

HP Application Lifecycle Management

Software Version: 11.50

User Guide

Document Release Date: June 2012

Software Release Date: June 2012



Legal Notices

Warranty

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

Restricted Rights Legend

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Copyright Notice

© Copyright 2002 - 2012 Hewlett-Packard Development Company, L.P.

Trademark Notices

Adobe® is a trademark of Adobe Systems Incorporated.

Intel® is a trademark of Intel Corporation in the U.S. and other countries.

Java is a registered trademark of Oracle and/or its affiliates.

Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.

Oracle® is a registered trademark of Oracle and/or its affiliates.

UNIX® is a registered trademark of The Open Group.

Documentation Updates

The title page of this document contains the following identifying information:

- Software Version number, which indicates the software version.
- Document Release Date, which changes each time the document is updated.
- Software Release Date, which indicates the release date of this version of the software.

To check for recent updates or to verify that you are using the most recent edition of a document, go to:

<http://h20230.www2.hp.com/selfsolve/manuals>

This site requires that you register for an HP Passport and sign in. To register for an HP Passport ID, go to:

<http://h20229.www2.hp.com/passport-registration.html>

Or click the **New users - please register** link on the HP Passport login page.

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

Support

Visit the HP Software Support Online web site at:

<http://www.hp.com/go/hpsoftwaresupport>

This web site provides contact information and details about the products, services, and support that HP Software offers.

HP Software online support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support web site to:

- Search for knowledge documents of interest
- Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts
- Look up HP support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract. To register for an HP Passport ID, go to:

<http://h20229.www2.hp.com/passport-registration.html>

To find more information about access levels, go to:

http://h20230.www2.hp.com/new_access_levels.jsp

Contents

Welcome to this Guide.....	24
How This Guide is Organized.....	24
Documentation Library.....	25
Documentation Library Guides.....	25
Topic Types.....	28
Additional Online Resources.....	30
ALM Extension Guides.....	30
ALM Basics.....	31
ALM Introduction.....	33
HP ALM Overview.....	34
Application Lifecycle Management Roadmap.....	36
ALM at a Glance.....	39
The ALM Window.....	40
ALM Projects.....	40
User Privileges.....	40
Project History Management.....	41
Data Import from Microsoft Word and Microsoft Excel.....	41
Data Import from Word.....	41
Data Import from Excel.....	41
How to Start ALM.....	41
How to Reset Your Password.....	44
How to View Administrator Messages.....	44
ALM Common User Interface.....	45
ALM Common Areas.....	45
ALM Fields.....	50

ALM Icons.....	51
User Properties Page.....	51
Clear History Dialog Box.....	53
Task Manager Dialog Box.....	54
Send Error Details Dialog Box.....	56
ALM Common Functionality.....	57
ALM Common Functionality Overview.....	58
How to Display ALM Data.....	58
How to Modify Attachments.....	59
How to Search and Replace ALM Data.....	60
ALM Common Functionality User Interface.....	60
Filter Dialog Box.....	61
Select Filter Condition Dialog Box.....	70
Users List Dialog Box.....	72
Find Dialog Box.....	73
Replace Dialog Box.....	75
Text Search Pane.....	76
History Tab.....	78
Send E-mail Dialog Box.....	79
Attachments Page.....	83
Snapshot Dialog Box.....	85
Select Columns/Select Fields Dialog Box.....	86
Update Selected Dialog Box.....	88
Set Default Values Dialog Box.....	89
Alerts and Flags.....	91
Alerts Overview.....	92
Follow Up Flags Overview.....	93
How to Use Alerts.....	93
How to Work with Alerts - Use-Case Scenario.....	95
Alerts and Flags User Interface.....	97
Alerts Dialog Box.....	97
Flag For Follow Up Dialog Box.....	98

Favorite Views.....	101
Favorite Views Overview.....	102
How to Use Favorite Views.....	102
Favorite Views User Interface.....	103
Add Favorite Dialog Box.....	104
Organize Favorites Dialog Box.....	105
Version Control.....	107
Version Control Overview.....	108
How to Use Version Control.....	109
How to Filter by Version Control Fields.....	111
Non-versioned Fields.....	112
Moving, Copying, and Deleting Checked-out Entities.....	112
Version Control User Interface.....	113
Versions Menu and Buttons.....	113
Version Control Fields.....	114
Check In Dialog Box.....	116
Check Out Dialog Box.....	117
Pending Check In Dialog Box.....	118
Versions Tab.....	120
ALM Editions.....	123
ALM Functionality by Edition.....	124
ALM Keyboard Shortcuts.....	131
ALM Keyboard Shortcut Reference.....	132
General Keyboard Shortcuts.....	132
Attachments Shortcuts.....	134
Send Email Dialog Box Shortcuts.....	134
Releases Module Shortcuts.....	135
Libraries Module Shortcuts.....	136
Requirements Module Shortcuts.....	136
Business Models Module Shortcuts.....	137
Test Resources Module Shortcuts.....	137
Business Components Module Shortcuts.....	137

Test Plan Module Shortcuts.....	138
Test Lab Module Shortcuts.....	138
Manual Runner Shortcuts.....	139
Defects Module Shortcuts.....	139
Dashboard Shortcuts.....	140
Management.....	143
Releases and Cycles.....	145
Releases and Cycles Overview.....	146
How to Use Releases and Cycles in ALM.....	146
Work with Releases and Cycles - Use-Case Scenario.....	148
Releases and Cycles User Interface.....	152
Releases Module Window.....	153
Releases Module Menus and Buttons.....	154
Releases Module Icons.....	157
Releases Module Fields.....	158
New Release/Release Details Dialog Box.....	159
New Cycle/Cycle Details Dialog Box.....	161
Progress Tab.....	162
Quality Tab.....	164
Select Cycles Dialog Box.....	166
Select Releases Dialog Box.....	167
Reschedule Release/Cycle/Milestone Dialog Box.....	168
Project Planning and Tracking (PPT) Releases.....	171
PPT Releases Overview.....	172
How to Work with PPT.....	172
How to Work with PPT - Use-Case Scenario.....	174
KPI Types.....	177
PPT User Interface.....	178
PPT Fields.....	178
Release Scope Tab.....	180
New Scope Item/Scope Item Details Dialog Box.....	182
New Milestone Dialog Box.....	184

Milestone Scope Tab.....	185
KPIs Tab.....	187
New KPI/KPI Details Dialog Box.....	189
Thresholds Page.....	191
New Threshold Value Dialog Box.....	193
Master Plan Tab.....	194
Milestone Details Dialog Box.....	195
Scorecard Tab.....	196
KPI Drill Down Graph.....	198
KPI Drill Down Results Dialog Box.....	199
Breakdown Over Time Graph.....	201
Scorecard Layout Dialog Box.....	204
New Release From Template Dialog Box.....	205
Libraries and Baselines.....	207
Libraries Overview.....	208
Baselines Overview.....	208
Pinned Test Sets.....	209
How to Use Libraries and Baselines in ALM.....	210
Libraries and Baselines User Interface.....	213
Libraries Module Window.....	214
Libraries Module Menus and Buttons.....	215
Libraries Module Icons.....	218
Libraries Module Fields.....	219
New Library/Library Details Dialog Box.....	219
Content Tab.....	221
Create Baseline Wizard.....	223
New Baseline Page.....	223
Compare Baselines Tool Dialog Box.....	224
Compare Entities Dialog Box.....	226
Comparison Settings Dialog Box.....	228
Baselines Tab.....	229
Select Baselines Dialog Box.....	231

Imported Libraries.....	233
Imported Libraries Overview.....	234
Library Synchronization Overview.....	236
Library Verification.....	236
How to Share Libraries.....	237
Imported Libraries User Interface.....	240
Import Library Wizard.....	240
Select a Baseline Page.....	241
Library Verification Page.....	242
Select Target Root Folders Page.....	243
Imported By Tab.....	244
Imported From Tab.....	245
Compare Libraries Tool Dialog Box.....	246
Library Verification Dialog Box.....	249
Troubleshooting and Limitations.....	250
Requirements.....	251
Introducing Requirements.....	253
Introducing Requirements Overview.....	254
How to Use Requirements in ALM.....	254
Requirements Specification.....	257
Requirements Specification Overview.....	258
How to Create Requirements.....	258
How to Create Requirements - Use-Case Scenario.....	259
Requirements User Interface.....	260
Requirements Module Window.....	261
Requirements Module Menus and Buttons.....	265
Requirements Module Icons.....	272
Requirements Module Fields.....	274
Requirement Details Page.....	280
New Requirement Dialog Box.....	282
Convert to Tests Wizard.....	283
Select Automatic Conversion Method Page.....	284

Manual Change Conversion Page	285
Select Destination Path Page	286
Requirements Traceability	289
Requirements Traceability Overview	290
How to Trace Requirements	290
How to Trace Requirements - Use-Case Scenario	291
Requirements Traceability User Interface	293
Relationships Tab	293
Impact Analysis Tab	297
Traceability Matrix	299
Traceability Matrix Overview	300
How to Use the Traceability Matrix	300
How to Use the Traceability Matrix - Use-Case Scenario	301
Traceability Matrix User Interface	302
Traceability Matrix View	303
Configure Traceability Matrix Wizard	306
Define Source Requirements Page	307
Filter By Linked Requirements Page	308
Filter By Linked Tests Page	309
Risk-Based Quality Management	311
Risk-Based Quality Management Overview	312
How to Assess Risk	312
How to Assess Risk - Use-Case Scenario	314
Risk-Based Quality Management User Interface	316
Risk Assessment Tab	317
Risk Analysis Tab	321
Generate Report Dialog Box	325
Business Process Models	327
Business Process Models Overview	328
Business Process Models File Import	328
Re-importing models	329
Business Process Model Paths	329

How to Work with Business Process Models.....	329
Link Requirements and Tests to Model Entities.....	332
Business Models Module User Interface.....	333
Business Models Module Window.....	334
Model Analysis View.....	338
Business Models Module Menus and Buttons.....	342
Business Models Module Icons.....	346
Business Models Module Fields.....	347
Import Models Dialog Box.....	349
Map Imported Attributes to User Fields Dialog Box.....	351
Model Details/Model Activity Details Dialog Box.....	352
New Model Path/Model Path Details Dialog Box.....	354
Linkage Tab.....	356
Requirements Tree and Test Plan Tree Pane.....	359
Represented Items Tab.....	360
Lab Resources.....	363
Introducing Lab Resources.....	365
Lab Resources Overview.....	366
How to Use Lab Resources in ALM.....	366
Testing Hosts.....	367
Testing Hosts Overview.....	368
AUT Environments.....	369
AUT Environments Overview.....	370
Link AUT Environments to CDA.....	370
How to Work with AUT Environments.....	371
Work with AUT Environments - Use-Case Scenario.....	373
AUT Environments User Interface.....	375
AUT Environments Module Window.....	375
AUT Environments Module Menus and Buttons.....	377
AUT Environments Module Fields.....	380
AUT Environments Module Icons.....	380
AUT Environment Details Dialog Box.....	381

New AUT Environment Dialog Box.....	382
AUT Environment Configuration Details Dialog Box.....	383
New AUT Environment Configuration Dialog Box.....	384
New AUT Parameter Dialog Box.....	385
AUT Parameter Details Dialog Box.....	386
Link to CDA Dialog Box.....	387
Test Plan.....	391
Introducing Test Planning.....	393
Test Plan Overview.....	394
How should you test your application?.....	394
What resources do you require?.....	394
How to Plan Tests in ALM.....	394
Test Plan Specification.....	397
Test Plan Specification Overview.....	398
How to Create Tests.....	398
Test Types.....	401
Test Plan User Interface.....	402
Test Plan Module Window.....	403
Test Plan Module Menus and Buttons.....	406
Test Plan Module Icons.....	414
Test Plan Module Fields.....	416
Test Details Dialog Box.....	418
New Test Dialog Box.....	420
Sort Folders in Test Plan Tree Dialog Box.....	423
Paste Tests/Folders to Target Project Dialog Box.....	424
Requirement and Test Coverage.....	427
Requirement and Test Coverage Overview.....	428
How to Create Coverage.....	428
How to Create Coverage - Use-Case Scenario.....	429
Requirement and Test Coverage User Interface.....	431
Coverage Analysis View.....	432
Req Coverage Tab.....	433

Add Configuration Coverage Dialog Box	437
Add Advanced Coverage Dialog Box	438
Business Models Linkage Tab	439
Test Coverage Page	441
Analysis Settings Dialog Box	445
Coverage Analysis Dialog Box	446
Add Criterion Coverage Dialog Box	447
Test Parameters	449
Test Parameters Overview	450
How to Use Test Parameters	450
Test Parameters User Interface	451
Parameters Tab/Parameters Dialog Box	452
New Test Parameter/Test Parameter Details Dialog Box	454
Called Test Parameters/Parameters of Test Dialog Box	455
Test Design	459
Test Design Overview	460
Test Automation	460
How to Design Test Steps	461
Design Steps User Interface	463
Design Steps Tab/Design Step Details Dialog Box	464
The Design Steps Tab	464
The Design Step Details Dialog Box	464
Test Script Tab	469
Select Test Dialog Box	470
Paste Design Steps to Target Project Dialog Box	471
Criteria Tab	472
Test Configurations	475
Test Configurations Overview	476
How to Work with Test Configurations	476
How to Work with Test Configurations - Use-Case Scenario	477
Test Configurations User Interface	479
Test Configurations Tab	480

New Test Configuration/Test Configuration Details Dialog Box	482
Data Tab	484
Test Configuration Settings Tab	485
Test Configurations Pane	486
Test Configuration Status Tab	488
Generate Test Configuration Dialog Box	489
System Tests	491
System Tests Overview	492
How to Create System Tests	492
System Test User Interface	493
Test Script Tab - System Tests	494
Test Resources	497
Test Resources Overview	498
Entity Dependencies Overview	498
How to Use Test Resources	499
Test Resources User Interface	500
Test Resources Module Window	501
Test Resources Module Menus and Buttons	503
Test Resources Module Icons	505
Test Resources Module Fields	506
Resource Viewer Tab	508
Application Area Viewer Tab	509
Dependencies Tab	510
New Resource/Resource Details Dialog Box	512
Paste Resources To Target Project Dialog Box	513
VAPI-XP Tests	515
VAPI-XP Tests Overview	516
How to Create VAPI-XP Test Scripts	516
How to Edit VAPI-XP Test Scripts	523
Additional Editing Functions	526
How to Use AUT Environments with VAPI-XP	526
How to Use the VAPI-XP API	527

Using the TDHelper Object	527
Using the TDInput Object	529
Using the TDOutput Object	529
Using the XTools Object	530
How to Run VAPI-XP Tests in Debug Mode	530
How to Run VAPI-XP Tests in Test Mode	531
How to Debug VAPI-XP Tests Scripts Test Mode	532
VAPI-XP User Interface	534
HP VAPI-XP Wizard	534
Test Script Tab	534
Test Lab	535
Introducing Test Execution	537
Test Execution Overview	538
Draft Runs	539
How to Run Tests in ALM	540
How to Work with Draft Runs	542
The Test Lab Module User Interface	542
Test Lab Module Window	542
Test Lab Module Menus and Buttons	545
Test Lab Module Icons	558
Test Lab Module Fields	559
Test Set Specification	569
Test Set Specification Overview	570
How to Create Test Sets	571
Test Sets User Interface	575
Execution Grid Tab	575
Test Instance Details Dialog Box	578
Test Instance Details - Runs View	580
Test Instance Details - Execution Settings View	583
Requested Hosts Tab	587
Automation Tab	589
New Test Set Dialog Box	592

Select Tests Pane.....	594
Test Set Details Dialog Box.....	598
On Test Failure Dialog Box.....	599
Paste Test Set Folders To Target Project Dialog Box.....	601
Select Testing Host Dialog Box.....	602
Test Run Schedules.....	605
Test Run Schedules Overview.....	606
How to Schedule Test Runs.....	606
Test Run Schedules User Interface.....	607
Execution Flow Tab.....	608
Execution Condition Page.....	609
Time Dependency Page.....	611
Manual Test Execution.....	613
Manual Test Execution Overview.....	614
HP Sprinter Overview.....	614
How to Run Tests Manually.....	615
Manual Test Execution User Interface.....	618
Manual Test Run Dialog Box.....	618
Manual Runner Wizard.....	619
Manual Runner: Run Details Page.....	620
Manual Runner: Step Details Page.....	622
Automatic Test Execution.....	625
Automatic Test Execution Overview.....	626
Unified Functional Testing (UFT) GUI Test Execution.....	626
How to Run Tests Automatically.....	627
Automatic Test Execution User Interface.....	629
Automatic Runner Dialog Box.....	629
Host Manager Dialog Box (for Default test sets only).....	631
Order Test Instances Dialog Box.....	634
Execution Log Dialog Box.....	635
Run <Entity> Dialog Box.....	636
Execution Report Page.....	639

Test Results.....	643
Test Results Overview.....	644
How to View Test Results.....	644
Test Results User Interface.....	646
Test Runs Module Window.....	647
Test Runs Module Menus and Buttons.....	650
Run Details Dialog Box.....	653
Run Step Details Dialog Box.....	655
Test Set Run Details Dialog Box.....	657
Build Verification Suite Run Details Dialog Box.....	658
Purge Runs Wizard.....	659
Select Test Sets to Purge Page.....	660
Choose Type of Purge Page.....	660
Confirm Purge Request Page.....	661
Timeslots.....	663
Reserving Timeslots.....	665
Reserving Timeslots Overview.....	666
Types of Timeslot Reservations.....	666
Autostart Timeslots.....	668
Best Practices for Reserving Autostart Timeslots.....	668
Prolonging Performance Test Timeslot Reservations.....	669
Modifying Timeslot Reservations.....	669
Understanding Timeslot Failure.....	669
Host Allocation.....	670
Example of Allocating and Reshuffling Hosts.....	671
How to Reserve Testing Timeslots in ALM.....	676
How to Reserve Maintenance Timeslots (Lab Management only).....	677
Reserving Timeslots User Interface.....	678
Timeslots Module Window.....	678
Timeslots Module Menus and Buttons.....	685
Timeslots Module Fields.....	689
Timeslots Module Icons.....	692

Timeslot Reservation Dialog Box	692
Timeslot Reservation: Maintenance Dialog Box (Lab Management Only)	702
Timeslot Reservation: Data Processing Dialog Box	706
Select Controller Dialog Box	708
Select Automatch Load Generators/Hosts Dialog Box	710
Select Specific Load Generators/Hosts Dialog Box	712
Add Specific Host(s) Dialog Box	714
Time Zone Options Dialog Box	715
Build Verification	717
Build Verification Process	719
Build Verification Overview	720
How to Work with the Build Verification Suite in ALM	720
Deploying and Testing your Application in ALM	721
Build Verification User Interface	724
Build Verification Module Window	724
Build Verification Module Menus and Buttons	725
Build Verification Module Fields	727
Functional Test Sets Tab	728
Performance Test Tab	729
Build Verification Suite Details Dialog Box	731
New Build Verification Suite Dialog Box	732
Defects	735
Defect Tracking	737
Defect Tracking Overview	738
Defect Linkage	738
How to Track Defects in ALM	739
Track Defects - Use-Case Scenario	741
How to Search for Defects	745
How to Link Defects	746
Defect User Interface	746
Defects Module Window	747
Defects Module Menus and Buttons	748

Defects Module Icons.....	752
Defects Module Fields.....	753
New Defect Dialog Box.....	756
Defect Details Dialog Box.....	758
Similar Defects Dialog Box/Pane.....	759
Linked Defects/Entities Page.....	762
Defects to Link Dialog Box.....	765
Select Requirements Dialog Box.....	767
Analysis.....	769
Introducing Analysis.....	771
Analysis Overview.....	772
Dashboard Modules.....	772
Additional Analysis Tools.....	772
How to Analyze Data in ALM.....	772
Dashboard User Interface.....	774
Analysis View Window.....	774
Dashboard View Window.....	776
Analysis View Menus and Buttons.....	777
Dashboard View Menus and Buttons.....	781
Dashboard Icons.....	783
Details Tab.....	784
Share Analysis Item Dialog Box.....	785
Graphs and Dashboard Pages.....	787
Graphs and Dashboard Pages Overview.....	788
Business View Graphs Overview.....	789
How to Generate a Graph.....	790
How to Generate a Dashboard Page.....	792
Entity Graph Types.....	793
Graphs and Dashboard Pages User Interface.....	797
Configuration Tab/Window - Graphs.....	797
View Tab - Graphs/Graph Window.....	803
Configuration Tab - Dashboard Pages.....	808

View Tab – Dashboard Pages.....	809
Graph Wizard.....	811
Select Graph Type Page.....	811
Select Business View Page.....	812
Select Entity Type Page.....	813
Select Projects Page.....	813
Select Test Set Option Page.....	814
Select Filter Page.....	815
Select Graph Attributes Page.....	816
Select Coverage Page.....	817
New Graph Dialog Box.....	817
New Dashboard Page Dialog Box.....	818
Select Projects Dialog Box.....	819
Edit <Type> Categories Dialog Box.....	820
Graph Appearance Dialog Box.....	821
Drill Down Results Dialog Box.....	822
Project Planning and Tracking (PPT) Graphs.....	825
PPT Graphs Overview.....	826
How to Generate a PPT Graph.....	826
PPT Graphs User Interface.....	827
Configuration Tab - PPT Graphs.....	827
View Tab - PPT Graphs.....	830
Project Reports.....	835
Project Reports Overview.....	836
How to Create Project Reports.....	836
How to Create a Custom Report Template.....	840
Predefined Project Reports.....	840
Project Reports User Interface.....	844
Configuration Tab - Project Reports.....	845
New Project Report Dialog Box.....	853
Add Report Section Dialog Box.....	854
Edit Document Template Field Values Dialog Box.....	855

Excel Reports.....	857
Excel Reports Overview.....	858
Protecting the Database.....	858
Parameters in SQL Queries.....	859
Guidelines for Creating a Post-Processing Script.....	859
How to Generate an Excel Report.....	860
Excel Reports User Interface.....	861
Configuration Tab - Excel Reports.....	862
Query Tab.....	863
Excel Report Query Builder Dialog Box.....	865
Post-processing Tab.....	869
Generation Settings Tab.....	870
New Excel Report Dialog Box.....	872
New Query Parameter/Edit Query Parameter Dialog Box.....	872
Standard Reports.....	875
Standard Reports Overview.....	876
How to Manage Standard Reports.....	876
Available Sub-Reports.....	876
Standard Reports User Interface.....	877
Configuration Tab – Standard Reports.....	878
View Tab – Standard Reports.....	880
Live Analysis Graphs.....	883
Live Analysis Graphs Overview.....	884
How to Generate Live Analysis Graphs.....	884
Live Analysis Graphs User Interface.....	885
Live Analysis Tab.....	885
Live Analysis Graph Wizard.....	887
Select Graph Type Page.....	887
Select Graph Attributes Page.....	888
Project Documents.....	889
Project Documents Overview.....	890
How to Generate a Project Document.....	890

Document Generator User Interface.....	892
Document Generator Window.....	893
Document Generator Tree.....	895
Document Page.....	896
Requirements Page.....	898
Business Components Page.....	900
Subject Tree Page.....	901
Subject Tests Page.....	902
Test List Page.....	904
Test Lab Page.....	906
Test Sets Page.....	907
Tests Page.....	908
Runs Page.....	910
Defects Page.....	911
Organize Favorites Dialog Box.....	913
Glossary.....	915

Welcome to this Guide

Welcome to HP Application Lifecycle Management (ALM). ALM empowers IT to manage the core application lifecycle, from requirements through deployment, granting application teams the crucial visibility and collaboration needed for predictable, repeatable, and adaptable delivery of modern applications.

This guide describes how to use the ALM application. It provides descriptive and conceptual information, step-by-step guidance to help you work with the application, and explanations of reference-oriented material.

Note: HP Quality Center Enterprise Edition is in Technology Preview. It will be released formally after completion of the Technology Preview period.

How This Guide is Organized

The *HP Application Lifecycle Management User Guide* contains the following parts:

Part	Description
"ALM Basics" on page 31	Provides an overview of the ALM features and methodology. It also describes common ALM functionalities and explains the available ALM editions.
"Management" on page 143	<p>Describes how to define releases and cycles for managing the application lifecycle. It also describes how to define libraries to track changes in your project, reuse entities in a project, or share entities across multiple projects.</p> <p>Relevant tasks:</p> <ul style="list-style-type: none">• "How to Use Releases and Cycles in ALM" on page 146• "How to Use Libraries and Baselines in ALM" on page 210
"Requirements" on page 251	<p>Describes how to define and manage requirements throughout the application lifecycle.</p> <p>Relevant task: "How to Use Requirements in ALM" on page 254</p>
"Lab Resources" on page 363	<p>Describes how to define and manage the resources used for server-side execution.</p> <p>Relevant task: "How to Use Lab Resources in ALM" on page 366</p> <p>Available for: ALM Edition only</p>
"Test Plan" on page 391	<p>Describes how to plan the testing process, from building a test plan tree to creating tests. It also describes how to work with the VAPI-XP testing tool.</p> <p>Relevant task: "How to Plan Tests in ALM" on page 394</p>

Part	Description
"Test Lab" on page 535	Describes how to create test sets, execute manual and automated tests, and review test results. Relevant task: "How to Run Tests in ALM" on page 540
"Timeslots" on page 663	Describes how to reserve timeslots used for server-side test execution. Relevant task: "How to Reserve Testing Timeslots in ALM" on page 676 Available for: ALM Edition only
"Build Verification" on page 717	Describes how to create bundles of test sets to automate the deployment and testing process. Relevant task: "How to Work with the Build Verification Suite in ALM" on page 720 Available for: ALM Edition only
"Defects" on page 735	Describes how to report defects to a project and keep track of the repair process until the defects are resolved. Relevant task: "How to Track Defects in ALM" on page 739
"Analysis" on page 769	Describes how you can analyze the application lifecycle management process by creating graphs, standard reports, Excel reports, dashboard pages, and project documentation. Relevant task: "How to Analyze Data in ALM" on page 772

Documentation Library

The Documentation Library is an online help system that describes how to use ALM. You can access the Documentation Library in the following ways:

- Click **Documentation Library** in the ALM Help menu to open the Documentation Library home page. The home page provides quick links to the main help topics.
- Click **Help on this page** in the Help menu to open the Documentation Library to the topic that describes the current page.

Documentation Library Guides

The Documentation Library consists of the following guides and references, available online, in PDF format, or both. PDFs can be read and printed using Adobe Reader, which can be downloaded from the Adobe Web site (<http://www.adobe.com>).

Reference	Description
Using this Documentation Library	Explains how to use the Documentation Library and how it is organized.

Reference	Description
What's New?	Describes the newest features in the latest version of ALM. To access, select Help > What's New .
Product Feature Movies	Short movies that demonstrate the main product features. To access, select Help > Product Feature Movies .
Readme	Provides last-minute news and information about ALM.

HP Application Lifecycle Management (ALM) Guides		Description
HP ALM User Guide		Explains how to use ALM to organize and execute all phases of the application lifecycle management process. It describes how to specify releases, define requirements, plan tests, run tests, and track defects.
HP ALM Administrator Guide		Explains how to create and maintain projects using Site Administration, and how to customize projects using Project Customization.
HP ALM Lab Management Guide		Explains how to use Lab Management to manage lab resources used for functional and performance testing on remote hosts.
HP ALM Tutorial		A self-paced guide teaching you how to use ALM to manage the application lifecycle management process.
HP ALM Installation Guide		Describes the installation and configuration processes for setting up ALM Server.
Business Process Testing User Guide		Explains how to use Business Process Testing to create business process tests.

HP ALM Performance Center Guides		Description
HP ALM Performance Center Quick Start		A self-paced guide giving the Performance Center user a high level overview of creating and running performance tests.
HP ALM Performance Center Guide		Explains to the Performance Center user how to create, schedule, run, and monitor performance tests. Explains to the Performance Center administrator how to configure and manage Performance Center projects.

HP ALM Performance Center Guides		Description
HP ALM Performance Center Installation Guide		Describes the installation processes for setting up Performance Center Servers, Performance Center Hosts and other Performance Center components.
HP ALM Performance Center Troubleshooting Guide		Provides information for troubleshooting problems while working with HP ALM Performance Center.

HP ALM Best Practices Guides		Description
HP ALM Agile Testing Best Practices Guide		Provides best practices for implementing agile testing principles.
HP ALM Business Process Models Best Practices Guide		Provides best practices for working with the Business Models module.
HP ALM Database Best Practices Guide		Provides best practices for deploying ALM on database servers.
HP ALM Entities Sharing Best Practices Guide		Provides best practices for sharing entities.
HP ALM Project Planning and Tracking Best Practices Guide		Provides best practices for managing and tracking releases.
HP ALM Project Topology Best Practices Guide		Provides best practices for structuring projects.
HP ALM Upgrade Best Practices Guide		Provides methodologies for preparing and planning your ALM upgrade.
HP ALM Versioning and Baselining Best Practices Guide		Provides best practices for implementing version control and for creating baselines.
HP ALM Workflow Best Practices Guide		Provides best practices for implementing workflows.

HP ALM Performance Center Best Practices Guides		Description
HP Performance Centers of Excellence Best Practices		Provides best practices for successfully building and operating Performance Centers of Excellence.
HP Performance Monitoring Best Practices		Provides best practices for monitoring the performance of applications under test.

HP ALM API References	Description
HP ALM Project Database Reference	Provides a complete online reference for the project database tables and fields.
HP ALM Open Test Architecture API Reference	Provides a complete online reference for the ALM COM-based API. You can use the ALM open test architecture to integrate your own configuration management, defect tracking, and home-grown testing tools with an ALM project.
HP ALM Site Administration API Reference	Provides a complete online reference for the Site Administration COM-based API. You can use the Site Administration API to enable your application to organize, manage, and maintain ALM users, projects, domains, connections, and site configuration parameters.
HP ALM REST API Reference	Provides an online reference for the ALM REST-based API. You can use the REST API to access and work with ALM data.
HP ALM COM Custom Test Type Developer Guide	Provides a complete online guide for creating your own testing tool and integrating it into the ALM environment using native COM development tools.
HP ALM .NET Custom Test Type Developer Guide	Provides a complete online guide for creating your own testing tool and integrating it into the ALM environment using a combination of DCOM and .NET classes.

Topic Types

The content in the above mentioned ALM guides is organized by topics. Three main topic types are in use: **Concepts**, **Tasks**, and **Reference**.

Topic Type	Description	Usage
Concepts	Background, descriptive, or conceptual information.	Learn general information about what a feature does.

Topic Type	Description	Usage
Tasks	<p>Instructional Tasks. Step-by-step guidance to help you work with the application and accomplish your goals.</p> <p>Task steps can be with or without numbering:</p> <ul style="list-style-type: none"> • Numbered steps. Tasks that are performed by following each step in consecutive order. • Non-numbered steps. A list of self-contained operations that you can perform in any order. 	<ul style="list-style-type: none"> • Learn about the overall workflow of a task. • Follow the steps listed in a numbered task to complete a task. • Perform independent operations by completing steps in a non-numbered task.
	<p>Use-case Scenario Tasks. Examples of how to perform a task for a specific situation.</p>	Learn how a task could be performed in a realistic scenario.
Reference	<p>General Reference. Detailed lists and explanations of reference-oriented material.</p>	Look up a specific piece of reference information relevant to a particular context.
	<p>User Interface Reference. Specialized reference topics that describe a particular user interface in detail. Selecting Help on this page from the Help menu in the product generally open the user interface topics.</p>	Look up specific information about what to enter or how to use one or more specific user interface elements, such as a window, dialog box, or wizard.
Troubleshooting and Limitations	<p>Troubleshooting and Limitations. Specialized reference topics that describe commonly encountered problems and their solutions, and list limitations of a feature or product area.</p>	Increase your awareness of important issues before working with a feature, or if you encounter usability problems in the software.

Additional Online Resources

The following additional online resources are available from the Help menu:

Resource	Description
Troubleshooting & Knowledge Base	Opens the Troubleshooting page on the HP Software Support Web site where you can search the Self-solve knowledge base. Choose Help > Troubleshooting & Knowledge Base . The URL for this Web site is http://h20230.www2.hp.com/troubleshooting.jsp .
HP Software Support	Opens the HP Software Support Web site. This site enables you to browse the Self-solve knowledge base. You can also post to and search user discussion forums, submit support requests, download patches and updated documentation, and more. Choose Help > HP Software Support . The URL for this Web site www.hp.com/go/hpssoftwaresupport . <ul style="list-style-type: none">• Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract.• To find more information about access levels, go to: http://h20230.www2.hp.com/new_access_levels.jsp• To register for an HP Passport user ID, go to: http://h20229.www2.hp.com/passport-registration.html
HP Software Web site	Opens the HP Software Web site. This site provides you with the most up-to-date information on HP Software products. This includes new software releases, seminars and trade shows, customer support, and more. Choose Help > HP Software Web site . The URL for this Web site is www.hp.com/go/software .
Add-ins Page	Opens the Add-ins Page, which offers integration and synchronization solutions with HP and third-party tools.

ALM Extension Guides

Extensions provide added functionality to HP ALM. If you have a license for an ALM extension, you can utilize the added functionality by enabling the extension on a per project basis. For more details on enabling extensions, refer to the *HP Application Lifecycle Management Administrator Guide*.

To view the list of extensions available with ALM 11.50, or to download documentation for ALM extensions, visit the HP ALM Add-ins Page, accessible from the main ALM **Help** menu.

ALM Basics

Chapter 1

ALM Introduction

This chapter includes:

HP ALM Overview.....	34
Application Lifecycle Management Roadmap.....	36

HP ALM Overview

HP Application Lifecycle Management (ALM) empowers IT to manage the core application lifecycle, from requirements through deployment, granting application teams the crucial visibility and collaboration needed for predictable, repeatable, and adaptable delivery of modern applications.

Application lifecycle management is a complex process. Whether your organization is predominantly Agile or you are using both iterative and sequential methods, the aim of effective lifecycle management is greater predictability, heightened repeatability, improved quality, and a ready accommodation of change. Understanding project milestones, deliverables, and resource and budget requirements and keeping track of project health, standards and quality indicators, allow delivery managers to achieve these objectives.

ALM simplifies and organizes application management by providing you systematic control over the process. It helps you create a framework and foundation for your application lifecycle management workflow in a central repository.

Releases Tracking

ALM features a system for organizing and tracking application releases, enabling you to align your business priorities and quality expectations with your project requirements, tests, and defects. ALM helps you make more informed release decisions with real-time key performance indicators (KPIs).

Requirements and Tests

ALM helps you define and maintain a repository of requirements and tests. Requirements help ensure that business and testing needs are covered. Tests can then be automatically generated from these requirements to ensure the correct aspects of the application are being tested. To meet the various goals of a project, you can organize the tests in your project into unique groups. ALM provides a method for scheduling and executing tests, collecting test results, and analyzing the data.

Defects Tracking

Analyzing defects and defect trends helps you make effective "go/no-go" decisions. ALM features a system for tracking defects, enabling you to monitor defects from initial detection until resolution. It also allows you to share defects across projects, reducing risk by helping developers find, prioritize, and resolve defects sooner. A centralized defect repository also enables reporting of aggregated defect status and trends across projects.

Analysis Tools

The ability to track progress throughout the application lifecycle process is vital to predictability. ALM provides tools for analyzing each phase of the process including specific instrumentation for Agile projects (for example, burn-up and burn-down charts). You can generate interactive graphs that demonstrate a wide variety of business performance perspectives, or define reports with any cross-section of data. You can also monitor multiple business metrics, by arranging multiple graphs alongside each other in a single view.

Asset Libraries

ALM supports sharing and reuse of asset libraries across projects. Sharable libraries help you manage initiatives with multiple applications to verify that changes to one application do not negatively impact another application. They also help to drive greater consistency and repeatability,

by empowering asset reuse. Specific changes can be applied to the shared assets for each project while allowing the library to maintain its integrity.

ALM Integrations

ALM offers integration with HP testing tools (for example, Unified Functional Testing and LoadRunner) as well as third-party and custom testing tools, and requirement and configuration management tools. ALM communicates with the testing tool of your choice, providing you with a complete solution to fully automated application testing.

Note: HP Unified Functional Testing (UFT) comprises the products known as HP QuickTest Professional and HP Service Test.

- Functionality provided by QuickTest is known as GUI testing in UFT.
- Functionality provided by Service Test is known as API testing in UFT.

Performance Center Functionality

ALM includes functionality enabling you to manage all aspects of a large-scale performance testing project, including resource allocation and scheduling, from a centralized location accessible through the Web. ALM helps streamline the testing process, reduce resource costs, and increase operating efficiency. For details, see the *HP ALM Performance Center Guide*.

Lab Management Functionality

ALM includes functionality enabling you to manage resources which you can use to execute tests on remote hosts. ALM helps automate the deployment and testing process, improving reliability and convenience. For details, see the *HP ALM Lab Management Guide*.

ALM Editions

ALM is available in various editions. For details on the availability of ALM functionality according to editions, see ["ALM Editions" on page 123](#).

HP ALM Edition	Description
HP ALM	A unified platform for managing and automating processes, activities, and assets for building, testing, delivering, and maintaining applications. It includes modules for requirements, test, defect, and development management, and overall release and project planning. HP ALM helps organizations drive consistent processes, shared best-practices, and asset sharing across projects.
HP ALM Essentials Edition	Provides a subset of HP ALM product functionality, and is designed to help smaller teams get up and running quickly. It provides core functionality for requirements management, test management, and defect management.
HP Quality Center Enterprise Edition	Resides on the same unified platform as HP ALM. It delivers core functionality for quality management. It supports building a quality center of excellence through tight integrations with HP Unified Functional Testing, HP Business Process Testing, and HP Sprinter.

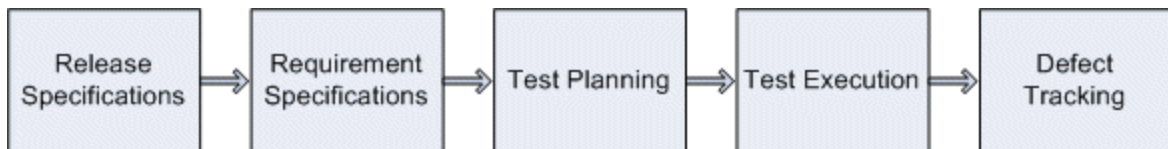
HP ALM Edition	Description
HP ALM Performance Center Edition	Functionality for the complete management, scheduling, running, and monitoring of performance test scripts. It resides on the same platform as HP ALM and integrates directly with HP ALM and HP LoadRunner.

Summary

ALM supports you through all phases of managing the application lifecycle. By integrating the tasks involved in application management, ALM enables you to better align IT with your business needs, and optimize efficiency. For details on the application lifecycle management phases, see ["Application Lifecycle Management Roadmap" below](#).

Application Lifecycle Management Roadmap

The application lifecycle management roadmap with ALM includes the following phases:



Phase	Description
Release Specifications	<p>Develop a release-cycle management plan to help you manage application releases and cycles more efficiently. You can track the progress of an application release against your plan to determine whether your release is on track.</p> <p>For task details, see "How to Use Releases and Cycles in ALM" on page 146.</p>
Requirement Specifications	<p>Define requirements to meet your business and testing needs. You can manage the requirements and conduct multi-dimensional traceability between requirements, tests and defects, across multiple releases and cycles. ALM provides real-time visibility of requirements coverage and associated defects to evaluate quality and business risk.</p> <p>For task details, see "How to Use Requirements in ALM" on page 254.</p>
Test Planning	<p>Based on the project requirements, you can build test plans and design tests. ALM provides a repository for both manual and automated tests.</p> <p>For task details on test planning, see "How to Plan Tests in ALM" on page 394.</p> <p>Performance Center: For task details, see the <i>HP ALM Performance Center Guide</i>.</p>

Phase	Description
Test Execution	<p>Create a subset of the tests in your project designed to achieve specific test goals. ALM supports sanity, functional, regression, and advanced testing. Execute scheduled tests to diagnose and resolve problems.</p> <p>For task details, see "How to Run Tests in ALM" on page 540.</p> <p>Performance Center: For task details, see the <i>HP ALM Performance Center Guide</i>.</p> <p>Lab Management: You can run server-side execution Functional test sets, which can be run immediately or scheduled for the future. Functional test sets are run without user intervention and can be run as a part of build verification suite in order to automate and streamline the deployment and testing process. For task details, see "Deploying and Testing your Application in ALM" on page 721.</p>
Defect Tracking	<p>Submit defects and track their repair progress. Analyzing defects and defect trends helps you make effective "go/no-go" decisions. ALM supports the entire defect lifecycle - from initial problem detection through fixing the defect and verifying the fix.</p> <p>For task details, see "How to Track Defects in ALM" on page 739.</p>

Throughout the application lifecycle, you can monitor and control strategic points by generating reports and graphs. For task details, see ["How to Analyze Data in ALM" on page 772](#).

For an overview of ALM, see ["HP ALM Overview" on page 34](#).

Chapter 2

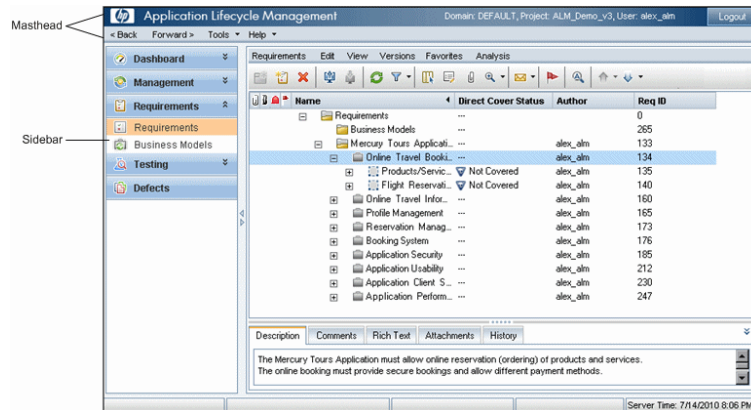
ALM at a Glance

This chapter includes:

The ALM Window.....	40
ALM Projects.....	40
User Privileges.....	40
Project History Management.....	41
Data Import from Microsoft Word and Microsoft Excel.....	41
How to Start ALM.....	41
How to Reset Your Password.....	44
How to View Administrator Messages.....	44
ALM Common User Interface.....	45

The ALM Window

When you connect to a project, the HP Application Lifecycle Management (ALM) main window opens and displays the module in which you were last working. On the upper-right side of the window, the domain, project, and your user name are displayed.



The ALM main window contains the following key elements that are available in all ALM views:

- **ALM masthead.** Contains navigation buttons, access to common tools, documentation and additional resources.
- **ALM sidebar.** Contains buttons enabling you to switch between ALM modules.

For user interface details, see ["ALM Common Areas"](#) on page 45.

For a related task, see ["How to Start ALM"](#) on next page.

ALM Projects

When you create an ALM project, you need to store and manage the data that was generated and collected by ALM. Each project is supported by a database that stores project information.

For more information on creating and managing ALM projects, refer to the *HP Application Lifecycle Management Administrator Guide*.

User Privileges

ALM enables you to manage user access to a project. By creating a list of authorized users and assigning each user a password and user group, you control the kinds of additions and modifications that each user makes to the project. The user group determines the privileges that the user has within a project. ALM includes a privileges and permissions mechanism that enables you to create rules for specific fields in a project.

For detailed information on the user groups available in ALM, and on assigning passwords and privileges, refer to the *HP Application Lifecycle Management Administrator Guide*.

Project History Management

When you customize your project, you can instruct ALM to preserve a log of values for the system and user fields in your project. For more information on enabling history for a field, refer to the *HP Application Lifecycle Management Administrator Guide*.

When the history data is no longer needed, you can choose to delete this data from your ALM project. For example, if you have successfully run the test sets you created, you may want to clear the test history from your project.

You can choose to clear all history data, or you can select a specific entity or field whose history you want to clear. In addition, you can choose to delete history data up to and including a specific date. ALM clears the data displayed in the History tab of the corresponding modules.

For user interface details, see "Clear History Dialog Box " on page 53.

Data Import from Microsoft Word and Microsoft Excel

You can import data from a Word document or an Excel worksheet to an ALM project.

Data Import from Word

You can import requirement or test plan data from a Word document to an ALM project. To import from Word, you must install the Microsoft Word Add-in and the HP ALM Connectivity Add-in on your client machine. To install an add-in, select **Help > Add-ins Page** to open the Add-ins page, and click the appropriate add-in link.

For more details, see the information on the Microsoft Word Add-in page.

Data Import from Excel

You can import requirement, test plan, or defect data from an Excel worksheet to an ALM project. To import from Excel, you must install the Microsoft Excel Add-in and the HP ALM Connectivity Add-in on your client machine. To install an add-in, select **Help > Add-ins Page** to open the Add-ins page, and click the appropriate add-in link.

For more details, see the information on the Microsoft Excel Add-in page.

How to Start ALM

This task describes how to launch ALM on your machine from your Web browser. You can work with multiple versions of ALM side-by-side on a workstation. This includes multiple ALM clients of version 11.00 or later connecting to different ALM servers, and a single Quality Center 10.00 or 9.2 client.

Note: To enable ALM to work with HP testing tools as well as third-party and custom testing tools, you must log in to the client machine with administrator privileges and register ALM on

client machines. For more information, refer to the HP Application Lifecycle Management Installation Guide.

To start ALM:

1. Open your Web browser and type your ALM URL
`http://<ALM server name/IP address>[:port number]/qcbn`. Contact your system administrator if you do not have the correct URL.

The HP Application Lifecycle Management Options window opens.



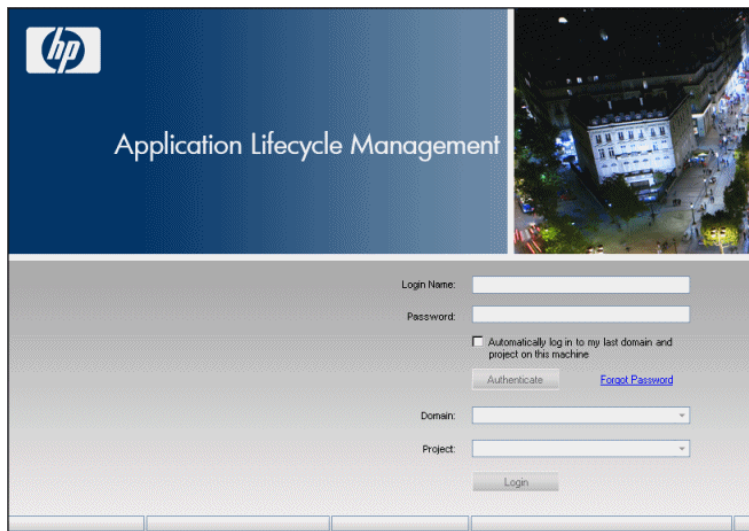
2. Click the **Application Lifecycle Management** link. Each time ALM is run, it carries out a version check. If it detects a newer version, it downloads the necessary files to your machine.

- **Windows XP and 7:** If you do not have administrator privileges on your machine, and a Security Warning displays, click **Don't Install**. You will be redirected to the Install screen.
- If file downloads are prohibited through your browser, you can install these files by using the **HP ALM Client MSI Generator Add-in** on the **More HP Application Lifecycle Management Add-ins** page. For more information on add-ins, refer to the *HP Application Lifecycle Management Installation Guide*.
- If you run ALM over a virtual environment, such as Citrix or VMware, only the system administrator can install a new version.

3. Follow the on-screen instructions.

Note: If files are downloaded, but the Login window does not display, you must install a Microsoft Hotfix on your machine. For more information, see [HP Software Self-solve knowledge base article KM905289](http://h20230.www2.hp.com/selfsolve/document/KM905289) (<http://h20230.www2.hp.com/selfsolve/document/KM905289>).

After the ALM version has been checked and files have been updated if necessary, the ALM Login window opens.



4. In the **Login Name** box, type your user name.
5. In the **Password** box, type the password assigned to you by your site administrator. If you cannot remember your password, click the **Forgot Password** link. For more details, see "[How to Reset Your Password](#)" on next page.
6. Select the **Automatically log in to my last domain and project on this machine** check box if you want ALM to automatically log in to the last project in which you were working.
7. Click the **Authenticate** button. ALM verifies your user name and password and determines which domains and projects you can access. If you specified automatic login, ALM opens.
8. If authentication fails, check that your user name and password are correct and try again.
9. In the **Domain** list, select a domain. By default, the last domain in which you were working is displayed.
10. In the **Project** list, select a project. By default, the last project in which you were working is displayed.

If the demonstration project was installed on the ALM server, you can select the **ALM_Demo** project (make sure that you select **DEFAULT** in the **Domain** list). The project includes sample data to help introduce you to ALM. For more information, refer to the *HP Application Lifecycle Management Tutorial*.

11. Click the **Login** button. ALM opens and displays the module in which you last worked during your previous session.

The first time you run ALM, the Welcome page opens. From the Welcome page, you can directly access the ALM documentation. If you do not want to display the Welcome page each time you log in to ALM, select **Don't show this again**. To open the Welcome page at any time, select **Help > Welcome Page**.

12. To exit and return to the ALM Login window, click the **Logout** button located in the upper-right corner of the window.

Alternatively, select **Tools > Change Project** to log in to a different project.

Note: When an ALM user session is inactive for a period of time, the session expires. This releases the license in use, making it available for other users.

When a session expires, you are prompted to reconnect. Logging in from the ALM login window includes loading project customization. However, if a project administrator has not made any significant changes to project customization, the customization does not reload when you reconnect. This enables you to reconnect quickly and continue working where you left off.

You can edit reconnect options by modifying the **FAST_RECONNECT_MODE** parameter in the Site Configuration tab. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

How to Reset Your Password

When logging in to ALM, if you cannot remember your password, you can reset it and create a new one.

Note: Resetting your password is unavailable in either of the following situations:

- It is deactivated by the **PASSWORD_RESET_DISABLE** Site Configuration parameter.
- LDAP authentication is enabled.

For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

To reset your password:

1. In the ALM Login window, click the **Forgot Password** link. The **Forgot Password** dialog box opens.
2. In the **Login Name** box, type your user name. By default, the name entered in the ALM Login window is displayed.
3. Click **OK**. ALM sends a message to the email address assigned to your ALM user name. Click the link to set a new password.

After you set a new password, the ALM Login window opens, enabling you to log in using your new password.

How to View Administrator Messages

The site administrator can send messages to users connected to ALM projects informing them about important maintenance or other issues. For example, the site administrator may send a message warning that a project you are connected to will be disconnected.

For more details on sending messages from Site Administration, refer to the *HP Application Lifecycle Management Administrator Guide*.

To view administrator messages:

- 1. When the site administrator sends you a message, a pop-up window automatically opens on your machine displaying the message text.
- 2. If there is more than one message, use the **Previous Message** and **Next Message** buttons to view other messages.

ALM Common User Interface

This section includes:

ALM Common Areas..... 45

ALM Fields..... 50

ALM Icons..... 51

User Properties Page..... 51

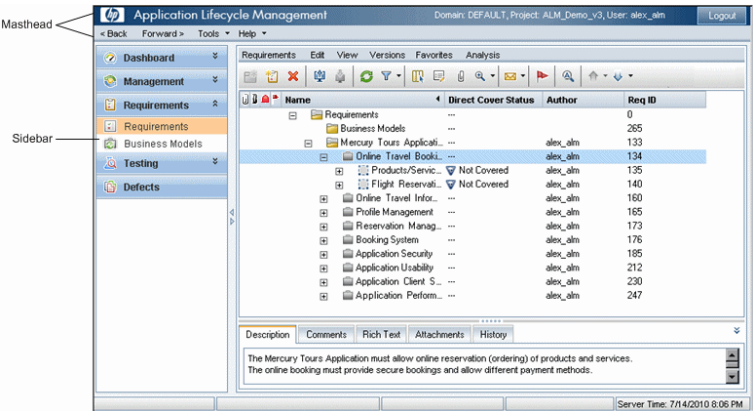
Clear History Dialog Box..... 53

Task Manager Dialog Box..... 54

Send Error Details Dialog Box..... 56

ALM Common Areas



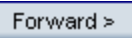
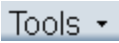

The common areas include navigation buttons, access to common tools, documentation and additional resources.



To access	The common areas are available from all ALM views.
Relevant tasks	"How to Start ALM" on page 41
See also	"The ALM Window " on page 40

Masthead

User interface elements are described below:

UI Element	Description
<domain, project, user>	Details of the current domain, project, and user.
	<p>Logs you out of your current project and returns you to the ALM Login window.</p> <p>Tip: You can change the project you are working in by choosing Tools > Change Project.</p>
 	<p>Enables you to navigate to your previous/next view in ALM.</p> <p>Tip: Use the Forward button after you navigate to a previous view.</p>
	<p>Includes commands that you can run from each of the ALM modules. For details, see "Tools Menu" on next page.</p> <p>Tip: To customize the Tools menu, refer to the <i>HP Application Lifecycle Management Installation Guide</i>.</p>
	<p>Enables you to open the HP Application Lifecycle Management Documentation Library and other additional online resources. For details on the additional online resources, see Additional Online Resources.</p> <p>To display version information for each ALM client component, select Help > About HP Application Lifecycle Management Software.</p> <p>To display ALM patch information, select Help > About HP Application Lifecycle Management Software. Click Additional Information.</p> <p>If an error occurs, ALM collects detailed system and usage information, which you can send as an email attachment. It is useful for when you contact ALM support. To send an error report, select Help > Send Error Details. For more details, see "Send Error Details Dialog Box" on page 56.</p> <p>You can add a custom entry to the Help menu that links to a URL address. For example, if you want to allow users local access to ALM product movies, which are available by default on an external Website, you can save the movies on the server, and create a link to a movies index page. To add the entry, you define the CUSTOM_HELP_MENU_LINK Site Configuration parameter.</p> <p>Tip: To rename, rearrange or delete items in the Help menu, refer to the <i>HP Application Lifecycle Management Installation Guide</i>.</p>

Tools Menu

User interface elements are described below:

UI Element	Description
Change Project	Enables you to log out of your current project and select one of the previously opened projects on the same machine, or select a different project from the Login window.
Customize	<p>Opens the Project Customization window, enabling you to customize your project. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.</p> <div>Tip: You can change your ALM password and user details in the Project Customization window. For user interface details, see "User Properties Page" on page 51.</div>
New Defect	Opens the New Defect dialog box, enabling you to add a new defect. For details, see " Defect Details Dialog Box " on page 758.
Spelling and Grammar	<p>Check Spelling. Checks the spelling for the selected text or text box. If there are no errors, a confirmation message opens. If errors are found, the Spelling dialog box opens and displays the word together with replacement suggestions.</p> <p>Spelling Options. Opens the Spelling Options dialog box, enabling you to configure the way ALM checks spelling.</p> <p>Thesaurus. Opens the Thesaurus dialog box and displays a synonym, antonym, or related word for the selected word. You can replace the selected word or look up new words.</p>
Clear History	Opens the Clear History dialog box, enabling you to delete history data from your project. Clearing history requires the appropriate user permissions. For details, see " Clear History Dialog Box " on page 53.
Task Manager	Opens the Task Manager dialog box, enabling you to view the status and progress of asynchronous tasks run in your project. For details, see " Task Manager Dialog Box " on page 54.
Document Generator	Opens the Document Generator. For details, see " Project Documents " on page 889.
Download Standalone Applications	Performance Center: Opens the Application Download window, enabling you to download standalone applications needed for Performance Center.
Event Log	Performance Center: Displays information about all events that occur during a performance test run. For details, refer to the <i>HP ALM Lab Management Guide</i> .

UI Element	Description
Lab Settings	<p>Opens the Project Settings Details dialog box, enabling you to configure Lab Management settings for your project. For details, refer to the <i>HP ALM Lab Management Guide</i>.</p> <p>Available for: Performance Center Edition and ALM Edition.</p>
Performance Center Controller Options	<p>Performance Center: Opens the Performance Center Controller Options dialog box, enabling you to configure global Controller options for your Performance Center project. For details, refer to the HP ALM Lab Management Guide.</p>
My Performance Center	<p>Performance Center: Opens the My Performance Center dialog box, allowing you to facilitate execution of day to day performance testing activities. For details, refer to the <i>HP ALM Performance Center Guide</i>.</p>

Sidebar Buttons

This area enables you to navigate between ALM modules.

Important information	<ul style="list-style-type: none"> • ALM Editions: ALM is also available in several editions which provide subsets of ALM functionality: ALM Essentials Edition, Quality Center Enterprise Edition, and Performance Center Edition. For details, see "ALM Editions" on page 123. • If the sidebar is hidden, click the expand button, located on the middle left corner of the window.
------------------------------	---

User interface elements are described below:

UI Element	Description
Dashboard	<p>Includes the following modules:</p> <p>Analysis View. Enables you to create graphs, reports, and Excel reports.</p> <p>Dashboard View. Enables you to create dashboard pages, in which you can view multiple graphs in a single display.</p>
Management	<p>Includes the following modules:</p> <ul style="list-style-type: none"> • Releases. Enables you to define releases and cycles for the application management process. • Libraries. Enables you to define libraries to track changes in your project, reuse entities in a project, or share entities across multiple projects.

UI Element	Description
Requirements	<p>Includes the following modules:</p> <ul style="list-style-type: none"> • Requirements. Enables you to manage requirements in a hierarchical tree-structure. Requirements can be linked to other requirements, tests, or defects. • Business Models. Enables you to import business process models, and test the quality of the models and their components. Access to this module is dependent on your ALM license.
Lab Resources	<p>Lab Management: Includes the following modules:</p> <ul style="list-style-type: none"> • Testing Hosts. Enables you to manage the allocation and availability of hosts for performance and functional testing. For more information, refer to the HP ALM Lab Management Guide. • AUT Environments. Enables you to manage AUT environment parameters which can be used for performance and functional testing. <p>Available for: Performance Center Edition and ALM Edition only</p>
Testing	<p>Includes the following modules:</p> <ul style="list-style-type: none"> • Test Resources. Enables you to manage test resources in a hierarchical tree-structure. Test resources can be associated with tests. • Business Components. Depending on your ALM license, you may also have access to the Business Components module. This module enables subject matter experts to drive the quality optimization process using Business Process Testing. For more information, refer to the <i>HP Business Process Testing User Guide</i>. • Test Plan. Enables you to develop and manage tests in a hierarchical tree-structure. Tests can be linked to requirements and defects. • Test Lab. Enables you to manage and run tests. • Lab Management: Timeslots. Enables you to reserve testing resources for the purposes of running a performance test or for performing maintenance tasks on them. <ul style="list-style-type: none"> ■ Available for: Performance Center Edition and ALM Edition only • Lab Management: Build Verification. Enables you to define a suite of automated functional test sets bundled together with a single performance test (called a build verification suite) to provide an end-to-end deployment and testing solution. <ul style="list-style-type: none"> ■ Available for: ALM Edition only • Test Runs. Enables you to analyze the results of test executions.

UI Element	Description
Performance Center	<p>Performance Center: Includes the following modules:</p> <p>Performance Lifecycle. Enables you to access trending and performance application lifecycle (PAL) reports. For more information, refer to the <i>HP ALM Performance Center Guide</i>.</p> <p>AUT Hosts. Enables you to manage the host machines that make up the Application Under Test (AUT). For more information, refer to the <i>HP ALM Lab Management Guide</i>.</p> <p>Topologies. Enables you to create topologies that graphically display the logical components that make up the Application Under Test (AUT) and the relationships between them. For more information, refer to the <i>HP ALM Performance Center Guide</i>.</p>
Defects	Enables you to add defects, determine repair priorities, repair open defects, and analyze the data.

ALM Fields

This section lists the fields available in ALM.

Module Name (A - Z)	Description
Business Components	<i>HP Business Process Testing User Guide</i>
Business Models	"Business Models Module Fields" on page 347
Defects	"Defects Module Fields" on page 753
Management	"Releases Module Fields" on page 158 "Libraries Module Fields" on page 219
Requirements	"Requirements Module Fields" on page 274
Lab Resources	<i>HP ALM Lab Management Guide</i> "AUT Environments Module Fields" on page 380 Available for: Performance Center Edition and ALM Edition only
Test Lab	"Test Lab Module Fields" on page 559
Timeslots	"Timeslots Module Fields" on page 689 Available for: Performance Center Edition and ALM Edition only
Build Verification	"Build Verification Module Fields" on page 727 Available for: ALM Edition only

Module Name (A - Z)	Description
Test Plan	"Test Plan Module Fields" on page 416 Business Process Testing: See the <i>HP Business Process Testing User Guide</i> .
Test Resource	"Test Resources Module Fields" on page 506

ALM Icons

This section lists the icons available in ALM.

Module Name	Description
Business Components	<i>HP Business Process Testing User Guide</i>
Dashboard	"Dashboard Icons" on page 783
Management	"Releases Module Icons" on page 157 "Libraries Module Icons" on page 218
Requirements	"Requirements Module Icons" on page 272
Test Resource	"Test Resources Module Icons" on page 505
Test Plan	"Test Plan Module Icons " on page 414
Test Lab	"Test Lab Module Icons" on page 558
Timeslots	"Timeslots Module Icons" on page 692 Available for: Performance Center Edition and ALM Edition only
Build Verification	"Build Verification Module Icons" on page 1 Available for: ALM Edition only
Defects	"Defects Module Icons" on page 752




User Properties Page

This page enables you to change your user properties, including full name, password, email address, phone number, and description.

Note: For additional details on the Project Customization window, refer to the *HP Application Lifecycle Management Administrator Guide*.

To access	<ol style="list-style-type: none">1. In the common toolbar, select Tools > Customize.2. In the Project Customization window, click the User Properties link.
Important information	<ul style="list-style-type: none">• Email information is important because it enables you to receive email notifications and alerts directly to your mailbox.• The site administrator can change and override a user's properties or password. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.

User interface elements are described below:

UI Element	Description
	Return. Closes the Project Customization window, and returns to the ALM window.
	Save. Saves changes to your user properties.
	Change Password. Opens the Change Password for [user name] dialog box, enabling you to change your login password.
User Name	Your ALM login name. Note: This field is read-only.
Full Name/Description	User details.
E-mail	Determines the email address to which notifications and alerts are delivered.
Phone Number	Your phone number.

UI Element	Description
Status	User status is displayed as Active . Only active users can log in to ALM projects.
Deactivation Date	The date on which the user is scheduled to be deactivated. A deactivated user cannot log in to an ALM project. Note: This field is set by the site administrator and is read-only.

Clear History Dialog Box

This dialog box enables you to delete history data.

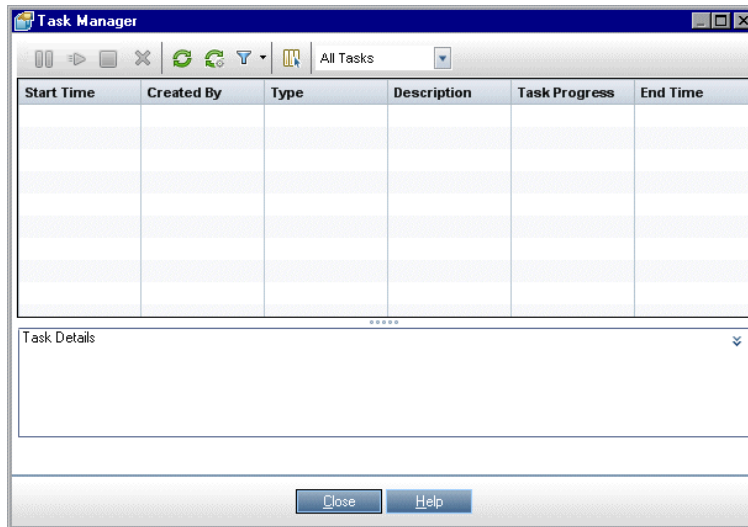
To access	On the masthead, select Tools > Clear History .
Important information	You must have the appropriate user permissions to clear history.
See also	"Project History Management " on page 41

User interface elements are described below:

UI Element	Description
Entity	The entity whose history you want to delete. Note: To delete history data from all entities, select All .
Field	The field whose history you want to delete. Note: To delete history data from all fields in the selected entity, select All .
Until Date	All data up to and including the selected date is deleted.

Task Manager Dialog Box




This dialog box enables you to view the status and progress of asynchronous tasks run in your project. For example, when you create a baseline, ALM runs the task in a background process. You can view the progress of this task in the Task Manager.



To access	On the masthead, select Tools > Task Manager .
Important information	ALM clears completed tasks from the Task Manager after two days.

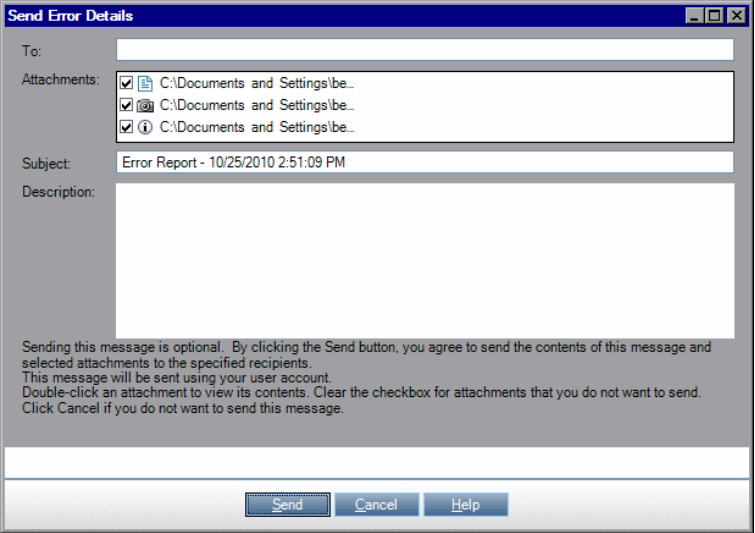
User interface elements are described below:

UI Element	Description
	<p>Delete. Clears the currently selected tasks from the grid.</p> <p>Note:</p> <ul style="list-style-type: none"> You can clear only completed tasks. A task can be cleared only by the user that ran the task, or by a project administrator.
	<p>Refresh All. Refreshes the grid so that it displays the most up-to-date task information.</p> <p>If Auto Refresh is enabled, this button is disabled.</p>
	<p>Set Auto Refresh On/Off. When enabled, automatically refreshes the grid every 5 seconds so that it displays the most up-to-date task information.</p>
	<p>Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort the tasks displayed in the grid. For more details, see "Filter Dialog Box" on page 61.</p>

UI Element	Description
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86.
Filter	Displays the filter currently applied to the grid. Located directly above the grid.
Start Time	The time the task started.
Created By	The name of the user who ran the task.
Type	The task type. For example, ImportBaseline .
Description	A description of the task.
Task Progress	The percentage of the task that is complete. When the task completes, displays the final result: Succeeded or Failed .
End Time	The time the task completed.
Task Details	Displays details of the selected task. Click the Show/Hide arrows   to display or hide this pane.
Task Id	A unique numeric ID for the task, assigned automatically by ALM.
Task State	Includes the following options: <ul style="list-style-type: none"> • Running. The task is in progress. • Paused. The task was paused by a user. • Finished. The task has completed. <p>Note: If a task is aborted by the user, the Task State value is Finished, and the Task Progress value is Failed.</p>

Send Error Details Dialog Box

This dialog box enables you to send an error report as a mail attachment. This can be helpful when contacting ALM support, or your local system administrator.



To access	On the masthead, select Help > Send Error Details .
Important information	<ul style="list-style-type: none">• The Send Error Details command is enabled by setting the SEND_EXCEPTION_ENABLED parameter in the Site Configuration tab in Site Administration. For details, see the <i>HP Application Lifecycle Management Administrator Guide</i>.• The mail message is sent using your ALM user account information.• The information collected is sent as mail attachments. Before sending, you can review the attachments and remove any that you do not want to send.

User interface elements are described below:

UI Element	Description
To	Enter a valid email address.
Attachments	Attachments include details of your system, a snapshot of your machine at the time of the error, and any generated log files. Double-click an attachment to view its contents. Clear the check box for attachments that you do not want to send.
Subject	The date and time that you send the report.
Description	A description of the error.

Chapter 3

ALM Common Functionality

This chapter includes:

- ALM Common Functionality Overview..... 58
- How to Display ALM Data 58
- How to Modify Attachments..... 59
- How to Search and Replace ALM Data 60
- ALM Common Functionality User Interface 60

ALM Common Functionality Overview

HP Application Lifecycle Management (ALM) organizes and displays data in grids and trees. You can manipulate the data in various ways, such as rearranging columns, filtering, sorting, and grouping. You can also attach files to records, search for specific text in records, and view history of various entities.

Note: As ALM grids and trees vary in the type of content they display, the tasks and references described in this chapter do not always apply to all grids and trees.


For task details, see ["How to Display ALM Data"](#) below, ["How to Modify Attachments"](#) on next page, and ["How to Search and Replace ALM Data"](#) on page 60.

How to Display ALM Data

This task describes how to manipulate ALM data.

- ["Filter Records"](#) below
- ["Sort Records"](#) below
- ["Group Records"](#) on next page
- ["Arrange and Resize Columns"](#) on next page
- ["Display ALM History"](#) on next page

Filter Records

- To filter ALM data to display only those records that meet your criteria, click the **Set Filter/Sort** button . The Filter dialog box opens. In the Filter tab, assign a single condition or multiple conditions. For user interface details, see ["Filter Dialog Box"](#) on page 61.

Example

In the Test Lab module, you can define the Status filter as "Failed" and the Tester filter as "David Or Mark". Only failed test runs performed by David or Mark are displayed.

- To further drill down your data, define a cross filter. In the Filter dialog box, click the **Cross Filter** tab. For user interface details, see ["Filter Dialog Box"](#) on page 61.

Example

In the test plan tree, you can define the cross filter for associated test sets as "Open". This ensures that only tests that belong to an open test set are displayed. Alternatively, you can define the associated test set filter to find tests that are not in any test set.

Sort Records

You set sorting priorities of records displayed in the ALM trees and grids. By default, records appear in ALM according to the order in which they were added. In the Filter dialog box, click the **View**

Order tab. For user interface details, see ["Filter Dialog Box" on page 61](#).

Example

In the Test Grid, if the **Designer** column is assigned the highest sort priority, records are sorted in the ASCII sort order according to the names appearing in the Designer column. If **Test Name** is assigned the next highest priority, test records assigned the same name in the **Designer** column are then sorted in the ASCII sort order according to their test name.

Group Records

You separate grid data into groups according to specified criteria. In the Filter dialog box, click the **Group** tab. For user interface details, see ["Filter Dialog Box" on page 61](#).

Example

In the Defects Grid, if you select the **Assigned To** column as the highest group by priority, records are grouped according to the names appearing in the **Assigned To** column. If you select **Status** and **Severity** as the next highest priorities respectively, defects assigned the same name in the **Assigned To** column are next grouped according to their status, and then their severity.

Arrange and Resize Columns

You determine which columns are displayed in ALM and the order in which they appear. Select **View > Select Columns**. The Select Columns dialog box opens. For user interface details, see ["Select Columns/Select Fields Dialog Box" on page 86](#).

You resize columns using the mouse. Click on the right edge of a column heading and drag to adjust the width.

Display ALM History

You can view a list of changes made to ALM entities. In addition, you can view previous versions of entities stored in a particular baseline.

Click the **History** tab or button. For user interface details, see ["History Tab" on page 78](#).

How to Modify Attachments

This task describes how to modify an ALM attachment.

When you open an attachment, ALM downloads the attachment to a local directory on your client machine and opens it in the associated application. After making changes to the attachment, you must save the attachment twice. First, save the local copy of your attachment in the application. Then upload the attachment to your ALM project.

To modify an attachment:

1. Navigate to the Attachments page for the selected ALM record. For user interface details, see ["Attachments Page" on page 83](#).
2. Double-click the selected attachment. A local copy opens in the associated application.

3. Modify the attachment.
4. Save the changes in the application. This saves the local copy of your attachment.
5. Close the attachment.
6. In ALM, click the **Upload Selected** button to upload the local copy to your ALM project.

How to Search and Replace ALM Data

The following steps describe how to search and replace ALM data.

- ["Search Records" below](#)
- ["Replace Records" below](#)

Search Records

Using the Find dialog box, you can search records based on the value of a particular field in a tree or grid. You can also search a folder for a particular subfolder or record. For user interface details, see ["Find Dialog Box" on page 73](#).

If available, you can search for keywords and variations of keywords using Text Search. Select **Edit > Text Search**. The Text Search pane opens in the lower part window. For user interface details, see ["Text Search Pane" on page 76](#).

Replace Records

You can replace a field value for a selected record, or for all records in the tree or grid using the Replace dialog box. For user interface details, see ["Replace Dialog Box" on page 75](#).

You can also update a field value for multiple records in a grid or a tree using the Update Selected dialog box. For user interface details, see ["Update Selected Dialog Box" on page 88](#).

ALM Common Functionality User Interface

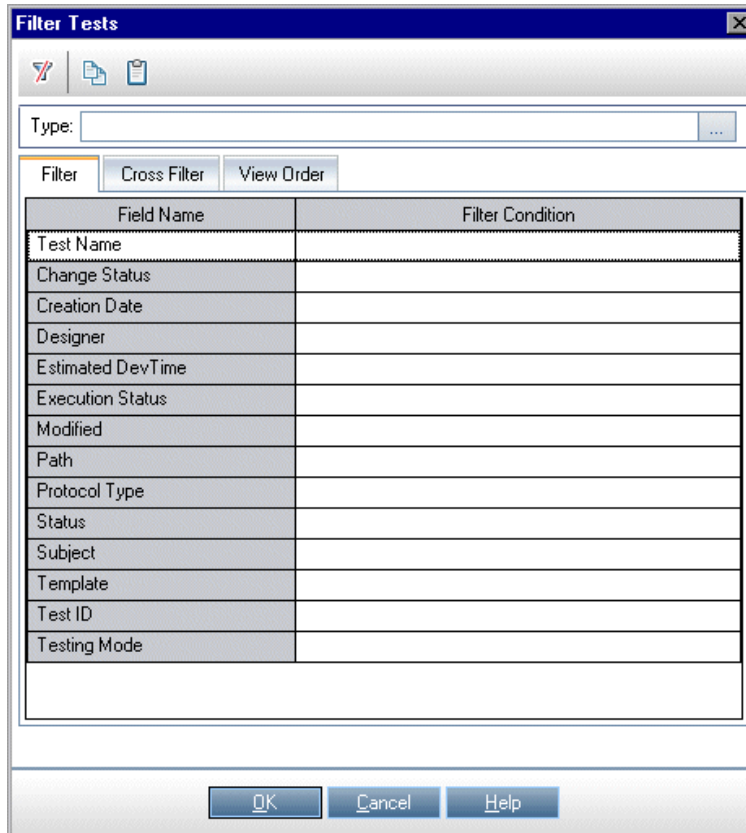
This section includes:



Filter Dialog Box.....	61
Select Filter Condition Dialog Box.....	70
Users List Dialog Box.....	72
Find Dialog Box.....	73
Replace Dialog Box.....	75
Text Search Pane.....	76
History Tab.....	78
Send E-mail Dialog Box.....	79
Attachments Page.....	83
Snapshot Dialog Box.....	85
Select Columns/Select Fields Dialog Box.....	86

Update Selected Dialog Box.....	88
Set Default Values Dialog Box.....	89

Filter Dialog Box




This dialog box enables you to filter, sort, and group ALM data to display only those records that meet the criteria that you define.



To access	Click the appropriate Set Filter/Sort button   .
Important information	<ul style="list-style-type: none"> Tip: You can save filtering and sorting settings as a favorite view and then load it as needed. To save as a favorite view, choose Favorites > Add to Favorites. The Add Favorite dialog box opens. For details on the user interface, see "Add Favorite Dialog Box" on page 104. ALM Editions: Not all fields and functionality are available for ALM Essentials Edition.
Relevant tasks	"How to Display ALM Data" on page 58
See also	"ALM Common Functionality Overview" on page 58


Filter Dialog Box Common Elements

Common user interface elements are described below:

UI Element	Description
	Clear Filter. Clears the filter, sort, and group by settings defined in the Filter dialog box.
	Copy Filter Settings. Copies the filter, sort, and group by settings to the Clipboard.
	<p>Paste Filter Settings. Pastes the filter, sort, and group by settings from the Clipboard to another project. You can also share the settings with another user by pasting them to an email or a text file.</p> <ul style="list-style-type: none"> To paste to another project, log in to the project to which you want to paste the settings, display the appropriate module, and open the Filter dialog box. Click the Paste Filter Settings button. To paste to an email or a text file, click the paste button of the target application.
Requirement Type	<p>Defines the filter by a selected requirement type.</p> <p>In the Requirement Type box, click the browse button. The Select Filter Condition dialog box opens. Select a requirement type and click OK. The Filter Condition tab displays the relevant field names.</p> <p>Note: Only available in the Requirements module.</p>
Hide Risk-Based Quality Management Columns	<p>Hides the requirement fields related to risk-based quality management. Only fields for which no filter condition is set are hidden.</p> <p>Note: Only available in the Requirements module.</p>

Filter Tab

This tab enables you to filter ALM data to display only those records that meet the criteria that you define.

Important information	<ul style="list-style-type: none">• Requirements Tree: If you are filtering in the requirements tree, parents of filtered entities that do not correspond to the filter are displayed in the tree with the  icon.• Test Plan Tree/Test Set Tree: If you are filtering in the test plan or test set tree, folders in the tree that do not correspond to the filter are not displayed in the tree. Empty folders will not be displayed after a filter is applied.• Version Control: For details on filtering data based on version control fields, see "How to Filter by Version Control Fields" on page 111.• Data-hiding: For additional details when filtering in the Project Customization Data-hiding tab, see the <i>HP Application Lifecycle Management Administrator Guide</i>.
Relevant tasks	"How to Display ALM Data" on page 58
See also	"ALM Common Functionality Overview" on page 58

User interface elements are described below:

UI Element	Description
Field Name	<p>Lists the fields available for filtering.</p> <p>Tip: To search for a field in the Field Name column, click a box in the Field Name column and type the first character of the field name. ALM highlights the first occurrence.</p> <p>For more details on fields see:</p> <ul style="list-style-type: none"> • "Requirements Module Fields" on page 274 • <i>HP ALM Lab Management Guide</i> • "AUT Environments Module Fields" on page 380 • "Test Plan Module Fields" on page 416 • "Test Resources Module Fields" on page 506 • "Test Lab Module Fields" on page 559 • "Timeslots Module Fields" on page 689 • "Build Verification Module Fields" on page 727 • "Defects Module Fields" on page 753 • Business Process Testing: <ul style="list-style-type: none"> ■ Business Component Module Fields in the <i>HP Business Process Testing User Guide</i>. ■ Test Plan Module Fields for Business Process Testing in the <i>HP Business Process Testing User Guide</i>.
Field Condition	<p>Defines a filter condition for a field.</p> <p>Click the corresponding Filter Condition box. Click the browse button. The Select Filter Condition dialog box opens. For more details, see "Select Filter Condition Dialog Box" on page 70.</p>

Cross Filter Tab

This tab enables you to define a second filter on an associated item such as requirements, tests, test sets, or defects.

Important information	The user interface elements available in the Cross Filter tab may change depending on the ALM module.
Relevant tasks	"How to Display ALM Data" on page 58
See also	"ALM Common Functionality Overview" on page 58

User interface elements are described below:

UI Element (A - Z)	Description
Alerts	<p>An alert can be one of the following:</p> <ul style="list-style-type: none"> • Show defects with alerts. Filters the defects by alerts that have been triggered. This option is only available in the Defects module. • Show models with alerts. Filters the business process model entities by alerts that have been triggered. This option is only available in the Business Models module. • Show requirements with alerts. Filters the requirements by alerts that have been triggered. This option is only available in the Requirements module. • Show test instances with alerts. Filters the test instances by alerts that have been triggered. This option is only available in the Execution Grid of the Test Lab module. • Show tests with alerts. Filters the tests by alerts that have been triggered. This option is only available in the Test Plan module.
Defects	<p>Performs one of the following:</p> <ul style="list-style-type: none"> • Filters the requirements by defects that have been directly or indirectly linked to the requirements. Available in the Requirements module. • Filters the business process model entities by linked defects. Available in the Business Models module. • Filters the tests by defects that have been directly or indirectly linked to the tests. Available in the Test Plan module. • Filters the test sets by defects that have been directly or indirectly linked to the tests. Available in the Test Set Tree of the Test Lab module. <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 63.</p>
Model Activities	<p>Filters models by activities that they include.</p> <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 63.</p>
Model Paths	<p>Filters models by paths that they include.</p> <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 63.</p>

UI Element (A - Z)	Description
Requirements	<p>Performs one of the following:</p> <ul style="list-style-type: none"> Filters the business process model entities by linked requirements. Available in the Business Models module. Filters the tests by covered requirements. Available in the Test Plan module. Filters the test instances by tests that cover selected requirements. Available in the Execution Grid of the Test Lab module. Filters the defects by linked requirements. Available in the Defects module. <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 63.</p> <p>Select Tests with no requirement coverage to filter tests that do not cover any requirements. For example, this can help you identify redundant tests or tests with missing requirement coverage links. This option is only available in the Test Plan module.</p>
Requirements: Trace from	<p>Filters the requirements by traced from requirements. Available in the Requirements module.</p> <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 63.</p>
Requirements: Trace to	<p>Filters the requirements by traced to requirements. Available in the Requirements module.</p> <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 63.</p>
Runs	<p>Performs one of the following:</p> <ul style="list-style-type: none"> Filters the tests by test runs. Available in the Test Plan module. Filters the test instances by test runs. Available in the Execution Grid of the Test Lab module. <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 63.</p>





UI Element (A - Z)	Description
Test Configurations	<p>Performs one of the following:</p> <ul style="list-style-type: none"> Filters the requirements by test configurations. Available in the Requirements module. Filters the tests by test configurations. Available in the Test Plan module. Filters the test sets by test configurations. Available in the Test Lab module. <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 63.</p>
Test Criteria	<p>Filters the requirements by test criteria. Available in the Requirements module.</p> <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 63.</p> <p>Business Process Testing: Functionality related to test criteria is available only for business process tests. For details, see the <i>HP Business Process Testing User Guide</i>.</p>
Test Sets	<p>Performs one of the following:</p> <ul style="list-style-type: none"> Filters the tests by test sets that contain the tests. Available in the Test Plan module. Filters the test instances by test sets that contain the test instances. Available in the Execution Grid of the Test Lab module. <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 63.</p> <p>Select Tests not in any test set to filter tests that are not part of any test set. For example, this can help you identify tests that have not been run. This option is only available in the Test Plan module.</p>
Tests	<p>Performs one of the following:</p> <ul style="list-style-type: none"> Filters the requirements by covered tests. Available in the Requirements module. Filters the business process model entities by linked tests. Available in the Business Models module. Filters the test sets by contained tests. Available in the Test Set Tree of the Test Lab module. Filters the defects by linked tests. Available in the Defects module. <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 63.</p>

View Order Tab

This tab enables you to sort records according to the ASCII sort order.

Important information	The View Order tab considers records beginning with a space or character before considering those beginning with numbers. It then considers uppercase letters and, finally, lowercase letters.
Relevant tasks	"How to Display ALM Data" on page 58
See also	"ALM Common Functionality Overview" on page 58

User interface elements are described below:


UI Element	Description
Available Fields	Displays the names of all the fields you can display.
Sorted Fields	Displays the names of the fields currently assigned a sorting priority.
	Sets the sort priority in the Sorted Fields pane. Tip: You can also drag the field names up or down.
	Moves selected fields between Available Fields and Sorted Fields . Tip: You can also drag the field names between panes or double-click a field name to move it across to the other pane.
	Moves all fields between Available Fields and Sorted Fields .
	Sorts a selected field in the Sorted Fields pane in an ascending or descending order.

Group Tab

This tab enables you to separate grid data into groups according to specified criteria. You can determine the information by which ALM groups records, and set the hierarchical order in which they are displayed (up to three levels). This enables you to navigate through large sets of data more easily.

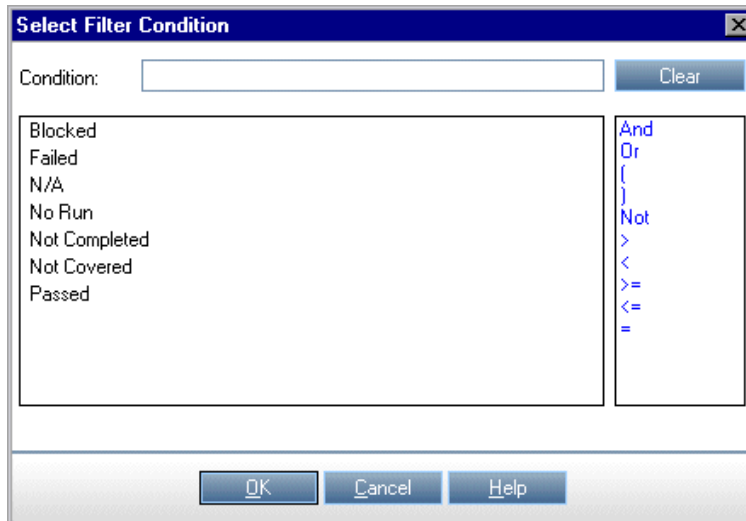
Important information	<ul style="list-style-type: none"> The Group tab is only available in grid views. You cannot select a group header and perform ALM actions on an entire group. To perform actions on multiple records, use CTRL or SHIFT to select records. If you group records by a field containing multiple values, the information in each value is grouped as its entire value. This value is the category for grouping. For example, a value with <code>English</code> and <code>French</code> will be grouped once as <code>English;French</code>, and not as part of separate <code>English</code> and <code>French</code> categories. For more information on allowing multiple values, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. The group by list displays only system and user-defined fields associated with a User List or Lookup List type field. For more information on field types, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.
Relevant tasks	"How to Display ALM Data" on page 58
See also	"ALM Common Functionality Overview" on page 58

User interface elements are described below:

UI Element	Description
Group items by	Groups records according to the select field.
Then by	Groups records by additional fields. <div> Note: If you group records by more than one field, select fields in the hierarchical order that you want them to be displayed. You cannot select a field that has already been selected. </div>
	Clears the grouping selection and changes it to none . <div> Note: If you clear a grouping that has child groupings defined on it, the child groupings move up one level and the last group changes to none. </div>

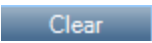
Select Filter Condition Dialog Box

This dialog box enables you to set a filter condition for a field.



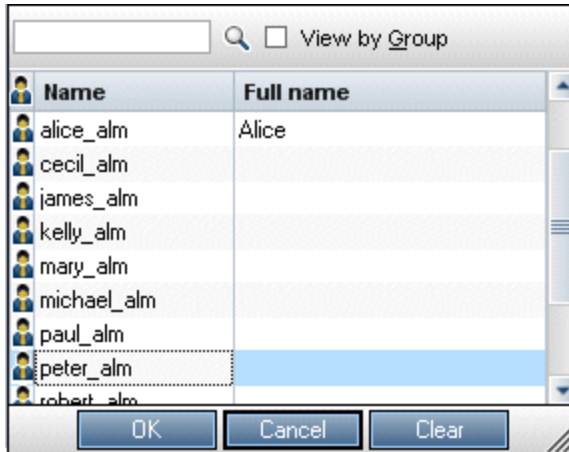
To access	<p>Use one of the following:</p> <ul style="list-style-type: none">• Open the Filter dialog box. In the Filter tab, click a Filter Condition box. Click the drop-down arrow.• In a grid view, click a grid filter box under a column name. Click the browse button.
Important information	<p>In the Requirements module, if you select the Req Parent field, the Select Filter Condition dialog box displays the requirements tree, sorted by requirement name. If you select a requirement from the requirements tree, its full path is displayed in the Condition box. Only requirements which are descendents of this requirement are displayed when you apply the filter.</p>
See also	<ul style="list-style-type: none">• "Filter Dialog Box" on page 61• "Users List Dialog Box" on page 72

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
Condition	<p>Indicates the field condition.</p> <p>Note:</p> <ul style="list-style-type: none"> • If you enter an item with more than one word, it must be enclosed in quotes. For example, to search for the test <code>Login Boundary</code>, in the Condition box, type the following: <code>"login boundary"</code> • If you want to enter only part of the item, use an asterisk (*). For example, to search for all tests with the word <code>Login</code>, in the Condition box, type the following: <code>*login*</code>. To search for all tests that begin with the words <code>Insert New</code> in the Condition box, type the following: <code>"insert new"</code> • To specify an empty field, type the following: <code>" "</code> • To specify a non-empty field, type the following: <code>not " "</code>
	Clears the filter condition.
<field value pane>	<p>Displays the values that are available for defining a filter condition for the current field. Select a value to add to the Condition box.</p> <p>If you select a field with a user name value, the <condition pane> displays a user list that enables you to sort users, search for users, group users by user groups, and select users from the list or from a group tree. For details, see "Users List Dialog Box" on next page.</p> <p>If you select a field with value that must be selected from a tree, the <field value pane> displays a search field and a refresh button.</p> <p>Note: Some items that appear in hierarchical lists contain sub-lists. These items are preceded by a folder icon. To choose an item from a sub-list, double-click the folder and click the item.</p>
<logical expression pane>	Displays the operators that are available for defining logical expressions.


Users List Dialog Box

This dialog box enables you to choose a user name from a user list. You can sort the users list, search for users, group users by user groups, and select users from the list or from a group tree.



To access	In an ALM grid or tree, select a column with a user name value, and click the drop-down arrow. The Users List dialog box opens.
Important information	<ul style="list-style-type: none"> To sort the Users List in ascending or descending order by user name or full name, click the Name or Full Name column heading. Click the column heading again to reverse the sort order. When defining a condition for a user, you can specify the current user (select [CurrentUser]), or an entire user group (for example, [Developer]).
See also	"Select Filter Condition Dialog Box" on page 70

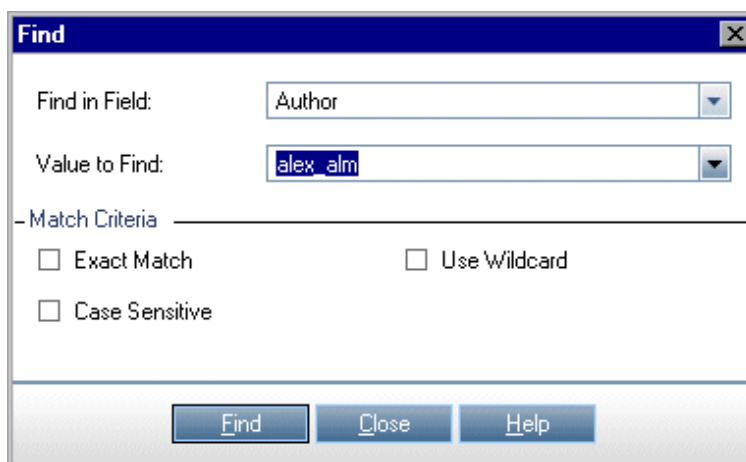
User interface elements are described below:


UI Element	Description
	<p>Find. Searches users by user name or full name. Type the name of a user (or part of the name) in the Find box and click the Find button. ALM highlights the first record that contains the search string. Press F3 to find subsequent occurrences of the search string.</p> <p>Tip: You can also search incrementally by typing the first character of the user name under the Name column. You can type additional characters to narrow down the search. ALM begins searching as soon as you type the first character of the search string, and highlights the record with the first occurrence of all the characters in the search string.</p>
Name	The ALM login name.

UI Element	Description
Full Name	The full name of the user.
View by Group	Displays users by user group.


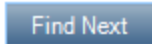
Find Dialog Box

This dialog box enables you to search for a particular record in a tree or grid. You can search records based on the value of a particular field. You can also search a folder for a particular subfolder or record.



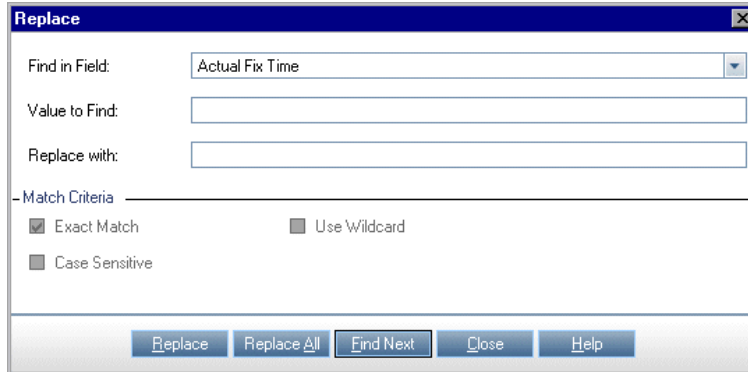
To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • Select Edit > Find. • In the Execution Grid, select Tests > Find. • In the test sets tree, select Edit > Find Folder/Test Set. <p>Available from the following modules: Requirements, Business Components, Test Plan, Test Resources, Test Lab, and Defects.</p>
Important information	<ul style="list-style-type: none"> • If a filter is applied to a tree or grid, the search is restricted to the records currently displayed. • Tip: If available, Text Search  is a more powerful tool that enables you to search for keywords and variations of keywords. For more details, see "Text Search Pane" on page 76.
Relevant tasks	"How to Search and Replace ALM Data" on page 60
See also	"Replace Dialog Box" on page 75

User interface elements are described below:

UI Element	Description
Find in Folder	Displays the name of the folder selected in the tree. Available from: Component Tree, Test Plan Tree, Test Resource Tree, and Test Sets Tree.
Find in Field	Indicates the field for ALM to search in. Available from: Requirements module, all module grid views.
Value to Find	The field value for which ALM searches. The search is not case sensitive.
Search for	Instructs ALM to search for folders only, individual records only, or both folders and individual records. Available from: Component Tree, Test Plan Tree, Test Resource Tree, and Test Sets Tree.
Exact Match	Finds records with values that exactly match the specified search string.
Use Wildcard	Enables you to use asterisk (*) characters in your search string in order to type only part of the item.
Case Sensitive	Instructs ALM to distinguish between uppercase and lowercase characters.
	Searches for the specified value in a tree view. If the search is successful, the Search Results dialog box opens and displays a list of possible matches. Select a result from the list and click Go To to highlight the record in the tree. If the search is unsuccessful, an information box opens.
	Searches for the next record in the grid that matches the specified value. If the search is successful, the matching record is highlighted in the grid. If the search is unsuccessful, an information box opens.
Name to Find	The value in the Name field for which ALM searches. The search is not case sensitive. Results include records where the search string matches the value, or part of the value, of the Name field.

Replace Dialog Box



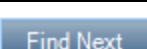
This dialog box enables you to find and replace field values in a tree or grid. You can replace a field value for a selected record, or for all records in the tree or grid.



To access	Use one of the following: <ul style="list-style-type: none">• In a grid view, select Edit > Replace.• In the Execution Grid, select Tests > Replace.
Important information	If a filter is applied to a tree or grid, the search and replace is restricted to the records currently displayed.
Relevant tasks	"How to Search and Replace ALM Data" on page 60
See also	<ul style="list-style-type: none">• "Find Dialog Box" on page 73• "Update Selected Dialog Box" on page 88

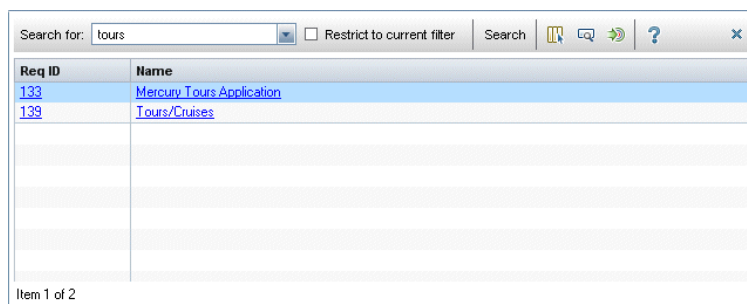
User interface elements are described below:

UI Element	Description
Find in Field	Indicates the field for ALM to search.
Value to Find	The field value for which ALM searches.
Replace with	Indicates the replacement field value.
Exact Match	Finds records with values that exactly match the specified search string.
Use Wildcard	Enables you to use asterisk (*) characters in your search string in order to type only part of the item.
Case Sensitive	Instructs ALM to distinguish between uppercase and lowercase characters.

UI Element	Description
Find in Field	Indicates the field for ALM to search.
Value to Find	The field value for which ALM searches.
	Replaces the specified field value for the selected record.
	Searches for and replaces the specified field value in all records displayed in the grid.
	Searches for the next record in the grid that matches the specified value. If the search is successful, the matching record is highlighted in the grid. If the search is unsuccessful, an information box opens.




Text Search Pane

This pane enables you to search for records in predefined fields.



To access	<p>Select Edit > Text Search. The Text Search pane opens in the lower part window.</p> <p>Available from the following modules: Requirements, Business Components, Test Plan, and Defects.</p>
Important information	<ul style="list-style-type: none"> Text search is only available if it has been enabled for the project. Contact your ALM site administrator if the search option is unavailable. Searchable text fields are predefined in Project Customization. For more details, see the <i>HP Application Lifecycle Management Administrator Guide</i>. Version Control: ALM searches only checked in versions.
Relevant tasks	"How to Search and Replace ALM Data" on page 60
See also	"Find Dialog Box" on page 73

User interface elements are described below:

UI Element	Description
Search for	<p>Indicates the keywords you want to find.</p> <p>Syntax exceptions:</p> <ul style="list-style-type: none"> Text search ignores the following: articles (a, an, the); coordinate conjunctions (and, but, for, nor, or); boolean operators (and, or, not, if, or, then). The search is not case sensitive. <p>Note:</p> <ul style="list-style-type: none"> When you enter a keyword, ALM searches the predefined fields for the keyword or variations of the keyword. For example, if you type <code>log</code>, the search will find fields containing <code>log</code>, <code>logs</code>, <code>logging</code>, and <code>logged</code>. The search will not find <code>login</code> or <code>logical</code> because these are not variations of the word. If you enter more than one keyword, the results will include all records that contain at least one of the keywords.
In	<p>Enables searching for text in Tests or Design Steps.</p> <p>Available from: Test Plan module.</p>
Restrict to current filter	Indicates whether to search all records in the module or restrict the search to the filtered records.
Search	Performs the text search on the predefined fields and displays the search results in order of relevance.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine column appearance and order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86.
	Searchable Fields. Displays the list of predefined search fields set in Project Customization.
	<p>Go to Entity. Select a record and click the button to display record details.</p> <p>Tip: Alternatively, select a record and click the <record ID> or <record Name> link.</p>

UI Element	Description
<module fields>	<p>Requirements. For details on the fields available in the Requirements module, see "Requirements Module Fields" on page 274.</p> <p>Test Plan. For details on the fields available in the Test Plan module, see "Test Plan Module Fields" on page 416.</p> <p>Defects. For details on the fields available in the Defects module, see "Defects Module Fields" on page 753.</p> <p>Business Process Testing: For details on the fields available in the Business Components module, see Business Component Module Details Fields in the <i>HP Business Process Testing User Guide</i>.</p>
Item	Number of the item selected in the search results and the total number of items found.

History Tab

This tab enables you to view a list of changes made to the currently selected entity. In addition, this tab displays a history of baselines in which the entity appears.

Version	Date	Modified by	Baselines
2	7/14/2010 7:49:24 PM	alex_alm	
1	7/14/2010 7:44:40 PM	alex_alm	Release 10.5

Comment for selected version:

To access	Click the History tab or button.
Important information	For details on preserving the history of changes made to a field, see the <i>HP Application Lifecycle Management Administrator Guide</i> .
Relevant tasks	"How to Display ALM Data" on page 58

Baselines Tab

This tab displays previous versions of entities stored in a particular baseline. For more details, see ["Baselines Tab" on page 229](#).


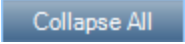
Versions Tab

Version Control: This tab is displayed when version control is enabled for a project. For details, see ["Versions Tab" on page 120](#).

Audit Log Tab

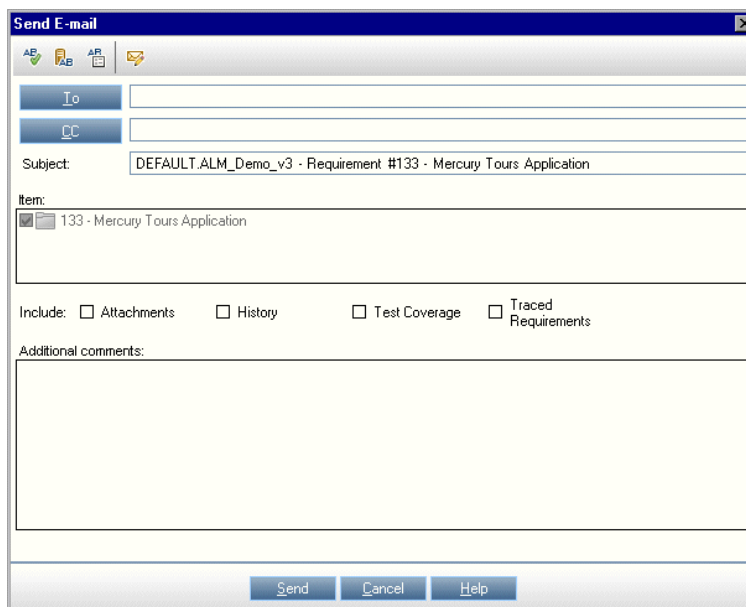
This tab displays the date and time of the change and the name of the user who made the change to the entity.

User interface elements are described below:


UI Element	Description
Field	Specifies which field changes are displayed in the grid. To view changes made to all fields, select <All> .
 	Expands or collapses all changes displayed in the grid.
Field Name	The field modified during the change.
Old Value	The prior field value.
New Value	The current field value.

Send E-mail Dialog Box





This dialog box enables you to send an email about an entity to other users. A link is included in the email message that enables the recipient to go directly to the entity.



The "Send E-mail" dialog box is shown. It has a title bar with "Send E-mail" and a close button. Below the title bar are icons for "To", "Cc", and "Subject". The "To" field is empty. The "Cc" field is empty. The "Subject" field contains "DEFAULT.ALM_Demo_v3 - Requirement #133 - Mercury Tours Application". Below the subject field is a section labeled "Item:" with a list box containing "133 - Mercury Tours Application" (selected). Below the list box are four checkboxes: "Include: Attachments", "History", "Test Coverage", and "Traced Requirements". Below these checkboxes is a text area labeled "Additional comments:". At the bottom are three buttons: "Send", "Cancel", and "Help".

To access	<p>Select one or more entities. Click the Send by E-mail arrow  and choose one of the following options:</p> <ul style="list-style-type: none"> • Send by E-mail. Sends email to recipients selected from a list. • Send by E-mail to <specific recipient >. Sends email to a specific recipient. For example, in the Requirements module, choose Send by E-mail to Author to send the email to the user who wrote the requirement.
Important information	<ul style="list-style-type: none"> • The following are automatically included in the email: <ul style="list-style-type: none"> ■ Link to the entity ■ Summary of the entity ■ Sender comments (specified using the "Additional Comments" on page 82 user interface element) ■ Details <p>To include additional items, see the "Include" on page 82 UI element.</p> • By default, after clicking Send, the email is queued to be sent (asynchronously) and you can continue working. If the send operation fails, you receive an email indicating undeliverable mail. <p>To send mail synchronously (meaning, the send operation is attempted immediately and, when completed, you can continue working), edit the ASYNC_MAIL_ENABLED parameter in the Site Configuration tab in Site Administration. For more details, see the <i>HP Application Lifecycle Management Administrator Guide</i>.</p> <ul style="list-style-type: none"> • By default, ALM sends emails in HTML format. To send emails as plain text instead, edit the MAIL_FORMAT parameter in the Site Configuration tab in Site Administration. For more details, see the <i>HP Application Lifecycle Management Administrator Guide</i>. • By default, the link to the entity that is included in the email message contains the path using the default mail server host name and port number. To modify the link's path to a different mail server, edit the ENTITY_LINK_HOST and ENTITY_LINK_PORT parameters in the Site Configuration tab in Site Administration. For more details, see the <i>HP Application Lifecycle Management Administrator Guide</i>. • By default, the maximum email attachment size is limited. If the attachment size is greater than the specified value, the email is sent without the attachment. To modify the attachment size limit, edit the ATTACH_MAX_SIZE parameter in the Site Configuration tab in Site Administration. For details, see the <i>HP Application Lifecycle Management Administrator Guide</i>.

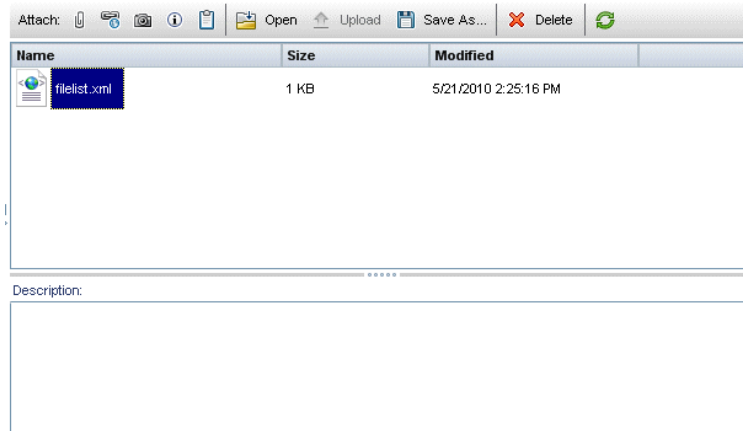
User interface elements are described below:



UI Element	Description
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Custom. Opens the Select Fields dialog box, enabling you to determine which fields to display in the email. For more details, see " Select Columns/Select Fields Dialog Box " on page 86.
To/CC	Indicates a valid email address or user name. Alternatively, click the To button or CC button to select users. The Select Recipients dialog box opens. Select the users or user groups to which you want to send the email.
Subject	The subject for the email. Default value: The domain, project, entity ID (if applicable), and entity name are displayed.
Item	The entity name.

UI Element	Description
Include	<p>Enables you to include the following:</p> <ul style="list-style-type: none"> • Activities. Only available from the Business Models module. • Attachments. • Design Steps. Only available from the Test Plan module. • History. • Linkage. Only available from the Business Models module. • Paths. Only available from the Business Models module. • Snapshot. Only available from the Business Components module. • Test Coverage. Only available from the Requirements module. • Traced Requirements. Only available from the Requirements module. • Run Steps. Only available from: <ul style="list-style-type: none"> ■ The Test Lab module. ■ If the run is linked to a defect, the Linked Entities tab in the Defects module. • Runs. Only available from: <ul style="list-style-type: none"> ■ The Test Lab module for test instances. ■ If the test instance is linked to a defect, the Linked Entities tab in the Defects module. <p>Note:</p> <ul style="list-style-type: none"> • As soon as one of the above items is selected for inclusion, Parameters are also included in the email, provided that parameters exist for the entity and the parameters have values. • The Include option is not available from the Test Resources module.
Additional Comments	<p>Enables you to add comments about the email.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Send	Sends the email to the specified distribution list.



Attachments Page






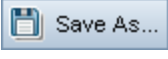


This page enables you to add and manage attachments to ALM records. You can attach a file, URL, snapshot of your application, items from the Clipboard, or system information.



To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> Click the Attachments button  in a toolbar. Click the Attachments button in a dialog box sidebar. Click the Attachments tab.
Important information	<p>When you add an attachment, ALM adds the attachment icon  to the record.</p>
Relevant tasks	<p>"How to Modify Attachments" on page 59</p>

User interface elements are described below:



UI Element	Description
	<p>File. Opens the Open dialog box, enabling you to add a file attachment to an ALM record.</p> <p>Tip: To add an email as an attachment to a record, save the email on your desktop and then use the Open dialog box to add it.</p>
	<p>URL. Opens the Attach Uniform Resource Locator (URL) dialog box, enabling you to add a URL attachment to an ALM record. This can be any valid URL scheme such as HTTP, FTP, Gopher, News, Mailto, or File.</p>

UI Element	Description
	<p>Snapshot. Opens the Snapshot dialog box, enabling you to add an image of your application to an ALM record. For more details, see "Snapshot Dialog Box" on next page.</p> <p>Snapshot attachments are assigned a .jpg extension.</p>
	<p>System Info. Opens the System Information dialog box, enabling you to attach system information about your machine to an ALM record.</p> <p>System information attachments are assigned a .tsi extension.</p>
	<p>Clipboard. Attaches the Clipboard content to an ALM record.</p> <p>Copy a text string or an image to the Clipboard and click the Clipboard button. A text string is assigned a .txt extension. An image is assigned a .jpg extension.</p>
	<p>Download and Open. Opens the selected attachment by downloading it to a local directory on your client machine and opening it in the associated application. You can view or modify an open attachment.</p>
	<p>Upload Selected. Uploads the modified attachment to your ALM project. For more details, see "How to Modify Attachments" on page 59.</p>
	<p>Save Attachment. Saves the copy of a selected attachment to your client machine.</p> <p>Note: Not available when adding attachments to a new entity.</p>
	<p>Delete Selected. Deletes the selected attachment. To select more than one attachment, use the CTRL key.</p>
	<p>Refresh All. Refreshes the list of attachments on the page.</p>
Name	<p>The attachment name. An icon for the application associated with the attachment appears next to the name. To rename the attachment, right-click and select Rename.</p>
Size	<p>The size of the attachment.</p>
Modified	<p>The date that the attachment was last modified.</p>
Description	<p>Describes the attachment.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>


Snapshot Dialog Box

This dialog box enables you to capture and attach images of your application to an ALM record.



To access	Use one of the following: <ul style="list-style-type: none">• In the Attachments page, click the Snapshot button .• In the Business Components module, click the Snapshot tab and then click the Snapshot button .
------------------	---

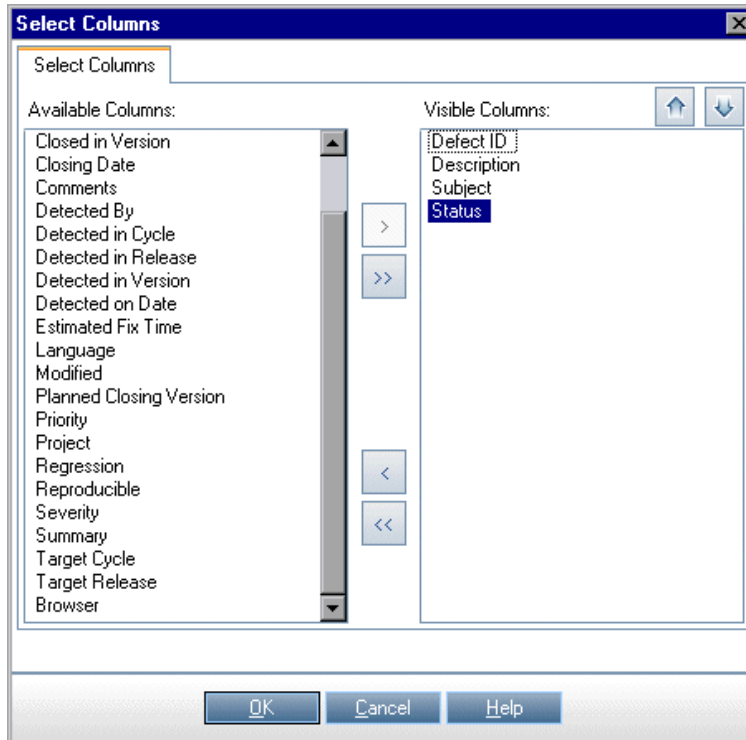
User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
	Drag the camera icon onto an object that you want to capture.
Zoom Out	Reduces the magnification level of the captured image.
Zoom In	Magnifies the captured image.
Normal	Restores to the original magnification level of the captured image.
<Image area>	Displays the captured image.
Attach	Adds the snapshot to the ALM record.

Select Columns/Select Fields Dialog Box





The Select Columns dialog box enables you to specify which columns are displayed in ALM and the order in which they appear.

The Select Fields dialog box enables you to specify which fields are displayed when sending emails about entities to other users.



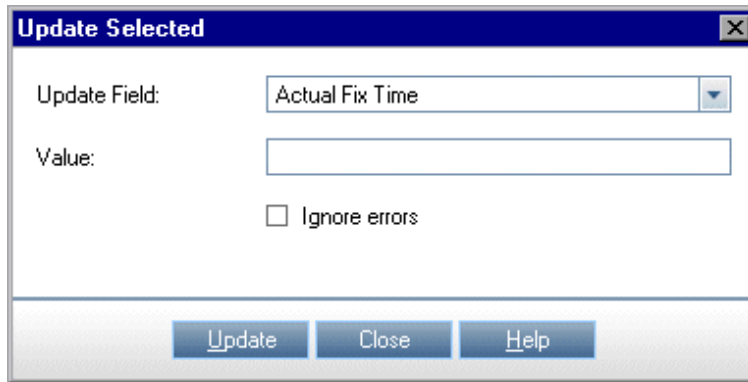
To access	<p>Select Columns dialog box:</p> <p>Use one of the following:</p> <ul style="list-style-type: none">• Select View > Select Columns.• In the Execution Grid, select Tests > Select Columns. <p>Select Fields dialog box:</p> <p>In the Send E-mail dialog box, click the Custom button.</p>
Important information	<p>ALM Editions: Not all fields and functionality are available for ALM Essentials Edition.</p>
Relevant tasks	<p>"How to Display ALM Data" on page 58</p>

User interface elements are described below:

UI Element	Description
Type	Displays the test fields related to a selected test type in the Available Columns list. Note: Available only in the Test Plan and Test Lab modules.
Requirement Type	Displays the requirement fields related to a selected requirement type in the Available Columns list. Note: Available only in the Requirements module.
Hide Risk-Based Quality Management Columns	Hides the requirement fields related to risk-based quality management from the Available Columns list. Note: Available only in the Requirements module.
Available Columns	Lists columns that are not currently displayed.
	Moves selected fields between Available Columns and Visible Columns . Tip: You can also drag the field names between panes or double-click a field name to move it across to the other pane.
	Moves all fields between Available Columns and Visible Columns .
Visible Columns	Lists columns that are currently displayed. Note: Columns displayed with the  icon cannot be removed from the Visible Columns list.
	Sets the order in which column names appear in Visible Columns . Tip: You can also drag the column names up or down.

Update Selected Dialog Box

This dialog box enables you to update a field value for multiple records in a grid or a tree.



To access	Right-click selected multiple records and select Update Selected . Available from the following modules: Requirements, Test Plan (Test Grid only), Test Lab (Execution Grid tab), Build Verification, and Defects.
Relevant tasks	"How to Search and Replace ALM Data" on page 60
See also	"Replace Dialog Box" on page 75

User interface elements are described below:

UI Element	Description
Update Field	Identifies the field to be updated.
Value	The replacement value for the selected field.
Update	Indicates the number of values that were updated, and the number of instances where the values were not updated.

Set Default Values Dialog Box

This dialog box enables you to set default values for certain fields for tests, test configurations, design steps, and defects.


You can select field values as default values for the 'Defect' entity. The values are entered in the order listed below. You can change the order using the up/down buttons.

Field: Values:




Selected values:

Field	Values
Status (BG_STATUS)	New
Description (BG_DESCRIPTION)	Problem: To reproduce: Expected: Actual
Priority (BG_PRIORITY)	1-Low
Severity (BG_SEVERITY)	1-Low

☒ When creating a new entity, use these defaults automatically

To access	<ul style="list-style-type: none"> From the Test Plan Module window, the Test Configurations tab in the Test Plan module, and the Defects Module window, choose Edit > Set Default Values. From the New Test dialog box, the New Design Step dialog box, and the New Defect Dialog box, click . <p>Available from the following modules: Test Plan and Defects</p>
Important Information	<ul style="list-style-type: none"> Each user sets his/her own default values for each entity. To clear default values, choose Edit > Clear Default Values. The size of default field values per module per user is limited to 5K. Your project may contain a workflow that enables you to specify that a different field list be used for a (secondary) field depending on the value of another (primary) field. In this case, the order in which you add fields to the list in the Set Default Values dialog box is important. First add the primary field to the list, and then add the secondary field. (You can also reorder the fields as necessary.) This ensures that the list of possible default values displayed for the secondary field are viable according to the selected primary field value and defined workflow rules. <p>For details about workflow and dependencies between field values and lists, see the <i>HP Application Lifecycle Management Administrator Guide</i>.</p>

User interface elements are described below:

UI Element	Description
Field	<p>Identifies the field for which to set a default value.</p> <p>Click the down arrow to see a drop-down list of the fields for which you can specify a default value.</p> <p>Tip: ALM does not support the setting of default values for all fields. Additionally, workflow rules based on events (such as fieldChange or fieldCanChange) can be defined to set certain fields to read-only or invisible. Fields whose default values cannot be set, read-only fields, and invisible fields are not displayed in the drop-down list.</p>
Value	<p>The default value for the selected field.</p> <p>For memo fields, date fields, and fields with user-defined lists, click the down arrow to open up a window that enables you to type text or select values from a list.</p>
	<p>Adds the Field and Value values to the grid.</p> <p>Tip: To modify the default value for a field that was already added to the list, add it again. You are prompted to override the original one.</p>
	<p>Removes the selected fields and their values from the grid.</p>
	<p>Moves the selected fields and their values up or down in the grid.</p> <p>Note: Reordering the fields in the list helps ensure that the list of possible default values displayed for each field are available and viable according to defined workflow rules. For details, see "Important Information" on previous page.</p>
Selected values	<p>Grid listing fields whose default values are set.</p> <p>Reordering the fields in the grid helps ensure that the list of possible default values displayed for each field are available and viable according to defined workflow rules. For details, see "Important Information" on previous page.</p>
When creating a new entity, use these defaults automatically	<p>If checked, indicates that when you create a new entity, the default values for that entity's fields are automatically filled in.</p> <p>If unchecked, default values are not filled in automatically. To use default values, click the Use Default Values button when creating the entity. For user interface details, see "New Test Dialog Box" on page 420, "New Test Configuration/Test Configuration Details Dialog Box " on page 482, or "New Defect Dialog Box" on page 756.</p>

Chapter 4

Alerts and Flags

This chapter includes:

- Alerts Overview..... 92
- Follow Up Flags Overview..... 93
- How to Use Alerts..... 93
- Alerts and Flags User Interface..... 97



Alerts Overview

When a requirement, test, or defect changes, HP Application Lifecycle Management (ALM) can alert the associated entities and notify those responsible for any associated entities. Your project administrator can activate alert rules based on associations you make between requirements, tests, and defects. The alert rules are based on the following associations you can create:

- You can associate a test in the test plan tree with a requirement. This is accomplished by creating **requirements coverage** in the Test Plan module, or by creating **tests coverage** in the Requirements module. For more information, see ["Requirement and Test Coverage Overview" on page 428](#).
- You can associate a test instance with a defect. This is performed by creating **Linked Defects** in the Test Plan module, or by adding a defect during a manual test run. For more information, see ["Defect Linkage" on page 738](#).
- You can create **traceability links** between requirements in the Requirements module. For more information, see ["Requirements Traceability Overview" on page 290](#).

After you establish associations in your project, you can track changes using these associations. When an entity in your project changes, ALM alerts any associated entities that may be impacted by the change. The alert can be seen by all users, and also notifies the person responsible for the entity at the time of the change of any associated entities that may be impacted by the change.

In the Alerts column in a tree or grid view, the Alerts flag indicates the following:

- A red alert flag  indicates that the alert is new.
- A gray alert flag  indicates that the alert has already been read.

Version Control: ALM alerts associated entities only when a new version is checked in. The alert states that the version status has changed to **Checked In**. It does not indicate which fields have been modified. You can then compare the new version with the previous version. For more information on comparing versions, see ["Versions Tab" on page 120](#).

Note: While the entity is checked out, changes made to non-versioned fields continue to generate regular alerts, indicating which field was changed. For more information on non-versioned fields, see ["Non-versioned Fields" on page 112](#).


Your ALM project administrator can activate four alert rules:

Rule	Description	Entities Flagged	User Notified by Email
1	<p>When a requirement is modified, alert the associated tests.</p> <p>Note: A change to the requirement can be any modification, excluding changes to the Direct Cover Status field and the risk-based quality management fields.</p>	Tests covering the requirement.	Test designer.
2	When a defect status changes to "Fixed", alert the associated test instances.	Test instances associated with the defect.	Responsible tester for the test instance.
3	When a test runs successfully (status changes to "Passed"), alert the linked defects.	Defects linked to the test run.	User assigned the defect.
4	When a requirement is modified or deleted, alert traced to requirements and child requirements.	The requirement's child requirements and traced to requirements.	Author of the requirement.

For details on activating alert rules in Project Customization, refer to the *HP Application Lifecycle Management Administrator Guide*.

For more details on working with Alerts, see ["How to Use Alerts" below](#).

Follow Up Flags Overview

You can add a follow up flag  to a specific requirement, test, test instance, or defect to remind yourself to follow up on an issue. For example, you can set a follow up flag on a defect to remind yourself to check the status in a week.

When you add a follow up flag, ALM adds a gray flag icon to the record. When the follow up date arrives, ALM sends you email and changes the flag icon to red.

A follow up flag is specific to your user login name. Anyone else viewing the record does not see your follow up flag. You can open the follow up flag at any time to view or modify the details.

For details on the user interface, see ["Flag For Follow Up Dialog Box" on page 98](#).

How to Use Alerts

This task describes how to work with automatic notification alerts to keep track of changes made to your requirements, tests, and defects.

To learn more about alerts, see ["Alerts Overview" on previous page](#).

For a use-case scenario related to this task, see ["How to Work with Alerts - Use-Case Scenario" on next page](#).

This task includes the following steps:


- ["Prerequisites" below](#)
- ["View alerts" below](#)
- ["Clear alerts" below](#)

1. Prerequisites

Verify that alert rules are activated for your project. Alert rules, activated by the project administrator, instruct ALM to send email to notify those responsible when changes occur in your project. For details, refer to the *HP Application Lifecycle Management Administrator Guide*.


2. View alerts

View alerts for a single record, or for all records in a module.

- **View Alerts for a Record.** In a tree or grid view, click the **Alert** flag  in the Alerts column. If this column is not visible, select **View > Indicator Columns**. For user interface details on the Alerts dialog box, see ["Alerts Dialog Box" on page 97](#).
- **View Alerts for a Module.** To view a list of all alerts for a selected module, in the **Filter** dialog box > **Cross Filter** tab, select the **Show <entity> with alerts** option. For user interface details on the Filter dialog box, see ["Filter Dialog Box" on page 61](#).

3. Clear alerts

Clear alerts for a single record, or for all records in a module.

- **Clear Alerts for a Record.** For a selected record, you can clear an individual alert or all alerts in the Alerts dialog box.
 - To clear a single alert, click **Clear Alert**  for the alert.
 - To clear all alerts for the record, click the **Clear All** button.

For user interface details on the Alerts dialog box, see ["Alerts Dialog Box" on page 97](#).

- **Clear Alerts for a Module.** You can clear all the alerts associated with all the records in an ALM module.
 - In the Requirement, Test Plan, or Defects module, select **Edit > Clear Alerts**.
 - In the Test Lab module, select **Tests > Clear Alerts**.

Only alerts associated with records that match the current filter are cleared. In addition, you can only clear alerts that are assigned to you, or that are not assigned to any user. The user to whom an alert is assigned is the user who receives email notification when the alert is triggered. This user is listed in the Alerts dialog box for the alert. For details on alert rules and the users that are sent email notification, see ["Alerts Overview" on page 92](#).

How to Work with Alerts - Use-Case Scenario

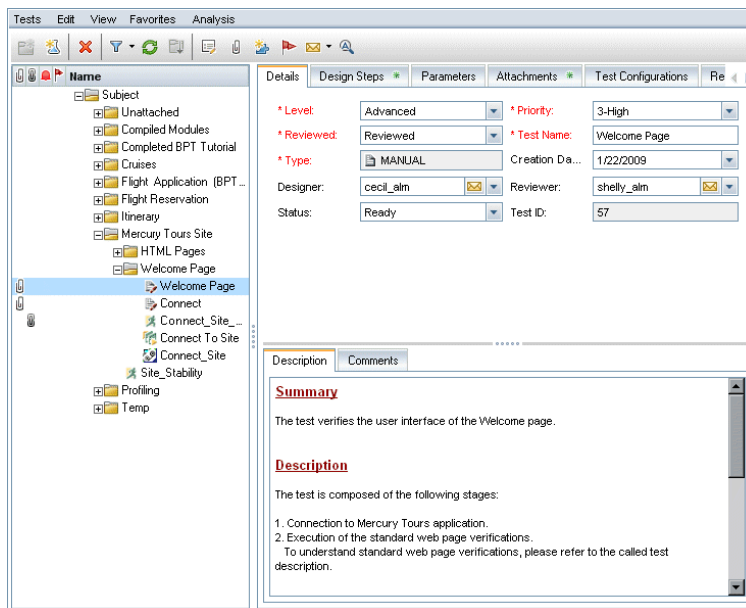
This use-case scenario provides an example of working with alerts in ALM.

Note: For a task related to this scenario, see ["How to Use Alerts" on page 93](#).

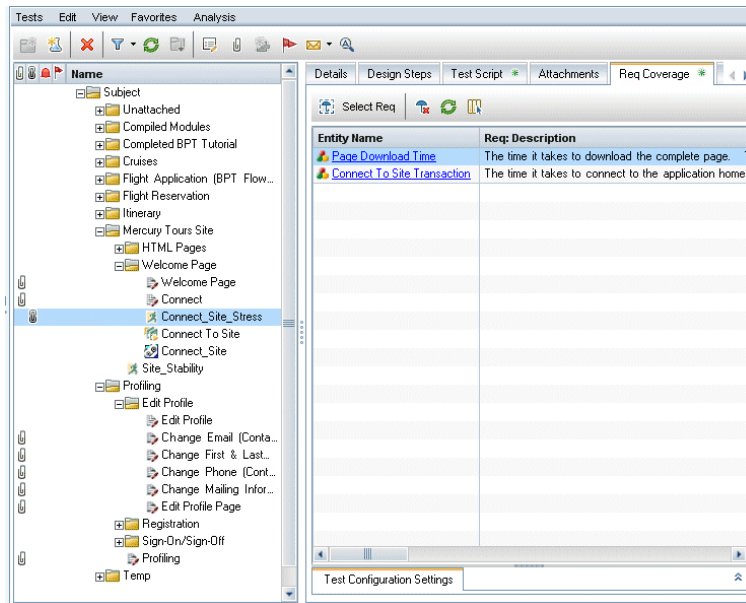
Suppose you are using the **ALM_Demo** project based on the Mercury Tours application. In Project Customization, your project administrator activates the first rule: **When a requirement is modified, alert the associated tests**. The project administrator also specifies that notifications be sent by email.

In the Requirements module, your QA manager defines the requirement **Page Download Time** (under **Application Performance**).

In the Test Plan module, the QA manager then defines a new test **Connect_Site_Stress** for this requirement (under **Mercury Tours Site > Welcome Page**). In the **Details** tab, the project administrator assigns the new test to designer Cecil.

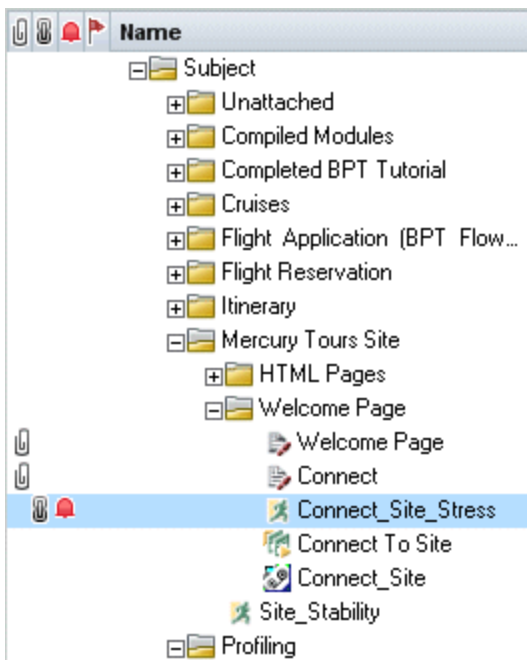


In the **Req Coverage** tab, the QA Manager links the **Connect_Site_Stress** test to the **Page Download Time** requirement.



A QA tester, Mike, reviews the requirement **Page Download Time** and decides that 10 seconds to download the page is too long. He changes the requirement description to 7 seconds. As a result, Cecil now needs to adjust his test **Connect_Site_Stress** so that it meets the changed requirements.

With the rule activated, Mike's change to the requirement causes ALM to flag the associated test. This alert can be seen by Cecil, the designer responsible for the test, and all other project users.



When clicking the Alerts flag, the Alerts dialog box opens and displays the details of the change. For user interface details, see ["Alerts Dialog Box" on next page](#).

In addition, Cecil (being the test's designer) receives an automatic ALM notification email message that describes the change Mike made to the **Page Download Time** requirement and recommends

that Cecil check the associated test, **Connect_Site_Stress**. Cecil clicks a link to open ALM and display the specified requirement or test.

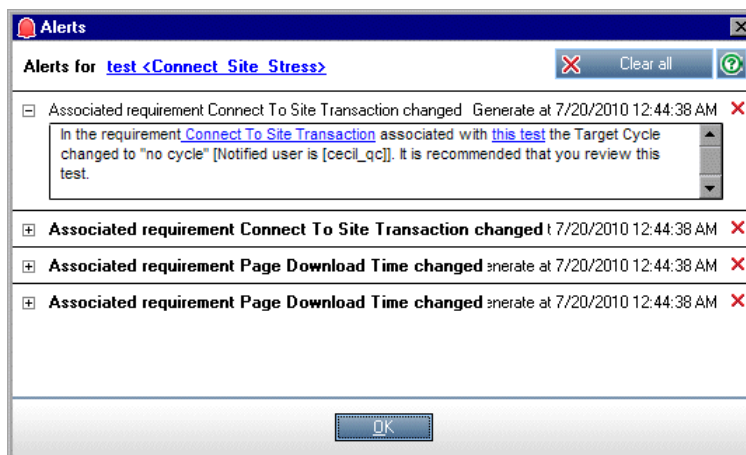
Alerts and Flags User Interface


This section includes:

Alerts Dialog Box	97
Flag For Follow Up Dialog Box	98

Alerts Dialog Box



This dialog box enables you to view a list of alerts for a selected record.



To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> In a tree or grid view, click the Alerts flag  in the Alerts column. If this column is not visible, select View > Indicator Columns. Right-click the entity and select Alerts. <p>Available for:</p> <ul style="list-style-type: none"> Requirements Tests in the Test Plan module Test instances in the Execution Grid Defects
Important information	<p>You can only clear alerts that are assigned to you, or that are not assigned to any user. The user to which an alert is assigned is the user that is sent email notification when the alert is triggered. For more details, see "Alerts Overview" on page 92.</p>

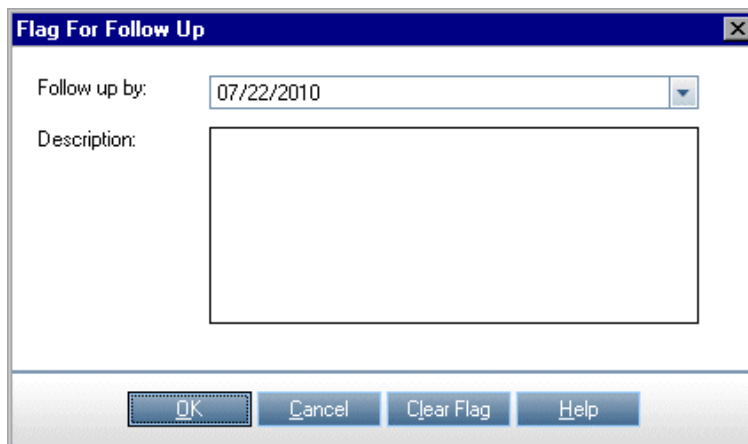
Relevant tasks	"How to Use Alerts" on page 93
See also	"Alerts Overview" on page 92

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
	Deletes all alerts for the record.
	Clear Alert. Deletes the specific alert.
<Alert details pane>	Displays a list of alerts for the selected record. Expand an alert to view details of the change that triggered the alert. Click a link to highlight the item in the tree or grid.
<Selected record>	Displays the type and name of the selected record. For example, "Alerts for Requirement <Travel Guides> ".


Flag For Follow Up Dialog Box

This dialog box enables you to create, view, and modify follow up flags to remind yourself to follow up on an issue.

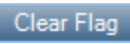


The dialog box titled "Flag For Follow Up" contains the following elements:

- Follow up by:** A text field with the date "07/22/2010" and a dropdown arrow.
- Description:** A large, empty text area for entering details.
- Buttons:** Four buttons at the bottom: "OK", "Cancel", "Clear Flag", and "Help".

To access	<p>Use one of the following:</p> <ul style="list-style-type: none">• Right-click a record and select Flag for Follow Up.• To view or modify an existing flag: In a tree or grid view, click the flag icon  in the Follow Up Flag column. If this column is not visible, select View > Indicator Columns. <p>Available for:</p> <ul style="list-style-type: none">• Requirements• Tests in the Test Plan module• Test instances in the Execution Grid• Defects
See also	"Follow Up Flags Overview" on page 93

User interface elements are described below:

UI Element	Description
Follow up by	The date on which ALM sends you a follow up email.
Description	The reminder text in the follow up email ALM sends you.
	Removes the follow up flag.

Chapter 5

Favorite Views

This chapter includes:

Favorite Views Overview.....	102
How to Use Favorite Views.....	102
Favorite Views User Interface.....	103

Favorite Views Overview

You determine the way an HP Application Lifecycle Management (ALM) window looks by selecting certain settings for it. For example, these settings may include applying a filter to grid columns, or sorting fields in a grid. You can save this view as a **favorite view** to be reloaded and used in the future.

You decide if others have accessibility to the favorite views by saving them to either a public folder or a private folder. Views in a **public** folder are accessible to all users. Views in a **private** folder are accessible only to the user who created them.

You can create subfolders to help you organize your favorite views. For example, you can create folders for different products, releases, or teams.

Consider the following when working with favorite views:

- A favorite view is unique to the module in which the view is created. For example, the Favorites menu in the Defects module contains only favorite views created for the Defects module.
- A favorite view includes the module view setting in which you create it, such as grid or tree view. For example, if you create a favorite view in the test plan tree view, and then load that favorite from the test grid view, ALM switches back to the test plan tree view.

In contrast, all Requirements module views except for the Requirements Grid view share favorite views. For example, if you create a favorite view in the Requirement Details view, loading the favorite from the Coverage Analysis view does not switch back to the Requirement Details view.

Some favorite view commands are accessible only to certain user groups. For more information on user group privileges, refer to the *HP Application Lifecycle Management Administrator Guide*.

For details on working with favorite views, see ["How to Use Favorite Views"](#) below.

How to Use Favorite Views

This task describes how to work with favorite views in an ALM project.

To learn more about favorite views, see ["Favorite Views Overview"](#) above.

This task includes the following steps:

- ["Add a Favorite View"](#) below
- ["Load a Favorite View"](#) on next page
- ["Update a Favorite View"](#) on next page
- ["Organize Favorite Views"](#) on next page

Add a Favorite View

Arrange an ALM window to meet your needs and save it as a favorite view.

1. Determine the way an ALM window looks by selecting certain settings for it. For example, this can include applying a filter, or sorting fields in a grid. For task details on displaying ALM data,

see ["How to Display ALM Data" on page 58](#).

2. Select **Favorites > Add to Favorites**. For user interface details on the Add Favorite dialog box, see ["Add Favorite Dialog Box" on next page](#).

Load a Favorite View

Load an existing view in an ALM window by selecting a recently used favorite view, or by selecting a view from a private or public folder.

- **Load a recently used favorite view.** Open the **Favorites** menu and select a view.

Note: By default, ALM displays the four most recently used views on the **Favorites** menu. You can define the number of views displayed on the menu by setting the **FAVORITES_DEPTH** parameter in the Site Configuration tab in Site Administration. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

- **Load a favorite view.** Select **Favorites > Private** or **Favorites > Public** and select a view.

Update a Favorite View

You can update the settings of an existing favorite view.

1. Load a favorite view from the **Favorites** menu.
2. Make changes to the view.
3. Select **Favorites > Add to Favorites**. The Add Favorite dialog box opens.
4. In the Favorites list, select the view name and click **OK**.
5. Click **OK** to overwrite the previous settings.

Organize Favorite Views

Organize your favorite views in private or public folders, or delete views no longer in use. From the menu bar, select **Favorites > Organize Favorites**. For user interface details on the Organize Favorites dialog box, see ["Organize Favorites Dialog Box" on page 105](#).

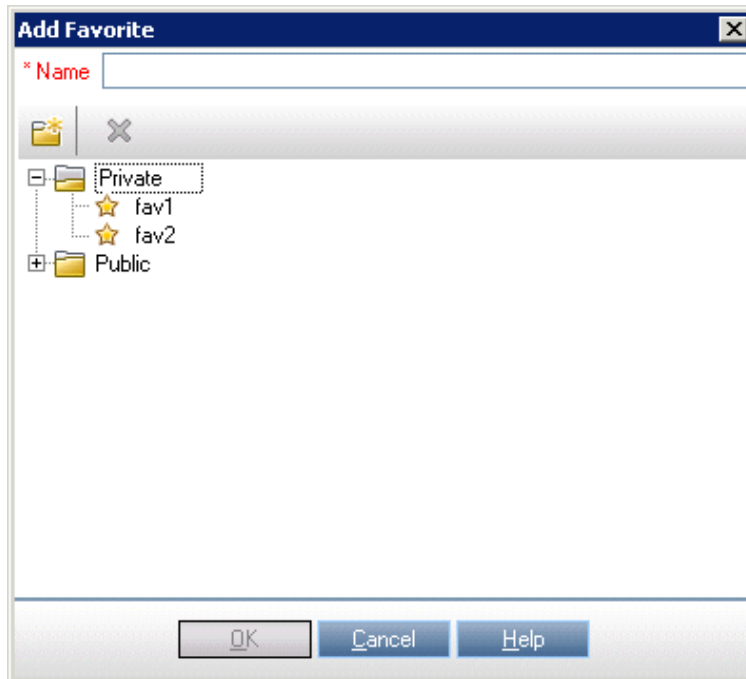
Favorite Views User Interface

This section includes:

Add Favorite Dialog Box	104
Organize Favorites Dialog Box	105



Add Favorite Dialog Box

This dialog box enables you to add a favorite view to your private folder or to a public folder.



To access	From a menu bar, select Favorites > Add to Favorites . Available from the following modules: Requirements, Test Plan, Test Lab, and Defects
Relevant tasks	"How to Use Favorite Views" on page 102
See also	"Favorite Views Overview" on page 102

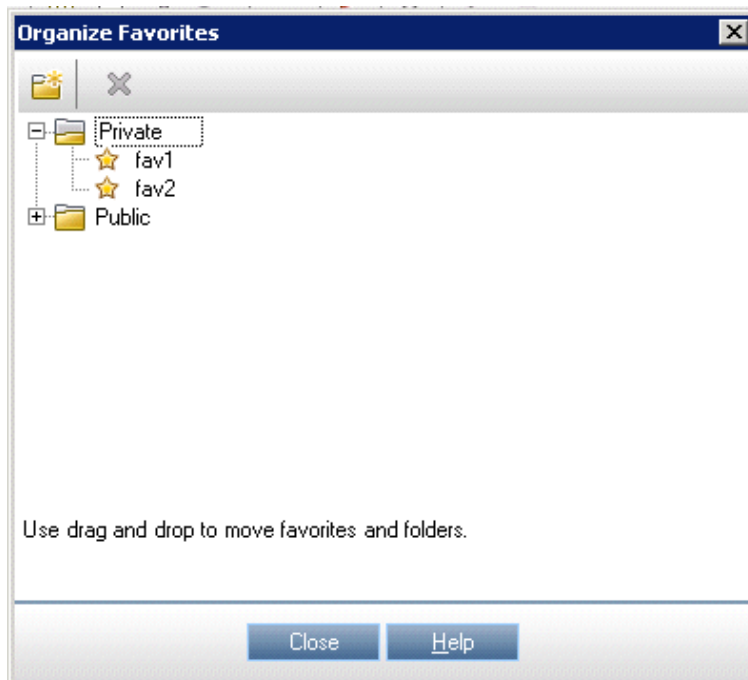
User interface elements are described below:

UI Element	Description
Name	The name of the favorite view.
	New Folder. Opens the New Favorite Folder dialog box, enabling you to add a folder under a selected folder.
	Delete. Deletes the selected favorite or folder. Deleting a favorite folder also deletes its subfolders and favorite views.
Private	Favorite views in this folder can only be accessed by you. You cannot delete the Private folder.

UI Element	Description
Public	Favorite views in this folder can be accessed by all users of the project. You cannot delete the Public folder.



Organize Favorites Dialog Box

This dialog box enables you to organize the list of favorite views in private and public folders.



To access	From a menu bar, select Favorites > Organize Favorites . Available from the following modules: Requirements, Test Plan, Test Lab, and Defects
Important information	Drag and drop favorite views to move them between folders. Note: You cannot drag and drop favorite views between private and public folders.
Relevant tasks	"How to Use Favorite Views" on page 102
See also	"Favorite Views Overview" on page 102

User interface elements are described below:

UI Element	Description
	New Folder. Opens the New Favorite Folder dialog box, enabling you to add a folder under a selected folder.
	Delete. Deletes the selected favorite or folder. Deleting a favorite folder also deletes its favorite views and subfolders.
Private	Favorite views in this folder can only be accessed by you. You cannot delete the Private folder.
Public	Favorite views in this folder can be accessed by all users of the project. You cannot delete the Public folder.
Rename	Right-click a favorite view or folder and select Rename . You cannot rename the Private folder or the Public folder.

Chapter 6

Version Control

This chapter includes:

- Version Control Overview..... 108
- How to Use Version Control..... 109
- How to Filter by Version Control Fields..... 111
- Non-versioned Fields..... 112
- Moving, Copying, and Deleting Checked-out Entities..... 112
- Version Control User Interface..... 113

Version Control Overview

In a version control enabled project, you can create and manage HP Application Lifecycle Management (ALM) entities while maintaining previous versions of these entities. This includes requirements, tests, test resources, business process models, and business components.



To make changes to an entity in a version control enabled project, you must first check out the entity. When you check out an entity, ALM locks the entity, preventing other users from overwriting any changes you make. The checked out version of the entity is not visible to other users.

When you finish making changes, you check in the entity. The new version of the entity is then available to other users.

You can view all previous versions of an entity, or check out an earlier version. You can also compare two versions of an entity to view the changes between versions.

Note: Version control applies to single entities only. To maintain usability and data integrity, ALM stores previous versions of an entity without data related to relationships between entities. When an entity is checked in, only data of the individual entity is stored. The following data is not stored for versions: requirements and tests coverage, requirements traceability, and defect linkage. In addition, risk data is also not stored for previous versions of an entity.

Baselines provide a snapshot of a set of entities and the relationships between them. For more details, see ["Baselines Overview" on page 208](#).

You can create and manage entities in a version control enabled project. An entity checked out by the current user is displayed with an open green lock icon . An entity checked out by another user is displayed with a red lock icon . Grid views contain additional version control fields, such as Version Status, indicating whether the entity is checked in or checked out.

For details on ALM fields not stored under version control, see ["Non-versioned Fields" on page 112](#).

For more details on working with version control, see ["How to Use Version Control" on next page](#).

Examples

The following examples demonstrate when you can use version control.

- **Monitor changes and compare versions.**

Kelly, the product manager, finds that product development is being implemented differently than she had expected. She reviews the requirements for the product and discovers that some have changed. She compares the current requirements with the versions of the requirements that were agreed upon at the start of the release.

- **Restore an earlier version.**

Michael, a QA tester, receives a new build of the banking application currently being developed. He starts to update the relevant tests to meet the needs of the new release. Then the development team sends out notification of a significant problem with the build.

Development rolls back to the previous build. Michael decides to check out and revert back to the versions of tests that were used for the previous build and continue testing from there.

- **Lock entities for editing.**

Robert, a business analyst, wants to update certain functionality for an application. To do this, he needs to update a set of requirements. He requires several days to update the requirements, and does not want anyone else to make any changes to the requirements while he is editing them. Robert checks out the relevant requirements, and starts to edit.

How to Use Version Control

This task describes how to work with version control in an ALM project. Version control enables you to create and manage ALM entities while maintaining previous versions of these entities.

To learn more about version control, see "[Version Control Overview](#)" on [previous page](#).

Note: Version control functionality is available in the following modules: Requirements, Business Models, Test Plan, and Test Resources.

This task includes the following steps:

- "[Prerequisites](#)" below
- "[Check out an entity](#)" below
- "[Undo a checkout - optional](#)" on next page
- "[Check in an entity](#)" on next page
- "[View all checked out entities - optional](#)" on next page
- "[Access version history](#)" on next page
- "[Copy, move, or delete checked-out entities](#)" on page 111

1. Prerequisites

Verify that version control is enabled for your project. For details on enabling version control, refer to the *HP Application Lifecycle Management Administrator Guide*.

2. Check out an entity

To make changes to an entity in a version control enabled project, the entity must be checked out.

Use one of the following:

- **Automatic checkout.** When you start editing an entity, ALM displays the Check Out dialog box, enabling you to check out the entity.

To instruct ALM to automatically check out entities that you start editing, without displaying the Check Out dialog box, click **Don't show this again** in the Check Out dialog box.

- **Manual check out.** Select one or more entities. On the module toolbar, click **Check Out**



For user interface details on the Check Out dialog box, see ["Check Out Dialog Box"](#) on page 117.

3. Undo a checkout - optional

When an entity is checked out, you can undo the checkout to cancel your changes. Right-click the entity and select **Versions > Undo Check Out**. For more details on the Undo Check Out command, see ["Versions Menu and Buttons"](#) on page 113.

4. Check in an entity

When you finish making changes, check in the entity to create a new, updated version available to other users.

Use one of the following:

- **Check in a single entity.** Right-click the entity and select **Versions > Check In**.


- **Check in multiple entities.** Select the entities. On the module toolbar, click **Check In**



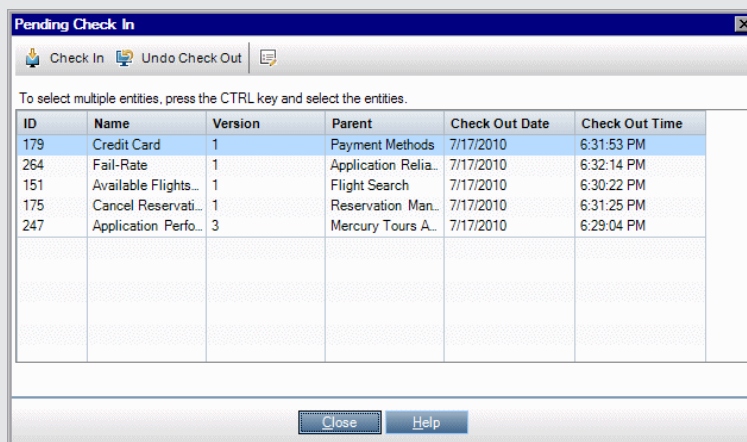
For user interface details on the Check In dialog box, see ["Check In Dialog Box"](#) on page 116.

5. View all checked out entities - optional

You can view all entities in the current module that you have checked out, and check in or undo the checkout for selected entities.

Click the **Check In** button  in the top right corner of the ALM window. For user interface details on the Pending Check In dialog box, see ["Pending Check In Dialog Box"](#) on page 118.

Example

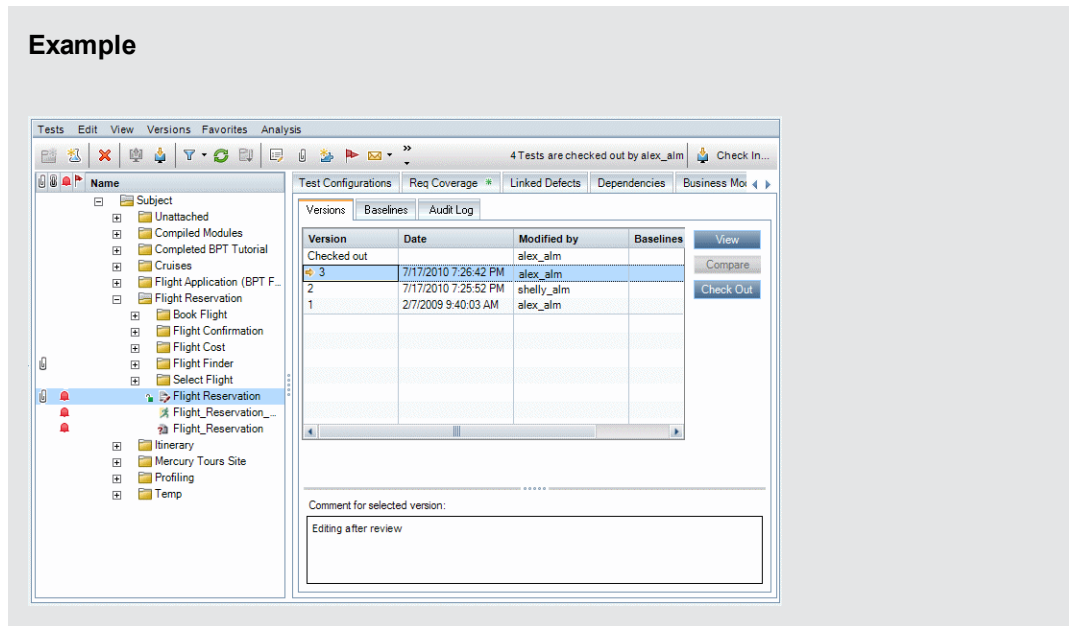


6. Access version history

To view, compare, and check out previous versions of an entity, select the entity and click the

History tab > **Versions** tab. For user interface details, see "Versions Tab" on page 120.

Example



7. Copy, move, or delete checked-out entities

Some restrictions apply when moving, copying, and deleting checked-out entities. For details, see "Moving, Copying, and Deleting Checked-out Entities" on next page.

How to Filter by Version Control Fields

This task describes how to filter ALM data to display only checked out entities in the Requirements, Business Models, Test Plan, Test Resources, and Test Lab modules. The following table describes how to set the filter conditions:

Filter Description	Filter Conditions for the Test Plan Module	Filter Conditions for All Other Modules
Display all entities that you have checked out	Version Status=Checked Out and Version Owner=<your user name>	Version Checked Out By=<your user name>
Display all entities checked out by another user	Version Status=Checked Out and Version Owner=<other user's user name>	Version Checked Out By=<other user's user name>

For details on defining filters, see "Filter Dialog Box" on page 61.

Non-versioned Fields

When you are working with version control, changes made to the following fields are not stored in previous versions of the entities:

Entity	Fields
Requirements	<ul style="list-style-type: none">• Reviewed• Direct Cover Status• Target Release• Target Cycle• All RBQM fields.
Tests	Execution Status

Consider the following when working with non-versioned fields in a version control enabled project:

Action	Result
Undo a checkout	Any changes you made to non-versioned fields while the entity was checked out are not cancelled and the new values remain.
Checkout a previous version	The value of a non-versioned field is the value in the currently checked in version.
View and compare previous versions	Non-versioned fields are displayed with the value Non-versioned Field . When viewing and comparing previous versions, pages specific to data for which version control data is not stored , such as the Linked Entities page or the Requirement Traceability page, are not displayed.


Moving, Copying, and Deleting Checked-out Entities

Consider the following guidelines when moving, copying, or deleting entities that are checked out.

For a single entity

Description	Cut/Paste or Move	Copy/Paste	Delete
Entity checked out by current user	✓	✗	✓
Entity checked out by another user	✗	✓ The current, checked-in version is pasted.	✗

For a folder that contains several entities

Cut/Paste or Move	Copy/Paste	Delete
	All entities in folder must be checked in.	All entities in the folder must be either checked in, or checked out by current user.

For several entities (multi-select)

Cut/Paste or Move	Copy/Paste	Delete
All selected entities must be either checked in, or checked out by current user.	All selected entities must be checked in.	All selected entities must be either checked in, or checked out by current user.

Version Control User Interface

This section includes:



Versions Menu and Buttons.....	113
Version Control Fields.....	114
Check In Dialog Box.....	116
Check Out Dialog Box.....	117
Pending Check In Dialog Box.....	118
Versions Tab.....	120

Versions Menu and Buttons

The Versions menu and version control toolbar buttons are available in a version control enabled project.

To access	Available from the menu bar or toolbar of the following modules: Requirements, Business Models, Business Components, Test Plan, and Test Resources.
Relevant tasks	"How to Use Version Control" on page 109
See also	"Version Control Overview" on page 108

User interface elements are described below:

UI Element	Description
Check In 	Opens the Check In dialog box, enabling you to check in selected entities. For details, see "Check In Dialog Box" on page 116 .
Check Out 	Opens the Check Out dialog box, enabling you to check out selected entities. For details, see "Check Out Dialog Box" on page 117 .
Pending Check In	Opens the Pending Check In dialog box, enabling you to view a list of all entities in the current module that you have checked out. For details, see "Pending Check In Dialog Box" on page 118 .
Undo Check Out	<p>Cancels the check out of selected entities and discards changes.</p> <p>To undo checkouts for entities checked out by other users, you must have the appropriate user permissions. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.</p> <p>When you undo a checkout, any changes you made to non-versioned fields while the entity was checked out are not canceled and the new values remain. For details, see "Non-versioned Fields" on page 112.</p>
Warn Before Check Out	Instructs ALM to display a confirmation message before automatically checking out an entity. For details, see "Check Out Dialog Box" on page 117 .

Version Control Fields

This section describes the version control fields available in the ALM modules.

To access	On the ALM sidebar, select Requirements, Business Models, Business Components, Test Plan, or Test Resources.
Relevant tasks	"How to Use Version Control" on page 109
See also	"Version Control Overview" on page 108

Requirements Module

The Requirements module displays the following additional fields if version control is enabled:

UI Element (A - Z)	Description
Version Check Out Date	The date the version was checked out.
Version Check Out Time	The time the version was checked out.

UI Element (A - Z)	Description
Version Checked Out By	The name of the user who checked out the version.
Version Number	The version number.
Version Status	The status of the version (Checked Out or Checked In).

Business Models Module

The Business Models module displays the following additional fields if version control is enabled:

UI Element (A - Z)	Description
Version Check Out Date	The date the version was checked out.
Version Check Out Time	The time the version was checked out.
Version Checked Out By	The name of the user who checked out the version.
Version Number	The version number.
Version Status	The status of the version (Checked Out or Checked In).

Business Components Module

The Business Components module displays the following additional fields if version control is enabled:

UI Element (A - Z)	Description
Version Check Out Date	The date the version was checked out.
Version Check Out Time	The time the version was checked out.
Version Checked Out By	The name of the user who checked out the version.
Version Number	The version number.
Version Status	The status of the version (Checked Out or Checked In).

Test Plan Module

The Test Plan module displays the following additional fields if version control is enabled:

UI Element (A - Z)	Description
Version Date	The date of the last action (check in or check out) performed for the version.
Version Number	The version number.
Version Owner	The name of the user who performed the last action (check in or check out).
Version Status	The status of the version (Checked Out or Checked In).
Version Time	The time of the last action (check in or check out) performed for the version.

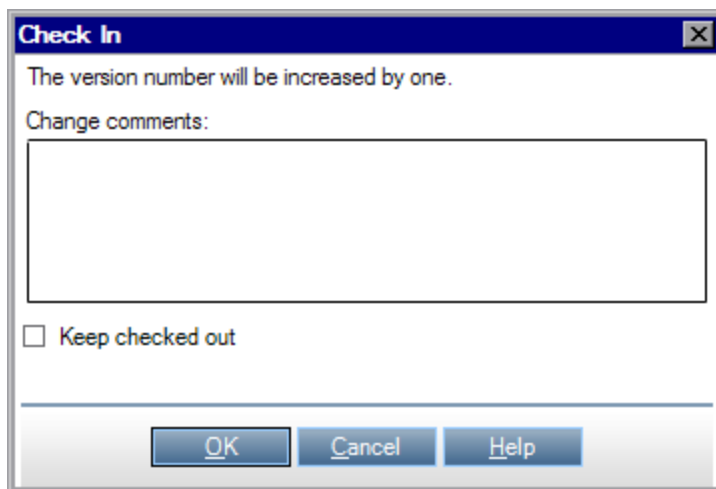
Test Resources Module

The Test Resources module displays the following additional field if version control is enabled:

UI Element	Description
Version Number	The version number of the resource.

Check In Dialog Box

This dialog box enables you to check in one or more checked out entities in a version control enabled project. The new version is then available to other users.



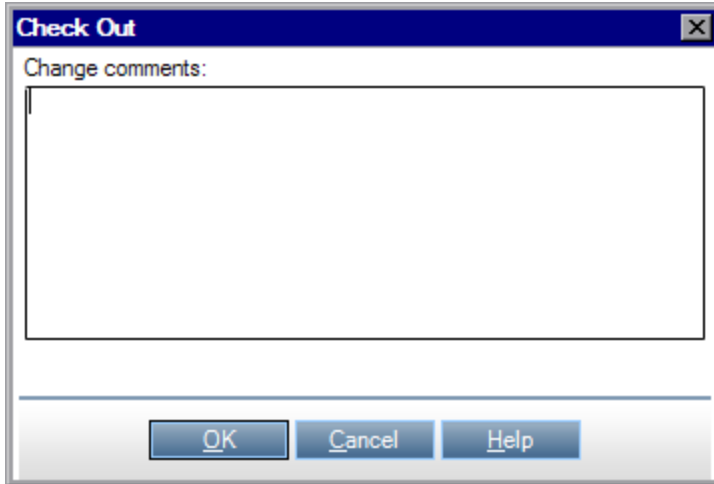
To access	Right-click an entity and select Versions > Check In . Available from the following modules: Requirements, Business Models, Business Components, Test Plan, and Test Resources.
Important information	The version number assigned to a new entity is 1. When an entity is checked in, the version number is increased by one.
Relevant tasks	"How to Use Version Control" on page 109
See also	"Version Control Overview" on page 108



User interface elements are described below:

UI Element (A - Z)	Description
Change comments	Describes the changes that were made to this version.
Keep checked out	Stores your changes with the new version number while keeping the entity checked out.

Check Out Dialog Box

This dialog box enables you to check out one or more entities in a version control enabled project to make changes to the entities.



To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • Select an entity and start to edit. The Check Out dialog box opens automatically. • Right-click an entity and select Versions > Check Out. • Select an entity and click the History tab > Versions tab. Select a version and click Check Out. <p>Available from the following modules: Requirements, Business Models, Business Components, Test Plan, and Test Resources.</p>
Important information	<p>Checked out entities are indicated by the following icons:</p> <ul style="list-style-type: none"> • An entity checked out by the current user is displayed with an open green lock icon . • An entity checked out by another user is displayed with a red lock icon .
Relevant tasks	"How to Use Version Control" on page 109
See also	"Version Control Overview" on page 108

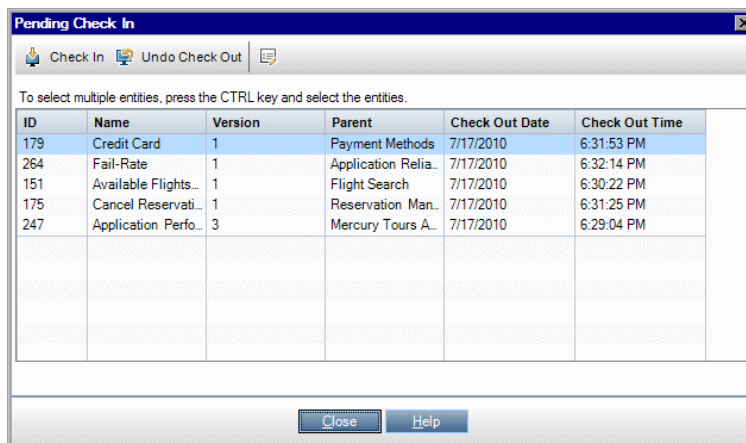
User interface elements are described below:

UI Element (A - Z)	Description
Change comments	Describes the reason for the checkout.

UI Element (A - Z)	Description
Don't show this again	Instructs ALM to automatically check out entities that you start editing, without requesting confirmation. This option is available when an entity is checked out automatically.


Pending Check In Dialog Box

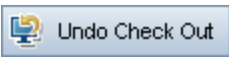

This dialog box enables you to view all entities in the current module that you have checked out, and check in or undo the check out for selected entities.



To access	Use one of the following: <ul style="list-style-type: none"> Click the Check In button in the top right corner of the ALM window. From a module menu bar, select Versions > Pending Check In. Available from the following modules: Requirements, Business Models, Business Components, Test Plan, and Test Resources.
Relevant tasks	"How to Use Version Control" on page 109
See also	"Version Control Overview" on page 108

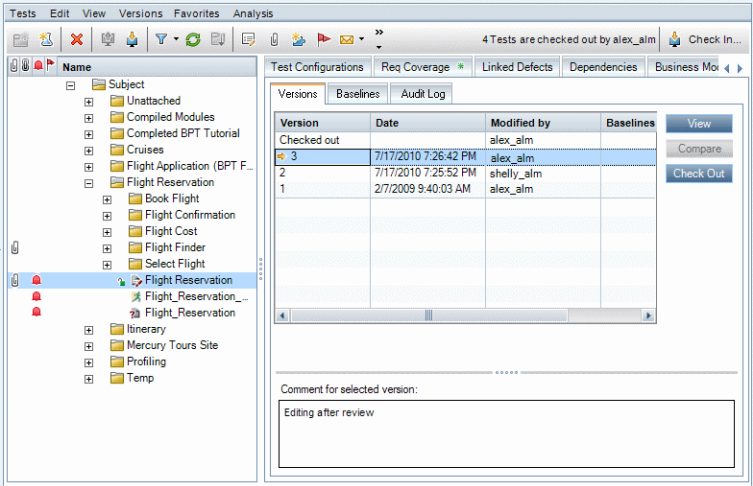
User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element (A - Z)	Description
 Check In	Opens the Check In dialog box, enabling you to check in selected entities. For details, see "Check In Dialog Box" on page 116 .

UI Element (A - Z)	Description
 Undo Check Out	<p>Cancels the check out of selected entities and discards changes.</p> <p>When you undo a checkout, any changes you made to non-versioned fields while the entity was checked out are not cancelled and the new values remain. For details, see "Non-versioned Fields" on page 112.</p>
	<p>Details. Opens a Details dialog box, displaying details for the selected entity. Click a button on the sidebar to view additional details, such as Design Steps, Test Script and Attachments. The buttons available depend on the data available for the particular entity type.</p>
<grid>	<p>Displays a list of entities that you have checked out in the current module.</p> <p>You can perform the following actions on the grid:</p> <ul style="list-style-type: none"> • To select multiple entities, press the CTRL key and select the entities. • To select all entities, right-click and select Select All. • To rearrange columns, drag the column headers.
Check Out Date	The date the version was checked out.
Check Out Time	The time the version was checked out.
ID	The unique numeric ID for the entity, assigned automatically by ALM.
Name	The name of the checked out entity.
Parent	The name of the entity one hierarchical level above the selected entity in the tree structure.
Version	<p>The version number of the checked out entity.</p> <p>The version number assigned to a new entity is 1. When an entity is checked in, the version number is increased by one.</p>

Versions Tab



This view displays version history for a selected entity in a version control enabled project.



To access	<p>Select an entity in the tree or grid, and click the History tab > Versions tab.</p> <p>Available from the following modules: Requirements, Business Models, Business Components, Test Plan, and Test Resources.</p>
Important information	<ul style="list-style-type: none">To maintain usability and data integrity, ALM stores previous versions of an entity without most data related to relationships between entities. The following data is not stored for previous versions: requirements and tests coverage, requirements traceability, and defect linkage. In addition, risk data is also not stored for previous versions of an entity.Changes to some fields are not stored under version control. For details, see "Non-versioned Fields" on page 112.
Relevant tasks	<p>"How to Use Version Control" on page 109</p>
See also	<ul style="list-style-type: none">"Version Control Overview" on page 108"Baselines Tab" on page 229

User interface elements are described below:

UI Element (A - Z)	Description
	Opens a Details dialog box, displaying read-only details for the selected version. Click a button on the sidebar to view additional details for the version, such as the Design Steps, Test Script and Attachments. The buttons available depend on the data stored under version control for the particular entity type.

UI Element (A - Z)	Description
	<p>Opens the Compare Entities dialog box, enabling you to compare two selected versions. For details, see "Compare Entities Dialog Box" on page 226.</p> <p>To compare two versions, press the CTRL key and select the versions. Then click the Compare button.</p>
	<p>Opens the Check Out dialog box, enabling you to check out the selected version. For details, see "Check Out Dialog Box" on page 117.</p>
Baseline	The baseline in which the version appears.
Comment for selected version	The comments typed by the user when checking in the version.
Date	The date the version was created.
Modified By	The user who created the version.
Version	<p>The version number. If the entity is currently checked out, the Version column for the checked out version displays Checked out. If the entity is checked out by the current user, an arrow icon ➡ indicates the version that was checked out.</p> <p>The default version number for a new entity is 1.</p>

Chapter 7

ALM Editions

This chapter includes:

ALM Functionality by Edition 124

ALM Functionality by Edition

HP Application Lifecycle Management is also available in several editions which provide subsets of ALM functionality — HP ALM Essentials Edition, HP Quality Center Enterprise Edition, and HP ALM Performance Center Edition.

HP ALM Edition	Description
HP ALM	A unified platform for managing and automating processes, activities, and assets for building, testing, delivering, and maintaining applications. It includes modules for requirements, test, defect, and development management, and overall release and project planning. HP ALM helps organizations drive consistent processes, shared best-practices, and asset sharing across projects.
HP ALM Essentials Edition	Provides a subset of HP ALM product functionality, and is designed to help smaller teams get up and running quickly. It provides core functionality for requirements management, test management, and defect management.
HP Quality Center Enterprise Edition	Resides on the same unified platform as HP ALM. It delivers core functionality for quality management. It supports building a quality center of excellence through tight integrations with HP Unified Functional Testing, HP Business Process Testing, and HP Sprinter.
HP ALM Performance Center Edition	Functionality for the complete management, scheduling, running, and monitoring of performance test scripts. It resides on the same platform as HP ALM and integrates directly with HP ALM and HP LoadRunner.

The following table indicates the availability of ALM functionality according to edition. Further information on each function is provided below.

Functionality	HP ALM Edition	HP ALM Essentials Edition	HP Quality Center Enterprise Edition	HP ALM Performance Center Edition
"Licensing" on page 126	✓	✓	✓	✓
"Release Management" on page 126	✓	✓	✓	✓
"Project Planning and Tracking (PPT) Releases" on page 127	✓	✗	✗	✗

Functionality	HP ALM Edition	HP ALM Essentials Edition	HP Quality Center Enterprise Edition	HP ALM Performance Center Edition
"Multiple Requirement Types" on page 127	✓	✓	✓	✓
"Requirement to Requirement Traceability" on page 127	✓	✓	✓	✓
"Risk-based Quality Management" on page 127	✓	✗	✓	✓
"Business Models Module" on page 127	✓	✗	✓	✗
"Test Authoring and Execution" on page 127	✓	✓	✓	✓ (partial)
"Test Resources" on page 127	✓	✓	✓	✓ (partial)
"Test Configurations" on page 127	✓	✗	✓	✓
"HP Sprinter" on page 128	✓	✗	✓	✗
"Lab Management" on page 128	✓	✗	✗	✓
"Versioning" on page 128	✓	✗	✓	✓
"Baselining" on page 128	✓	✗	✓	✓

Functionality	HP ALM Edition	HP ALM Essentials Edition	HP Quality Center Enterprise Edition	HP ALM Performance Center Edition
"Sharing Requirements and Tests" on page 128	✓	✗	✗	✓
"Sharing Defects" on page 128	✓	✗	✗	✗
"Cross Project Customization" on page 128	✓	✓	✗	✓
"Cross Project Reporting" on page 129	✓	✓	✗	✓ (partial)
"Export Data to Excel" on page 129	✓	✓	✓	✓ (partial)
"Business Process Testing" on page 129	✓	✗	✓	✗
"Extensions" on page 129	✓	✓ (partial)	✓ (partial)	✓ (partial)
"Upgrading Editions" on page 129	--	✓	✓	✓

Licensing

ALM licensing is determined according to your purchase agreement. The site administrator can manage and monitor the license usage from Site Administration. For more details, see the *HP Application Lifecycle Management Administrator Guide*.

Release Management

You organize and track your upcoming releases in the Releases module. Performance Center Edition does not support release management. If you are working with Performance Center Edition edition, fields and commands related to cycles and releases are not available. For example, Target Cycle and Target Release are not available.

For more details on the Releases module, see ["Releases and Cycles Overview" on page 146](#).

Project Planning and Tracking (PPT) Releases

ALM project planning and tracking (PPT) functionality enables quality assurance managers to track application readiness by defining goals for activities of an application release. PPT is available for ALM Edition only.

For more details on PPT releases, see ["PPT Releases Overview" on page 172](#).

Multiple Requirement Types

You can assign each requirement in the Requirements module to a default ALM requirement type. In addition, you can customize the default types and create your own requirement types.

For more details on requirement types, see ["Requirements Module Fields" on page 274](#).

Requirement to Requirement Traceability

Requirements traceability defines a relationship between two or more requirements, assisting you when analyzing the impact of a change proposed in a specific requirement.

For more details on requirements traceability, see ["Requirements Traceability" on page 289](#).

Risk-based Quality Management

The risk-based quality management feature enables you to calculate at which level to test each requirement, based on the nature of the requirement and the resources you have available. In the ALM Essentials Edition, the Risk tab is unavailable in the Requirements module. In addition, any risk related fields are unavailable.

For more details on risk-based quality management, see ["Risk-Based Quality Management " on page 311](#).

Business Models Module

The Business Models module enables you to import business process models from standard modeling tools, and test their quality in ALM. The Business Models module is not available in ALM Essentials Edition or Performance Center Edition.

For more details on the Business Models module, see ["Business Process Models" on page 327](#).

Test Authoring and Execution

You can build test plans and design tests based on your project requirements, and then execute those tests to diagnose and resolve problems. ALM Performance Center Edition supports performance testing only.

For more details, see ["Test Plan Overview " on page 394](#) and ["Test Execution Overview" on page 538](#).

Test Resources

The Test Resources module enables you to managing resources used by your tests. ALM Performance Center Edition supports a subset of test resource types.

For more details, see ["Test Resources" on page 497](#).

Test Configurations

Test configurations enable testing of various use-cases, each time with a different set of data. ALM

Essentials Edition does not support test configurations.

For more details, see ["Test Configurations Overview" on page 476](#).

HP Sprinter

HP Sprinter provides enhanced manual testing functionality and a variety of tools to assist in the manual testing process. Sprinter is available for ALM Edition and Quality Center Enterprise Edition.

For more details on Sprinter, see ["HP Sprinter Overview" on page 614](#).

Lab Management

Lab Management allows users to manage the lab resources and systems they use for functional and performance testing in ALM. Lab Management is available for functional and performance testing with ALM Edition and for performance testing with Performance Center Edition.

For more details, refer to the *HP ALM Lab Management Guide*.

Versioning

Version control enables you to create and manage ALM entities while maintaining previous versions of those entities. ALM Essentials Edition does not support single entity versioning of your ALM projects.

For more details on versioning, see ["Version Control" on page 107](#).

Baselining

You can create a baseline to store a snapshot of multiple entities in your project, at a specific point in time. ALM Essentials Edition does not support baselining.

For more details, see ["Libraries and Baselines" on page 207](#).

Sharing Requirements and Tests

The Libraries module enables you to create and compare baselines of requirements, tests, test resources, and business components. You can also reuse an existing set of entities by importing, synchronizing and comparing libraries across multiple projects.

Quality Center Enterprise Edition: You can use the Libraries module to create and compare baselines in a project. Quality Center Enterprise Edition does not include importing, synchronizing and comparing libraries across multiple projects.

For more details on the Libraries module, see ["Libraries Module Window" on page 214](#).

Sharing Defects

You can share and synchronize defects across multiple ALM projects using the *HP ALM Synchronizer*. Defect sharing is available for ALM Edition only.

For more details, see the *HP ALM Synchronizer User Guide*, available from the HP Application Lifecycle Management Add-ins page.

Cross Project Customization

Cross project customization enables you to work with template projects to standardize policies and procedures across projects in your organization. Cross project customization is not available for Quality Center Enterprise Edition.

For more details, see the *HP Application Lifecycle Management Administrator Guide*.

Cross Project Reporting

When you create graphs in ALM, you can combine and compare data from multiple projects. Cross project reporting is unavailable for some entities. Cross project reporting is not available for Quality Center Enterprise Edition.

For more details on the ALM reports and graphs, see ["Analysis View Window" on page 774](#).

Export Data to Excel

All editions enable exporting ALM data to Excel for reporting. Exporting functionality is unavailable for some entities.

For more details, see ["Excel Reports" on page 857](#).

Business Process Testing

Business Process Testing enables non-technical subject matter experts to build and work with business components in a script-free environment and to create application-quality business process tests. Business Process Testing is not available for ALM Essentials Edition or Performance Center Edition.

Each user with the proper permissions who logs into an ALM server with a Business Process Testing license uses up both a Business Process Testing license and an ALM license.

Note: You can run test sets containing business process tests in the Test Lab module and you can also edit automated components in Unified Functional Testing, even if no Business Process Testing license is available in ALM.

Business Process Testing Enterprise Extension is also fully integrated with ALM. It is enabled only if your ALM is licensed for Business Process Testing and Business Process Testing Enterprise Extension is enabled. Business Process Testing Enterprise Extension is not available for the Performance Center Edition.

For more information on Business Process Testing, refer to the *HP Business Process Testing User Guide*.

Extensions

ALM extensions provide added functionality to ALM. Various extensions are available, depending on the edition with which you are working. If you have a license for an ALM extension, you can utilize the added functionality by enabling the extension on a per project basis. For more details on enabling extensions, refer to the *HP Application Lifecycle Management Administrator Guide*.

To view the list of extensions available with ALM 11.50 or to download documentation for the extensions, visit the HP ALM Add-ins Page, accessible from the main ALM **Help** menu..

Upgrading Editions

You can upgrade your current edition to another edition. For example, you can upgrade from HP ALM Essentials Edition 11.50 to HP ALM Edition 11.50.

For more information on upgrading, refer to the *HP Application Lifecycle Management Installation Guide*.

Chapter 8

ALM Keyboard Shortcuts

This chapter includes:

ALM Keyboard Shortcut Reference..... 132

ALM Keyboard Shortcut Reference

You can navigate HP Application Lifecycle Management (ALM), and perform many ALM commands, using shortcut keys.

This section includes:

General Keyboard Shortcuts.....	132
Attachments Shortcuts.....	134
Send Email Dialog Box Shortcuts.....	134
Releases Module Shortcuts.....	135
Libraries Module Shortcuts.....	136
Requirements Module Shortcuts.....	136
Business Models Module Shortcuts.....	137
Test Resources Module Shortcuts.....	137
Business Components Module Shortcuts.....	137
Test Plan Module Shortcuts.....	138
Test Lab Module Shortcuts.....	138
Manual Runner Shortcuts.....	139
Defects Module Shortcuts.....	139
Dashboard Shortcuts.....	140

General Keyboard Shortcuts

You can navigate ALM, and perform common commands, by pressing the following shortcut keys:

Shortcut Key	Function
DOWN ARROW or UP ARROW	Selects the previous and next item respectively.
LEFT ARROW or RIGHT ARROW	In tree folders: Collapses or expands the folders respectively. In grid views: Selects the previous and next grid column respectively.
TAB	Selects the next data box in a tab or dialog box.
SHIFT+TAB	Selects the previous data box in a tab or dialog box.
CTRL+TAB	Moves forward through the tabs.
CTRL+SHIFT+TAB	Moves backward through the tabs.

Shortcut Key	Function
ALT	Focuses on the module menu options. Press LEFT ARROW, RIGHT ARROW, DOWNARROW or UP ARROW to navigate the menus.
ALT+DOWN	Opens the drop-down lists for list boxes. Press DOWNARROW or UP ARROW to select a list value.
LEFT ARROW	Expands a folder that contains sub-folders in the tree view (if it is collapsed).
RIGHT ARROW	Collapses a folder that contains sub-folders in the tree view (if it is expanded).
ALT+G	Goes to the selected entity.
ALT+HOME/END	Displays the first or last entity respectively in the Requirement Details, Defect Details, or Test Instance Properties dialog box.
ALT+LEFT/RIGHT ARROW	Displays the previous or next entity respectively in the Requirement Details, Defect Details, or Test Instance Properties dialog box.
CTRL+F	Opens a Find dialog box that helps you search for specified text.
CTRL+C	Copies the selected item and saves it to the Clipboard.
CTRL+V	Pastes the contents of the Clipboard to the selected location.
CTRL+X	Cuts the selected item and saves it to the Clipboard.
CTRL+Z	Undoes the last action.
CTRL+A	Selects all items in a grid.
F1	Displays help for the selected dialog box.
F2	Renames an entity.
F5	Refreshes the page.
F7	Spell checks the selected word or text box.
SHIFT+F7, SHIFT+CTRL+F7	Opens the Thesaurus dialog box and displays a synonym, antonym, or related word for the selected word.
ALT	Accesses the menu bar.
TAB	Creates a tab for memo fields.
CTRL+SHIFT+TAB	Changes the hierarchical position of list items in a memo field.

Attachments Shortcuts

You can perform the following commands in the Attachments tab/dialog box by pressing the corresponding shortcut keys:

Shortcut Key	Function
CTRL+F	Attaches a file.
CTRL+W	Attaches a URL.
CTRL+P	Attaches a snapshot.
CTRL+I	Attaches system information.
CTRL+B	Attaches Clipboard content.
CTRL+O	Downloads and opens an attachment.
CTRL+U	Uploads an attachment.
CTRL+S	Saves an attachment.
DELETE	Deletes an attachment.

Send Email Dialog Box Shortcuts

You can perform the following commands in the Send Email dialog box by pressing the corresponding shortcut keys:

Shortcut Key	Function
ALT+C OR ALT+T	Opens the Select Recipients dialog box.
ALT+S	Sends the email.
CTRL+ALT+O	Opens the Spelling Options dialog box.
CTRL+ALT+T	Opens the Thesaurus dialog box.
CTRL+M	Sends the entity by email from the entity's Details dialog box.

Releases Module Shortcuts

You can perform the following commands in the Releases module by pressing the corresponding shortcut keys:

Shortcut Key	Function
CTRL+A	Adds a new threshold from the Threshold view.
CTRL+N	Releases module: Creates a new release folder. New Release, New Cycle, New Scope Item, or New Milestone dialog box: Clears all fields.
CTRL+R	Creates a new release.
CTRL+Y	Creates a new cycle.
CTRL+D	Releases module: Creates a copy of a cycle. Threshold view: If enabled, deletes a threshold.
ALT+C	Closes the New Release Folder dialog box.
ALT+O	Saves the New Release Folder dialog box.
CTRL+ALT+D	Creates a copy of a milestone.
CTRL+SHIFT+2	Expands and collapses Releases module entities.
DELETE	Deletes the selected entity. Entities include: release folders, releases, cycles, and milestones.
CTRL+M	Creates a new milestone.
ALT+N	Release Scope tab: Adds a new scope item.
ALT+HOME	Scope Item Details dialog box: Goes to the first scope item.
ALT+END	Scope Item Details dialog box: Goes to the last scope item.
ALT+LEFT ARROW	Scope Item Details dialog box: Goes to the previous scope item.
ALT+RIGHT ARROW	Scope Item Details dialog box: Goes to the next scope item.

Libraries Module Shortcuts

You can perform the following commands in the Libraries module by pressing the corresponding shortcut keys:

Shortcut Key	Function
ALT+B	Adds a new baseline.
ALT+M	Imports a library.
CTRL+ALT+N	Adds a new library folder.
ALT+N	Adds a new library.
CTRL+SHIFT+2	Expands and collapses Library module entities.
DELETE	Deletes the selected Library module entity.

Requirements Module Shortcuts

You can perform the following commands in the Requirements module by pressing the corresponding shortcut keys:

Shortcut Key	Function
CTRL+ALT+N	Creates a new folder.
ALT+G	Opens the Create New Requirement dialog box.
ALT+N	Creates a new requirement.
CTRL+I	Zooms in.
CTRL+O	Zooms out one level.
SHIFT+CTRL+O	Zooms out to root level.
CTRL+A	Adds test to coverage.
CTRL+M	Requirement Details dialog box: Sends requirement by email.

Business Models Module Shortcuts

You can perform the following commands in the Business Models module by pressing the corresponding shortcut keys:

Shortcut Key	Function
CTRL+ALT+N	Creates a new folder.
ALT+I	Imports a model.
ALT+G	Opens the Go To Model dialog box.
CTRL+R	Goes to the representative requirement.
ALT+S	Linkage tab in the Grid view and Tree view: Opens the Select Requirements/Select Tests pane.
ALT+R	Linkage tab in the Grid view and Tree view: Removes a requirement or a test from linkage.
CTRL+DEL	Deletes a folder, a model, or a path.
CTRL+N	Clears path details.
CTRL+/-	Zooms in/out of the model diagram.
F2	Renames a path.

Test Resources Module Shortcuts

You can perform the following commands in the Test Resources module by pressing the corresponding shortcut keys:

Shortcut Key	Function
CTRL+N	Creates a new test resource folder.
CTRL+R	Creates a new test resource.

Business Components Module Shortcuts

You can perform commands in the Business Components module by pressing the corresponding shortcut keys. For details, see the *HP Business Process Testing User Guide*.

Test Plan Module Shortcuts

You can perform the following commands in the Test Plan module by pressing the corresponding shortcut keys:

Shortcut Key	Function
ALT+G	Opens the Go To Test dialog box.
ALT+N	Design Steps tab: Creates a new step.
CTRL+P	Design Steps tab: Inserts a parameter.
SHIFT+ALT+A	Design Steps tab: Adds attachments.
CTRL+L	Design Steps tab: Adds a call to a manual test.
CTRL+S	Design Steps tab: Saves a step.
ALT+N	Test Parameters tab: Creates a new parameter.
CTRL+DELETE	Test Parameters tab: Deletes a parameter.
ALT+R	Req Coverage tab: Removes a requirement from coverage.

Test Lab Module Shortcuts

You can perform the following commands in the Test Lab module by pressing the corresponding shortcut keys:

Shortcut Key	Function
ALT+N	Test Sets tab: Creates a new test set.
ALT+G	Test Sets tab: Opens the Go To Test Set dialog box.
CTRL+F9	Execution Grid tab in the Test Sets tab: Runs test.
CTRL+ALT+F9	Execution Grid tab in the Test Sets tab: Runs test manually.
CTRL+SHIFT+F9	Execution Grid tab in the Test Sets tab: Continues manual run.
ALT+F9	Execution Grid tab in the Test Sets tab: Runs test set.
DELETE	Execution Grid tab in the Test Sets tab: Removes selected test instances from test set.
ALT+END/HOME	Test Runs tab: Selects the first/last run.
ALT+LEFT/RIGHT ARROWS	Test Runs tab: Selects the next/previous run.
DELETE	Deletes the selected run.
F5	Refreshes the page.

Manual Runner Shortcuts

You can perform the following commands in the Manual Runner dialog box by pressing the corresponding shortcut keys:

Shortcut Key	Function
CTRL+R	Begins the run.
CTRL+Q	Ends the run.
CTRL+K	Cancels the run.
CTRL+U	Opens the Attachments dialog box.
CTRL+N	Adds a new defect.
CTRL+B	Adds an existing defect.
CTRL+S	Manual Runners's Step Details dialog box: Adds attachments to the test step.
CTRL+P	Manual Runners's Step Details dialog box: Passes the selected test run steps.
CTRL+F	Manual Runners's Step Details dialog box: Fails the selected test run steps.
CTRL+A	Manual Runners's Step Details dialog box: Passes all the test run steps.
CTRL+G	Manual Runners's Step Details dialog box: Fails all the test run steps.

Defects Module Shortcuts

You can perform the following commands in the Defects module by pressing the corresponding shortcut keys:

Shortcut Key	Function
ALT+N	Adds a new defect.
ALT+G	Opens the Go To Defect dialog box.
CTRL+DELETE	Deletes the selected defects.
CTRL+ALT+G	Defects grid: Finds similar defects.
CTRL+ALT+F	Defects grid: Finds similar text.
CTRL+L	Finds the next instance of the specified text.
CTRL+M	Defect Details dialog box: Sends defect by email.
CTRL+N	New Defect dialog box: Clears all fields.

Dashboard Shortcuts

This section includes keyboard shortcuts that you can use in the Dashboard modules.

Analysis View Module Shortcuts

You can perform the following commands in the Analysis View module by pressing the corresponding shortcut keys:

Shortcut Key	Function
ALT+A	Opens the Set Graph Appearance dialog box.
ALT+C	Copies graph to clipboard, in color.
ALT+F	Displays graph or standard reports in full screen.
ALT+G	Generates selected graph or standard report and displays it in the view.
ALT+I	Displays summary graphs in pie chart format.
ALT+L	Displays progress graphs in line chart format.
ALT+M	Copies graph to clipboard, in monochrome.
ALT+O	Displays the graph in bar chart format.
ALT+P	In graphs: Prints graph in color. In standard reports: Prints current page.
ALT+Q	Opens the Excel Report Query Builder dialog box, when in the Query tab.
ALT+R	Displays the graph as a data grid.
ALT+S	In graphs: Saves graph image. In standard reports: Saves current page.
ALT+T	In progress graphs, shows/hides total values.
ALT+U	Opens Edit Group By Categories dialog box.
ALT+V	Resets group by categories.
ALT+X	Opens Edit X-Axis Categories dialog box.
ALT+Y	Resets x-axis categories.
ALT+N	Scrolls graph to the right, when zoom is active.
ALT+B	In graphs: Scrolls graph to the left, when zoom is active. In standard reports: Displays first page.

Shortcut Key	Function
ALT+E	Displays the last page of a standard report.
ALT+UP ARROW	In graphs: Increases zoom level. In standard reports: Displays next page.
ALT+DOWN ARROW	In graphs: Decreases zoom level. In standard reports: Displays previous page.
ALT+SPACE	Resets graph zoom.
CTRL+E	Opens the New Excel Report dialog box.
CTRL+G	Opens the New Graph dialog box.
CTRL+R	Opens the New Standard Report dialog box.
CTRL+P	Opens the Graph Wizard.
CTRL+DELETE	Deletes the selected folder or analysis item.
CTRL+ALT+C	Copies full-screen graph to clipboard, in color.
CTRL+ALT+F	Opens the New Folder dialog box.
CTRL+ALT+M	Copies full-screen graph to clipboard, in monochrome.
CTRL+ALT+P	In graphs: Prints graph in monochrome. In standard reports: Prints all pages.
CTRL+ALT+S	Saves all standard reports pages.
CTRL+T	Create project report (for template-based reports).
ALT+A	Add a report section (for template-based reports).
ALT+R	Delete a report section (for template-based reports).
ALT+P	Preview the report (for template-based reports).
ALT+C	Create a new template file (for template-based reports).
ALT+UP ARROW	Move section up (for template-based reports).
ALT+DOWN ARROW	Move section down (for template-based reports).
CTRL+ALT+S	Opens the New Graph dialog box for creating a New Release Scorecard graph.
CTRL+ALT+M	Opens the New Graph dialog box for creating a KPI Over Time graph.

Shortcut Key	Function
CTRL+ALT+B	Opens the New Graph dialog box for creating a KPI Breakdown graph.
CTRL+ALT+T	Opens the New Graph dialog box for creating a KPI Breakdown Over Time graph.

Dashboard View Module Shortcuts

You can perform the following commands in the Dashboard View module by pressing the corresponding shortcut keys:

Shortcut Key	Function
ALT+A	Goes to the selected graph in the analysis tree.
ALT+F	Displays the selected graph in full screen.
ALT+G	Generates the selected dashboard page and displays it in the view.
ALT+I	Generates the selected graph.
CTRL+P	Opens the New Dashboard Page dialog box.
CTRL+DELETE	Deletes the selected folder or dashboard page.
CTRL+ALT+F	Opens the New Folder dialog box.
UP ARROW	Moves the selected graph placeholder to row above.
DOWN ARROW	Moves the selected graph placeholder to row below.
LEFT ARROW	Moves the selected graph placeholder to the left, if vacant.
RIGHT ARROW	Moves the selected graph placeholder to the right, if vacant.
BACKSPACE / DELETE	Removes the selected graph placeholder from dashboard page.
SPACE	Expands/reduces the selected graph placeholder.
ENTER	Adds the selected graph to the dashboard page.

Management

ALM Editions:

- Functionality related to PPT is available for ALM Edition only.
- The Libraries module is not available with ALM Essentials Edition. Quality Center Enterprise Edition does not include all Libraries module functionality.

Chapter 9

Releases and Cycles

This chapter includes:

Releases and Cycles Overview.....	146
How to Use Releases and Cycles in ALM.....	146
Releases and Cycles User Interface.....	152

Releases and Cycles Overview

The issue of application releases is often challenging. It requires aligning your business priorities and quality expectations with your project requirements, tests, and defects. Most applications require testing on multiple hardware platforms, multiple configurations (computers, operating systems, and browsers), and multiple application versions. Managing all aspects of an application release can be time-consuming and difficult. You begin the application management process by defining releases.

HP Application Lifecycle Management (ALM) enables you to organize and track your upcoming releases by defining releases and cycles. A **release** represents a group of changes in one or more applications that will be available for distribution at the same time. Each release can contain a number of cycles. A **cycle** is a set of development and quality assurance efforts performed to achieve a common goal based on the release timeline. Both releases and cycles have defined start and end dates.

After defining releases and cycles, you define and review requirements and assign them to releases and cycles. **Requirements** describe in detail your application needs, and are used as a basis for creating a test plan. The tests you create during the test plan phase should cover these requirements.

After assigning requirements to releases and cycles, you create test set folders and assign them to cycles. A **test set** is a group of test instances in an ALM project designed to achieve specific test goals. After assigning test set folders to a cycle, you run the test sets under these test set folders.

If an application flaw is detected while running a test set, you can submit a defect. ALM automatically creates a link between the test run, associated release and cycle, and the new defect.

A defect can be submitted to an ALM project from any module at any stage of the application management process. While reviewing and deciding which new defects need to be fixed, the defects can be assigned to the appropriate release and cycle.

Following test runs, you can review the test progress to determine how well it meets the release goals. You can also determine how many defects were resolved, and how many still remain open. The results can be analyzed at a release or cycle level.

You can track the progress of the application management process in real time by analyzing the Releases tree and ensuring that it matches the release goals.

For related task details, see ["How to Use Releases and Cycles in ALM" below](#).

How to Use Releases and Cycles in ALM

This task describes how to create and track releases and cycles. To learn more about releases and cycles, see ["Releases and Cycles Overview" above](#).

You can also use Project Planning and Tracking (PPT) to track your application releases. PPT helps you make more informed release decisions using real-time key performance indicators (KPIs). For task details on working with PPT, see ["How to Work with PPT" on page 172](#).

Note:

- **Use-case:** For a use-case scenario related to this task, see ["Work with Releases and Cycles - Use-Case Scenario"](#) on next page.
- **Higher-level task:** This task is part of a higher-level task. For details, see ["Application Lifecycle Management Roadmap"](#) on page 36.

This task includes the following steps:

- ["Define releases and cycles"](#) below
- ["Assign requirements"](#) below
- ["Assign and run test sets"](#) below
- ["Assign defects"](#) on next page
- ["Analyze releases and cycles"](#) on next page

1. **Define releases and cycles**

Define releases and cycles in a hierarchical releases tree.

- a. **Open the Releases module.** On the ALM sidebar, under **Management**, select **Releases**.
- b. **Create folders.** Right-click the **Releases** root folder and select **New Release Folder**. To create a sub-folder, right-click a folder and select **New Release Folder**.
- c. **Add releases to folders.** Right-click a folder or sub-folder and select **New Release**. Fill in fields in the New Release dialog box. For user interface details, see ["New Release/Release Details Dialog Box"](#) on page 159.
- d. **Add cycles to a release.** Right-click a release and select **New Cycle**. Fill in fields in the New Cycle dialog box. For user interface details, see ["New Cycle/Cycle Details Dialog Box"](#) on page 161.

2. **Assign requirements**

In the Requirements module, assign requirements to releases and cycles.

- **Assign to release.** Right-click a requirement and select **Assign to Release**. For user interface details on the Select Releases dialog box, see ["Select Releases Dialog Box"](#) on page 167.
- **Assign to cycle.** Right-click a requirement and select **Assign to Cycle**. For user interface details on the Select Cycles dialog box, see ["Select Cycles Dialog Box"](#) on page 166.

3. **Assign and run test sets**

In the Test Lab module, assign test sets folders to cycles, and then run the test sets.

- a. **Assign to cycles.** Right-click a test set folder and select **Assign to Cycle**. For user interface details on the Select Cycles dialog box, see ["Select Cycles Dialog Box"](#) on page 166.
- b. **Run tests.** For task details on running tests, see ["How to Run Tests in ALM"](#) on page 540.

4. Assign defects

Assign defects to a target release and a target cycle. For task details, see ["How to Track Defects in ALM" on page 739](#).

5. Analyze releases and cycles

View statistics and graphs to track the progress of your releases and cycles.

- **View assigned requirements and test set folders.**

To view statistics on the requirements and test set folders assigned to your releases and cycles, in the Releases module, select a release or cycle and click the **Details** tab. In the **Statistics** area, view statistics on assigned requirements and test set folders. For user interface details on the Releases module window, see ["Releases Module Window" on page 153](#).

- **View coverage progress.**

View statistics and graphs which provide visual indications of the current progress of your release or cycle.

- **For a release:** Select a release in the releases tree, click the **Status** tab, and then click the **Progress** tab.
- **For a cycle:** Expand a release in the releases tree, select a cycle, and click the **Progress** tab.

For user interface details, see ["Progress Tab" on page 162](#).

- **View defects.**

View graphs in the Releases module displaying the number of defects submitted over the course of a release or cycle.

- **For a release:** Select a release in the releases tree, click the **Status** tab, and then click the **Quality** tab.
- **For a cycle:** Expand a release in the releases tree, select a cycle, and click the **Quality** tab.

For user interface details, see ["Quality Tab" on page 164](#).

Work with Releases and Cycles - Use-Case Scenario

This use-case scenario describes the release management workflow.

Note: For a task related to this scenario, see ["How to Use Releases and Cycles in ALM" on page 146](#).

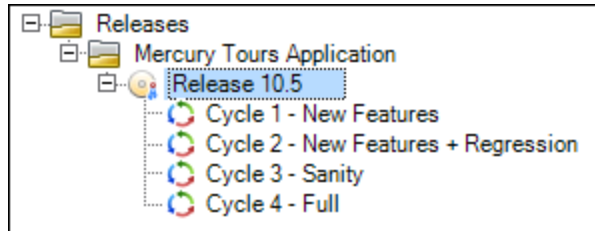
This scenario includes the following steps:

- ["Define Releases and Cycles" on next page](#)
- ["Assign Requirements" on next page](#)
- ["Assign and Run Test Sets" on next page](#)

- ["Assign Defects" on next page](#)
- ["Analyze Releases and Cycles" on next page](#)

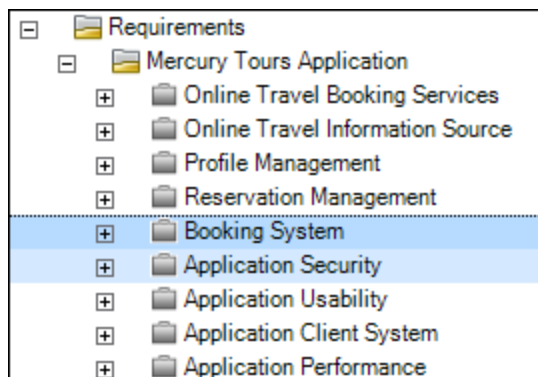
1. Define Releases and Cycles

Suppose you are developing a flight reservation application. In four months, you plan on releasing version 10.5. Your release includes four cycles. The first cycle is for testing new features. The second cycle is for regression testing. The third cycle is for sanity testing. The fourth cycle verifies the full functionality of the application. Your releases tree may be defined as follows:



2. Assign Requirements

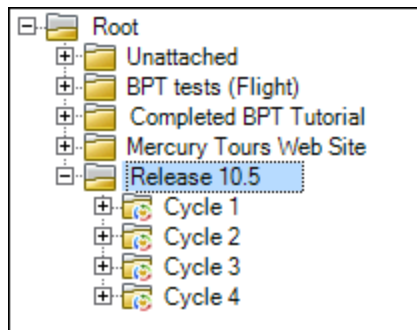
In the Requirements module, you decide which requirements need to be covered in each cycle and assign them to the relevant cycles accordingly. For example, in the requirements tree, under the **Mercury Tours Application** folder, you might assign **Booking System** and **Application Security** to the **Cycle 1 - New Features** cycle in the **Release 10.5** release.



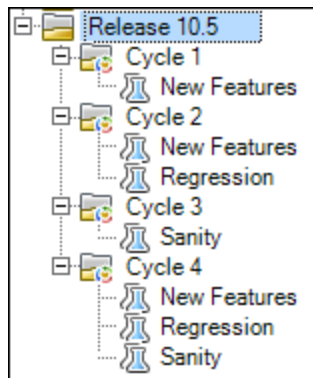
Requirements are then used as a basis for the test plan in the Test Plan module. You create tests and associate them with the assigned requirements to create coverage.

3. Assign and Run Test Sets

In the Test Lab module, you create test set folders and assign them to specific cycles. For this example, you might define the **Cycle 1**, **Cycle 2**, **Cycle 3**, and **Cycle 4** test set subfolders:



For each assigned test set folder, you then create test sets and add tests to them, for example:



4. Assign Defects

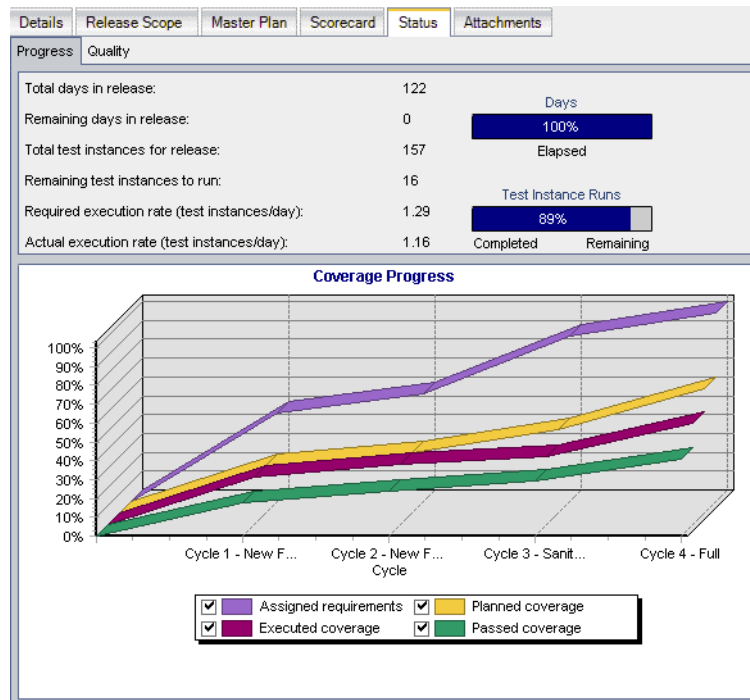
A defect is detected while running a test instance from a test set in the **Cycle 1** test set folder. When the defect is initially submitted to the project, the **Detected in Release** field is assigned to the **Release 10.5** release, and the **Detected in Cycle** field is assigned to the **Cycle 1 - New Features** cycle.

Continuing with this example, suppose this defect is planned to be fixed in the next cycle. The **Target Release** field would be assigned to **Release 10.5**, and the **Target Cycle** field would be assigned to **Cycle 2 - New Features+ Regression**.

5. Analyze Releases and Cycles

After running the test sets from the assigned test set folders, you can review the progress in the Progress tab of the Releases module to determine how well it meets your release goals. This provides you with a high-level overview of the progress of your release.

The following shows the progress in the Release 10.5 example:



The top pane shows the total and remaining days in the release, total test instances for the release, actual and remaining test instances to run, and more.

The bottom pane displays the Coverage Progress graph. The curves displayed in this graph are accumulative, that is, each curve is calculated by accumulating all the release information from the beginning of the release.

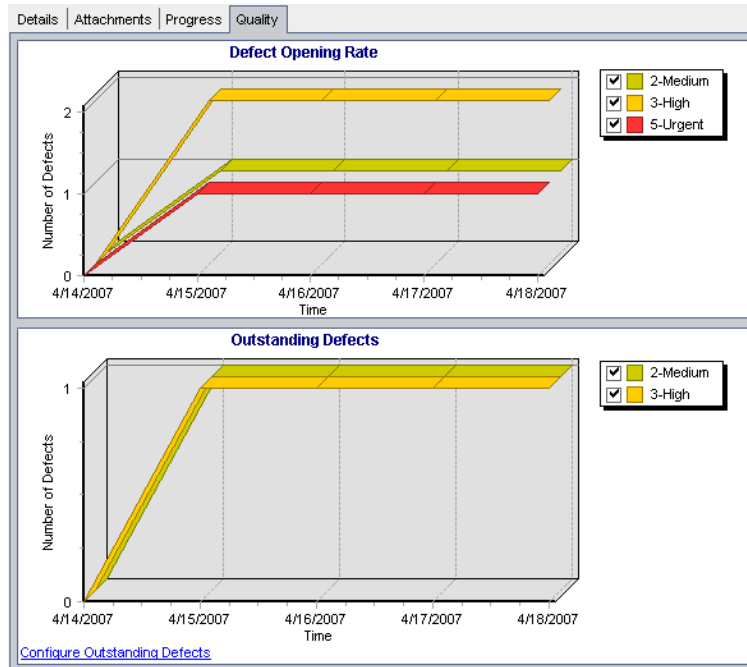
The **Assigned requirements** curve indicates the distribution of the assigned requirements within the release's cycles. In this example, the curve indicates a 100% value in the **Cycle 4 - Full** cycle.

The **Planned coverage** curve below the Assigned requirements curve indicates the percentage of requirements that are covered throughout the release. In this example only 60% of the requirements are covered in the **Cycle 4 - Full** cycle.

The **Executed coverage** curve below the Planned coverage curve indicates the percentage of tests that were run as the release progressed. In this example, the curve indicates that at **Cycle 4 - Full** only 40% of the assigned tests were run.

The **Passed coverage** curve is below the Executed coverage curve. It indicates the test runs in which the most recent status is passed. In this example, the curve indicates a 20% value in the **Cycle 4 - Full** cycle.

For each cycle, you can view the number of defects submitted and their severity in the Quality tab. Suppose that while running the **Cycle 1** test set under the **Release 10.5** test set folder, four application flaws are detected. In the Releases tree, you would select **Cycle 1 - New Features** cycle and click the Quality tab to view the number of defects opened over the course of the cycle. The defects are categorized by severity level, ranging from **1-Low** to **5-Urgent**.



In the Defect Opening Rate graph, you can see that of the four defects detected while testing the first cycle, two defects are assigned a severity value of **3-High**, one defect is assigned **5-Urgent**, and one defect is assigned **2-Medium**.

In the Outstanding Defects graph, you can see that two of the four defects are still outstanding. One defect is assigned **2-Medium** the other defect is assigned **3-High**.

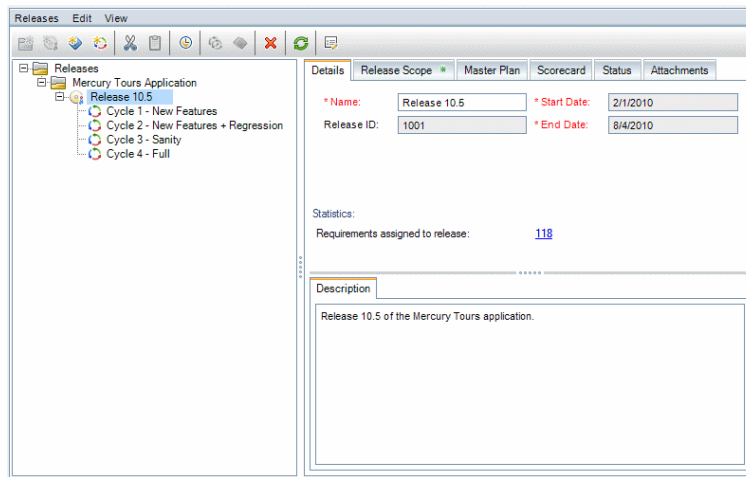
Releases and Cycles User Interface

This section includes:

Releases Module Window.....	153
Releases Module Menus and Buttons.....	154
Releases Module Icons.....	157
Releases Module Fields.....	158
New Release/Release Details Dialog Box.....	159
New Cycle/Cycle Details Dialog Box.....	161
Progress Tab.....	162
Quality Tab.....	164
Select Cycles Dialog Box.....	166
Select Releases Dialog Box.....	167
Reschedule Release/Cycle/Milestone Dialog Box.....	168

Releases Module Window

This window enables you to define and track releases and cycles.



To access	On the ALM sidebar, under Management, select Releases .
Relevant tasks	"How to Use Releases and Cycles in ALM" on page 146
See also	"Releases and Cycles Overview" on page 146

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<Releases module common UI elements>	<ul style="list-style-type: none"> • Release fields. For field definitions, see "Releases Module Fields" on page 158. • Release menus and buttons. For command and button descriptions, see "Releases Module Menus and Buttons" on next page. • Release icons. For icon descriptions, see "Releases Module Icons" on page 157. • ALM main menu and sidebar. For details on the Tools menu, Help menu and sidebar, see "ALM Common Areas" on page 45.
<Releases tree>	A graphical representation of your releases.
Details tab	Displays details of the currently selected folder, release, or cycle. The Statistics area displays the requirements and test set folders associated with the release or cycle. For more details, see "Releases Module Fields" on page 158 .
Release Scope tab	Shows the release scope items of the currently selected release. For more details, see "Release Scope Tab" on page 180 . ALM Editions: This tab is available for ALM Edition only.






UI Element	Description
Master Plan tab	Shows the progress of a release in a Gantt chart. For more details, see "Master Plan Tab" on page 194 . ALM Editions: This tab is available for ALM Edition only.
Scorecard tab	Shows a KPI scorecard of the status of the currently selected release. For more details, see "Scorecard Tab" on page 196 . ALM Editions: This tab is available for ALM Edition only.
Status tab	Includes the following tabs: <ul style="list-style-type: none">• Progress tab. Shows a high-level overview of the progress of the currently selected release or cycle. For more details, see "Progress Tab" on page 162.• Quality tab. Shows the number of defects opened over the course of the currently selected release or cycle. It also shows the number of outstanding defects. For more details, see "Quality Tab" on page 164.
Attachments tab	Lists attachments that provide additional information about the currently selected folder, release, or cycle. For more details, see "Attachments Page" on page 83 .
Description tab	Describes the currently selected folder, release, or cycle. Click in the text box to display a toolbar for formatting and spell checking the text.






Releases Module Menus and Buttons


This section describes the menus and buttons available in the Releases module.

To access	On the ALM sidebar, under Management, select Releases .
Important information	Tip: You can access the menu bar from the Releases module by pressing the shortcut key ALT. Additionally, you can perform many other ALM operations using shortcut keys. For a list of shortcut keys, see "ALM Keyboard Shortcut Reference" on page 132 .
Relevant tasks	"How to Use Releases and Cycles in ALM" on page 146
See also	<ul style="list-style-type: none">• "Releases Module Icons" on page 157• "Releases Module Window" on previous page• "Releases and Cycles Overview" on page 146

User interface elements are described below:

UI Element	Menu	Description
New Release Folder 	Releases	Opens the New Release Folder dialog box, enabling you to add a folder under a selected folder.
New Release/ New Empty Release 	Releases	<p>Opens the New Release dialog box, enabling you to add a release to a selected release folder. For more details, see "New Release/Release Details Dialog Box" on page 159.</p> <p>Note: When working with a project that is linked to a template project, the New Empty Release option is available instead of the New Release option.</p> <p>ALM Editions: New Empty Release is available for ALM Edition only.</p>
New Milestone 	Releases	<p>Opens the New Milestone dialog box, enabling you to add a milestone to a selected release. For more details, see "New Milestone Dialog Box" on page 184.</p> <p>ALM Editions: This feature is available for ALM Edition only.</p>
New Cycle 	Releases	Opens the New Cycle dialog box, enabling you to add a cycle to a selected release. For more details, see "New Cycle/Cycle Details Dialog Box" on page 161.
Details 	Releases	<p>Opens the corresponding Details dialog box, enabling you to view and update details of the selected release, cycle, or milestone.</p> <p>For more details, see:</p> <ul style="list-style-type: none"> • "New Release/Release Details Dialog Box" on page 159 • "New Cycle/Cycle Details Dialog Box" on page 161 • "Milestone Details Dialog Box" on page 195 <p>ALM Editions: Milestones are available for ALM Edition only.</p>
Reschedule 	Releases	<p>Opens the Reschedule dialog box, enabling you to reschedule the start and end date of a release, cycle, or milestone. For more details, see "Reschedule Release/Cycle/Milestone Dialog Box" on page 168.</p> <p>ALM Editions: The capability to reschedule milestones is available for ALM Edition only.</p>

UI Element	Menu	Description
Cut/Paste 	Edit	<p>Moves a selected release folder or release to a different location in the releases tree.</p> <p>Note: Moving a release folder also moves its releases and cycles. Moving a release also moves its cycles. The root folder cannot be moved.</p> <p>Tip: You can also move a release folder or a release to a new location in the releases tree by dragging it.</p>
Duplicate Cycle 	Edit	<p>Creates a copy of the selected cycle within the same release.</p> <p>To duplicate more than one cycle, press the CTRL key and select the cycles you want to duplicate. You can select only cycles that belong to the same release.</p>
Duplicate Milestone 	Edit	<p>Creates a copy of the selected milestone within the same release.</p> <p>To duplicate more than one milestone, press the CTRL key and select the milestones you want to duplicate. You can select only milestones that belong to the same release.</p> <p>ALM Editions: This feature is available for ALM Edition only.</p>
Delete 	Edit	<p>Deletes selected release folders, releases, or cycles. Deleting a folder also deletes its releases and cycles. Deleting a release also deletes its cycles.</p> <p>Note: Deleting a release folder, release, or cycle also un-assigns the associated requirements, test set folders, and defects.</p>
Rename	Edit	Renames a selected release folder, release, or cycle. You cannot rename the root folder.
Expand All	View	Expands all branches in the releases tree.
Collapse	View	Collapses all branches in the releases tree.
Refresh All 	View	Refreshes the releases tree so that it displays the most up-to-date information.






UI Element	Menu	Description
New Release From Template 	Releases	<p>Opens the New Release from Template dialog box, enabling you create a release based on a release from a template project. For more details, see "New Release From Template Dialog Box" on page 205.</p> <p>ALM Editions: This option is available for ALM Edition only.</p> <p>Note: This option is available in a project that is linked and synchronized with a template project.</p>
Show Requirements	<right-click menu>	Goes to the Requirements module and displays the requirements assigned to the selected release or cycle.
Show Test Set Folders	<right-click menu>	Goes to the Test Lab module and displays the test set folders assigned to the selected cycle.

Releases Module Icons

This section describes the icons available in the Releases module.

To access	On the ALM sidebar, under Management, select Releases .
Relevant tasks	"How to Use Releases and Cycles in ALM" on page 146
See also	<ul style="list-style-type: none"> "Releases Module Menus and Buttons" on page 154 "Releases Module Window" on page 153 "Releases and Cycles Overview" on page 146

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
	<green asterisk> . The tab is populated.
	<p>Milestone. A milestone of a release in the releases tree.</p> <p>ALM Editions: This icon is available for ALM Edition only.</p>
	Release Folder . A folder for organizing releases.
	Release . A release in the releases tree.
	Cycle . A cycle of a release in the releases tree.

Releases Module Fields

The Releases module Details tab displays the following fields for a release or a cycle.

To access	On the ALM sidebar, under Management, select Releases .
Important information	<ul style="list-style-type: none">• The dates for the cycles must be contained within the dates for the releases.• You can add user-defined fields and change the label of any of the fields in the Releases module. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.• You can use the Script Editor to restrict and dynamically change the fields and values in the Releases module. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.• For project planning and tracking (PPT) fields, see "PPT Fields" on page 178.
Relevant tasks	"How to Use Releases and Cycles in ALM" on page 146
See also	<ul style="list-style-type: none">• "Releases Module Window" on page 153• "Releases and Cycles Overview" on page 146

The fields are described below:

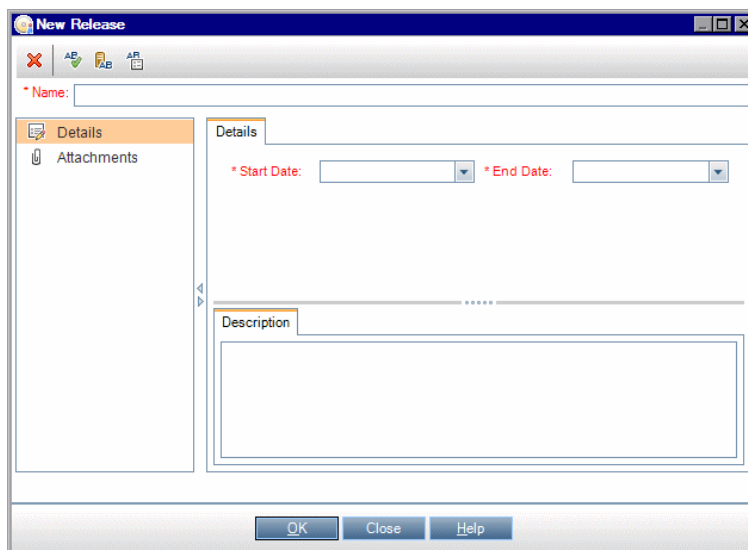
UI Element	Description
Cycle ID	A unique numeric ID for the cycle, assigned automatically by ALM. The Cycle ID is read-only.
Release ID	A unique numeric ID for the release, assigned automatically by ALM. The Release ID is read-only.
Name	The folder, release, or cycle name.
Start Date	The date on which the release or cycle starts.
End Date	The date on which the release or cycle ends.
Release Start Date	The date on which the release starts.
Release End Date	The date on which the release ends.
Requirements assigned to cycle	The number of requirements associated with the selected cycle. To view the requirements assigned to the cycle in the Requirements module, click the link displaying the number of requirements.
Requirements assigned to release	The number of requirements associated with the selected release. To view the requirements assigned to the release in the Requirements module, click the link displaying the number of requirements.

UI Element	Description
Test set folders assigned to cycle	The number of test set folders associated with the selected cycle. To view the test set folders assigned to the cycle in the Test Lab module, click the link displaying the number of test set folders.

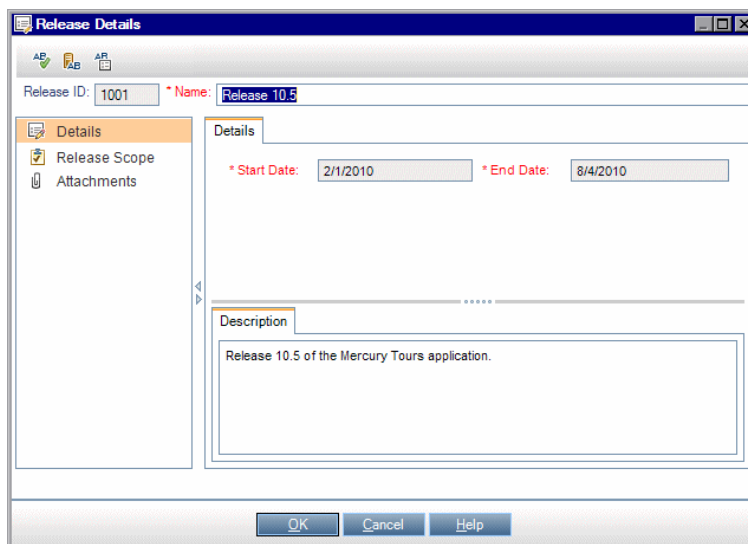
New Release/Release Details Dialog Box

The New Release dialog box enables you to define a new release.

The Release Details dialog box enables you to view and update the details of the selected release.







The "New Release" dialog box is used to create a new release. It features a left sidebar with "Details" and "Attachments" tabs. The "Details" tab is active, showing a "Name" field at the top. Below it, there are "Start Date" and "End Date" fields, each with a dropdown arrow. A "Description" field is located at the bottom. At the very bottom, there are "OK", "Close", and "Help" buttons.



The "Release Details" dialog box is used to view and update the details of a selected release. It features a left sidebar with "Details", "Release Scope", and "Attachments" tabs. The "Details" tab is active, showing a "Release ID" field with the value "1001" and a "Name" field with the value "Release 10.5". Below these, there are "Start Date" and "End Date" fields, each with a dropdown arrow. A "Description" field is located at the bottom. At the very bottom, there are "OK", "Cancel", and "Help" buttons.

To access	<ul style="list-style-type: none"> • New Release dialog box: In the Releases module, right-click a release folder and select New Release. • From a template based project: In the Releases module, right-click a release folder and select New Empty Release. • Release Details dialog box: In the Releases module, right-click a release and select Details.
Important information	<p>ALM Editions: The New Release dialog box is available for ALM Edition only.</p> <p>Note: The New Empty Release option is available in a project that is linked and synchronized with a template project. For more details on linking and synchronizing template projects, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.</p>
Relevant tasks	"How to Use Releases and Cycles in ALM" on page 146
See also	"Releases and Cycles Overview" on page 146

User interface elements are described below:

UI Element	Description
	<p>Clear All Fields. Clears the data.</p> <p>Available from: New Release dialog box</p>
	<p>Check Spelling. Checks the spelling for the selected word or text box.</p>
	<p>Thesaurus. Displays a synonym, antonym, or related word for the selected word.</p>
	<p>Spelling Options. Enables you to configure the way ALM checks spelling.</p>
Name	Type a name for the new release.
Details	<p>Lists release fields. Required fields are displayed in red. For details on the available release fields, see "Releases Module Fields" on page 158.</p> <p>Tip: Clicking in the Description field on this page displays a toolbar for formatting and spell checking the text.</p>
Release Scope	<p>Shows the release scope items of the currently selected release. For more details, see "Release Scope Tab" on page 180.</p> <p>ALM Editions: This tab is available for ALM Edition only.</p> <p>Available from: Release Details dialog box</p>
Attachments	<p>Enables you to add attachments that provide additional information about the new release. For more details, see "Attachments Page" on page 83.</p>

New Cycle/Cycle Details Dialog Box





The New Cycle dialog box enables you to define a new release.

The Cycle Details dialog box enables you to view and update the details of the selected release.

To access	<p>New Cycle dialog box: In the Releases module, right-click a release and select New Cycle.</p> <p>Cycle Details dialog box: In the Releases module, expand a release, right-click a cycle and select Details.</p>
Important information	<p>ALM Editions: Functionality related to PPT is available for ALM Edition only.</p>

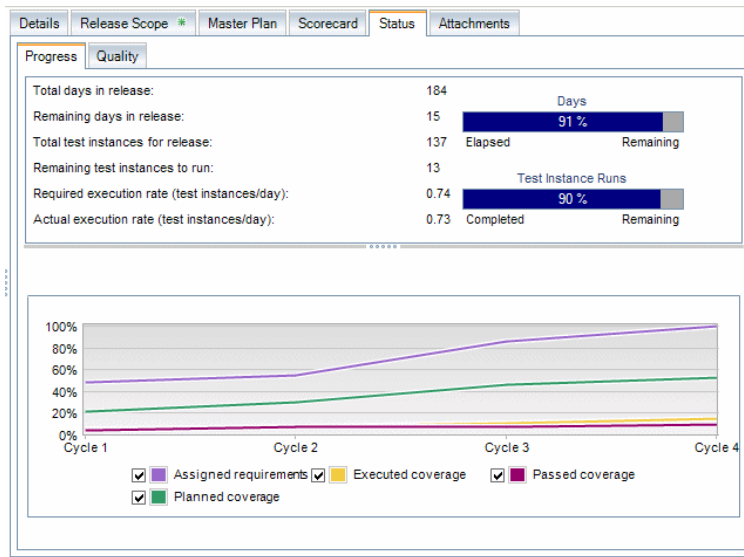
Relevant tasks	<ul style="list-style-type: none"> • "How to Use Releases and Cycles in ALM" on page 146 • "How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> • "Releases and Cycles Overview" on page 146 • "PPT Releases Overview" on page 172 • "Releases Module Window" on page 153


User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears the data. Available from: New Cycle dialog box
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Name	The name of the cycle.
Details	<p>Lists cycle fields. Required fields are displayed in red. For details on the available cycle fields, see "Releases Module Fields" on page 158.</p> <p>Tip: Clicking in the Description field on this page displays a toolbar for formatting and spell checking the text.</p>
Attachments	Enables you to add attachments that provide additional information about the cycle. For more details, see "Attachments Page" on page 83 .

Progress Tab

This tab displays statistics and graphs to provide visual indications of the current progress of your release or cycle. You can view information such as elapsed and remaining days, completed and remaining test instances to run, and actual and required execution rate.



To access	<p>In the Releases module:</p> <ul style="list-style-type: none"> For a release: Select a release in the releases tree, click the Status tab, and then click the Progress tab. For a cycle: Expand a release, select a cycle and click the Progress tab.
Important information	<p>Click the Refresh All button  in the Releases module toolbar to display the most up-to-date data.</p>
Relevant tasks	<p>"How to Use Releases and Cycles in ALM" on page 146</p>
See also	<ul style="list-style-type: none"> "Releases and Cycles Overview" on page 146 "Releases Module Window" on page 153

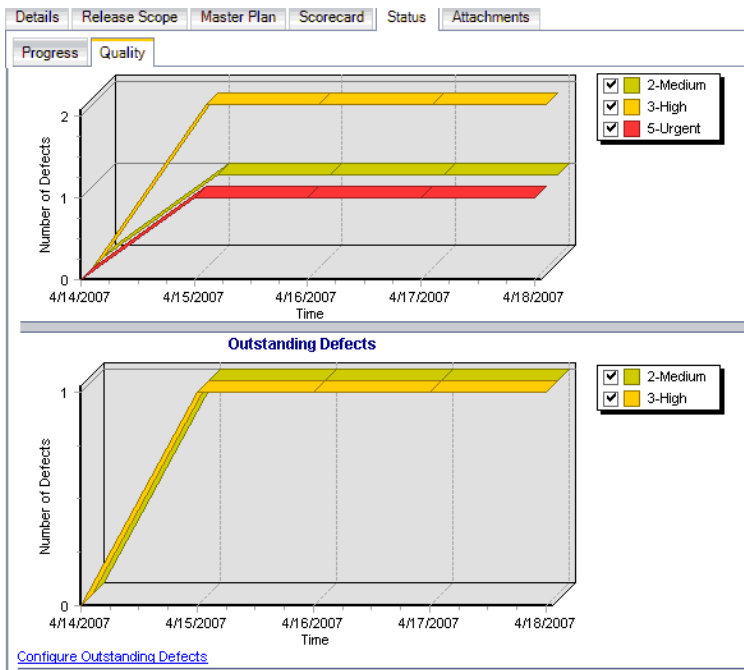
User interface elements are described below:


UI Element	Description
Total days in release/cycle	The total number of days in a selected release or cycle (end date - start date).
Remaining days in release/cycle	The total number of days remaining in a selected release or cycle.
Total test instances for release/cycle	The total number of test instances included in the test set folders assigned to a selected release or cycle.
Remaining test instances to run	The total number of test instances included in the assigned test set folders of a selected release or cycle that have not yet run.

UI Element	Description
Required execution rate (test instances/day)	The average number of test runs required per day for the remaining days in a selected release or cycle.
Days (progress bar)	The percentage of days elapsed in a selected release or cycle.
Test Instance Runs (progress bar)	<p>The percentage of test runs completed in a selected release or cycle.</p> <p>Note: A test instance is counted as executed if it was run and results of the run were saved, even if it is currently in a "Not Completed" or "Blocked" state.</p>
Coverage Progress graph	<p>Displays coverage progress for a selected release or cycle.</p> <p>Display options include:</p> <ul style="list-style-type: none"> • Assigned requirements. The accumulated percentage of requirements assigned to all cycles within the selected release. This option available for releases only. • Planned coverage. The accumulated percentage of tests planned for a selected cycle, or for all cycles within a selected release. • Executed coverage. The accumulated percentage of tests planned for a selected cycle, or for all cycles within a selected release. • Passed coverage. The accumulated percentage of tests that ran successfully in a selected cycle, or for all cycles within a selected release. <p>Note: To see the coverage progress relationships, you must define links between requirements and tests, and assign requirements and test sets to a cycle.</p>

Quality Tab

This tab displays the number of defects submitted over the course of a release or cycle in graphical format. You can view the graphs at any stage of the application management process to check the progress of your release.



To access	<p>In the Releases module:</p> <ul style="list-style-type: none"> For a release: Select a release in the releases tree, click the Status tab, and then click the Quality tab. For a cycle: Expand a release, select a cycle and click the Quality tab.
Important information	<p>Click the Refresh All button  in the Releases module toolbar to display the most up-to-date data.</p>
Relevant tasks	<p>"How to Use Releases and Cycles in ALM" on page 146</p>
See also	<p>"Releases and Cycles Overview" on page 146</p> <p>"Releases Module Window" on page 153</p>

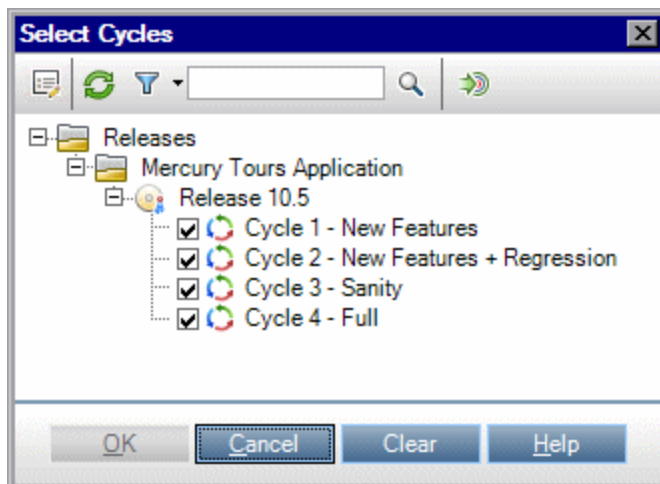
User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
Defect Opening Rate graph	<p>Displays the number of defects opened over the course of the selected release or cycle.</p> <p>The graph displays defects whose Detected in Release or Detected in Cycle value matches the selected release or cycle. The defects are grouped according to their level of Severity. The x-axis displays the number of defects according to their severity on the last day of each cycle.</p>

UI Element	Description
<Defect severity level display options>	Determine which defects are displayed in the graph based on defect severity level. The severity levels ranges from Low-1 to Urgent-5 .
Outstanding Defects graph	Displays the number of outstanding defects for the selected release or cycle. The graph displays defects whose Target Release or Target Cycle value matches the selected release or cycle, or is empty. The defects are grouped according to their level of Severity . The x-axis displays the number of outstanding defects according to their severity on the last day of each cycle. By default, New , Open , and Reopened defects are considered outstanding.
Configure Outstanding Defects	Opens the Configure Outstanding Defects dialog box, enabling you to determine which defects are displayed in the graph by filtering them by their status. To display or hide defects, move statuses between the Available Defect Status and Visible Defect Status boxes.

Select Cycles Dialog Box







This dialog box enables you to assign requirements and test set folders to cycles defined in the releases tree.



To access	Right-click a requirement in the Requirements module, or a test set folder in the Test Lab module, and select Assign to Cycle .
Important information	<ul style="list-style-type: none"> When you assign a requirement to a cycle, the value is entered in the requirement's Target Cycle field. In addition, the cycle's release is entered in the Target Release field. When you assign a test set folder to a cycle, the test set's subfolders are automatically assigned to the same cycle.

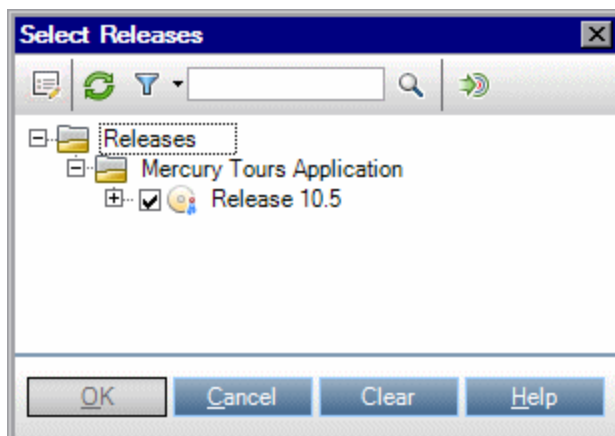
Relevant tasks	<ul style="list-style-type: none"> • "How to Use Requirements in ALM" on page 254 • "How to Create Test Sets" on page 571 • "How to Use Releases and Cycles in ALM" on page 146
See also	"Releases and Cycles Overview" on page 146

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
	Show Cycle Details. Opens the Details dialog box for the selected cycle in read-only mode.
	Refresh. Refreshes the releases tree so that it displays the most up-to-date information.
	Filter/Sort. Enables you to filter the data according to the criteria that you choose. For more details, see "Filter Dialog Box" on page 61 .
<Find box>	Enter the name of the cycle you want to search for and click the Find button.
	Find. Searches the releases tree for the value you specify in the Find box.
	Go to Entity by ID. Opens the Go to Cycle dialog box, enabling you to locate the cycle in the tree according to Cycle ID.
<Releases tree>	Displays the releases tree in the Releases module. Expand the tree and select a cycle. You can assign requirements to more than one cycle.
	Clears the assigned cycle from the requirement. Available from: Requirements module







Select Releases Dialog Box

This dialog box enables you to assign requirements to releases defined in the releases tree.



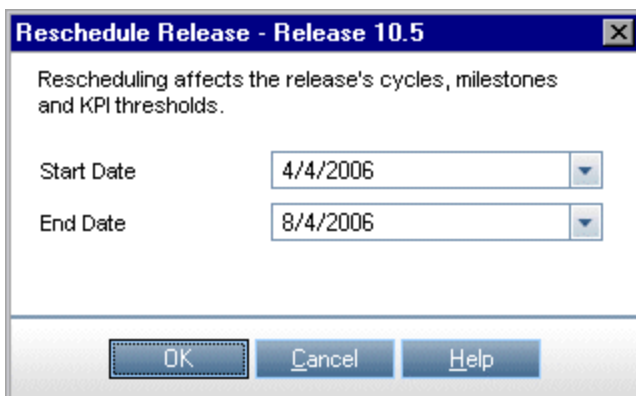
To access	In the Requirements module, right-click a requirement and select Assign to Release .
Important information	When you assign a requirement to a release, the value is entered in the requirement's Target Release field.
Relevant tasks	"How to Use Releases and Cycles in ALM" on page 146
See also	"Releases and Cycles Overview" on page 146

User interface elements are described below:

UI Element	Description
	Show Release Details. Opens the Details dialog box for the selected release in read-only mode.
	Refresh. Refreshes the releases tree so that it displays the most up-to-date information.
	Filter/Sort. Enables you to filter the data according to the criteria that you choose. For more details, see "Filter Dialog Box" on page 61 .
<Find box>	Enter the name of the release you want to search for and click the Find button.
	Find. Searches the releases tree for the value you specify in the Find box.
	Go to Entity by ID. Opens the Go to Release dialog box, enabling you to locate the release in the tree according to Release ID.
<Releases tree>	Displays the releases tree in the Releases module. Expand the tree and select one or more releases.
	Clears the assigned release from the requirement.

Reschedule Release/Cycle/Milestone Dialog Box

This dialog box enables you to reschedule the start and end date of a release, cycle, or milestone.



To access	In the Releases module, right-click a release, cycle, or milestone. Select Reschedule .
Important information	<ul style="list-style-type: none">• ALM Editions: Functionality related to PPT is available for ALM Edition only.• When rescheduling a release, the related cycles, milestones, and KPI thresholds are rescheduled accordingly.• When rescheduling a milestone, the related KPI thresholds are rescheduled accordingly.
Relevant tasks	<ul style="list-style-type: none">• "How to Use Releases and Cycles in ALM" on page 146• "How to Work with PPT" on page 172
See also	<ul style="list-style-type: none">• "Releases and Cycles Overview" on page 146• "PPT Releases Overview" on page 172

User interface elements are described below:

UI Element	Description
Start Date	The date on which the release, cycle, or milestone starts.
End Date	The date on which the release or cycle ends. Available from: Reschedule Release/Cycle dialog box
Due Date	The date on which the milestone ends. Available from: Reschedule Milestone dialog box

Chapter 10

Project Planning and Tracking (PPT) Releases

This chapter includes:

- PPT Releases Overview..... 172
- How to Work with PPT..... 172
- KPI Types..... 177
- PPT User Interface..... 178

PPT Releases Overview

Project planning and tracking (PPT) enables quality assurance managers to track application readiness by defining goals for activities of an application release.

For each release, you define release scope items. A **release scope item** refers to a subdivided section of a release, such as a new feature, a change to an existing feature, or a new theme. For each scope item you define the related requirements, tests, test sets, and defects. To measure the progress of the release scope items, you associate them with milestones. A **milestone** is a point in the timeline of a release that signifies the completion of a deliverable. It enables you to track and validate the progress of the release. A milestone can be associated with one or more release scope items.

PPT collects and analyzes the data from the defined milestones using key performance indicators (KPIs). A **KPI** is a quantifiable measure designed to track a critical performance variable over time, and measure the essential outcome of quality assurance activities. For each KPI, you define threshold levels to set warning limits.

PPT uses the KPIs to analyze a milestone's readiness data, and to show the overall health and deployment readiness of a release in the form of a scorecard. The scorecard monitors and tracks how well each milestone is being met on a daily basis. To further analyze your output, you can generate dashboard reports and graphs.

ALM Editions: Functionality related to PPT is available for ALM Edition only.

For task details, see ["How to Work with PPT" below](#).

How to Work with PPT

This task describes how to define releases, release scopes and milestones, and how to track release scope status in the Releases module. To learn more about PPT, see ["PPT Releases Overview" above](#).

- **ALM Editions:** Functionality related to PPT is available for ALM Edition only.
- **Use-case:** For a use-case scenario related to this task, see ["How to Work with PPT - Use-Case Scenario" on page 174](#).
- **Product Feature Movie:** To view a movie that demonstrates PPT, choose **Help > Product Feature Movies** in the ALM main window.

This task includes the following steps:

- ["Define releases" on next page](#)
- ["Define release scope items" on next page](#)
- ["Define milestones" on next page](#)
- ["Analyze progress" on next page](#)

1. Define releases

- a. **Open the Releases module.** On the ALM sidebar, under **Management**, select **Releases**. For user interface details on the Releases module, see ["Releases Module Window" on page 153](#).
- b. **Create folders.** Right-click the **Releases** root folder and select **New Release Folder**. To create a sub-folder, right-click a folder and select **New Release Folder**.
- c. **Add releases.** Right-click a release folder and select **New Release**. For user interface details, see ["New Release/Release Details Dialog Box" on page 159](#).

Alternatively, if you are working with a project that is linked to a template project, you can create a release by copying from the template project. Right-click a release folder and select **New Release from Template**. For user interface details, see ["New Release From Template Dialog Box" on page 205](#).

2. Define release scope items

In the releases tree, select a release. Click the **Release Scope** tab. Add release scope items and define the related requirements, tests, test sets, and defects. For user interface details, see ["Release Scope Tab" on page 180](#).

3. Define milestones

- a. **Add milestones.** In the releases tree, right-click a release and select **New Milestone**. The New Milestone dialog box opens. Define timelines for your milestone. For user interface details, see ["New Milestone Dialog Box" on page 184](#).
- b. **Associate release scope items.** In the releases tree, select a milestone. Click the **Milestone Scope** tab. Associate the milestone with release scope items. For user interface details, see ["Milestone Scope Tab" on page 185](#).
- c. **Associate KPIs.** Click the **KPIs** tab. Configure related KPIs and set boundaries for performance against those KPIs. For user interface details, see ["KPI Types" on page 177](#).

4. Analyze progress

- **View scorecard.** In the releases tree, select a release. Click the **Scorecard** tab. View the status and progress of your defined milestones. For user interface details on the Scorecard tab, see ["Scorecard Tab" on page 196](#).
- **View Gantt chart.** In the releases tree, select a release. Click the **Master Plan** tab. For user interface details, see ["Master Plan Tab" on page 194](#).
- **Create PPT graphs.** For task details on how to generate graphs, see ["How to Generate a PPT Graph" on page 826](#).

How to Work with PPT - Use-Case Scenario

This use-case scenario demonstrates how to work with PPT. For example, suppose your organization is releasing a new version of a purchase order application in 6 months. The new version includes the following enhancements: new mobile interface, additional sales reports, and enhancements to the purchase order forms. You, as quality assurance manager, must define the release scope items and milestones, and track progress and quality of the release against your defined scope items.

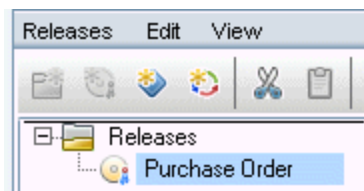
Note: For a task related to this scenario, see ["How to Work with PPT" on page 172](#).

This scenario includes the following steps:

- ["Define a release" below](#)
- ["Define release scope items" below](#)
- ["Define a milestone" on next page](#)
- ["Analyze progress" on page 176](#)

1. Define a release

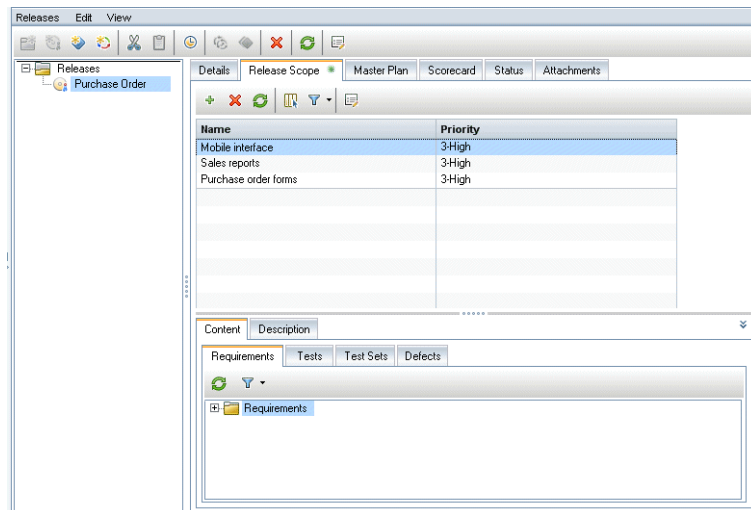
In the Releases module, define the **Purchase Order** release and set the release duration to 6 months.



2. Define release scope items

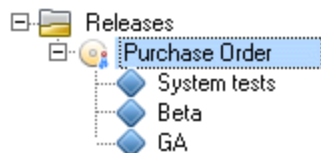
Select the **Purchase Order** release and define the following release scope items: **Mobile interface**, **Sales reports**, and **Purchase order forms**.

Under the **Content** tab, for each release scope item, determine the scope by assigning related requirements, tests, test sets, and defects.



3. Define a milestone

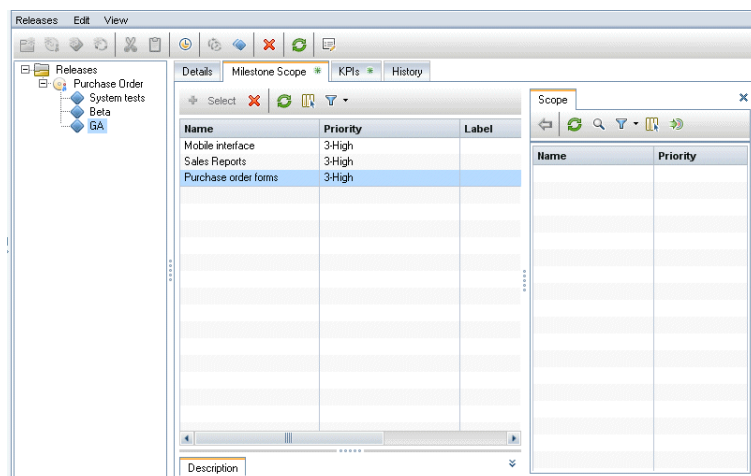
Add the following milestones to your release: **System tests**, **Beta**, and **GA**.



To measure the readiness of the **System tests** milestone, associate it with the following release scope items: **Mobile interface**, **Sales reports**, and **Purchase order forms**.

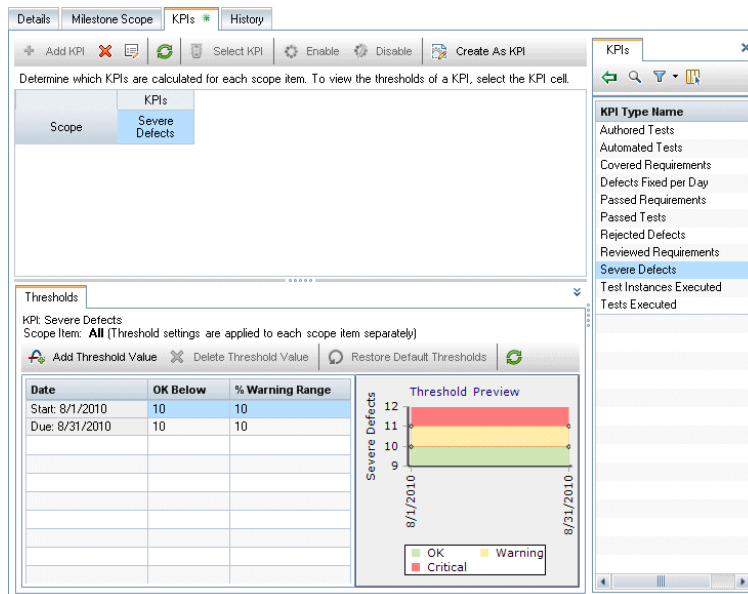
To measure the readiness of the **Beta** milestone, associate it with the following release scope items: **Sales reports** and **Purchase order forms**.

To measure the readiness of the **GA** (General Availability) milestone, associate it with the following release scope items: **Mobile interface**, **Sales reports**, and **Purchase order forms**.



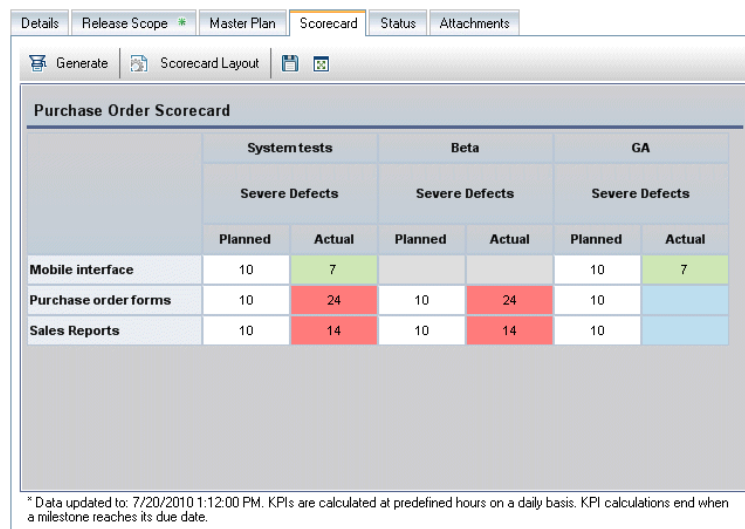
For each milestone, you define related KPIs using the KPIs tab. For each milestone, select the **Severe Defects** KPI. In the Threshold pane, under the **Date** column, the start and end dates of

the selected milestone are displayed. Under the **OK Below** column, both values are set to **10**. The KPI state is considered acceptable when there are less than 10 defects with severity levels of **5-Urgent** or **4-Very High** out of the defects that still need to be fixed. Under **% Warning Range**, the warning limits are set to **10**. A value higher than 10 is considered critical. The Threshold Preview chart shows the threshold values with respect to the y-axis.



4. Analyze progress

After running calculations for this project, select the **Purchase Order** release from the releases tree. Click the **Scorecard** tab. The scorecard enables you to view the scope items, the milestones, and the KPI results. For example, under the **System tests** milestone, the **Purchase order forms** release scope item indicates the number of planned severe defects is 10 and the actual value is 24.



To drill down further and display the scorecard as a graph, you can click a KPI value.

KPI Types

This section describes the system defined KPI types.

Important information	<ul style="list-style-type: none">You can modify system defined KPIs and add additional user-defined KPIs to your project. For more details, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.ALM Editions: Functionality related to PPT is available for ALM Edition only.
------------------------------	--

KPI types are described below:

KPI Type (A - Z)	Description
Authored Tests	Calculates the number of tests whose planning status is set to Ready .
Automated Tests	Calculates the percentage of automated tests.
Covered Requirements	Calculates the percentage of requirements covered by at least one test.
Defects Fixed per Day	Calculates the number of defects fixed per day.
Passed Requirements	Calculates the percentage of requirements whose covered tests have an execution status of Passed .
Passed Tests	Calculates the percentage of tests whose last run has an execution status of Passed .
Rejected Defects	Calculates the percentage of rejected defects.
Reviewed Requirements	Calculates the percentage of business or functional requirements that have been reviewed.
Severe Defects	Calculates the number of defects with the status of New , Open or Reopened assigned a severity level of 5-Urgent or 4-Very High .
Test Instances Executed	Calculates the percentage of executed test instances.
Tests Executed	Calculates the percentage of executed tests.

PPT User Interface

This section includes:

PPT Fields.....	178
Release Scope Tab.....	180
New Scope Item/Scope Item Details Dialog Box.....	182
New Milestone Dialog Box.....	184
Milestone Scope Tab.....	185
KPIs Tab.....	187
New KPI/KPI Details Dialog Box.....	189
Thresholds Page.....	191
New Threshold Value Dialog Box.....	193
Master Plan Tab.....	194
Milestone Details Dialog Box.....	195
Scorecard Tab.....	196
KPI Drill Down Graph.....	198
KPI Drill Down Results Dialog Box.....	199
Breakdown Over Time Graph.....	201
Scorecard Layout Dialog Box.....	204
New Release From Template Dialog Box.....	205

PPT Fields

This section describes the PPT fields in the Releases module.

Important information	<ul style="list-style-type: none">You can add user-defined fields and change the label of any of the fields in the Releases module. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.You can use the Script Editor to restrict and dynamically change the fields and values in the Releases module. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172

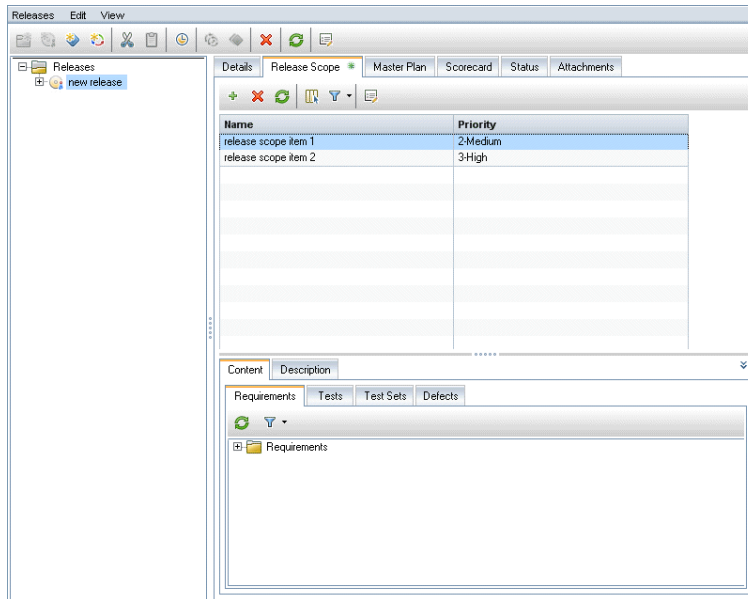
See also	<ul style="list-style-type: none"> • "Release Scope Tab" on next page • "Master Plan Tab" on page 194 • "Scorecard Tab" on page 196 • "PPT Releases Overview" on page 172
-----------------	---

The fields are described below:

UI Element (A - Z)	Description
Due Date	The date on which the milestone ends.
KPI Type	The type of KPI. For more details, see "KPI Types" on page 177 .
Label	The release scope item name as it is displayed in the chart of the Master Plan tab.
Milestone ID	A unique numeric ID for the milestone, assigned automatically by ALM. The Milestone ID is read-only.
Modified	The date and time the release scope item or milestone was last changed. Default value: The database server date and time.
Name	The release scope item or milestone name.
Owner	The user name of the person who owns the release scope item.
Priority	The priority of the release scope item, ranging from low priority (level 1) to high priority (level 3).
Release End Date	The date on which the release ends.
Release ID	A unique numeric ID for the release, assigned automatically by ALM. The Release ID is read-only.
Release Start Date	The date on which the release starts.
Scope Item ID	A unique alphanumeric ID for the release scope item that is assigned automatically. This field cannot be modified.
Start Tracking Date	The date on which the milestone starts.





Release Scope Tab




This tab enables you to define and update release scope items.



To access	In the Releases module, select a release and click the Release Scope tab.
Important information	ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 172 "Releases Module Window" on page 153

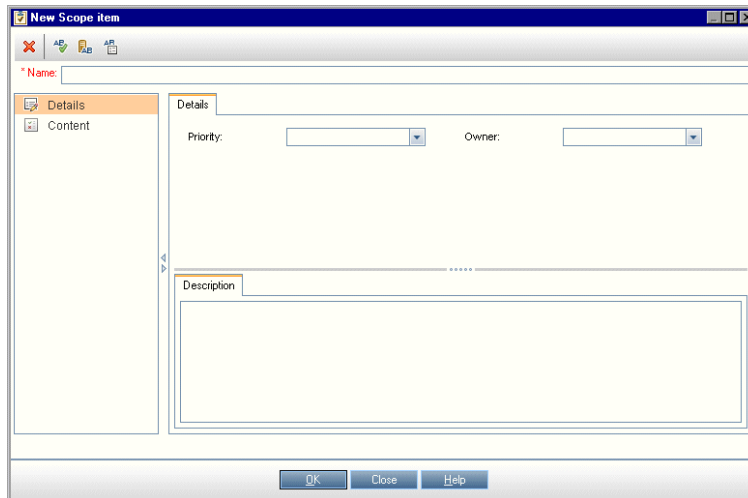
User interface elements are described below:

UI Element	Description
	New Scope Item. Opens the New Scope Item dialog box, enabling you to define a release scope item. For more details, see "New Scope Item/Scope Item Details Dialog Box" on page 182 .
	Delete. Deletes selected release scope item.
	Refresh. Refreshes the release scope grid so that it displays the most up-to-date information.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the release scope grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .

UI Element	Description
	Filter/Sort. Enables you to filter the data according to the criteria that you choose. For more details, see "Filter Dialog Box" on page 61 .
	Scope Item Details. Opens the Scope Item Details dialog box, enabling you to display the details of the selected release scope item. For more details, see "New Scope Item/Scope Item Details Dialog Box" on next page .
	Show/Hide. Shows/hides the Description and Content tabs.
Content tab	<p>Enables you to select content to be included in the release scope item. It includes the following tabs:</p> <ul style="list-style-type: none"> • Requirements. Displays the requirements tree. Expand the tree and select the folders/requirements to include in the release scope item. • Tests. Displays the test plan tree. Expand the tree and select the folders/tests to include in the release scope item. To only include tests covered by the requirements selected in the Requirements tab, select Tests covering selected requirements. • Test Sets. Displays the test set tree. Expand the tree and select the test set folders to include in the release scope item. To only include test sets that contain tests selected in the Test tab, select Test sets containing the selected tests. • Defects. Displays the defects grid. Define a filter to determine the defects to be included in the release scope item.
Description tab	<p>Describes the release scope item.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>




New Scope Item/Scope Item Details Dialog Box



This dialog box enables you to define and update the release scope items.



To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> In the Release Scope tab, right-click the release scope grid and select New Scope Item. The New Scope Item dialog box opens. In the Release Scope tab, right-click a release scope item and select Scope Item Details. The Scope Item Details dialog box opens.
Important information	ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 172 "Releases Module Window" on page 153

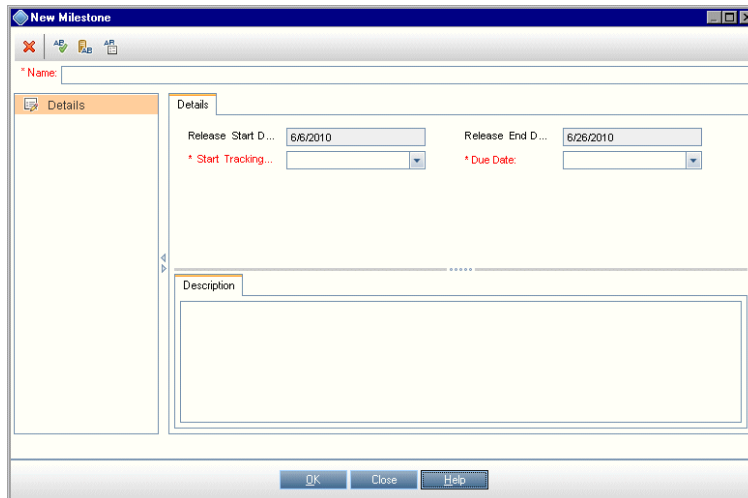
User interface elements are described below:

UI Element	Description
	<p>First/Previous/Next/Last Entity. Allows you to browse through the release scope items.</p> <p>Available from: Scope Item Details dialog box</p>
	<p>Clear All Fields. Clears all the fields in the dialog box.</p> <p>Available from: New Scope Item dialog box</p>
	<p>Spell Check. Checks the spelling for the selected word or text box.</p>

UI Element	Description
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Name	The release scope item name.
Details	Displays details of a release scope item. For details on the available fields, see "PPT Fields" on page 178 .
Content	<p>Displays the content to be included in the release scope item. It includes the following tabs:</p> <ul style="list-style-type: none"> • Requirements. Displays the requirements tree. Expand the tree and select the folders/requirements to include in the release scope item. • Tests. Displays the test plan tree. Expand the tree and select the folders/tests to include in the release scope item. To only include tests covered by the requirements selected in the Requirements tab, select Tests covering selected requirements. • Test Sets. Displays the test set tree. Expand the tree and select the test set folders to include in the release scope item. To only include test sets that contain tests selected in the Test tab, select Test sets containing the selected tests. • Defects. Displays the defects grid. Define a filter to determine the defects to be included in the release scope item.
Description	<p>Describes the release scope item.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>

New Milestone Dialog Box

This dialog box enables you to define milestones.



To access	In the Releases module, right-click a release and choose New Milestone .
Important information	<ul style="list-style-type: none"> You can limit the number of milestones that can be defined per release using the MAX_MILESTONES_PER_RELEASE parameter in the Site Configuration tab in Site Administration. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i> ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 172 "Releases Module Window" on page 153

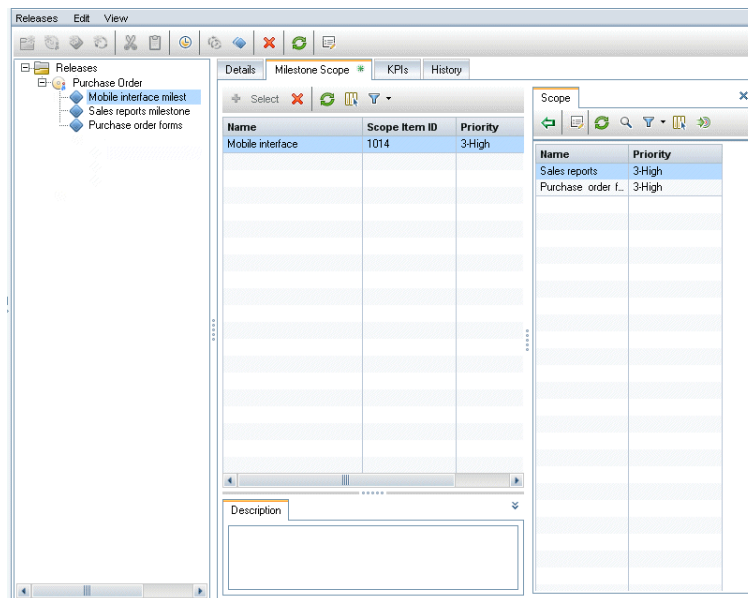
User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears all the fields in the dialog box. Available from: New Milestone dialog box
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.

UI Element	Description
Name	The milestone name.
Details	Displays milestone details. For details on the available fields, see "PPT Fields" on page 178 .
Description	The description of the milestone.

Milestone Scope Tab






This tab enables you to associate milestones with release scope items.



To access	Select a milestone. Click the Milestone Scope tab.
Important information	<ul style="list-style-type: none"> You can limit the number of scope items that can be defined per release using the MAX_SCOPE_ITEMS_PER_RELEASE parameter in the Site Configuration tab in Site Administration. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 172 "Releases Module Window" on page 153







Milestone Scope Grid


User interface elements are described below:

UI Element	Description
	Select Scope Items. Opens the Scope pane, enabling you to select release scope items.
	Remove Scope Items. Removes selected scope items from the grid.
	Refresh. Refreshes the milestone scope grid so that it displays the most up-to-date information.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the milestone scope grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .
	Filter/Sort. Enables you to filter data according to the criteria that you choose. For more details, see "Filter Dialog Box" on page 61 .

Scope Pane

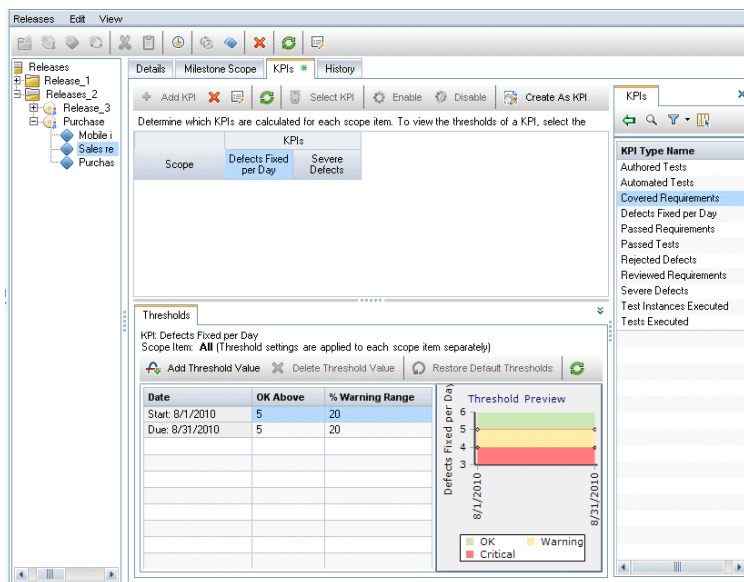
User interface elements are described below:

UI Element	Description
	Add Scope Item. Adds selected release scope items to the milestone scope grid. <div> Tip: You can also add release scope items by dragging a them from the scope item grid to the milestone scope grid. </div>
	Show Scope Item Details. Opens the Details dialog box for the selected scope item in read-only mode.
	Refresh All. Refreshes the scope item grid.
	Find. Searches for a specific release scope item in the scope item grid. Type the name (or part of the name) of the release scope item in the Find box and click Find . If the search is successful, the release scope item is highlighted in the scope item grid.
	Filter/Sort. Filters and sorts the release scope items in the scope item grid. For more details, see "Filter Dialog Box" on page 61 .
	Select Columns. Opens the Select Columns dialog box, enabling you to determine column appearance and order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .

UI Element	Description
	<p>Go to Scope Item by ID. Opens the Go To Scope Item dialog box, enabling you to find a specific test by Scope Item ID.</p> <p>Note: You can only go to release scope items that are in the current filter.</p>

KPIs Tab

This tab enables you to define the KPIs for tracking the milestone scope, and setting the KPI thresholds.





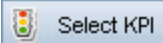

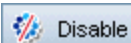




To access	Select a milestone. Click the KPIs tab.
Important information	<ul style="list-style-type: none"> You can customize the default KPIs and create your own KPIs. For more details, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. You can limit the number of KPIs that can be defined per milestone using the MAX_KPIS_PER_MILESTONE parameter in the Site Configuration tab in Site Administration. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. You can limit the number of threshold values that can be defined per KPI using the MAX_THRESHOLD_VALUES_PER_KPI parameter in the Site Configuration tab in Site Administration. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172

See also	<ul style="list-style-type: none"> • "PPT Releases Overview" on page 172 • "Releases Module Window" on page 153
-----------------	---



Main Area




User interface elements are described below:

UI Element	Description
	Opens the KPI pane, enabling you to select KPIs.
	Delete KPI. Removes the selected KPI from the new milestone grid.
	Show KPI Details. Opens the KPI Details dialog box, enabling you to update KPIs and thresholds. For more details, see "New KPI/KPI Details Dialog Box" on next page .
	Refresh. Refreshes the grid so that it displays the most up-to-date information.
	Displays thresholds for a selected KPI column. This option is enabled by selecting a single cell.
	Includes the selected KPI in the defined milestone scope.
	Excludes the selected KPI from the defined milestone scope.
	Opens the New KPI dialog box, enabling you to create a KPI based on a selected KPI. For more details, see "New KPI/KPI Details Dialog Box" on next page .
	Show/Hide. Shows/hides the Thresholds pane.
Thresholds pane	Enables you to manage threshold values for selected KPIs. For more details, see "Thresholds Page" on page 191 .

KPIs Pane

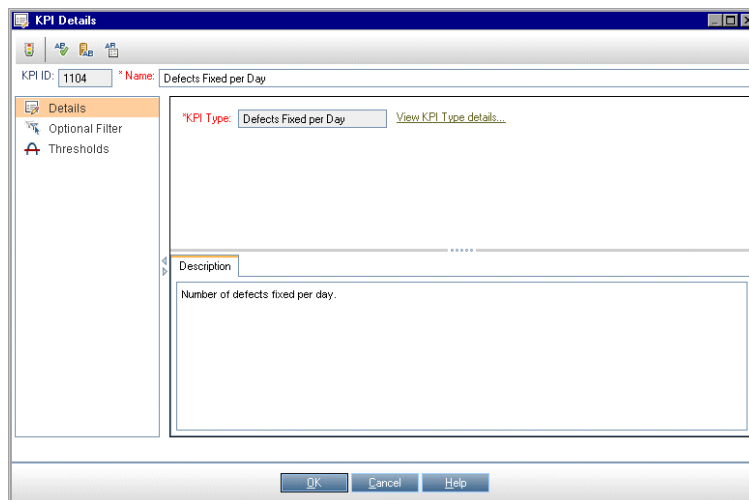
User interface elements are described below:


UI Element	Description
	Add KPI. Adds the selected KPI to the main area in the KPI tab.
	Show KPI Definition Details. Opens the KPI Definition Details dialog box for the selected KPI in read-only mode.

UI Element	Description
	Find. Searches for a specific KPI in the KPI grid. Type the name (or part of the name) of the KPI in the Find box and click Find . If the search is successful, the KPI is highlighted in the KPI grid.
	Filter/Sort. Filters and sorts the KPIs in the KPI grid. For more details, see " Filter Dialog Box " on page 61.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine column appearance and order. For more details, see " Select Columns/Select Fields Dialog Box " on page 86.

New KPI/KPI Details Dialog Box

This dialog box enables you to define and update KPIs.








To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> Select a milestone. Click the KPIs tab. Click Create As KPI. The New KPI dialog box opens. Select a milestone. Click the KPIs tab. Click Show KPI Details . The KPI Details dialog box opens.
------------------	--

Important information	<ul style="list-style-type: none"> You can limit the number of KPIs that can be defined per milestone using the MAX_KPIS_PER_MILESTONE parameter in the Site Configuration tab in Site Administration. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. You can limit the number of threshold values that can be defined per KPI using the MAX_THRESHOLD_VALUES_PER_KPI parameter in the Site Configuration tab in Site Administration. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> "KPI Types" on page 177 "PPT Releases Overview" on page 172 "Releases Module Window" on page 153

Common Elements



User interface elements are described below:

UI Element	Description
	Clear all Fields. Clears all fields in the dialog box. Available from: New KPI dialog box
	Show KPI Type Definition. Opens the KPI Type Definition dialog box, enabling you to view additional information on a selected KPI.
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
KPI ID	A unique alphanumeric ID for the KPI that is assigned automatically. The KPI ID field cannot be modified.
Name	The KPI name.

User interface elements are described below:

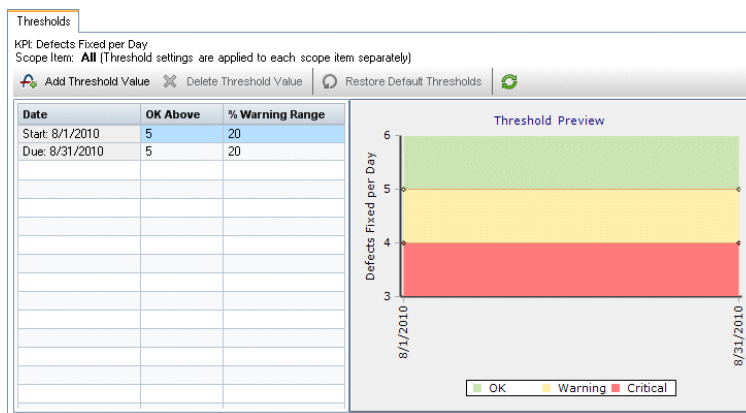
UI Element	Description
KPI Type	The type of KPI. For details on the available KPI, see "KPI Types" on page 177 .
View KPI Type Details	Displays details on the selected KPI.
Description	A description of the selected KPI.


This view enables you to narrow down the entities population in each milestone scope item.

UI Element	Description
	Set Filter/Sort. Enables you to limit the KPI data according to your chosen criteria. For more details on filtering, see "Filter Dialog Box" on page 61 .
	Clear Filter. Clears the defined filter.
View KPI Type Details	Displays details on the selected KPI.





This view enables you to manage threshold values for a selected KPI. For more details, see ["Thresholds Page"](#) below.

This pane enables you to manage threshold values for selected KPIs.



To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> Select a milestone. Click the KPIs tab. Click Create As KPI. The New KPI dialog box opens. Click Thresholds. Select a milestone. Click the KPIs tab. Click Show KPI Details . The KPI Details dialog box opens. Click Thresholds. Select a milestone. Click the KPIs tab. The Thresholds pane is displayed on the bottom.
Important information	<ul style="list-style-type: none"> You can modify the default threshold values of a KPI. For more details, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. You can limit the number of threshold values that can be defined per KPI using the MAX_THRESHOLD_VALUES_PER_KPI parameter in the Site Configuration tab in Site Administration. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 172 "Releases Module Window" on page 153


User interface elements are described below:

UI Element	Description
 Add Threshold Value	Opens the New Threshold Value dialog box, enabling you to define the threshold values for a selected KPI. For more details, see "New Threshold Value Dialog Box" on next page .
 Delete Threshold Value	Removes selected threshold value from the thresholds grid.
 Restore Default Thresholds	Restores default KPI threshold.
	Refresh All. Refreshes the new thresholds grid so that it displays the most up-to-date information.
Date	The threshold value date.
OK Above	<p>A value lower than OK Above and higher than the warning limit, indicates a warning KPI state.</p> <p>A value lower than the warning limit indicates a critical KPI state.</p>
OK Below	<p>A value higher than OK Below and lower than the warning limit, indicates a warning KPI state.</p> <p>A value higher than the warning limit indicates a critical KPI state.</p>

UI Element	Description
% Warning Range	<p>Determines the KPI's warning range.</p> <p>A value lower than OK Above and higher than the warning limit, indicates a warning KPI state.</p> <p>A value higher than OK Below and lower than the warning limit, indicates a warning KPI state.</p>
Threshold Preview	<p>Provides a visual indicator of the thresholds of the selected KPI over the duration of the milestone.</p> <p>Includes the following color-coded thresholds:</p> <ul style="list-style-type: none"> • Green. Indicates a good KPI state. • Yellow. Indicates an acceptable or a warning KPI state. • Red. Indicates a bad KPI state.

New Threshold Value Dialog Box

This dialog box enables you to set threshold values for selected KPIs.

To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • Select a milestone. Click the KPIs tab. Click Create As KPI. The New KPI dialog box opens. Click Thresholds. Click Add Threshold Value. • Select a milestone. Click the KPIs tab. Click Show KPI Details . The KPI Details dialog box opens. Click Thresholds. Click Add Threshold Value. • Select a milestone. Click the KPIs tab. The Thresholds pane is displayed on the bottom. Click Add Threshold Value.
Important information	ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> • "PPT Releases Overview" on page 172 • "Releases Module Window" on page 153

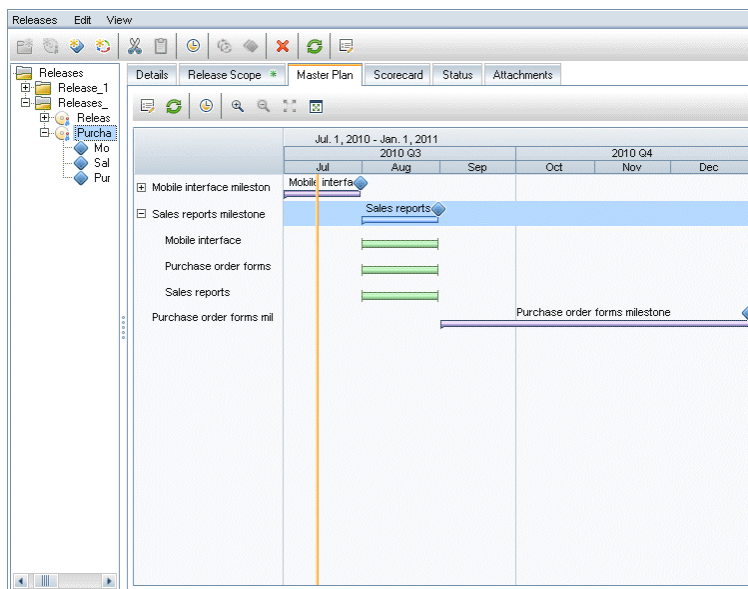
User interface elements are described below:

UI Element	Description
Date	The threshold value date.

UI Element	Description
OK Above	A value lower than OK Above and higher than the warning limit, indicates a warning KPI state. A value lower than the warning limit indicates a critical KPI state.
OK Below	A value higher than OK Below and lower than the warning limit indicates a warning KPI state. A value higher than the warning limit indicates a critical KPI state.
% Warning Range	Determines the KPI's warning range. A value lower than OK Above and higher than the warning limit indicates a warning KPI state. A value higher than OK Below and lower than the warning limit indicates a warning KPI state.







Master Plan Tab

This tab displays the progress of a release in a Gantt chart.



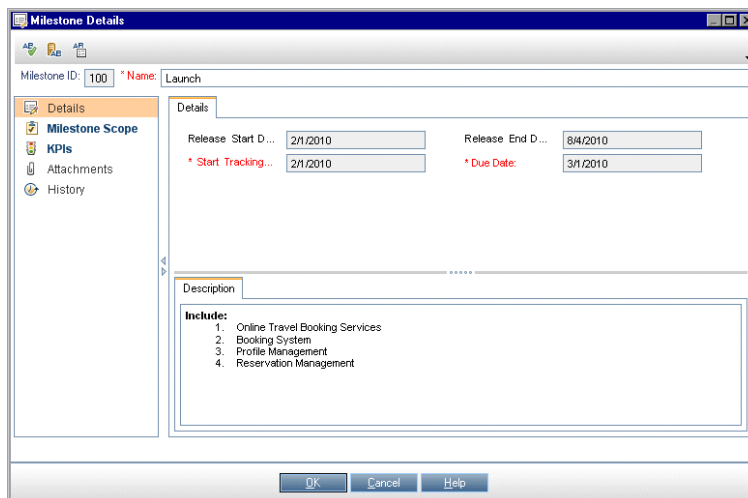
To access	In the Releases module, select a release and click the Master Plan tab.
Important information	ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 172 "Releases Module Window" on page 153

User interface elements are described below:

UI Element	Description
	<p>Show Details. Opens the appropriate Details dialog box, depending on the selected entity. You can select the following entities: cycles, milestones, and release scope items.</p> <p>For more details on cycle details, see "New Cycle/Cycle Details Dialog Box" on page 161.</p> <p>For more details on milestone details, see "Milestone Details Dialog Box" below.</p> <p>For more details on release scope item details, see "New Scope Item/Scope Item Details Dialog Box" on page 182.</p> <p>Tip: You can also double-click an entity on the chart. The appropriate Details dialog box opens.</p>
	<p>Refresh. Refreshes the chart.</p>
	<p>Reschedule. Reschedules the start and end date of a release, cycle or milestone. For more details, see "Reschedule Release/Cycle/Milestone Dialog Box" on page 168.</p>
	<p>Zoom In/Out. Changes the magnification of the chart.</p>
	<p>Display Entire Release. Restores the chart to its normal size. This button is enabled when the Zoom In and Zoom Out buttons are in use.</p>
	<p>Full Screen View. Opens the chart in a new window and maximizes its display.</p>




Milestone Details Dialog Box

This dialog box enables you to view and update the milestones.



To access	Use one of the following: <ul style="list-style-type: none"> In the Releases module, select a release and click the Master Plan tab. Double-click a milestone on the chart. In the Releases module, right-click a milestone and choose Details.
Important information	ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 172 "Releases Module Window" on page 153

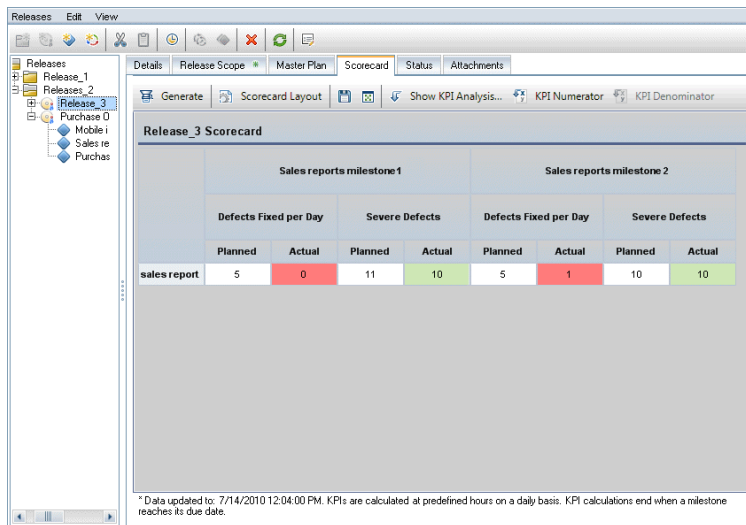
User interface elements are described below:

UI Element	Description
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Milestone ID	A unique numeric ID for the milestone, assigned automatically by ALM. The Milestone ID is read-only.
Name	The milestone name.
Details	Displays milestone details. For details on the available fields, see "PPT Fields" on page 178 .
Milestone Scope	Enables you to view and update a release scope item. For more details, see "Milestone Scope Tab" on page 185 .
KPIs	Enables you to define KPIs and set thresholds. For more details, see "KPIs Tab" on page 187 .
Attachments	Enables you to add attachments that provide additional information about the new milestone. For more details, see "Attachments Page" on page 83 .
History	Enables you to view the fields modified during the change. For more details, see "History Tab" on page 78 .
Description	A description of the milestone.

Scorecard Tab



This tab displays KPI calculations that enable you to determine the status of your release. You can view a detailed analysis of each KPI cell and display the calculation as a graph. You can also view






details of the entities that contributed to the KPI data.



To access	In the Releases module, select a release and click the Scorecard tab.
Important information	<ul style="list-style-type: none"> To view progress in the Scorecard tab, you must run calculations for your project. You can schedule to run calculations automatically or manually. For more details, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 172 "Releases Module Window" on page 153 "View Tab - PPT Graphs" on page 830

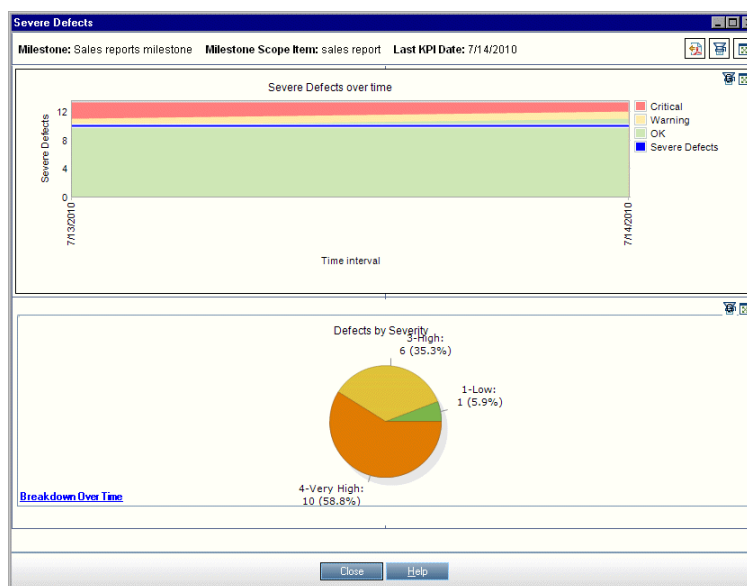
User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
 Generate	<p>Refreshes the scorecard table, so that it displays the most up-to-date information.</p> <p>For details on the scorecard table, see "View Tab - PPT Graphs" on page 830.</p> <p>Note: KPIs are calculated at predefined hours on a daily basis. Milestones are calculated once they reach their due date.</p>
 Scorecard Layout	<p>Scorecard Layout. Opens the Scorecard Layout dialog box enabling you to configure the scorecard table. For more details, see "Scorecard Layout Dialog Box" on page 204.</p>

UI Element	Description
	Save Graph Image. Saves the scorecard table as an image.
	Full Screen. Displays the scorecard table in full-screen mode.
 Show KPI Analysis...	Opens the KPI analysis of the selected cell as defined in project customization. For more details, see "KPI Drill Down Graph" below .
 KPI Numerator  KPI Denominator	<p>Opens the Drill Down Results dialog box which displays details of the entities that contributed to the KPI value. For more details see "KPI Drill Down Results Dialog Box" on next page.</p> <p>Example: If your release scope item contains 50 defects, of which 10 have been rejected, then the value for the Rejected Defects KPI will be 20%. To view details of the rejected defects only, click KPI Numerator. To view details of all the defects, click KPI Denominator.</p> <p>Note: KPI Denominator is only available for percentage KPI types.</p>
<KPI cell>	Hover over a KPI cell to view a tooltip containing the KPI's threshold values.




KPI Drill Down Graph

This graph shows calculations of a KPI cell. The top area shows changes in the KPI calculations over time. The bottom area shows KPI breakdown calculations.



To access	<ol style="list-style-type: none"> 1. In the Releases module, select a release and click the Scorecard tab. 2. Select a KPI cell. 3. On the Scorecard tab toolbar, click Show KPI Analysis.
Important information	<ul style="list-style-type: none"> • The graph page can contain up to two additional graphs. You can customize this page and determine whether or not to display these additional graphs. For more details, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. • ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> • "PPT Releases Overview" on page 172 • "Releases Module Window" on page 153

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
	Export to PDF. The Save As dialog box opens enabling you to save the graph as a PDF.
	Generate All Graphs in Page/Generate Graph. Refreshes all the graphs on the page, or the selected graph, so that they display the most up-to-date information.
	View Page in Full Screen. Displays the dashboard page in full-screen mode. View Graph in Full Screen. Displays the graph in full-screen mode.
Milestone	The name of the selected milestone.
Milestone Scope Item	The name of the selected milestone scope item.
Last KPI Date	Indicates when the KPI was last calculated.
<graph area>	Hover over a graph segment to view a tooltip containing additional information.
Breakdown Over Time link	Click to drill down to the graph's data and show specific points during a period of time. Opens a breakdown over time graph. For more details, see "Breakdown Over Time Graph" on page 201 . Available from: graph area on the bottom of the page.

KPI Drill Down Results Dialog Box

This dialog box displays the most up to date details of entities that contributed to the KPI value. The information displayed represents either the numerator or the denominator value contributing to the

KPI percentage result, or the value contributing to the KPI count result.

Drill Down Results

Denominator Drilldown, Number of Items: 101


	Bua ID	Detected By	Detected...	Modified	Severitv	Status
1		user2	9/2/2010	3/24/2011 12...	2-Medium	Closed
2		user1	10/14/2010	3/27/2011 2:3...	1-Low	Open
3		user1	10/14/2010	3/27/2011 2:3...	1-Low	Open
4		user1	10/14/2010	3/27/2011 2:3...	1-Low	Open
5		user1	10/14/2010	3/27/2011 2:3...	1-Low	Open
6		user1	10/14/2010	3/27/2011 2:3...	1-Low	Open
7		user2	10/14/2010	3/27/2011 2:3...	1-Low	Open
8		user2	10/14/2010	3/27/2011 2:3...	1-Low	Open
9		user2	10/14/2010	3/27/2011 2:3...	1-Low	Open
10		user2	10/14/2010	3/27/2011 2:3...	1-Low	Open


Description: Comments:

The displayed list of entities is correct according to the most recent KPI calculation (5/3/2011 10:38:44 AM). However, entities that were subsequently deleted from the system are not displayed. Entity details are the most up to date and if they have changed since the KPI calculation, they may contradict the KPI value.

To access	<ol style="list-style-type: none"> 1. In the Releases module, select a release and click the Scorecard tab. 2. Select a KPI cell and on the Scorecard toolbar and click either KPI Numerator or KPI Denominator (if the KPI is a percentage type)..
Important information	<ul style="list-style-type: none"> • The dialog box displays the most up to date information for each entity, even if it has changed since the original KPI calculation. Therefore it is possible that the information displayed may contradict the KPI value. • Entities that have been deleted from the system are not displayed. • ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> • "PPT Releases Overview" on page 172 • "Releases Module Window" on page 153

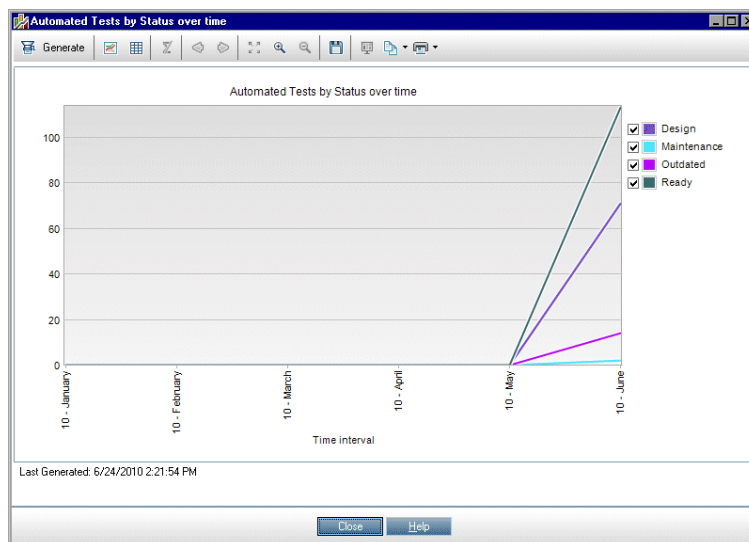
User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element (A - Z)	Description
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the data grid, and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86.

UI Element (A - Z)	Description
	<p>Export. Opens the Export Grid Data dialog box, enabling you to export the records as a text file, Microsoft Excel worksheet, Microsoft Word document, or HTML document.</p> <p>Select one of the following options:</p> <ul style="list-style-type: none"> • All. Exports all records in the grid. • Selected. Exports selected records in the grid.
<Segment parameters>	Located above the data grid, displays the drill down type and the number of records displayed.
<Data grid>	<p>A list of the numerator or denominator records that are included in the selected KPI value.</p> <p>To open a particular record, double-click a record. The <Module> Details dialog box opens, enabling you to view or edit the record. Use the navigation buttons to browse through the drill down results.</p>




Breakdown Over Time Graph









This graph displays specific points during a period of time.



To access	<p>From the Releases module:</p> <ol style="list-style-type: none"> 1. In the Releases module, select a release and click the Scorecard tab. 2. Select a KPI cell. 3. On the Scorecard tab toolbar, click Show KPI Analysis. The KPI Drill Down Graph opens. 4. On the bottom of the KPI Drill Down Graph page, click the Breakdown Over Time link. <p>From the Dashboard module:</p> <ol style="list-style-type: none"> 1. Select Analysis View. 2. Expand the analysis tree, and select one of the following graphs: KPI Breakdown or Release Scorecard. 3. Click the View tab. 4. For a KPI Breakdown graph, click the Breakdown Over Time link. <p>For a Release Scorecard, click a KPI cell. On the bottom of the KPI graph page, click the Breakdown Over Time link.</p>
Important information	ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> • "PPT Releases Overview" on page 172 • "Releases Module Window" on page 153 • "KPI Drill Down Graph" on page 198

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
 Generate	Refreshes the graph so that it displays the most up-to-date information.
	Line Chart. Switches the chart format to a line chart.
	Data Grid. The grid creates a matrix of the graph's x-axis and Grouped By categories. A Total row is added that displays the total of each Grouped By category.

UI Element	Description
	<p>Show/Hide Total Values. Shows/hides a <total> category to the graph, representing the sum of all the other Grouped By categories.</p> <p>Tip: After showing the <total> category, click its label in the legend to hide the category.</p>
	<p>Scroll to the Left/Right. Scrolls the graph to the left or right. These buttons are enabled when the Zoom In and Zoom Out buttons are in use.</p>
	<p>Show All. Restores the graph to its normal size. This button is enabled when the Zoom In and Zoom Out buttons are in use.</p>
	<p>Zoom In/Out. Changes the magnification of the graph.</p>
	<p>Save Graph Image. When viewing a graph as a bar, pie chart, or line chart, saves the graph image. You can select from a variety of graphic file formats.</p> <p>Save Graph Data. When viewing a data grid, saves the graph data. You can save the data as an Excel spreadsheet, a Word file, an HTML document, or a text file.</p>
	<p>Set Graph Appearance. Opens the Graph Appearance dialog box, enabling you to customize the graph title, graph color, and graph display. For more details, see "Graph Appearance Dialog Box" on page 821.</p>
	<p>Copy Graph to Clipboard. Includes the following options:</p> <ul style="list-style-type: none"> • Copy Graph (Color). Copies the graph in color to the Clipboard. • Copy Graph (Monochrome). Copies the graph in monochrome to the Clipboard. • Copy Full Screen Graph (Color). Copies the graph in color to the Clipboard, enlarged to fit full screen. • Copy Full Screen Graph (Monochrome). Copies the graph in monochrome to the Clipboard, enlarged to fit full screen.
	<p>Print Graph. Includes the following options:</p> <ul style="list-style-type: none"> • Print Graph (Color). Prints the graph in color. This is the default button option. • Print Graph (Monochrome). Prints the graph in monochrome. • Print Graph and Details (Color). Prints the graph and its description in color. • Print Graph and Details (Monochrome). Prints the graph and its description in monochrome.

UI Element	Description
<graph area>	Hover over a graph segment to view a tooltip containing additional information.
<legend>	Displays the chart categories and their corresponding color. Click a category to show or hide the category in the graph.

Scorecard Layout Dialog Box

This dialog box enables you to configure the scorecard table settings.

Scorecard Layout

Rows: Scope Item Name

Columns: Milestone Name, KPI Name

☐ Group scope items by field: Owner

☐ Display planned KPI target

Filter

Milestone: Sort By: Due Date[Ascending]

Scope Item: Sort By: Name[Ascending]

KPI: Sort By: Name[Ascending]






Restore Default Filter Settings

* Any changes in the scorecard layout will affect all users viewing the scorecard.

OK Cancel Help

To access	In the Releases module, select a release and click the Scorecard tab. Click the Scorecard Layout button.
Important information	ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 172 "Releases Module Window" on page 153

User interface elements are described below:

UI Element	Description
Rows	Lists rows that are currently displayed in the scorecard table.
	Sets the order in which row or column names appear in scorecard table.
	Moves selected names between Rows and Columns .
Columns	Lists columns that are currently displayed in the scorecard table.
Group Scope Items by Field	Groups according to a specified scope item field.
Display Planned KPI Target	Displays the OK value of a KPI's threshold in the Planned column of the scorecard table. Note: The Planned column is displayed only when this option is enabled.
	Enables you to narrow and sort the Milestone , Scope Item , or KPI data according to your chosen criteria. For more details on filtering, see "Filter Dialog Box" on page 61 .
	Clears the defined filter.
	Restores default filter definitions.

New Release From Template Dialog Box

This dialog box enables you to create a new release by copying from an existing release in a template project.

To access	In the Releases module, right-click a release folder and select New Release from Template > New Release from Template .
------------------	---

Important information	<ul style="list-style-type: none">• The following release properties are copied from the template project: description, start/end dates, cycles, milestones, KPIs, KPI thresholds, attachments, and user-defined fields.• The following release properties are not copied from the template project: release scope, milestone scope, and links to ALM entities in other modules.• After creating the new release, you must update the copied dates.• The New Release from Template option is available in a project that is linked and synchronized with a template project. For more details on linking and synchronizing template projects, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.• ALM Editions: Functionality related to PPT is available for ALM Edition only.
Relevant tasks	"How to Work with PPT" on page 172
See also	<ul style="list-style-type: none">• "PPT Releases Overview" on page 172• "Releases Module Window" on page 153

User interface elements are described below:

UI Element	Description
Template Release	Displays the releases available from the template project. Expand the tree and select a release.
Release Name	The name of the new release. Note: If the release name already exists in the Releases module, the suffix _ Copy will be added to the release name.

Chapter 11

Libraries and Baselines

This chapter includes:

Libraries Overview.....	208
How to Use Libraries and Baselines in ALM.....	210
Libraries and Baselines User Interface.....	213

Libraries Overview

ALM Editions: The Libraries module functionality described in this chapter is not available for ALM Essentials Edition.

In the Libraries module, you define a hierarchical libraries tree to create and manage your libraries. A **library** represents a set of entities in a project and the relationships between them. The entities in a library can include requirements, tests, test resources, and business components.

After you create a library, you can create a baseline to keep track of changes made to your project over time. A **baseline** is a snapshot of the library at a specific point in time. You can compare baselines at all stages of the application development lifecycle.

Viewing baseline history enables you to track changes made to individual entities in your library over time. As development continues, you can view and compare all versions of an entity that are stored in a baseline.

You can also import a library. Importing a library enables you to reuse and share an existing set of entities. As development continues, you can compare and synchronize libraries. For details, see ["Imported Libraries Overview" on page 234](#).

ALM Editions: Imported library functionality is available for ALM Edition and Performance Center Edition only.

Creating and managing libraries and baselines requires appropriate user permissions. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

This section also includes:

- ["Baselines Overview" below](#)
- ["Pinned Test Sets" on next page](#)

For task details, see ["How to Use Libraries and Baselines in ALM" on page 210](#).

Baselines Overview

After you create a library, you can create a baseline. A baseline is a snapshot of your library at a specific point in time. You can use a baseline to mark any significant milestone in the application development lifecycle. A baseline includes all the entities defined in the library, including requirements, tests, and test resources. Baselines also include:

- the relationships between the entities in the library, such as traceability and coverage
- any related entities outside of the library that the tests in the library need in order to run, such as called tests and test resources

Baselines enable you to keep track of changes made to your project over time. You can use baselines in the following ways:

- Compare baselines at all stages of the application development lifecycle. For example, you can compare two baselines in a library to assess the impact of changes made to requirements over

time. You can then update the relevant tests in your project accordingly. You can also compare a baseline to the current entities in the library.

- Pin a test set to a baseline. This ensures that when you run the test set, the versions of the tests stored in a baseline you specify are run. For more details, see ["Pinned Test Sets" below](#).
- Use a baseline to share the entities in a library. This enables you to reuse the library's entities within your project, or in a different project. You share or reuse entities by importing a library. The library must contain a baseline. For details on importing a library, see ["Imported Libraries Overview" on page 234](#).

ALM Editions: Imported library functionality is available for ALM Edition and Performance Center Edition only.

Baseline Examples

The following examples demonstrate how you can use baselines:

- **Establish content of a release - stakeholder sign off**

Your organization is starting development of a new version of an application. Robert, a business analyst, presents a group of requirements to the stakeholders to review. After the requirements are reviewed and approved, he creates a baseline. Stakeholders can then sign off on the agreed upon release content.

- **Monitor change**

Kelly, a product manager, finds that product development is being implemented differently than she expected. She reviews the requirements for the product and discovers that some have changed. She compares the current requirements with the requirements in the baseline created and agreed upon at the start of the release.

- **Evaluate the impact of changes**

Michael, a QA tester, is responsible for a large group of tests that are part of the latest application release. He is updating some of the tests in accordance with the requirements for the release. Following the latest requirements review meeting, he is notified that some of the requirements have been changed. Michael compares the current requirements with the requirements in the baseline created at the start of the release. He identifies which changes affect tests he is working on, and updates the tests to reflect the changes.

Pinned Test Sets

You can pin a test set to a baseline. When you pin a test set to a baseline, the tests that are in the test set are associated with the versions of the tests stored in the baseline you select. When you run the tests in a pinned test set, the versions of the tests stored in the specified baseline are run.

A pinned test set can include only tests that are included in the baseline. When you pin a test set to a baseline, tests that are not a part of the baseline are removed from the test set. In addition, all test runs are deleted from the test set. When you add tests to a pinned test set, you can select only tests that are included in the baseline.

You can also clear a pinned test set. The tests in the test set are then associated with the current tests in the Test Plan module. When you clear a pinned test set, all test runs in the test set are deleted.

For user interface details, see ["Select Baselines Dialog Box"](#) on page 231.

How to Use Libraries and Baselines in ALM

This task describes how to work with libraries and baselines.

To learn more about libraries and baselines, see ["Libraries Overview"](#) on page 208.

- **ALM Editions:** Quality Center Enterprise Edition does not include all Libraries module functionality. This module is not available with ALM Essentials Edition.
- **Product Feature Movie:** To view a movie that demonstrates versioning and baselining capabilities, choose **Help > Product Feature Movies** in the ALM main window.

This task includes the following steps:

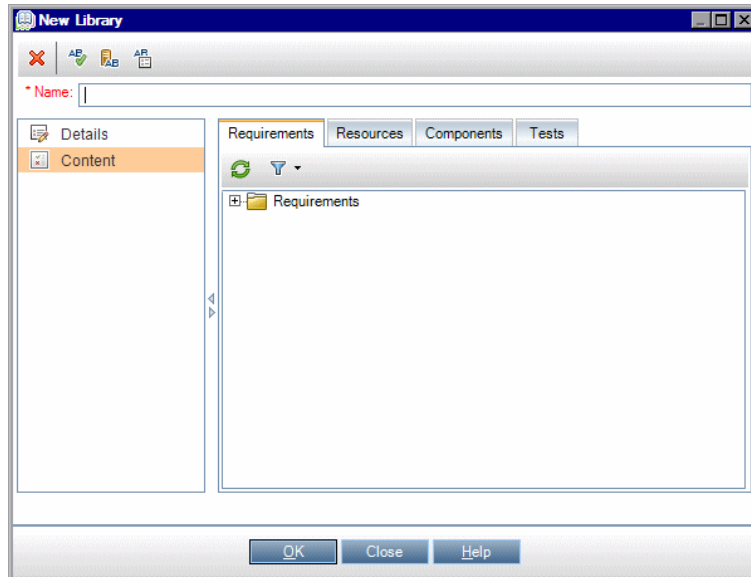
- ["Create a library"](#) below
- ["Create a baseline"](#) on next page
- ["Monitor library tasks - optional"](#) on page 212
- ["Compare baselines"](#) on page 212
- ["Pin a test set to a baseline"](#) on page 213
- ["View baseline history"](#) on page 213
- ["Share a library"](#) on page 213

1. Create a library

Define a hierarchical framework for your libraries by creating a libraries tree that can contain folders and subfolders.

- a. **Open the Libraries module.** On the ALM sidebar, under **Management**, select **Libraries**.
- b. **Create folders.** Right-click the **Libraries** root folder and select **New Folder**. To create a sub-folder, right-click a folder and select **New Folder**.
- c. **Add libraries to folders.** Right-click a folder and select **Create Library**. In the New Library dialog box, fill in fields on the Details page. For user interface details, see ["New Library/Library Details Dialog Box"](#) on page 219.

On the **Content** page, select entities to include in the library. For user interface details, see "Content Tab" on page 221.



You can define a filter to help you select the entities that you want to include. This can be useful, for example, if you want to create a library that is not based solely on the hierarchical structure of your project.

Example

Jim, the project manager, has a new project with a major security impact. The test plan tree in his project is organized hierarchically based on products and versions. Jim creates a library that includes the relevant test folders, and defines a filter for the library to include only security-related tests in those folders.

Note: In order to maintain optimal performance, the number of entities that a library can contain is limited. You can change the default values by setting the **LIBRARY_FUSE** and **REQUIREMENTS_LIBRARY_FUSE** parameters in the Site Configuration tab in Site Administration. For details, refer to the *HP Application Lifecycle Management Administrator Guide*.

2. Create a baseline

Create a baseline for a library to track changes made to entities in your project over time.

- a. In the Libraries module, right-click a library and select **Create Baseline**. For user interface details, see "Create Baseline Wizard" on page 223.
- b. Click the **View Log** button in the Details tab. The Log: Create Baseline dialog box opens and displays progress.

Note: When the process is complete, view the log before refreshing the display. If you

refresh the display after the baseline is created, the **View Log** button is no longer displayed, and you cannot view the log.

For user interface details on the Libraries module window, see ["Libraries Module Window" on page 214](#).

- c. Click the **Refresh** button on the module toolbar to refresh the display. The baseline details are displayed in the Details tab. For details on the available fields in the Details tab, see ["Libraries Module Fields" on page 219](#).

3. Monitor library tasks - optional

When you create a baseline, ALM performs the task in the background, enabling you to continue working in ALM while the process is running. You can view the status and progress of all asynchronous tasks run for the project using the Task Manager.

On the ALM masthead, select **Tools > Task Manager**. For user interface details, see ["Task Manager Dialog Box" on page 54](#).


4. Compare baselines

Compare two baselines in a library, or compare a baseline to the current entities in the library.

- a. In the Libraries module, right-click a baseline, click **Compare To**, and choose one of the following:
 - **Select Baseline.** Compares the baseline you selected with another baseline in the library. Opens the Select Baseline dialog box. Click the browse button to select a baseline from the list.
 - **Current Entities.** Compares the baseline you selected with the current entities in the library.

For user interface details on the Compare Baselines Tool, see ["Compare Baselines Tool Dialog Box" on page 224](#).

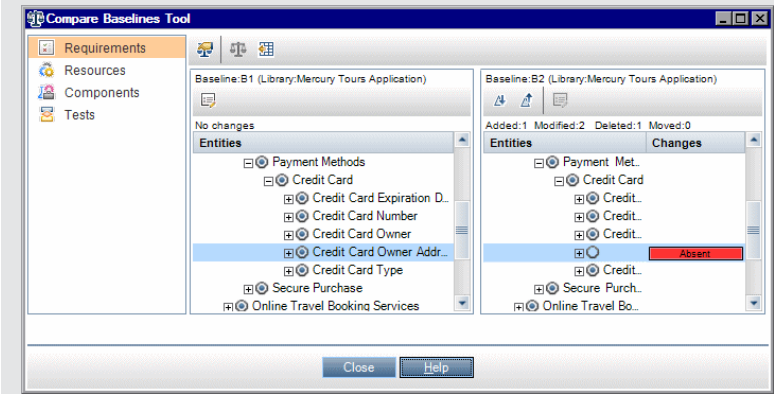
- b. To save the baseline comparison results in .csv file format, click the **Export Comparison**

Results button . After saving, the file opens in the default application defined for opening .csv files on your computer, such as Microsoft Excel.

Example

Comparing two baselines that were created for the Mercury Tours Application

library at different stages of development shows the following results:



5. **Pin a test set to a baseline**

You can pin a test set to a baseline to associate the test set with the versions of the tests stored in the baseline you select.

- In the Test Lab module, right-click a test set and select **Pin to Baseline**. For user interface details on the Select Baseline dialog box, see ["Select Baselines Dialog Box"](#) on page 231.
- To clear a pinned baseline, right-click a test set and select **Clear Pinned Baseline**.

For concept details on pinned test sets, see ["Pinned Test Sets"](#) on page 209.

6. **View baseline history**

View and compare all versions of an entity that are stored in a baseline.

Note: Available from the following modules: Requirements, Business Components, Test Plan, Test Resources.

Select an entity in the tree or grid, and click **History** tab > **Baselines** tab.

For user interface details on the Baselines tab, see ["Baselines Tab"](#) on page 229.

7. **Share a library**

Import a library to reuse an existing set of entities within a project or across multiple projects. As development continues, compare and synchronize libraries. For task details, see ["How to Share Libraries"](#) on page 237.

ALM Editions: Imported library functionality is available for ALM Edition and Performance Center Edition.

Libraries and Baselines User Interface

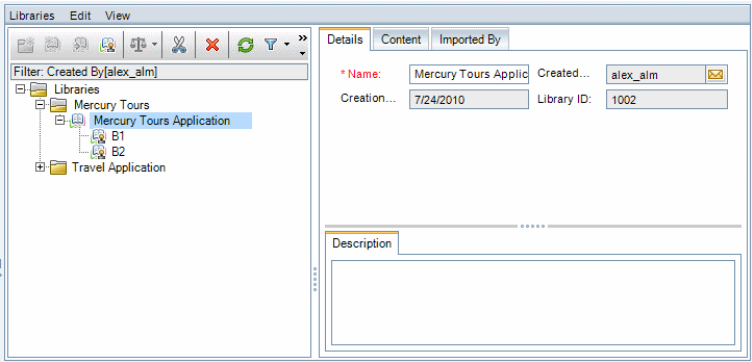
This section includes:

Libraries Module Window.....	214
Libraries Module Menus and Buttons.....	215
Libraries Module Icons.....	218

Libraries Module Fields.....	219
New Library/Library Details Dialog Box.....	219
Content Tab.....	221
Create Baseline Wizard.....	223
Compare Baselines Tool Dialog Box.....	224
Compare Entities Dialog Box.....	226
Comparison Settings Dialog Box.....	228
Baselines Tab.....	229
Select Baselines Dialog Box.....	231

Libraries Module Window

The Libraries module window enables you to create and manage libraries and baselines.



To access	On the ALM sidebar, under Management, select Libraries .
Important information	ALM Editions: Quality Center Enterprise Edition does not include all Libraries module functionality. This module is not available with ALM Essentials Edition.
Relevant tasks	<ul style="list-style-type: none"> "How to Use Libraries and Baselines in ALM" on page 210 "How to Share Libraries" on page 237
See also	"Libraries Overview" on page 208

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<Libraries module common UI elements>	<ul style="list-style-type: none">• Library fields. For field definitions, see "Libraries Module Fields" on page 219.• Library menus and buttons. For command and button descriptions, see "Libraries Module Menus and Buttons" below.• Library icons. For icon descriptions, see "Libraries Module Icons" on page 218.• ALM main menu and sidebar. For details on the Tools menu, Help menu and sidebar, see "ALM Common Areas" on page 45.
<Libraries tree>	A graphical representation of your libraries.
<Filter status bar>	Describes the filter currently applied to the tree. Located directly above the libraries tree.
Details tab	Describes the library folder, library, or baseline selected in the libraries tree.
Content tab	Displays the entities included in the selected library. For details, see "Content Tab" on page 221 .
Imported By tab	Displays a list of projects that have imported the selected library. For more details, see "Imported By Tab" on page 244 . ALM Editions: Available only for ALM Edition and Performance Center Edition.
Imported From tab	Displays details about the library from which the currently selected library was imported. This tab is visible only when the selected library is imported. For more details, see "Imported From Tab" on page 245 . ALM Editions: Available only for ALM Edition and Performance Center Edition.
Description tab	A description of the currently selected library folder, library, or baseline. Click in the text box to display a toolbar for formatting and spell checking the text.





Libraries Module Menus and Buttons




This section describes the menus and buttons available in the Libraries module.




To access	On the ALM sidebar, under Management, select Libraries .
-----------	---

Important information	<p>Tip: You can access the menu bar from the Libraries module by pressing the shortcut key ALT. Additionally, you can perform many other ALM operations using shortcut keys. For a list of shortcut keys, see "ALM Keyboard Shortcut Reference" on page 132.</p> <p>ALM Editions: Quality Center Enterprise Edition does not include all Libraries module functionality. This module is not available with ALM Essentials Edition.</p>
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 210
See also	<ul style="list-style-type: none"> • "Libraries Module Icons" on page 218 • "Libraries Overview" on page 208

User interface elements are described below:

UI Element	Menu	Description
New Folder 	Libraries	Opens the New Library Folder dialog box, enabling you to add a folder under a selected folder.
Create Library 	Libraries	Opens the Create Library dialog box, enabling you to add a library to a selected library folder. For more details, see "New Library/Library Details Dialog Box" on page 219 .
Import Library 	Libraries	<p>Opens the Import Library Wizard, enabling you to import a library under a selected library folder. For more details, see "Import Library Wizard" on page 240.</p> <p>ALM Editions: Available only with ALM Edition and Performance Center Edition.</p>
Create Baseline 	Libraries	Enables you to create a baseline for a selected library. For more details, see "Create Baseline Wizard" on page 223 .

UI Element	Menu	Description
Compare To 	Libraries	<p>Compares the currently selected library or baseline with other libraries or baselines. Includes the following options:</p> <p>For a selected library: ALM Editions: Available only with ALM Edition and Performance Center Edition.</p> <ul style="list-style-type: none"> • Latest Baseline Created. Compares the selected library with the most recent baseline created in the other library. • Select Baseline. Opens the Select Baseline dialog box, enabling you to select a baseline in another library with which to compare. <p>For a selected baseline:</p> <ul style="list-style-type: none"> • Current Entities. Compares the selected baseline with the current entities in the library. • Select Baseline. Opens the Select Baseline dialog box, enabling you to select a baseline in the library with which to compare.
Library Details 	Libraries	<p>Opens the Library Details dialog box, enabling you to view and edit the details of the selected library. For details, see "Libraries Module Window" on page 214.</p>
Cut/Paste 	Edit	<p>Moves a selected library folder or library to a different location in the libraries tree.</p> <p>Note: Moving a library folder also moves its libraries and baselines. Moving a library also moves its baselines. You cannot move a baseline or the root folder.</p> <p>Tip: You can also move a library folder or a library to a new location in the libraries tree by dragging it.</p>




UI Element	Menu	Description
Delete 	Edit	Deletes selected library folders, libraries, or baselines. Note: <ul style="list-style-type: none"> You cannot delete a library folder that contains libraries, or delete a library that contains baselines. Deleting a library or baseline does not delete the library's entities from your project. If you delete a baseline, you can no longer compare between the baseline's library and another library that was imported from or synchronized with the baseline. Deleting a baseline also deletes test sets pinned to the baseline.
Rename	Edit	Renames a selected library folder, library, or baseline. You cannot rename the root folder.
Refresh 	View	Refreshes the libraries tree and tabs so that they display the most up-to-date information.
Filter 	View	Enables you to filter the libraries in the libraries tree. For more details, see "Filter Dialog Box" on page 61 .



Libraries Module Icons

This section describes the icons available in the Libraries module.

To access	On the ALM sidebar, under Management, select Libraries .
Important information	ALM Editions: Quality Center Enterprise Edition does not include all Libraries module functionality. This module is not available with ALM Essentials Edition.
See also	<ul style="list-style-type: none"> "Libraries Module Menus and Buttons" on page 215 "Libraries Module Window" on page 214

User interface elements are described below:

UI Element	Description
	<green asterisk> . The applicable tab is populated.
	Baseline . A baseline for a library in the libraries tree.
	Imported Library . A library that was imported from the same project or from a different project.

UI Element	Description
	Library Folder. A folder for organizing libraries.
	Library. A library in the libraries tree.

Libraries Module Fields

This section describes the Libraries module fields.

To access	On the ALM sidebar, under Management, select Libraries .
Important information	<ul style="list-style-type: none">You can add user-defined fields and change the label of any of the fields in the Details tab. You can also customize project lists. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.You can use the Script Editor to restrict and dynamically change the fields and values in the Libraries module. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.ALM Editions: Quality Center Enterprise Edition does not include all Libraries module functionality. This module is not available with ALM Essentials Edition.
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 210
See also	"Libraries Overview" on page 208

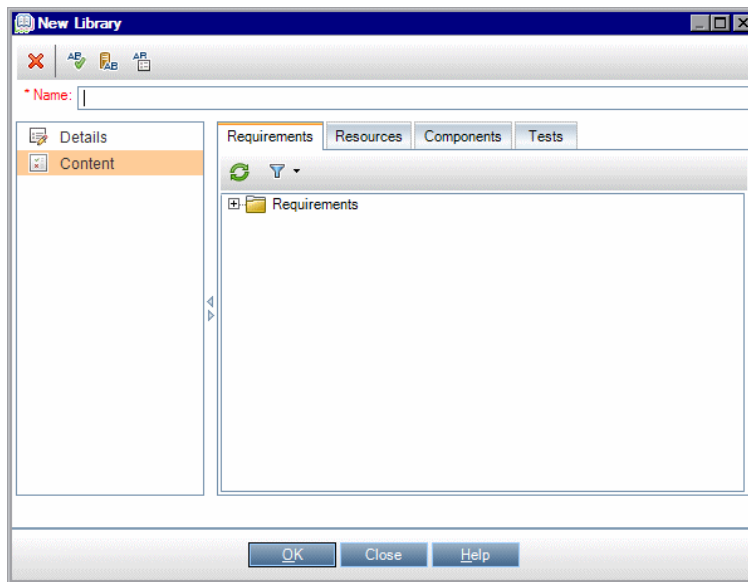
The fields are described below:

UI Element	Description
Name	The folder, library, or baseline name.
Baseline ID	A unique numeric ID for the baseline that ALM assigns automatically.
Created By	The user name of the person who created the library or baseline.
Creation Date	The date on which the library or baseline was created.
Modified	The date and time on which the baseline was last renamed or the description was changed.
Library ID	A unique numeric ID for the library that ALM assigns automatically.
Description	A description of the library folder, library, or baseline. Click in the text box to display a toolbar for formatting and spell checking the text.

New Library/Library Details Dialog Box

The New Library dialog box enables you to add a library to a library folder.

The Library Details dialog box enables you to view and update the details and content of a library.



To access	<p>New Library dialog box: In the Libraries module, right-click a library folder and select Create Library.</p> <p>Library Details dialog box: In the Libraries module, right-click a library and select Library Details.</p>
Important information	ALM Editions: This dialog box is not available with ALM Essentials Edition.
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 210
See also	"Libraries Overview" on page 208

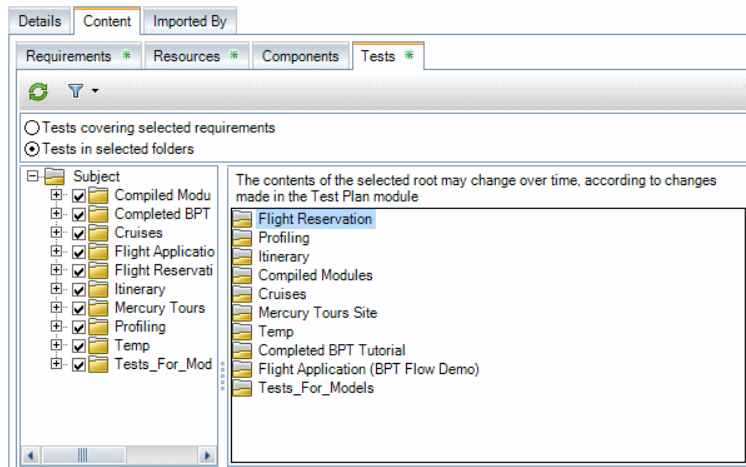
User interface elements are described below:

UI Element	Description
	<p>Clear All Fields. Clears the data.</p> <p>Available from: New Library dialog box</p>
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Name	<p>The name you assign to the library.</p> <p>Syntax exceptions: A library name cannot include the following characters: \ / : * ? " < > </p>

UI Element	Description
Details	Lists library fields. Required fields are displayed in red. For details on the available library fields, see "Libraries Module Fields" on page 219 .
Content	Enables you to select entities in your project to include in the library. For details, see "Content Tab" below .
Description	A description of the library. Clicking inside the Description field displays a toolbar for formatting and spell checking the text.
Library ID	A unique numeric ID for the library that ALM assigns automatically.



Content Tab

This tab enables you to select or view the entities included in a library.



To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> In the Libraries module, select a library and click the Content tab. In the New Library dialog box or the Library Details dialog box, click Content on the sidebar.
Important information	<ul style="list-style-type: none"> When you select tests to include in a library, you do not need to select related entities that a test needs to run, such as its called tests and test resources. When you create a baseline for the library, ALM automatically includes those related entities in the baseline. ALM Editions: This tab is not available with ALM Essentials Edition.
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 210
See also	"Libraries Overview" on page 208

User interface elements are described below:

UI Element	Description
Requirements	Requirements module content for the library.
Resources	Test Resources module content for the library.
Components	Business Components module content for the library.
Tests	<p>Test Plan module content for the library.</p> <p>Select an option for including tests in the library:</p> <ul style="list-style-type: none"> • Tests in selected folders. Enables you to select folders in the tree to include in the library. • Tests covering selected requirements. Includes only the tests that cover the requirements that are selected for the library. <p>Note: Selecting this option clears any previous selection or filter defined in this tab.</p>
	Refresh. Refreshes the tab so that it displays the most up-to-date information.
	<p>Filter. Enables you to filter the entities in the tree.</p> <p>The filter determines the following:</p> <ul style="list-style-type: none"> • the folders and records that are displayed and available for selection in the Content tab • the entities that are included when you create a baseline or import the library <p>Note: Creating a relative filter for a library, such as filtering by the Test Plan Path field, is not supported. If the library is then imported to create a new library, the baseline that is created automatically after import, which is the basis for future comparison and synchronization, is based on the relative filter and does not function properly within the imported library.</p>
<Filter status bar>	Describes the filter currently applied to the tree. Located directly above the libraries tree.
<Left pane>	<p>The entity tree for the selected module. Displays the folders that are available for selection.</p> <p>Select a folder to include it in the library. Contents of the selected folder are displayed in the right pane.</p> <p>Note: In the Requirements tab, you can also select individual requirements.</p>

UI Element	Description
<Right pane>	<p>Displays the child entities of the selected folder. The contents displayed may change over time, according to changes made in the module.</p> <p>This pane is not displayed in the Requirements tab. All requirements are displayed in the tree in the left pane.</p>

Create Baseline Wizard

This wizard enables you to create a baseline for a library.

To access	In the Libraries module, right-click a library and select Create Baseline .
Wizard map	This wizard contains: Baseline Verification Page > "New Baseline Page" below
Important information	ALM Editions: This is not available with ALM Essentials Edition.
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 210
See also	"Baselines Overview" on page 208

New Baseline Page

This wizard page enables you to assign a name to the baseline.

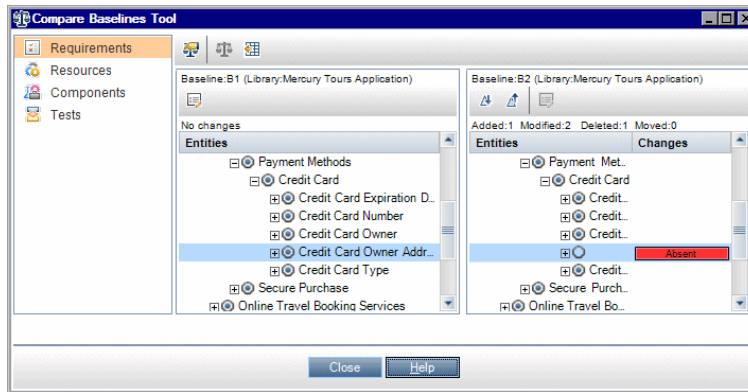
Important information	<ul style="list-style-type: none">General information about this wizard is available here: "Create Baseline Wizard" above.When you create a baseline for a library that includes tests, related entities that the tests need to run, such as their called tests and test resources, are also included in the baseline. These related entities do not need to be defined in the library.The baseline is created in a background process, and may take some time. You can continue working in ALM during baseline creation.
Wizard map	The "Create Baseline Wizard" above contains: Baseline Verification Page > "New Baseline Page" above
See also	"Baselines Overview" on page 208

User interface elements are described below:

UI Element (A - Z)	Description
Baseline Name	The name you assign to the baseline.

Compare Baselines Tool Dialog Box






This dialog box enables you to compare two baselines in a library, or compare a baseline to the current entities in the library. For example, you can compare baselines at different stages of development to review and assess the impact of changes made to requirements in your project.



To access	<p>In the Libraries module, right-click a baseline, click Compare To, and choose one of the following:</p> <ul style="list-style-type: none"> • Select Baseline. Compares the baseline you selected with another baseline in the library. Opens the Select Baseline dialog box. Click the browse button to select a baseline from the list. • Current Entities. Compares the baseline you selected with the current entities in the library.
Important information	<ul style="list-style-type: none"> • ALM does not consider changes made to Target Release and Target Cycle fields when determining whether an entity has been modified. • If coverage or traceability between two entities was deleted and then added again, those entities are considered modified. • Coverage of tests or requirements in the library by entities outside of the library is not considered when comparing baselines. • ALM Editions: This dialog box is not available with ALM Essentials Edition.
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 210
See also	"Baselines Overview" on page 208

User interface elements are described below (unlabeled elements are shown in angle brackets):

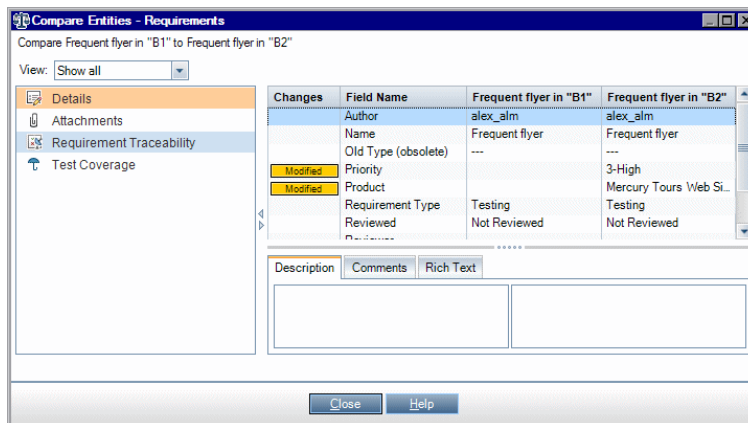
UI Element	Description
<Sidebar>	<p>Enables you to view comparison results for entities by module. For example, select Tests to view comparison results for the Test Plan module.</p> <p>The sidebar displays only the modules that are included in the library.</p>

UI Element	Description
	Comparison Settings. Opens the Comparison Settings dialog box, enabling you to define settings for comparing baselines. For more details, see "Comparison Settings Dialog Box" on page 228 .
	Compare Entities. Opens a Compare Entities dialog box, enabling you to view details of the entity in each baseline. For details, see "Compare Entities Dialog Box" on next page .
	Export Comparison Results. Enables you to save the baseline comparison results in .csv file format. After saving, the file opens in the default application defined for opening .csv files on your computer, such as Microsoft Excel.
<Baseline identification bar>	Located at the top of each baseline pane, indicates the name of the baseline displayed in the pane below.
	<p>Details. Opens a Details dialog box, enabling you to view details of the selected entity stored in the baseline.</p> <p>Select an entity and click the Details button.</p> <p>For example, select a requirement in one of the panes. The Requirement Details dialog box opens and displays details of the requirement in the baseline.</p>
	Go to Next/Previous Change. Moves to the next/previous change for the selected module.
<Counter bar>	Located above each baseline pane, displays the number of entities that were added, modified, deleted, or moved, according to change status.
<Left pane>	Displays entities stored in the older baseline.
<Right pane>	Displays entities stored in the more recently created baseline or current entities.
Entities	Displays the library's entities in the same hierarchical structure as defined in the selected module.

UI Element	Description
Changes	<p>Indicates differences between the two baselines. Possible values include the following:</p> <ul style="list-style-type: none"> • Added. The entity did not exist in the older baseline. • Modified. There is a difference in the entity between the baselines. • Absent. The entity does not exist in the newer baseline. • Moved. The entity is in a different location in the tree structure in the newer baseline. • Moved and Modified. The entity has changed and has been moved to a different location in the tree. <p>A deleted or moved entity is displayed in its original location in the tree, indicated by a placeholder. This maintains the hierarchical structure, enabling you to compare changes between baselines.</p>

Compare Entities Dialog Box

This page enables you to compare an entity between two baselines in a library, or between two libraries. In a version control enabled project, you can compare two versions of an entity.



To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • In the Compare Baselines Tool or Compare Libraries Tool dialog box, select a modified entity and click the Compare Entities button. • In the History tab > Baselines tab, select two versions and click the Compare button. • Version Control: In the History tab > Versions tab, select two versions and click the Compare button. <p>Available from the following modules: Requirements, Business Components, Test Plan, Test Resources</p>
------------------	--

Important information	<ul style="list-style-type: none"> Changes made to Target Release and Target Cycle fields do not cause the fields to be marked as modified. Version Control: <ul style="list-style-type: none"> Compare two versions of an entity in a version control enabled project. Not all data and sidebar buttons are displayed. The data available depends on the information stored under version control. For more details, see "Version Control Overview" on page 108 and "Non-versioned Fields" on page 112.
Relevant tasks	<ul style="list-style-type: none"> "How to Use Libraries and Baselines in ALM" on page 210 "How to Use Version Control" on page 109
See also	"Baselines Overview" on page 208

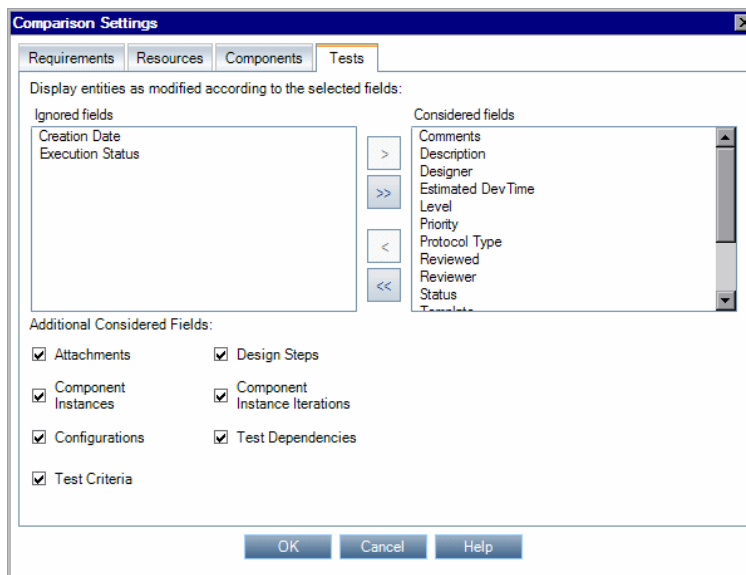
User interface elements are described below (unlabeled elements are shown in angle brackets):


UI Element	Description
View	Enables you to select a display option for results.
<Sidebar>	<p>Enables you to view additional comparison results.</p> <p>The buttons displayed depend on the type of entity you are comparing.</p> <p>Note: If you are comparing a UFT entity, the QTP Comparison button is displayed, enabling you to open the QuickTest Asset Comparison Tool. For more information on working with UFT, refer to the <i>HP Unified Functional Testing User Guide</i>.</p>
Changes	<p>Indicates a modified field.</p> <p>Note:</p> <ul style="list-style-type: none"> Version Control: Changes to some fields are not stored under version control. For more details, see "Non-versioned Fields" on page 112. For traceability and coverage, if a linked entity is marked as both Deleted and Added, or is displayed as Missing on both sides, this can indicate that the link between the entities was deleted and then added.
<Results grid>	Displays fields and the field value stored in each version of the entity. Indicates each field whose value has changed.
Comments tab	Enables you to compare the contents of the Comments field stored in each version.
Rich Text tab	Enables you to compare rich text. Each pane in the Rich Text tab indicates if rich text has been added, deleted, or modified for the relevant entity version. You can open or save the rich text as a file to view and compare changes.

UI Element	Description
View	Enables you to select a display option for results.
Attachments tab	Enables you to compare attachments stored in each version. The Changes column indicates if an attachment has been added, deleted, or modified. You can open or save an attachment to view and compare changes.





Comparison Settings Dialog Box

This page enables you to define settings for comparing libraries or baselines. You can select which fields ALM considers when determining whether an entity has been modified.



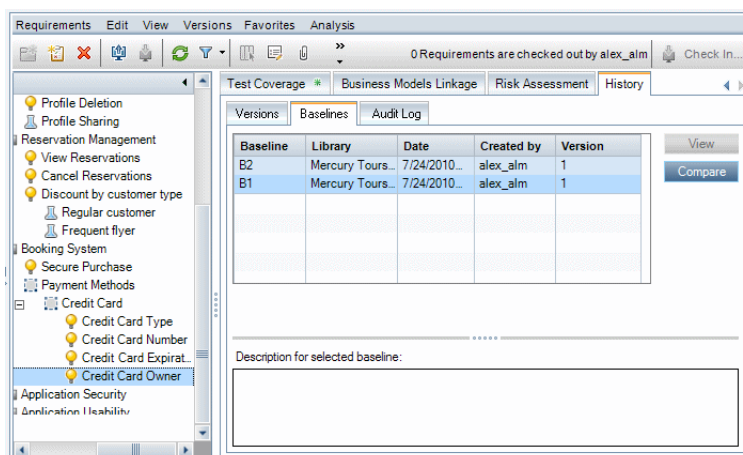
To access	In the Compare Baselines Tool or Compare Libraries Tool, click the Comparison Settings button  .
Important information	<ul style="list-style-type: none"> ALM does not consider changes made to Target Release and Target Cycle fields when determining whether an entity has been modified. ALM Editions: This is not available with ALM Essentials Edition.
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 210
See also	<ul style="list-style-type: none"> "Compare Baselines Tool Dialog Box" on page 224 "Compare Libraries Tool Dialog Box" on page 246

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element (A - Z)	Description
<Module tabs>	Enable you to configure comparison settings per module. The Comparison Setting dialog box displays tabs for modules included in the library.
Ignored Fields	ALM does not display the entity as modified based on changes made to fields in this box.
 	Moves selected fields between Ignored Fields and Considered Fields . Tip: You can also drag the field names between panes or double-click a field name to move it across to the other pane.
 	Moves all fields between Ignored Fields and Considered Fields .
Considered fields	ALM displays the entity as modified based on changes made to fields in this box.
Additional considered fields	Instructs ALM to consider the entity as modified based on changes made to the selected fields. Note: To instruct ALM to ignore coverage, you must clear the Coverage check box in both the Requirements and Tests tabs.



Baselines Tab

This view displays baseline history for a selected entity. You can view and compare all versions of the entity that are stored in a baseline.



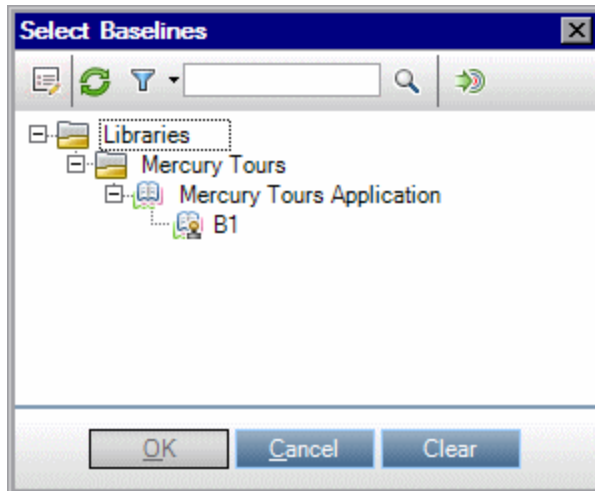
To access	Select an entity in the tree or grid, and click History tab > Baselines tab. Available from the following modules: Requirements, Business Components, Test Plan, Test Resources.
Important information	ALM Editions: This tab is not available with ALM Essentials Edition.
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 210
See also	"Baselines Overview" on page 208


User interface elements are described below:

UI Element	Description
Baseline	The name of the baseline in which the entity is stored.
Library	The library for which the baseline was created.
Date	The date the baseline was created.
Created By	The name of the user who created the baseline.
Version	The version number of the entity stored in the selected baseline. Available in version control enabled projects only.
	Opens a Details dialog box, displaying read-only details for the version of the entity stored in the selected baseline. Select an option on the sidebar to view additional information, such as Test Coverage and Attachments. The buttons displayed depend on the type of entity selected in the tree or grid. Note: If you are viewing information for a UFT GUI test, clicking the Test Script button opens the test in a UFT viewer, enabling you to view the test or open the test in UFT. For more information, refer to the <i>HP Unified Functional Testing User Guide</i> .
	Opens the Compare Entities dialog box, enabling you to compare two selected baseline versions. For details, see "Compare Entities Dialog Box" on page 226 . To compare two baseline versions, press the CTRL key and select the versions. Then click the Compare button.
Description for selected baseline	The descriptions typed by the user when creating the baseline.




Select Baselines Dialog Box



This dialog box enables you to pin a test set to a baseline. This associates the tests in the test set with the tests stored in a baseline that you specify. When you run a test set that is pinned to a baseline, ALM runs the versions of the tests that are stored in the specified baseline.



To access	In the Test Lab module, right-click a test set and select Pin to Baseline .
Important information	<ul style="list-style-type: none"> A pinned test set can include only tests that are included in the baseline. When you pin a test set, ALM removes tests that are not included in the baseline from the test set. A pinned test set is displayed with the pinned test set icon  in the test set tree. When you pin a test set, ALM deletes all test runs from the test set. ALM Editions: This feature is not available with ALM Essentials Edition.
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 210
See also	"Pinned Test Sets" on page 209

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
	Show Baseline Details. Opens the Baseline Details dialog box for the selected baseline in read-only mode.
	Refresh. Refreshes the libraries tree so that it displays the most up-to-date information.
	Filter/Sort. Enables you to filter the data according to the criteria that you choose. For more details, see "Filter Dialog Box" on page 61 .

UI Element	Description
<Find box>	Enter the name of the library you want to search for and click the Find button.
	Find. Searches the libraries tree for the value you specify in the Find box.
	Go to Baseline by ID. Opens the Go to Baseline dialog box, enabling you to locate the baseline in the tree according to Baseline ID.
<Libraries tree>	Enables you to select a baseline from the libraries tree.

Chapter 12

Imported Libraries

This chapter includes:

- Imported Libraries Overview..... 234
- How to Share Libraries..... 237
- Imported Libraries User Interface..... 240
- Troubleshooting and Limitations..... 250

Imported Libraries Overview

ALM Editions: Imported libraries functionality is available for ALM Edition and Performance Center Edition.

Importing a library enables you to share or reuse an existing set of entities in projects across your enterprise. You import a library by selecting a baseline in another library from which to import. You can import a library from the same project, or from a different project.

When you import a library, the library is added to your libraries tree, and the library's entities are copied to the corresponding modules in your project. If the library includes associated entities, such as requirements that have test coverage, this relationship is also copied. In addition, any related entities outside of the library that the tests in the library need in order to run are also imported, such as called tests and test resources.

You can compare associated libraries at all stages of the application development lifecycle. For example, you can compare an imported library with the source library from which it was imported. When changes are made to entities in a library, you can synchronize libraries to update the entities in an associated library.

Importing and synchronizing libraries requires appropriate user permissions. For details, see ["How to Share Libraries" on page 237](#).

Note: You can also share defects across multiple ALM projects. You share and synchronize defects using the HP ALM Synchronizer. For more information, see the *HP ALM Synchronizer User Guide*, available from the HP Application Lifecycle Management Add-ins Page.

This section also includes:

- ["Library Synchronization Overview" on page 236](#)
- ["Library Verification" on page 236](#)

For related task details, see ["How to Share Libraries" on page 237](#).

Imported Library Examples

The following examples demonstrate how you can use libraries.

- **Reuse requirements and tests for a new release.**

While developing a new application, you create a library that includes all the entities in your project that are relevant to the application. After work is complete, you release the new application. As you are about to begin work on the next version, you can import the library, and start making adjustments to requirements and tests to meet the needs of the new version.

- **Create a set of requirements, tests, and resources for use by multiple applications.**

Your project contains requirements in the Requirements module that are relevant to an application you are developing. The project also contains tests in the test plan module that you developed to test those requirements. In addition, you have created relationships between the requirements and tests, such as traceability and coverage. You can create a library that represents the application. Then import this library as a self-contained component of other applications.

- **Update imported libraries with changes made in the source library.**

A library in your project includes requirements and tests for a calculator application. Multiple other projects have imported the library, and are using the application's requirements and tests in other applications they are developing. The business analyst has revised some requirements for the calculator application. To update the imported libraries with these changes, you can synchronize the imported libraries with the source library.

- **Update a source library with developments in an imported library.**

A tester works with an imported library that contains a set of regression tests for the banking application currently in development. During testing, she develops new tests to test the added functionality in the new version of the banking application. When testing is complete, the tester wants to update the regression tests in the source library. The source library can be synchronized with the imported library to update the tests for future testing needs.

Library Synchronization Overview

You can synchronize two associated libraries to update one library with changes made in another library. You can update an imported library with changes made in the source library. You can also update a source library with changes made in the imported library.

During synchronization, data from the other library's baseline is copied to your library. The following table summarizes how the entities in your library are updated:

Event in Source Library	Event in Your Library
An entity was added	The entity is added.
An entity was modified	The entity is updated. If the entity was modified in both libraries, the entity in your library is overwritten. Version Control: A new version is created.
An entity was deleted	A new folder is created and the deleted entity is moved to the new folder. The new folder is named SYNC_OBSOLETE_<library_id>_<current_date> and is located under the module's root folder.
An entity was moved	The entity and its children are moved.

Entities in a library must not be edited during synchronization. If entities in your library are being edited by another user during the synchronization process, synchronization cannot complete successfully.

Version Control: All entities in your library must be checked in before synchronization. If an entity in your library is checked out, synchronization cannot complete successfully.

After you synchronize libraries, a baseline is automatically created for the updated library. This baseline is the basis for comparing the libraries at any point in time and should not be deleted.

For related task details, see ["How to Share Libraries" on next page](#).

Library Verification

When you import a library, or synchronize libraries, the library is first verified. The verification process includes the following checks:

- **Requirement type check.** Checks that your project contains the necessary requirement types. If the source library contains customized requirement types, your project must contain the same requirement types. For more information on customized requirement types, see *HP Application Lifecycle Management Administrator Guide*.

- **Entities compatibility check.** Checks that your project has the necessary extensions enabled. If the source project has an extension enabled, and the source library includes entities for that extension, your project must also have that extension enabled. For more information on extensions, see *HP Application Lifecycle Management Administrator Guide*.
- **Library size check.** Checks that the number of entities in the library does not exceed the maximum defined by the LIBRARY_FUSE configuration parameter in Site Administration. For more information, see the *HP Application Lifecycle Management Administrator Guide*.

How to Share Libraries

This task describes how to share libraries between projects or within a project.

To learn more about sharing libraries, see ["Imported Libraries Overview" on page 234](#).

ALM Editions: Imported libraries functionality is available for ALM Edition and Performance Center Edition.

This task includes the following steps:

- ["Prerequisites" below](#)
- ["Import a library" below](#)
- ["Compare libraries" on next page](#)
- ["Synchronize libraries" on page 239](#)
- ["Monitor library tasks" on page 240](#)

1. Prerequisites

- To import and synchronize libraries, you must have the appropriate Library module user permissions, as well as **Create** and **Update** permissions for the entity types you are importing. In addition to these permissions, synchronizing libraries requires **Delete** permissions for the entity types in the library. For more information on Library module permissions, refer to the *HP Application Lifecycle Management Administrator Guide*.
- Verify that a baseline has been created for the library you want to import. For task details, see ["How to Use Libraries and Baselines in ALM" on page 210](#).
- **Business Process Testing:** Before importing a project with application areas to another project, make sure you have connected to the destination project at least one time from within Unified Functional Testing. For instructions, see the *HP Unified Functional Testing User Guide*.

2. Import a library

Import an existing library to your libraries tree to reuse a set of entities in your project or from a different project.

- a. In the Libraries module, right-click a library folder and select **Import Library**. For user interface details on the Import Library wizard, see ["Import Library Wizard" on page 240](#).

Note: Business Process Testing: When importing libraries, components in the **Obsolete** and **Component Requests** folders are not included in the process.

- b. Click the **View Log** button in the Details tab. The Log: Import Library dialog box opens and displays progress.

Note: When the process is complete, view the log before refreshing the display. If you refresh the display after the library is imported, the **View Log** button is no longer displayed, and you cannot view the log.

For user interface details on the Libraries module window, see ["Libraries Module Window" on page 214](#).

- c. Click the **Refresh** button on the module toolbar to refresh the display. The library details are displayed in the Details tab. For details on the available fields in the Details tab, see ["Libraries Module Fields" on page 219](#).

3. Compare libraries

Compare libraries to review changes made to entities in your projects over time.

- a. In the libraries tree, right-click a library and select **Compare To**. Select a library with which to compare, and choose one of the following:
 - o **Latest Baseline Created.** Compare the library with the most recent baseline created in the other library.
 - o **Select Baseline.** Select a baseline in the other library with which to compare. Opens the Select Baseline dialog box. Click the browse button to select a baseline from the list.

Available for: A source library or an imported library.

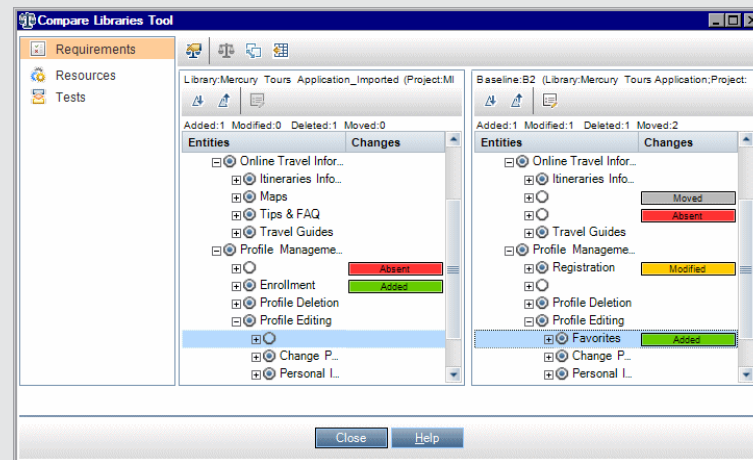
For user interface details on the Compare Libraries Tool, see ["Compare Libraries Tool Dialog Box" on page 246](#).

- b. Click the **Export Comparison Results** button  to save the library comparison results in .csv file format. After saving, the file opens in the default application defined for opening .csv files on your computer, such as Microsoft Excel.

Example

Comparing the imported `Mercury Tours Application` library with the source


library from which it was imported shows the following results:



4. Synchronize libraries

Synchronize libraries to update your library with changes made in another associated library. You can update an imported library with changes made in the source library. You can also update a source library with changes made in the imported library.

- In the libraries tree, select the library that you want to update. Using the Compare Libraries Tool, compare the library by selecting a baseline in the other library with which to synchronize. For user interface details on the Compare Libraries Tool, see ["Compare Libraries Tool Dialog Box" on page 246](#).

- In the Compare Libraries Tool, click the **Synchronize** button . The Library Verification dialog box opens, displaying the verification results.

For user interface details on the Library Verification dialog box, see ["Library Verification Dialog Box" on page 249](#).

For concept details on library verification, see ["Library Verification" on page 236](#).

- Click **Continue** to start the synchronization. The data is copied from the other library's baseline to your library.

If the baseline includes an entity type that it did not contain at the time of import, a parent folder is created in your project. For example, you imported a library containing only tests, and defined a target root folder for the Test Plan module only. Later, requirements were added to the source library. During synchronization, a new folder is created in the Requirements module in your project, under the Requirements root folder, to store the newly imported requirements.

- Close the Compare Libraries Tool dialog box. Synchronization continues in a background process, and may take some time. You can continue working in your project during the synchronization process.
- Click the **View Log** button in the Details tab. The Log: Synchronize Libraries dialog box

opens and displays progress.

For user interface details on the Libraries module window, see ["Libraries Module Window" on page 214](#).

- f. Click the **Refresh** button on the module toolbar to refresh the display. When the process completes, the **Last Synchronization** date is updated in the Imported By or Imported From tab.

5. Monitor library tasks

When you import or synchronize libraries, these tasks are performed in the background, enabling you to continue working in your project while the processes are running. You can view the status and progress of all asynchronous tasks for the project using the Task Manager.

On the ALM masthead, select **Tools > Task Manager**. For user interface details, see ["Task Manager Dialog Box" on page 54](#).

Imported Libraries User Interface

This section includes:

Import Library Wizard.....	240
Imported By Tab.....	244
Imported From Tab.....	245
Compare Libraries Tool Dialog Box.....	246
Library Verification Dialog Box.....	249

Import Library Wizard

This wizard enables you to import a library to share and reuse an existing set of entities. You import a library by selecting a baseline in another library from which to import. You can import a library from the same project or from a different project.

To access	In the Libraries module, right-click a library folder and select Import Library .
Important information	<ul style="list-style-type: none">Importing libraries requires appropriate user permissions, including: Import library, Capture baseline, and Create and Update permissions for the entity types you are importing. For more information on user permissions, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.After you import a library, a baseline is automatically created for the new library in your project. This baseline is the basis for comparing the libraries at any point in time and should not be deleted.ALM Editions: Imported libraries functionality is available for ALM Edition and Performance Center Edition.

Relevant tasks	"How to Share Libraries" on page 237
Wizard map	This wizard contains: "Select a Baseline Page " below > "Library Verification Page " on next page > "Select Target Root Folders Page" on page 243
See also	<ul style="list-style-type: none"> • "Imported Libraries Overview" on page 234 • "Libraries Overview" on page 208 • "Troubleshooting and Limitations" on page 250

Select a Baseline Page

This wizard page enables you to select a baseline in the library you are importing.

Important information	General information about this wizard is available here: "Import Library Wizard" on previous page.
Wizard map	The "Import Library Wizard" on previous page contains: "Select a Baseline Page " above > "Library Verification Page " on next page > "Select Target Root Folders Page" on page 243
See also	"Baselines Overview" on page 208

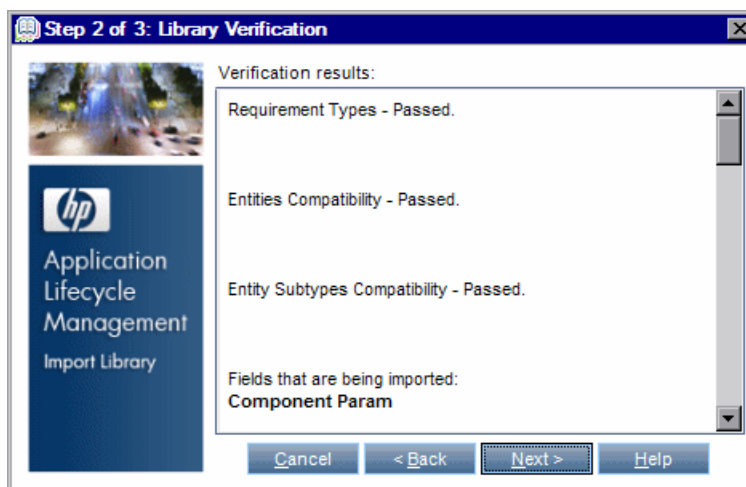
User interface elements are described below:

UI Element (A - Z)	Description
Description	A description of the library you are importing.
Domain	The domain in which the library you are importing is located.

UI Element (A - Z)	Description
From Current Project	Enables you to import a library from the project in which you are working.
From Project	Enables you to select a domain and project from which to import a library.
Project	The project in which the library you are importing is located.
Select a Baseline	Enables you to select a baseline from which to import the library. Click the browse button to display the libraries tree in the selected project. Only libraries that can be imported are displayed. You cannot import an imported library.

Library Verification Page

This wizard page enables you to view results of the library verification process.



Important information	<ul style="list-style-type: none"> General information about this wizard is available here: "Import Library Wizard" on page 240. If any of the verification checks have the status Failed, you cannot proceed with the import process. Click Cancel.
Wizard map	<p>The "Import Library Wizard" on page 240 contains:</p> <p>"Select a Baseline Page " on previous page > "Library Verification Page " above > "Select Target Root Folders Page" on next page</p>
See also	"Library Verification" on page 236

User interface elements are described below:

UI Element	Description
Verification Results	Displays the verification results and the list of fields to be imported. The import process can continue if all verification checks have the status Passed .

Select Target Root Folders Page

This wizard page enables you to select a location in your project for each of the root folders you are importing.

Important information	<ul style="list-style-type: none"> General information about this wizard is available here: "Import Library Wizard" on page 240. You cannot import a library under the same previously imported library. For more details, see "Troubleshooting and Limitations" on page 250. The library is imported in a background process, and may take some time. You can continue working in your project during the import process.
Wizard map	<p>The "Import Library Wizard" on page 240 contains:</p> <p>"Select a Baseline Page " on page 241 > "Library Verification Page " on previous page > "Select Target Root Folders Page" above</p>

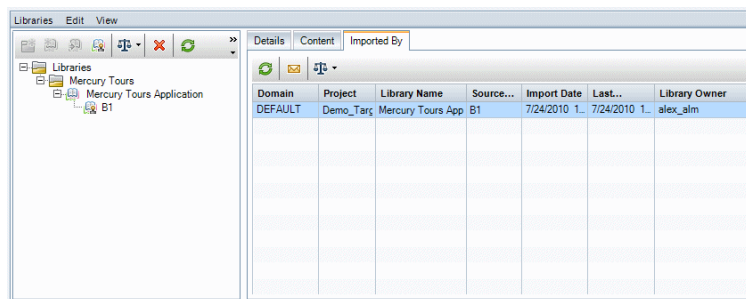
User interface elements are described below:

UI Element (A - Z)	Description
Description	A description for the library. By default, if the source library and baseline contain descriptions, the descriptions are displayed.
Name	The name of the library. By default, the name of the library from which you are importing is displayed with the suffix _Imported .

UI Element (A - Z)	Description
Select Target Root Folders	<p>The location in your project for each of the imported folders. For example, in the Requirement Root Folder box, specify a location for the imported requirements. All of the requirement folders defined in the library are imported under the requirement folder you specify. Click the browse button to display the requirements tree in your project. Select a folder or create a new folder for the imported requirements.</p> <p>Note: If the library you are importing contains tests, the baseline automatically includes related entities that the tests need to run, such as test resources. In this case, the Resource Root Folder box is also displayed, enabling you to select a target folder for the imported test resources.</p>



Imported By Tab


This tab displays a list of projects that imported a selected library.



To access	Select a library in the libraries tree and click the Imported By tab.
Important information	<p>You can rearrange columns in the grid by dragging the column headers.</p> <p>ALM Editions: Imported libraries functionality is available for ALM Edition and Performance Center Edition.</p>
Relevant tasks	"How to Share Libraries" on page 237

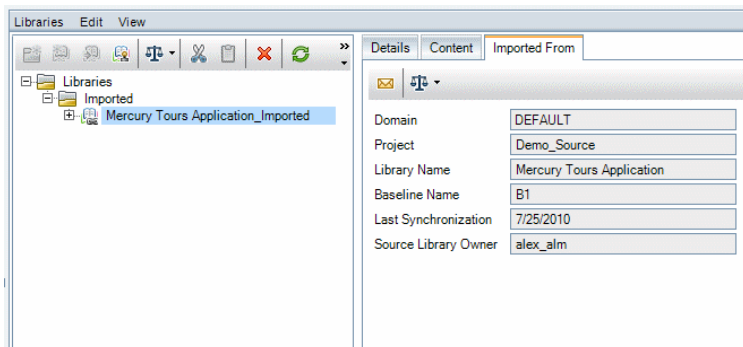
User interface elements are described below:

UI Element	Description
	Refresh. Refreshes the tab so that it displays the most up-to-date information.
	Send mail. Sends an email with details about the selected library. For more details, see "Send E-mail Dialog Box" on page 79 .

UI Element	Description
	<p>Compare To. Compares the source library selected in the libraries tree with a library that imported the source library.</p> <p>Select an imported library in the grid and click Compare To. Select a baseline in the imported library with which to compare.</p>
Domain	The domain in which the imported library is located.
Project	The name of the project that imported the library.
Library Name	The name of the imported library.
Source Baseline Name	The initial value indicates the name of the baseline in the source project from which the selected library was imported. After synchronization, indicates the name of the baseline in the source project with which the selected library was synchronized.
Import Date	The date the library was imported.
Last Synchronization	The date of the most recent synchronization of the imported and source libraries.
Library Owner	The user name of the person who imported the library.



Imported From Tab

This tab displays details of the source library from which a selected library is imported.



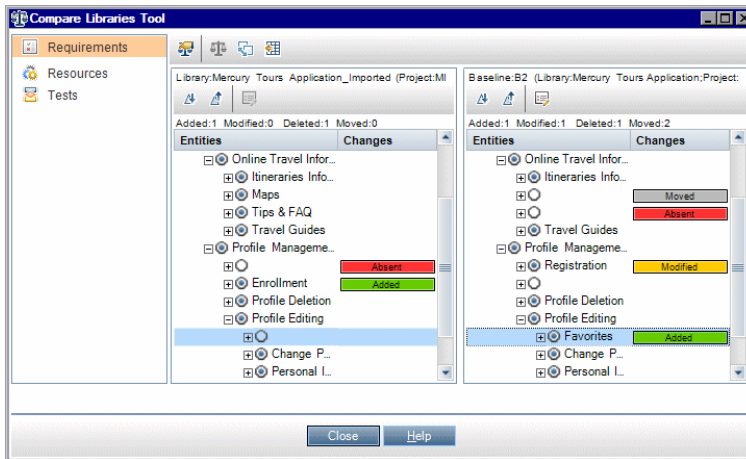
To access	Select an imported library in the libraries tree and click the Imported From tab. This tab is visible only when the selected library is imported.
Important information	ALM Editions: Imported libraries functionality is available for ALM Edition and Performance Center Edition.
Relevant tasks	"How to Share Libraries" on page 237

User interface elements are described below:

UI Element	Description
	Send Mail to Owner. Sends an email to the source library owner. For more details, see "Send E-mail Dialog Box" on page 79 .
	Compare To Source. Compares the selected library with the library from which it was imported. Select a baseline in the source library with which to compare.
Domain	The domain in which the source project is located.
Project	The name of the source project.
Library Name	The name of the library in the source project.
Baseline Name	The name of the baseline in the source project from which the project was imported.
Last Synchronization	The date of the most recent synchronization of the imported and source libraries. When the library is first imported, the value of this field is N/A .
Source Library Owner	The user name of the person who created the library in the source project.







Compare Libraries Tool Dialog Box

This dialog box enables you to compare two associated libraries. You can compare an imported library with the source library from which it was imported.



To access	<p>In the libraries tree, right-click a library and select Compare To. Select a library with which to compare, and choose one of the following:</p> <ul style="list-style-type: none">• Latest Baseline Created. Compare the library with the most recent baseline created in the other library.• Select Baseline. Select a baseline in the other library with which to compare. Opens the Select Baseline dialog box. Click the browse button to select a baseline from the list. <p>Available for: a source library or an imported library</p>
Important information	<ul style="list-style-type: none">• Changes made to Target Release and Target Cycle fields are not considered when determining whether an entity has been modified.• If coverage or traceability between two entities was deleted and then added again, those entities are considered modified.• Coverage of tests or requirements in the library by entities outside of the library is not considered when comparing libraries.• ALM Editions: Imported libraries functionality is available for ALM Edition and Performance Center Edition.
Relevant tasks	"How to Share Libraries" on page 237
See also	"Library Synchronization Overview" on page 236

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<Sidebar buttons>	Enable you to view comparison results for entities by module. For example, click the Tests button to view comparison results for the Test Plan module. The sidebar displays only the modules that are included in the library.
	Comparison Settings. Opens the Comparison Settings dialog box, enabling you to define settings for comparing libraries. For more details, see "Comparison Settings Dialog Box" on page 228 .
	Compare Entities. Opens a Compare Entities dialog box, enabling you to view details of the entity in each library. For details, see "Compare Entities Dialog Box" on page 226 .
	Synchronize. Updates your library, displayed in the left pane, with changes indicated in the baseline displayed in the right pane. For more details, see "Library Synchronization Overview" on page 236 . Note: Synchronizing libraries requires the appropriate user permissions. For details, see "How to Share Libraries" on page 237 .
	Export Comparison Results. Enables you to save the library comparison results in .csv file format. After saving, the file opens in the default application defined for opening .csv files on your computer, such as Microsoft Excel.
<Identification bar>	Located at the top of each pane, indicates the name of the library or baseline displayed in the pane below.
	Go to Next/Previous Change. Moves to the next/previous change for the selected module.
	Details. Opens a Details dialog box, enabling you to view details of the selected entity. Select an entity and click the Details button. For example, select a requirement in one of the panes. The Requirement Details dialog box opens and displays details of the requirement in the selected library or baseline.
<Counter bar>	Located above each pane, displays the number of entities that were added, modified, deleted, or moved, according to change status.
<Left pane>	Displays the library you selected in the libraries tree.
Entities	Displays the library's entities in the same hierarchical structure as defined in the selected module.

UI Element	Description
<Sidebar buttons>	<p>Enable you to view comparison results for entities by module. For example, click the Tests button to view comparison results for the Test Plan module.</p> <p>The sidebar displays only the modules that are included in the library.</p>
Changes	<p>Indicates differences between the two libraries. Possible values include the following:</p> <ul style="list-style-type: none"> • Added. The entity does not exist in the other library. • Modified. The entity has been modified in the library. • Absent. The entity does not exist in the library. • Moved. The entity is in a different location in the tree structure in the library. • Moved and Modified. The entity has changed and has been moved to a different location in the tree. <p>A deleted or moved entity is displayed in its original location in the tree, indicated by a placeholder. In addition, a placeholder is displayed in the tree where an entity was added in the other library. This maintains the hierarchical structure, enabling you to compare changes between the libraries.</p>
<Right pane>	Displays the baseline in the library with which you are comparing.

Library Verification Dialog Box

This dialog box enables you to view results of the library verification process when synchronizing libraries.

To access	In the Compare Libraries Tool dialog box, click the Synchronize button.
Important information	<ul style="list-style-type: none"> • If any of the verification checks have the status Failed, you cannot proceed with the synchronization. Click Cancel. • ALM Editions: Imported libraries functionality is available for ALM Edition and Performance Center Edition.
Relevant tasks	"How to Share Libraries" on page 237
See also	"Library Verification" on page 236

User interface elements are described below:

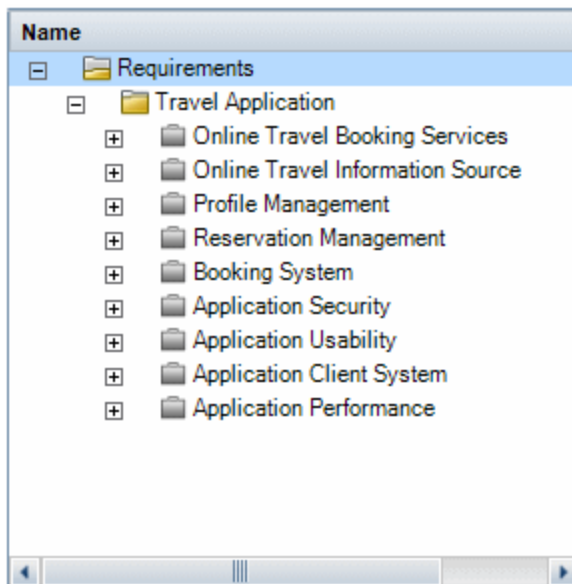
UI Element	Description
Verification Results	Displays the verification results and the list of fields to be imported. The synchronization process can continue only if all verification checks have the status Passed .

UI Element	Description
Continue	<p>Starts the synchronization process. The data is copied from the other library's baseline to your library.</p> <p>Synchronization continues in a background process, and may take some time. To continue working in your project during the synchronization process, close the Compare Libraries Tool dialog box.</p>

Troubleshooting and Limitations

You cannot import a library under the same previously imported library. This applies in the requirements, test plan, or test resources tree.

For example, in the requirements tree, the Travel Application folder is an imported library. If you want to import the Travel Application library again, you cannot define the Travel Application folder or any of its child folders as the root folder for the requirements in the library.



Requirements

ALM Editions: Not all fields and functionality in the Requirements module are available with ALM Essentials Edition.

Chapter 13

Introducing Requirements

This chapter includes:

Introducing Requirements Overview.....	254
How to Use Requirements in ALM.....	254

Introducing Requirements Overview

Requirements describe in detail what needs to be solved or achieved to meet the objectives of your application under development. Clearly and correctly defining requirements at the front end of a project provides the following advantages:

- Provides guidelines of what the priorities are to stakeholders
- Sets clear expectations among stakeholders
- Cuts waste and eliminates unnecessary expenditure

The Requirements module enables you to define, manage and track requirements at all stages of the application lifecycle management.

ALM Editions: Not all fields and functionality in the Requirements module are available with ALM Essentials Edition.

For task details, see ["How to Use Requirements in ALM"](#) below.

How to Use Requirements in ALM

This task describes how to create and manage requirements in ALM.

To learn more about requirements, see ["Introducing Requirements Overview"](#) above.

Note: This task is part of a higher-level task. For details, see ["Application Lifecycle Management Roadmap"](#) on page 36.

This task includes the following steps:

- ["Prerequisites"](#) below
- ["Create requirements"](#) on next page
- ["Import business process models"](#) on next page
- ["Trace requirements"](#) on next page
- ["Calculate risk"](#) on next page
- ["Create coverage"](#) on page 256
- ["Link to defects"](#) on page 256
- ["Assign to releases"](#) on page 256
- ["Analyze requirements"](#) on page 256
- ["Establish baseline"](#) on page 256

1. Prerequisites

Determine the requirements scope by gathering information such as functional and technical

specifications, marketing and business requirements documents, and stakeholders goals.

Example

Some questions you may want to ask are:

- What is the main purpose and direction of the application?
- What are the critical constraints of the application?
- What are the major features of the application?
- What is the relative importance of each element in the application functionality?
- What are the critical or high-risk functions of the application?
- What are your business or testing priorities?
- Do your customers/end-users agree with your priorities?
- What are your overall quality goals?

2. Create requirements

Define a hierarchical framework for your requirements scope by creating a requirements tree.

Define different groups of requirements in the requirements tree. For each requirement group, you create a list of detailed requirements in the requirements tree. Each requirement in the tree can include any relevant attachments and rich text documents.

You then assign the requirement a priority level which can be taken into consideration when creating the test plan.

For task details, see ["How to Create Requirements" on page 258](#).

3. Import business process models

If you work with business process models, you can create a framework of requirements by importing models created with standard modeling tools. The Business Models module enables you to analyze the quality of your business process models and business flows. For task details, see ["How to Work with Business Process Models" on page 329](#).

4. Trace requirements

You can add traceability between the requirements. When analyzing the impact of a change proposed in a specific requirement, traceability shows the other requirements that the change might affect. For task details, see ["How to Trace Requirements" on page 290](#).

To determine the completeness of the relationships between your requirements, you can generate a traceability matrix. For task details, see ["How to Use the Traceability Matrix" on page 300](#).

5. Calculate risk

Use risk-based quality management to calculate at which level to test each requirement, based on the nature of the requirement and the resources you have available. For task details, see ["How to Assess Risk" on page 312](#).

6. Create coverage

Create coverage between your requirements and tests to ensure that all requirements are implemented in the project. For task details, see ["How to Create Coverage" on page 428](#).

You can also create coverage by converting requirements to tests in the test plan tree. Coverage is automatically created between the requirements and their corresponding tests. For task details, see ["How to Create Requirements" on page 258](#).

7. Link to defects

You can link a requirement to specific defects. This is useful, for example, when coverage is created between requirements and tests. Linking defects can help you ensure compliance with your requirements and testing needs. If a requirement changes, you can immediately identify which tests and defects are affected, and who is responsible.

For user interface details, see ["Linked Defects/Entities Page" on page 762](#).

8. Assign to releases

Assign requirements to releases or cycles defined in the releases tree in the Releases module.

- **Assign to release.** Right-click a requirement and select **Assign to Release**. For user interface details, see ["Select Releases Dialog Box" on page 167](#).
- **Assign to cycle.** Right-click a requirement and select **Assign to Cycle**. For user interface details, see ["Select Cycles Dialog Box" on page 166](#).

9. Analyze requirements

Review your requirements to ensure that they meet the defined requirements scope. After a requirement is approved, you change the status of a requirement from **Not Reviewed** to Reviewed.

To help review the requirements, you can generate reports and graphs. For task details, see ["How to Analyze Data in ALM" on page 772](#).

10. Establish baseline

Create a baseline to sign off on or compare significant milestones in your application lifecycle. For task details, see ["How to Use Libraries and Baselines in ALM" on page 210](#).

Chapter 14

Requirements Specification

This chapter includes:

Requirements Specification Overview.....	258
How to Create Requirements.....	258
Requirements User Interface.....	260

Requirements Specification Overview

Requirements are recorded in the Requirements module by creating a requirements tree. The **requirements tree** is a graphical representation of your requirements specification, displaying the hierarchical relationship between different requirements. The tree includes different groups of requirements based either on requirement type or functional area.

For each requirement group, you create a list of detailed requirements in the requirements tree. Each requirement in the tree is described in detail and can include any relevant links and attachments.

After creating a requirements tree, the requirements can be used as a basis for defining tests in your test plan tree.

For task details, see ["How to Create Requirements" below](#).

How to Create Requirements

This task describes how to define and update your requirements in the Requirements module. After you have created a requirements tree, you can use the requirements as a basis for defining the tests in your test plan tree.

To learn more about creating requirements, see ["Requirements Specification Overview" above](#).

- **Higher-level task:** This task is part of a higher-level task. For details, see ["How to Use Requirements in ALM" on page 254](#).
- **Use-case:** For a use-case scenario related to this task, see ["How to Create Requirements - Use-Case Scenario" on next page](#).

This task includes the following steps:

- ["Create requirements" below](#)
- ["Import requirements - optional" on next page](#)
- ["Update requirements" on next page](#)
- ["Convert requirements to tests - optional" on next page](#)

1. Create requirements

- a. **Open the Requirements module.** On the ALM sidebar, under **Requirements**, select **Requirements**. In the **View** menu, select **Requirements Tree**.

For user interface details on the Requirements module, see ["Requirements Module Window" on page 261](#).

- b. **Create folders.** Click the **Requirements** root folder and select **New Folder**. To create a sub-folder, click a folder and select **New Folder**. In the New Requirement Folder dialog box, type a folder name.
- c. **Add requirements.** Right-click a requirement folder and select **New Requirement**. To

create a sub-requirement, right-click a requirement and select **New Requirement**. For user interface details, see ["New Requirement Dialog Box" on page 282](#).

2. Import requirements - optional

In addition to creating requirements directly in ALM, you can also import requirements to your ALM project from Microsoft Word, Microsoft Excel, or other third-party requirement management tools. To import requirements, you must first install the appropriate add-in. For more details on add-ins, see the *HP Application Lifecycle Management Installation Guide*.

3. Update requirements

For each requirement, you can update its details, attachments, and rich text documents. Right-click a requirement and select **Requirement Details**. The Requirement Details dialog box opens. For user interface details, see ["Requirement Details Page" on page 280](#).

4. Convert requirements to tests - optional

To assist you in establishing a test plan tree in the Test Plan module, you can use your requirements as a basis for defining your tests. You can reuse your requirements and convert them to the following entities in your test plan tree: test subjects, tests, test steps, or step descriptions.

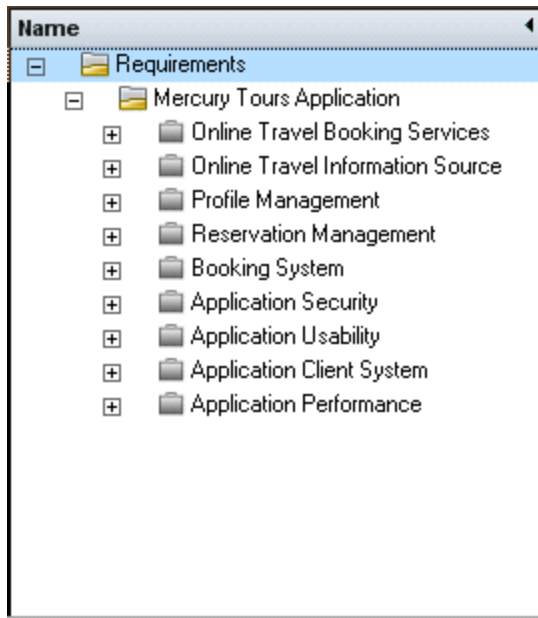
To convert requirements to test subjects, tests, test steps, or step descriptions, right click a requirement or folder and select **Convert to Tests**. The Convert to Tests wizard opens. For user interface details, see ["Convert to Tests Wizard" on page 283](#).

How to Create Requirements - Use-Case Scenario

This use-case scenario provides an example of specifying requirements in the Requirements module.

Note: For a task related to this scenario, see ["How to Create Requirements" on previous page](#).

The following scenario uses a project based on an application for reserving flights and vacations. You may define your major requirements as: **Online Travel Booking Services**, **Online Travel Information Source**, **Profile Management**, **Reservation Management**, **Booking System**, **Application Security**, **Application Usability**, **Application Client System**, and **Application Performance**.



For each requirement group, you create a list of detailed requirements in the requirements tree. The Profile Management requirement can be broken down into the following requirements:



Each requirement in the tree can include any relevant attachments and rich text documents.

Requirements User Interface

This section includes:

Requirements Module Window.....	261
Requirements Module Menus and Buttons.....	265
Requirements Module Icons.....	272
Requirements Module Fields.....	274
Requirement Details Page.....	280
New Requirement Dialog Box.....	282
Convert to Tests Wizard.....	283

Requirements Module Window

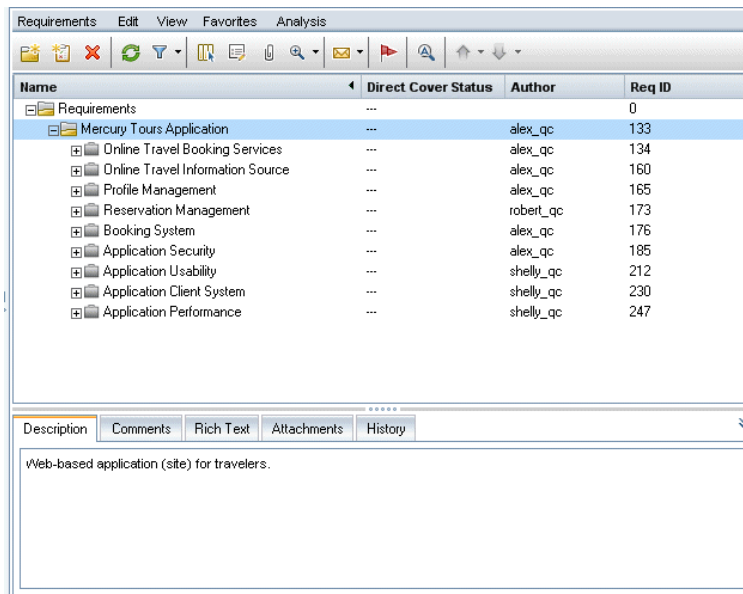
This window enables you to define and maintain ALM requirements.

To access	On the ALM sidebar, under Requirements , select Requirements . Select a requirements view from the View menu.
Important information	<ul style="list-style-type: none">• ALM Editions: Not all fields and functionality in the Requirements module are available with ALM Essentials Edition.
Relevant tasks	"How to Create Requirements" on page 258
See also	"Requirements Specification Overview" on page 258

It contains the following views: Requirements Tree, Requirement Details, Requirements Grid, Coverage Analysis, and Traceability Matrix. You select a view from the **View** menu.

Requirements Tree View

This view enables you to view your requirements hierarchically in a tree.



Requirement Details View

This view enables you to create links between requirements and other entities. It also enables you to calculate and analyze requirement risks. For more details, see ["Requirement Details Page" on page 280](#).

Requirements Edit View Favorites Analysis

Name

Requirements

Mercury Tours Application

Online Travel Booking...

Online Travel Informati...

Profile Management

Reservation Managem...

Booking System

Application Security

Application Usability

Application Client Syst...

Application Performan...

Details Rich Text Attachments Linked Defects Requirement T

* Name: Mercury Tours Appli * Requir ... Folder

Author: alex_qc Creation ... 1/23/2009

Creation ... 11:07:57 AM Modified: 1/29/2009 5:51:45 P

Priority: 5-Urgent Product: Mercury Tours

Req ID: 133 Reviewed: Not Reviewed

Target C ... Target R ...

Description Comments

Web-based application (site) for travelers.

Requirements Grid View

This view enables you to view requirements in a flat non-hierarchical view. Each line in the grid displays a separate requirement.

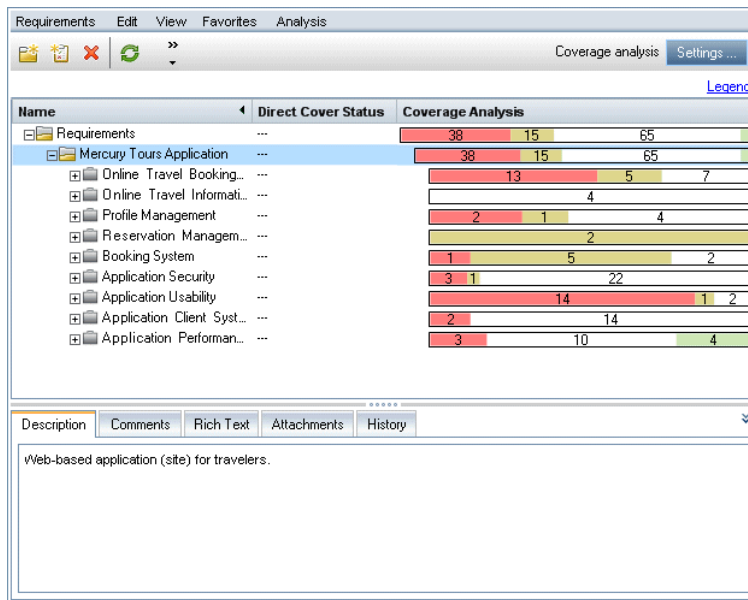
Requirements Edit View Favorites Analysis

Name	Direct Cover Status	Author	Req ID
Requirements	...		0
Mercury Tours Application	...	alex_qc	133
Online Travel Booking Services	...	alex_qc	134
Products/Services On Sale	Not Covered	shelly_qc	135
Flight Tickets	Failed	shelly_qc	136
Flight Search	Failed	robert_qc	141
Search Conditions	Not Covered	shelly_qc	142
Origin And Destination	Failed	peter_qc	143
One-Way Trip	Failed	robert_qc	149
Relevant Flights	Not Completed	robert_qc	152
Names Of Passengers	Failed	robert_qc	156
Itineraries Information	Not Covered	alex_qc	161
Registration	Not Covered	robert_qc	166
Customer Identification Information	Failed	robert_qc	167
Change Password	Not Covered	robert_qc	170
View Reservations	Not Completed	robert_qc	174
Secure Purchase	Not Completed	alex_qc	177
Credit Card	Not Covered	alex_qc	179
Credit Card Type	Not Completed	robert_qc	180
Access Authorization	Not Covered	alex_qc	186
Customers vs. Site Visitors	Failed	alex_qc	187

Description Comments Rich Text Attachments History

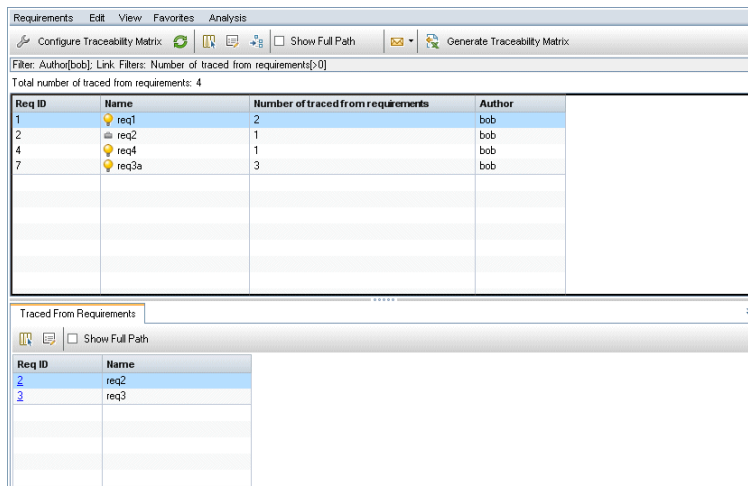
Coverage Analysis View

This view enables you to analyze the breakdown of child requirements according to test coverage status. For more details, see ["Coverage Analysis View" on page 432](#).



Traceability Matrix View

This view enables you to view traceability relationships between requirements and other requirements or tests in a matrix. For more details, see ["Traceability Matrix View" on page 303](#).



Req ID	Name	Number of traced from requirements	Author
1	req1	2	bob
2	req2	1	bob
4	req4	1	bob
7	req3a	3	bob

Traced From Requirements

Req ID	Name
2	req2
3	req3

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A - Z)	Description
<Requirements module common UI elements>	<ul style="list-style-type: none"> • Requirement fields. For field definitions, see "Requirements Module Fields" on page 274. • Requirement menus and buttons. For command and button descriptions, see "Requirements Module Menus and Buttons" on next page. • Requirement icons. For icon descriptions, see "Requirements Module Icons" on page 272. • ALM main menu and sidebar. For details on the Tools menu, Help menu and sidebar, see "ALM Common Areas" on page 45.
<Requirements tree>	<p>Located on the left side of the window, organizes and displays your requirements hierarchically.</p> <p>Available from: Requirements Tree, Requirement Details, and Coverage Analysis</p>
<Filter status bar>	<p>Describes the filter currently applied to the grid or tree. Located directly above the grid filter boxes or tree.</p> <p>In grid views:</p> <ul style="list-style-type: none"> • Showing <x> results. Indicates the number of records currently displayed out of the total records. • Retrieve all <x> results. Click to display all records.
Attachments tab	Lists attachments that provide additional information about the currently selected requirement. For more details, see "Attachments Page" on page 83 .
Business Models Linkage tab	Lists the business model entities linked to the currently selected requirement. For more details, see "Business Models Linkage Tab" on page 439 .
Comments tab	<p>Comments about the currently selected requirement.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Description tab	<p>Describes the currently selected requirement.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Details tab	Details the currently selected requirement.
History tab	Lists changes made to the currently selected requirement. For more details, see "History Tab" on page 78 .

UI Element (A - Z)	Description
Linked Defects tab	Lists the defects linked to the currently selected requirement. For more details, see "Linked Defects/Entities Page" on page 762 .
Represented Items	Lists the business process model entities represented by the selected requirement. Available from: Business Model requirements
Requirements Traceability tab	Lists the requirements linked to the currently selected requirement. For more details, see "Relationships Tab" on page 293 and "Impact Analysis Tab" on page 297 .
Rich Text tab	Enables you to add, view, and edit rich text using an HTML editor from within ALM. Note: <ul style="list-style-type: none"> Changes you make to the rich text for a requirement are saved automatically when you move to a different requirement or a different module. If your project was upgraded from a previous version of Quality Center, rich text that existed before the upgrade is saved as an attachment to the requirement, accessible from the requirement's Attachments tab. <p>For details on defining rich text templates, see the <i>HP Application Lifecycle Management Administrator Guide</i>.</p>
Risk Analysis/Risk Assessment tab	Calculates and analyzes risk for the currently selected requirement. For more details, see "Risk Assessment Tab" on page 317 and "Risk Analysis Tab" on page 321 .
Test Coverage tab	Lists the tests associated with the currently selected requirement. For more details, see "Test Coverage Page" on page 441 .


Requirements Module Menus and Buttons

This section describes the menus and buttons available in the Requirements module.



To access	On the ALM sidebar, under Requirements , select Requirements .
------------------	--

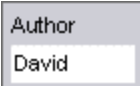
Important information	<ul style="list-style-type: none"> Some menu commands and buttons are not available in all requirement views. Tip: You can access the menu bar from the Requirements module by pressing the shortcut key ALT. Additionally, you can perform many other ALM operations using shortcut keys. For a list of shortcut keys, see "ALM Keyboard Shortcut Reference" on page 132. Version Control: Additional menu commands and buttons are available in a version control enabled project. For details, see "Versions Menu and Buttons" on page 113. ALM Editions: Not all fields and functionality in the Requirements module are available with ALM Essentials Edition.
Relevant tasks	"How to Create Requirements" on page 258
See also	"Requirements Module Icons" on page 272 "Requirements Specification Overview" on page 258





User interface elements are described below (unlabeled elements are shown in angle brackets):




UI Element (A - Z)	Menu	Description
<list of recently used favorite views>	Favorites	Displays the four most recently used favorite views in the Requirements module. You can define the number of views displayed on the menu by setting the FAVORITES_DEPTH parameter in the Site Configuration tab in Site Administration. For details, see the <i>HP Application Lifecycle Management Administrator Guide</i> .
Add to Favorites	Favorites	Opens the Add Favorite dialog box, enabling you to add a favorite view to your private or the public folder. For details, see "Add Favorite Dialog Box" on page 104 .
Alerts	Edit	Opens the Alerts dialog box, enabling you to display alerts for the requirements. For details, see "Alerts Dialog Box" on page 97 .
Assign to Cycle	Requirements	Opens the Select Cycles dialog box, enabling you to assign selected requirements to cycles. For more details, see "Select Cycles Dialog Box" on page 166 .
Assign to Release	Requirements	Opens the Select Releases dialog box, enabling you to assign selected requirements to releases. For more details, see "Select Releases Dialog Box" on page 167 .
Attachments 	<right-click menu>	Opens the Attachments page, enabling you to add attachments to the selected requirement. For details, see "Attachments Page" on page 83 .




UI Element (A - Z)	Menu	Description
Clear Alerts	Edit	Clears displayed alerts for the module. For more details, see "How to Use Alerts" on page 93 .
Clear Follow Up Flag	Edit	Clears a follow up flag of a selected requirement. For details on follow up flags, see "Follow Up Flags Overview" on page 93 .
Collapse	View	Collapses all branches in the requirements tree.
Configure Traceability Matrix	Edit	Opens the Configure Traceability Matrix wizard, enabling you to set the entities displayed the matrix. For more details, see "Configure Traceability Matrix Wizard" on page 306 . Available from: Traceability Matrix
Convert to Tests	Requirements	Opens the Convert to Tests wizard, enabling you to convert selected requirements to tests in a specified subject in the test plan tree. For more details, see "Convert to Tests Wizard" on page 283 .
Copy URL/Paste	Edit	Copies a selected requirement and pastes its URL as a link. The requirement itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the requirement. If you are not already logged in, ALM first prompts for login details.
Copy/Paste	Edit	Copies selected requirements within the same project or across projects. When you copy a requirement, any children of the requirement are also copied. Note: <ul style="list-style-type: none"> • Test coverage, defect linkage, and risk-based quality management data for the requirement are not copied. • To copy a requirement with traceability, you must also copy its associated traced requirements. • The root folder cannot be copied within the same project. • If you paste a requirement that has the same name as an existing requirement, the suffix _Copy is added automatically to the end of the requirement's name. • Not available in all views.
Coverage Analysis	View	Displays the Coverage Analysis view, enabling you to analyze the breakdown of child requirements according to test coverage status. For details, see "Coverage Analysis View" on page 432 .

UI Element (A - Z)	Menu	Description
Cut/Paste	Edit	<p>Moves selected requirements to a different location in the requirements tree.</p> <p>Note: Moving a requirement to a different location in the requirements tree also moves its child requirements, tests coverage, requirement traceability links, and defects linkage. The root folder cannot be moved.</p> <p>Tip: You can also move a requirement to a new location by dragging it. In the requirements tree, click a requirement and drag it under a folder or a requirement.</p>
Delete 	Edit	<p>Deletes selected requirements. Deleting a requirement also deletes its child requirements, tests coverage, requirement traceability links, and defects linkage. You cannot delete the root folder.</p> <p>Version Control: Deleting a requirement deletes all previous versions of the requirement.</p>
Expand All	View	Expands all branches in the requirements tree.
Export	Requirements	<p>Opens the Export Coverage Analysis dialog box, enabling you to save the Coverage Analysis view to a Microsoft Word document. The document displays a bar graph for each parent requirement in the requirements tree.</p> <p>Available from: Coverage Analysis</p>
Export	<right-click menu>	<p>Opens the Export All Grid Data dialog box, enabling you to export the requirements in a grid as a text file, Microsoft Excel worksheet, Microsoft Word document, or HTML document.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • All. Exports all requirements in the grid. • Selected. Exports selected requirements in the grid. <p>Available from: Requirements Grid</p>
Export Traceability Matrix	Analysis	<p>Opens the Export Traceability Matrix dialog box, enabling you to save the Traceability Matrix view to a Microsoft Excel worksheet.</p> <p>Available from: Traceability Matrix</p>
Filter/Sort 	View	Enables you to filter and sort the requirements in the requirements tree or grid. For more details, see "Filter Dialog Box" on page 61 .

UI Element (A - Z)	Menu	Description
Find	Edit	Searches for a requirement in the Requirements module. For more details, see "Find Dialog Box" on page 73 .
Find Next	Edit	Searches for the next item in the requirements grid that meets the previously defined search criteria. Available from: Requirements Grid
Flag for Follow Up 	Edit	Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for a selected requirement. For more details, see "Flag For Follow Up Dialog Box" on page 98 .
Go to Requirement	Requirements	Opens the Go To Requirement dialog box, enabling you to find a specific requirement by ReqID . To display the requirement in the requirements tree, click Show in Tree . To display the requirement in the Requirement Details dialog box, click Open Details . You can only go to requirements that are in the current filter.
Go To Requirement in Requirements Tree 	<right-click menu>	Goes to the Requirements Tree view and highlights the selected requirement. Available from: Requirements Grid and Traceability Matrix
Graphs	Analysis	Lists the graphs you can generate for requirements data. Select a predefined graph, or launch the graph wizard. For details on the predefined graph types, see "Entity Graph Types" on page 793 .
Grid Filters 	View	Displays a grid filter box under each column name, enabling you to define a filter condition for a column. Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For more details, see "Select Filter Condition Dialog Box" on page 70 . Available from: Requirements Grid
Indicator Columns	View	Displays the  columns on the left-side of the requirements window. For more details, see "Requirements Module Icons" on page 272 .

UI Element (A - Z)	Menu	Description
Information Panel	View	Displays information panel tabs on the bottom of the requirement view. For more details, see "Requirements Module Window" on page 261 . Available from: Coverage Analysis, Requirements Grid, and Requirements Tree
Invert Selection	Edit	Unselects all previously selected requirements in the grid and selects all previously unselected requirements. Available from: Requirements Grid
Most Recently used	Analysis	Lists the most recently viewed reports and graphs in ALM. Displays up to ten items.
Move Down  Move Up 		<p>Enables you to move selected requirements in the requirements tree up or down to set their order.</p> <div> <p>Note: The Move Up and Move Down buttons are not available if the requirements in the requirements tree are already sorted using the View Order tab in the Filter dialog box. For more details on the View Order tab, see "Filter Dialog Box" on page 61.</p> </div> <p>Available from: Requirements Tree, Requirement Details, and Coverage Analysis</p>
New Folder 	Requirements	<p>Opens the Create New Requirement Folder dialog box, enabling you to add a folder under a selected folder.</p> <p>Available from: Requirements Tree, Requirement Details, and Coverage Analysis</p>
New Requirement 	Requirements	<p>Opens the New Requirement dialog box, enabling you to add a requirement under a selected requirement. For more details, see "New Requirement Dialog Box" on page 282.</p> <p>Available from: Requirements Tree, Requirement Details, and Coverage Analysis</p>
Organize Favorites	Favorites	Opens the Organize Favorites dialog box, enabling you to organize the list of favorite views by changing properties or deleting views. For details, see "Organize Favorites Dialog Box" on page 105 .
Private	Favorites	Lists the favorite views that are accessible only to the user who created them.

UI Element (A - Z)	Menu	Description
Project Report	Analysis	<p>Lists the predefined project reports you can produce on requirements data. For details on the report types, see "Predefined Project Reports" on page 840.</p> <p>Selecting a report from the list generates a preview of the report. The preview displays up to five entities per report section. To generate the full report, in the upper left corner of the preview, click the downward arrow adjacent to the Generate button and select the report format to generate.</p>
Public	Favorites	Lists the favorite views that are accessible to all users.
Refresh All 	View	Refreshes the requirements tree or grid so that it displays the most up-to-date requirements.
Rename	Edit	<p>Renames a selected requirement. You cannot rename the root folder.</p> <p>Syntax exceptions: A requirement name cannot include the following characters: \ ^ *</p>
Replace	Edit	Replaces a requirement field value in the tree or grid. For more details, see "Replace Dialog Box" on page 75 .
Requirement Details	View	Displays the Requirement Details view, enabling you to create links between requirements and other entities. It also enables you to calculate and analyze requirement risks. For more details, see "Requirement Details Page" on page 280 .
Requirement Details 	Requirements	Opens the Requirement Details dialog box, enabling you to display the details of the selected requirement. For more details, see "Requirement Details Page" on page 280 .
Requirements Grid	View	Displays the Requirements Grid view, enabling you to view requirements in a flat non-hierarchical view. Each line in the grid displays a separate requirement.
Requirements Tree	View	Displays the Requirements Tree view, enabling you to view your requirements hierarchically in a tree.
Select All	Edit	<p>Selects all requirements in the grid.</p> <p>Available from: Requirements Grid</p>
Select Columns 	View	Opens the Select Columns dialog box, enabling you to determine which fields to display in the requirements tree or grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .














UI Element (A - Z)	Menu	Description
Send by E-mail 	Requirements	Opens the Send E-mail dialog box, enabling you to send requirement email to recipients selected from a list or to the author of the requirement. For more details, see "Send E-mail Dialog Box" on page 79 .
Show Full Path	View	Displays the path of the requirements in the requirements tree. Available from: Traceability Matrix
Test Coverage > Show Add Criteria to Coverage	View	Enables the Add Criterion Coverage dialog box. For more details, see "Add Criterion Coverage Dialog Box" on page 447 . Available from: Requirements Tree, Requirement Details, and Coverage Analysis
Text Search 	Edit	Opens the text search pane in the lower part of the Requirements module window, enabling you to search for records in predefined fields. For more details, see "Text Search Pane" on page 76 .
Traceability Matrix	View	Displays the Traceability Matrix view, enabling you to view traceability relationships between requirements and other requirements or tests in a matrix.
Update Selected	Edit	Opens the Update Selected dialog box, enabling you to update a field value for multiple selected requirements in the tree or grid. For more details, see "Update Selected Dialog Box" on page 88 .
Zoom 	View	Changes the level of detail in the requirements tree. Includes the following options: Zoom In. Displays the selected requirement and includes a heading with the hierarchical path of the requirement. Zoom Out One Level. Undoes the previous zoom in command. Zoom Out To Root. Enlarges to the highest hierarchical level and display the entire requirements tree.






Requirements Module Icons

This section describes the icons available in the Requirements module.

To access	On the ALM sidebar, under Requirements , select Requirements .
Important information	ALM Editions: Not all fields and functionality in the Requirements module are available with ALM Essentials Edition.
See also	<ul style="list-style-type: none"> "Requirements Module Menus and Buttons" on page 265 "Requirements Module Window" on page 261

The icons are described below:

UI Element (A - Z)	Description
	<green asterisk>. The applicable tab is populated.
	<p>Alerts. Click to view alerts for the requirement.</p> <ul style="list-style-type: none"> • Red alert. The alert is new. • Gray alert. The alert has already been read. <p>For more details, see "Alerts Dialog Box" on page 97.</p>
	<p>Attachments. Click to view attachments for the specified requirement. For more details, see "Attachments Page" on page 83.</p>
	<p>Business Model Requirement. A requirement representing a business process model entity.</p> <div> <p>Note:</p> <ul style="list-style-type: none"> • Business model requirements are created automatically for each model entity added to the Business Models module. • You cannot change the requirement type of business model requirements. </div>
	<p>Business Requirement. A business process requirement.</p>
	<p>Child. A child requirement affected by a change to a selected requirement. For more details, see "Impact Analysis Tab" on page 297.</p>
	<p>Folder Requirement. A folder for organizing requirements.</p>
	<p>Follow Up Flags. Click to view follow up flags for the requirement.</p> <ul style="list-style-type: none"> • Gray flag. The follow up flag is new. • Red flag. The follow up date has arrived. <p>For more details, see "Flag For Follow Up Dialog Box" on page 98.</p>
	<p>Functional Requirement. A system behavioral requirement.</p>
	<p>Group Requirement. A collection of related requirements.</p>
	<p>Linked Defects. Click to view linked defects for the requirement. For more details, see "Linked Defects/Entities Page" on page 762.</p>
	<p>Parent. A parent requirement that affects a selected requirement. For more details, see "Impact Analysis Tab" on page 297.</p>
	<p>Recursive Relationship. The same requirement participates more than once in the relationship. For more details, see "Impact Analysis Tab" on page 297.</p>

UI Element (A - Z)	Description
	Testing Requirement. A testing type requirement.
	Trace From. A requirement that affects a selected requirement. For more details, see "Impact Analysis Tab" on page 297 .
	Trace To. A requirement that is affected by a selected requirement. For more details, see "Impact Analysis Tab" on page 297 .
	Undefined Requirement. A requirement with an undefined type.
	Version Control. The requirement is checked out. <ul style="list-style-type: none"> • Green lock. The requirement is checked out by the current user. • Red lock. The requirement is checked out by another user.

Requirements Module Fields

This section describes the Requirements module fields.

To access	On the ALM sidebar, under Requirements , select Requirements .
Important information	<ul style="list-style-type: none"> • You can add user-defined fields and change the label of any of the fields in the Requirements module. You can also customize project lists. For more details, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. • You can use the Script Editor to restrict and dynamically change the fields and values in the Requirements module. For more details, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. • When you select a requirement column with a user name value (including user-defined fields), ALM displays a list with the name and full name of each user. You can search for users, sort users, group users by user group, and select users from the users list or a group tree. For more details, see "Users List Dialog Box" on page 72. • Some fields are not available in all requirement views. • Version Control: Additional fields are available in a version control enabled project. For details, see "Version Control Fields" on page 114. • ALM Editions: Not all fields and functionality in the Requirements module are available with ALM Essentials Edition.
See also	"Requirements Module Window" on page 261








The fields are described below:

UI Element (A - Z)	Description
Author	The user name of the person who created the requirement. Default value: Login user name.
Comments	Comments about the requirement. Click in the text box to display a toolbar for formatting and spell checking the text.
Coverage Analysis	Graphically displays the direct cover status of the requirement and its children. Requirements which do not match the current filter, or requirements with direct cover status "N/A" are not counted in the analysis. Note: If you set the coverage by cycle, ALM does not use the Direct Cover Status field in its calculations. Instead, it uses calculated direct cover status values based on the tests that have instances belonging to test set folders that are assigned to cycles included in the filter. In this case, requirements that do not have test coverage for any of the cycles in the filter are not counted in the analysis. For more details on setting coverage by cycle, see "Analysis Settings Dialog Box" on page 445 .
Created By	The user name of the person who created the requirement link. Default value: The login user name.
Creation Date	The date on which the requirement or requirement link was created. Default value: Current database server date.
Creation Time	The time at which the requirement was created. Default value: Current database server time.
Description	A description of the requirement. Click in the text box to display a toolbar for formatting and spell checking the text.

UI Element (A - Z)	Description
Direct Cover Status	<p>The current status of the requirement, determined according to the status of the tests associated with the requirement.</p> <p>A requirement status can be one of the following:</p> <ul style="list-style-type: none"> • Blocked. One or more tests covered by the requirement have an execution status of "Blocked". • Not Covered. The requirement has not been linked to a test. • Failed. One or more tests covered by the requirement have an execution status of "Failed", and none has an execution status of "Blocked". • Not Completed. One or more tests covered by the requirement have an execution status of "Not Completed", and none has an execution status of "Blocked" or "Failed". Alternatively, tests covered by the requirement have execution statuses of "Passed" and "No Run", or "Passed" and "N/A". • Passed. All the tests covered by the requirement have an execution status of "Passed". • No Run. All the tests covered by the requirement have an execution status of "No Run". • N/A. The current status of the requirement is not applicable. • ---. The requirement does not have a direct cover status as it belongs to a requirement type that does not support coverage. <p>Default value: The status is Not Covered.</p>
Modified	<p>The date and time on which the requirement or requirement link was modified.</p> <p>Default value: The current database server date and time.</p>
Name	The requirement name.
Old Type (obsolete) (formerly Type)	<p>The type of requirement (obsolete). In previous versions of ALM, the type could be any value configured in the project, with typical values Change, Functional, Guideline, Quality, Standard, and System.</p> <p>This field is only available for requirements of undefined type.</p>
Priority	The priority of the requirement, ranging from low priority (level 1) to urgent priority (level 5).
Product	The component of the application on which the requirement is based.
RBQM Business Impact	The calculated Business Criticality for the requirement. Possible values are A (High) , B (Medium) , and C (Low) . This field is only in use for assessment requirements.

UI Element (A - Z)	Description
RBQM Custom Business Impact	The user-defined custom Business Criticality for the requirement. Possible values are A (High) , B (Medium) , and C (Low) . This field is only in use for assessment requirements.
RBQM Custom Failure Probability	The user-defined custom Failure Probability for the requirement. Possible values are 1 (High) , 2 (Medium) , and 3 (Low) . This field is only in use for assessment requirements.
RBQM Custom Functional Complexity	The user-defined custom Functional Complexity for the requirement. Possible values are 1 (High) , 2 (Medium) , and 3 (Low) . This field is only in use for assessment requirements.
RBQM Custom Risk	The user-defined custom Risk for the requirement. Possible values are A (High) , B (Medium) , and C (Low) . This field is only in use for assessment requirements.
RBQM Custom Testing Hours	The user-defined effort required to test the requirement, measured in units defined in Project Customization. This field is only in use for assessment requirements.
RBQM Custom Testing Level	The user defined level at which to test the requirement. Possible values are 1-Full , 2-Partial , 3-Sanity , and 4-None . This field is only in use for assessment requirements.
RBQM Date of Last Analysis	The date a risk-based quality management analysis was last performed on the requirement. This field is only in use for analysis requirements.
RBQM Effective Business Impact	The effective Business Criticality for the requirement. Possible values are A (High) , B (Medium) , and C (Low) . This field is only in use for assessment requirements.
RBQM Effective Failure Probability	The effective Failure Probability for the requirement. Possible values are 1 (High) , 2 (Medium) , and 3 (Low) . This field is only in use for assessment requirements.
RBQM Effective Functional Complexity	The effective Functional Complexity for the requirement. Possible values are 1 (High) , 2 (Medium) , and 3 (Low) . This field is only in use for assessment requirements.

UI Element (A - Z)	Description
RBQM Effective Risk	The effective Risk for the requirement. Possible values are A (High) , B (Medium) , and C (Low) . This field is only in use for assessment requirements.
RBQM Estimated RnD Effort	The user-defined estimate of the effort required to develop the requirement. This field is only in use for assessment requirements.
RBQM Exclude from Analysis	Indicates whether to exclude the requirement from risk analysis. A requirement may be excluded from risk analysis if it belongs to a type for which risk assessments are not available, or if you specifically exclude it from analysis.
RBQM Failure Probability	The calculated Failure Probability for the requirement. Possible values are 1 (High) , 2 (Medium) , and 3 (Low) . This field is only in use for assessment requirements.
RBQM Functional Complexity	The calculated Functional Complexity for the requirement. Possible values are 1 (High) , 2 (Medium) , and 3 (Low) . This field is only in use for assessment requirements.
RBQM Risk	The calculated Risk for the requirement. Possible values are A (High) , B (Medium) , and C (Low) . This field is only in use for assessment requirements.
RBQM Testing Hours	The calculated effort required to test the requirement, measured in units defined in Project Customization. This field is only in use for assessment requirements.
RBQM Testing Level	The calculated level at which to test the requirement. Possible values are 1-Full , 2-Partial , 3-Sanity , and 4-None . This field is only in use for assessment requirements.
RBQM Use Custom Business Impact	Indicates whether to use the user-defined Business Criticality, instead of the Business Criticality calculated by ALM. This field is only in use for assessment requirements.
RBQM Use Custom Failure Probability	Indicates whether to use the user-defined Failure Probability, instead of the Failure Probability calculated by ALM. This field is only in use for assessment requirements.
RBQM Use Custom Functional Complexity	Indicates whether to use the user-defined Functional Complexity, instead of the Functional Complexity calculated by ALM. This field is only in use for assessment requirements.
RBQM Use Custom Results	Indicates whether to use the user-defined testing effort and testing level, instead of the values calculated by ALM. This field is only in use for assessment requirements.

UI Element (A - Z)	Description
RBQM Use Custom Risk	Indicates whether to use the user-defined Risk, instead of the Risk calculated by ALM. This field is only in use for assessment requirements.
Req ID	A unique alphanumeric ID for the requirement that is assigned automatically. The Req ID field cannot be modified.
Req Parent	The name of the parent requirement.
Requirement Trace ID	A unique alphanumeric ID for the requirement link that is assigned automatically.
Requirement Type	<p>The type of requirement.</p> <p>Default values:</p> <ul style="list-style-type: none"> •  Business. A business process requirement. By default, you cannot add coverage to this requirement. •  Folder. A folder for organizing requirements. By default, you cannot add coverage to this requirement. •  Functional. A system behavioral requirement. •  Group. A collection of related requirements. •  Testing. A system performance requirement. •  Business Model. A requirement representing a business process model entity. •  Undefined. An undefined requirement. <p>Note: You can customize the default types and create your own requirement types. For more details on customizing requirement types, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.</p>
Reviewed	Indicates whether the requirement has been reviewed and approved by the person responsible.
Target Cycle	Indicates the cycle to which the requirement is assigned.
Target Release	Indicates the release to which the requirement is assigned.
Trace Comment	Displays comments about the requirement link.




Requirement Details Page

This page enables you to update the details, attachments, tests coverage, requirement traceability links, risk-based quality management settings, and defect links for any requirement. You can also view a list of changes made to any requirement.

To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> In the Requirements module, right-click a requirement and select Requirement Details. The Requirement Details dialog box opens. Select View > Requirement Details. The Requirement Details view opens.
Important information	ALM Editions: Not all fields and functionality in Requirement Details are available with ALM Essentials Edition.
Relevant tasks	"How to Create Requirements" on page 258
See also	"Requirements Specification Overview" on page 258

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
	<p>First/Previous/Next/Last Entity. Allows you to browse through the requirements.</p> <p>Available from: Requirement Details dialog box</p>
	<p>Flag for Follow Up. Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for the requirement. For details, see "Flag For Follow Up Dialog Box" on page 98.</p>
	<p>Send by Email. Sends an email with the requirement details. For more details, see "Send E-mail Dialog Box" on page 79.</p>

UI Element	Description
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Details	Details the currently selected requirement. For details on the available fields, see "Requirements Module Fields" on page 274 .
Rich Text	Enables you to add, view, and edit rich text using an editor from within ALM. Note: Changes you make to the rich text for a requirement are saved automatically when you move to a different requirement or a different module.
Attachments	Lists attachments that provide additional information about the currently selected requirement. For more details, see "Attachments Page" on page 83 .
Linked Defects	Lists the defects linked to the currently selected requirement. For more details, see "Linked Defects/Entities Page" on page 762 .
Requirements Traceability	Lists the requirements linked to the currently selected requirement. For more details, see "Impact Analysis Tab" on page 297 and "Relationships Tab" on page 293 .
Test Coverage	Lists the tests associated with the currently selected requirement. For more details, see "Test Coverage Page" on page 441 .
Business Models Linkage	Lists the business model entities linked to the currently selected requirement. For more details, see "Business Models Linkage Tab" on page 439 .
Risk Analysis/Risk Assessment	Calculates and analyzes risk for the currently selected requirement. For more details, see "Risk Assessment Tab" on page 317 and "Risk Analysis Tab" on page 321 .
History	Displays a list of changes made to the currently selected requirement. For more details, see "History Tab" on page 78 . In addition, this tab displays a history of baselines in which the requirement appears. For more details, see "History Tab" on page 78 .


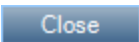
New Requirement Dialog Box

This dialog box enables you to add a new requirement to the Requirements module.

To access	In the Requirements module, right-click a requirement and select New Requirement . Available from: Requirements Tree, Requirement Details, and Coverage Analysis
Relevant tasks	"How to Create Requirements" on page 258
See also	"Requirements Specification Overview" on page 258

User interface elements are described below:

UI Element	Description
	Clears the data.
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Name	Type a name for the new requirement. Syntax exceptions: A requirement name cannot include the following characters: \ ^ *

UI Element	Description
Requirement Type	Select a requirement type. For more details on requirement types, see "Requirement Type" on page 279 .
Details	Required fields are displayed in red. For details on the available requirement fields, see "Requirements Module Fields" on page 274 .
Rich Text	Enables you to add, view, and edit rich text using an HTML editor from within ALM. Note: Changes you make to the rich text for a requirement are saved automatically when you move to a different requirement or a different module.
Attachments	Enables you to add attachments for the currently selected requirement. For more details, see "Attachments Page" on page 83 .
	Adds the new requirement to the requirements tree. The New Requirement page remains open.
	Closes the New Requirement page.

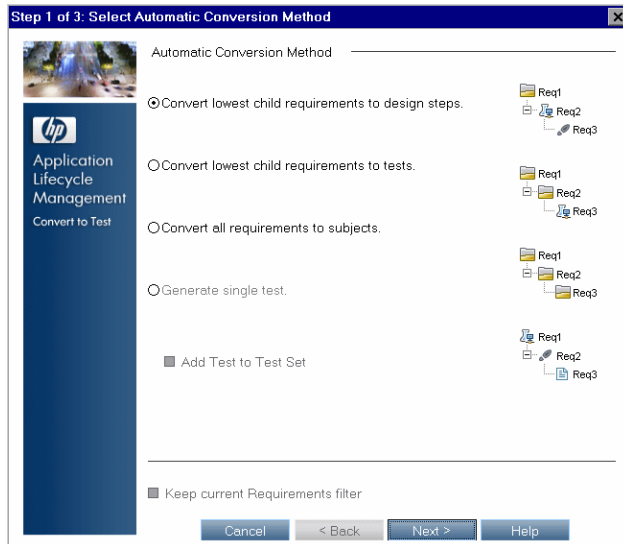
Convert to Tests Wizard

This wizard enables you to convert requirements to tests in a specified subject in the test plan tree. Coverage is automatically created between the requirements and their corresponding tests. You can convert selected requirements or all requirements in the requirements tree.

To access	In the Requirements module, right-click a requirement in the requirements tree and select Convert to Tests . To convert all requirements, right-click the root requirement folder in the requirements tree and select Convert to Tests .
Important information	<ul style="list-style-type: none"> You must have the necessary permissions to create tests. The following requirement types are set so that, by default, you cannot convert them to tests: Business, Folder, and Group. <p>To enable you to convert, you must enable test coverage for these requirement types. For more details, see the <i>HP Application Lifecycle Management Administrator Guide</i>.</p>
Wizard map	This wizard contains: "Select Automatic Conversion Method Page" on next page > "Manual Change Conversion Page" on page 285 > "Select Destination Path Page" on page 286
Relevant tasks	"How to Create Requirements" on page 258
See also	"Requirements Specification Overview" on page 258

Select Automatic Conversion Method Page

This wizard page enables you to choose an automatic conversion method. You can convert requirements to design steps, tests, or subjects.



Important information	General information about this wizard is available here: "Convert to Tests Wizard" on previous page.
Wizard map	The "Convert to Tests Wizard" on previous page contains: "Select Automatic Conversion Method Page" above > "Manual Change Conversion Page" on next page > "Select Destination Path Page" on page 286

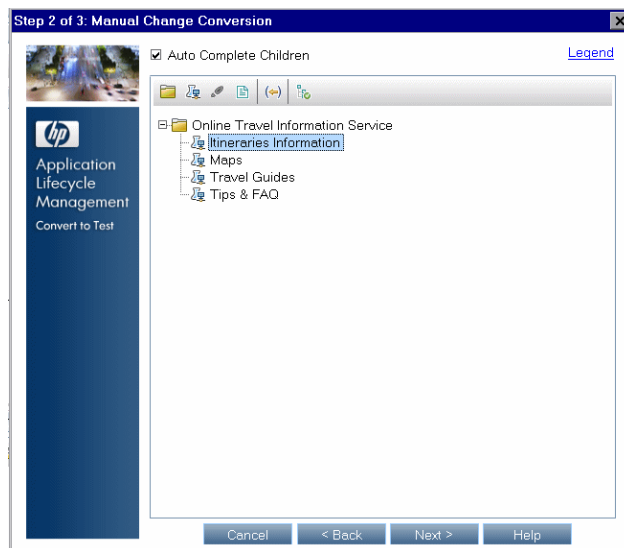
User interface elements are described below:

UI Element	Description
Convert lowest child requirements to design steps	Converts all lowest level child requirements to design steps, the next level up to tests, and all levels above to subjects.
Convert lowest child requirements to tests	Converts all lowest level child requirements to tests and all levels above to subjects.
Convert all requirements to subjects	Converts all selected requirements to subjects in the Test Plan module.
Generate Single Test	Converts requirements to tests in specified subjects in the test plan tree.
Add Test to Test Set	This option is activated when Generate Single Test is selected. Adds the tests to specified test sets in the Test Lab module.

UI Element	Description
Keep current Requirements filter	This option is activated when the requirements are filtered. Keeps the current filter for the requirements. Only filtered requirements are converted.
Next	Starts the conversion process. The results are displayed in the "Manual Change Conversion Page" below.
Cancel	If you are canceling before starting the conversion process, the wizard closes. If you are canceling after starting the conversion process, Click the Stop button in the progress bar.







Manual Change Conversion Page

This wizard page enables you to manually set requirements to subjects in the test plan tree, tests, test steps, or step descriptions. You can also choose to exclude requirements from the conversion process.



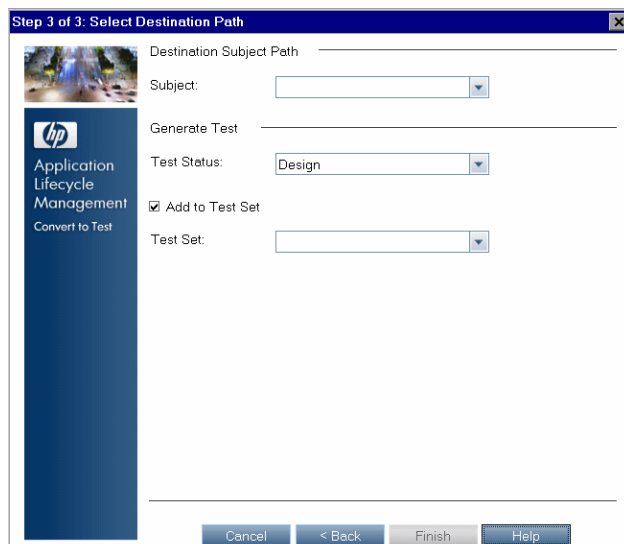
Important information	<ul style="list-style-type: none"> General information about this wizard is available here: "Convert to Tests Wizard" on page 283. If you are converting a single requirement, the wizard skips this page.
Wizard map	<p>The "Convert to Tests Wizard" on page 283 contains:</p> <p>"Select Automatic Conversion Method Page" on previous page > "Manual Change Conversion Page" above > "Select Destination Path Page" on next page</p>

User interface elements are described below:

UI Element	Description
Auto Complete Children	Changes the level of the children of the selected parent. For example, if you change the level of a parent from a subject to a test, the wizard changes the level of all the children from tests to test steps.
Legend	Provides a legend for this wizard page.
	Convert to Subject. Changes the selected item to a subject in the test plan tree. Children can then be either subjects or tests. Subject names must be unique.
	Convert to Test. Changes the selected item to a test in the test plan tree. Children are then converted to steps. Test names must be unique.
	Convert to Step. Changes the selected item to a step in the test plan tree. Children are then converted to step descriptions.
	Convert to Description. Changes the selected item to a step description in the test plan tree. Children are then converted to indented description text.
	Exclude from Conversion. Excludes the selected item from the test plan tree. Children are also excluded.
	Verify Children. Changes the type of the child node according to the type of the parent node. For example, if the parent is a test, the children are converted to steps.
Cancel	If you are canceling before starting the conversion process, the wizard closes. If you are canceling after starting the conversion process, Click the Stop button in the progress bar.

Select Destination Path Page

This wizard page enables you to define the destination subject path in the test plan tree.



Important information	<ul style="list-style-type: none"> General information about this wizard is available here: "Convert to Tests Wizard" on page 283. If you are converting a single requirement, the wizard skips this page.
Wizard map	<p>The "Convert to Tests Wizard" on page 283 contains:</p> <p>"Select Automatic Conversion Method Page" on page 284 > "Manual Change Conversion Page" on page 285 > "Select Destination Path Page" on previous page</p>

User interface elements are described below:

UI Element	Description
Destination Subject Path	<p>Sets the destination subject path in the Test Plan module.</p> <p>Default value: The subject folder and tests are placed in the Subject folder of the Test Plan module.</p>
Test Status	<p>This field is visible when Generate Single Test is selected in the "Select Automatic Conversion Method Page" on page 284. Sets the test status for the generated test.</p> <p>Default value: Design</p>
Add to Test Set	<p>This field is visible when Add Test to Test Set is selected in the "Select Automatic Conversion Method Page" on page 284. Adds the test to a test set in the Test Lab module.</p> <p>Test Set. Select the test set in the Test Lab module.</p>
Finish	<p>Starts the conversion process. When the conversion process ends, click OK. The page displays errors generated while converting the requirements.</p> <p>Note: If you stop the conversion process, any requirements already converted are not deleted from the test plan tree. You must delete them manually.</p>

Chapter 15

Requirements Traceability

This chapter includes:

Requirements Traceability Overview.....	290
How to Trace Requirements.....	290
Requirements Traceability User Interface.....	293

Requirements Traceability Overview

Requirements traceability defines a relationship between two or more requirements. When analyzing the impact of a change proposed in a specific requirement, the traceability links indicate the other requirements that the change might affect.

You can add traceability links to and from a selected requirement.

- **Trace from** links indicate requirements that affect a selected requirement.
- **Trace to** links indicate requirements that are affected by a selected requirement.

When a requirement changes, HP Application Lifecycle Management (ALM) can alert the affected requirements. For more details on alerts, see ["Alerts Overview" on page 92](#).

For task details, see ["How to Trace Requirements" below](#).

How to Trace Requirements

This task describes how to define traceability links between requirements, and how to view the associations and dependencies that exist between the requirements.

To learn more about tracing requirements, see ["Requirements Traceability Overview" above](#).

Tip: For a use-case scenario related to this task, see ["How to Trace Requirements - Use-Case Scenario" on next page](#).

This task includes the following steps:

- ["Define traceability links" below](#)
- ["View traceability impact" below](#)
- ["Generate a traceability matrix - Optional" below](#)

1. Define traceability links

- a. In the Requirements module, select the **Requirement Details** view. Click the **Requirements Traceability** tab.
- b. To define a traceability link, select a requirement from the requirements tree.
- c. In the **Relationships** tab, click the **Add Requirement Traceability** button to display the requirements tree in the right pane. Add traceability links. For user interface details, see ["Relationships Tab" on page 293](#).

2. View traceability impact

Click the **Impact Analysis** tab. Review the associations and dependencies that exist between the requirements. For user interface details, see ["Impact Analysis Tab" on page 297](#).

3. Generate a traceability matrix - Optional

You can generate a traceability matrix to determine the completeness of the relationships

between your requirements.

In the Requirements module, select **View > Traceability Matrix**. Configure the traceability matrix. For task details, see "How to Use the Traceability Matrix" on page 300.

How to Trace Requirements - Use-Case Scenario

This use-case scenario provides an example of tracing requirements in ALM.

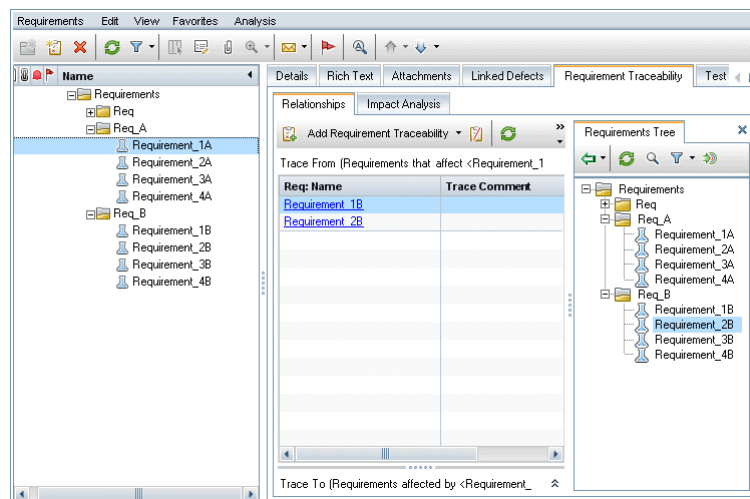
Note: For a task related to this scenario, see "How to Trace Requirements" on previous page.

This scenario includes the following steps:

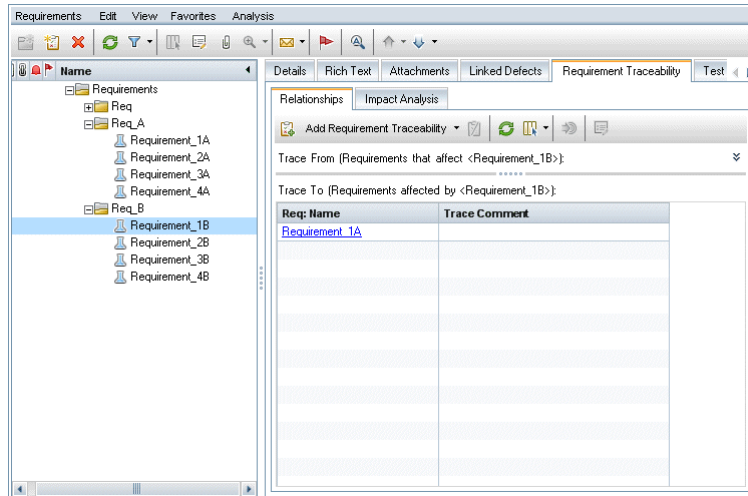
- "Define traceability links" below
- "View Traceability Impact" on next page

1. Define traceability links

In the Requirements module, select the **Requirement Details** view. Click the **Requirements Traceability** tab. To implement a relationship between the requirements, suppose Requirement_1B and Requirement_2B affect Requirement_1A. You select Requirement_1A in the requirements tree. In the Relationships tab, you add Requirement_1B and Requirement_2B to the Trace From grid.



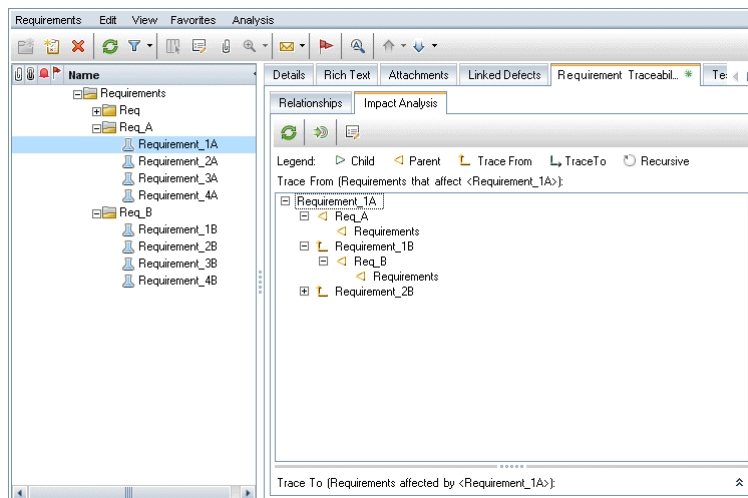
If you select Requirement_1B in the requirements tree, the Trace To grid indicates that Requirement_1B is traced to Requirement_1A.



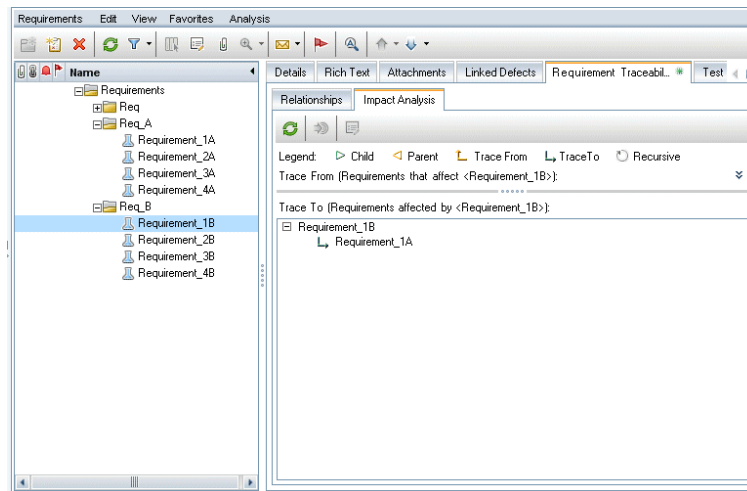
If you select Requirement_2B in the requirements tree, the Trace To grid indicates that Requirement_2B is traced to Requirement_1A.

2. View Traceability Impact

In the following Impact Analysis tab, the Trace From tree indicates that Requirement_1A is traced from Requirement_1B and Requirement_2B. Req_A is the parent requirement of Requirement_1A. Req_B is the parent requirement of Requirement_1B.



The Trace To tree displays requirements that are affected by a selected requirement. For example, the following Trace To tree indicates that Requirement_1B is traced to Requirement_1A.



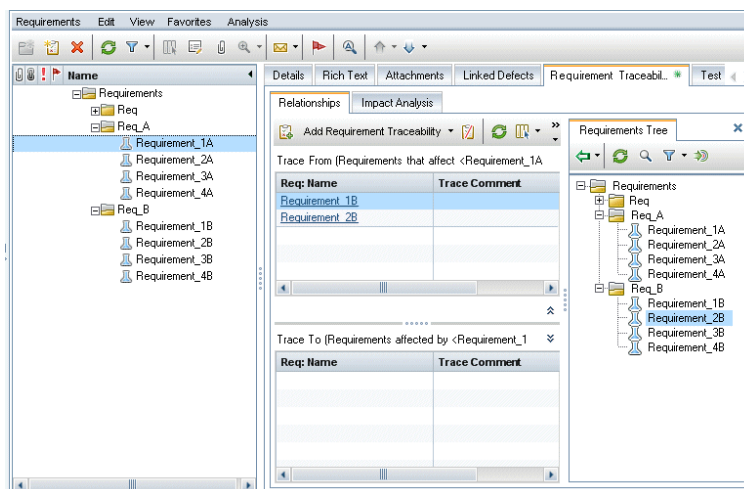
Requirements Traceability User Interface

This section includes:

Relationships Tab.....	293
Impact Analysis Tab.....	297

Relationships Tab




This tab enables you to define relationships between requirements. It helps you understand associations and dependencies that exist between the requirements by displaying them in a grid structure.







To access	In the Requirements module, select View > Requirement Details . Click the Requirements Traceability tab.
Important information	The Relationships tab shows the affected requirements excluding their child requirements.
Relevant tasks	"How to Trace Requirements" on page 290
See also	"Requirements Traceability Overview" on page 290 "Impact Analysis Tab" on page 297

Trace From/Trace To Grid

User interface elements are described below:

UI Element	Description
 Add Requirement Traceability ▾	<p>Defines traceability relationships between the requirements.</p> <p>Includes the following options:</p> <ul style="list-style-type: none"> • Add Requirement Traceability or From Requirements Tree. Displays the requirements tree in the right pane, enabling you to add traceability links from the requirements tree to the selected requirement. For more details, see below. • By ID (Trace From). Opens the Trace Existing Requirement dialog box, enabling you to add a traceability link to the Trace From grid by typing a requirement ID. • By ID (Trace To). Opens the Trace Existing Requirement dialog box, enabling you to add a traceability link to the Trace To grid by typing a requirement ID.
	<p>Remove from Traceability. Removes a traceability relationship link from the Trace From or Trace To grid.</p> <p>Tip: Press the CTRL key to select multiple links.</p>
	Refresh All. Refreshes the grids.









UI Element	Description
	<p>Select Columns. Sets column appearance and order.</p> <p>Includes the following options:</p> <ul style="list-style-type: none"> • Select Column (Trace From). Opens the Select Columns dialog box, enabling you to determine which fields to display in the Trace From grid and their order. • Select Column (Trace To). Opens the Select Columns dialog box, enabling you to determine which fields to display in the Trace To grid and their order. <p>For more details, see "Select Columns/Select Fields Dialog Box" on page 86.</p>
	<p>Go To Requirement. Displays a traced requirement in the requirements tree.</p>
	<p>Requirement Details. Opens the Requirement Details dialog box, enabling you to display the details of the selected requirement. For more details, see "Requirement Details Page" on page 280.</p>
Trace From pane	Displays requirements that affect a selected requirement.
<requirement fields>	For details on the requirement fields available from the grids, see "Requirements Module Fields" on page 274 .
	Show/Hide. Shows/hides the Trace From or the Trace To pane.
Trace To pane	Displays requirements that are affected by a selected requirement.

Requirements Tree Pane

This pane enables you to add traceability links from the requirements tree to the selected requirement.

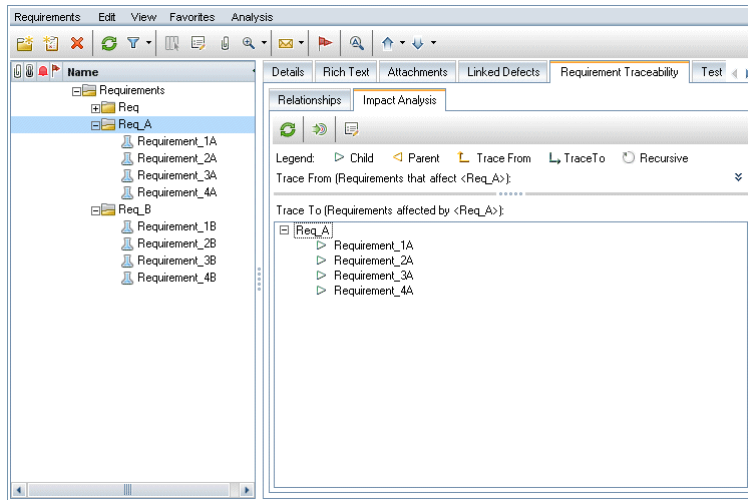
To access	In the Requirements module, select the Requirement Details view. Click the Requirements Traceability tab. Click the Add Requirement Traceability button.
------------------	---

User interface elements are described below:

UI Element	Description
	<p>Add to Traceability. Adds traceability links from the requirements tree.</p> <p>Includes the following options:</p> <ul style="list-style-type: none"> • Add to Traceability (Trace From). Adds selected requirements to the Trace From grid. • Add to Traceability (Trace To). Adds selected requirements to the Trace To grid. <p>Tip: You can also add traceability links by dragging a requirement in the tree to the appropriate grid.</p>
	<p>Show Requirement Details. Opens the Details dialog box for the selected requirement in read-only mode.</p>
	<p>Go to Requirement in Requirements Tree. Navigates to the selected requirements location in the tree in the Requirements module, and highlights the requirement.</p>
	<p>Refresh All. Refreshes the requirements tree.</p>
	<p>Find. Searches for a specific requirement in the tree.</p> <p>Type the name (or part of the name) of the requirement in the Find box and click Find. If the search is successful, the requirement is highlighted in the tree.</p>
	<p>Set Filter/Sort. Filters and sorts the requirements in the requirements tree. For more details, see "Filter Dialog Box" on page 61.</p>
	<p>Go to Requirement by ID. Opens the Go To Requirement dialog box, enabling you to find a specific requirement by ReqID.</p> <p>Note: You can only go to requirements that are in the current filter.</p>
	<p>Close. Hides the requirements tree in the right pane.</p>




Impact Analysis Tab


This tab enables you to analyze the impact of requirement changes by reviewing the relationships. It helps you understand associations and dependencies that exist between the requirements by displaying them in a hierarchical tree structure.



To access	In the Requirements module, select View > Requirement Details . Click the Requirements Traceability tab and then the Impact Analysis tab.
Important information	The Impact Analysis tab shows the affected parent and child requirements.
Relevant tasks	"How to Trace Requirements" on page 290
See also	"Requirements Traceability Overview" on page 290 "Relationships Tab" on page 293

User interface elements are described below:

UI Element	Description
	Refresh All. Refreshes the tree.
	Go To Requirement. Displays a traced requirement in the requirements tree.
	Requirement Details. Opens the Requirement Details dialog box, enabling you to display the details of the selected requirement. For more details, see " Requirement Details Page " on page 280.
Legend	Describes the relationships between the requirements. For more details on the traceability icons, see " Requirements Module Icons " on page 272.

UI Element	Description
Trace From pane	Displays requirements that affect a selected requirement.
	Show/Hide. Shows/hides the Trace From or the Trace To pane.
Trace To pane	Displays requirements that are affected by a selected requirement.

Chapter 16

Traceability Matrix

This chapter includes:

Traceability Matrix Overview.....	300
How to Use the Traceability Matrix.....	300
Traceability Matrix User Interface.....	302

Traceability Matrix Overview

The traceability matrix enables you to determine the extent of relationships between requirements and other requirements and between requirements and tests. It helps you verify that all requirements are met and identify changes to the scope of your requirements when they occur.

The traceability matrix lists source requirements and their associated requirements and tests. The total number of relationships is listed for each source requirement. A low value may imply that the source requirement is not associated with enough requirements or tests. A high value may imply that the source requirement is too complex and can perhaps be simplified. A zero value indicates that no relationship exists.

For task details, see ["How to Use the Traceability Matrix" below](#).

How to Use the Traceability Matrix

This task describes how to configure and display the traceability matrix.

To learn more about the traceability matrix, see ["Traceability Matrix Overview" above](#).

- **Use-case:** For a use-case scenario related to this task, see ["How to Use the Traceability Matrix - Use-Case Scenario" on next page](#).
- **Product Feature Movie:** To view a movie that demonstrates how to create a traceability matrix, choose **Help > Product Feature Movies** in the ALM main window.

This task includes the following steps:

- ["Prerequisites" below](#)
- ["Configure the traceability matrix" below](#)
- ["View the traceability matrix" on next page](#)

1. Prerequisites

- a. **Define requirement traceability links.** In the Requirements module, select **View > Requirement Details**. Click the **Requirements Traceability** tab. Define traceability links between requirements. For task details on how to trace requirements, see ["How to Trace Requirements" on page 290](#).
- b. **Define requirement and test coverage.** Create coverage by linking requirements to tests. You can create coverage from the Requirements or the Test Plan module. For task details, see ["How to Create Coverage" on page 428](#).

2. Configure the traceability matrix

- a. In the Requirements module, select **View > Traceability Matrix**.
- b. Click the **Configure Traceability Matrix** button. The Configure Traceability Matrix wizard opens. Define the matrix. For user interface details, see ["Configure Traceability Matrix Wizard" on page 306](#).

3. View the traceability matrix

In the Traceability Matrix view, analyze and review the traceability links between requirements, and the links between requirements and tests. For user interface details, see ["Traceability Matrix View"](#) on page 303.

How to Use the Traceability Matrix - Use-Case Scenario

This use-case scenario provides an example of how to configure the traceability matrix and how to view the results. In this scenario, you will identify requirements that have an impact on the specified source requirements.

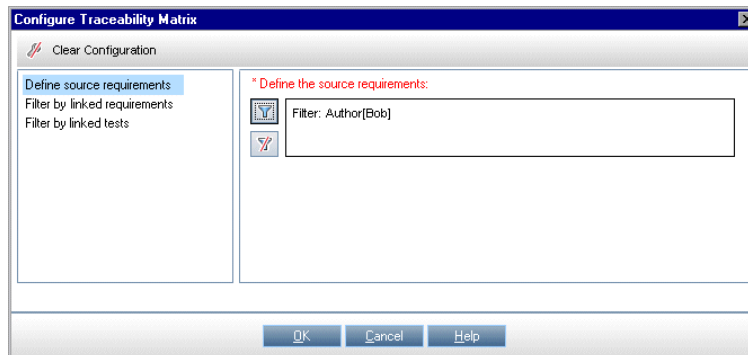
Note: For a task related to this scenario, see ["How to Use the Traceability Matrix"](#) on previous page.

This scenario includes the following steps:

- ["Define the source requirements"](#) below
- ["Define the linked requirements"](#) below
- ["View the traceability matrix"](#) on next page

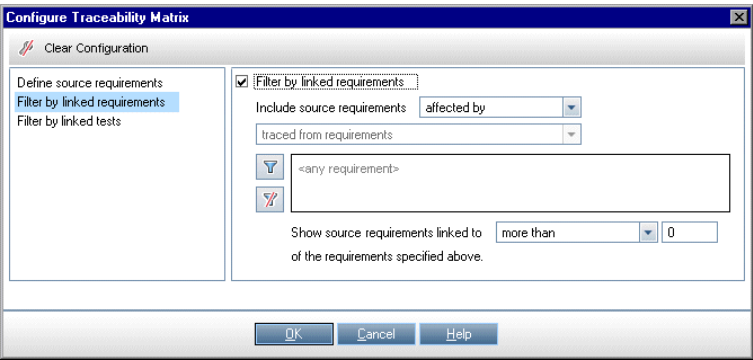
1. Define the source requirements

In the Configure Traceability Matrix, limit the matrix to requirements authored by a specific user, for example **Bob**.



2. Define the linked requirements

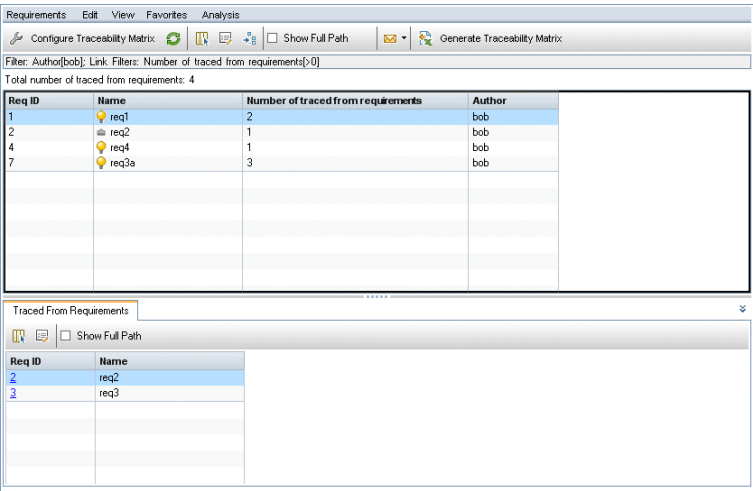
In **Filter by linked requirements**, identify the requirements that have an impact on the defined source requirements.



3. View the traceability matrix

The traceability matrix grid displays the source requirements and number of traced from requirements. For example, the req1 requirement is linked to two traced from requirements.

The Traced From Requirements tab displays the requirements that have an impact on a specified source requirement. For example, req2 and req3 have an impact on req1.



Traceability Matrix User Interface

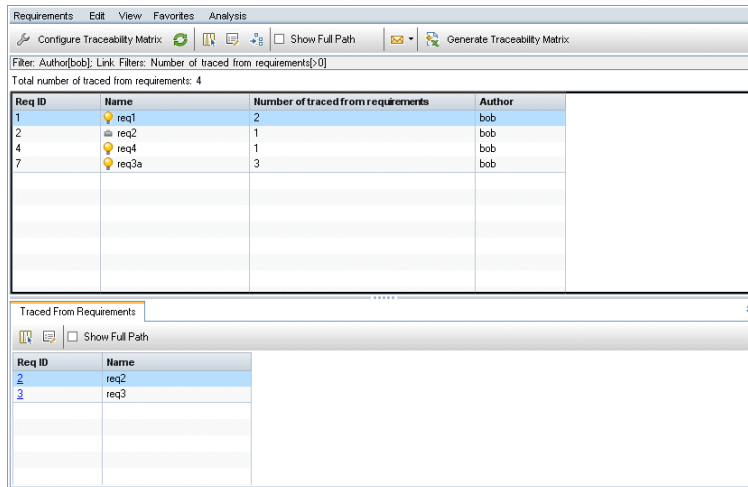
This section includes:

Traceability Matrix View..... 303

Configure Traceability Matrix Wizard..... 306

Traceability Matrix View





This view enables you to analyze the traceability matrix.







To access	In the Requirements module, select View > Traceability Matrix .
Important information	The data displayed in the traceability matrix grid is not editable.
Relevant tasks	"How to Use the Traceability Matrix" on page 300
See also	"Traceability Matrix Overview" on page 300 "Configure Traceability Matrix Wizard" on page 306

Traceability Matrix Grid

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element (A - Z)	Description
 Configure Traceability Matrix	Opens the Configure Traceability Matrix wizard, enabling you to define the matrix. For more details, see "Configure Traceability Matrix Wizard" on page 306 .
	Refresh All. Refreshes the matrix so that it displays the most up-to-date data.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the matrix and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .
	Requirement Details. Opens the Requirement Details dialog box, enabling you to display the details of the selected requirement. For more details, see "Requirement Details Page" on page 280 .


UI Element (A - Z)	Description
	Go To Requirement in Requirements Tree. Goes to the Requirements Tree view and highlights the selected requirement.
	Send E-mail. Opens the Send E-mail dialog box, enabling you to send requirement email to recipients selected from a list or to the author of the requirement. For more details, see "Send E-mail Dialog Box" on page 79 .
 Generate Traceability Matrix	Opens the Generate Traceability Matrix dialog box, enabling you to save the Traceability Matrix view to a Microsoft Excel worksheet.
	Show/Hide. Shows/hides the lower pane of the Traceability Matrix view.
<grid fields>	For details on the requirement fields available from the grid, see "Requirements Module Fields" on page 274 .
Name	The requirement name.
Number of linked tests	The number of tests associated with a selected requirement.
Number of traced from requirements	The number of requirements that affect a selected requirement.
Number of traced to requirements	The number of requirements that are affected by a selected requirement.
Show Full Path	Displays the path of the requirements in the requirements tree.


Traced From Requirements Tab

This tab displays requirements that affect a selected requirement.

Important information	This tab is available when the following options are set in the Filter By Linked Requirements page of the Configure Traceability Matrix wizard: Include source requirements affected by or Include source requirements not affected by . For more details on the Filter By Linked Requirements page, see "Configure Traceability Matrix Wizard" on page 306 .
------------------------------	---

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element (A - Z)	Description
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the matrix and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .



UI Element (A - Z)	Description
	Requirement Details. Opens the Requirement Details dialog box, enabling you to display the details of the selected requirement. For more details, see " Requirement Details Page " on page 280.
<grid fields>	For details on the requirement fields available from the grid, see " Requirements Module Fields " on page 274.
Show Full Path	Displays the path of the requirements in the requirements tree.

Traced To Requirements Tab

This tab displays requirements that are affected by a selected requirement.

Important information	This tab is available when the following options are set in the Filter By Linked Requirements page of the Configure Traceability Matrix wizard: Include source requirements affecting or Include source requirements not affecting . For more details on the Filter By Linked Requirements page, see " Configure Traceability Matrix Wizard " on next page.
------------------------------	---

User interface elements are described below (unlabeled elements are shown in angle brackets):



UI Element (A - Z)	Description
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the matrix and their order. For more details, see " Select Columns/Select Fields Dialog Box " on page 86.
	Requirement Details. Opens the Requirement Details dialog box, enabling you to display the details of the selected requirement. For more details, see " Requirement Details Page " on page 280.
<grid fields>	For details on the requirement fields available from the grid, see " Requirements Module Fields " on page 274.
Show Full Path	Displays the path of the requirements in the requirements tree.

Linked Tests Tab

This tab displays tests that are linked to a selected requirement.

Important information	This tab is available when the following options are set in the Filter By Linked Tests page of the Configure Traceability Matrix wizard: Include source requirements linked to or Include source requirements not linked to . For more details on the Filter By Linked Tests page, see " Configure Traceability Matrix Wizard " below.
------------------------------	--

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A - Z)	Description
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the matrix and their order. For more details, see " Select Columns/Select Fields Dialog Box " on page 86.
	Test Details. Opens the Test Details dialog box, enabling you to display the details of the selected test. For more details, see " Test Details Dialog Box " on page 418.
<grid fields>	For details on the test fields available from the grid, see " Test Plan Module Fields " on page 416.
Show Full Path	Displays the path of the tests in the test plan tree.

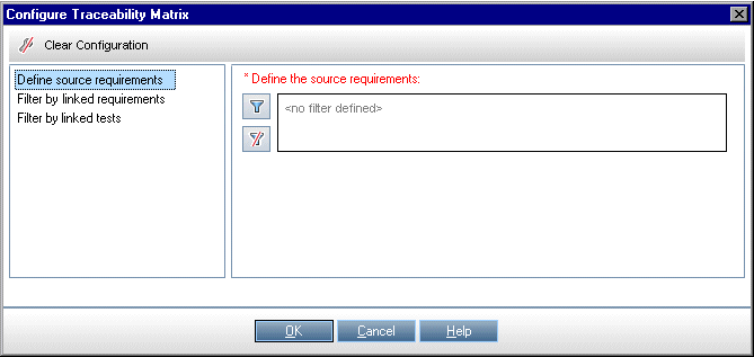
Configure Traceability Matrix Wizard

This wizard enables you configure the traceability matrix.

To access	In the Requirements module, select View > Traceability Matrix . Click the Configure Traceability Matrix button or the create a configuration link, if no configuration has been created.
Wizard map	The wizard contains: "Define Source Requirements Page" on next page > "Filter By Linked Requirements Page" on page 308 > "Filter By Linked Tests Page" on page 309
Relevant tasks	"How to Use the Traceability Matrix" on page 300
See also	"Traceability Matrix Overview" on page 300 "Traceability Matrix View" on page 303




Define Source Requirements Page

This wizard page enables you to define the source requirements.



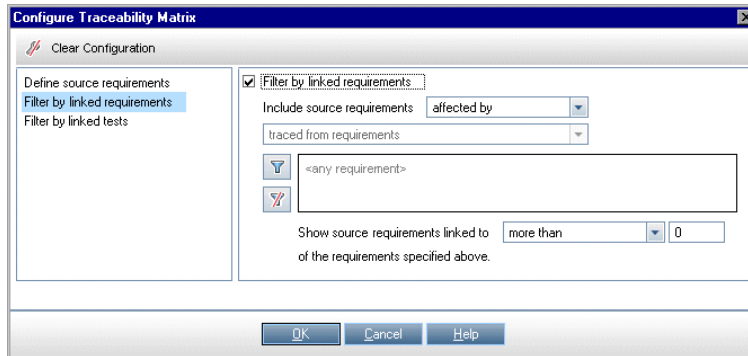
Important information	General information about this wizard is available here: "Configure Traceability Matrix Wizard" on previous page .
Wizard map	The "Configure Traceability Matrix Wizard" on previous page contains: "Define Source Requirements Page" above > "Filter By Linked Requirements Page" on next page > "Filter By Linked Tests Page" on page 309

User interface elements are described below:

UI Element	Description
 Clear Configuration	Clears the defined configuration.
	Set Filter/Sort. Filters and sorts the source requirements in the Requirements module. For more details on filtering, see "Filter Dialog Box" on page 61 . Note: Filter settings are not applied to child requirements.
	Clear Filter. Clears the defined filter.

Filter By Linked Requirements Page

This wizard page enables you to define the requirements linked to and from the source requirements.



Important information	General information about this wizard is available here: "Configure Traceability Matrix Wizard" on page 306 .
Wizard map	The "Configure Traceability Matrix Wizard" on page 306 contains: "Define Source Requirements Page" on previous page > "Filter By Linked Requirements Page" above > "Filter By Linked Tests Page" on next page

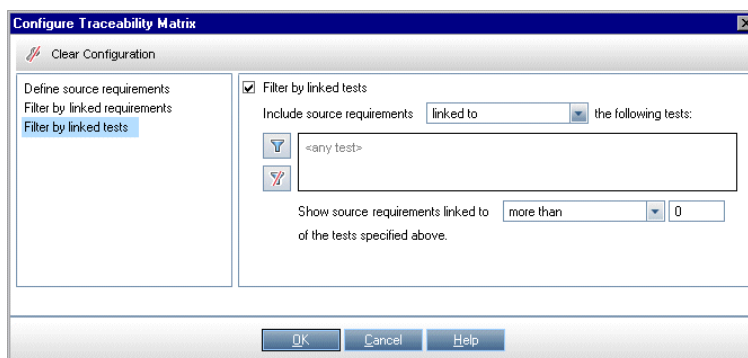
User interface elements are described below:

UI Element	Description
Clear Configuration	Clears the defined configuration.
	Set Filter/Sort. Filters and sorts the linked requirements. For more details on filtering, see "Filter Dialog Box" on page 61 .
	Clear Filter. Clears the defined filter.
Filter by linked requirements	Filters the source requirements by linked requirements.
Include source requirements affected by traced from requirements	Shows the source requirements that are impacted by the selected requirements.
Include source requirements not affected by traced from requirements	Shows the source requirements that are not impacted by the selected requirements.
Include source requirements affecting direct children and traced to requirements	Shows the source requirements that impact their child requirements and their traced to requirements.

UI Element	Description
Include source requirements affecting direct children	Shows the source requirements that impact their child requirements.
Include source requirements affecting traced to requirements	Shows the source requirements that impact their traced to requirements.
Include source requirements not affecting direct children and traced to requirements	Shows the source requirements that do not impact their child requirements and their traced to requirements.
Include source requirements not affecting direct children	Shows the source requirements that do not impact their child requirements.
Include source requirements not affecting traced to requirements	Shows the source requirements that do not impact their traced to requirements.
Show source requirements linked to more than <number> of the requirements specified above	Shows the source requirements that are linked to more than the specified number of requirements. Note: This option is available when one of the following options is selected: Include source requirements affected by or Include source requirements affecting .
Show source requirements linked to less than <number> of the requirements specified above	Shows the source requirements that are linked to less than the specified number of requirements. Note: This option is available when one of the following options is selected: Include source requirements affected by or Include source requirements affecting .

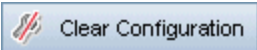


Filter By Linked Tests Page

This wizard page enables you to define the associated tests.



Important information	General information about this wizard is available here: "Configure Traceability Matrix Wizard" on page 306 .
Wizard map	The "Configure Traceability Matrix Wizard" on page 306 contains: "Define Source Requirements Page" on page 307 > "Filter By Linked Requirements Page" on page 308 > "Filter By Linked Tests Page" on previous page

User interface elements are described below:

UI Element	Description
	Clears the defined configuration.
	Set Filter/Sort. Filters and sorts the linked tests. For more details on filtering, see "Filter Dialog Box" on page 61 .
	Clear Filter. Clears the defined filter.
Filter by linked tests	Filters the source requirements by linked tests.
Include source requirements linked to the following tests	Shows the source requirements that are linked to the specified tests.
Include source requirements not linked to the following tests	Shows the source requirements that are not linked to the specified tests.
Show source requirements linked to less than <number> of the tests specified above	Shows the source requirements that are linked to less than the specified number of tests. Note: This option is available when the Include source requirements linked to the following tests is selected.
Show source requirements linked to more than <number> of the tests specified above	Shows the source requirements that are linked to more than the specified number of tests. Note: This option is available when the Include source requirements linked to the following tests is selected.

Chapter 17

Risk-Based Quality Management

This chapter includes:

- Risk-Based Quality Management Overview..... 312
- How to Assess Risk..... 312
- Risk-Based Quality Management User Interface..... 316

Risk-Based Quality Management Overview

When planning how to test your requirements, you generally do not have unlimited resources available, and are not able to fully test every requirement. You must make compromises and only partially test requirements that have low criticality to the business, or those that have only a minor risk associated with their implementation. The risk-based quality management feature enables you to calculate at which level to test each requirement, based on the nature of the requirement and the resources you have available. You can then plan your testing process based on these recommendations.

Each requirement type with risk-based quality management enabled can support either risk analysis that is referred to as an **analysis requirement**, or an individual risk assessment that is referred to as an **assessment requirement**.

- An **analysis requirement** is a requirement belonging to a type that represents higher levels in the requirements tree hierarchy, such as the **Folder** type. You perform risk analysis on an analysis requirement based on the assessment requirements under it in the requirements tree.

The risk results of multiple assessment requirements are aggregated to give an overall risk analysis which can then be used to determine testing effort and test strategy.

- An **assessment requirement** is a requirement belonging to a type that represents requirements that are children of analysis requirements and at a lower level in the requirements tree hierarchy. Assessment requirements under a particular analysis requirement form the basis for risk analysis on that analysis requirement.

For each assessment requirement under the analysis requirement, you can assign or calculate the **Risk** and **Functional Complexity**.

Risk is composed of its **Business Criticality** and **Failure Probability**. Business Criticality measures how crucial a requirement is for the business. Failure Probability indicates how likely a test based on the requirement is to fail.

Functional Complexity indicates the complexity of the requirement's implementation.

You can enable each requirement type for risk-based quality management. For more information, see the *HP Application Lifecycle Management Administrator Guide*.

You can customize default settings for risk-based quality management. For more information, see the *HP Application Lifecycle Management Administrator Guide*.

ALM Editions: Risk-based quality management is not available with ALM Essentials Edition.

For task details, see ["How to Assess Risk"](#) below.

How to Assess Risk

This task describes how to assess risk in ALM.

To learn more about assessing risk, see ["Risk-Based Quality Management Overview"](#) above.

Note:

- **Use-case:** For a use-case scenario related to this task, see ["How to Assess Risk - Use-Case Scenario" on next page](#).
- **Product Feature Movie:** To view a movie that demonstrates the risk-based quality management options, choose **Help > Product Feature Movies** in the ALM main window.

This task includes the following steps:

- ["Assess requirements" below](#)
- ["Define testing policy settings" below](#)
- ["Finalize the testing policy" below](#)
- ["Analyze the testing strategy" on next page](#)

1. Assess requirements

- a. **Display the Risk Assessment tab.** In the Requirements module, choose **View > Requirement Details**. In the requirements tree, under an analysis requirement, select an assessment requirement. Click the **Risk Assessment** tab. For user interface details, see ["Risk Assessment Tab" on page 317](#).

- b. **Determine Risk and Functional Complexity.** Click the **Assessment Questions** tab. The following sub-tabs are displayed: **Business Criticality**, **Failure Probability**, and **Functional Complexity**. In each sub-tab, assign values to the set of criteria. For user interface details on the Assessment Questions tab, see ["Risk Assessment Tab" on page 317](#).

Instead of assigning values to each set of criteria in the Assessment Questions tab, you can assign custom values directly to each category in the **Assessment Results** tab. For user interface details on the Assessment Results tab, see ["Risk Assessment Tab" on page 317](#).

- c. For each assessment requirement under the analysis requirement, assign or calculate the Risk and Functional Complexity.

2. Define testing policy settings

- a. In the requirements tree, select the analysis requirement. Click the **Risk Analysis** tab. For user interface details, see ["Risk Analysis Tab" on page 321](#).
- b. Under **Analysis Constants**, define the initial settings for testing the analysis requirement and the assessment requirements under it. These settings include how much time to assign to a requirement of a specific Functional Complexity were you to test it fully and how long it would take you to perform partial or basic testing on a requirement. You also decide which level of testing you want to perform on requirements for each Risk and Functional Complexity.

For user interface details on the Analysis Constants pane, see ["Risk Analysis Tab" on page 321](#).

3. Finalize the testing policy

- a. **Calculate the Testing Policy.** In the Risk Analysis tab, click the **Analyze** button to

calculate the Testing Level and Testing Time for each assessment requirement under the analysis requirement. The **Total required test time**, **Total allocated testing time**, and **Total required development time** are updated.

For user interface details on the Risk Analysis tab, see ["Risk Analysis Tab" on page 321](#).

- b. **Adjust the Testing Policy.** Under **Analysis Constants**, you can make adjustments to the testing policy to ensure that you have enough time to perform all the testing, and that no resources are wasted.

For user interface details on the Analysis Constants pane, see ["Risk Analysis Tab" on page 321](#).

- c. **Apply results for each assessment requirement.** Click the **Analysis and Apply to Children** button. The analysis is applied to all assessment requirements under the analysis requirement that match the current filter.

4. Analyze the testing strategy

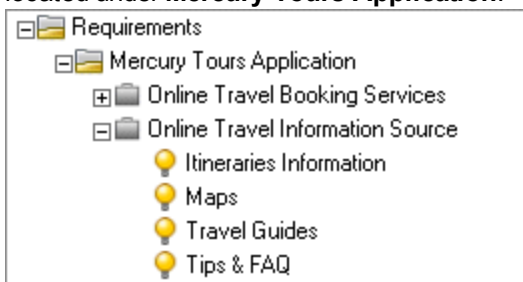
- To generate a report detailing the testing strategy of the analysis requirement, in the Risk Analysis tab, click the **Report** button. The Generate Report dialog box opens. For user interface details, see ["Generate Report Dialog Box" on page 325](#).
- To analyze the testing strategy for an assessment requirement, select an assessment requirement from the requirements tree and click the **Risk Assessment** tab. The results are displayed in the Assessment Results sub-tab. For user interface details, see ["Risk Assessment Tab" on page 317](#).

How to Assess Risk - Use-Case Scenario

This use-case scenario provides an example of assessing risk in ALM.

Note: For a task related to this scenario, see ["How to Assess Risk" on page 312](#).

The following scenario uses a project based on an application for reserving flights and vacations. You want to plan the testing of the analysis requirement **Online Travel Information Source**, located under **Mercury Tours Application**.



You begin by assigning values to the Business Criticality criteria for the child assessment requirement **Itineraries Information**. As information on travel itineraries is for display purposes and does not involve calculation or validation, you assign the value `Display` to the criterion **Type of Process**. As incorrect information on travel itineraries could result in legal action, you assign the value `Legal` to the criterion **Impact of failure**.

You also assign the value **Very often** to the criterion **Frequency of use**, and the value **Many/High** to the criterion **Number/Significance of affected users**. ALM now calculates the Business Criticality of the requirement as **A - Critical**.

Assessment Status: **InProgress** ☐ Exclude from Analysis

Assessment Results | Assessment Questions

Business Criticality | Failure Probability | Functional Complexity

Assign values to the following criteria to assess the Business Criticality of this requirement:

Criteria	Value
Type of process	Display
Impact of failure	Legal
Frequency of use	Very often
Number/Significance of affected users	Many/High

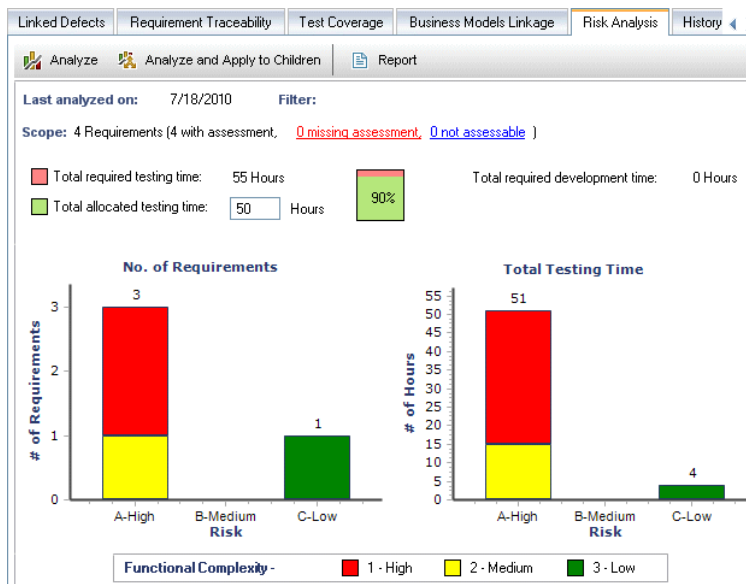
Description of Criterion: "Type of process"
The type of process represented by the requirement.
This criterion has the following possible values:
Calculation/Validation - The feature represented by the requirement is an important calculation or validation.
Data Change - The feature represented by the requirement modifies application data.
Display - The feature represented by the requirement modifies the application display.

Calculated Business Criticality: **A-Critical**

Similarly, you determine the Failure Probability by assigning values to its criteria. ALM calculates the Failure Probability as **2 - Medium**. Next, you determine the Functional Complexity by assigning values to its criteria. ALM calculates the Functional Complexity as **1 - High**. The overall Risk Category is **A - High** and the overall Functional Complexity is **1 - High**.

You then proceed to determine the Risk and Functional Complexity for each of the assessment requirements **Maps**, **Travel Guides**, and **Tips & FAQ**.

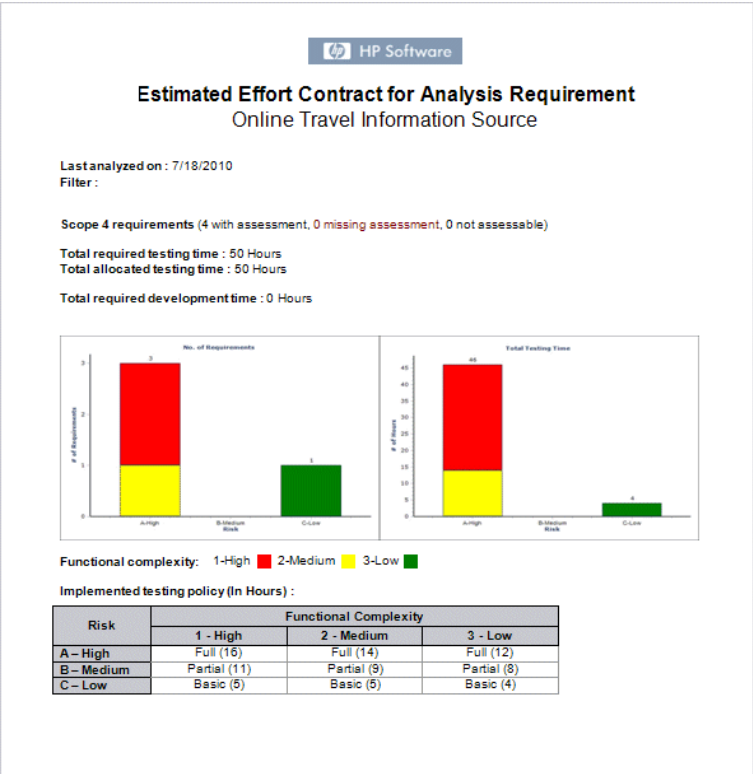
You are now ready to perform a risk analysis on the requirement **Online Travel Information Source**. You decide to use ALM's default testing policy and perform a risk analysis based on this policy. ALM calculates that you need 55 hours to test the requirement. However, you only have 50 hours available, which is 90% of the required resources, so you need to modify the testing policy.



You change the Testing Time for requirements with Functional Complexity set to **1-High** from 18 hours to 16 hours and requirements with Functional Complexity set to **2-Medium** from 15 hours to

14 hours. The time needed to test the requirement is now estimated at 50 hours, which is the amount of time you have available, so you decide to accept this modified testing policy.

You now have sufficient resources to test the requirement, so you create a risk analysis report to summarize the testing strategy recommended by ALM, and give it to your organization to use as a basis for their test plan.



Risk-Based Quality Management User Interface

This section includes:

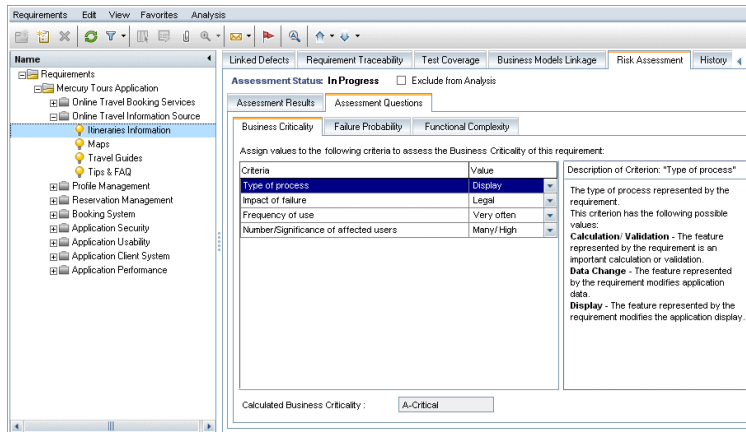
Risk Assessment Tab..... 317

Risk Analysis Tab..... 321

Generate Report Dialog Box..... 325

Risk Assessment Tab

This tab enables you to determine the Business Criticality, Failure Probability, and Functional Complexity of a requirement by assigning them values directly or by assigning values to a set of criteria.



To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> In the Requirements module, select the Requirement Details view. Select an assessment requirement and click the Risk Assessment tab. In the Requirements module, right-click an assessment requirement and select Requirement Details. The Requirement Details dialog box opens. Click the Risk Assessment button.
Important information	<ul style="list-style-type: none"> If you do not determine the Business Criticality, Failure Probability, and Functional Complexity for a requirement, ALM does not include the requirement in the risk analysis. You can customize the criteria, their possible values, and how these values determine the Business Criticality, Failure Probability, and Functional Complexity. You can also customize how the Business Criticality and Failure Probability are used to calculate the Risk. For more information, see the <i>HP Application Lifecycle Management Administrator Guide</i>. ALM Editions: Risk-based quality management is not available with ALM Essentials Edition.
Relevant tasks	"How to Assess Risk" on page 312
See also	<p>"Risk Analysis Tab" on page 321</p> <p>"Risk-Based Quality Management Overview" on page 312</p>

Risk Assessment Tab Common Elements

Common user interface elements are described below:

UI Element	Description
Assessment Status	The current status of the assessment requirement. An assessment status can be one of the following: Not Started , In Progress , and Completed .
Exclude from Analysis	Ignores the selected assessment requirement when performing risk analysis.

Assessment Results Tab - Assessments Summary Area

This area displays the assigned or calculated values of the Risk and Functional Complexity of an assessment requirement.

Important information	The Assessments Summary area shows the Risk and Functional Complexity values calculated in the Assessment Questions tab. You can ignore these values and use instead custom values.
Relevant tasks	"How to Assess Risk" on page 312
See also	"Risk Assessment Tab" on previous page

User interface elements are described below:

UI Element	Description
Risk	<p>Calculates the risk based on the Business Criticality and Failure Probability for the requirement.</p> <p>Select Use custom to ignore the calculated value and use instead a custom value. Possible values are A - High, B - Medium, and C - Low.</p>
Business Criticality	<p>Measures how important the requirement is to your business.</p> <p>Select Use custom to ignore the calculated value and use instead a custom value. Possible values are A - Critical, B - Important, and C - Nice to Have.</p> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p>Example: A requirement affecting a minor feature that is likely to be used rarely might be assigned a <i>Nice to Have</i> Business Criticality, whereas a requirement that is essential to your application's functionality would probably be assigned a <i>Critical</i> Business Criticality.</p> </div>

UI Element	Description
Failure Probability	<p>Measures how likely a test on the requirement is to fail.</p> <p>Select Use custom to ignore the calculated value and use instead a custom value. Possible values are 1 - High, 2 - Medium, and 3 - Low.</p> <p>Example: A requirement whose implementation involves making significant changes across most areas of your application would probably be assigned a High Failure Probability. In contrast, a requirement that involves changing an icon in your application would probably not have many associated risks, and so is likely to be assigned a Low Failure Probability.</p>
Functional Complexity	<p>Indicates the complexity of the requirement's implementation.</p> <p>Select Use custom to ignore the calculated value and use instead a custom value. Possible values are 1 - High, 2 - Medium, and 3 - Low.</p> <p>Example: A requirement whose implementation involves making significant changes to your application to enable it to communicate with other systems probably has a high complexity and would be assigned a High Functional Complexity. In contrast, a requirement that involves no significant changes to enable your application to communicate with other systems would probably not have many associated risks, and so is likely to be assigned a Low Functional Complexity.</p>

Assessment Results Tab - Testing Policy Area

This area displays the conclusions of the last analysis you performed on an analysis requirement that is the parent of the assessment requirement.

Important information	To view and edit the testing policy of an assessment requirement in the Testing Policy area, you must first perform analysis on relevant analysis requirements (parent requirements) and apply results to all assessment requirements (children requirements) in the Risk Analysis tab.
Relevant tasks	"How to Assess Risk" on page 312
See also	"Risk Analysis Tab" on page 321

User interface elements are described below:

UI Element (A - Z)	Description
Based on analysis requirement	Displays the analysis requirement on which the last analysis that included the current requirement was performed. You can click the analysis requirement's name to go to the analysis requirement in the requirements tree.

UI Element (A - Z)	Description
Calculated Testing Level	The level at which to test the requirement, as calculated in the last analysis that included the current requirement.
Calculated Testing Time	The time allocated to test the requirement, as calculated in the last analysis that included the current requirement.
Estimated development time (optional)	The estimated time needed to develop the requirement. ALM can then calculate the total estimated development time for an analysis requirement and its children as the sum of the estimated development times of the children. Assigning the estimated development time is optional, and does not affect the risk analysis.
Last analyzed on date	The date on which the last analysis that included the current requirement was performed.
Use these for the next calculation	Overrides the calculated values in the next calculation, and instead uses custom values. In the Testing Level box, select the Testing Level to use for the next calculation. In the Testing Time box, type the Testing Effort to use for the next calculation. When you next perform an analysis that includes the current requirement, these values are used instead of the calculated values.

Assessment Questions Tab

This tab displays lists of criteria used to determine Business Criticality, Failure Probability, and Functional Complexity.

Relevant tasks	"How to Assess Risk" on page 312
See also	"Risk Analysis Tab" on next page

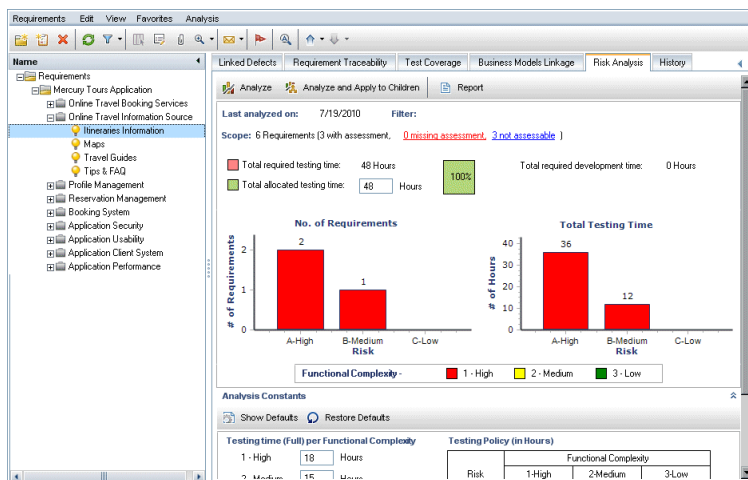
User interface elements are described below:

UI Element	Description
Business Criticality/Failure Probability/Functional Complexity tab	Each tab lists criteria to consider when assessing each category.
Criteria	Lists the criteria to use for assessing a selected category.
Value	Lists the possible values that can be assigned to each criterion.
Description of Criterion	Explains the selected criterion.

UI Element	Description
Calculated Business Criticality/ Calculated Failure Probability/Calculated Functional Complexity	<p>Updates according to the values you assigned to the criteria of the selected category.</p> <p>Note: You can ignore the value calculated on the basis of the values for the criteria, and use instead a custom value when performing risk analysis. In the Assessment Summary area of the Assessment Results tab, select Use custom.</p>

Risk Analysis Tab

This tab enables you to define the testing policy settings and to determine the total estimated testing time for the analysis requirement and the assessment requirements under it.



To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> In the Requirements module, select the Requirement Details view. Select an analysis requirement and click the Risk Analysis tab. In the Requirements module, right-click an analysis requirement and select Requirement Details. The Requirement Details dialog box opens. Click the Risk Analysis button.
------------------	--




Important information	<ul style="list-style-type: none">• Make sure that you have determined the Risk and Functional Complexity categories of all assessment requirements that are located under the analysis requirement for which you want to finalize the testing policy, and that you want to include in the risk analysis. For more details, see "Risk Assessment Tab" on page 317.• You can filter the requirements tree to include only the assessment requirements you want to include in the risk analysis. For more details on filtering, see "Filter Dialog Box" on page 61.• You can customize each requirement type for risk-based quality management. For more information, see the <i>HP Application Lifecycle Management Administrator Guide</i>.• You can customize the testing policy used by default. For more details, see the <i>HP Application Lifecycle Management Administrator Guide</i>.• ALM Editions: Risk-based quality management is not available with ALM Essentials Edition.
Relevant tasks	"How to Assess Risk" on page 312
See also	"Risk Assessment Tab" on page 317 "Risk-Based Quality Management Overview" on page 312

Risk Analysis - main area

This tab enables you to calculate the total estimated testing time for the analysis requirement and the assessment requirements under it. The calculation is based on the testing policy defined in the Analysis Constants pane.

Important information	<ul style="list-style-type: none">• If you do not want to use the default Testing Effort and Testing Level values when calculating the testing policy in this main area, make sure that you have defined custom values in the Analysis Constants pane.• After calculating the testing policy in this main area, compare the total calculated testing time with the resources you have available. If the resources you have available are not sufficient to test the requirement according to the current settings, you can change the settings in the Analysis Constants pane, and perform the calculation again.
------------------------------	--




User interface elements are described below:

UI Element	Description
 Analyze	<p>Calculates the Testing Level and Testing Time for each assessment requirement under the analysis requirement that matches the current filter.</p> <p>This calculation is based on the assessment requirements' Risk Category, Testing Level, and Testing Time values you defined for the analysis requirement.</p>
 Analyze and Apply to Children	Propagates the analysis results to all assessment requirements under the analysis requirement that match the current filter.
 Report	Opens the Generate Report dialog box. For more details, see "Generate Report Dialog Box" on page 325 .
Last analyzed on	The date on which the risk analysis was last performed.
Filter	Determines which requirements were included in the risk analysis. For more details on filtering, see "Filter Dialog Box" on page 61 .
Scope	<p>The number of requirements included in the risk analysis. Also provides a breakdown of which requirements were assessed, which were missing assessment, and which were not assessable.</p> <p>To display a list of requirements not included in the analysis, click the missing assessment or not assessable links. The Drill Down Results dialog box opens and displays a grid with a list of requirements in the category. For more details, see "Drill Down Results Dialog Box" on page 822.</p> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p>Tip: The missing assessment link displays the requirements for which you did not determine a category or which you excluded explicitly from the analysis. Verify that there are no requirements that should be assigned a category. If you do not want to include a requirement in the analysis, then exclude it from the analysis explicitly.</p> </div>
Total required testing time	Displays the total calculated time required to test all the assessment requirements under the analysis requirement matching the current filter and included in the risk analysis.
Total allocated testing time	The total time allocated to test the requirements included in the risk analysis.

UI Element	Description
Total required development time	Displays the total time required to develop all the assessment requirements under the analysis requirement, based on the required development time you optionally estimated for each assessment requirement.
No. of Requirements	<p>Displays the number of sub-requirements of the analysis requirement of each Risk Category.</p> <p>To display a list of requirements included in the analysis, click a segment in the graph. The Drill Down Results dialog box opens and displays a grid with a list of requirements in the category. For more details, see "Drill Down Results Dialog Box" on page 822.</p>
Total Testing Time	<p>Displays the total calculated testing time required to test all the requirements of each Risk Category.</p> <p>To display a list of requirements included in the analysis, click a segment in the graph. The Drill Down Results dialog box opens and displays a grid with a list of requirements in the category. For more details, see "Drill Down Results Dialog Box" on page 822.</p>
Functional Complexity	A legend of the Functional Complexity values displayed in the graphs.

Analysis Constants Pane

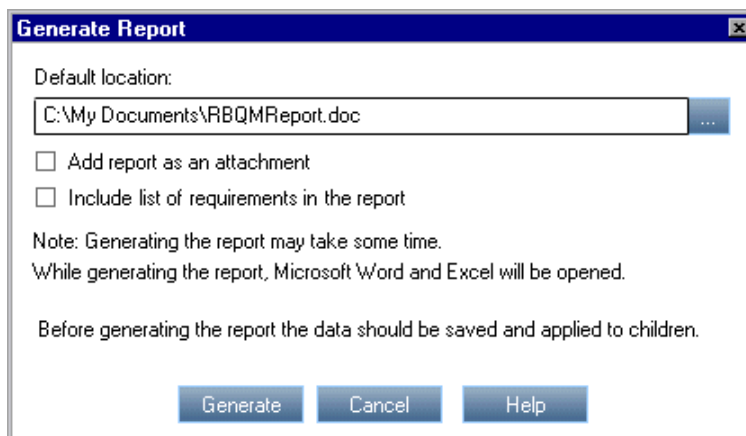
User interface elements are described below:

UI Element	Description
	Show/Hide. Shows/hides the Analysis Constants pane.
 Show Defaults	Opens the Risk-Based Quality Management Constants Defaults dialog box, enabling you to view the default constants in use.
 Restore Defaults	Assigns default values to the constants used for the current requirement.
Testing Time (full) per Functional Complexity	<p>The time needed to fully test a requirement with that Functional Complexity. For each Functional Complexity value, type the estimated testing time.</p> <p>Example: A requirement with a high Functional Complexity generally requires more testing time as it is more likely that the requirement's implementation contains defects.</p>

UI Element	Description
Testing Level (Full = 100%, None = 0%)	<p>Defines how much Testing Time is required for a requirement as a percentage of full testing.</p> <p>In the Partial and Basic boxes, type the default Testing Time required for partial testing and basic testing of a requirement. Express this as a percentage of the effort required for full testing.</p> <p>A requirement whose Testing Level is set to None is not tested at all, and the testing effort is zero.</p> <p>Example: If 20 hours are required to perform full testing on a requirement and partial testing is defined as 75% of full testing, ALM calculates that 15 hours are required to perform partial testing on the requirement.</p>
Testing Policy (in Hours) grid	<p>Defines the level at which to test a requirement of each Risk and Functional Complexity category.</p> <p>To define these levels, click the arrow next to the cell in the grid. Select a Testing Level from the available Testing Levels. The available Testing Levels are Full, Partial, Basic, and None. Next to each Testing Level, you can see the estimated time needed to test a requirement at that level, based on the Testing Efforts and Testing Levels you defined.</p>

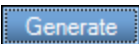
Generate Report Dialog Box

This dialog box enables you to generate a report for analyzing the testing strategy for the analysis requirement and for the assessment requirements under it.



To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • In the Requirements module, select the Requirement Details view. Select an analysis requirement and click the Risk Analysis tab. Click the Report button. • In the Requirements module, right-click an analysis requirement and select Requirement Details. The Requirement Details dialog box opens. Click the Risk Analysis button. Click the Report button.
Important information	<ul style="list-style-type: none"> • To generate a report, you must first save the analysis and apply it to all assessment requirements under the analysis requirement. For more details, see "Risk Analysis Tab" on page 321. • To generate a report, Microsoft Word must be installed on your machine. • The analysis results are only valid for the requirements at the time the analysis was last performed. If you subsequently modify the Risk or Functional Complexity Categories of the requirements, or the testing policy, you should re-perform the analysis. • ALM Editions: Risk-based quality management is not available with ALM Essentials Edition.
Relevant tasks	"How to Assess Risk" on page 312
See also	"Risk Analysis Tab" on page 321 "Risk-Based Quality Management Overview" on page 312

User interface elements are described below:

UI Element	Description
Default location	The location and name of the Microsoft Word file to which you want the data to be exported. You can click the browse button to select a location from the Save As dialog box.
Add report as an attachment	Adds the report as an attachment to the analysis requirement.
Include list of requirements in the report	Includes a list of the requirements in the report.
	Generates the report as a Microsoft Word document.

Chapter 18

Business Process Models

This chapter includes:

Business Process Models Overview.....	328
How to Work with Business Process Models.....	329
Business Models Module User Interface.....	333

Business Process Models Overview

ALM Editions: The ALM Business Models module is available for ALM Edition and Quality Center Enterprise Edition.

The HP Application Lifecycle Management (ALM) Business Models module addresses the need for a stronger connection between business process modeling, quality assurance management, and requirement definitions. The module integrates business process models into the application lifecycle.

This integration fosters collaboration between the various roles involved in the business process modeling and testing lifecycles, thereby facilitating communication between business users and people in more technical departments. This collaboration facilitates better business outcomes by identifying high level activities, thus guiding the QA manager in determining the high level test requirements.

Integrating business process models into ALM involves importing business process models into ALM, and linking requirements and tests to models, activities, and end-to-end business flows. After executing tests, you can display quality status views on the business process model level.

To work with business process models in ALM, you must first design models with standard modeling tools, and import the models to ALM. For more details, see ["Business Process Models File Import" below](#).

In addition to the standard business process model entities, ALM enables you to perform quality testing on end-to-end business flows ("**paths**"). For more details, see ["Business Process Model Paths" on next page](#).

For details on working with business process models, see ["How to Work with Business Process Models" on next page](#).

Business Process Models File Import

To work with business process models in ALM, you must first create models in standard BPMN or EPC modeling tools, and export them to files.

ALM supports the following model and file formats:

- **BPMN 1.1** models exported to **XPDL 2.0/2.1** files
- **EPC 7.1** models exported to **AML** files (.xml extension)

During the import process, you can map model and activity attributes to ALM memo or string fields. This enables you to edit attribute values in ALM.

For each model that you import to ALM, business process model entities are created under the selected folder: an entity for the model as a whole, and an entity for each of the model's activities.

Note: If you use Metastorm ProVision, you should export models using the **Independent Sub-Process** option.

In addition, **representative requirements** are created automatically for the model and for each of its activities in the Requirements module.

- Representative requirements for models are created under the **Business Models** requirement folder.
- Representative requirements for activities are created under the **Activities** sub-folder. If the same activity is included in several models, the same requirement is used to represent the activity.

Representative requirements are assigned the **Business Model** requirement type.

Re-importing models

If changes are made to a model in the model authoring tool, you can apply the changes to the model in ALM by re-importing the model. ALM automatically updates the model entities, as follows:

- Activities added or deleted in the re-imported model are added or deleted in the model in ALM.

Note: Activities are identified by the GUID assigned to them by the authoring tool. A re-imported activity with a different GUID than the original activity is re-imported as a separate activity.

- Paths are automatically updated in ALM, provided that alternative paths are found. If alternative paths cannot be found, you must assign a new path to the path entity, or delete the path entity.

Business Process Model Paths

The quality of a business process model is determined not only by its activities, but also by the business flows within the model, or paths. A **path** is an end-to-end sequence of transitions between activities in a model.

A business process model that you create with standard modeling tools does not include path definitions. As paths are important for verifying the quality of a business process, ALM enables you to define paths in your imported models.

ALM automatically analyzes all possible end-to-end paths in a model, and allows you to select those paths that are important to test.

Note: Recursive paths that repeat the same activity are not supported.

For each path you create, a representative requirement is created automatically under the **Paths** group requirement, a child of the model representative requirement.

How to Work with Business Process Models

This task describes how to specify business process models in ALM.

To learn more about business process modeling in ALM, see ["Business Process Models Overview" on previous page](#).

Product Feature Movie: To view a movie that demonstrates how to integrate business process models into the application lifecycle, choose **Help > Product Feature Movies** in the ALM main window.

This task includes the following steps:

- ["Prerequisites" below](#)
- ["Import or re-import business process models" below](#)
- ["Create paths" on next page](#)
- ["Develop requirements and tests" on next page](#)
- ["Link requirements and tests to model entities" on next page](#)
- ["Analyze the quality of business process models" on next page](#)
- ["Generate a report of business process models" on page 332](#)

1. Prerequisites

- With standard modeling tools, create business process models, and export the business process models to files.

ALM supports the following model and file formats:

- **BPMN 1.1** models exported to **XPDL 2.0/2.1** files
- **EPC 7.1** models exported to **AML** files (.xml extension)
- To enable mapping of model and activity attributes to ALM entities, add string or memo fields to the following entities:
 - **Business Process Models**
 - **Business Process Model Elements**

For more details on adding user-defined fields, refer to the *HP Application Lifecycle Management Administrator Guide*.

2. Import or re-import business process models

For concept details, see ["Business Process Models File Import" on page 328](#).

- Open the Business Models module.** On the ALM sidebar, under **Requirements**, select **Business Models**. In the **View** menu, select **Model Tree**.
- Create a folder.** Right-click the **Models** root folder and select **New Folder**. To create a sub-folder, right-click a folder and select **New Folder**.
- Open the Import Models dialog box.** Right-click a folder and select **Import Model**. For user interface details, see ["Import Models Dialog Box" on page 349](#).
- Select a file and models.** In the Import Models dialog box, select a file to import. After the file is analyzed, select the models you want to import from the file.

- e. **Map model and activity attributes to ALM fields.** In the Import Models dialog box, click **Import Attributes**. For user interface details, see ["Map Imported Attributes to User Fields Dialog Box" on page 351](#).
- f. **Track import status.** Track the import status in the Import Models dialog box. When import is complete, click **OK** to close the Importing Models dialog box.

3. Create paths

For concept details, see ["Business Process Model Paths" on page 329](#).

- a. In the Business Models module, select **View > Model Tree**.
- b. **Open the New Path dialog box.** Right-click a business process model and select **New Path**. For user interface details, see ["New Model Path/Model Path Details Dialog Box" on page 354](#).
- c. **Select a path.** In the Path drop-down list, select a path that is important to test. The activities along the path are highlighted in the model diagram, and a description of the path is displayed in the Path Description tab.

4. Develop requirements and tests

To determine the quality of business process models in ALM, you must develop requirements and tests that cover all the critical aspects of the model.

To assist you in this, ALM automatically creates a structure of business model requirements that represent the models and activities that you import, and the paths that you create.

- a. Use one of the following:
 - o Use the representative requirements as a basis for developing a detailed requirements tree and adding test coverage.
 - o If you have existing requirements, not related to the representative requirements, you can continue developing them. Later, link them manually to the relevant model entities.
- b. Depending on your testing strategy, create test coverage for the requirements.

For task details, see ["How to Use Requirements in ALM" on page 254](#).

5. Link requirements and tests to model entities

For requirements and tests to be included in the quality analysis, you must link them to their respective model entities. For task details, see ["Link Requirements and Tests to Model Entities" on next page](#).

6. Analyze the quality of business process models

After you run tests on your model entities, generate graphs that analyze the quality of a model entity.

- a. **Open the Model Analysis view.** In the Business Models module, select **View > Model Analysis**. For user interface details, see ["Model Analysis View" on page 338](#).
- b. **Select a model entity for the root of the analysis.** Use one of the following:

- In the Models Map tab, select a model. The corresponding model node is highlighted in the business models tree.
 - In the business models tree, select a model entity.
- c. Click the **Quality Analysis** tab.
- d. In the **Depth** drop-down list, select the number of levels to include in the analysis.
- e. Depending on your requirements strategy, choose whether to include representative or child requirements in the analysis.
- f. Click on graph bars to drill down to records represented by the bars. For task details, see ["How to Generate a Graph" on page 790](#).

7. Generate a report of business process models

Include business process model entities in project reports. For task details, see ["How to Create Project Reports" on page 836](#).

Link Requirements and Tests to Model Entities

The following steps describe how to link requirements and tests to their respective model entities.

Note: This task is part of a higher-level task. For details, see ["How to Work with Business Process Models" on page 329](#).

This task includes the following steps:

- ["Prerequisites" below](#)
- ["Link requirements and tests directly to model entities" below](#)
- ["Link model entities to tests" on next page](#)
- ["Link model entities to requirements" on next page](#)

Prerequisites

When creating model linkage, consider the following:

- If you developed your requirements under the representative requirements, the requirements and their covering tests are automatically linked to their respective model entities.
- If your requirements are not related to the representative requirements, you must link the requirements manually to their respective model entities.
- Tests that cover linked requirements are automatically linked to the same model entities. You can also manually link other tests directly to model entities.
- You cannot manually link representative requirements to model entities.


Link requirements and tests directly to model entities

1. In the Business Models module, select **View > Model Tree**.
2. Select a model entity, and click the **Linkage** tab. For user interface details, see ["Linkage Tab"](#)


on page 356.

3. Click either the **Requirements** or **Tests** tab.
4. Click **Select Requirements** or **Select Tests**, respectively.
5. In the **Requirements Tree/Test Plan Tree** pane, right-click requirements or tests and select **Add to Linkage**. For user interface details, see "[Requirements Tree and Test Plan Tree Pane](#)" on page 359.
6. Alternatively, create linkage to any model entity by dragging requirements and tests to entities in the model diagram.

Link model entities to tests

1. In **Test Plan > Test Plan Tree** view, select a test and click the **Business Models Linkage** tab.
2. Click **Add to Linkage**  to display the business models tree in the right pane.
3. Link model entities to tests. For user interface details, see "[Business Models Linkage Tab](#)" on page 439.

Link model entities to requirements

1. In **Requirements > Requirement Details** view, select a requirement and click the **Business Models Linkage** tab.
2. Click **Add to Linkage**  to display the business models tree in the right pane.
3. Link model entities to requirements. For user interface details, see "[Business Models Linkage Tab](#)" on page 439.

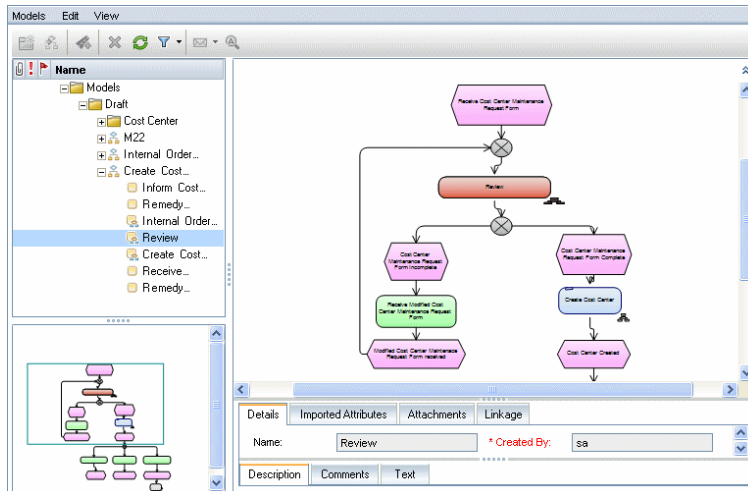
Business Models Module User Interface

This section includes:

Business Models Module Window.....	334
Model Analysis View.....	338
Business Models Module Menus and Buttons.....	342
Business Models Module Icons.....	346
Business Models Module Fields.....	347
Import Models Dialog Box.....	349
Map Imported Attributes to User Fields Dialog Box.....	351
Model Details/Model Activity Details Dialog Box.....	352
New Model Path/Model Path Details Dialog Box.....	354
Linkage Tab.....	356
Requirements Tree and Test Plan Tree Pane.....	359
Represented Items Tab.....	360


Business Models Module Window

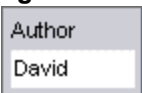
This window enables you to define and maintain business process models in ALM.



To access	On the ALM sidebar, under Requirements , select Business Models .
Important information	<p>The Business Models module includes the following views:</p> <ul style="list-style-type: none"> • Model Tree. Displays business process models and their elements in a hierarchical tree. • Model Grid. Displays a flat list of models, activities or paths. • Model Analysis. Displays an analysis of a model's testing coverage and quality. For user interface details, see "Model Analysis View" on page 338.
Relevant tasks	" How to Work with Business Process Models " on page 329
Learn more	<p>"Business Process Models Overview" on page 328</p> <p>"Business Models Module Fields" on page 347</p>

User interface elements are described below (unlabeled elements are shown in angle brackets):

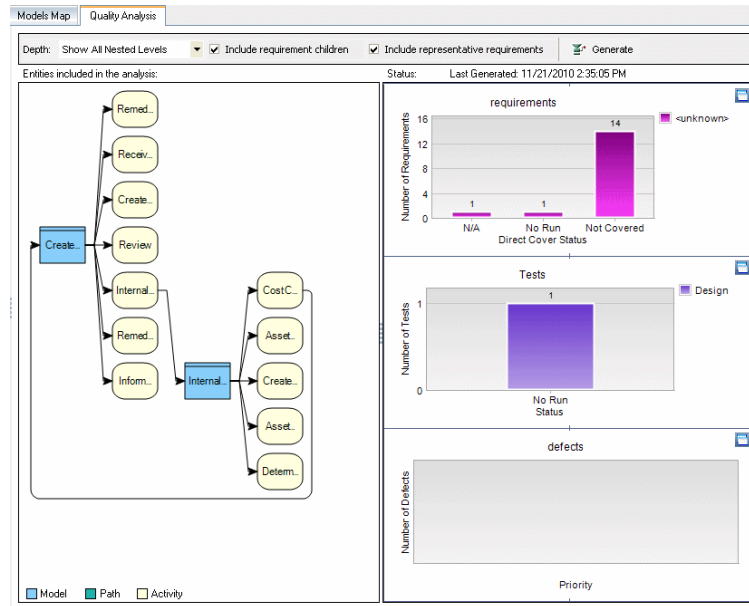
UI Element (A - Z)	Description
<Business Models module common UI elements>	<ul style="list-style-type: none"> • Business Model fields. For field definitions, see "Business Models Module Fields" on page 347. • Business Model menus and buttons. For command and button descriptions, see "Business Models Module Menus and Buttons" on page 342. • Business Model icons. For icon descriptions, see "Business Models Module Icons" on page 346. • ALM main menu and sidebar. For details on the Tools menu, Help menu and sidebar, see "ALM Common Areas" on page 45.
	<p>Hides or shows the model diagram and diagram overview.</p> <p>Available from: Model Tree view</p>
<business models tree>	<p>A hierarchical representation of business process models, activities, and paths. Activities and paths are displayed as children of their respective models.</p> <p>Note: The position of business process models in the tree does not necessarily reflect connections between models. Connections between models are displayed in the Model Analysis view. For user interface details, see "Model Analysis View" on page 338.</p>
<business process model diagram pane>	<p>Located in the upper-right side of the window, a diagram of the currently selected business process model. An activity or a path that you select in the business models tree is highlighted in the diagram.</p> <p>Tip:</p> <ul style="list-style-type: none"> • Hold down the CTRL key and use the mouse wheel to zoom in and out. • Select an activity in the diagram to view its details in the main window. • Double-click an activity to view its details in a separate window.

UI Element (A - Z)	Description
<business process model overview>	<p>Located in the lower-left side of the window, a reduced diagram of the currently selected business process model. The framed area of the model in the overview is magnified in the diagram pane.</p> <p>Tip:</p> <ul style="list-style-type: none"> Select an area in the overview to focus on the selected area in the diagram pane. Drag or resize the frame to change the focus of the model in the diagram pane.
<filter status bar>	Describes the filter currently applied to the grid or tree. Located directly above the grid filter boxes or tree.
<grid filters> 	<p>Displays a grid filter box under each column name, enabling you to define a filter condition for a column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For user interface details, see "Select Filter Condition Dialog Box" on page 70.</p> <p>Available from: Model Grid view</p>
Activities	<p>Displays a list of activities across multiple business process models.</p> <p>Tip: To group activities by business process model, select Group By Owner Model.</p> <p>Available from: Model Grid view</p>
Attachments	Lists attachments that provide additional information about the currently selected business process model, activity or path. For more details, see "Attachments Page" on page 83 .
Comments	<p>Comments about the currently selected model entity.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Description	<p>Describes the currently selected model entity.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Details	Details the currently selected model entity.

UI Element (A - Z)	Description
Group By Owner Model	<p>If selected in combination with Activities or Paths, groups the activities or paths according to the model in which they are defined.</p> <p>If this option is not selected, the activities or paths are displayed in a flat list.</p> <p>Available from: Model Grid view</p>
History	<p>Lists changes made to the currently selected business process model. For more details, see "History Tab" on page 78.</p>
Imported Attributes	<p>Lists field labels and values relevant to the business process model or activity, as defined in the model authoring tool.</p> <p>Note: This tab is read-only.</p>
Linkage	<p>Contains the Requirements and Tests tabs that list entities linked to the business process model, activity, or path. For more details, see "Linkage Tab" on page 356.</p>
Models	<p>Displays a list of business process models.</p> <p>Available from: Model Grid view</p>
Paths	<p>Displays a list of paths across multiple business process models.</p> <p>Tip: To group activities by business process model, select Group By Owner Model.</p> <p>Available from: Model Grid view</p>
Text	<p>Text displayed in an activity entity. The field is read-only.</p> <p>Available from: Model activities</p>

Model Analysis View




This view enables you to analyze the quality of business process models, activities, and paths.



To access	<ol style="list-style-type: none"> 1. In the Business Models module, select View > Model Analysis. 2. Use one of the following: <ul style="list-style-type: none"> ■ In the Models Map tab, select a model. The corresponding model entity is highlighted in the business models tree. ■ In the business models tree, select a model entity. 3. Click the Quality Analysis tab.
Important information	<p>The Model Analysis view includes the following tabs:</p> <ul style="list-style-type: none"> • Models Map. Displays relationships between business process models imported into ALM. • Quality Analysis. Analyzes the quality of a business process model entity.
Relevant tasks	"How to Work with Business Process Models" on page 329
Learn more	"Business Process Models Overview" on page 328

Models Map Tab


User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
	<p>A business process model.</p> <p>Tip: Double-click a model to view model details in a separate window. For user interface details, see "Model Details/Model Activity Details Dialog Box" on page 352.</p>
	Indicates that the model at the tip of the arrow is a sub-process of the model at the tail of the arrow.
	A bi-directional link, indicating that the model at one end of the line is a continuation of the model at the other end of the line.
<map area>	<p>Displays all the business process models imported to ALM, and the hierarchical connections between the models.</p> <p>Select a model in the map area that you want to analyze, and then click the Quality Analysis tab.</p> <p>Tip: Hold down the CTRL key and use the mouse wheel to zoom in and out of the map image.</p>

Quality Analysis Tab Toolbar

User interface elements are described below:




UI Element	Description
Depth	<p>Defines the number of hierarchical levels, from the root entity down, displayed in the entities pane. Entities displayed in the entities pane are analyzed in the analysis graphs.</p> <p>Standalone Entity. Displays the root entity alone.</p> <p>One Nested Level. Displays the root entity, and entities one level down from the current entity.</p> <p>All Nested Levels. Displays and analyzes the root entity, and all entities leading off from the root entity on all levels.</p>
Include requirement children	Instructs ALM to include in the analysis all child requirements of the requirements linked to the model entities in the entities pane.

UI Element	Description
Include representative requirements	Instructs ALM to include in the analysis the representative requirements linked to the model entities in the entities pane. Tip: Use this option if representative requirements are linked to tests.
 Generate	Refreshes the analysis graphs to include the most up-to-date information.

Quality Analysis Tab Entities Pane

This pane displays the business process model entities that are analyzed in the graphs pane.


User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<entities pane>	Displays business process models, activities, and paths that are analyzed in the graphs pane, and hierarchical connections between them. Note: <ul style="list-style-type: none"> The number of hierarchical levels displayed is determined by the value in the Depth field. An activity that is included in more than one model or path is displayed in the entities pane once. Tip: <ul style="list-style-type: none"> To change the root entity displayed in the entities pane, select a model in the Models Map tab, or select an entity in the business models tree. Hold down the CTRL key and use the mouse wheel to zoom in and out. Double-click an entity to display entity details.
	A business process model entity.
	A path entity.
	An activity entity.

Quality Analysis Tab Graphs Pane

This pane displays graphs that analyze the quality of the entities displayed in the entities pane.

User interface elements are described below (unlabeled elements are shown in angle brackets):




UI Element	Description
<graph title>	Click a graph title to change the graph's titles and appearance. For user interface details, see "Graph Appearance Dialog Box" on page 821 .
Requirements graph	Displays the coverage status of requirements linked to the model entities displayed in the entities pane. Note: The scope of requirements included in the graph is determined by the Include requirement children and Include representative requirements options.
Tests graph	Displays the execution status of tests linked to the model entities displayed in the entities pane. Note: The tests graph includes tests that are linked to the requirements included in the Requirements graph, and tests that are linked directly to the entities displayed in the entities pane.
<legend>	Displays the graph categories and their corresponding color. Tip: Right-click a category to change its color.
Defects graph	Displays the severity of defects linked to the model entities displayed in the entities pane. Note: The defects graph includes defects linked to the requirements in the Requirements graph, and to the tests in the Tests graph.
Last Generated	The date and time that the graph data was last refreshed. Click Generate to refresh the data.
	View Graph in Full Screen. Opens the graph in a new window and maximizes its display. In the new window you can customize the graph view and save the graph data. For user interface details, see "View Tab - Graphs/Graph Window" on page 803 .
<graph area>	You can perform the following actions in the graph area: <ul style="list-style-type: none"> • Drill down to the graph's data by clicking on a segment in the graph. For task details, see "How to Generate a Graph" on page 790. • Right-click an area in the graph to change its color. • Hover over a bar to view a tooltip containing the area's category, x-axis, and y-axis values.



Business Models Module Menus and Buttons




This section describes the menus and buttons available in the Business Models module.




To access	On the ALM sidebar, under Requirements , select Business Models .
Important information	<ul style="list-style-type: none">Some menu commands and buttons are not available in all model views.Tip: You can access the menu bar from the Business Models module by pressing the shortcut key ALT. Additionally, you can perform many other ALM operations using shortcut keys. For a list of shortcut keys, see "ALM Keyboard Shortcut Reference" on page 132.Version Control: Additional menu commands and buttons are available in a version control enabled project. For details, see "Versions Menu and Buttons" on page 113.
Relevant tasks	"How to Work with Business Process Models" on page 329
Learn more	"Business Models Module Icons" on page 346

User interface elements are described below:

UI Element (A - Z)	Menu	Description
Copy URL/Paste	Edit	Copies a model entity or folder and pastes its URL as a link. The item itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the item. If you are not already logged in, ALM first prompts for login details.
Cut/Paste  	Edit	Moves a business process model or folder to a different location in the tree. Activities and paths are moved together with their model. Tip: You can also move a business process model or folder by dragging it to a new location in the tree.
Delete 	Edit	Deletes selected model entities or folders. You cannot delete the root folder. Note: Deleting a folder deletes all the items included in it.
Details	Models	Opens the details dialog box for the selected model entity. For more details, see " Model Details/Model Activity Details Dialog Box " on page 352.

UI Element (A - Z)	Menu	Description
Expand All/Collapse	View	Expands/collapses all the nodes under the selected folder.
Filter/Sort 	View	Enables you to filter and sort the models in the business models tree or grid. Any currently applied filters or sorting orders are displayed below the toolbar. For more details, see "Filter Dialog Box" on page 61 .
Find	Edit	Opens the Find dialog box, enabling you to search for a model entity under the selected folder. For more details, see "Find Dialog Box" on page 73 .
Fit Overview to Window	right-click menu	Adjusts the zoom level of the diagram overview so that the entire model is visible in the overview pane.
Fit to Window	right-click menu	Adjusts the zoom level of the model diagram so that the entire model is visible in the diagram pane.
Flag for Follow Up 	Edit	Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for a selected model entity. For more details, see "Flag For Follow Up Dialog Box" on page 98 .
Go to Model	Models	Opens the Go To Model dialog box, enabling you to find a specific model by Model ID. You can only go to models that are in the current filter.
Go to Representative Requirement	Models	Opens the requirements tree in the Requirements module, and highlights the representative requirement of the selected model entity.
Go to Requirement in Requirements Tree	right-click menu	Opens the requirements tree in the Requirements module, and highlights the selected requirement. Available from: Linkage tab > Requirements tab
Go To Sub-Model	right-click menu	Navigates to the sub-model in the business models tree that is represented by the selected activity.
Go to Test in Test Set	right-click menu	Enables you to view instances of a test in test sets in the Test Lab module. If there is only one instance of the selected test, the Test Lab module opens with the instance highlighted. If there is more than one instance of the selected test, the Select Test Set dialog box opens, and you select a test set and instance. Available from: Linkage tab > Tests tab

UI Element (A - Z)	Menu	Description
Go to Test in Test Tree	right-click menu	Opens the test plan tree in the Test Plan module, and highlights the selected test. Available from: Linkage tab > Tests tab
Import Model 	Models	Opens the Import Models dialog box, enabling you to import or re-import business process models from a source file. For more details, see "Import Models Dialog Box" on page 349 . Available from: Model Tree view
Indicator Columns	View	Displays indicators on the left-side of the business process model window. For more details, see "Business Models Module Icons" on page 346 .
Model Analysis	View	Displays the Model Analysis view, enabling you to analyze the quality of selected business process models. For more details, see "Model Analysis View" on page 338 .
Model Grid	View	Displays the Model Grid view, enabling you to view business process models, activities, or paths in a flat, non-hierarchical view.
Model Tree	View	Displays the Model Tree view, enabling you to view your business process models and elements hierarchically in a tree, and to view a diagram of the selected model.
New Folder 	Models	Opens the New Folder dialog box, enabling you to add a folder under a selected folder in the business models tree. Syntax exceptions: The folder name cannot include the following characters: \ ^ * Available from: Model Tree view
New Path 	Models	Opens the New Business Model Path dialog box, enabling you to define a sequence of transitions between activities in a model. For more details, see "New Model Path/Model Path Details Dialog Box" on page 354 . Available from: Model Tree view
Refresh 	View	Refreshes the business process model view so that it displays the most up-to-date information.
Remove From Linkage	right-click menu	Removes the selected requirement or test from the linkage grid. Available from: Linkage tab > Tests and Requirements tabs
Rename	Edit	Enables you to rename the selected business process model folder. Available from: Model Tree view











UI Element (A - Z)	Menu	Description
Select All	Edit	Selects all records displayed in grid. Available from: Model Grid view and Linkage tab > Tests and Requirements tabs
Select Columns 		Opens the Select Columns dialog box, enabling you to determine which fields are displayed in the business models grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 . Available from: Model Grid view
Select Requirements/Select Tests	right-click menu	Opens a panel displaying the following tabs: <ul style="list-style-type: none"> Requirements Tree Test Plan Tree The panel enables you to link requirements and tests to model entities.
Send by E-mail 	Models	Opens the Send E-mail dialog box, enabling you to send business process models by email to recipients selected from a list. For more details, see "Send E-mail Dialog Box" on page 79 .
Show Full Path	right-click menu	Displays the full path of linked requirements or tests. The path is displayed in the Name column of linked requirements, and in the Test Name column of linked tests. Available from: Linkage tab > Tests and Requirements tabs
Text Search 	Edit	Opens the text search pane in the lower part of the Business Model module window, enabling you to search for records in predefined fields. For more details, see "Text Search Pane" on page 76 . Available from: Model entities
Zoom In	right-click menu	Increases the zoom level of the model diagram.
Zoom Overview In	right-click menu	Increases the zoom level of the diagram overview.
Zoom Out	right-click menu	Decreases the zoom level of the model diagram.
Zoom Overview Out	right-click menu	Decreases the zoom level of the diagram overview.



Business Models Module Icons

This section describes the icons available in the Business Models module.

To access	On the ALM sidebar, under Requirements , select Business Models .
Relevant tasks	"How to Work with Business Process Models" on page 329
Learn more	"Business Models Module Menus and Buttons" on page 342 "Business Models Module Window" on page 334

The icons are described below:

UI Element	Description
	<green asterisk> . The applicable tab is populated.
	Activity that expands to a sub-model
	Alerts . Click to view alerts for the model entity. <ul style="list-style-type: none">• Red alert. The alert is new.• Gray alert. The alert has already been read. For more details, see "Alerts Dialog Box" on page 97 .
	Attachments . Click to view attachments for the specified model entity. For more details, see "Attachments Page" on page 83 .
	Business process model
	Business process model activity
	Business process model folder
	Business process model path
	Follow Up Flags . Click to view follow up flags for the model entity. <ul style="list-style-type: none">• Gray flag. The follow up flag is new.• Red flag. The follow up date has arrived. For more details, see "Flag For Follow Up Dialog Box" on page 98 .
	Re-imported business process model Available from: Import Models dialog box
	Unresolved path

UI Element	Description
 	Version Control. The model entity is checked out. <ul style="list-style-type: none"> Green lock. The model entity is checked out by the current user. Red lock. The model entity is checked out by another user.

Business Models Module Fields

This section describes the Business Models module fields.

To access	On the ALM sidebar, under Requirements , select Business Models .
Important information	<ul style="list-style-type: none"> You can add user-defined fields and change the label of any of the fields in the Business Models module. You can also customize project lists. For more details, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. You can use the Script Editor to restrict and dynamically change the fields and values in the Business Models module. For more details, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. When you select a business process model column with a user name value (including user-defined fields), ALM displays a list with the name and full name of each user. You can search for users, sort users, group users by user group, and select users from the users list or a group tree. For more details, see "Users List Dialog Box" on page 72. Version Control: Additional fields are available in a version control enabled project. For details, see "Version Control Fields" on page 114. Some fields are not available in all business process model views.
Relevant tasks	"How to Work with Business Process Models" on page 329
Learn more	"Business Models Module Window" on page 334

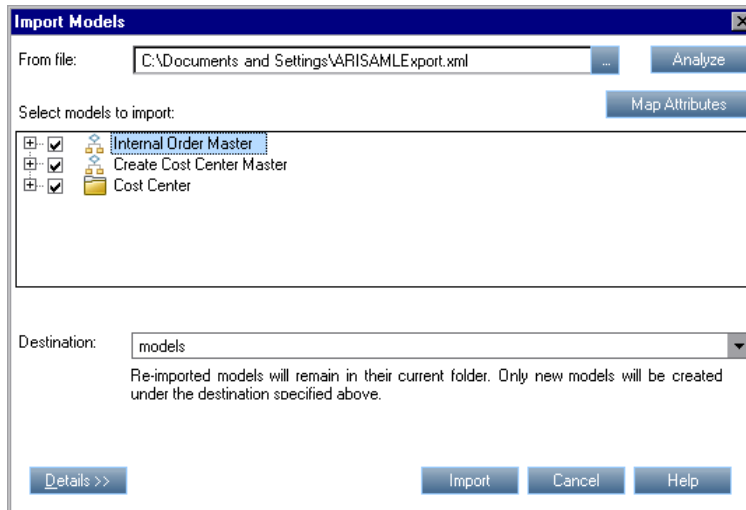
User interface elements are described below:

UI Element (A - Z)	Description
Activity ID/Folder ID/Path ID/Model ID	A unique numeric ID for the entity that is assigned automatically. The ID field cannot be modified.
Comments	Comments on the entity. Click in the text box to display a toolbar for formatting and spell checking the text.
Created By	Models/Activities: The user who first imported the entity. Paths: The user who created the path.

UI Element (A - Z)	Description
Creation Date	<p>Models/Activities: The date and time on which the entity was first imported.</p> <p>Paths: The date and time on which the path was created.</p>
Description	<p>A description of the entity.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Guid	A unique code identifying the model. The code helps identify the model in case of re-import.
Guid of referenced element	If an activity references a business process model, the unique code identifying the model.
Import Date	The date and time on which the entity was last imported.
Imported By	The user who last imported the entity.
Imported File Name	The name of the source file from which the model was last imported.
Lane	The location of an activity within a model.
Model Author	The user who created the model in the model authoring tool.
Name	The entity name.
Notation	The notation that is used to implement the model in the source file. Possible values are EPC or BPMN .
Notation Version	The version of the notation (EPC or BPMN) that is used to implement the model in the source file.
Path Description	Lists the activities included in the path.
Pool	The location of an activity within a model.
Priority	The priority of the entity.
Prototype	Possible values are As-Is or To-Be .
Status	The status of the entity.
Text	Text displayed in the activity diagram, as defined in the modeling tool.
Type	The activity type.
Vendor	The modeling tool used to create the business process model.

Import Models Dialog Box



This dialog box enables you to import business process models from a source file.



To access	In the Business Models module, in the Model Tree view, right-click a folder, and select Import Model .
Important information	Characters in names of imported models and activities that are illegal in ALM (for example, \ ^ *), are replaced with underscores.
Relevant tasks	"How to Work with Business Process Models" on page 329
Learn more	"Business Models Module Window" on page 334

User interface elements are described below:

UI Element	Description
From file	The source file from which business process models are imported. Tip: Click the browse button to locate a file in a folder.
Analyze	Scans the source file for business process models. The models in the file are displayed in the file content area.
Map Attributes	Opens the Map Imported Attributes to User Fields dialog box. For user interface details, see "Map Imported Attributes to User Fields Dialog Box" on page 351 .
Select models to import	Displays the business process models contained in the source file. If you selected a file with ARIS notation, structured models are displayed hierarchically.

UI Element	Description
Destination	<p>The folder in the business models tree under which the imported model will be added.</p> <p>Note:</p> <ul style="list-style-type: none"> You cannot import models under the root Models folder. Re-imported models remain in the original folder. <p>Tip: Click the drop-down button to select a folder in the business models tree.</p>
	Shows/hides options for defining representative requirements.
	<p>Imports the models selected in the Select models to import pane.</p> <p>The Importing Models dialog box opens, displaying the progress and status of the file import.</p>
Rename requirements	<p>Instructs ALM to rename representative requirements of re-imported models. The requirements are renamed according to the new names given to the business process model and its activities.</p> <p>Available if the Details pane is expanded.</p>
Requirement Destination	<p>The folder in the requirements tree under which representative requirements of the imported business process model are added.</p> <p>Note:</p> <ul style="list-style-type: none"> You cannot select the Requirements root folder. Representative requirements of re-imported models remain in the original folder. <p>Tip: Click the drop-down button to select a folder in the requirements tree.</p> <p>Available if the Details pane is expanded.</p>

Map Imported Attributes to User Fields Dialog Box

This dialog box enables you to map model and activity attributes to ALM fields.

Map Imported Attributes to User Fields

Model attribute mappings:

Imported Attribute	User Field
AT_DESC	
AT_USER_ATTR1	
AT_UA_VAL_2	
AT_EXT_1	
AT_REM	

☐ Show non-mapped attributes only

Activity attribute mappings:

Imported Attribute	User Field
AT_DESC	
AT_PERS_RESP	
AT_TRANS_CODE	

☐ Show non-mapped attributes only

OK Cancel Help

To access	In the Import Models dialog box, select a file to import, and click Map Attributes .
Important information	<ul style="list-style-type: none"> To enable attribute mapping, you must add string or memo fields to the Business Process Models and Business Process Model Elements entities. For more details on adding user-defined fields, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. If user fields are not defined, imported attributes are not displayed in the appropriate grid. If the selected models include attributes that were previously mapped, the existing mappings are displayed.
Relevant tasks	"How to Work with Business Process Models" on page 329
Learn more	"Business Models Module Window" on page 334

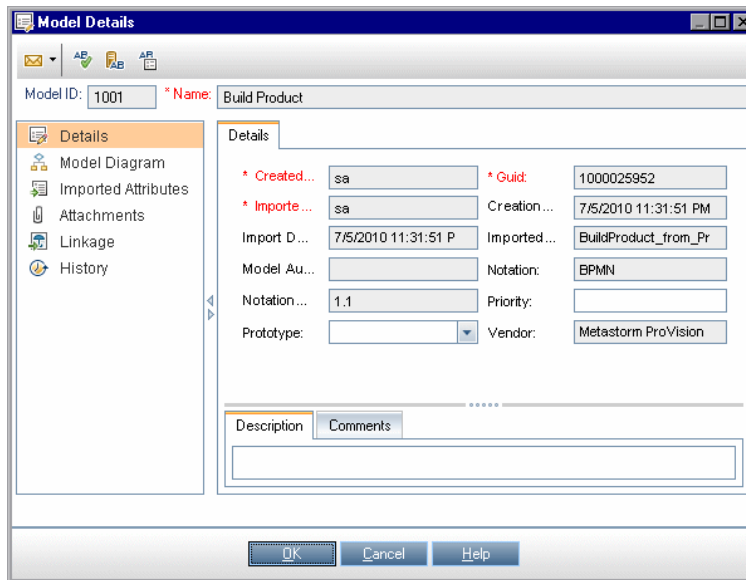
User interface elements are described below:

UI Element	Description
Model attribute mappings	<p>Displays the imported model attributes, and the ALM fields to which they are mapped.</p> <p>Note: Toggle the Show non-mapped attributes only option to show or hide mapped attributes.</p>
Activity attribute mappings	<p>Displays the imported activity attributes, and the ALM fields to which they are mapped.</p> <p>Note: Toggle the Show non-mapped attributes only option to show or hide mapped attributes.</p>
Imported Attribute	<p>Lists the model or activity attributes imported from the source file.</p>
User Field	<p>Lists the user-defined fields that are mapped to the corresponding attributes.</p> <p>Note:</p> <ul style="list-style-type: none">• The drop-down list includes only user fields that are not already mapped to attributes in the selected models.• If user fields are mapped to attributes in imported models, you can reassign them to other attributes in the selected models. This will override the previous mapping.
Show non-mapped attributes only	<p>Enables you to hide attributes that are already mapped to ALM fields.</p>

Model Details/Model Activity Details Dialog Box





The Model Details dialog box enables you to view and update details of a business process model.

The Model Activity Details dialog box enables you to view and update details of a business process model activity.



To access	In the Business Model module, right-click a business process model or activity, and select Details .
Relevant tasks	"How to Work with Business Process Models" on page 329
Learn more	"Business Process Models Overview" on page 328

User interface elements are described below (unlabeled elements are shown in angle brackets>):

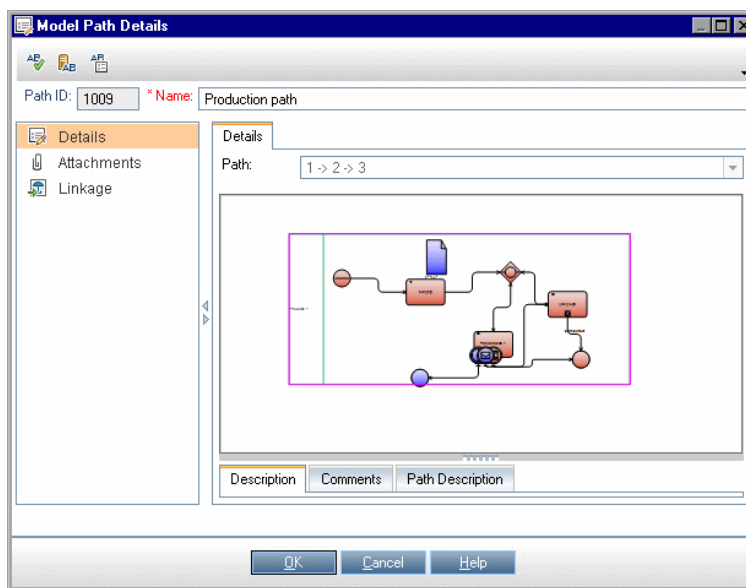
UI Element	Description
	Send by E-mail. Opens the Send E-mail dialog box, enabling you to send a business process model by email to recipients selected from a list. For more details, see "Send E-mail Dialog Box" on page 79 . Available from: Business Process Model Details dialog box
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
<Business Models module fields>	For details on the fields available in the Business Models module, see "Business Models Module Fields" on page 347 .
Details	Lists the relevant fields for the selected business entity. For details, see "Business Models Module Fields" on page 347 .

UI Element	Description
Model Diagram	<p>Business Process Model Details dialog box: Displays a diagram of the current business process model.</p> <p>Model Activity Details dialog box: Displays a diagram of the business process model in which the current activity is embedded. The current activity is highlighted in the model diagram.</p> <p>Tip: Right-click an area in the diagram, and select one of the zoom options.</p>
Imported Attributes	Lists field labels and values relevant to the business entity, as defined in the modeling tool.
Attachments	Lists attachments that provide additional information about the currently selected model entity. For more details, see "Attachments Page" on page 83 .
Linkage	Contains the Requirements and Tests tabs that list entities linked to the business entity. For more details, see "Linkage Tab" on page 356 .
History	<p>Lists changes made to the currently selected business process model. For more details, see "History Tab" on page 78.</p> <p>Available from: Business Process Model Details dialog box</p>

New Model Path/Model Path Details Dialog Box




The New Model Path dialog box enables you to define a path of transitions between activities in a business process model.

The Model Path Details dialog box enables you to view and update details of a business process model path.



To access	<p>New Model Path dialog box:</p> <ol style="list-style-type: none"> 1. In the Business Models module, select the Model Tree view. 2. Right-click a business process model and select New Path. <p>Model Path Details dialog box:</p> <p>In the Business Models module, right-click a path and select Details.</p>
Important information	<ul style="list-style-type: none"> • Paths are created in the business models tree as a sub-entities of the business process model. • Recursive paths that repeat the same activity are not supported.
Relevant tasks	"How to Work with Business Process Models" on page 329
Learn more	"Business Process Model Paths" on page 329

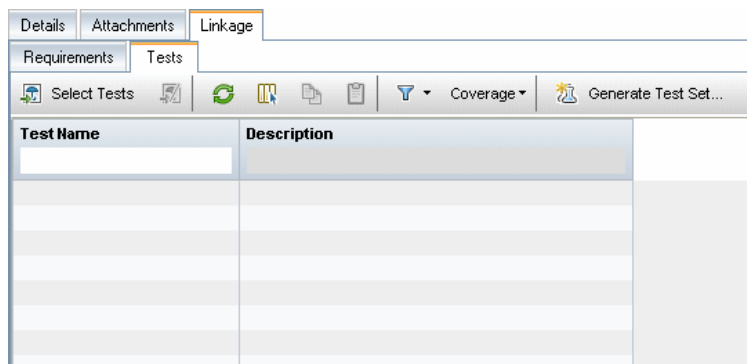
User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A - Z)	Description
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
<Business Models module fields>	For details on the fields available in the Business Models module, see "Business Models Module Fields" on page 347 .
Details	Lists the relevant fields for the selected path. For details, see "Business Models Module Fields" on page 347 .
Attachments	Lists attachments that provide additional information about the currently selected path. For more details, see "Attachments Page" on page 83 .
Linkage	Contains the Requirements and Tests tabs that list entities linked to the path. Available from: Model Path Details dialog box

UI Element (A - Z)	Description
Path	<p>New Business Model Path dialog box: A drop-down list of possible end-to-end paths in the business process model. Select a path that is important to test.</p> <p>Business Model Path Details dialog box: A notation of the current end-to-end path. The activities in the path are represented by numbers.</p> <p>Note: If the path is unresolved, select a new path from the drop-down list.</p> <p>Tip: Click the Path Description tab to view a full description of the path, including the full names of the activities in the path.</p>
<model diagram>	A diagram of the business process model. When you select paths in the Paths drop-down list, the activities and nodes along the path are highlighted.
Description	<p>Describes the currently selected path.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Comments	<p>Comments about the currently selected path.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Path Description	A full description of the path, including the full names of the activities in the path.

Linkage Tab

This tab enables you to link requirements and tests to a model entity.








To access	Select a business process model entity, and click the Linkage tab or button.
------------------	---

Important information	Requirement linkage is created automatically when you convert a representative requirement to a test. Therefore, even if you have not yet added requirements linkage, it may already exist.
Relevant tasks	"How to Work with Business Process Models" on page 329







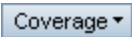

Requirements Tab

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
 Select Requirements	<p>Opens a panel displaying the following tabs:</p> <ul style="list-style-type: none"> Requirements Tree Test Plan Tree <p>The panel enables you to link requirements and tests to model entities.</p> <p>For more details, see "Requirements Tree and Test Plan Tree Pane" on page 359.</p>
	Remove From Linkage. Removes selected requirements from the linkage grid.
	Refresh All. Refreshes the linkage grid.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the linkage grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .
	Copy/Paste. Copies linked requirements to another model entity. To paste the copied requirements, select a model entity, click the Linkage > Requirements tab, and click Paste .
<linkage grid>	For field definitions, see "Requirements Module Fields" on page 274 .

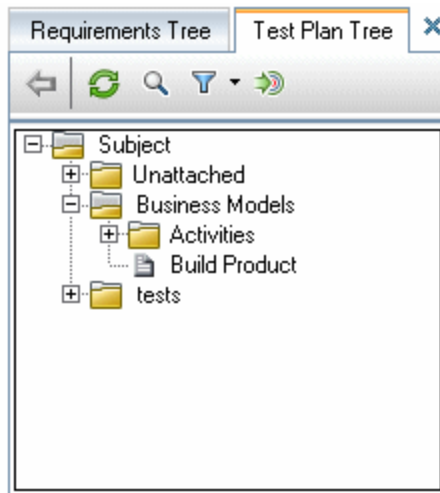
Tests Tab

User interface elements are described below:

UI Element	Description
	<p>Opens a panel displaying the following tabs:</p> <ul style="list-style-type: none"> • Requirements Tree • Test Plan Tree <p>The panel enables you to link requirements and tests to model entities.</p> <p>For more details, see "Requirements Tree and Test Plan Tree Pane" on next page.</p>
	<p>Remove From Linkage. Removes selected tests from the linkage grid.</p> <p>Note: You cannot remove tests covering linked requirements.</p>
	<p>Refresh All. Refreshes the linkage grid.</p>
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the linkage grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86.</p>
	<p>Copy/Paste. Copies linked tests to another model entity. To paste the copied tests, select a model entity, click the Linkage > Tests tab, and click Paste.</p>
	<p>Set Filter/Sort. Includes the following options:</p> <ul style="list-style-type: none"> • Set Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort tests. • Clear Filter/Sort. Clears any filters or sorting that you have applied. <p>For more details, see "Filter Dialog Box" on page 61.</p>
	<p>Select the type of linked tests displayed in the grid.</p> <ul style="list-style-type: none"> • Direct Coverage. Displays tests linked directly to the model entity, or to the representative requirement. This option is always selected. • Linked Requirement Coverage. Displays tests linked to requirements that are linked to the model entity. • Children Requirement Coverage. Displays tests that are linked to child requirements of requirements that are linked to the model entity.
	<p>Enables you to create a test set containing the tests in the linkage grid.</p> <p>In the Select Test Set Folder dialog box, select the folder in the test sets tree under which the test set is created.</p>
<linkage grid>	<p>For field definitions, see "Test Plan Module Fields" on page 416.</p>





Requirements Tree and Test Plan Tree Pane





This pane enables you to link requirements and tests to a business process model entity.



To access	<ol style="list-style-type: none"> 1. Select a business process model, activity, or path, and click the Linkage tab or button. 2. Click the Requirements or Tests tab. 3. Click the Select Requirements or Select Tests button.
Important information	In the Business Models module window, you can create linkage by dragging and dropping requirements and tests to any entity in the model diagram.
Relevant tasks	"How to Work with Business Process Models" on page 329



User interface elements are described below:

UI Element	Description
	Add to Linkage. Adds a selected requirement, test or folder to the linkage grid. <p>Tip: Alternatively, create linkage to any model entity by dragging requirements and tests directly to entities in the model diagram.</p>
	Show Entity Details. Opens the Details dialog box for the selected entity in read-only mode.
	Go to Entity in Module Tree. Navigates to the selected entity's location in that entity's module, and highlights the entity.
	Refresh. Refreshes the tree to display the most up-to-date information.

UI Element	Description
	<p>Find. Searches for a specific requirement or test in the tree.</p> <p>Type the name (or part of the name) of the requirement or test in the Find box and click Find. If the search is successful, the requirement or test is highlighted in the tree.</p>
	<p>Filter/Sort. Includes the following options:</p> <ul style="list-style-type: none"> • Set Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort tests. • Clear Filter/Sort. Clears any filters or sorting that you have applied. <p>For more details, see "Filter Dialog Box" on page 61.</p>
	<p>Go to Requirement by ID. Opens the Go To Requirement dialog box, enabling you to find a specific requirement by ReqID.</p> <p>Go to Test by ID. Opens the Go To Test dialog box, enabling you to find a specific test by Test ID.</p> <p>Note: You can only go to requirements and tests that are in the current filter.</p>
	Hides the Requirement Tree and Test Plan tree pane.



Represented Items Tab

This tab lists business process model entities represented by the selected requirement.

Represented Items		
<div>   </div>		
Name	Created By	Creation Date
Schedule Produ...	sa	7/5/2010 11:31:5...

To access	In the Requirements module, open the Requirement Details view, select a Business Model requirement, and click the Represented Items tab.
Relevant tasks	"How to Create Requirements" on page 258 "How to Work with Business Process Models" on page 329

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
	Refresh. Refreshes the grid to display the most up-to-date information.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the requirements tree or grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .
<business model entities grid>	Click a link in the grid to go to the represented business process model entity in the business models tree. For field definitions, see "Business Models Module Fields" on page 347 .

Lab Resources

Chapter 19

Introducing Lab Resources

This chapter includes:

Lab Resources Overview.....	366
How to Use Lab Resources in ALM.....	366

Lab Resources Overview

HP ALM Lab Management allows you to manage resources used for Functional and Performance testing. The **Lab Resources** module in ALM are used to view and manage remote testing resources and to automate deployment schemas.

ALM Editions: The Lab Resources modules are available only for ALM Edition.

For task details, see ["How to Use Lab Resources in ALM" below](#).

Many of the administrative tasks you use to manage lab resources are only available from within Lab Management. From within the ALM project, you can view and manage the resources that are allocated to your project.

To learn more about Lab Management and Lab Resources, see the *HP ALM Lab Management Guide*.

How to Use Lab Resources in ALM

In ALM, you can view and use the lab resources allocated to your project.

- Using the **Testing Hosts** module, you can view and modify testing hosts. For more information, see ["Testing Hosts Overview" on page 368](#).
- Using the **AUT Environments** module, you can view and modify the parameters used by AUT hosts. For more details, see ["How to Work with AUT Environments" on page 371](#).

ALM Editions: The Lab Resources modules are available only for ALM Edition.

For details about Lab Resource management, refer to the *HP ALM Lab Management Guide*.

To learn more about Lab Resources in ALM, see ["Lab Resources Overview" above](#).

Chapter 20

Testing Hosts

This chapter includes:

Testing Hosts Overview.....	368
-----------------------------	-----

Testing Hosts Overview

The **Testing Hosts** module in ALM enables you to view and modify the properties of remote testing hosts. The testing hosts from your project's host pool are displayed in the Testing Hosts module grid.

You can use remote testing hosts for functional and performance testing. Instead of launching a test from your local machine, tests can be controlled by the ALM server. Server-side execution is available for both functional and performance tests.

Each testing host is assigned a location, purpose, and attributes.

You can create public remote testing hosts in Lab Management. Each testing host is placed in a host pool and assigned to a project. You can also create private remote testing hosts from within ALM. The private hosts are automatically added to your current project's host pool.

ALM Editions: The Testing Hosts module is available only for ALM Edition.

For more information about testing hosts, see the *HP ALM Lab Management Guide*.

For more details on creating and managing hosts and host pools, see the *HP ALM Lab Management Guide*.

For more details about how to use the remote testing hosts in ALM see ["How to Run Tests in ALM" on page 540](#).

Chapter 21

AUT Environments

This chapter includes:

AUT Environments Overview.....	370
How to Work with AUT Environments.....	371
AUT Environments User Interface.....	375

AUT Environments Overview

AUT Environments allows users to make Lab Management test execution more dynamic by parameterizing the environment data used for testing.

An AUT environment is a container for a set of AUT environment parameters. You can provide a default value for each AUT environment parameter.

Within an AUT environment, you create a set of AUT environment configurations. Each AUT environment configuration contains a set of the AUT environment parameters, which can all be overridden. Instead of defining and running several different tests that use the same logic but need different AUT environment parameters, you can simply provide a specific AUT environment configuration that ALM inserts into your test at run-time. ALM then uses the parameter values you defined in the AUT environment configuration when deploying the environment and executing the test.

ALM Editions: The AUT Environments module only available in ALM Edition.

To make your environment parameter value definitions dynamic, you can link your AUT environment configurations to CDA. For more information, see ["Link AUT Environments to CDA" below](#).

AUT environment configurations are a key component in ALM's Continuous Delivery solution. They facilitate an automated, end-to-end deployment and testing framework that makes application development more efficient, reliable, and quick. For more information about how AUT environment configurations can be used as part of this process, see ["Deploying and Testing your Application in ALM" on page 721](#).

Note: Implementation of AUT environment configurations is currently available only for Performance Center Tests, Service Test, UFT API testing, and VAPI-XP.

For task details, see ["How to Work with AUT Environments" on next page](#).

Link AUT Environments to CDA

Linking your project to HP Continuous Delivery Automation (CDA) enables you to dynamically provision and deploy your testing environments. You use Lab Management to configure CDA servers in ALM.

Note: For information about setting up CDA Servers in Lab Management, see the *HP ALM Lab Management Guide*.

ALM Editions: The AUT Environments module is available only for ALM Edition.

To take advantage of dynamic provisioning and deployment, you first link your AUT environment configuration to CDA. Then, when you run a test set or build verification suite, instead of supplying specific environment parameters, you implement the linked AUT environment configuration. CDA then automatically allocates an available set of the required resources from the cloud. When using an AUT environment configuration linked to CDA, you do not need to keep track of the values of

multiple environment parameters, and you do not have to check the availability of environment resources before running a test.

For task information, see ["How to Work with AUT Environments"](#) below.

How to Work with AUT Environments

This task describes how to work with AUT Environments.

ALM Editions: The AUT Environments module is available only for ALM Edition.

- ["Prerequisites "](#) below
- ["Create AUT environments "](#) below
- ["Link AUT environment configurations to CDA \(optional\) "](#) on next page
- ["Run tests using AUT environments "](#) on next page
- ["Select a deployment and provisioning option \(CDA only\)"](#) on page 373

1. Prerequisites

- Determine which AUT environments you need to configure.
- What are the applications you intend to test?
- How many different environments will you have for each application?
- What details do you need for each environment? For example, do you have specific URLs, user names, and passwords for each environment?

2. Create AUT environments

- Open the AUT Environments module.** On the ALM sidebar, under **Lab Resources**, select **AUT Environments**.
- Create folders.** Select the root AUT Environments folder or a sub-folder, and click the **New AUT Environment Folder** button.
- Add AUT Environments to folders.** Select a folder and click the **New AUT Environment** button. Add an AUT environment for each of the applications you need to test.

For user interface details, see ["New AUT Environment Dialog Box"](#) on page 382.

- Add AUT Parameters.** Select an AUT environment and click the **New AUT Parameter** button in the right pane. Add a parameter for each environment parameter you need for the application you are testing. Enter the parameter name and a value in the New AUT Parameter dialog box. The value you enter in the AUT parameter dialog box will be the default value for that parameter in the selected AUT environment.

For user interface details, see ["New AUT Parameter Dialog Box"](#) on page 385.

- Add AUT Environment Configurations.** Select an AUT environment and click the **New AUT Environment Configuration** button. Add an AUT environment configuration for each environment you might use while testing the selected application.

For user interface details, see ["New AUT Environment Configuration Dialog Box" on page 384](#).

- f. **Modify AUT Environment Configurations.** Select an AUT environment configuration and override any of the default parameter values you need to adjust for this specific AUT environment configuration. You can modify the values in the right pane.


For user interface details, see ["AUT Environments Module Window" on page 375](#).

3. Link AUT environment configurations to CDA (optional)

You can link your AUT environment configurations to HP Continuous Delivery Automation (CDA) to arrange for your tests to be provisioned and deployed dynamically. For more information, see ["Link AUT Environments to CDA" on page 370](#).

Note: To use CDA, you must configure a CDA server in Lab Management. For more details, see [How to Manage CDA Servers](#).

To link an AUT environment configuration to CDA, do the following:

- a. In the **AUT Environments** module, select an AUT environment configuration.
- b. Click the **Link to CDA**  button.
- c. In the Link to CDA dialog box, use the drop-downs to select a CDA topology. For user interface details, see ["Link to CDA Dialog Box" on page 387](#)
- d. In the **AUT Environments** module, in the right pane, select a parameter in the **Values** tab. Select the CDA parameter to link to the selected AUT environment parameter.

4. Run tests using AUT environments

When running a functional or performance test, you can provide an AUT environment configuration to execute your test using specific environment parameters.

Note: AUT Environments are available only for Performance Center Tests, Service Test, API testing in UFT, and VAPI-XP tests.

Use one of the following methods to execute your test using an AUT environment configuration:

■ Schedule a timeslot.

In the **Timeslots** module, create a new timeslot. Select a test set to run and then select an AUT environment configuration. For user interface details, see ["Timeslot Reservation Dialog Box" on page 692](#).

■ As part of a functional test set or performance test execution.

In the Test Lab module, go to the **Execution Grid** tab. Select a functional test set and click **Run Test Set**, or select a performance test set, then a performance test, and click **Run Test**. In the Run <Entity> dialog box, select an AUT environment configuration. For user interface details, see ["Run <Entity> Dialog Box" on page 636](#).

- **In a build verification suite.**

In the **Build Verification** module, select a build verification suite and click **Run**. In the Run Build Verification Suite dialog box, select an AUT environment configuration. For user interface details, see ["Run <Entity> Dialog Box" on page 636](#).

5. **Select a deployment and provisioning option (CDA only)**

When your system is integrated with CDA, you can select deployment and provisioning actions for the application under test. ALM provides the following options in the Timeslot Reservation dialog box and the Run <Entity> dialog box for this purpose:

- **Provision and deploy.** Allocates machines on which to deploy an environment for the application under test, and prepares the required image so that the application can be installed. That is, the operating system, database server and all required software are installed based on CDA parameters. Following provisioning, the application under test itself is installed.
- **Deploy.** Deploys and runs the application under test environment on machines that have already been provisioned.
- **Use deployed.** Uses an existing installation to run the test.

Note: When deciding which option to select, bear in mind that the provisioning and deployment actions can be very time consuming. For routine testing, it is advisable to select **Use Deployed**.

Available for: All options are available for Build Verification Suite timeslots. For Functional test set timeslots, **Use Deployed** is selected by default. You cannot change this selection.

ALM also allows you to select the action to be taken after an environment has been deployed. ALM provides the following options:

- **Leave environment deployed.** Leaves the AUT environment deployed indefinitely. The deployed environment can be used for future tests.
- **Deprovision at end.** After the tests have completed running, the environment is undeployed and the machines are deprovisioned, freeing them up for other use.

Available for: Build Verification and Functional test set timeslots.

For user interface details, see ["Timeslot Reservation Dialog Box" on page 692](#) and the ["Run <Entity> Dialog Box" on page 636](#)

Work with AUT Environments - Use-Case Scenario

This use-case scenario describes the AUT Environments workflow.

ALM Editions: The AUT Environments module is available only for ALM Edition.

- ["Prerequisites " on next page](#)
- ["Create AUT Environments " on next page](#)

- ["Link AUT Environment Configurations to CDA \(Optional\) "](#) below
- ["Run Tests using AUT Environments "](#) below

1. Prerequisites

Suppose you are developing a Pet Clinic application. You have arranged two environments, QA and Dev. Each environment has a database and an application server. You now want to implement and schedule API testing (also known as Service Test testing) for both environments. To utilize AUT Environments, collect the IP and user name/password information for each environment.

2. Create AUT Environments


In the AUT Environments module, you create a new AUT environment, PetClinicApplication.

Create new parameters corresponding to the information you collected about your environments earlier. In this example, create parameters DBServerIP, AppServerIP, DBUsername, DBPassword, AppUsername, and AppPassword.

Select the PetClinicApplication environment and create two new AUT environment configurations, PetClinicQA and PetClinicDev. For each AUT environment configuration, override the default values in each parameter with the correct IP and user name/password values.

3. Link AUT Environment Configurations to CDA (Optional)

Note: To use CDA, you must configure a CDA server in Lab Management. For more details, see ["How to Manage CDA Servers" on page 1](#).

- In the **AUT Environments** module, select the PetClinicQA AUT environment configuration.
- Click the **Link to CDA**  button.
- In the Link to CDA dialog box, use the drop-downs to select the PetClinic CDA topology. For user interface details, see ["Link to CDA Dialog Box" on page 387](#)
- In the AUT Environments module, in the right pane, select the DBUsername parameter in the **Values** tab. Select a CDA parameter to link to the DBUsername AUT environment parameter.

4. Run Tests using AUT Environments

To run a functional test on your application's QA environment, go to the Timeslots module and create a new Timeslot. Select a test set in the Timeslot Reservation dialog box and then select the PetClinicQA AUT environment configuration. Complete the timeslot reservation and submit.

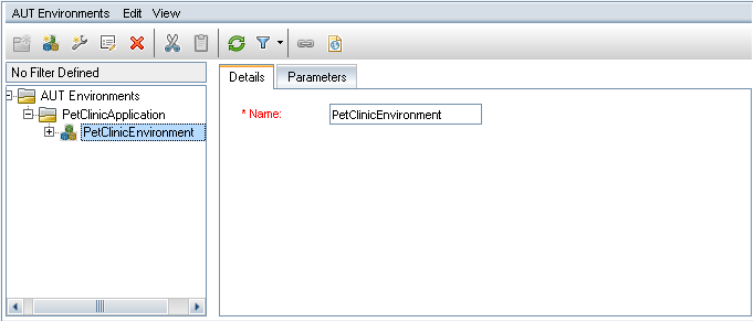
When configuring the test from within UFT API testing or HP Service Test, select the parameters from the PetClinicQA environment configuration as input values. For more information, see the *HP Service Test User Guide* or the information about API testing in the *HP Unified Functional Testing User Guide*.

AUT Environments User Interface

This section includes:

AUT Environments Module Window.....	375
AUT Environments Module Menus and Buttons.....	377
AUT Environments Module Fields.....	380
AUT Environments Module Icons.....	380
AUT Environment Details Dialog Box.....	381
New AUT Environment Dialog Box.....	382
AUT Environment Configuration Details Dialog Box.....	383
New AUT Environment Configuration Dialog Box.....	384
New AUT Parameter Dialog Box.....	385
AUT Parameter Details Dialog Box.....	386
Link to CDA Dialog Box.....	387

AUT Environments Module Window



To access	On the ALM sidebar, under Lab Resources , select AUT Environments .
Important information	ALM Editions: The AUT Environments module is available only in ALM Edition.
Relevant tasks	"How to Work with AUT Environments" on page 371
See also	"AUT Environments Module Fields" on page 380

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<AUT Environments module common UI elements>	<ul style="list-style-type: none"> • AUT Environments fields. For field definitions, see "AUT Environments Module Fields" on page 380. • AUT Environments menus and buttons. For command and button descriptions, see "AUT Environments Module Menus and Buttons" on next page. • AUT Environments icons. For icon descriptions, see "AUT Environments Module Icons" on page 380. • ALM main menu and sidebar. For details on the Tools menu, Help menu and sidebar, see "ALM Common Areas" on page 45.
<filter status bar>	Describes the filter currently applied to the tree. Located directly above the tree.
<AUT Environments tree>	<p>Located on the left side of the window, organizes and displays your AUT Environments hierarchically.</p> <p>Note: You cannot move AUT Environments within a folder. When you refresh the tree view, AUT Environments in a folder are alphabetized.</p>
Details tab	Located on the right side of the window. Lists the AUT Environments fields. For details on the fields, see "Test Plan Module Fields" on page 416 .
Parameters tab	<p>Located on the right side of the window. Contains a grid of the parameters and default values for the selected AUT Environment object.</p> <p>If you do not override the AUT environment parameter in an AUT environment configuration then the default value is used during execution.</p> <p>Note: Only visible when an AUT Environment object is selected.</p>



UI Element	Description
Values tab	<p>Located on the right side of the window. Contains a grid of parameters and values for the selected AUT Environment Configuration object.</p> <p>You can select a parameter in the values tab and override the default value derived from the AUT environment level. If you do not override a parameter value, the default value is used during execution.</p> <p>Note: You cannot modify the parameters in the automatically generated Default AUT environment configuration.</p> <p>If the AUT environment configuration is linked to CDA, you can select a dynamic value from a drop-down list in the CDA Parameter list.</p> <p>For more information on CDA, see "Link AUT Environments to CDA" on page 370.</p> <p>Note: Only visible when an AUT Environment Configuration object is selected.</p>





AUT Environments Module Menus and Buttons







This section describes the menus and buttons available in the AUT Environments module.

To access	On the ALM sidebar, under Lab Resources , select AUT Environments .
Relevant tasks	"How to Work with AUT Environments" on page 371
See also	<ul style="list-style-type: none"> "AUT Environments Overview" on page 370 "AUT Environments Module Fields" on page 380 "AUT Environments Module Window" on page 375

User interface elements are described below:

UI Element (A - Z)	Menu	Description
AUT Environment Configuration Details 	AUT Environments	Opens the AUT Environment Configuration Details dialog box, enabling you to view and update details of the selected AUT Environment Configuration. For details, see "AUT Environment Configuration Details Dialog Box" on page 383 .
AUT Environment Details 	AUT Environments	Opens the AUT Environment Details dialog box, enabling you to view and update details of the selected AUT Environment. For details, see "AUT Environment Details Dialog Box" on page 381 .

UI Element (A - Z)	Menu	Description
Collapse	View	Collapses all branches in the tree.
Copy URL/Paste	AUT Environments	Copies a selected AUT environment, AUT environment folder, or AUT environment configuration and pastes its URL as a link. The AUT environment or AUT environment configuration itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking on the link opens ALM and takes you to the AUT Environment or AUT environment configuration. If you are not already logged in, ALM first prompts for login details.
Cut/Paste	Edit	Cuts selected AUT environments and configurations within the same project or across projects.
Delete 	Edit	From the toolbar, deletes a selected AUT environment, AUT environment folder, or AUT environment configuration. You cannot delete the root AUT Environments folder. From the Parameters tab toolbar, deletes the selected parameter folder or parameter.
Expand All	View	Expands all folders in the AUT Environments tree below the selected folder.
Go to AUT Environment	AUT Environments	Opens the Go to AUT Environment dialog box, enabling you to type an AUT environment ID to find a specific AUT environment in the AUT Environments tree.
Link AUT Environment Configuration to CDA 		Opens the Link to CDA tab, enabling you to link the selected AUT environment configuration to a CDA topology.
New AUT Environment 	AUT Environments	Opens the New AUT Environment dialog box, enabling you to add an AUT environment to a selected folder. For details, see "New AUT Environment Dialog Box" on page 382 .
New AUT Environment Configuration 	AUT Environments	Opens the New AUT Environment Configuration dialog box, enabling you to add an AUT environment configuration to a selected folder. For details, see "New AUT Environment Configuration Dialog Box" on page 384 .

UI Element (A - Z)	Menu	Description
New AUT Environment Folder 	AUT Environments	<p>Opens the New AUT Environment Folder dialog box, enabling you to add a folder under a selected folder.</p> <p>Syntax exceptions: An AUT environment folder name cannot include the following characters: \ ^ *</p>
New AUT Parameter 		<p>Opens the New AUT Parameter dialog box, enabling you to add an AUT parameter and parameter value to an AUT environment.</p> <p>Located in the Parameters tab toolbar.</p> <p>For details, see "New AUT Parameter Dialog Box" on page 385.</p>
Open Applications Page in CDA 		<p>Opens the CDA applications page. For details, see the documentation for CDA.</p>
Refresh All 	View	<p>Refreshes the view to display the most up-to-date information.</p>
Rename	Edit	<p>Enables you to rename an AUT environment, an AUT environment folder, or an AUT environment configuration. You cannot rename the root AUT Environment folder.</p>
Restore Default Parameter Value 		<p>Restores the value of the selected AUT environment configuration parameter to the default AUT environment value.</p>
Set Filter/Sort 	View	<p>Enables you to set filter and sort options for the AUT Environments tree.</p> <p>Includes the following options:</p> <ul style="list-style-type: none"> • Set Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort AUT Environments. • Clear Filter/Sort. Clears any filters or sorting that you have applied. <p>For more details, see "Filter Dialog Box" on page 61.</p>
Update Selected	Edit	<p>Opens the Update Selected dialog box, enabling you to update a field value for multiple selected environments, configurations, and folders in the tree. For more details, see "Update Selected Dialog Box" on page 88.</p>

AUT Environments Module Fields

This section describes the AUT Environments module fields.

To access	On the ALM sidebar, in Lab Resources , select AUT Environments .
Important information	The AUT Environments module displays the environment configuration data fields for functional testing in ALM.
Relevant tasks	"How to Work with AUT Environments" on page 371
See also	<ul style="list-style-type: none">• "AUT Environments Overview" on page 370• "AUT Environments Module Menus and Buttons" on page 377• "AUT Environments Module Window" on page 375

User interface elements are described below:





UI Element (A - Z)	Description
AUT Environments ID	The ID of the AUT environment to which the selected AUT environment configuration belongs.
AUT Environments Folder ID	The ID of the folder of the AUT environment.
Default Value	The default value of the selected AUT parameter for the selected AUT environment.
Name	The name of the AUT environment, AUT environment configuration, AUT environment folder, or AUT parameter.
Value	The value of the selected AUT parameter. The value can be default or overridden in an AUT environment configuration.

AUT Environments Module Icons

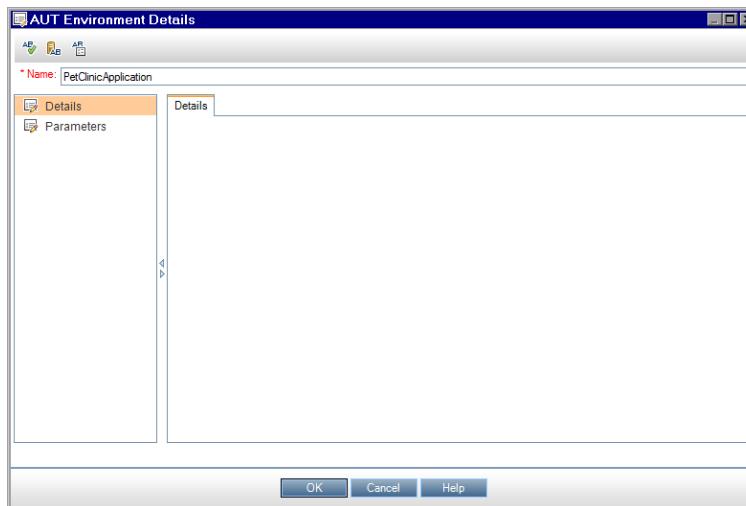
This section describes the icons available in the AUT Environments module.


To access	On the ALM sidebar, select AUT Environments .
Relevant tasks	"How to Work with AUT Environments" on page 371
See also	<ul style="list-style-type: none">• "AUT Environments Module Window" on page 375• "AUT Environments Module Fields" above

The icons are described below:




UI Element (A - Z)	Description
	AUT environment folder
	AUT environment
	AUT environment configuration
	AUT environment parameter

AUT Environment Details Dialog Box



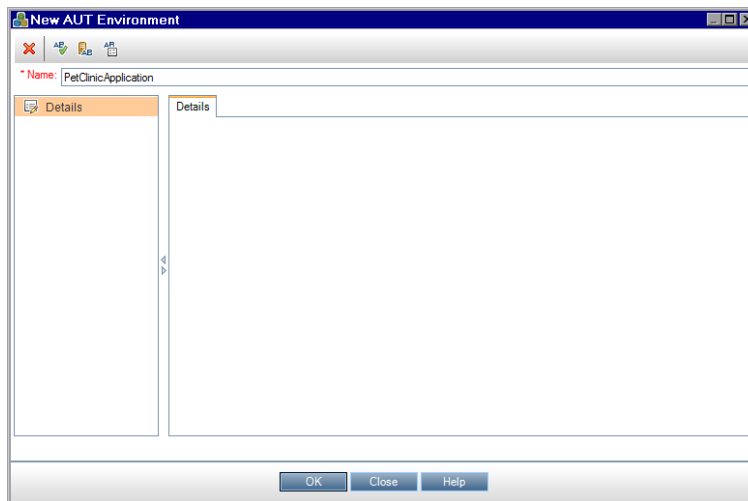
To access	On the ALM sidebar, under Lab Resources , select AUT Environments . Select an AUT Environment and click  .
Relevant tasks	"How to Work with AUT Environments" on page 371
See also	"AUT Environments Module Fields" on previous page


User interface elements are described below:

UI Element	Description
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Name	The name associated with the selected AUT environment.



UI Element	Description
Details	Lists the AUT environment fields. For details on AUT environment fields, see "AUT Environments Module Fields" on page 380.
Parameters	Lists parameters associated with the currently selected AUT Environment. You can add AUT parameters or modify the default value of AUT parameters associated with the selected AUT environment. For user interface details, see "New AUT Parameter Dialog Box" on page 385 and "AUT Parameter Details Dialog Box" on page 386.



New AUT Environment Dialog Box



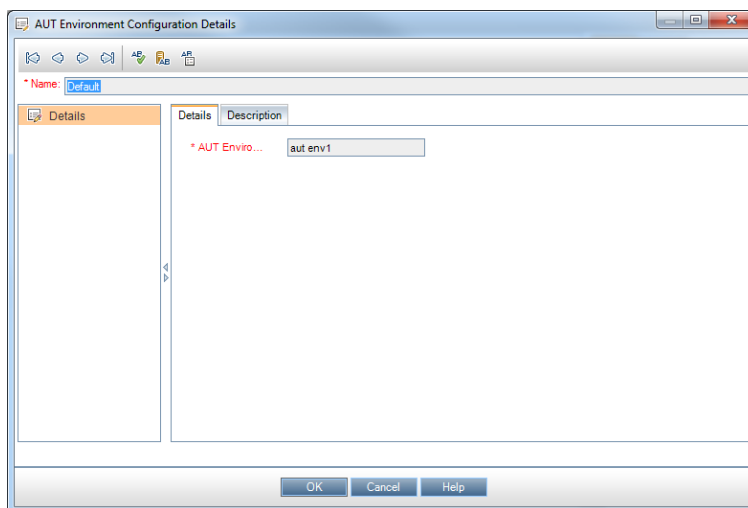
To access	On the ALM sidebar, under Lab Resources , select AUT Environments . Click  .
Relevant tasks	"How to Work with AUT Environments" on page 371
See also	<ul style="list-style-type: none"> "AUT Environments Module Fields" on page 380 "AUT Environments Overview" on page 370


User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears the data.
	Check Spelling. Checks the spelling for the selected word or text box.



UI Element	Description
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Name	The name associated with the new AUT environment.
Details	Lists the AUT environment fields. For details on AUT environment fields, see "AUT Environments Module Fields" on page 380 .



AUT Environment Configuration Details Dialog Box



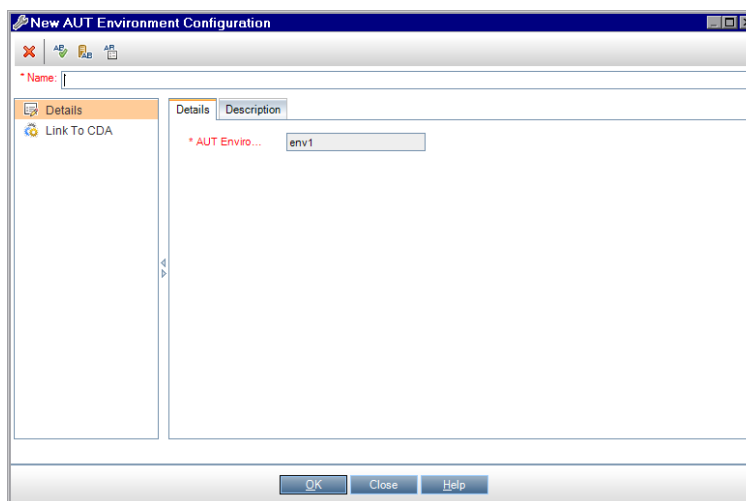
To access	On the ALM sidebar, under Lab Resources , select AUT Environments . Select an AUT Environment Configuration and click  .
Relevant tasks	"How to Work with AUT Environments" on page 371
See also	<ul style="list-style-type: none"> "AUT Environments Module Fields" on page 380 "AUT Environments Overview" on page 370


User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears the data.
	Check Spelling. Checks the spelling for the selected word or text box.





UI Element	Description
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Details	Lists the AUT environment fields. For details on AUT environment fields, see "AUT Environments Module Fields" on page 380 .
Link to CDA	Enables you to link the selected AUT environment configuration to CDA. For more information, see "Link to CDA Dialog Box" on page 387 .

New AUT Environment Configuration Dialog Box

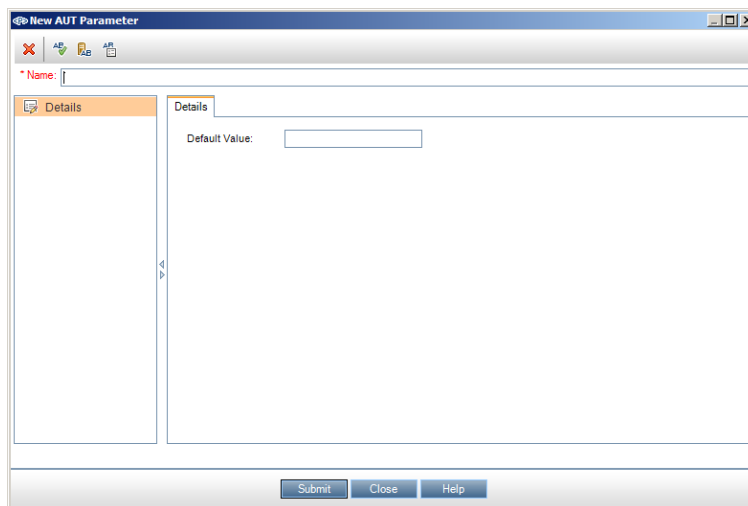



To access	On the ALM sidebar, under Lab Resources , select AUT Environments . Select an AUT Environment, and click  .
Important information	
Relevant tasks	"How to Work with AUT Environments" on page 371
See also	<ul style="list-style-type: none"> "AUT Environments Module Fields" on page 380 "AUT Environments Overview" on page 370

User interface elements are described below:





UI Element	Description
	Clear All Fields. Clears the data.
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Name	The name associated with the new AUT environment configuration.
Details	Lists the AUT environment configuration fields. For details on AUT Environments fields, see "AUT Environments Module Fields" on page 380 .
Link to CDA	Enables you to link the selected AUT environment configuration to CDA. For more information, see "Link to CDA Dialog Box" on page 387 .

New AUT Parameter Dialog Box

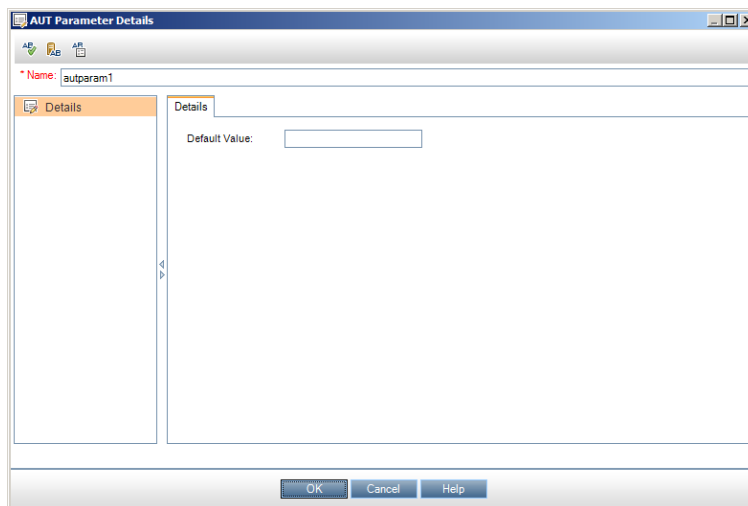


To access	On the ALM sidebar, under Lab Resources , select AUT Environments . Select an AUT Environment, and click  on the right pane.
Relevant tasks	"How to Work with AUT Environments" on page 371
See also	<ul style="list-style-type: none"> "AUT Environments Module Fields" on page 380 "AUT Environments Overview" on page 370

User interface elements are described below:





UI Element	Description
	Clear All Fields. Clears the data.
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Name	The name associated with the new AUT parameter.
Details	Lists the AUT parameter fields. For details on AUT Environment fields, see "AUT Environments Module Fields" on page 380 .

AUT Parameter Details Dialog Box

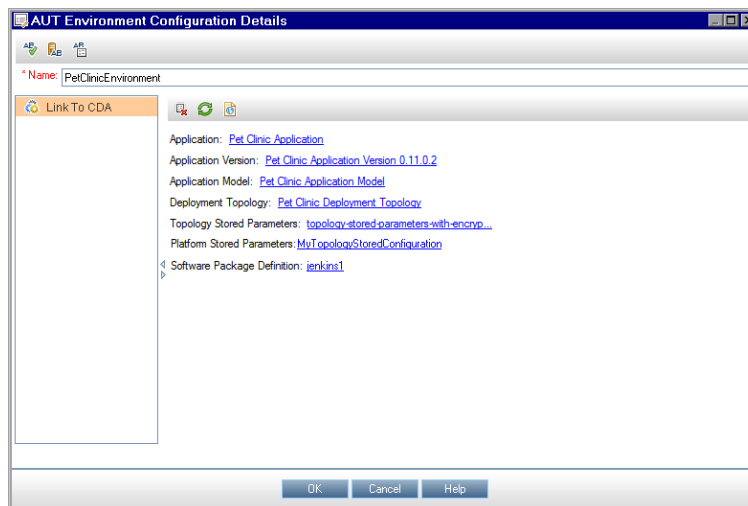




To access	On the ALM sidebar, under Lab Resources , select AUT Environments . Select an AUT Environment and then select an AUT parameter on the right pane.
Relevant tasks	"How to Work with AUT Environments" on page 371
See also	<ul style="list-style-type: none"> "AUT Environments Module Fields" on page 380 "AUT Environments Overview" on page 370

User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears the data.
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Name	The name of the selected AUT parameter.
Details	Lists the AUT environment fields. For details on AUT environment fields, see "AUT Environments Module Fields" on page 380 .







Link to CDA Dialog Box



To access	<p>Select an AUT Environment Configuration from the AUT Environments module. Then do one of the following:</p> <ul style="list-style-type: none"> Click the Link to CDA  button. Click the AUT Environment Configuration Details  button. On the AUT Environment Configuration Details dialog box sidebar, select Link to CDA.
Relevant tasks	"How to Work with AUT Environments" on page 371

See also	<ul style="list-style-type: none"> • "AUT Environments Module Fields" on page 380 • "AUT Environments Overview" on page 370
-----------------	---

User interface elements are described below:

UI Element	Description
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Name	The name of the selected AUT environment configuration.
Clear Link to CDA 	Removes the linkage between the selected AUT environment configuration and the CDA topology.
Reload CDA entities from the server 	<p>Reloads the list of available CDA entities. Any changes that occurred on the CDA server side will be updated in the lists in the dialog box.</p> <p>Caution: Reloading the list of CDA entities will remove all your linkages.</p>
Open <Page> in CDA 	<p>Opens a CDA page.</p> <p>If you have not yet selected a Deployment Topology, the Applications Page in CDA opens. If you have selected a Deployment Topology, the Linked Topology Page in CDA opens.</p>

UI Element	Description
<CDA topology link section>	<p>Enables you to configure the linkage between the selected AUT environment configuration and a CDA topology.</p> <p>By default, there is no linkage between CDA and the AUT environment configuration. To link, click none and select a CDA parameter.</p> <p>Select the following CDA topology levels:</p> <ul style="list-style-type: none">• Application• Application Version• Application Model• Deployment Topology• Topology Stored Parameters• Platform Stored Parameters• Software Package Definition <p>Note: If you do not complete all of the selections, you are not able to link your AUT environment configuration to a CDA topology.</p>

Test Plan

Chapter 22

Introducing Test Planning

This chapter includes:

Test Plan Overview.....	394
How to Plan Tests in ALM.....	394

Test Plan Overview

Developing a clear and concise test plan is fundamental to successful application testing. A good test plan enables you to assess the quality of your application at any point in the application management process.

Outline a strategy for achieving your requirements, as defined in the Requirements module. Ask yourself two basic questions:

How should you test your application?

- Which testing techniques will you use (stress tests, security tests, performance and load tests, etc.)?
- How will you handle defects (severity classification, authorization to open and close defects, etc.)?

What resources do you require?

- What resources do you require to test (personnel, hardware, etc.)?
- When will the various tasks be completed?

For example, consider a flight reservation application that lets you manage flight scheduling, passenger bookings, and ticket sales. Testing will require designing both manual and automated tests. You could assign testing personnel with programming experience the task of designing automated tests, while non-programmers could design manual tests.

How to Plan Tests in ALM

This task describes how to work with tests in HP Application Lifecycle Management (ALM).

Note: This task is part of a higher-level task. For details, see ["Application Lifecycle Management Roadmap" on page 36](#).

This task includes the following steps:

- ["Prerequisites" on next page](#)
- ["Create a test plan tree" on next page](#)
- ["Create dependencies with test resources – optional" on next page](#)
- ["Define test parameters" on next page](#)
- ["Define test configurations" on next page](#)
- ["Create test steps" on next page](#)
- ["Automate tests" on next page](#)
- ["Create requirements coverage" on page 396](#)

- ["Link a test to a defect" on next page](#)
- ["Analyze test plan data" on next page](#)
- ["Establish a baseline" on next page](#)

1. Prerequisites

A set of requirements is defined in the Requirements tree.

For task details, see ["How to Use Requirements in ALM" on page 254](#).

Tip: You can automatically create tests based directly on your requirements in the Requirements module. For more details, see the step for converting requirements to tests in the ["How to Create Requirements" on page 258](#) task.

2. Create a test plan tree

Create a test plan tree of test subject folders and tests. For task details, see ["How to Create Tests" on page 398](#).

3. Create dependencies with test resources – optional

You can associate tests with a set of resources that you upload to the ALM repository.

You can then view these dependencies and determine the resources that are in use. For task details, see ["How to Use Test Resources" on page 499](#).

Business Process Testing: You can associate component design steps with application area resources that you upload.

4. Define test parameters

To make tests more flexible, you can include parameters in test steps. This enables you to run the same test repeatedly and assign different values to the parameters. For task details, see ["How to Use Test Parameters " on page 450](#).

5. Define test configurations

To run tests for different use-cases, you can define test configurations. This enables you to run the same test under different scenarios. For task details, see ["How to Work with Test Configurations" on page 476](#).

6. Create test steps

Create test steps describing the operations to perform and their expected results. After you define the test steps, decide whether to perform the test manually or to automate it. For task details, see ["How to Design Test Steps" on page 461](#).

7. Automate tests

After designing test steps, decide which tests to automate. Factors influencing test automation include frequency of execution, volume of data input, length of execution time, and complexity. For task details, see ["How to Design Test Steps" on page 461](#).

System Tests. You can also create automated system tests that provide system information for a machine, capture a desktop image, or restart a machine. For task details, see ["How to Create System Tests" on page 492](#).

8. **Create requirements coverage**

Link each test in the test plan tree with a requirement or requirements in the requirements tree. By defining requirements coverage for a test, you keep track of the relationship between the tests in your test plan and your original requirements. For task details, see ["How to Create Coverage" on page 428](#).

9. **Link a test to a defect**

Link a test to specific defects. This is useful, for example, when a new test is created specifically for a known defect. By creating a link, you can determine if the test should be run based on the status of the defect. For user interface details, see ["Linked Defects/Entities Page" on page 762](#).

10. **Analyze test plan data**

Analyze the test plan by generating reports and graphs.

Use one of the following:

- **View dynamic graphs of test subjects.** In the test plan tree, select a test subject, and click the **Live Analysis** tab. For task details on generating live analysis graphs, see ["How to Generate Live Analysis Graphs" on page 884](#).
- **View test plan data in a graph.** On the Test Plan module menu, select **Analysis > Graphs**. For task details on generating graphs, see ["How to Generate a Graph" on page 790](#).
- **Create a report of test plan data.** On the Test Plan module menu, select **Analysis > Reports**. For task details on creating reports, see ["How to Manage Standard Reports" on page 876](#).

For details on additional analysis tools in ALM, see ["How to Analyze Data in ALM" on page 772](#).

11. **Establish a baseline**

After your test plan has been reviewed and approved, you can create a baseline. A baseline provides you with a snapshot of your test plan at a specific point in time. Use a baseline to mark any significant milestone in the application lifecycle. The baseline then serves as a point of reference against which changes can be compared. For task details, see ["How to Use Libraries and Baselines in ALM" on page 210](#).

Chapter 23

Test Plan Specification

This chapter includes:

Test Plan Specification Overview.....	398
How to Create Tests.....	398
Test Types.....	401
Test Plan User Interface.....	402

Test Plan Specification Overview

The typical application is too large to test as a whole. The Test Plan module enables you to divide your application according to functionality. You divide your application into units, or **subjects**, by creating folders in a test plan tree. This is a graphical representation of your test plan, displaying your tests according to the hierarchical relationship of their functions.

After you define subjects in the tree, you decide which tests to create for each subject and add them to the tree. At this stage, you define basic information about the test, such as its name, status, and the designer. You can also attach a file, URL, application snapshot or system information to illustrate a test. Afterwards, you define the test steps. **Test steps** contain detailed instructions on how to execute a test and evaluate the results.

ALM enables you to use the same test to test different use-cases, each with its own **test configuration**. Each test configuration uses a different set of data. You define the data by adding **test parameter** values for each test configuration. A test parameter is a variable that can be assigned a value.

During the application management process, you may need to modify your test plan. You can update the test plan tree at any time.

There are a number of methods for organizing your test plan by subject. For example, you could define subjects according to:

- Application functionality—such as editing, file operations, and reporting
- Type of testing—such as functional, user interface, performance, and load

Note: Developing and editing a test plan tree requires appropriate user permissions. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

For details on specifying tests, see ["How to Create Tests"](#) below.

How to Create Tests

This task describes how to create folders of test subjects in the test plan tree, and add tests to the test subjects.

Note: This task is part of a higher-level task. For details, see ["How to Plan Tests in ALM"](#) on page 394.

To learn more about test specification, see ["Test Plan Specification Overview"](#) above.

This task includes the following steps:


- ["Create test subjects" on next page](#)
- ["Create tests in the test plan tree" on next page](#)
- ["Import tests – optional" on page 400](#)
- ["Create a manual template test – optional" on page 400](#)

- ["Create a UFT template GUI test – optional" on next page](#)
- ["Add steps to tests" on page 401](#)

1. Create test subjects

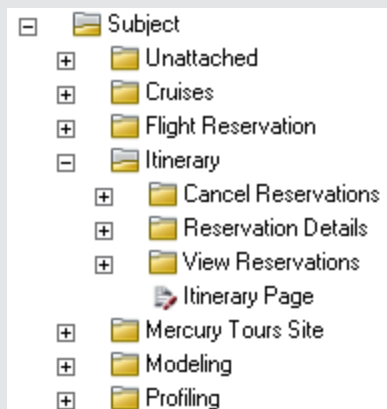
Create folders in the test plan tree. Each folder represents a **test subject** – a testing area in your application.

To create a test subject:

- On the ALM sidebar, under **Testing**, select **Test Plan**.
- Select **View > Test Plan Tree**.
- Select the **Subject** root folder or an existing test subject, and click **New Folder**  .

Example

To test a flight reservation application that lets you manage flight scheduling, passenger bookings, and ticket sales, you might define the following subjects for the test plan tree:



Notice how the **Itinerary** subject contains additional subject folders. These folders further categorize the tests in the test plan tree by creating additional levels of subjects. For the complete example, refer to the **ALM_Demo** project.

2. Create tests in the test plan tree

Create tests under test subject folders.

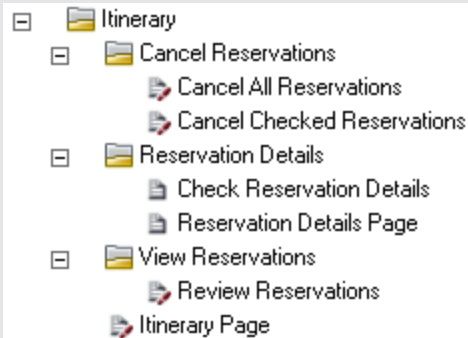
To create tests:

- In the Test Plan tree, right-click the folder, and select **New Test**.
- Fill in the fields in the New Test dialog box. For user interface details, see ["New Test Dialog Box" on page 420](#).

Each test should have a distinct objective, such as verifying a specific function or system requirement. The tests you define should be based on the goals you set at the beginning of the application management process.

Example

In the test plan tree shown in the previous step, you might assign tests to the **Itinerary** subject folders as follows:



3. Import tests – optional

In addition to creating a test plan tree in the ALM Test Plan module, you can also import test plan data from Microsoft Word or Microsoft Excel to your ALM project. To import from Word, you must install the **HP ALM Microsoft Word Add-in** and the **HP ALM Connectivity Add-in**. To import from Excel, you must install the **HP ALM Microsoft Excel Add-in** and the **HP ALM Connectivity Add-in**. You can install the add-ins from the HP Application Lifecycle Management Add-ins page. For more information, refer to the *HP Application Lifecycle Management Installation Guide*.

4. Create a manual template test – optional

If there are common instructions that will be repeated in several tests, for example `Log in to the application`, you can create a manual template test of common instructions, that is then called by other manual tests.

Note: It is not essential to mark a test as a template test to be able to call it.

To create a manual template test:

- a. Create a manual test, as described in the step above for creating tests in the test plan tree.
- b. Right-click the new test in the test plan tree, and select **Mark as Template Test**. The test icon changes from gray to white, indicating that it is now a template test.

5. Create a UFT template GUI test – optional

The template test defines which UFT add-ins ALM associates with a new UFT GUI test. For details, see the Unified Functional Testing documentation and the relevant Unified Functional Testing add-in documentation.

In addition to the default UFT template GUI test that is provided with the ALM client, you can create other UFT template tests.

To create a UFT template test:

- a. Create a UFT GUI test, as described above in the step for creating tests in the test plan tree.
- b. Right-click the new test in the test plan tree, and select **Mark as Template Test**. The test icon changes from gray to white, indicating that it is now a template test.

6. Add steps to tests








Add steps to tests, describing the actions a tester should perform to complete the tests.





For task details, see ["How to Design Test Steps" on page 461](#).

Test Types

The following test types are available in the Test Plan module.

ALM Editions: Not all test types are available with each edition.

Test Icon	Test Type	Description
	BUSINESS-PROCESS	A business process test. For details, refer to the <i>HP Business Process Testing User Guide</i> .
	FLOW	A test comprising a collection of business components in a fixed sequence that performs a specific task. For more details, refer to the <i>HP Business Process Testing User Guide</i> .
	LR-SCENARIO	A scenario that is executed by LoadRunner, the HP load testing tool.
	MANUAL	A test that is run manually.
	PERFORMANCE-TEST	A performance test. For details, refer to the <i>HP ALM Performance Center Guide</i> .
	QAINspect_TEST	A test that is executed by QAInspect, the HP security testing tool.
	QUICKTEST_TEST	<p>A GUI test that is executed by Unified Functional Testing, the HP functional enterprise testing tool.</p> <p>This test type is only available if you have installed the appropriate add-in from the HP Application Lifecycle Management Add-ins page. For details on installing add-ins, refer to the <i>HP Application Lifecycle Management Installation Guide</i>.</p>

Test Icon	Test Type	Description
	SERVICE-TEST	<p>An API test, created in Unified Functional Testing or HP Service Test, HP's tool for creating tests for GUI-less applications such as Web and REST services. For details on API tests, see the <i>HP Service Test User Guide</i> or the information about API testing in the <i>HP Unified Functional Testing User Guide</i>.</p> <p>This test type is only available if you have installed the appropriate add-in from the HP Application Lifecycle Management Add-ins page. For details on installing add-ins, refer to the <i>HP Application Lifecycle Management Installation Guide</i>.</p> <p>Note: API tests can be viewed in, and launched from, ALM. You can create API tests in Unified Functional Testing or HP Service Test. Alternatively, you can create a business process test or flow that is automated as an API test.</p>
	SYSTEM-TEST	A test that instructs ALM to provide system information, capture a desktop image, or restart a machine.
	VAPI-XP-TEST	A test that is created by Visual API-XP, the ALM open test architecture API testing tool. For more information on VAPI-XP tests, see "VAPI-XP Tests " on page 515.
	VuGenScript	A VuGen script that is executed by LoadRunner, the HP load testing tool.

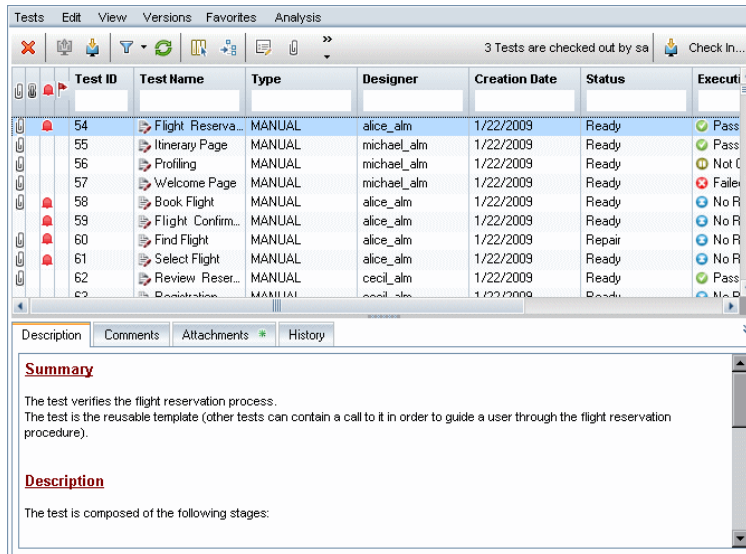
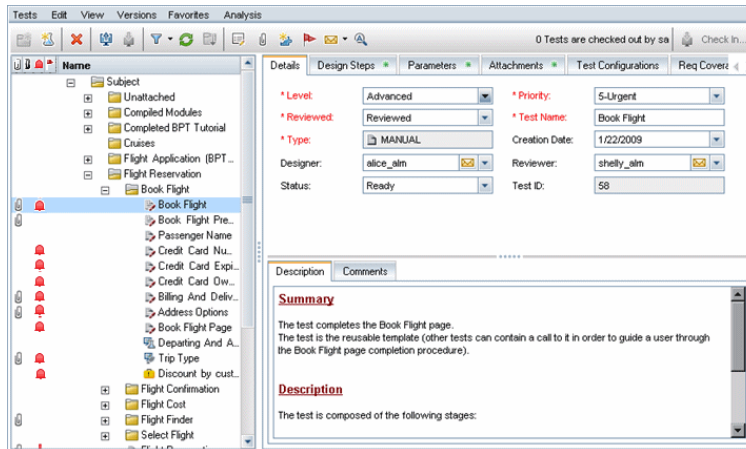
Test Plan User Interface

This section includes:

Test Plan Module Window.....	403
Test Plan Module Menus and Buttons.....	406
Test Plan Module Icons.....	414
Test Plan Module Fields.....	416
Test Details Dialog Box.....	418
New Test Dialog Box.....	420
Sort Folders in Test Plan Tree Dialog Box.....	423
Paste Tests/Folders to Target Project Dialog Box.....	424

Test Plan Module Window

The test plan window enables you to define and maintain ALM tests.




To access

1. On the ALM sidebar, under **Testing**, select **Test Plan**.
2. In the **View** menu, select **Test Grid** or **Test Plan Tree**.

Important information	<p>The Test Plan window includes the following views.</p> <ul style="list-style-type: none"> • Test Plan Tree. Displays test subjects and tests hierarchically in a tree. • Test Grid. Displays tests in a flat, non-hierarchical view. Each line in the grid displays a separate test. <p>Tip: To enable scrolling in the Test Grid view after editing a field, click the Escape key, then scroll using the mouse wheel or the up/down arrow keys.</p> <p>Business Process Testing: Different tabs are displayed in this module if you are working with a business process test. For details, refer to the <i>HP Business Process Testing User Guide</i>.</p>
Relevant tasks	<p>"How to Plan Tests in ALM" on page 394</p> <p>"How to Create Tests" on page 398</p>
See also	<p>"Test Plan Module Fields" on page 416</p>

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A - Z)	Description
<Test Plan module common UI elements>	<ul style="list-style-type: none"> • Test Plan fields. For field definitions, see "Test Plan Module Fields" on page 416. • Test Plan menus and buttons. For command and button descriptions, see "Test Plan Module Menus and Buttons" on page 406. • Test Plan icons. For icon descriptions, see "Test Plan Module Icons " on page 414. • ALM main menu and sidebar. For details on the Tools menu, Help menu and sidebar, see "ALM Common Areas" on page 45.
<filter status bar>	<p>Describes the filter currently applied to the grid or tree. Located directly above the grid filter boxes or tree.</p> <p>In grid views:</p> <ul style="list-style-type: none"> • Showing <x> results. Indicates the number of records currently displayed out of the total records. • Retrieve all <x> results. Click to display all records.
<test plan tree>	<p>Located on the left side of the window, organizes and displays your tests hierarchically.</p> <p>Note: You cannot move tests within a folder. When you refresh the tree view, tests in a folder are alphabetized.</p>

UI Element (A - Z)	Description
<grid filters> 	<p>Displays a grid filter box under each column name, enabling you to define a filter condition for a column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For user interface details, see "Select Filter Condition Dialog Box" on page 70.</p> <p>Available from: Test Grid view</p>
Details tab	<p>Lists the test fields. For details on test fields, see "Test Plan Module Fields" on page 416.</p> <p>Tip: Clicking in the Description or Comments field in this tab displays a toolbar for formatting and spell checking the text.</p>
Test Script tab	<ul style="list-style-type: none"> • For automated tests: The test script that is run by the testing tool for the currently selected test. For user interface details, see "Test Script Tab" on page 469. • For business process tests and flows: The components and flows that are run for the currently selected test (or the components that are run for the currently selected flow). For user interface details, see the <i>HP Business Process Testing User Guide</i>.
Design Steps tab	Lists the instructions on how to execute the selected test. For more details, see "Design Steps Tab/Design Step Details Dialog Box" on page 464 .
Parameters tab	Lists parameters associated with the currently selected test. Parameters can be incorporated in the test's design steps. For more details, see "Parameters Tab/Parameters Dialog Box" on page 452 .
Test Configurations tab	Displays the test configurations of the selected test. For more details, see "Test Configurations Tab" on page 480 .
Attachments tab	Lists attachments that provide additional information about the currently selected test. For more details, see "Attachments Page" on page 83 .
Req Coverage tab	Lists the requirements that are met by the currently selected test. For more details, see "Req Coverage Tab " on page 433 .
Linked Defects tab	Lists the defects linked to the currently selected test. For more details, see "Linked Defects/Entities Page" on page 762 .
Dependencies tab	Displays dependency relationships that exist between entities such as test resources and tests. For more information, see "Dependencies Tab" on page 510 .

UI Element (A - Z)	Description
Business Models Linkage	Lists the business model entities linked to the currently selected test. For more details, see "Business Models Linkage Tab" on page 439 .
Criteria tab	Displays criteria of the selected business process test. For user interface details, see "Criteria Tab " on page 472 . Business Process Testing: Functionality related to test criteria is available only for business process tests. For task details, see the <i>HP Business Process Testing User Guide</i> .
History tab	Lists changes made to the currently selected test. For more details, see "History Tab" on page 78 .
Live Analysis tab	Displays a graphical representation of test data related to the selected test subject folder. For more details, see "Live Analysis Tab" on page 885 . Available from: Test Plan Tree view
Test Design tab	Performance Center: Displays a detailed summary of the selected performance test. For more details, refer to the <i>HP ALM Performance Center Guide</i> .



Test Plan Module Menus and Buttons

This section describes the menus and buttons available in the Test Plan module.



To access	On the ALM sidebar, under Testing , select Test Plan .
Important information	<ul style="list-style-type: none"> Some menu commands and buttons are not available in all test plan views. Tip: You can access the menu bar from the Test Plan module by pressing the shortcut key ALT. Additionally, you can perform many other ALM operations using shortcut keys. For a list of shortcut keys, see "ALM Keyboard Shortcut Reference" on page 132. Version Control: Additional menu commands and buttons are available in a version control enabled project. For details, see "Versions Menu and Buttons" on page 113. Business Process Testing: Additional menu commands and buttons are available for Business Process Testing and Business Process Testing Enterprise Extension. For details, see the <i>HP Business Process Testing User Guide</i>.
Relevant tasks	"How to Create Tests" on page 398





See also	<ul style="list-style-type: none"> • "Test Plan Module Window" on page 403 • "Test Plan Module Icons " on page 414
-----------------	--


User interface elements are described below (unlabeled elements are shown in angle brackets):


UI Element (A - Z)	Menu	Description
<list of recently used favorite views>	Favorites	Displays the four most recently used favorite views in the Test Plan module. You can define the number of views displayed on the menu by setting the FAVORITES_DEPTH parameter in the Site Configuration tab in Site Administration. For details, see the <i>HP Application Lifecycle Management Administrator Guide</i> .
Add to Favorites	Favorites	Opens the Add Favorite dialog box, enabling you to add a favorite view to your private or the public folder. For details, see "Add Favorite Dialog Box" on page 104 .
Alerts	Edit	Opens the Alerts dialog box, enabling you to display alerts for the test. For details, see "Alerts Dialog Box" on page 97 .
Attachments 	<toolbar>	Opens the Attachments page, enabling you to add attachments to the selected test. For details, see "Attachments Page" on page 83 .
Clear Alerts	Edit	Clears displayed alerts for the module. For more details, see "How to Use Alerts" on page 93 .
Clear Default Values	Edit	Removes default values set using the Set Default Values dialog box. No defaults are available when creating new tests or test configurations.
Clear Follow Up Flag	Edit	Clears a follow up flag of a selected test. For more details, see "Follow Up Flags Overview" on page 93 . Available from: Test Grid
Collapse	View	Collapses all branches in the test plan tree.
Convert to Component 	Tests	Creates components from a test or a flow. For user interface details, refer to the <i>HP Business Process Testing User Guide</i>
Copy URL/Paste	Edit	Copies a selected test and pastes its URL as a link. The test itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the test. If you are not already logged in, ALM first prompts for login details.




UI Element (A - Z)	Menu	Description
Copy/Paste	Edit	<p>Copies selected tests within the same project or across projects. When you copy a test subject, any subfolders and tests of the test subject are also copied.</p> <p>Note:</p> <ul style="list-style-type: none"> When you copy a test from one project to another, if the test contains calls to other tests, or if the tests are dependent on test resources or other entities, you can instruct ALM to copy them using one of three methods. For more details, see "Paste Tests/Folders to Target Project Dialog Box" on page 424. To copy tests across projects, both projects must use the same ALM version and patch level. The Paste option is only available from the Test Plan Tree.
Cut/Paste	Edit	<p>Moves selected tests to a different location in the test plan tree.</p> <p>Note:</p> <ul style="list-style-type: none"> When moving a test subject, any subfolders and tests of the test subject are moved with it. The root folder cannot be moved. The Paste option is only available from the Test Plan Tree. <p>Tip: You can also move a test or test subject to a new location in the test plan tree by dragging it.</p>



UI Element (A - Z)	Menu	Description
Delete 	Edit	<p>Deletes the selected test or folder in the test plan tree.</p> <p>When deleting a folder, select one of the following options:</p> <p>Delete folders only. Deletes folders and moves all related tests to the Unattached folder.</p> <p>Delete folder and tests. Deletes folders, tests, and test scripts.</p> <p>Version Control: Deleting a test deletes all previous versions of the test.</p> <p>When deleting a test, if dependencies are defined for the test, the Delete Test dialog box opens. To view the Used By entities, click Details.</p> <div> <p>Caution:</p> <ul style="list-style-type: none"> You cannot delete the root Subject folder. If you choose to delete a folder and tests, all subfolders and tests under the selected folder are deleted permanently. If you delete a test, the test and test script are deleted permanently. If dependencies are defined for a test, deleting the test may impact the dependent entities. To view the dependencies before you delete, click the Dependencies tab. For more details on related entities, see "Dependencies Tab" on page 510. Performance Testing: Deleting a performance test that is linked to a timeslot will affect the timeslot. </div>
Description Page	<right-click menu>	<p>Opens the Description tab.</p> <p>Available from: Test Grid</p>
Edit Test 	Tests	<p>Performance Center: Opens the Performance Test Designer, enabling you to design a performance test. For details, refer to the <i>HP ALM Performance Center Guide</i></p>
Expand All	View	Expands all branches in the test plan tree.

UI Element (A - Z)	Menu	Description
Export	<right-click menu>	<p>Opens the Export Grid Data dialog box, enabling you to export the tests in a grid as a text file, Microsoft Excel worksheet, Microsoft Word document, or HTML document.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • All. Exports all tests in the grid. • Selected. Exports selected tests in the grid. <p>Available from: Test Grid</p>
Filter/Sort 	View	<p>Enables you to filter and sort the tests in the test tree or grid. Any currently applied filters or sorting orders are displayed below the toolbar. For more details, see "Filter Dialog Box" on page 61.</p> <p>Note: A filter that is defined in one test plan view does not apply to the other view.</p>
Find	Edit	Opens the Find dialog box, enabling you to search for a test in the Test Plan module. For more details, see "Find Dialog Box" on page 73 .
Find Next	Edit	Searches for the next item in the test grid that meets the previously defined search criteria.
Flag for Follow Up 	Edit	Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for a selected test. For more details, see "Flag For Follow Up Dialog Box" on page 98 .
Go to Test	Tests	Opens the Go To Test dialog box, enabling you to find a specific test by Test ID . You can only go to tests that are in the current filter.
Go to Entity in Module Tree 	<toolbar>	<p>Navigates to the selected entity's location in that entity's module, and highlights the selected entity.</p> <p>Available from:</p> <ul style="list-style-type: none"> • Select Components and Flows pane, for business process tests • Business Models Linkage > Business Models Tree pane • Req Coverage > Requirement Tree pane
Go to Test in Test Plan Tree 	<toolbar>	<p>Goes to the Test Plan Tree view and highlights the selected test.</p> <p>Available from: Test Grid</p>

UI Element (A - Z)	Menu	Description
Go to Test in Test Set	Tests	<p>Enables you to view instances of a test in test sets in the Test Lab module.</p> <p>If there is only one instance of the selected test, the Test Lab module opens with the instance highlighted.</p> <p>If there is more than one instance of the selected test, the Select Test Set dialog box opens, and you select a test set and instance.</p>
Graphs	Analysis	<p>Lists the graphs you can generate for test plan data. Select a predefined graph, or launch the graph wizard.</p> <p>For details on the predefined graph types, see "Entity Graph Types" on page 793.</p>
History Page	<right-click menu>	<p>Opens the History tab. For more details, see "History Tab" on page 78.</p> <p>Available from: Test Grid</p>
Indicator Columns	View	<p>Displays indicators on the left-side of the test window. For more details, see "Test Plan Module Icons " on page 414.</p>
Invert Selection	Edit	<p>Unselects all previously selected tests in the grid and selects all previously unselected tests.</p> <p>Available from: Test Grid</p>
Live Analysis	Analysis	<p>Lists options for displaying graphs in the Live Analysis tab. Add or delete a graph, or configure its appearance.</p> <p>For details on live analysis, see "Live Analysis Graphs Overview " on page 884.</p> <p>Available from: Live Analysis tab</p>
Mark as Template Test	Tests	<p>For manual tests. Marks a test as a template test that you can then call from another test.</p> <p>After you mark a template test, the manual test icon changes from gray to white .</p> <p>For GUI tests. Marks a test as a template test that you will then be able to use to create other UFT GUI tests.</p>
Most Recently Used	Analysis	<p>Lists the most recently viewed reports and graphs in ALM. Displays up to ten items.</p>

UI Element (A - Z)	Menu	Description
New Folder 	Tests	<p>Opens the New Test Folder dialog box, enabling you to add a test subject under a selected folder.</p> <p>Syntax exceptions: A folder name cannot include the following characters: \ ^ *</p> <p>Available from: Test Plan Tree</p>
New Test 	Tests	<p>Opens the Create New Test dialog box, enabling you to add a test under a selected folder. For more details, see "New Test Dialog Box" on page 420.</p> <p>Available from: Test Plan Tree</p>
Organize Favorites	Favorites	Organizes your favorite views. For details, "Organize Favorites Dialog Box" on page 105 .
Private	Favorites	Lists the favorite views that are accessible only to the user who created them.
Project Reports	Analysis	<p>Lists the predefined project reports you can produce on test plan data. For details on the report types, see "Predefined Project Reports" on page 840.</p> <p>Selecting a report from the list generates a preview of the report. The preview displays up to five entities per report section. To generate the full report, in the upper left corner of the preview, click the downward arrow adjacent to the Generate button and select the report format to generate.</p>
Public	Favorites	Lists the favorite views that are accessible to all users.
Refresh All 	View	Refreshes the test plan tree or grid so that it displays the most up-to-date tests.
Rename	Edit	<p>Renames a selected test or folder. You cannot rename the root folder.</p> <p>Syntax exceptions: A test name cannot include the following characters: \ / : " ? < > * % ' </p>
Replace	Edit	In the test grid, opens the Replace dialog box, enabling you to replace a test field value. For more details, see "Replace Dialog Box" on page 75 .
Report Selected	<right-click menu>	Displays a report of the selected tests.
Req Coverage	View	Enables the Advanced Coverage dialog box. For more details, see "Add Advanced Coverage Dialog Box" on page 438 .

UI Element (A - Z)	Menu	Description
Run Test 	Tests	Performance Center: Enables you to run the selected performance test from the Test Plan module. For more details on running performance tests, refer to the <i>HP ALM Performance Center Guide</i> .
Select All	Edit	Selects all tests in the grid. Available from: Test Grid
Select Columns 	View	Opens the Select Columns dialog box, enabling you to determine which fields to display in the test grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .
Send by E-mail 	Tests	Opens the Send E-mail dialog box, enabling you to send a test by email to recipients selected from a list, or to the test designer. For more details, see "Send E-mail Dialog Box" on page 79 .
Set Default Values	Edit	Opens the Set Default Values dialog box, enabling you to set default values for certain test fields. For user interface details, see "Set Default Values Dialog Box" on page 89 .
Show Entity Details 	<toolbar>	Opens the Details dialog box for the selected entity in read-only mode. Available from: <ul style="list-style-type: none"> • Select Components and Flows pane, for business process tests • Business Models Linkage > Business Models Tree pane • Req Coverage > Requirement Tree pane
Show Details and History	<right-click menu>	Displays information panel tabs on the bottom of the test grid. Available from: Test Grid
Sort Folders 	View	Opens the Sort Folders in Test Plan Tree dialog box, enabling you to rearrange subfolders in a test subject folder. For more details, see "Sort Folders in Test Plan Tree Dialog Box" on page 423 .
Test Details 	Tests	Opens the Test Details dialog box, displaying the details of the selected test. For user interface details, see "Test Plan Module Window" on page 403 . For user interface details specific for Business Process Testing, see Test Details Dialog Box for Business Process Testing .
Test Grid	View	Displays the Test Grid view, enabling you to view tests in a flat, non-hierarchical view. Each line in the grid displays a separate test.
Test Plan Tree	View	Displays the Test Plan Tree view, enabling you to view your tests and test subject hierarchically in a tree.






UI Element (A - Z)	Menu	Description
Text Search 	Edit	Opens the text search pane in the lower part of the Test Plan module window, enabling you to search for records in predefined fields. For more details, see "Text Search Pane" on page 76 .
Update Selected	Edit	Opens the Update Selected dialog box, enabling you to update a field value for multiple selected tests in the grid. For more details, see "Update Selected Dialog Box" on page 88 .
Upload Script 	Tests	Performance Center: Enables you to upload VuGen scripts to ALM. For more details, refer to the <i>HP ALM Performance Center Guide</i> .


















Test Plan Module Icons

This section describes the icons available in the Test Plan module.

To access	On the ALM sidebar, under Testing , select Test Plan .
Relevant tasks	"How to Create Tests" on page 398
See also	<ul style="list-style-type: none"> "Test Plan Module Menus and Buttons" on page 406 "Test Plan Module Window" on page 403

The icons are described below:

UI Element (A-Z)	Description
	<green asterisk> . The applicable tab is populated.
	Alerts. Click to view alerts for the test. <ul style="list-style-type: none"> Red alert. The alert is new. Gray alert. The alert has already been read. For more details, see "Alerts Dialog Box" on page 97 .
	Attachments. Click to view attachments for the specified test. For more details, see "Attachments Page" on page 83 .
	Business process test
	Flow of business components

UI Element (A-Z)	Description
	Follow Up Flags. Click to view follow up flags for the test. <ul style="list-style-type: none"> • Gray flag. The follow up flag is new. • Red flag. The follow up date has arrived. For more details, see "Flag For Follow Up Dialog Box" on page 98.
	Linked Defects. Click to view linked defects for the test. For more details, see "Linked Defects/Entities Page" on page 762.
	LoadRunner scenario
	Manual Template test
	Manual Template test that includes test steps
	Manual test
	Manual test that includes test steps
	QAInspect test
	Subject folder
	System test
	UFT GUI test
	UFT GUI test that includes test steps
	UFT Template GUI test that includes test steps
	UFT Template GUI test
	Version Control. The test is checked out. <ul style="list-style-type: none"> • Green lock. The test is checked out by the current user. • Red lock. The test is checked out by another user.
	Visual API-XP test
	Vuser Script test

Test Plan Module Fields

This section describes the Test Plan module fields.

To access	On the ALM sidebar, under Testing , select Test Plan .
Important information	<ul style="list-style-type: none">You can add user-defined fields and change the label of any of the fields in the Test Plan module. You can also customize project lists. For more details, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.You can use the Script Editor to restrict and dynamically change the fields and values in the Test Plan module. For more details, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.When you select a test plan column with a user name value (including user-defined fields), ALM displays a list with the name and full name of each user. You can search for users, sort users, group users by user group, and select users from the users list or a group tree. For more details, see "Users List Dialog Box" on page 72.Some fields are not available in all test plan views.Additional fields are available for business process tests and flows. For details, see the <i>HP Business Process Testing User Guide</i>.Version Control: Additional fields are available in a version control enabled project. For details, see "Version Control Fields" on page 114.
See also	" Test Plan Module Window " on page 403

Test Plan Fields

UI Element (A - Z)	Description
Comments	Displays comments about the test. Click in the text box to display a toolbar for formatting and spell checking the text.
Creation Date	The date on which the test was created. By default, the creation date is set to the current ALM server date. Click the down arrow to display a calendar and select a different creation date.
Description	Describes the test. Click in the text box to display a toolbar for formatting and spell checking the text.
Designer	The user name of the person who designed the test.
Estimated Dev Time	The time estimated to design and develop the test.

UI Element (A - Z)	Description
Execution Status	<p>The execution status of the last run of an instance of the test. Execution status can be one of the following:</p> <ul style="list-style-type: none"> • Blocked. One or more steps cannot run. For example, the test is running on a remote machine but cannot continue due to some environmental failure, such as network problems or hardware failure. • Failed. One or more steps in the run failed, and none have the status "Blocked". • N/A. The current status of the test is not applicable. • No Run. No steps have been run. • Not Completed. One or more steps were not completed or not run, and none have the status "Blocked" or "Failed". • Passed. The run was successful.
Modified	The date and time of the last change to the test.
Path	The path of this test relative to the Tests directory in the project repository.
Status	The planning status of the test. The default status is Design.
Subject	The subject folder in the test plan tree in which the test resides.
Template	Indicates whether the manual test or UFT GUI test is a test template. The value in this column is Y if the test is a test template; N or empty otherwise. For task details, see "How to Create Tests" on page 398 .
Test ID	A unique numeric ID for the test, assigned automatically by ALM. This is a read-only field.
Test Name	The name of the test.
Type	The test type of the current test. For more details, see "Test Types" on page 401 .

Test Parameter Fields

UI Element (A - Z)	Description
Default Value	A default value for the parameter. The default value helps users assign an actual value for test runs. Click in the text box to display a toolbar for formatting and spell checking the text.
Description	A description of the parameter. Click in the text box to display a toolbar for formatting and spell checking the text.
Modified	The date and time on which the test parameter was last modified.
Order	The position of the parameter in the set of parameters.
Parameter Name	The parameter name.
Used	Indicates whether the parameter is included in a design step.

Test Details Dialog Box


The Test Details dialog box enables you to view and update a single test.

The screenshot shows the 'Test Details' dialog box. At the top, there are fields for 'Test ID: 58', '* Test Name: Book Flight', and '* Type: MANUAL'. Below these is a sidebar with icons for 'Details', 'Design Steps', 'Parameters', 'Attachments', 'Test Configurations', 'Req Coverage', 'Linked Defects', 'Dependencies', 'Business Models...', and 'History'. The main area is titled 'Details' and contains several fields: '* Level: Advanced', '* Priority: 5-Urgent', '* Reviewed: Reviewed', 'Creation D...: 1/22/2009', 'Designer: alice_alm', 'Reviewer: shelly_alm', and 'Status: Ready'. Below these fields are tabs for 'Description' and 'Comments'. The 'Description' tab is active, showing a 'Summary' section with the text: 'The test completes the Book Flight page. The test is the reusable template (other tests can contain a call to it in order to guide a user through the Book Flight page completion procedure).' At the bottom are 'OK', 'Cancel', and 'Help' buttons.

To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Testing, select Test Plan. 2. Right-click a test, and select Test Details.
------------------	---

Relevant tasks	"How to Plan Tests in ALM" on page 394 "How to Create Tests" on page 398
See also	"Test Plan Module Fields" on page 416

User interface elements are described below:

UI Element	Description
	First/Previous/Next/Last Entity. Allows you to browse through the tests.
	Flag for Follow Up. Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for the test. For details, see "Flag For Follow Up Dialog Box" on page 98 .
	Send by Email. Sends an email with the test details. For more details, see "Send E-mail Dialog Box" on page 79 .
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Details	<p>Lists the test fields. For details on test fields, see "Test Plan Module Fields" on page 416.</p> <p>Tip: Clicking in the Description or Comments field in this tab displays a toolbar for formatting and spell checking the text.</p>
Design Steps	<p>Lists the instructions on how to execute the selected test. For more details, see "Design Steps Tab/Design Step Details Dialog Box" on page 464.</p> <p>Not available for: Business Process Testing</p>
Test Script	<p>For automated tests: The test script that is run by the testing tool for the currently selected test. For user interface details, see "Test Script Tab" on page 469.</p> <p>For business process tests and flows: The components and flows that are run for the currently selected business process test, or the components that are run for the currently selected flow. For user interface details, see the <i>HP Business Process Testing User Guide</i>.</p>
Parameters	Lists parameters associated with the currently selected test. Parameters can be incorporated in the test's design steps. For more details, see "Parameters Tab/Parameters Dialog Box" on page 452 .

UI Element	Description
Test Configurations	Displays configurations of a selected test. For more details, "Test Configurations Tab" on page 480.
Attachments	Lists attachments that provide additional information about the currently selected test. For more details, see "Attachments Page" on page 83.
Req Coverage	Lists the requirements that are met by the currently selected test. For more details, see "Req Coverage Tab " on page 433.
Linked Defects	Lists the defects linked to the currently selected test. For more details, see "Linked Defects/Entities Page" on page 762.
Dependencies	Displays dependency relationships that exist between entities such as test resources and tests. For more information, see "Dependencies Tab" on page 510.
Business Models Linkage	Lists the business process model entities that are linked to the selected test. For more details, see "Business Models Linkage Tab" on page 439.
Criteria	Display criteria of a selected business process test. For more details, see "Criteria Tab " on page 472.
History	Lists changes made to the currently selected test. For more details, see "History Tab" on page 78.







New Test Dialog Box

This dialog box enables you to add a new test to the test plan tree.

To access	Select a subject folder in the test plan tree, right-click and select New Test .
------------------	---

Important information	<p>If you have installed the Unified Functional Testing Add-in on your machine, the New Test dialog box includes the Template box.</p> <p>Tip: You can set default values for certain test fields. For user interface details, see "Set Default Values Dialog Box" on page 89.</p>
Relevant tasks	"How to Create Tests" on page 398

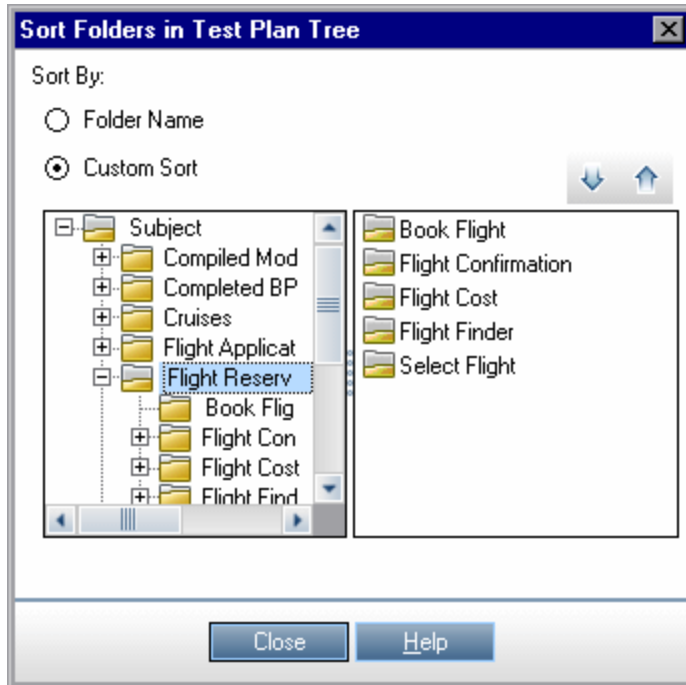
User interface elements are described below:


UI Element	Description
	Clear All Fields. Clears all data in the dialog box.
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Use Default Values. Fills in certain fields with default values, as specified in the Set Default Values dialog box. For user interface details, see "Set Default Values Dialog Box" on page 89 .
	Set Default Values. Enables you to specify default values for certain fields using the Set Default Values dialog box. For user interface details, see "Set Default Values Dialog Box" on page 89 .
Test Name	<p>Type a name for the new test.</p> <p>Syntax exceptions: A test name cannot include the following characters: \ / : " ? < > * % ' </p>

UI Element	Description
Type	<p>Select a manual or automated test type. For considerations on whether or not to automate a test, see "Test Automation " on page 460.</p> <p>For details on test types, see "Test Types" on page 401.</p> <div data-bbox="553 394 1383 793"> <p>Note:</p> <ul style="list-style-type: none"> • If you select the MANUAL test type, you can design the test manually and then convert the test to an automated test type later in the Design Steps tab. • If you select an automated test type, you can select a different automated testing tool later in the Design Steps tab, but you cannot convert it back to the MANUAL test type. • If you select the FLOW test type, you cannot convert it to a different test type. </div>
Template	<p>Available if you selected QUICKTEST_TEST from the Test Type list.</p> <p>Select another GUI test as a template for the new test. The template test is copied to your new test, without the test results.</p> <p>To select a template test, click the browse button. The Select Tests dialog box opens. By default, only UFT template tests are displayed.</p> <p>Select the template test and click the Add Test button.</p> <div data-bbox="553 1104 1383 1350"> <p>Note: To set the UFT add-ins that ALM associates with a new GUI test, choose a template test that lists the appropriate add-ins. Alternatively, use the default template test provided on your ALM client. This test loads the Web and ActiveX add-ins by default. For more information, refer to the UFT documentation and the relevant UFT add-in documentation.</p> </div>
Details	<p>Lists test fields. Required fields are displayed in red. For details on the available test fields, see "Test Plan Module Fields" on page 416.</p> <div data-bbox="553 1465 1383 1579"> <p>Tip: Clicking in the Description or Comments field on this page displays a toolbar for formatting and spell checking the text.</p> </div>
Attachments	<p>Enables you to add attachments that provide additional information about the new test. For more details, see "Attachments Page" on page 83.</p>


Sort Folders in Test Plan Tree Dialog Box

This dialog box enables you to sort folders in the test plan tree and create a custom sort according to your needs.



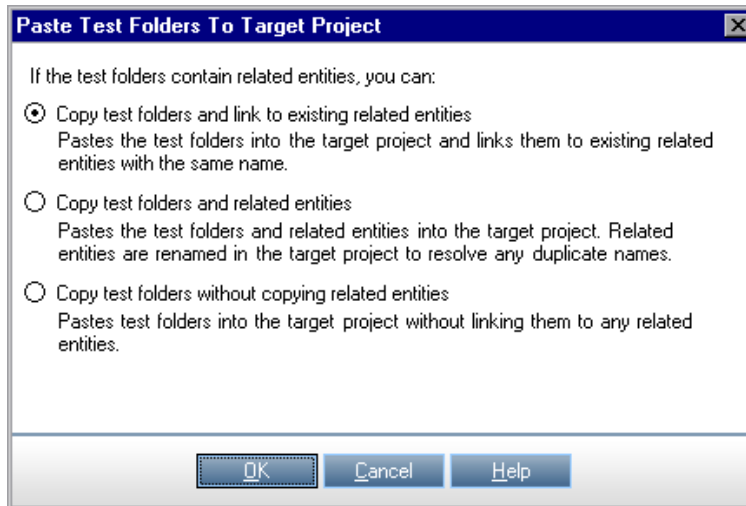
To access	<ol style="list-style-type: none"> 1. In the Test Plan module, choose View > Test Plan Tree. 2. Select a folder, and click Sort Folders .
Important information	<ul style="list-style-type: none"> • You must have project administrator permissions to create a custom sort. For more information on assigning user group permissions, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. • To view the changes in the test plan tree, click Refresh.

User interface elements are described below:

UI Element	Description
Folder Name	Sorts the subfolders alphabetically in the selected test subject folder.
	Move Down Item/Move Up Item. Moves the selected subfolder up or down within the parent folder.
Custom Sort	<p>Enables you to reorder the subfolders in a selected test subject folder.</p> <p>Select a test subject folder in the left pane, and rearrange the subfolders in the right pane by dragging or using the vertical arrows.</p>

Paste Tests/Folders to Target Project Dialog Box

This dialog box enables you to choose how ALM copies a test or test subject across projects.



To access	<ol style="list-style-type: none">1. In the test plan tree or grid, select a test or subject folder.2. Right-click and select Copy.3. Open another instance of ALM and log in to the project to which you want to paste the tests.4. Right-click and select Paste.
Important information	To copy tests across projects, both projects must use the same ALM version and patch level.

User interface elements are described below:

UI Element	Description
Copy tests/test folders and link to existing related entities	ALM copies the tests or subject folders and pastes them into the target project. The copied tests or subject folders are linked to existing test resources and called tests with the same name and path. If a related test resource or a test does not exist in the target project, ALM copies it to the target project.
Copy tests/test folders and related entities	ALM copies the tests or subject folders along with the related test resources and called tests, and pastes them into the target project. If a related test resource or a called test already exists in the target project, the copied related test resource or called test is renamed to resolve the duplicate name.

UI Element	Description
Copy tests/test folders without copying related entities	ALM copies the tests or subject folders without copying the related test resources or called tests, and pastes them into the target project. The copied items are not linked to any related entities.

Chapter 24

Requirement and Test Coverage

This chapter includes:

Requirement and Test Coverage Overview.....	428
How to Create Coverage.....	428
Requirement and Test Coverage User Interface.....	431

Requirement and Test Coverage Overview

It is essential that the tests in your test plan meet your original requirements. To keep track of the relationship between your requirements and tests, you add links between them.

In the Test Plan module, you create requirement coverage by selecting requirements to link to a test. Requirement coverage assists you in assessing the impact of a change in the test or requirement. A test can cover more than one requirement.

Alternatively, in the Requirements module, you create test coverage by linking tests to a requirement. Test coverage assists you in assessing the impact of a change in the test or requirement. A requirement can be covered by more than one test.

Instead of covering each requirement only at the level of the test, you can cover a requirement by test configurations. A **test configuration** represents a specific use-case of a test. For example, a test configuration can specify a subset of data or a run-time environment that the test should use. Covering test configurations with requirements provide finer granularity for requirement coverage by enabling coverage by different use-cases of a test. For more details on test configurations, see ["Test Configurations Overview" on page 476](#).

If you work with the **Business Models** module, you can link model entities to tests, either in the Test Plan module or in the Business Models module.

Business Process Testing: When creating coverage between requirements and business process tests, instead of covering each requirement only at the level of a test and/or its test configurations, you can also define coverage by a criterion. HP Application Lifecycle Management (ALM) creates a criterion for each business component and flow. You decide whether to include the criterion for calculating coverage. For more details on criteria, see the *HP Business Process Testing User Guide*.

Note: You can link requirements and tests to defects. This can help you ensure compliance with your testing needs throughout the application management process. If a requirement changes, you can immediately identify which tests and defects are affected, and who is responsible. For more details, see ["Defect Linkage" on page 738](#).

For task details, see ["How to Create Coverage" below](#).

How to Create Coverage

The following steps describe how to create coverage by linking requirements to tests. Instead of covering each requirement only at the level of the test, you can cover a requirement by test configurations.

You can create coverage from the Requirements or the Test Plan module. It also describes how to examine the status of your requirements by understanding the breakdown of child requirements according to test coverage.

To learn more about creating coverage, see ["Requirement and Test Coverage Overview" above](#).

Tip: For a use-case scenario related to this task, see ["How to Create Coverage - Use-Case"](#)

[Scenario " on next page.](#)

Note: This task is part of a higher-level task. For details, see ["How to Plan Tests in ALM" on page 394.](#)

- ["Link requirements to tests" below](#)
- ["Link tests to requirements" below](#)
- ["Analyze coverage" below](#)

Link requirements to tests

1. In the Test Plan module, select the **Test Plan Tree** view.
2. Select a test and click the **Req Coverage** tab. Click the **Select Req** button to display the requirements tree in the right pane. Add to coverage your selected requirements. For user interface details, see ["Req Coverage Tab " on page 433.](#)

Link tests to requirements

1. In the Requirements module, select the **Requirement Details** view.
2. Select a requirement and click the **Test Coverage** tab. Click the **Select** button to display the test plan tree in the right pane. Add to coverage your selected tests. For user interface details, see ["Test Coverage Page" on page 441.](#)

Analyze coverage

In the **Requirements** module, select **Coverage Analysis** from the **View** menu. Examine the status of your requirements and child requirements according to test coverage.

For user interface details, see ["Coverage Analysis View" on page 432.](#)

How to Create Coverage - Use-Case Scenario

This use-case scenario provides an example of creating coverage in ALM.

Note: For a task related to this scenario, see ["How to Create Coverage" on previous page.](#)

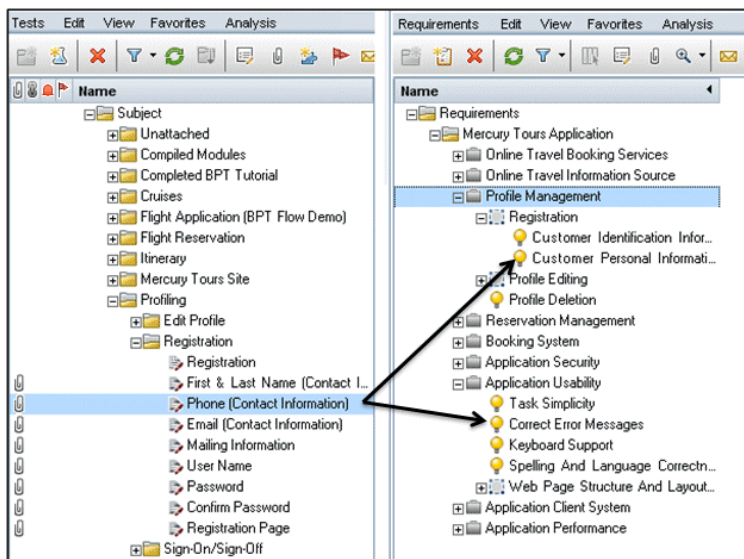
This scenario includes the following steps:

- ["Link requirements to tests" below](#)
- ["Link tests to requirements" on next page](#)
- ["Analyze coverage" on next page](#)

Link requirements to tests

Using the **ALM_Demo** project, in the test plan tree, under **Profiling**, expand the **Registration** folder and select the **Phone (Contact Information)** test.

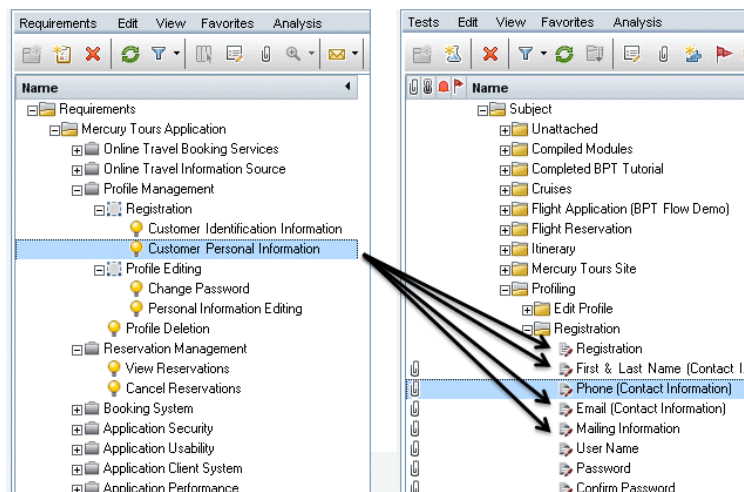
The **Phone (Contact Information)** test verifies the customer phone number in the Registration page. If you click the **Req Coverage** tab, you can see that this test covers the following requirement topics: **Customer Personal Information**, and **Correct Error Messages**.



Link tests to requirements

You can also link coverage in the **ALM_Demo** project from the other direction. In the Requirements module, go to the requirements tree. Under **Requirements**, expand the requirement topics **Mercury Tours Application**, **Profile Management**, and **Registration**, and then select the requirement **Customer Personal Information**.

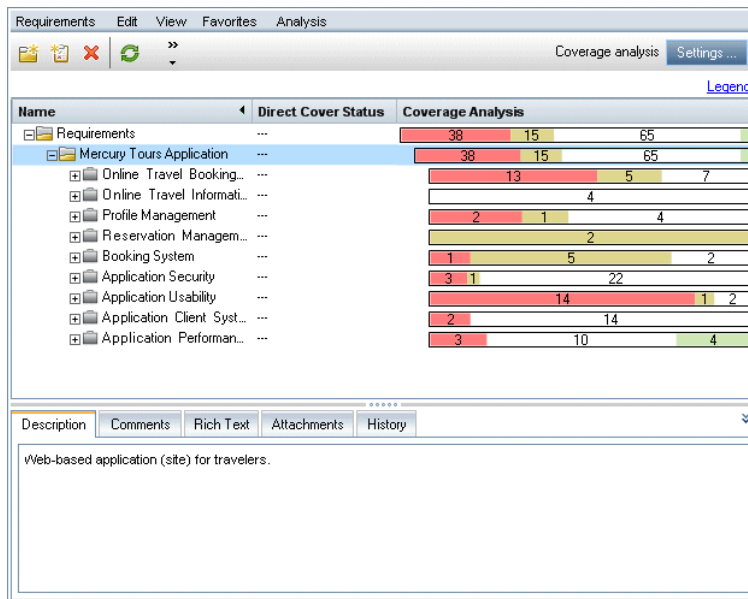
The **Customer Personal Information** requirement ensures that the flight reservation system includes personal information about the customer. In the **Test Coverage** tab, you can see that this requirement is covered by the following tests: **Email (Contact Information)**, **First & Last Name (Contact Information)**, **Mailing Information**, **Phone (Contact Information)**, and **Registration**.



Analyze coverage

In the **ALM_Demo** project, select the requirement **Application Client System**, located under the

requirement **Mercury Tours Application**. This requirement has twelve children, including itself. In the Coverage Analysis, you can see that two of the children have a status of Failed (one or more of the tests covered by the requirement failed). When you analyze this, you can see that three (27%) of the tests associated with this requirement failed.



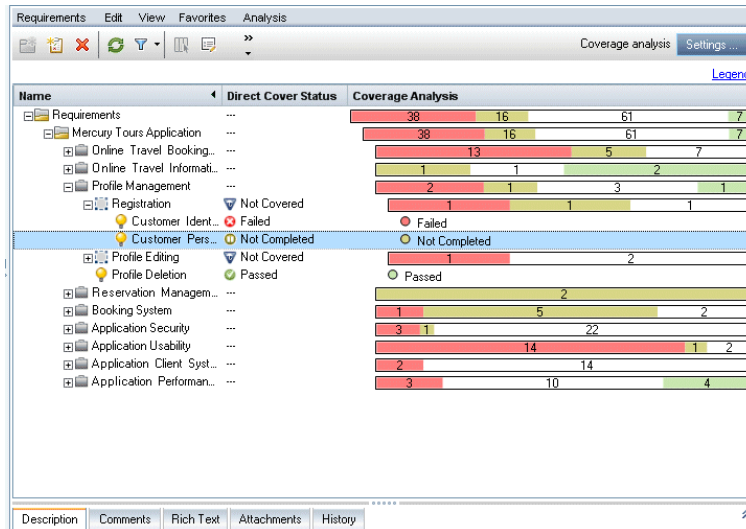
Requirement and Test Coverage User Interface

This section includes:

Coverage Analysis View.....	432
Req Coverage Tab.....	433
Add Configuration Coverage Dialog Box.....	437
Add Advanced Coverage Dialog Box.....	438
Business Models Linkage Tab.....	439
Test Coverage Page.....	441
Analysis Settings Dialog Box.....	445
Coverage Analysis Dialog Box.....	446
Add Criterion Coverage Dialog Box.....	447

Coverage Analysis View


This view enables you to examine the status of your requirements by displaying the breakdown of child requirements according to test coverage. You can set the coverage analysis by cycle, enabling you to view in the analysis only the coverage of runs that are assigned to specific cycles.



To access	In the Requirements module, select Coverage Analysis from the View menu.
Important information	By default, coverage is available only for the following requirement types: Functional , Testing , and Undefined .
Relevant tasks	"How to Create Coverage" on page 428
See also	"Requirements Module Window" on page 261

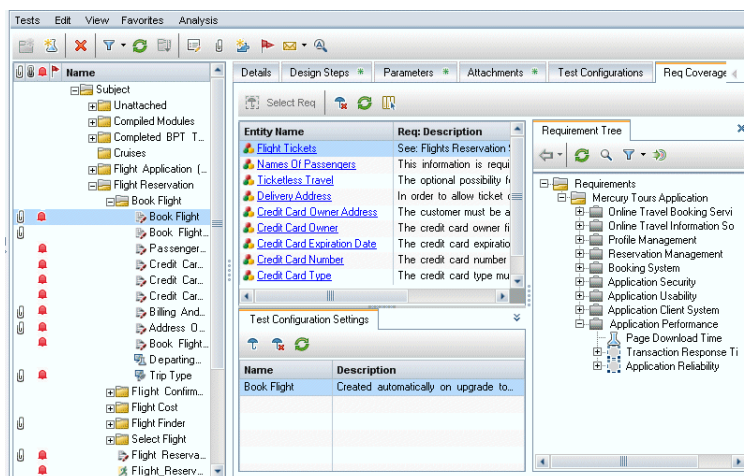
User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<Coverage Analysis view common UI elements>	<ul style="list-style-type: none"> Coverage Analysis fields. For field definitions, see "Requirements Module Fields" on page 274. Coverage Analysis view menus and buttons. For command and button descriptions, see "Requirements Module Menus and Buttons" on page 265. Coverage Analysis icons. For icon descriptions, see "Requirements Module Icons" on page 272.
Settings ...	Opens the Analysis Settings dialog box, enabling you to define the coverage analysis settings. For more details, see "Analysis Settings Dialog Box" on page 445.

UI Element	Description
Legend	<p>Displays the color coding used to indicate the direct cover status of the requirements and their children.</p> <p>A requirement status can be one of the following:</p> <ul style="list-style-type: none"> • Blocked. One or more tests covered by the requirement have an execution status of "Blocked". • Failed. One or more tests covered by the requirement have an execution status of "Failed", and none has an execution status of "Blocked". • No Run. All the tests covered by the requirement have an execution status of "No Run". • Not Completed. One or more tests covered by the requirement have an execution status of "Not Completed", and none has an execution status of "Blocked" or "Failed". Alternatively, tests covered by the requirement have execution statuses of "Passed" and "No Run". • Not Covered. The requirement has not been linked to a test. • Passed. All the tests covered by the requirement have an execution status of "Passed".
	<p>Show. Displays information panel tabs on the bottom of the requirement view. For more details, see "Requirements Module Window" on page 261.</p>

Req Coverage Tab

This tab enables you to view the requirements that are covered by a selected test in the test plan tree.







To access	In the Test Plan module, select the Test Plan Tree view. Select a test and click the Req Coverage tab.
------------------	---

Important information	<ul style="list-style-type: none"> Requirement coverage is created automatically when you convert a requirement to a test. Therefore, even if you have not yet added requirement coverage, it may already exist. For more details, see "Convert to Tests Wizard" on page 283. The following requirement types are set so that, by default, you cannot add coverage to them: Business, Folder, and Group. To enable you to add coverage, you must enable test coverage for these requirement types. For more details, see the <i>HP Application Lifecycle Management Administrator Guide</i>.
Relevant tasks	"How to Create Coverage" on page 428 "How to Work with Test Configurations" on page 476
See also	"Requirement and Test Coverage Overview" on page 428 "Test Configurations Overview" on page 476

Requirement Coverage Grid





User interface elements are described below (unlabeled elements are shown in angle brackets):



UI Element (A - Z)	Description
 Select Req	Displays the requirements tree in the right pane, enabling you to add requirement coverage to a test. For more details, see "Requirement Tree Pane" on next page .
	Remove Selected. Removes selected requirements from the coverage grid.
	Refresh All. Refreshes the coverage grid.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the coverage grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .
<coverage grid>	For field definitions, see "Requirements Module Fields" on page 274 .
Coverage Mode	Indicates whether an entity is covered by selected test configurations or all test configurations.
Coverage Type	The type of coverage.
Entity Name	The name of the requirement.

UI Element (A - Z)	Description
Go To Requirement in Requirements Tree	Right-click a requirement in the coverage grid to go to the requirements tree in the Requirements module and highlight the selected requirement.
Show Full Path	Right-click a requirement in the coverage grid to display the location of the selected requirement in the requirements tree.

Requirement Tree Pane

User interface elements are described below:

UI Element	Description
	<p>Add to Coverage. Adds requirement coverage to a specified test.</p> <p>Includes the following options:</p> <ul style="list-style-type: none"> • Add to Coverage (Without Children). Adds selected requirement without its child requirements to the coverage grid. Alternatively, you can double-click or drag the selected requirement to the coverage grid. <p>When the specified test contains more than one test configuration, the Add Configuration Coverage dialog box opens. For more details, see "Add Configuration Coverage Dialog Box" on page 437.</p> <ul style="list-style-type: none"> • Add to Coverage (Include Children). Adds selected requirements, including their child requirements. The associated test configurations are added to the Test Configuration Settings pane. <div style="background-color: #f0f0f0; padding: 10px; margin: 10px 0;"> <p>Note: Only child requirements that match the current filter and that belong to a type that supports test coverage are added to the coverage.</p> </div> <p>Business Process Testing: When adding requirement coverage to a business process test, the Add Advanced Coverage dialog box opens. For more details, see "Add Advanced Coverage Dialog Box" on page 438.</p>
	<p>Refresh. Refreshes the requirements tree.</p>
	<p>Find. Searches for a specific requirement in the tree.</p> <p>Type the name (or part of the name) of the requirement in the Find box and click Find. If the search is successful, the requirement is highlighted in the tree.</p>
	<p>Set Filter. Filters and sorts the requirements in the requirements tree. For more details, see "Filter Dialog Box" on page 61.</p>

UI Element	Description
	Go to Requirement by ID. Opens the Go To Requirement dialog box, enabling you to find a specific requirement by ReqID .
	Note: You can go only to requirements that are in the current filter.
	Close. Hides the requirements tree in the right pane.

Test Configuration Settings Tab




This tab displays the test configurations associated with the requirement coverage. For more details, see "[Test Configuration Settings Tab](#)" on page 485.

Criterion Settings Tab

This tab enables you to add or remove criterion of a selected covered test.

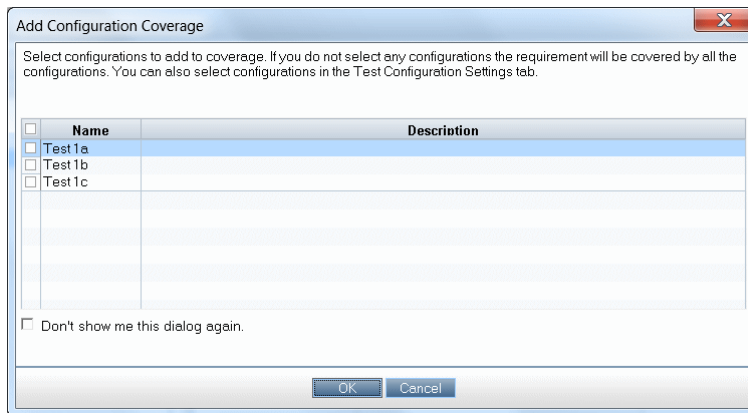
Important information	Business Process Testing: Functionality related to test criteria is available only for business process tests. For details, see the <i>HP Business Process Testing User Guide</i> .
------------------------------	--


User interface elements are described below:

UI Element	Description
	Add Criteria. Opens the Add Criteria dialog box enabling you to add criteria to the criterion settings grid. For more details, see " Add Criterion Coverage Dialog Box " on page 447.
	Remove Criteria. Removes selected criteria from the criterion settings grid.
	Note: If the last criterion is removed, coverage reverts to test-level.
	Refresh. Refreshes the criterion settings grid.

Add Configuration Coverage Dialog Box

This dialog box enables you to add test configurations to coverage.



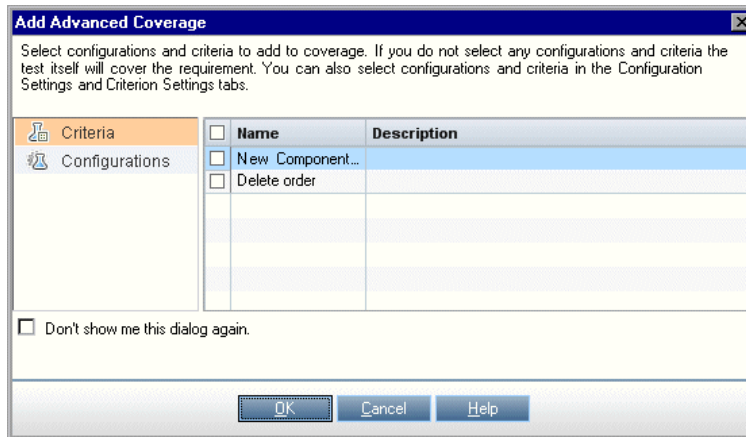
To access	<ol style="list-style-type: none"> 1. In the Test Plan module, select a test that contains more than one test configuration from the test plan tree. Click the Req Coverage tab. 2. Click Select Req to display the Requirement Tree pane. 3. Select a requirement. Click Add to coverage (Without Children) . The Add Configuration Coverage dialog box opens.
Important information	<ul style="list-style-type: none"> • This dialog box opens only if the selected test contains more than one test configuration. • Business Process Testing: When adding requirement coverage to a business process test, the Add Advanced Coverage dialog box opens. For more details, see "Add Advanced Coverage Dialog Box" on next page.
Relevant tasks	"How to Create Coverage" on page 428
See also	"Coverage Analysis View" on page 432


User interface elements are described below:

UI Element	Description
Name	The name of the test configuration.
Description	The description of the test configuration.
Don't show me this dialog again	<p>Hides this dialog box.</p> <p>To reveal this dialog box, select View > Req Coverage > Show Advanced Coverage dialog.</p>

Add Advanced Coverage Dialog Box

This dialog box enables you to add criteria and test configurations to coverage.



To access	<ol style="list-style-type: none"> 1. In the Test Plan module, select a business process test from the test plan tree. Click the Req Coverage tab. 2. Click Select Req to display the Requirement Tree pane. 3. Select a requirement. Click Add to coverage . The Add Advanced Coverage dialog box opens.
Important information	<ul style="list-style-type: none"> • Business Process Testing: This dialog box is available only for business process tests. • This dialog box opens only if the selected business process test contains criteria and test configurations.
Relevant tasks	"How to Create Coverage" on page 428
See also	"Coverage Analysis View" on page 432

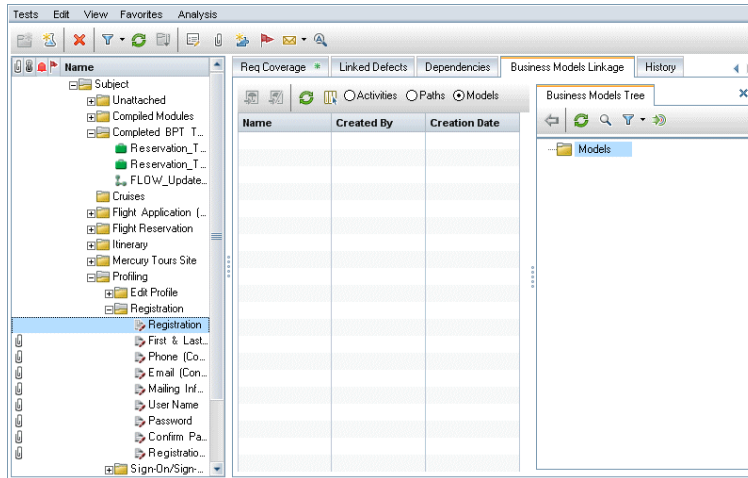
User interface elements are described below:

UI Element	Description
Criteria	<p>Enables you to select criteria.</p> <p>Business Process Testing: Functionality related to test criteria is available only for business process tests. For details, see the <i>HP Business Process Testing User Guide</i>.</p>
Configurations	<p>Enables you to select test configurations. For details, see the "Test Configurations Overview" on page 476.</p>
Don't show me this dialog again	<p>Hides this dialog box.</p> <p>To reveal this dialog box, select View > Req Coverage > Show Advanced Coverage dialog.</p>

Business Models Linkage Tab

Requirements module: This tab enables you to view the business process model entities that are covered by a selected requirement in the requirements tree.


Test Plan module: This tab enables you to view the business process model entities that are covered by a selected test in the test plan tree.






To access	<p>In the Requirements module:</p> <p>Select the Requirement Details view, select a requirement, and click the Business Models Linkage tab.</p> <p>In the Test Plan module:</p> <p>Select the Test Plan Tree view, select a test (or a Business Process Testing flow), and click the Business Models Linkage tab.</p>
Important information	Business models can be linked to tests automatically by converting representative requirements of model entities to tests.
Relevant tasks	"Link Requirements and Tests to Model Entities" on page 332
See also	"Business Process Models Overview" on page 328

Business Models Linkage Grid







User interface elements are described below (unlabeled elements are shown in angle brackets>):



UI Element	Description
	Add to Linkage. Displays the business models tree in the right pane, enabling you to add business model entities to a test or requirement. For more details, see "Business Models Tree Pane" on next page.

UI Element	Description
	Remove from Linkage. Removes selected model entities from the linkage grid.
	Refresh. Refreshes the linkage grid to display the most up-to-date information.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the linkage grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .
Activities	Lists the business process model activities linked to the selected requirement or test.
Paths	Lists the business process model paths linked to the selected requirement or test.
Models	Lists the business process models linked to the selected requirement or test.
<linkage grid>	Click a link in the grid to go to the model entity in the business models tree. For field definitions, see "Business Models Module Fields" on page 347 .

Business Models Tree Pane

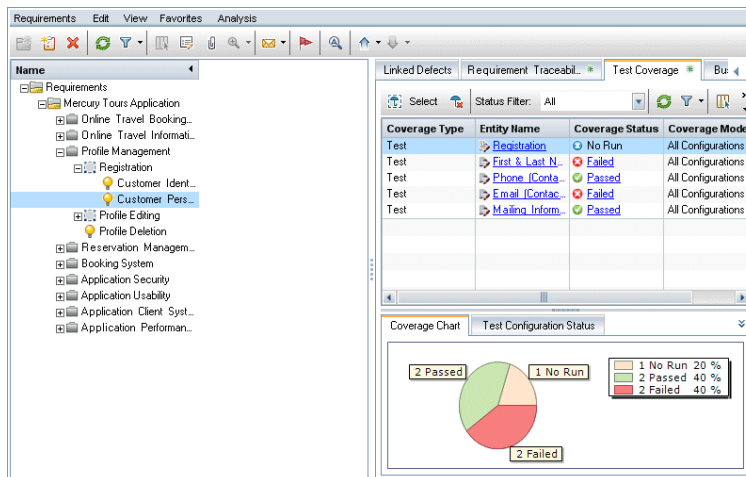
User interface elements are described below:

UI Element	Description
	Add to Linkage. Links the selected model entity to the current requirement or test. Tip: You can also link model entities by double-clicking a model entity, or by dragging it from the business models tree to the linkage grid.
	Show Entity Details. Opens the Details dialog box for the selected entity in read-only mode.
	Go to Entity in Module Tree. Navigates to the selected entity's location in that entity's module, and highlights the entity.
	Refresh. Refreshes the business models tree.
	Find. Searches for a specific model entity in the tree. Type the name (or part of the name) of the model entity in the Find box and click Find . If the search is successful, the entity is highlighted in the tree.
	Filter/Sort. Filters and sorts the entities in the business models tree. For more details, see "Filter Dialog Box" on page 61 .

UI Element	Description
	Go to Model Folder by ID. Opens the Go To Model dialog box, enabling you to find a specific model by Model ID.
	Note: You can only go to models that are in the current filter.
	Close. Hides the business models tree in the right pane.

Test Coverage Page






This page enables you to view the tests that are covering a selected requirement in the requirements tree.




To access	In the Requirements module, select the Requirement Details view. Select a requirement and click the Test Coverage tab.
Important information	<ul style="list-style-type: none"> Test coverage is created automatically when you generate a test from a requirement. Therefore, even if you have not yet added test coverage, it may already exist. For more details, see "Convert to Tests Wizard" on page 283. The following requirement types are set so that, by default, you cannot add coverage to them: Business, Folder, and Group. <p>To enable you to add coverage, you must enable test coverage for these requirement types. For more details, see the <i>HP Application Lifecycle Management Administrator Guide</i>.</p>
Relevant tasks	"How to Create Coverage" on page 428
See also	"Requirement and Test Coverage Overview" on page 428

Test Coverage Grid

User interface elements are described below (unlabeled elements are shown in angle brackets):







UI Element	Description
	Select Tests. Displays the test plan tree in the right pane, enabling you to add test coverage to a requirement. For more details, see "Test Plan Tree Pane" on next page .
	Remove From Coverage. Removes selected tests from the coverage grid. Caution: Deleting coverage in full coverage mode may also delete coverage from child requirements.
Status Filter	Filters the coverage grid by status type.
	Refresh All. Refreshes the coverage grid.
	Set Filter/Sort. Filters and sorts the tests in the coverage grid. For more details, see "Filter Dialog Box" on page 61 .
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the coverage grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .
Full Coverage	Shows the test coverage of all the children of the selected requirement.
<coverage grid>	For field definitions, see "Test Plan Module Fields" on page 416 .
Coverage Type	The type of coverage.
Entity Name	The name of the test.
Coverage Status	The current execution status of the test.
Coverage Mode	Indicates whether the test coverage includes all the test configurations associated with a selected test, or specific test configurations. The value in this column can be Selected Configurations or All Configurations .
Go To Test in Test Lab	Right-click a test in the coverage grid to go to the Execution Grid in the Test Lab module and highlight the selected test.




UI Element	Description
Go To Test in Test Plan	Right-click a test in the coverage grid to go to the test plan tree in the Test Plan module and highlight the selected test.
	Show/Hide. Shows/hides the lower pane of the Test Coverage page.

Test Plan Tree Pane

This pane enables you to add tests to the requirement's test coverage. When adding tests, ALM also adds the associated test configurations displayed in the Test Configurations pane.

User interface elements are described below:

UI Element	Description
	<p>Add to Coverage. Adds selected test including its associated test configurations to the requirement's test coverage. Alternatively, you can double-click or drag the selected test to the test coverage grid.</p> <p>Note: If you select a folder, only tests that match your current filter are added to the test coverage.</p> <p>Business Process Testing:When adding a business process test, the Add Criterion Coverage dialog box opens. For more details, see "Add Criterion Coverage Dialog Box" on page 447.</p> <p>Tip: To add selected configurations of a test to the requirement's test coverage, add coverage from the Test Configurations pane.</p>
	Show Test Details. Opens the Details dialog box for the selected test in read-only mode.
	Go to Test in Module Tree. Navigates to the selected test's location in the Test Plan module, and highlights the test.
	Refresh All. Refreshes the requirements tree.
	Set Filter/Sort. Filters and sorts the tests in the tree. For more details, see "Filter Dialog Box" on page 61 .
	<p>Find. Searches for a specific test in the tree.</p> <p>Type the name (or part of the name) of the test in the Find box and click Find. If the search is successful, the test is highlighted in the tree.</p>

UI Element	Description
	Go to Test by ID. Opens the Go To Test dialog box, enabling you to find a specific test by Test ID . Note: You can only go to tests that are in the current filter.
	Close. Hides the Test Plan Tree pane.
	Show/Hide. Shows/hides the Test Configurations pane.

Test Configurations Pane

This pane enables you to add selected test configurations to the requirement's test coverage. For more details, see ["Test Configurations Pane" on page 486](#).

Coverage Chart tab

This tab displays a pie chart which graphically shows the run status of the tests in the coverage grid.

Test Configuration Status tab




This tab displays the status of the configurations associated with a covered test. For more details, see ["Test Configuration Status Tab" on page 488](#).

Criterion Settings tab

This tab enables you to add or remove criterion of a selected covered test.

Important information	Functionality related to test criteria is available only for business process tests. For details, see the <i>HP Business Process Testing User Guide</i> .
------------------------------	---

User interface elements are described below:

UI Element	Description
	Add Criteria. Opens the Add Criteria dialog box enabling you to add criteria to the criterion settings grid. For more details, see "Add Criterion Coverage Dialog Box" on page 447 .
	Remove Criteria. Removes selected criteria from the criterion settings grid.
	Refresh. Refreshes the criterion settings grid.

Analysis Settings Dialog Box

This dialog box displays the coverage status for a requirement and its children according to the current analysis settings.

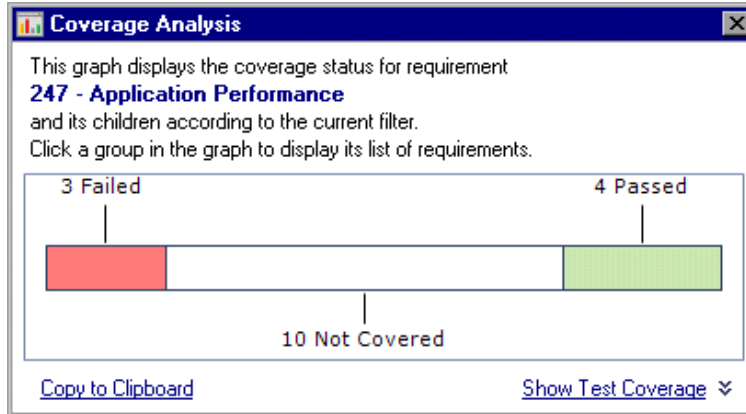
To access	In the Coverage Analysis view, click the Settings button.
Relevant tasks	"How to Create Coverage" on page 428
See also	"Coverage Analysis View" on page 432

User interface elements are described below:

UI Elements	Description
Coverage Analysis	<p>Calculates the current coverage status of the requirements based on the Direct Cover Status field values. The status is graphically displayed under the Coverage Analysis field of the Coverage Analysis view.</p> <p>For more details on the Direct Cover Status field, see "Direct Cover Status" on page 276.</p> <p>For more details on the Coverage Analysis field, see "Coverage Analysis" on page 275.</p>
Execution Analysis	<p>Calculates the coverage status of the requirements based on the runs of the covering tests that were run in the selected cycles. The Execution Analysis option does not use the Direct Cover Status field in its calculations.</p> <p>Tests that were not assigned to run in any of the selected cycles are assigned the status No Run. Requirements not covered by any tests are not counted in the analysis.</p> <p>In the Execution Analysis box, click the arrow button. The releases tree opens. Expand the tree and select the cycles for which you want to analyze coverage.</p> <p>The status is graphically displayed under the Coverage Analysis field of the Coverage Analysis view. For more details on the Coverage Analysis field, see "Coverage Analysis" on page 275.</p> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p>Note: When the Execution Analysis option is selected, the Direct Cover Status field is unavailable in the Coverage Analysis view.</p> </div>

Coverage Analysis Dialog Box

This dialog box displays the coverage status for a requirement and its children according to the current filter.



To access	In the Coverage Analysis view, right-click a requirement and choose Coverage Analysis .
Relevant tasks	"How to Create Coverage" on page 428
See also	"Coverage Analysis View" on page 432

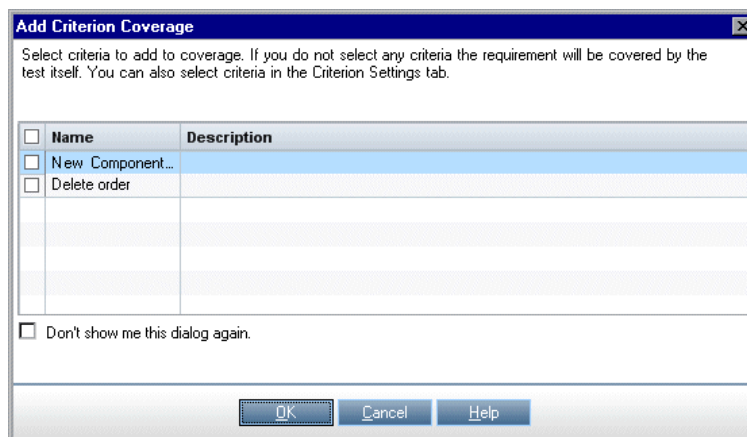
User interface elements are described below (unlabeled elements are shown in angle brackets):




UI Element	Description
<graph area>	<p>Displays the coverage status for a selected requirement and its children.</p> <p>Click a section in the graph to display a list of child requirements with the selected status.</p> <p>From the list, you can select a requirement and click Go To to highlight it in the requirements tree.</p> <p>Example: Clicking the Failed area lists the requirements with the status of Failed.</p>
Copy to Clipboard	Copies a snapshot of the Coverage Analysis dialog box to the Clipboard.

UI Element	Description
Add Tests Coverage	<p>Extends the dialog box and displays the Test Coverage Chart. This pie chart graphically displays the full test coverage for the requirement, grouped according to test status.</p> <p>Click a section in the chart to view the list of tests with the selected status that cover the requirement and its children. The Tests Coverage dialog box opens with the Status Filter set to the status of the area you selected in the chart. For more details, see "Test Coverage Page" on page 441.</p> <p>Note: If a parent requirement has several children all of which cover the same test, that test is included only once in the parent requirement's Tests Coverage Chart.</p>

Add Criterion Coverage Dialog Box

This dialog box enables you to add criteria for a test.



To access	<ol style="list-style-type: none"> In the Requirements module's Requirement Details view, select a requirement from the requirements tree. Click the Test Coverage tab. Click Select  to display the Test Plan Tree pane on the right-side of the window. In the Test Plan Tree pane, select a business process test and click Add to coverage . Alternatively, in the Test Configurations pane, select a test configuration of a business process test and click Add configurations to coverage . The Add Criterion Coverage dialog box opens.
Important information	<p>Business Process Testing: Functionality related to test criteria is available only for Business Process tests. For details, see the <i>HP Business Process Testing User Guide</i>.</p>

Relevant tasks	"How to Create Coverage" on page 428
See also	"Coverage Analysis View" on page 432

User interface elements are described below:

UI Element	Description
Name	The name of the criterion.
Description	The description of the criterion.
Don't show me this dialog again	Hides this dialog box. To reveal this dialog box, select View > Test Coverage > Show Add Criterion Coverage .

Chapter 25

Test Parameters

This chapter includes:

Test Parameters Overview.....	450
How to Use Test Parameters.....	450
Test Parameters User Interface.....	451

Test Parameters Overview

You can add parameters to your tests. A **test parameter** is a variable that can be assigned a value outside the test from which it is defined. Using parameters can increase the flexibility of your tests by enabling you to run the same test repeatedly with different data each time.

When working with a manual test, you can add parameters to the design steps from within the test or you can add parameters by calling them from other tests. This is useful if you have common steps you often want to perform as part of other tests. For example, you can create a template test **Login_Template** that logs a user in when you start the application. You need to call this test at the beginning of each test. In some cases, you will want to log in as a regular user while in others, you will need to log in as the project administrator.

For this purpose, you can create two parameters, <<<user name>>> and <<<password>>>, and change the values according to the type of test that is calling **Login_Template**. If the most common login is a regular user, you can set the default values for the parameters to a regular user name and password. For more information on calling manual tests, see ["How to Design Test Steps" on page 461](#).

When working with an automated test, you can define parameters for a test script from within the test or you can load parameters from a shared test resource file. For more information on using test resources, see ["How to Use Test Resources" on page 499](#).

For task details, see ["How to Use Test Parameters " below](#).

How to Use Test Parameters

This task describes how to work with test parameters.

To learn more about test parameters, see ["Test Parameters Overview " above](#).

Business Process Testing/UFT: When working with a **business-pprocess** or **GUI-Test** test type, different options are available for working with test parameters. For more details, see the *HP Business Process Testing User Guide*, and the *HP Unified Functional Testing User Guide*.

This task includes the following steps:

- ["Prerequisites" below](#)
- ["Define test parameters" below](#)
- ["Add parameters to a design step" on next page](#)
- ["Assign actual values to parameters" on next page](#)

1. Prerequisites

A manual test is defined in the test plan tree. For more details, see ["How to Plan Tests in ALM" on page 394](#).

2. Define test parameters

In the Parameters tab, plan and define the test parameters you will use in the test design steps. For user interface details, see ["New Test Parameter/Test Parameter Details Dialog Box " on](#)

[page 454.](#)

3. **Add parameters to a design step**

While creating design steps, click **Insert Parameter**  to add a parameter to a design step. The Parameters dialog box opens. For user interface details, see ["Parameters Tab/Parameters Dialog Box" on next page.](#)

Alternatively, in the description or expected result of a design step, type a new or existing parameter name, using the syntax <<<parameter name>>>. If you typed a new parameter, it is automatically added to the test parameter grid.

If you apply formatting to a parameter name in a design step, you must apply the same formatting to the entire parameter name, including the <<< and >>> characters. For example, if you want to italicize the parameter <<<password>>>, you must italicize the entire string <<<password>>> and not just the word password.

4. **Assign actual values to parameters**

Before you run a test, ALM prompts you to assign actual values to the parameters included in the test. The **actual value** is the data that is used during the test run. You can take the parameter default values and use them as actual values.

ALM prompts you to assign actual values at three stages of designing your test. For user interface details, see ["Called Test Parameters/Parameters of Test Dialog Box" on page 455.](#)

According to your testing policy, you can assign actual values at any of these stages:

- **When you call a test with parameters.** If you assign actual values to parameters when you call a test, the values are automatically applied to each test instance that you create from the calling test.
- **When you create a test instance.** If you assign actual values to parameters when you create a test instance, the values are automatically applied to each run of the test instance. You can also assign actual values to test instances in the Execution Settings view of a test instance. see ["Test Instance Details - Execution Settings View" on page 583.](#)
- **When you run a test.** If you assign actual values to parameters for a test run, the values apply to that test run only. If you do not assign actual values at this stage, the test will run with null values.

At each of these stages, you can only assign values to parameters that have not already been assigned values.

Test Parameters User Interface

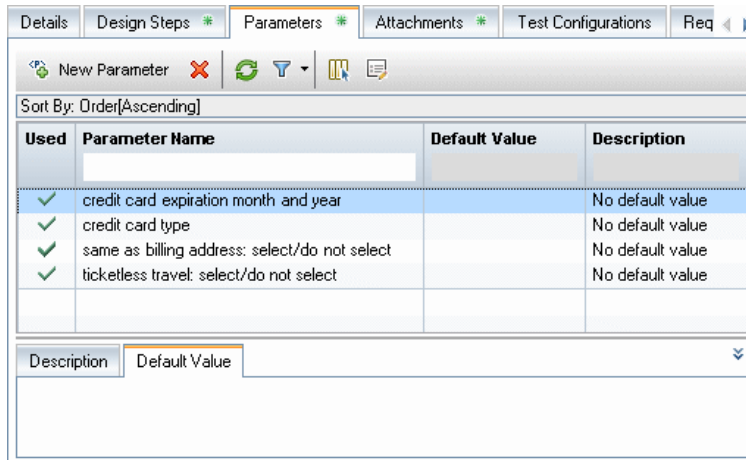
This section includes:


Parameters Tab/Parameters Dialog Box	452
New Test Parameter/Test Parameter Details Dialog Box	454
Called Test Parameters/Parameters of Test Dialog Box	455

Parameters Tab/Parameters Dialog Box


The Parameters tab enables you to create and view test parameters.









The Parameters dialog box enables you to insert test parameters in a test step.



To access	<p>Parameters tab:</p> <p>In the test plan tree, select a test, and click the Parameters tab.</p> <p>Parameters dialog box:</p> <p>In the test plan tree, select a test (other than a business process test or flow) and click the Design Steps tab. Double-click a design step and position the cursor in the Description or Expected Result field. Click Insert Parameter .</p>
Important information	<p>After you select a parameter in the Parameters dialog box, the parameter is inserted at the cursor location in the design step, using the syntax <code><<<parameter name>>></code>.</p>
Relevant tasks	<ul style="list-style-type: none"> • "How to Use Test Parameters " on page 450 • <i>HP Business Process Testing User Guide</i>
See also	<ul style="list-style-type: none"> • "Test Parameters Overview " on page 450 • <i>HP Business Process Testing User Guide.</i>

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element (A - Z)	Description
	<p>Go To Resource. Goes to the test resources tree and highlights the selected resource.</p> <p>Available for: Automated test types</p>

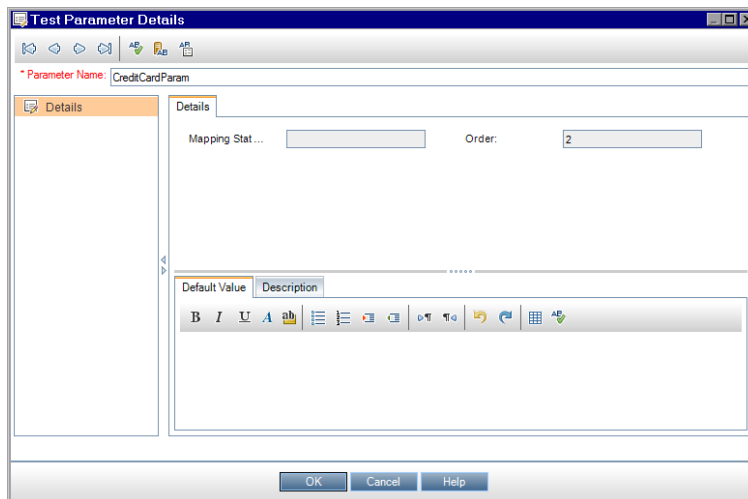
UI Element (A - Z)	Description
	<p>Resource Preview. Displays the content of the selected test resource.</p> <p>Available for: Automated test types</p>
	<p>Map Parameters. Opens the Map Parameters dialog box, enabling you to map the parameter names to the column names in the selected test resource file.</p> <p>Under the Mapped Value column, type the test resource column name for each parameter name.</p> <p>Available for: Automated test types</p>
 New Parameter	<p>New Parameter. Opens the New Test Parameter dialog box, enabling you to define a new parameter. For more details, see "New Test Parameter/Test Parameter Details Dialog Box" on next page.</p>
	<p>Delete. Deletes the currently selected parameter. If you delete a parameter that is included in a design step, the parameter in the design step is replaced by regular text, using the syntax: <code><parameter name></code>.</p>
	<p>Refresh. Refreshes the test parameter so that it displays the most up-to-date information.</p>
	<p>Set Filter/Sort. Opens the Filter Test Parameters dialog box, enabling you to filter and sort the test parameters in the test parameter grid. Any currently applied filters or sorting orders are displayed below the toolbar. For more details, see "Filter Dialog Box" on page 61.</p>
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields are displayed and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86.</p>
	<p>Parameter Details. Opens the Test Parameter Details dialog box, displaying the details of the selected parameter. For more details, see "New Test Parameter/Test Parameter Details Dialog Box" on next page.</p>
<test parameter fields>	<p>For details on the fields available for test parameters, see "Test Plan Module Fields" on page 416.</p>
Data Resource	<p>Enables you to load a test resource file from the test resources tree. For more details on test resources, see "How to Use Test Resources" on page 499.</p> <p>Note: This option is available only for automated test types.</p> <p>Caution: If a test resource was assigned to the parameter but subsequently deleted, the Data Resource field will be read-only and a broken relation image will be displayed.</p>

UI Element (A - Z)	Description
Default Value	The default value of the parameter.
Description	The description of the parameter.
Used	Indicates whether the parameter is included in a design step.

New Test Parameter/Test Parameter Details Dialog Box






The New Test Parameter dialog box enables you to define a test parameter.

The Test Parameter Details dialog box enables you to view and modify test parameter details.



To access	<p>New Test Parameter:</p> <p>In the test plan tree, select a test and click the Parameters tab. Click the New Parameter button. The New Test Parameter dialog box opens.</p> <p>Test Parameter Details:</p> <p>In the test plan tree, select a test and click the Parameters tab. Double-click a parameter.</p>
Important Information	<p>Business Process Testing: When working with a Business Process test type, different options are available for working with test parameters.</p>
Relevant tasks	<ul style="list-style-type: none"> • "How to Use Test Parameters " on page 450 • <i>HP Business Process Testing User Guide</i>
See also	<p>"Test Parameters Overview " on page 450</p>

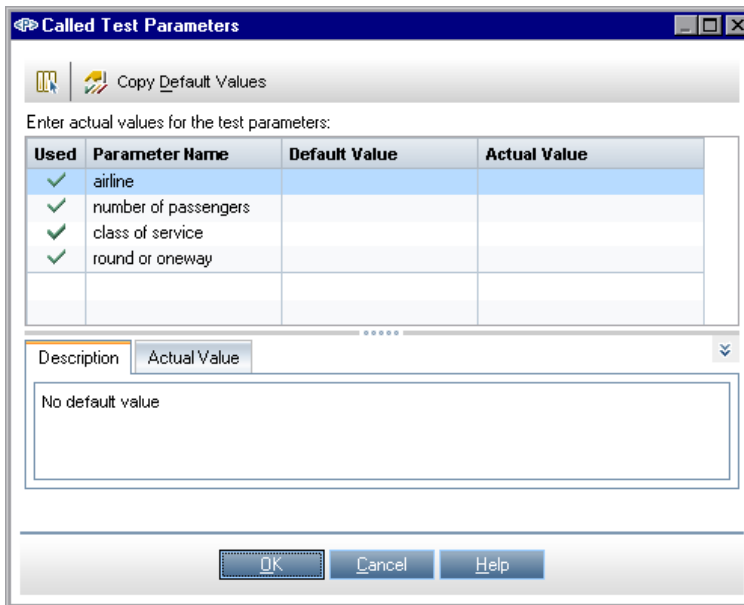
User interface elements are described below:

UI Element	Description
	First/Previous/Next/Last Entity. Allows you to browse through the test parameters. Available from: Test Parameter Details dialog box
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Clear All Fields. Clears all fields. Available from: New Test Parameter dialog box
Details tab	For details on the fields available for test parameters, see "Test Plan Module Fields" on page 416 .
Default Value	The default value of the parameter. Click in the text box to display a toolbar for formatting and spell checking the text.
Description	The description of the parameter. Click in the text box to display a toolbar for formatting and spell checking the text.

Called Test Parameters/Parameters of Test Dialog Box



The Called Test Parameters dialog box enables you to view and assign actual values for parameters included in a called test.

The Parameters of Test dialog box enables you to assign actual values for parameters in test instances or test runs.



To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • In the Test Plan module, select a test and click the Design Steps tab. Right-click a step and select Call to Test. Select a test. If the selected test includes parameters, the Called Test Parameters dialog box opens. • In the Test Plan module, select a test and click the Design Steps tab. Right-click a step that contains a call to a test, and select Called Test Parameters. The Called Test Parameters dialog box opens. • In the Test Lab module, run a test with parameters. The Parameters of Test dialog box prompts you to assign actual values to the parameters.
Important information	Only parameters for which you have not already assigned actual values are displayed.
Relevant tasks	"How to Use Test Parameters " on page 450
See also	"Test Parameters Overview " on page 450

User interface elements are described below:

UI Element	Description
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields are displayed in the dialog box and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .
 Copy Default Values	Replaces the values in the Actual Value column with values in the Default Value column for the currently selected parameters.
Used	Indicates whether the parameter is included in a design step.

UI Element	Description
Parameter Name	The name of the parameter.
Default Value	The default value of the parameter.
Actual Value	The actual value that is used for the parameter during the test run. Type the actual value in the Actual Value column or tab.
Description	The description of the parameter.

Chapter 26

Test Design

This chapter includes:

- Test Design Overview..... 460
- Test Automation..... 460
- How to Design Test Steps..... 461
- Design Steps User Interface..... 463

Test Design Overview

After you add a test to the test plan tree, you build the test by defining design steps. For details, see ["How to Design Test Steps" on next page](#).

After you define the test steps, decide whether to perform the test manually or to automate it.

For manual tests you define steps, execute them on your application, and record the results of each step. Use manual tests in cases where the test requires a response by the tester, for usability tests, onetime tests, tests that need to be run immediately, tests requiring knowledge of the application, and tests without predictable results.

For example, in the flight reservation application, tests that check if a dialog box is user-friendly require user response. Therefore, you should make these tests manual.

For automated tests, the testing expert can use the design steps as the basis for creating the detailed test script. Automated tests require that you create automated test scripts using HP testing tools, or third-party testing tools. For details on automating tests, see ["Test Automation " below](#).

As part of test design, you can include a call to another manual test. When you run the calling test, it includes the steps from the called test. This is useful if you have common steps you often want to perform as part of other tests.

For example, suppose you want to include a login step in a number of different tests. You can create a test **Login_Template** that logs in a user when you start your application. You can call this test at the beginning of each test.

Called tests can include test parameters. These are useful if you want to run the called test with different data according to the type of test that is calling it. For details on using parameters in manual tests, see ["Test Parameters Overview " on page 450](#).

For task details, see ["How to Design Test Steps" on next page](#).

Test Automation

Test planning involves deciding which tests to automate. If you choose to automate a test, you can generate a test script and run the test using Unified Functional Testing, LoadRunner, or Visual API-XP.

Automating a test allows unattended execution of the test at high speed. It also makes the test reusable and repeatable. For example, you automate functional, benchmark, unit, stress and load tests, as well as tests requiring detailed information about applications.

Consider the following issues when deciding whether to automate a test.

Frequency of Execution

Tests that will run with each new version of your application are good candidates for automation. These include sanity tests that check basic functionality across an entire application. Each time there is a new version of the application, you run these tests to check the stability of the new version, before proceeding to more in-depth testing.

Tests that use multiple data values for the same operation (data-driven tests) are also good candidates for automation. Running the same test manually—each time with a different set of input data—can be tedious and ineffective. By creating an automated data-driven test, you can run a single test with multiple sets of data.

Stress/Load Testing

It is also recommended that you automate tests that are run many times (stress tests) and tests that check a multi-user client/server system (load tests). For example, suppose a test must be repeated a thousand times. Running the test manually would be extremely impractical. In this case, you can create a test that runs a thousand iterations.

When Not to Automate Tests

Generally, the more user involvement a test requires, the less appropriate it is to automate. The following describes test cases that should not be automated:

- Usability tests—tests providing usage models that check how easy the application is to use.
- Tests that you only have to run once.
- Tests that you need to run immediately.
- Tests based on user intuition and knowledge of the application.
- Tests with no predictable results.

How to Design Test Steps

After adding tests to the test plan tree, describe the detailed, step-by-step instructions the tester should perform to complete a test. Each test step includes a description of an action.

Note: This task is part of a higher-level task. For details, see ["How to Plan Tests in ALM" on page 394](#).

To learn more about test design, see ["Test Design Overview "](#) on previous page.

This task includes the following steps:

- ["Prerequisites" below](#)
- ["Create test steps" below](#)
- ["Call a template test – optional" on next page](#)
- ["Generate an automated test – optional" on page 463](#)
- ["Results" on page 463](#)

1. Prerequisites

Tests, and basic test information, are defined in the test plan tree.


For task details on creating tests, see ["How to Create Tests" on page 398](#).

2. Create test steps


Describe the steps a tester must perform to run a test. A test step includes the actions to perform on your application, the input to enter, and the expected results.

To create test steps:

- In the Test Plan module, select **View > Test Plan Tree**, and select a test.
- Click the **Design Steps** tab.
- If there are existing design steps, select the step below which you want to add a new step.


- Click **New Step** . Fill in the fields in the Design Step Details dialog box. For user interface details, see ["Design Steps Tab/Design Step Details Dialog Box"](#) on page 464.

- To add a parameter to a design step, in the Design Step Details dialog box, click **Insert**

Parameter . For details on working with test parameters, see ["How to Use Test Parameters"](#) on page 450.

Example

To test the Reservation Details page in the Mercury Tours application, you might create design steps as follows:

Details	Design Steps	Parameters	Attachments	Test Configurations	Req Coverage	Linked Defect
						
Step Name	Description	Expected Result				
Initialization	1. Register new user profile. 2. Create different flight reservations for the user. Print Flight Confirmation for each reservation created to compare the reservation details in following steps.					
Step 1: Open Itinerary	Select the itinerary from the top menu.	The Itinerary page opens. All the flight reservations that you have created in the Initialization step should be shown.				
Step 2: Compare Flight Reservation Details	Compare the flight reservation details in the Flight Confirmation page (printed in the Initialization step), to the details in the Itinerary page. Check each of the following: 1. Booking date and time. 2. Departing and returning destinations. 3. Airline and flight number. 4. Service class. 5. Number of passengers. 6. Prices and Total Airfare.	All flight reservation details must be identical on Flight Confirmation and Itinerary page.				

3. Call a template test – optional

To include commonly used instructions in your test, for example `Log in to the application`, you can call a template test from within your test that includes common instructions.

Note: For details on creating template tests, see ["How to Create Tests"](#) on page 398.

To call a template test:

- Select the test in which you want to include a template test.
- Click the **Design Steps** tab.
- If there are existing design steps, select the step below which you want to call a template test.

- Click **Call to Test** .

- e. In the Select Test dialog box, select the test that you want to call. For user interface details, see "Select Test Dialog Box" on page 470.

A call to the selected template test is inserted below the selected step. When you run the test, the template test's design steps are listed accordingly.

4. **Generate an automated test – optional**

After you have created steps for a manual test, you can generate a test script skeleton in which you can write scripts to run the test as an automated test.

Notes:

- You can generate an automated test before designing test steps, or by selecting an automated test type when you create the test.
- For considerations on whether or not to automate a test, see "Test Automation " on page 460.
- For a list of automated test types, see "Test Types" on page 401.

To generate an automated test:


In the Design Steps tab, click **Generate Script**  and choose an automated test type to which to convert.

Any text that appeared in the steps of the manual test is listed as comments in the generated test script. If the manual test has parameters, they are also listed as comment text.

Example

In the flight reservation application, you can automate a test that checks whether the login mechanism works. After adding test steps, you create a test script. Then, using Unified Functional Testing GUI tests, you complete the automated test script.

5. **Results**

The design steps that you add appear in the Design Steps tab. The first time you add design steps to a test, a footprint  appears in the test plan tree next to the test icon, indicating that steps were defined for the test.

Design Steps User Interface

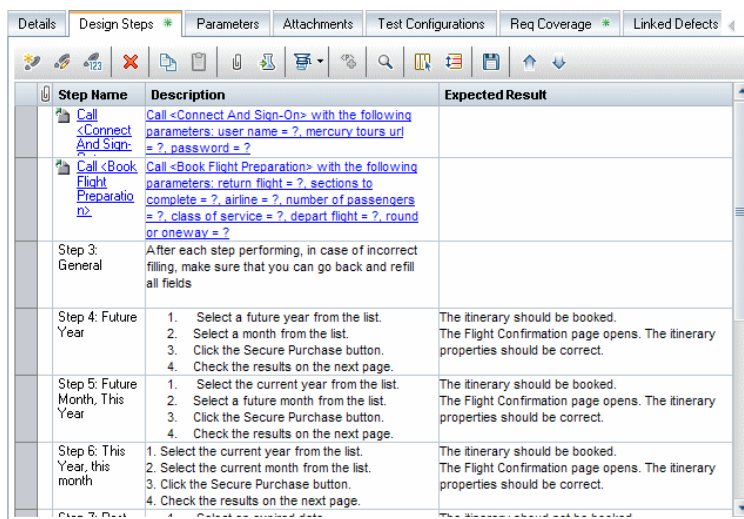
This section includes:

Design Steps Tab/Design Step Details Dialog Box.....	464
Test Script Tab.....	469
Select Test Dialog Box.....	470
Paste Design Steps to Target Project Dialog Box.....	471
Criteria Tab.....	472

Design Steps Tab/Design Step Details Dialog Box

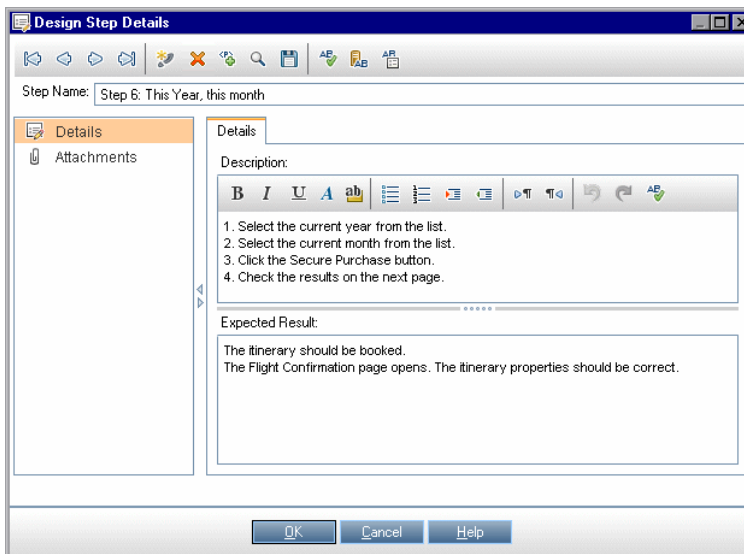
The Design Steps tab enables you to view and edit design steps for the selected test. The Design Step Details dialog box enables you to create and edit individual design steps.

The Design Steps Tab



Step Name	Description	Expected Result
Call <Connect And Sign-On> with the following parameters: user name = ?, mercury tours url = ?, password = ?		
Call <Book Flight Preparation> with the following parameters: return flight = ?, sections to complete = ?, airline = ?, number of passengers = ?, class of service = ?, depart flight = ?, round or oneway = ?		
Step 3: General	After each step performing, in case of incorrect filling, make sure that you can go back and refill all fields	
Step 4: Future Year	1. Select a future year from the list. 2. Select a month from the list. 3. Click the Secure Purchase button. 4. Check the results on the next page.	The itinerary should be booked. The Flight Confirmation page opens. The itinerary properties should be correct.
Step 5: Future Month, This Year	1. Select the current year from the list. 2. Select a future month from the list. 3. Click the Secure Purchase button. 4. Check the results on the next page.	The itinerary should be booked. The Flight Confirmation page opens. The itinerary properties should be correct.
Step 6: This Year, this month	1. Select the current year from the list. 2. Select the current month from the list. 3. Click the Secure Purchase button. 4. Check the results on the next page.	The itinerary should be booked. The Flight Confirmation page opens. The itinerary properties should be correct.

The Design Step Details Dialog Box



Design Step Details

Step Name: Step 6: This Year, this month

Details

Description:

1. Select the current year from the list.
2. Select the current month from the list.
3. Click the Secure Purchase button.
4. Check the results on the next page.







Expected Result:








The itinerary should be booked.
The Flight Confirmation page opens. The itinerary properties should be correct.






OK Cancel Help




To access	<p>Design Steps tab: In the Test Plan module, select a test in the test plan tree, and click the Design Steps tab.</p> <p>Design Step Details dialog box: In the Test Plan module, select a test in the test plan tree, and click the Design Steps tab. Then use one of the following:</p> <ul style="list-style-type: none"> Right-click the design steps grid, or a design step, and select New Step. Right-click a design step and select Edit Step.
Important information	<ul style="list-style-type: none"> If you apply formatting to a parameter name in a design step, you must apply the same formatting to the entire parameter name, including the <<< and >>> characters. For example, if you want to italicize the parameter <code>password</code>, you must italicize the entire string <<<password>>> and not just the word <code>password</code>. Specifying less than 2,500 characters in user-defined fields in this tab or dialog box can improve performance.
Relevant tasks	"How to Design Test Steps" on page 461
See also	"Test Design Overview " on page 460

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element (A - Z)	Description
	<p>Allows you to browse through design steps.</p> <p>Available from: Design Step Details dialog box</p>
	<p>Check Spelling. Checks the spelling for the selected word or text box.</p> <p>Available from: Design Step Details dialog box</p>
	<p>Spelling Options. Enables you to configure the way ALM checks spelling.</p> <p>Available from: Design Step Details dialog box</p>
	<p>Thesaurus. Displays a synonym, antonym, or related word for the selected word.</p> <p>Available from: Design Step Details dialog box</p>
	<p>New Step. Creates a new design step in the Design Step Editor dialog box. The new step is added below the selected step.</p>
	<p>Edit Step. Opens the selected design step in the Design Step Editor dialog box.</p> <p>Tip: Double-click a step to edit.</p> <p>Available from: Design Steps tab</p>

UI Element (A - Z)	Description
	<p>Renumber Steps. Renumbers the design steps sequentially. Use this command after you rearrange steps.</p> <p>Available from: Design Steps tab</p>
	<p>Delete Selected. Deletes the selected design steps.</p>
	<p>Copy/Paste Steps. Copies the selected design steps and pastes them to another test in the same project or in another project. The copied design step is inserted above the selected step.</p> <p>When you paste design steps to another project, the Paste Design Steps to Target Project dialog box opens. For user interface details, see "Paste Design Steps to Target Project Dialog Box" on page 471.</p> <p>Note: Parameters included in the design step are copied to the target test.</p> <p>Available from: Design Steps tab</p>
	<p>Attachments. Opens the Attachments page, enabling you to add attachments to the selected design step. For user interface details, see "Attachments Page" on page 83.</p> <p>After you add an attachment, the  icon displays in the Design Steps grid, next to the appropriate design step.</p> <p>Note: If you add an attachment to a design step, a copy of the attachment is made every time the test is run.</p>
	<p>Call to Test. Opens the Select Test dialog box, enabling you to call another manual test. For user interface details, see "Select Test Dialog Box" on page 470. The call to the test is inserted as a new design step below the selected step.</p> <p>Tip: To return to the calling test, click  in the upper left corner of the design step grid.</p> <p>Available from: Design Steps tab</p>

UI Element (A - Z)	Description
	<p>Generate Script. Enables you to convert the test to an automated test type that is run by the applicable automatic testing tool. For considerations on whether or not to automate a test, see "Test Automation " on page 460.</p> <p>For reference details, see "Test Types" on page 401.</p> <p>ALM generates a test script skeleton based on the current design steps.</p> <p>The test icon next to the test you automated is replaced with the automated test icon.</p> <div> <p>Note:</p> <ul style="list-style-type: none"> After automating a test, you cannot convert it back to the MANUAL test type. For automated test types other than FLOW, you can use this button to select a different testing tool. </div> <p>Available from: Design Steps tab</p>
	<p>Insert Parameter. Opens the Parameters dialog box, enabling you to insert a test parameter in the Description or Expected Result field. The parameter is inserted at the cursor position. For user interface details, see "Parameters Tab/Parameters Dialog Box" on page 452.</p>
	<p>Find Text. In the Design Steps tab, opens the Find dialog box, enabling you to find text in specific fields. For user interface details, see "Find Dialog Box" on page 73.</p> <p>Find/Replace Text. In the Design Step Details dialog box, opens the Find & Replace dialog box, enabling you to find or replace a specified string in the selected field.</p>
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to define which columns appear in the grid, and the order in which they appear. For user interface details, see "Select Columns/Select Fields Dialog Box" on page 86.</p> <p>Available from: Design Steps tab</p>
	<p>Adjust Rows Height. Adjusts the row size of the steps in a test. This enables you to view all the text in the Description or Expected Result columns if the text is long.</p> <div> <p>Tip: To resize a single step, position the mouse in the gray sidebar on the gridline below the step. The cursor changes to a vertical arrow. Drag the gridline up or down.</p> </div> <p>Available from: Design Steps tab</p>

UI Element (A - Z)	Description
	Save Steps. Saves the design steps in the project. If you are typing long text, use the Save Steps button to prevent data loss.
	Move Down/Move Up. Moves the selected design step up or down in the design steps grid. Tip: Alternatively, select a design step and drag it to a new position.
	Back. Returns to the test that called the currently-open template test. For task details on inserting calls to template tests, see "Call a template test – optional" on page 462 . Available from: Design Steps tab
<design steps grid>	Displays design steps that are included in the selected test. Available from: Design Steps tab
Attachments	Enables you to add attachments that provide additional information about the design step. For user interface details, see "Attachments Page" on page 83 . Available from: Design Step Details dialog box
Description	Instructions for the tester to perform. Note: <ul style="list-style-type: none"> Test parameters included in the Description field are surrounded by <<< >>> brackets. Design Steps Tab: If a step is a call to another test, the Description field displays a link to the called test, and actual values of the parameters included in the called test. To edit actual values of the called test parameters, right-click the link, and choose Called Test Parameters. Tip: <ul style="list-style-type: none"> Clicking in this field displays a toolbar for formatting and spell checking the text. Specifying less than 2,500 characters in this field can improve performance.
Details	Design step details. Required fields are displayed in red. Available from: Design Step Details dialog box

UI Element (A - Z)	Description
Expected Result	<p>The expected state after the step instructions are performed.</p> <p>Tip:</p> <ul style="list-style-type: none"> Clicking in this field displays a toolbar for formatting and spell checking the text. Test parameters included in the Expected Result field are surrounded by <<< >>> brackets. Specifying less than 2,500 characters in this field can improve performance.
Step Name	<p>The name of the step.</p> <p>Default value: The sequential number of the design step. For example, <i>Step 1</i> if you are adding a step to a test for the first time.</p> <p>Note: If a step is a call to another test, the Step Name field displays a link to the called test, and actual values of the parameters included in the called test. To edit actual values of the called test parameters, right-click the link, and choose Called Test Parameters.</p>

Test Script Tab

This tab contains the script run by the testing tool designated for the selected test.

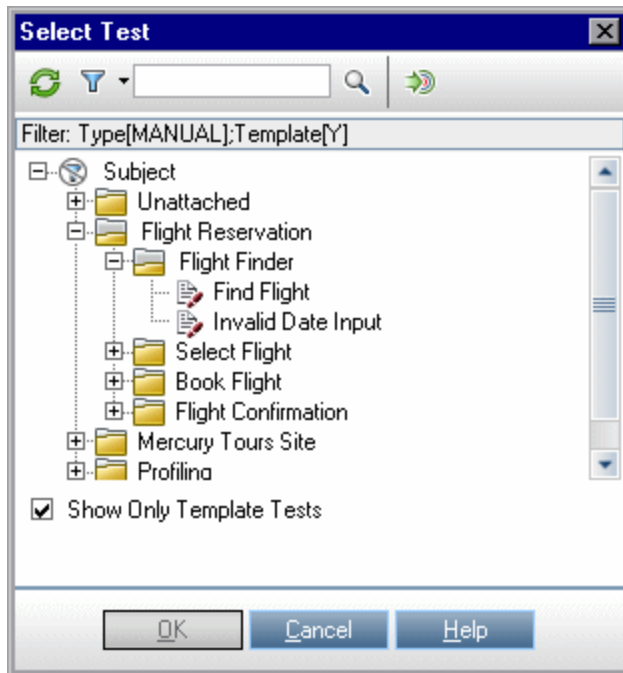
To access	<p>In the test plan tree, select a test, and click the Test Script tab.</p> <p>Available from: Automated test types</p>
Important information	<ul style="list-style-type: none"> For details on the user interface for system tests, see "Test Script Tab - System Tests" on page 494. For details on the user interface for business process tests and flows, see the <i>HP Business Process Testing User Guide</i>. The Test Script tab is populated with elements designed by the applicable testing tool, such as UFT. (When you first create an automated test, only the Launch button is displayed.) For details, see the documentation for the testing tool. You can view API tests only if you have installed the appropriate add-in from the HP Application Lifecycle Management Add-ins page. For more details on installing add-ins, refer to the <i>HP Application Lifecycle Management Installation Guide</i>.
Relevant tasks	<p>"How to Design Test Steps" on page 461</p>
See also	<p>"Test Automation " on page 460</p>

User interface elements are described below:

UI Element	Description
Launch	Displays the testing script in the applicable testing tool.






Select Test Dialog Box

This dialog box enables you to select a manual test that is called by a design step.



To access	<ol style="list-style-type: none"> 1. In the Test Plan module, select a test in the test plan tree, and click the Design Steps tab. 2. Right-click the design step below which you want to add a call to a manual test, and select Call to Test.
Important information	If the called test contains parameters, the Called Test Parameters dialog box opens, enabling you to set actual parameter values. The actual values are used by default in test instances created from the current test. For user interface details, see "Called Test Parameters/Parameters of Test Dialog Box" on page 455 .
Relevant tasks	"How to Design Test Steps" on page 461
See also	"Test Design Overview " on page 460

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
	Show Entity Details. Opens the Details dialog box for the selected entity in read-only mode.
	Refresh. Refreshes the test tree so that it displays the most up-to-date tests.
	Filter/Sort. Opens the Filter Tests dialog box, enabling you to filter and sort the tests in the test plan tree. For details, see " Filter Dialog Box " on page 61.
	Find. Searches for a specific test in the test plan tree. Type the name of the test in the Find box and click the Find button. If the search is successful, the test is highlighted in the tree. Click the Find button again to highlight the next match.
	Go To Test By ID. Opens the Go To Test dialog box, enabling you to select a test by its ID.
<test plan tree>	Displays folders in the test plan tree that contain manual tests. If the Show only Template Tests check box is selected, only folders that contain template tests are displayed. Expand the tree to locate the test that you want to call.
Show Only Template Tests	Instructs ALM to display only template tests. To choose a test that is not a template test, clear the check box.

Paste Design Steps to Target Project Dialog Box

This dialog box enables you to select the way in which design steps are copied from a test in one project to a test in another project.


To access	<ol style="list-style-type: none"> 1. In the source project, right-click a design step and select Copy. 2. Open the target project in a separate browser window. 3. In the target project, right-click a design step below which you want to insert the copied step, and select Paste.
Important information	The source and target projects must use the same ALM version and patch level.

User interface elements are described below:

UI Element	Description
Copy design steps and link to existing related entities	ALM copies the design steps and pastes them into the target project. The copied design steps are linked to existing tests with the same name. If a called test does not exist in the target project, ALM copies it to the target project.
Copy design steps and related entities	ALM copies the design steps and called tests and pastes them into the target project. If a called test name already exists in the target project, the copied called test is renamed to resolve the duplicate test name.
Copy design steps without copying related entities	ALM copies the design steps without copying the called tests, and pastes them into the target project. The copied design steps are not linked to any called tests.



Criteria Tab

This tab enables you to view the criteria of the selected business process test.

Dependencies	Business Models Linkage	Criteria	History
 Go To Component			
Name	Execution Status	Created by	Creation date
Login	No Run	alex_alm	7/13/2010
Logout	No Run	alex_alm	7/13/2010
Reserve Flight	No Run	alex_alm	7/13/2010
Check flight price	No Run	alex_alm	7/13/2010
Description <div></div>			

To access	In the test plan tree, select a business process test, and click the Criteria tab.
Important information	Business Process Testing: Functionality related to test criteria is only available for business process tests. For details, see the <i>HP Business Process Testing User Guide</i> .
See also	"Requirement and Test Coverage Overview" on page 428

User interface elements are described below:

UI Element	Description
	Refresh. Refreshes the criteria grid.
 Go To Component	Goes to the Test Script tab and highlights the selected component.
Name	The name of the criterion.
Execution Status	The current execution status of the criterion. Execution status can be one of the following: Failed, N/A, No Run, Not Completed, Passed.
Created by	The user name of the person who created the criterion.
Creation date	The date on which the criterion was created. By default, the creation date is set to the server date on which the criterion was created.
Description	The description of the criterion.

Chapter 27

Test Configurations

This chapter includes:

Test Configurations Overview.....	476
How to Work with Test Configurations.....	476
Test Configurations User Interface.....	479

Test Configurations Overview

When you create a test in HP Application Lifecycle Management (ALM), you can use test configurations to test various use-cases, each time with a different set of data. A **test configuration** represents a specific use-case of a test. For example, a test configuration can specify a subset of data or a run-time environment that the test should use. By using test configurations, you can create more generic tests and reuse them by associating a different set of data with each configuration.

When you create a test in the Test Plan module, a single test configuration with the same name as the test is created automatically. You can view this test configuration and add additional ones in the Test Configurations tab of the Test Plan module. You associate a test configuration with data in the Parameters tab of the Test Plan module.

To provide finer granularity for requirements coverage, instead of covering each requirement only at the level of the test, you can link a requirement to a specific test configuration. For example, you can use a single test to cover multiple requirements by associating different test configurations in the same test with each requirement.

After creating coverage, you define a test set in the Test Lab module. A test set can include any or all of the test configurations defined for a test, or it can include test configurations based on requirement coverage. When you run a test set, the parameter values are retrieved from the data set according to the settings defined for each test configuration.

For task details, see ["How to Work with Test Configurations"](#) below.

How to Work with Test Configurations

This task describes how to work with test configurations.

- **Use-case:** For a use-case scenario related to this task, see ["How to Work with Test Configurations - Use-Case Scenario"](#) on next page.
- **Product Feature Movie:** To view a movie that demonstrates how to work with test configurations, choose **Help > Product Feature Movies** in the ALM main window.

This task includes the following steps:

- ["Prerequisites"](#) below
- ["Define test configurations"](#) on next page
- ["Create coverage"](#) on next page
- ["Define test sets"](#) on next page
- ["View test results"](#) on next page

1. Prerequisites

- a. Define requirements in the Requirements module. For task details, see ["How to Create Requirements"](#) on page 258.

- b. Define tests with test parameters in the Test Plan module.

For task details on creating tests, see ["How to Create Tests" on page 398](#).

For task details on test parameters, see ["How to Use Test Parameters " on page 450](#).

2. Define test configurations

- a. In the test plan tree, select a test and click the **Test Configurations** tab.
 - b. Define configurations for the test. For user interface details, see ["Test Configurations Tab" on page 480](#).

For certain test types, you can define test configurations that access data saved externally in data table resources. These test types include business process tests and UFT GUI tests. For details on working with these types of test configurations, you can also see the *HP Business Process Testing User Guide*.

3. Create coverage

Link requirements to the test or to specific test configurations. For task details, see ["How to Create Coverage" on page 428](#).

4. Define test sets

Create and define a test set in the Test Lab module. For task details, see ["How to Create Test Sets" on page 571](#).

5. View test results

View the test set run results. For task details, see ["How to View Test Results" on page 644](#).

How to Work with Test Configurations - Use-Case Scenario

This use-case scenario provides an example of how to work with test configurations in ALM.

Suppose your company is releasing a new version of a purchase order application in the upcoming months. The new version includes several new enhancements. One of the enhancements is a new purchase order form. The form must provide different solutions for Gold Card, Silver Card, and Bronze Card users.

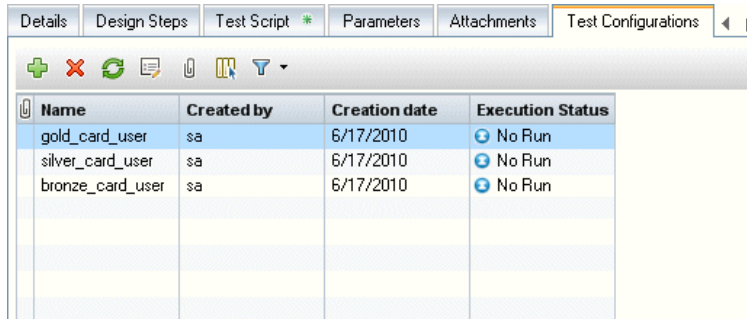
Note: For a task related to this scenario, see ["How to Work with Test Configurations" on previous page](#).

This scenario includes the following steps:

- ["Define test configurations" on next page](#)
- ["Create coverage" on next page](#)
- ["Define a test set" on next page](#)
- ["View test results" on page 479](#)

1. Define test configurations

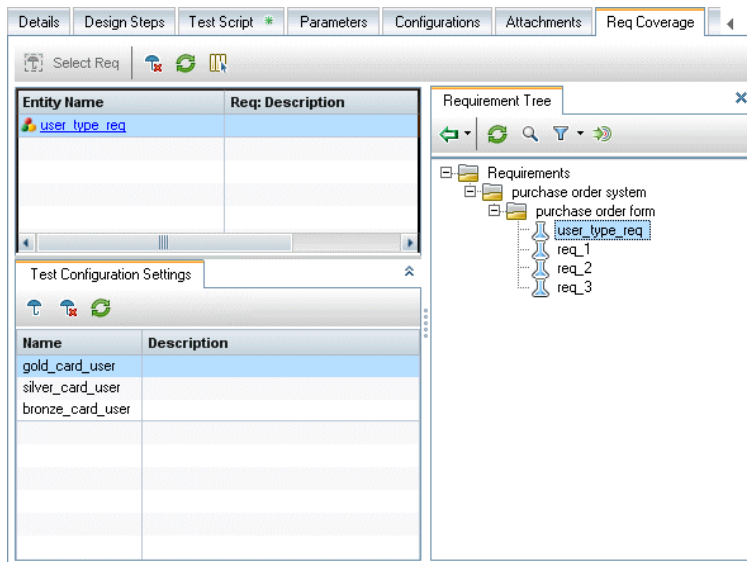
In the test plan tree, select the **user_type** test and click the **Test Configuration** tab. Rename the existing test configuration to **gold_card_user**. Define the following test configurations: **silver_card_user** and **bronze_card_user**. In the **Data** tab, for each test configuration, specify the data to be used for testing each scenario.



Name	Created by	Creation date	Execution Status
gold_card_user	sa	6/17/2010	No Run
silver_card_user	sa	6/17/2010	No Run
bronze_card_user	sa	6/17/2010	No Run

2. Create coverage

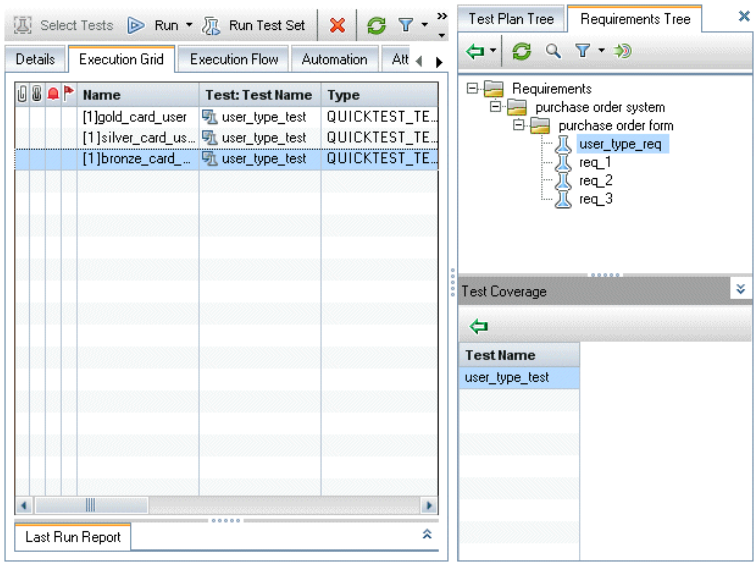
In the Req Coverage tab, create requirement coverage between the **user_type_req** requirement and the **user_type** test. Click **Add to Coverage**. The Add Configuration Coverage dialog box opens and displays the available test configurations. Add the test configurations to coverage. The Test Configuration Settings tab lists the test configurations included in the coverage.



Name	Description
gold_card_user	
silver_card_user	
bronze_card_user	

3. Define a test set

In the Execution Grid tab of the Test Lab module, create a test set based on your coverage. Add the **user_type_req** requirement from the Requirements Tree pane. Note that the Test Coverage pane lists the tests that cover the selected requirement. The Execution Grid displays the test configurations included in the test set.



4. View test results

After running the test set, view the results. The Test Runs tab indicates that the test run with the **bronze_card_user** test configuration failed, and that the test run with the **gold_card_user** and **silver_card_user** test configurations passed.

Run ID	Run Name	Test: Test Name	Configuration...	Status	Exec Date	Tester
3	Fast_Run_5-1...	user_type_test	bronze_card_user	Failed	6/17/2010	sa
2	Fast_Run_5-1...	user_type_test	silver_card_user	Passed	6/17/2010	sa
1	Fast_Run_5-1...	user_type_test	gold_card_user	Passed	6/17/2010	sa

Test Configurations User Interface

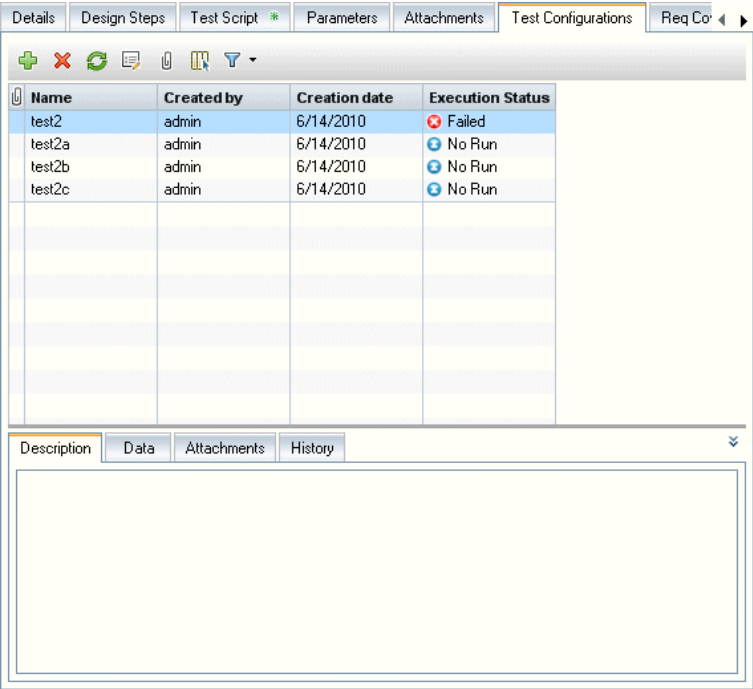
This section includes:

Test Configurations Tab.....	480
New Test Configuration/Test Configuration Details Dialog Box.....	482
Data Tab.....	484
Test Configuration Settings Tab.....	485
Test Configurations Pane.....	486

Test Configuration Status Tab	488
Generate Test Configuration Dialog Box	489

Test Configurations Tab








This dialog box enables you to define and update test configurations.



To access	In the test plan tree, select a test and click the Test Configurations tab.
-----------	--

Important information	<p>Test types for which you can define test configurations that access external data table resources include:</p> <ul style="list-style-type: none"> • QUICKTEST_TEST (UFT GUI Tests) • BUSINESS-PROCESS • QAINSPECT-TEST • SYSTEM-TEST • VAPI-XP-TEST • ALT-SCENARIO <p>For details on working with QUICKTEST_TEST (UFT GUI Tests) test configurations that access external data table resources, see the section on working with ALM in the <i>HP Unified Functional Testing User Guide</i>.</p> <p>For details on working with other test types whose test configurations can access external data table resources, see the <i>HP Business Process Testing User Guide</i>.</p>
Relevant tasks	<ul style="list-style-type: none"> • "How to Work with Test Configurations" on page 476 • <i>HP Business Process Testing User Guide</i>
See also	"Test Configurations Overview" on page 476

User interface elements are described below:



UI Element	Description
	New Test Configuration. Opens the New Test Configuration dialog box, enabling you to define a test configuration. For more details, see "New Test Configuration/Test Configuration Details Dialog Box " on next page.
	Delete Test Configuration. Deletes selected test configuration from the test configurations grid.
	Refresh. Refreshes the test configurations grid so that it displays the most up-to-date information.
	Test Configuration Details. Opens the Test Configuration Details dialog box, enabling you to display details of the selected test configuration. For more details, see "New Test Configuration/Test Configuration Details Dialog Box " on next page.
	Attachments. Opens the Attachments page in the Test Configuration Details dialog box, enabling you to view attachments of the currently selected test configuration. For more details, see "Attachments Page" on page 83.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields are displayed and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86.
	Set Filter. Enables you to filter and sort the test configurations in the test configurations grid. For more details, see "Filter Dialog Box" on page 61.

UI Element	Description
Name	The name of the test configuration.
Created By	The user name of the person who created the test configuration.
Creation Date	The date on which the test configuration was created. By default, the creation date is set to the current ALM server date.
Execution Status	The execution status of the last run of a test configuration. By default, the execution status can be one of the following: Blocked, Failed, N/A, No Run, Not Completed, Passed.
Description	Describes the test configuration.
Data tab	The data associated with the currently selected test configuration. For more details, see "Data Tab" on page 484 .
Attachments tab	Lists attachments that provide additional information about the currently selected test configuration. For more details, see "Attachments Page" on page 83 .
History tab	Lists changes made to the currently selected requirement. For more details, see "History Tab" on page 78 .
ID	A unique numeric ID for the test configuration, assigned automatically by ALM.
Modified	The date and time of the last change to the test configuration.
Test ID	A unique numeric ID for the test, assigned automatically by ALM.
Test Name	The name of the test.








New Test Configuration/Test Configuration Details Dialog Box

This dialog box enables you to define and update test configurations.

The screenshot shows the 'New Test Configuration' dialog box. The 'Details' tab is active, displaying fields for 'Created by:' (admin), 'Creation date:' (calendar icon), 'Execution Status:' (No Run), and 'Test Name:'. The 'Description' tab is also visible but empty. The dialog includes standard window controls and buttons for 'OK', 'Close', and 'Help' at the bottom.

To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> In the test plan tree, select a test and click the Test Configurations tab. Click the New Test Configuration button . The New Test Configuration dialog box opens. In the test plan tree, select a test and click the Test Configurations tab. Click the Test Configuration Details button . The Test Configuration Details dialog box opens.
Relevant tasks	<ul style="list-style-type: none"> "How to Work with Test Configurations" on page 476 <i>HP Business Process Testing User Guide</i>
See also	<ul style="list-style-type: none"> "Test Configurations Overview" on page 476 <i>HP Business Process Testing User Guide</i>

User interface elements are described below:


UI Element	Description
	<p>First/Previous/Next/Last Entity. Allows you to browse through the test configurations.</p> <p>Available from: Test Configuration Details dialog box</p>
	<p>Clear All Fields. Clears all fields.</p> <p>Available from: New Test Configuration dialog box</p>
	<p>Spell Check. Checks the spelling for the selected word or text box.</p>
	<p>Thesaurus. Displays a synonym, antonym, or related word for the selected word.</p>
	<p>Spelling Options. Enables you to configure the way ALM checks spelling.</p>
	<p>Use Default Values. Fills in certain fields with default values, as specified in the Set Default Values dialog box. For user interface details, see "Set Default Values Dialog Box" on page 89.</p>
	<p>Set Default Values. Enables you to specify default values for certain fields using the Set Default Values dialog box. For user interface details, see "Set Default Values Dialog Box" on page 89.</p>
Name	Displays the name for the new test configuration.
Details tab	Details the currently selected test configuration. For details on the available fields, see "Test Configurations Tab" on page 480 .

UI Element	Description
Data tab	The data associated with the currently selected test configuration. For more details, see "Data Tab" below . Available from: Test Configuration Details dialog box
Attachments tab	Lists attachments that provide additional information about the currently selected test configuration. For more details, see "Attachments Page" on page 83 .
History tab	Displays the date and time of the change and the name of the user who made the change to the test configuration. For more details, see "History Tab" on page 78 . Available from: Test Configuration Details dialog box
Description tab	Describes the currently selected test configuration. Click in the text box to display a toolbar for formatting and spell checking the text.

Data Tab




This dialog box shows the data defined for a selected test configuration.

Used	Parameter Name	Default Value	Actual Value
	param_1	a	a
	param_2	b	b

To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> In the test plan tree, select a test and click the Test Configurations tab. On the bottom pane, click Data. In the test plan tree, select a test and click the Test Configurations tab. Click the Test Configuration Details button . The Test Configuration Details dialog box opens. Click Data.
------------------	--

Important information	For certain test types, different options and fields are available in the Data tab. For user interface details, see the <i>HP Business Process Testing User Guide</i> or, for UFT GUI Tests, see the section on working with ALM in the <i>HP Unified Functional Testing User Guide</i> .
Relevant tasks	<ul style="list-style-type: none"> • "How to Work with Test Configurations" on page 476 • <i>HP Business Process Testing User Guide</i> "How to Work with Test Configurations" on page 476
See also	"Test Configurations Overview" on page 476

User interface elements are described below:

UI Element (A-Z)	Description
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields are displayed and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .
	Replaces actual values with default values for the currently selected parameters.
	Enables you to update the actual value of all or selected parameters across all test instances associated with the selected test configurations in the Test Lab module.
Actual Value	The actual value that is used for the parameter during the test run.
Default Value	The default value of the parameter as defined in the test level.
Description	The description of the parameter.
Modified	The last modified date of the parameter.
Order	The position of the parameter in the set of parameters.
Parameter Name	The name of the parameter.
Used	Indicates whether the parameter is included in a design step.

Test Configuration Settings Tab




This tab displays the test configurations associated with the requirement coverage.



Test Configuration Settings	
Name	Description
test2	
test2a	
test2b	
test2c	

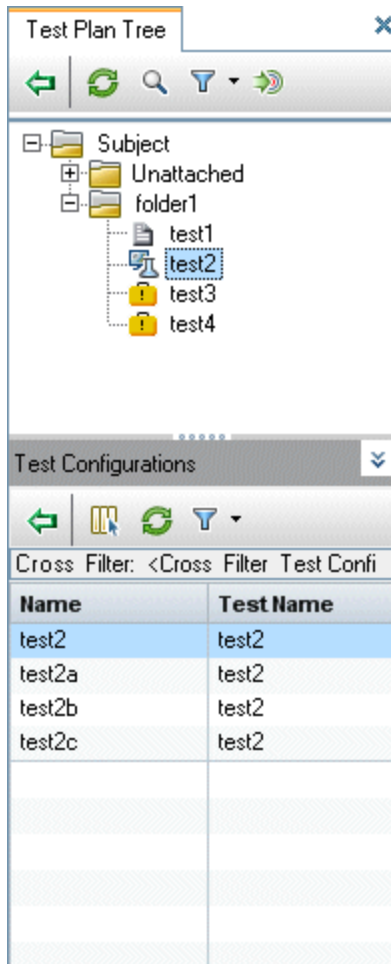
To access	<ol style="list-style-type: none"> 1. In the Test Plan module, select the Test Plan Tree view. 2. Select a test and click the Req Coverage tab. 3. Click Select Req button. 4. In the Requirements Tree pane, click Add to Coverage to add requirement coverage to a specified test. Requirement coverage is added to the requirement coverage grid. The Test Configuration Settings tab is displayed on the bottom of the Req Coverage tab.
Important information	This tab is displayed only when coverage has been created.
Relevant tasks	<ul style="list-style-type: none"> • "How to Create Coverage" on page 428 • "How to Work with Test Configurations" on page 476
See also	<ul style="list-style-type: none"> • "Req Coverage Tab " on page 433 • "Test Configurations Overview" on page 476

User interface elements are described below:

UI Element	Description
	Add Configuration. Opens the Add Configuration Coverage dialog box, enabling you to add configurations to the list of test configurations covering the selected requirement.
	Remove Configuration. Removes the selected configurations from the list of test configurations covering the selected requirement.
	Refresh. Refreshes the test configuration grid.
Name	The name of the test configuration.
Description	The description of the test configuration.





Test Configurations Pane

This pane lists the test configurations of a selected test.









To access	<p>From the Requirements module:</p> <ol style="list-style-type: none"> 1. Select View > Requirement Details. Select a requirement and click the Test Coverage tab. 2. Click the Select button. The Test Plan Tree and the Test Configurations panes are displayed. <p>From the Test Lab module:</p> <ol style="list-style-type: none"> 1. Select the Test Sets tab. Select a test set and click the Execution Grid tab or the Execution Flow tab. 2. Click the Select Tests button. The Test Plan Tree tab and the Test Configurations pane are displayed.
Relevant tasks	<ul style="list-style-type: none"> • "How to Create Coverage" on page 428 • "How to Work with Test Configurations" on page 476
See also	<ul style="list-style-type: none"> • "Test Coverage Page" on page 441 • "Test Configurations Overview" on page 476

User interface elements are described below:

UI Element (A-Z)	Description
	<p>Add Test Configuration to Coverage. Adds a test instance that uses the selected test configuration to the requirement's test coverage.</p> <p>Add Test Configuration to Test Set. Adds a test instance that uses the selected test configuration to the test set.</p> <p>Business Process Testing: When including a test configuration of a business process test, the Add Criterion Coverage dialog box opens. For more details, see "Add Criterion Coverage Dialog Box" on page 447.</p>
	Refresh All. Refreshes the test configurations grid.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the test configurations grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .
	Set Filter/Sort. Filters and sorts the test configurations in the grid. For more details, see "Filter Dialog Box" on page 61 .
Description	A description of the test configuration.
ID	A unique numeric ID for the test configuration, assigned automatically by ALM.
Test ID	A unique numeric ID for the test, assigned automatically by ALM.
Modified	The date and time of the last change to the test configuration.
Creation Date	The date on which the test was created. By default, the creation date is set to the current ALM server date.
Execution Status	The execution status of the last run of a test configuration. By default, the execution status can be one of the following: Blocked, Failed, N/A, No Run, Not Completed, Passed.
Name	The test configuration name.
Test Name	The test name.
Created By	The user name of the person who created the test configuration.



Test Configuration Status Tab

This tab displays the status of the test configurations associated with a covered requirement.

Test Configuration Status		
		
Name	Description	Status
test2		 No Run
test2a		 No Run
test2b		 No Run
test2c		 No Run

To access	<ol style="list-style-type: none"> 1. In the Requirements module, select the Requirement Details view. Select a requirement and click the Test Coverage tab. 2. Click the Select button. The Test Plan Tree and the Test Configurations panes display on the right-side of the Test Coverage tab. 3. Click Add to Coverage to add test coverage. Test coverage is added to the test coverage grid. The Test Configuration Status tab is displayed on the bottom of the Test Coverage tab.
Relevant tasks	<ul style="list-style-type: none"> • "How to Create Coverage" on page 428 • "How to Work with Test Configurations" on page 476
See also	<ul style="list-style-type: none"> • "Test Coverage Page" on page 441 • "Test Configurations Overview" on page 476 • "Requirement and Test Coverage Overview" on page 428

User interface elements are described below:

UI Element	Description
	Remove Configuration. Removes selected configuration from the list of configurations used to cover the selected requirement.
	Refresh All. Refreshes the configuration status grid.
Name	The test configuration name.
Description	The description of the test configuration.
Status	<p>The current test run status of the test configuration. By default, the status can be one of the following: Blocked, Failed, N/A, No Run, Not Completed, Passed.</p> <p>Business Process Testing: To view the criteria status of a test configuration, click its status value. The Criteria Status dialog box opens.</p>

Generate Test Configuration Dialog Box

After upgrading from a previous version of Quality Center, this dialog box enables you to create a test configuration from an existing test instance.

To access	<ol style="list-style-type: none"> 1. In the Test Lab module, select the Test Sets tab. 2. Select a test set and click the Execution Grid tab. 3. In the grid, right-click a test instance and choose Generate Test Configuration.
Important information	<p>When generating a test configuration from a test instance, ALM performs the following actions:</p> <ul style="list-style-type: none"> • Associates the test instance with the generated test configuration. • Associates the test instance's runs with the generated test configuration. • Associates the test instance's links (for example, tests, requirements) with the generated test configuration. • Sets the generated test configuration status to be the same as the status of the test instance. • Copies the parameter values of the test instance to the generated test configuration. <p>Business Process Testing: The Generate Test Configuration option is enabled only for business process test configuration instances that have been modified and no longer match their original static configurations. (This option is not available for dynamic configurations.) For task details on generating test configurations for business process test instances, see the <i>HP Business Process Testing User Guide</i>.</p>
Relevant tasks	<ul style="list-style-type: none"> • "How to Create Coverage" on page 428 • "How to Work with Test Configurations" on page 476
See also	<ul style="list-style-type: none"> • "Test Coverage Page" on page 441 • "Test Configurations Overview" on page 476

User interface elements are described below:

UI Element	Description
New Test Configuration Name	The name of the generated test configuration.

Chapter 28

System Tests

This chapter includes:

System Tests Overview.....	492
How to Create System Tests.....	492
System Test User Interface.....	493

System Tests Overview

You can run a system test to retrieve a machine's system information, view a captured desktop image of a test run on a machine, or restart a machine. For example, you can run a system cleanup test that will restart the machine on which an automated test failed. You can also create a system test to retrieve information about a machine's resource usage before or after a test run.

You create a system test by adding a system test to a test subject folder, defining the test, and adding the test to a test set.

Note: To run a system test, you must install the following add-ins on the machine where the test is to be run:

- HP ALM System Test Remote Agent Add-in
- HP ALM Connectivity Add-in

For more information on HP Application Lifecycle Management (ALM) add-ins, refer to the *HP Application Lifecycle Management Installation Guide*.

When running a system test, the following steps can be created:

- **SysInfo.** Collection of system information
- **Snapshot.** Capture of desktop image
- **Reboot Start** and **Reboot Finish.** Machine restart

You can view details for each of these steps after your system test has finished running. You can also view the system information that has been retrieved—such as CPU, memory, and processes running on the machine—and an image of the machine executing the system test.

For task details, see ["How to Create System Tests" below](#).

How to Create System Tests

This task describes how to create and run a system test that instructs ALM to provide system information for a machine, capture a desktop image, or restart a machine.

Note: This task is part of a higher-level task. For details, see ["How to Plan Tests in ALM" on page 394](#).

This task includes the following steps:

- ["Prerequisites" on next page](#)
- ["Create a system test" on next page](#)
- ["Configure a system test" on next page](#)
- ["Run system tests" on next page](#)

1. **Prerequisites**


Test subjects are defined in the test plan tree.

For task details on creating test subjects, see the step on creating test subjects in the ["How to Create Tests"](#) on page 398 task.

2. **Create a system test**

Create a system test in a subject folder.

- a. In the Test Plan Tree view, right-click a test subject, and select **New Test**.
- b. In the New Test dialog box, select **SYSTEM-TEST** in the **Type** field.
- c. Fill in other fields in the New Test dialog box. For user interface details, see ["New Test Dialog Box"](#) on page 420.

A new test with the system test icon  is added to the test plan tree under the subject folder you selected.

3. **Configure a system test**

Select the operations a system test should perform.

- a. Select a system test in the test plan tree.
- b. Click the **Test Script** tab to configure the system test settings. For user interface details, see ["Test Script Tab - System Tests"](#) on next page.

4. **Run system tests**

Run system tests in the Test Lab module. For details on running tests, see ["How to Run Tests in ALM"](#) on page 540.

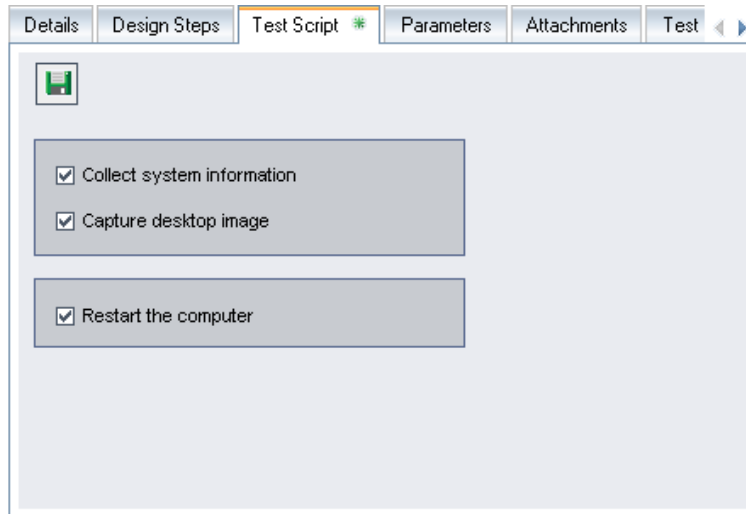
System Test User Interface

This section includes:

[Test Script Tab - System Tests](#)..... 494


Test Script Tab - System Tests

This tab enables you to define settings for the system test.



To access	In the test plan tree, select a system test, and click the Test Script tab.
Relevant tasks	"How to Create System Tests" on page 492
See also	"System Tests Overview" on page 492

User interface elements are described below:

UI Element	Description
	Saves the system test settings.
Collect system information	Instructs ALM to collect information such as CPU, memory, and processes running on the machine when the test is run.
Capture desktop image	Instructs ALM to add an attachment displaying a snapshot of the machine's desktop when the test is run.

UI Element	Description
Restart the computer	<p>Instructs ALM to restart the machine when the test is run.</p> <div><p>Note:</p><ul style="list-style-type: none">• To use the Restart the computer option, you must enable auto login on your machine. Choose Start > Programs > HP ALM System Test Agent > System Test Agent (configuration). The Auto Restart Settings dialog box opens. By default, User Name and Domain are read-only. Type your password.• To select a different user name, reopen the Auto Restart Settings dialog box. User Name and Domain are no longer read-only. Modify the values.</div>

Chapter 29

Test Resources

This chapter includes:

Test Resources Overview.....	498
How to Use Test Resources.....	499
Test Resources User Interface.....	500

Test Resources Overview

The Test Resources module enables you to manage resources used by your tests. You can organize your resources by defining a hierarchical **test resource tree** containing resource folders and resources. For each resource in the tree, you select and upload a set of resource files to the HP Application Lifecycle Management (ALM) repository. These files can be used by one or more tests.

You can then define dependencies between resources and tests. For more details on dependencies, see ["Entity Dependencies Overview" below](#).

For task details, see ["How to Use Test Resources" on next page](#).

Example

Michael, a QA tester, works with an external testing tool that stores its tests in ALM. Each test uses a shared configuration file that is common to a number of tests. He therefore wants a single point of maintenance for the configuration file, rather than saving separate copies of the file for each test.

Michael uses his testing tool to define the configuration file as a resource and define each test that uses the file as dependent on that resource. As only one copy of the resource exists in ALM, replacing the configuration file would replace it for all tests that depend on it.

After Michael defines dependencies, if he attempts to delete the resource, ALM will warn him that this may affect tests that depend on it. In addition, if he copies one of the tests that depend on the resource between projects, ALM will enable him to choose to copy the resource as well as the test.

Entity Dependencies Overview

Dependencies define relationships between entities such as tests, components, and test resources. When analyzing the impact of a change proposed to a specific entity, the dependencies indicate the other entities that the change might affect. For example, you may want to view dependencies before deleting or copying an entity.

Dependency relationships are displayed in the Dependencies tab. This tab is available from the Test Plan, Business Components, and Test Resources modules. You can view the entities used by a selected entity, and the entities that are using a selected entity.

You can define dependencies between entities using other HP testing tools, for example, Unified Functional Testing. For details, refer to the *HP Unified Functional Testing User Guide*.

You can also define dependencies between entities by writing your own application. For more information, refer to the *ALM Open Test Architecture API Reference*.

How to Use Test Resources

This task describes how to manage test resources in the Test Resources module. Create a test resource tree, upload and download resources, and define dependencies between resources and other entities, such as tests.

Note: This task is part of a higher-level task. For details, see ["How to Plan Tests in ALM" on page 394](#).

This task includes the following steps:

- ["Prerequisites" below](#)
- ["Create resources" below](#)
- ["Upload resource files" below](#)
- ["Download resource files" below](#)
- ["Define dependencies" on next page](#)
- ["View dependencies" on next page](#)

1. Prerequisites

For details on working with UFT resources, see the section on working with ALM in the *HP Unified Functional Testing User Guide*.

2. Create resources

- Open the Test Resources module.** On the ALM sidebar, under **Testing**, select **Test Resources**.
- Create folders.** Right-click the **Resources** root folder and select **New Resource Folder**. To create a sub-folder, right-click a folder and select **New Resource Folder**.
- Add resources to folders.** Right-click a folder or sub-folder and select **New Resource**. Fill in the fields in the New Resource dialog box. For user interface details, see ["New Resource/Resource Details Dialog Box " on page 512](#).

3. Upload resource files

You can upload files for each resource in the test resource tree to the ALM repository.

Select a resource in the test resource tree and click the **Resource Viewer** tab. For user interface details, see ["Resource Viewer Tab " on page 508](#).

Business Process Testing: When working with application areas, launch the testing tool in the **Application Area Viewer** tab to work with the resource. For user interface details, see ["Application Area Viewer Tab " on page 509](#).

4. Download resource files

To view and edit your test resources, you can download them to a local directory.

Select a resource in the test resource tree and click the **Resource Viewer** tab. For user interface details, see ["Resource Viewer Tab "](#) on page 508.

5. **Define dependencies**

You define dependencies between entities from your testing tool, for example, UFT . For more information, refer to the *HP Unified Functional Testing User Guide*.

You can also define dependencies between entities by writing your own application. For more information, refer to the *HP ALM Open Test Architecture API Reference*.

6. **View dependencies**

View the relationships between entities such as tests, components, and test resources. You can view the entities that depend on a selected entity, and the entities on which a selected entity depends.

Select a resource (Test Resources module), test (Test Plan module) or component (Business Components module) and click the **Dependencies** tab. For user interface details, see ["Dependencies Tab"](#) on page 510.

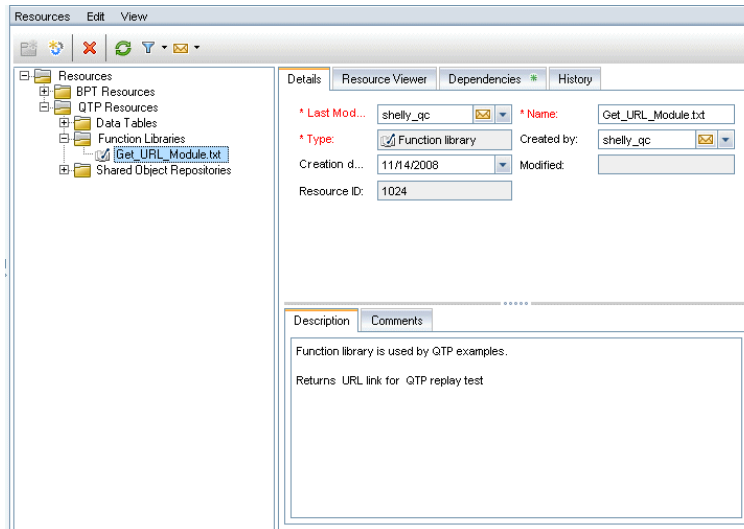
Test Resources User Interface

This section includes:

Test Resources Module Window.....	501
Test Resources Module Menus and Buttons.....	503
Test Resources Module Icons.....	505
Test Resources Module Fields.....	506
Resource Viewer Tab.....	508
Application Area Viewer Tab.....	509
Dependencies Tab.....	510
New Resource/Resource Details Dialog Box.....	512
Paste Resources To Target Project Dialog Box.....	513

Test Resources Module Window

This window enables you to manage resources used by your tests.



To access	On the ALM sidebar, under Testing , select Test Resources .
Important information	<ul style="list-style-type: none"> • UFT: For more details on working with UFT resources, see the section on working with ALM in the <i>HP Unified Functional Testing User Guide</i>. • Business Process Testing: When an ALM project with Business Process Testing is connected to UFT, a BPT Resources folder is created automatically in the tree. The BPT Resources folder contains all the UFT resources available for business components in the project. For details about Business Process Testing application areas, see the <i>HP Business Process Testing User Guide</i>. • Performance Center: For more details on working with Performance Center resources, see the <i>HP ALM Performance Center Guide</i>.
Relevant tasks	"How to Use Test Resources" on page 499
See also	"Test Resources Overview" on page 498

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<Test Resources module common UI elements>	<ul style="list-style-type: none"> • Test Resource fields. For field definitions, see "Test Resources Module Fields" on page 506. • Test Resource menus and buttons. For command and button descriptions, see "Test Resources Module Menus and Buttons" on next page. • Test Resource icons. For icon descriptions, see "Test Resources Module Icons" on page 505. • ALM main menu and sidebar. For details on the Tools menu, Help menu and sidebar, see "ALM Common Areas" on page 45.
<test resource tree>	<p>A graphical representation of your test resources.</p> <p>Note: When Sprinter is used for manual testing in your project, a Sprinter folder is added to the Resources folder. This folder contains a subfolder for each Sprinter user and is used to store user information. Caution: The Sprinter folder is managed by Sprinter only. You must not make any changes to the folder or subfolders. For more details, see the HP Sprinter User Guide.</p>
Details tab	Displays details of the currently selected resource folder or resource. For more details, see "Test Resources Module Fields" on page 506 .
Resource Viewer tab	<p>Enables you to upload and download test resource files from the ALM repository. For more information, see "Resource Viewer Tab " on page 508.</p> <p>Note: Some resources have different viewer tabs, such as the application area resource. For details on its viewer tab, see "Application Area Viewer Tab " on page 509.</p>
Dependencies tab	Displays dependency relationships that exist between entities such as test resources, components, and tests. For more information, see "Dependencies Tab" on page 510 .
History tab	<p>Displays a history of baselines in which the test resource appears. You can also compare two baseline versions.</p> <p>Version Control: You can view all previous versions of a test resource.</p> <p>For more details on the History tab, see "History Tab" on page 78.</p>
Monitors Configuration tab	Performance Center: Enables you to configure Performance Center monitor profiles. For details, see the <i>HP ALM Performance Center Guide</i> .







Test Resources Module Menus and Buttons

This section describes the menus and buttons available in the Test Resources module.

To access	On the ALM sidebar, under Testing , select Test Resources .
Important information	Tip: You can access the menu bar from the Test Resources module by pressing the shortcut key ALT. Additionally, you can perform many other ALM operations using shortcut keys. For a list of shortcut keys, see " ALM Keyboard Shortcut Reference " on page 132.
Relevant tasks	" How to Use Test Resources " on page 499
See also	<ul style="list-style-type: none">• "Test Resources Module Window" on page 501• "Test Resources Module Icons" on page 505• "Test Resources Overview" on page 498

User interface elements are described below:

UI Element (A-Z)	Menu	Description
Collapse	View	Collapses all branches in the test resource tree.
Copy URL/Paste	Edit	Copies a selected resource and pastes its URL as a link. The resource itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the resource file or folder. If you are not already logged in, ALM first prompts for login details.
Copy/Paste	Edit	<p>Copies selected resources or folders within the same project or across projects.</p> <p>Note:</p> <ul style="list-style-type: none">• When you copy a resource from one project to another, if the resource is dependent on other test resources, you can instruct ALM to copy using one of three methods. For more details, see "Paste Resources To Target Project Dialog Box" on page 513.• To copy resources across projects, both projects must use the same ALM version and patch level.




UI Element (A-Z)	Menu	Description
Delete 	Edit	<p>Deletes selected resources and folders from the test resource tree.</p> <p>If other entities depend on the resource, the Delete Resource dialog box opens. The related entities are displayed.</p> <div> <p>Caution: If other entities depend on the resource, deleting the resource may impact these related entities. You can view related entities in the Dependencies tab. For more information, see "Dependencies Tab" on page 510.</p> </div> <p>Version Control: Deleting a resource deletes all previous versions of the resource.</p>
Filter 	View	<p>Enables you to filter the resources in the test resource tree. For more details, see "Filter Dialog Box" on page 61.</p>
Expand All	View	<p>Expands all branches in the test resource tree.</p>
Cut/Paste	Edit	<p>Moves selected resources to a different location in the test resource tree.</p> <div> <p>Note: The root folder cannot be moved.</p> </div> <div> <p>Tip: You can also move a resource to a new location in the test resource tree by dragging it.</p> </div>
Find	Edit	<p>Opens the Find dialog box, enabling you to search for a resource in the test resource tree. For more details, see "Find Dialog Box" on page 73.</p>
New Resource 	Resources	<p>Opens the New Resource dialog box, enabling you to add a resource to a selected folder. For more details, see "New Resource/Resource Details Dialog Box" on page 512.</p>
New Resource Folder 	Resources	<p>Opens the New Resource Folder dialog box, enabling you to add a folder under a selected folder.</p>
Send by E-mail 	Resources	<p>Opens the Send E-mail dialog box, enabling you to send a resource by email to recipients selected from a list. For more details, see "Send E-mail Dialog Box" on page 79.</p>
Refresh All 	View	<p>Refreshes the test resource tree so that it displays the most up-to-date information.</p>
Rename	Edit	<p>Renames a selected resource or folder.</p>








Test Resources Module Icons

This section describes the icons available in the Test Resources module.

To access	On the ALM sidebar, under Testing , select Test Resources .
Important information	ALM Editions: Not all resource types are available with each edition.
Relevant tasks	"How to Use Test Resources" on page 499
See also	<ul style="list-style-type: none">• "Test Resources Module Window " on page 501• "Test Resources Module Menus and Buttons" on page 503• "Test Resources Overview" on page 498

User interface elements are described below:

UI Element	Description
	<p>Application area. Provides all settings and resources required to create the content of:</p> <ul style="list-style-type: none">• UFT GUI tests• Business process tests or flows that contain business components with automated GUI facets <p>For details about application areas, see the <i>HP Business Process Testing User Guide</i>.</p>
	<p>Data Table. Contains data to be used for driving run steps for:</p> <ul style="list-style-type: none">• Test configurations• UFT GUI tests and API tests <p>For details about data tables for UFT, see the <i>HP Unified Functional Testing User Guide</i>.</p> <p>For task details about using data tables for test configurations, see "How to Work with Test Configurations" on page 476.</p>
	<p>Environment Variables. Contains variables and corresponding values that can be accessed from:</p> <ul style="list-style-type: none">• UFT GUI tests• Business process tests or flows that contain business components with automated GUI facets <p>For details about environment variables, see the <i>HP Unified Functional Testing User Guide</i>.</p>

UI Element	Description
	<p>Function Library. Contains Visual Basic script functions, subroutines, and modules for use with:</p> <ul style="list-style-type: none"> • UFT GUI tests • Business process tests or flows that contain business components with automated GUI facets <p>For details about function libraries, see the <i>HP Unified Functional Testing User Guide</i>.</p>
	<p>Recovery Scenario. Contains scenarios which include definitions of unexpected events and the operations necessary to recover UFT run sessions. For details about recovery scenarios, see the <i>HP Unified Functional Testing User Guide</i>.</p>
	<p>API Test Shared Resources. Contains imported services for use in ALM with:</p> <ul style="list-style-type: none"> • API tests, which are created in HP Service Test and UFT • Business process tests or flows that contain business components that are automated for API testing <p>For details about sharing services, see the information about activity sharing in the <i>HP Service Test User Guide</i> or the information about API testing in the <i>HP Unified Functional Testing User Guide</i>.</p>
	<p>Shared Object Repository. Contains information that enables UFT to identify the objects in your application. UFT enables you to maintain the reusability of your tests by storing all the information regarding your test objects in shared object repositories. For details about shared object repositories, see the <i>HP Unified Functional Testing User Guide</i>.</p>
	<p>Test Resource. A generic test resource type for use by all test types.</p>
	<p>Monitor Over Firewall. Contains Performance Center monitor settings for servers that are located over a firewall. For details about monitor over firewall, see the <i>HP Performance Center Guide</i>.</p>
	<p>Monitor Profile. Contains Performance Center monitor settings that can saved as a monitor profile to be used by any load test in your project. For details about monitor profiles, see the <i>HP Performance Center Guide</i>.</p>

Test Resources Module Fields

This section describes the Test Resources module fields.

To access	On the ALM sidebar, under Testing , select Test Resources .
------------------	---

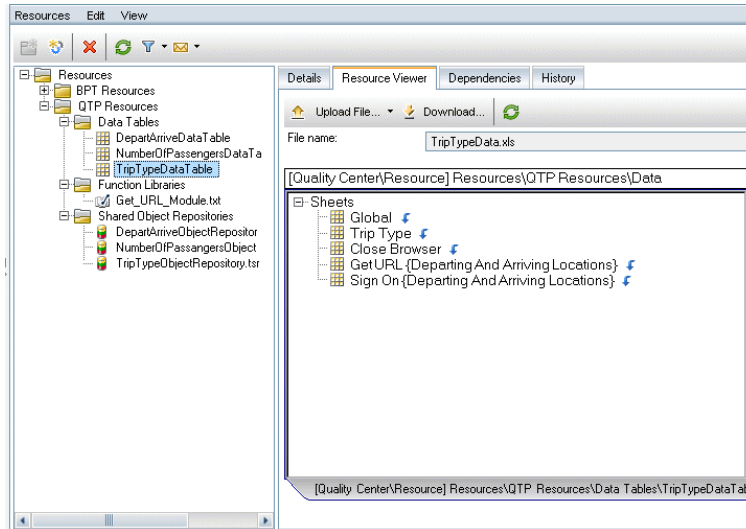
Important information	<ul style="list-style-type: none"> You can add user-defined fields and change the label of any of the fields in the Test Resources module. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. You can use the Script Editor to restrict and dynamically change the fields and values in the Test Resources module. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.
Relevant tasks	"How to Use Test Resources" on page 499
See also	<ul style="list-style-type: none"> "Test Resources Module Window " on page 501 "Test Resources Overview" on page 498

The fields are described below:

UI Element (A-Z)	Description
Comments	Displays comments about the resource. To add a new comment, click the Add Comment button. A new section is added to the Comments box, displaying your user name and the database's current date.
Created By	The user who created the resource.
Creation Date	The date on which the resource was created. Default value: The current database server date.
Description	Describes the folder or resource. Click in the text box to display a toolbar for formatting and spell checking the text. Business Process Testing: When specifying an application area resource, this field is mandatory.
File Name	The file name.
Folder ID	A unique numeric ID for the folder that is assigned by ALM. This field cannot be modified.
Modified	The date the resource was modified.
Name	The folder or resource name.
Resource ID	A unique numeric ID for the file that is assigned by ALM. This field cannot be modified.
Type	Indicates the type of resource. For details, see "Test Resources Module Icons" on page 505 .
Version number	Version Control: The version number of the resource. If version control is enabled for your project, this field is displayed.


Resource Viewer Tab

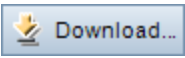

This tab enables you to upload files for each resource in the test resource tree to the ALM repository. You can also download files to a local directory.



To access	In the Test Resources module, select a resource in the test resource tree and click the Resource Viewer tab.
Important information	<ul style="list-style-type: none"> To view the resource content, you must install the relevant add-in or extension. For more information on the Unified Functional Testing add-in, refer to the <i>HP Unified Functional Testing User Guide</i>. Some resources have different viewer tabs, such as the application area resource. For details on its viewer tab, see "Application Area Viewer Tab" on next page.
Relevant tasks	"How to Use Test Resources" on page 499
See also	"Test Resources Overview" on page 498

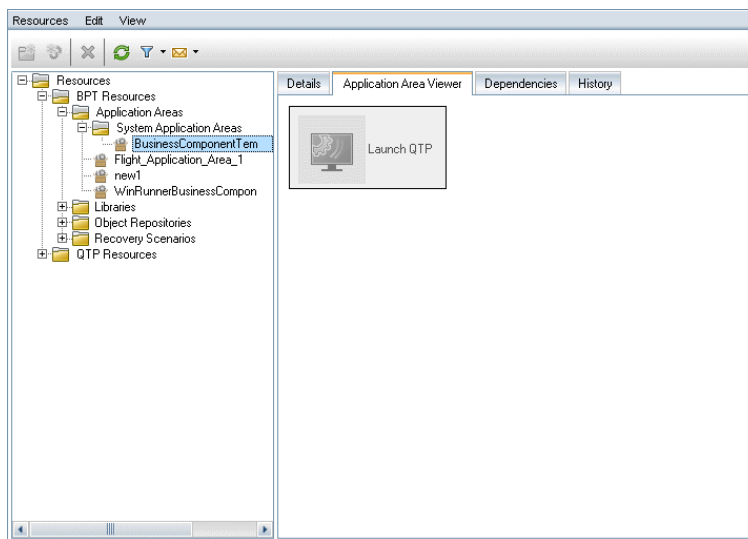
User interface elements are described below:

UI Element	Description
 Upload File...	<p>Upload File. Uploads the file or folder to the ALM repository. Includes the following options:</p> <ul style="list-style-type: none"> Upload File. Opens the Upload File dialog box, enabling you to select a file. Upload Folder. Opens the Browse for Folder dialog box, enabling you to select a folder. <p>To replace an uploaded file, upload again.</p>

UI Element	Description
	Download. Opens the Browse for Folder dialog box, enabling you to download a selected folder.
	Refresh. Refreshes the tab.
File name	Resource file name.

Application Area Viewer Tab

This tab enables you to launch the testing tool for the application area resource.



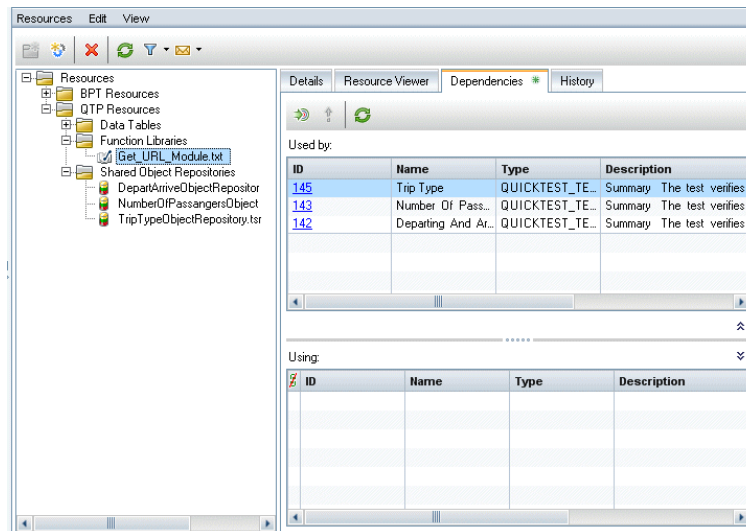
To access	Business Process Testing: In the Test Resources module, select an application area resource in the test resource tree and click the Application Area Viewer tab.
Important information	<ul style="list-style-type: none"> To view the resource content, you must install the relevant testing tool, add-in, or extension. For more information on the UFT add-in, refer to the <i>HP Unified Functional Testing User Guide</i>. Launching an ALM version 11.50 application area resource in QuickTest Professional version 10.00 is not supported. Instead, open the application area directly in QuickTest Professional.
Relevant tasks	"How to Use Test Resources" on page 499
See also	"Test Resources Overview" on page 498

User interface elements are described below:

UI Element	Description
Launch <testing tool>	<p>Launches the relevant testing tool.</p> <p>Version Control: The Launch button is disabled when attempting to open an application area from an older version or baseline. Instead, open the application area directly in QuickTest Professional.</p>






Dependencies Tab

This tab displays the relationships between entities such as tests, components, and test resources. You can view the entities that depend on a selected entity (**Used By** grid), and the entities that a selected entity depends on (**Using** grid).



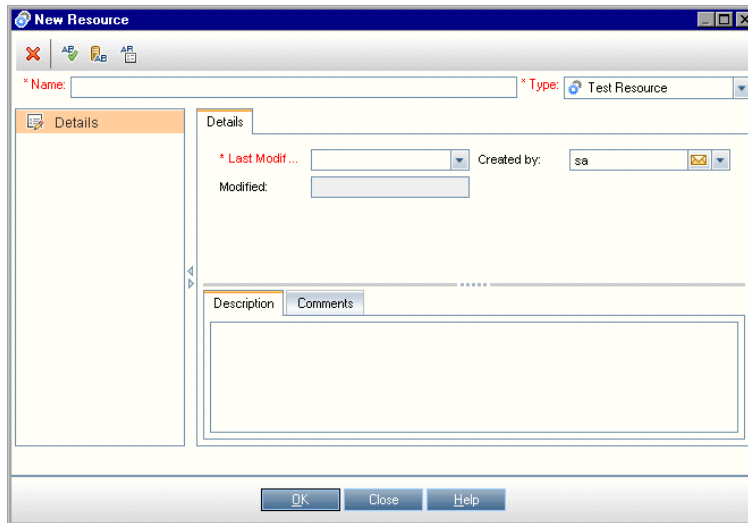
To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • Test Resources module: Select a resource in the test resource tree and click the Dependencies tab. • Test Plan module: Select a test in the test plan tree and click the Dependencies tab. • Business Components module: Select a component in the component tree and click the Dependencies tab.
Relevant tasks	"How to Use Test Resources" on page 499
See also	"Entity Dependencies Overview" on page 498

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A - Z)	Description
	Go To. Enables you to navigate to a selected entity.
	Show Broken Relation. Displays details of the broken relation for the selected relation in the Using grid. Select an entity in the Using grid that is marked as a broken relation and click the Show Broken Relation button.
	Refresh. Refreshes the tab.
	Show/Hide arrow. Displays or hides the Used By or Using grid.
	Broken Relation. The related entity no longer exists. Click the icon for details.
<Used by grid>	Displays entities that depend on a selected entity.
<Using grid>	Displays the related entities that a selected entity depends on.
ID	A unique numeric ID for the associated entity. The ID is assigned automatically by ALM.
Name	The name of the associated entity.
Type	The type of the associated entity.
Description	The description of the associated entity.
Owner name	The name of entity that owns the selected entity.
Owner type	The type of entity that owns the selected entity.





New Resource/Resource Details Dialog Box


This dialog box enables you to add and view resources.



To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> In the Test Resources module, right-click a resource folder and select New Resource. The New Resource dialog box opens. In the Test Resources module, click the History tab. Click Baselines or Versions and Baselines. Click the View button. The Resource Details dialog box opens.
Important information	Version Control: The new resource is automatically checked out. For more information, see "Check Out Dialog Box" on page 117 .
Relevant tasks	"How to Use Test Resources" on page 499
See also	"Test Resources Overview" on page 498

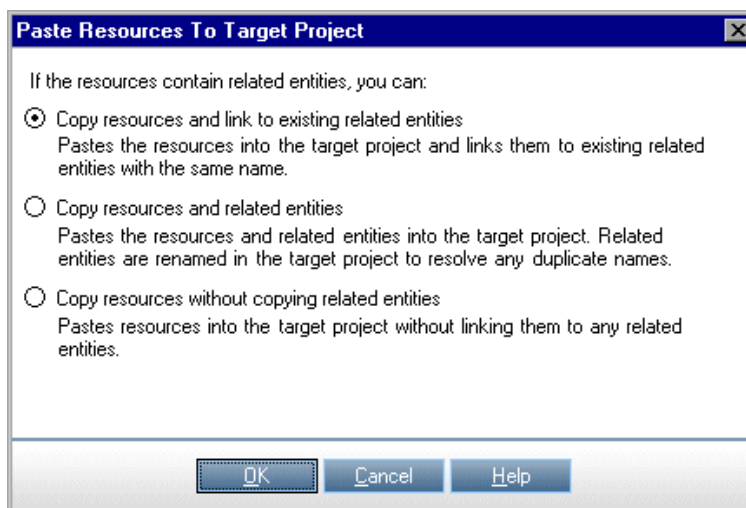
User interface elements are described below:

UI Element	Description
	<p>Clears the content in the dialog box.</p> <p>Available from: New Resource dialog box</p>
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.

UI Element	Description
	<p>Send by Email. Sends an email with the test resource details. For more details, see "Send E-mail Dialog Box" on page 79.</p> <p>Available from: Resource Details dialog box</p>
Name	The name of the resource.
Type	Indicates the type of resource. For details, see "Test Resources Module Icons" on page 505 .
Details	Details of the currently selected test resource. For details on the available fields, see "Test Resources Module Fields" on page 506 .
Resource Viewer	Enables you to upload files for the currently selected test resource to the ALM repository. You can also download files to a local directory. For more details, see "Resource Viewer Tab " on page 508 .
Dependencies	Displays the relationships between the currently selected test resource and other entities. For more details, see "Dependencies Tab" on page 510 .

Paste Resources To Target Project Dialog Box

This dialog box enables you to choose how ALM copies test resources across projects.



To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • In the Test Resources module, right-click a resource folder and select New Resource. The New Resource dialog box opens. • In the Test Resources module, click the History tab. Click Baselines or Versions and Baselines. Click the View button. The Resource Details dialog box opens.
------------------	--

User interface elements are described below:

UI Element	Description
Copy resources and link to existing related entities	ALM copies the test resources and pastes them into the target project. The copied test resources are linked to existing entities with the same name and path. If a related entity does not exist in the target project, ALM copies it to the target project.
Copy resources and related entities	ALM copies the test resources along with the related entities, and pastes them into the target project. If an entity already exists in the target project, the copied related entity is renamed to resolve the duplicate name.
Copy resources without copying related entities	ALM copies the test resources without copying the related entities, and pastes them into the target project. The copied items are not linked to any related entities.

Chapter 30

VAPI-XP Tests

This chapter includes:

- VAPI-XP Tests Overview..... 516
- How to Create VAPI-XP Test Scripts..... 516
- How to Edit VAPI-XP Test Scripts..... 523
- How to Use AUT Environments with VAPI-XP..... 526
- How to Use the VAPI-XP API..... 527
- How to Run VAPI-XP Tests in Debug Mode..... 530
- How to Run VAPI-XP Tests in Test Mode..... 531
- How to Debug VAPI-XP Tests Scripts Test Mode..... 532
- VAPI-XP User Interface..... 534

VAPI-XP Tests Overview

The VAPI-XP testing tool enables you to create new testing scripts using Microsoft VBScript, Microsoft JavaScript (JScript version), PerlScript, and PythonScript, and integrate these scripts into your application management process. Using VAPI-XP test scripts, you can test COM/DCOM servers, SOAP-based Web services, Java APIs (such as Java classes and EJBs), and console applications. You can also use VAPI-XP to create a LoadRunner virtual user.

In addition, VAPI-XP is fully integrated with HP Application Lifecycle Management (ALM), enabling you to design your VAPI-XP test script to call any ALM test or test set, and execute it as part of your own script. This allows you to build a more advanced test set execution flow, in which you can filter tests in a test set during execution, based on the status or type of each test.

VAPI-XP is also fully integrated with the ALM Open Test Architecture API. All open test architecture API classes and methods can be referenced from the VAPI-XP user interface so that you can easily include them in your test script.


For task details, see:

- ["How to Create VAPI-XP Test Scripts " below](#)
- ["How to Edit VAPI-XP Test Scripts " on page 523](#)
- ["How to Use the VAPI-XP API" on page 527](#)
- ["How to Run VAPI-XP Tests in Debug Mode " on page 530](#)
- ["How to Run VAPI-XP Tests in Test Mode " on page 531](#)
- ["How to Debug VAPI-XP Tests Scripts Test Mode " on page 532](#)


How to Create VAPI-XP Test Scripts

You create a VAPI-XP test script from the test plan tree in the Test Plan module.

To learn more about VAPI-XP tests, see ["VAPI-XP Tests Overview" above](#).

Note: You can also convert a manual test to a VAPI-XP test. In the **Design Steps** tab, click the **Generate Script** button  and select **VAPI-XP-TEST**. ALM creates a VAPI-XP test script that includes code for the steps that you defined. It also includes code for called tests that were part of the original manual test. For more information on manual tests, see ["Test Design " on page 459](#).

To create a VAPI-XP test script:

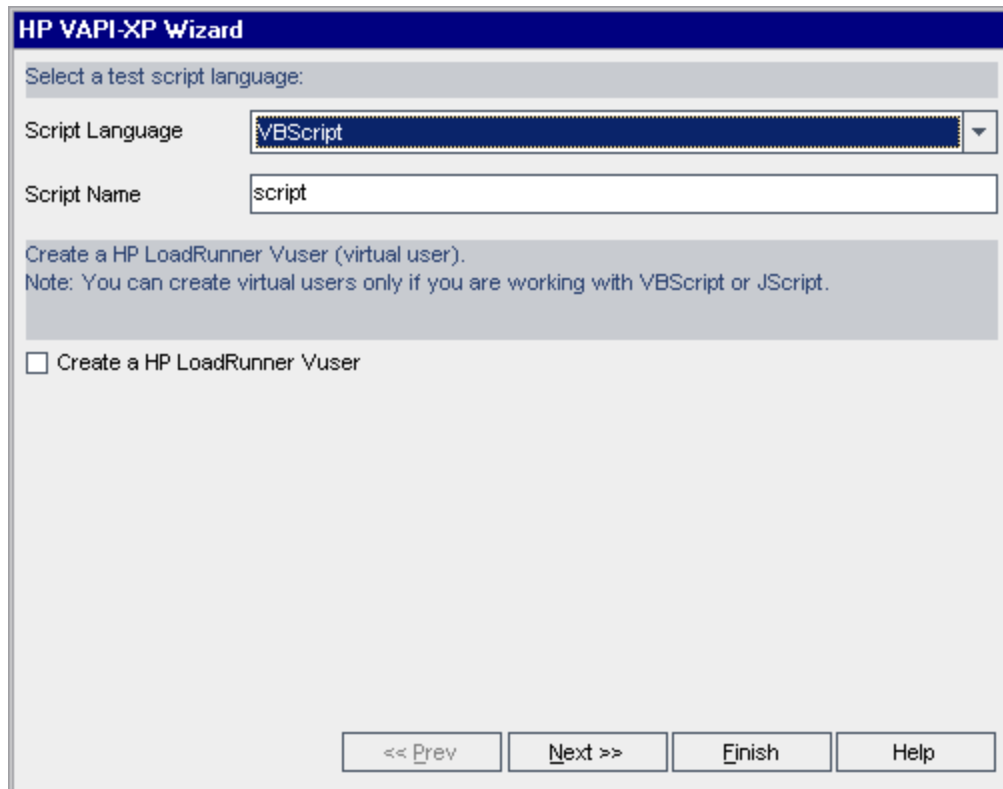
1. Choose a subject folder in the test plan tree.
2. Click the **New Test** button  or choose **Tests > New Test**. The New Test dialog box opens.
3. In the **Test Type** box, select **VAPI-XP-TEST**.
4. In the **Test Name** box, type a name for the test. Note that a test name cannot include the

following characters: \ / : " ? < > | * % `

5. Add test details in the Details tab. Click **OK**.

Note: If required test fields were defined in the Project Customization window, the Required Test Fields dialog box opens. Select values for the required fields, and click **OK**.

The HP VAPI-XP Wizard opens.



6. In the **Script Language** box, select a script language.

Note:

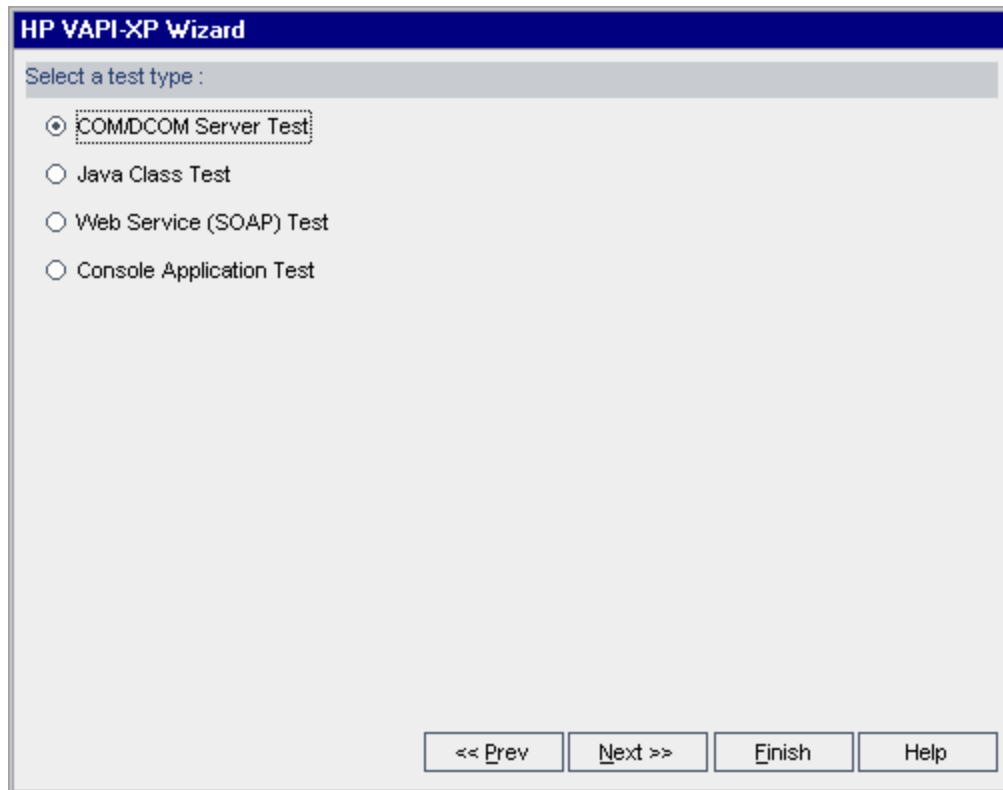
- To create a VAPI-XP test script using ActiveState's ActivePython or ActivePerl scripts, you must install the script language on your machine. From the **Help** menu in the Test Script tab, select **ActivePython Home Page** or **ActivePerl Home Page**, and follow the appropriate installation instructions.
- Microsoft's VBScript and JScript are usually installed with Internet Explorer. If they are not installed on your machine, select **VBScript Home Page** or **JScript Home Page** from the **Help** menu in the Test Script tab, and follow the appropriate installation instructions.

7. In the **Script Name** box, type a name for the VAPI-XP test script.
8. If you selected VBScript or JavaScript as your test scripting language, you can select **Create HP LoadRunner Vuser** to create a LoadRunner virtual user script that can be run in the

LoadRunner Controller.

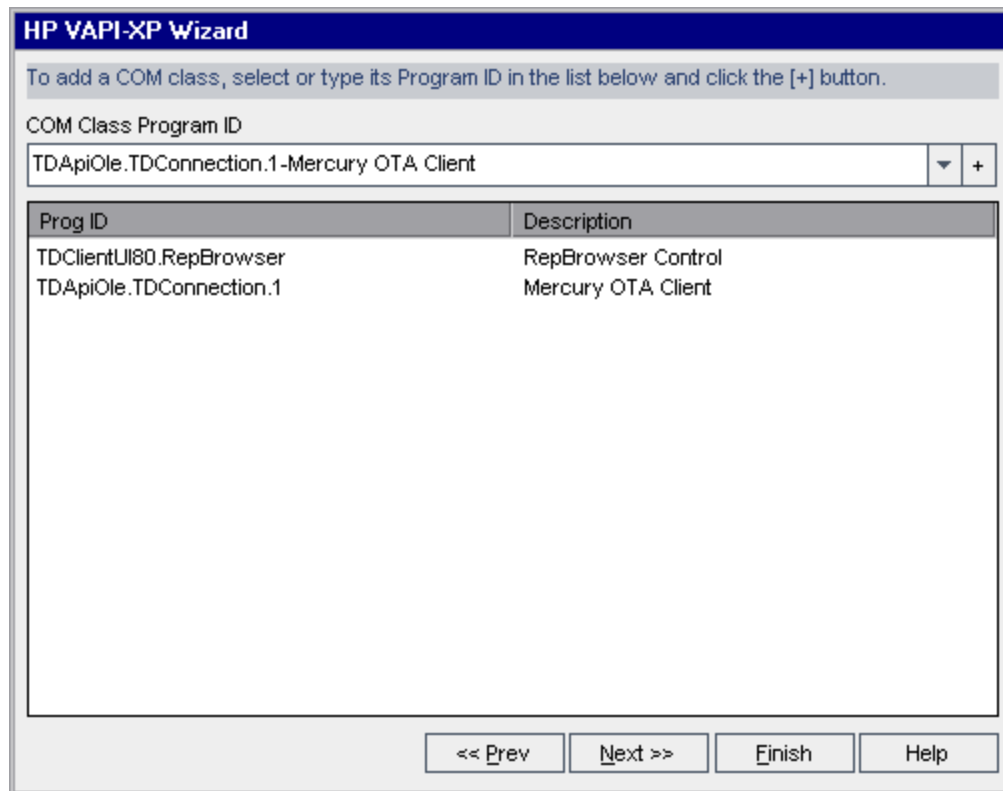
Note: To run this virtual user in the Controller, you must install the latest version of the HP ALM Connectivity Add-in on your LoadRunner client machine. This add-in is available from the HP Application Lifecycle Management Add-ins page. For more information, refer to the *HP Application Lifecycle Management Installation Guide*.

9. Click **Next** to continue creating the test script using the HP VAPI-XP Wizard. The following dialog box opens.



Note: In each dialog box, you can click **Finish** to close the Wizard and continue creating the test script in the Test Script tab.

10. Select the type of test you want to create.
11. Click **Next** to continue creating the test script using the HP VAPI-XP Wizard.
 - If you selected **COM/DCOM Server Test**, choose the Program IDs of the COM/DCOM objects in your machine's registry that you want to test, and click the **+** button. Each selected COM/DCOM object and its description is displayed in the box below.



- If you selected **Java Class Test**, type the full name of the Java class that you want to test in the **Java Class Name** box, and click the + button. The Java class name you typed appears in the text box below.

HP VAPI-XP Wizard

To add a java class, enter the full java class name in the edit box below, and click the [+] button.

Java Class Name +

Java Virtual Machine

Note that a Bean Scripting Framework (BSF) Java package is required.

JVM Runtime

Java Compiler

Classpath

JVM Parameters

<< Prev Next >> Finish Help

Note: You can only use a Java class that has a public constructor that does not take arguments.

Under **Java Virtual Machine**, specify the following:

- **JVM Runtime.** The Java virtual machine runtime executable file (usually **java.exe**).
- **Java Compiler.** The executable file that recompiles the bytecode at the execution platform (usually **javac.exe**).
- **Classpath.** A list of additional (non-standard) Java libraries, separated by semi-colons (;), required to run the specified Java application. Note that if you do not specify the Java classpath, ALM uses the environment variable **CLASSPATH**.
- **JVM Parameters.** The parameters for the Java virtual machine run-time executable file.

When working with Java virtual machines, add the location of the BSF DLLs to the system path, as follows: In the Control Panel, choose **System > System Properties**, and then click the **Advanced** tab. Click the **Environment Variables** button, and in the **System Variables** area, edit the **Path** parameter by adding the path of the following DLLs: **msvcp60.dll**, **bsfactivscriptengine.dll**, and **bsfactivscriptengine_g.dll**. Click **OK**.

- If you selected **Web Service (SOAP) Test**, choose the SOAP client library from the **SOAP Client Library** list, and type or select the URL you want to test in the **Web Service Definition** box. Click the + button. The URL you typed appears in the text box below.

HP VAPI-XP Wizard

To add a Web service, select a SOAP client library, enter a Web service URL, and click the [+] button.

SOAP Client Library

Web Service Definition (WSDL URL) +

<< Prev Next >> Finish Help

Note: Two SOAP client libraries are supported: Microsoft SOAP SDK and PocketSOAP. Note that even if you choose to work with PocketSOAP, you must install Microsoft SOAP SDK to parse Web services. If Microsoft SOAP SDK is not already installed on your machine, run the **SoapToolkit30.exe** file located in the **Redist** directory on your ALM installation DVD.

- If you selected **Console Application Test**, type the name of the application file you want to test in the **Application Executable File** box, and its parameters in the **Command Line Parameters** box.

Clear the **Use VAPI-XP Output instead of Standard Output** box if you do not want to replace the standard output with the VAPI-XP output window.

In the **Application Timeout** box, type the time, in milliseconds, for ALM to wait for the application to finish running. Note that if the timeout is set to **-1**, ALM waits an infinite amount of time for the application to finish running.

Click the **+** button. The data you entered appears in the text box below.

The dialog box is titled "HP VAPI-XP Wizard". It contains a text box for "Application Executable File" with the value "ping.exe" and a "+" button to its right. Below this is a text box for "Command Line Parameters" with the value "delta". There is a checkbox labeled "Use Vapi-XP Output instead of Standard Output." which is currently unchecked. Below the checkbox is a text box for "Application Timeout (in milliseconds, -1 = INFINITE)" with the value "-1". At the bottom of the dialog is a table with four columns: "Application", "Arguments", "Timeout", and "Use Output". The table contains one row with the values "ping.exe", "", "-1", and "true". At the bottom right of the dialog are four buttons: "<< Prev", "Next >>", "Finish", and "Help".

HP VAPI-XP Wizard

To add a console application, enter an application file name and parameters, and click the [+] button.

Console Application

Application Executable File +

ping.exe

Command Line Parameters

delta

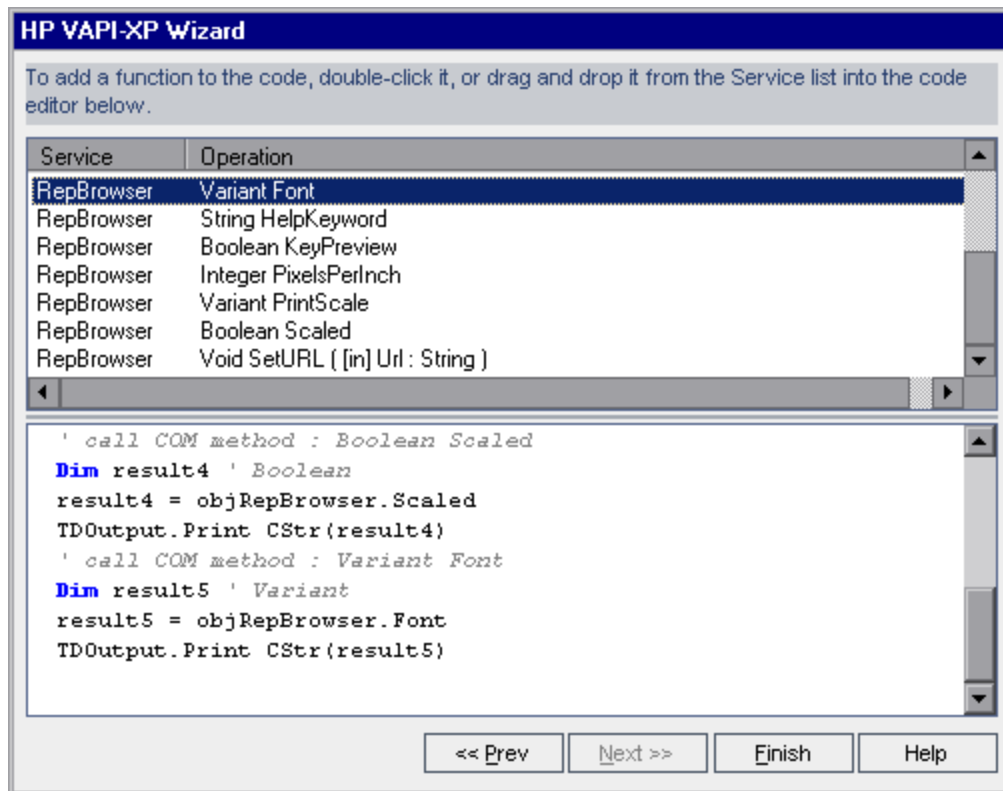
☐ Use Vapi-XP Output instead of Standard Output.

Application Timeout (in milliseconds, -1 = INFINITE) -1

Application	Arguments	Timeout	Use Output
ping.exe		-1	true

<< Prev Next >> Finish Help

12. Click **Next** to continue creating the test script using the HP VAPI-XP Wizard. The following dialog box opens.




13. In the **Service** list, select the functions you want to add to your test script. Double-click each function, or drag and drop it, to add it to your script code. The function is added to the box below the Service list.
14. If required, enter additional parameters or add extra code to the script in the lower pane.
15. Click **Finish**. The new test appears in the test plan tree under the subject folder you selected.

Note: You can choose to add details and attachments to the VAPI-XP test you created, or define requirements coverage. For information, see ["Test Plan Specification" on page 397](#)

How to Edit VAPI-XP Test Scripts

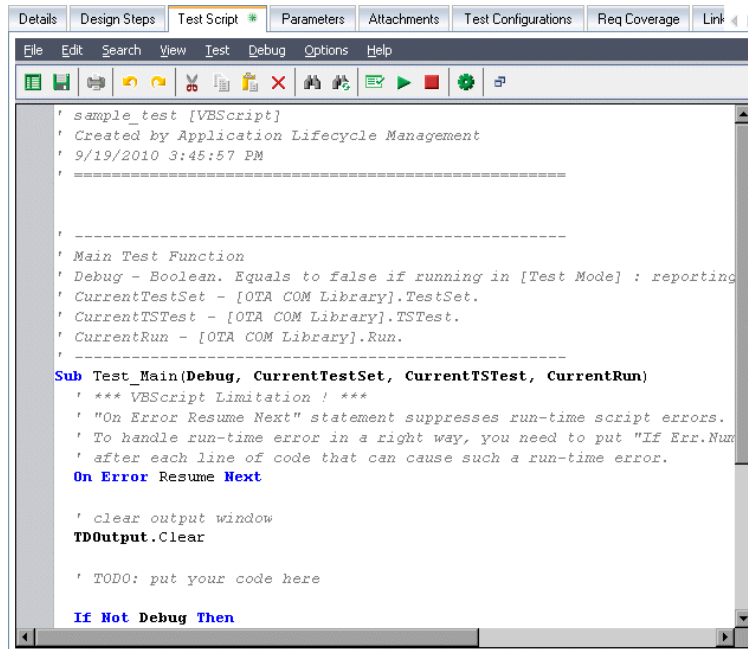
After you have created a VAPI-XP test script using the HP VAPI-XP Wizard, you can edit it in the Test Script tab.

To learn more about VAPI-XP tests, see ["VAPI-XP Tests Overview" on page 516](#).


Tip: You can display the Test Script tab in a separate window by selecting **View > Window Screen**, or clicking the **Window Screen** button .

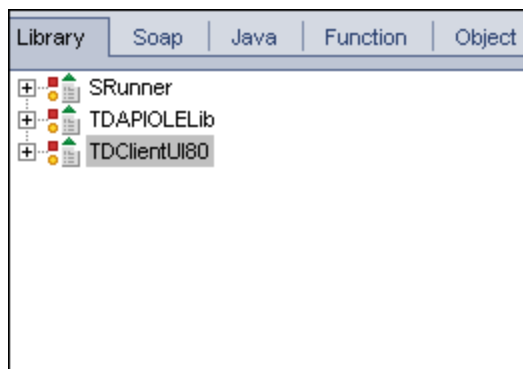
To edit a VAPI-XP test script:

1. In the test plan tree, select a VAPI-XP test, and click the **Test Script** tab. The test script is displayed.



Note: To view or edit the properties of the test script you created, choose **Test > Properties**.

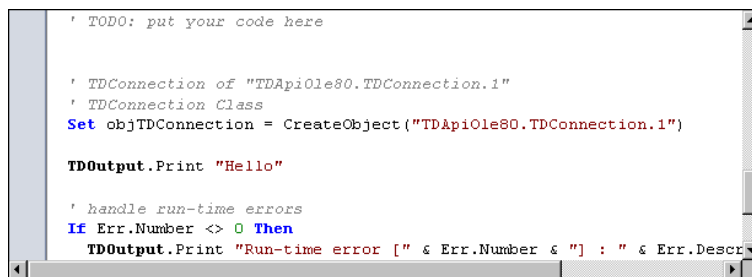
2. To view a list of object definitions, methods, and properties that you can add to your script, select one of the following options:
 - **Test > References > COM Library References.** Opens the References dialog box in which you can choose the COM object definitions, methods, and properties you want to view.
 - **Test > References > SOAP Web Service References.** Opens the Add Web Service Reference dialog box in which you can type the Web service object definition or method you want to view.
 - **Test > References > Java Class References.** Opens the Add Java Class Reference dialog box in which you can type the Java class object definition or method you want to view.
3. Select **View > Browsers**, or click the **Show/Hide Browsers** button . The following tabs are displayed.



- **Library tab.** Displays a list of VAPI-XP (SRunner), ALM (TDAPIOLELib), and COM/DCOM object definitions, methods, and properties that you can add to your script. For an explanation of VAPI-XP object definitions, methods, and properties, see ["How to Use the VAPI-XP API" on page 527](#). For an explanation of ALM object definitions, methods, and properties, refer to the *HP ALM Open Test Architecture API Reference*.
- **Soap tab.** Displays a list of Web service object definitions and methods that you can add to your script.
- **Java tab.** Displays a list of Java class object definitions and methods that you can add to your script.
- **Function tab.** Displays a list of functions contained in your script.
- **Object tab.** Displays a list of objects with defined names that you can add to your script.

Note: For a description of each object definition, method, or property, select **View > Output**, and click the **Help** tab.

4. To add an object definition, method, or property to the current function in your script, place the cursor in the appropriate place in your code, and double-click the object definition, method, or property in the Library, Soap, or Java tabs.



```
' TODO: put your code here

' TDConnection of "TDApiOle80.TDConnection.1"
' TDConnection Class
Set objTDConnection = CreateObject("TDApiOle80.TDConnection.1")


TDOutput.Print "Hello"

' handle run-time errors
If Err.Number <> 0 Then
    TDOutput.Print "Run-time error [" & Err.Number & "]: " & Err.Descript
```

5. To add an object with a defined name, select the object definition, method, or property in the Library, Soap, or Java tabs, and choose **Test > Add Object**. In the Add Object dialog box, type the name you want to assign to the object and click **OK**. The object is added to the Object tab.









Library		Soap	Java	Function	Object
Name	ProgID				
TDConnection	TDApiOle80.TDConnection				
TDHelper	SRunner.TDHelper				
TDInput	SRunner.TDInput				
TDOutput	SRunner.TDOutput				
ThisTest	TDApiOle80.Test				
XTools	SRunner.XTools				

To add the object to your script, double-click the object, or right-click it and select **Insert into Script**.



6. To check the syntax of your code, choose **Test > Check Syntax**, or click the **Syntax Check** button . Select **View > Output** to view the verification results in the **Output** tab.


Additional Editing Functions

You can perform the following editing functions in the Test Script tab:

- To undo a previous action, click the **Undo** button . To restore an action that was undone, click the **Redo** button .
- To remove a section of code from one part of your script, and place it in another part of the script, select the section and click the **Cut** and **Paste**   buttons.
- To copy a section of code from one part of your script, and place it in another part of the script, select the section and click the **Copy** and **Paste**   buttons.
- To delete a section of code, select it and click the **Delete** button .
- To locate specific text within your script, click the **Find in Script** button . In the Find Text dialog box, type the text for which you want to search. Select the options, direction, scope, and origin for your search, and click **OK**.

To find another occurrence of the text within the script, choose **Search > Find Next**.

- To locate specific text within your script and replace it with different text, click the **Replace** button . In the Find Text dialog box, type the text you want to search for in the **Text to find** box. Type the text with which you want to replace this text in the **Replace with** box. Select the options, direction, scope, and origin for your search, and click **OK**. To replace all instances of the text in the script, click the **Replace All** button.
- To locate a specific line number within your script, choose **Search > Go to Line Number**. In the Go to Line Number dialog box, type the line number you want to find, and click **OK**.
- To change the editor options, such as the margins, fonts, and screen/text colors, click the **Editor** button . Set the properties you want in the Editor, Display, and Colors tabs, and click **OK**.

After you have finished editing your script, click the **Save** button  to save the changes you made.

How to Use AUT Environments with VAPI-XP

ALM Editions: AUT Environments and Functional test sets are available only for ALM Edition.

VAPI-XP tests can be run using server-side execution when they are part of a Functional test set. When using server-side execution, you can take advantage of AUT Environments. AUT Environments allows users to make test execution more dynamic by parameterizing the environment data used for testing. Instead of defining and running several different VAPI-XP tests

that use the same logic but need different environment parameters, you can simply program your VAPI-XP test to use an already defined AUT environment configuration that ALM inserts into your test at run-time.

For more information about Functional test sets, see ["Test Set Specification Overview" on page 570](#).

For information about setting up AUT environment configurations and environment parameters, see ["How to Work with AUT Environments" on page 371](#).

To use your AUT environment configuration in a VAPI-XP script, you use the following functions:

Post

Invoke this function before calling functions that access AUT parameters.

currentRun.post()

getRunTimeParameterByName

Returns the environment parameter value based on parameter name.

currentRun.getRuntimeParameterByName(Name)

Name. Environment parameter name.

getRunTimeParameterByGuid

Returns the environment parameter value based on parameter Guid.

currentRun.getRuntimeParameterByGuid(Guid)

Guid. Environment parameter Guid.

isSSE

Returns TRUE if the test is being run as a server-side execution test in a Functional test set.

currentRun.isSSE

ReservationId

Returns the timeslot ID of the test if the test is being run as a server-side execution test in a Functional test set. Otherwise, returns NULL.

currentRun.ReservationID

How to Use the VAPI-XP API

The VAPI-XP tool contains a built-in library of VAPI-XP object definitions that you can reference as you are creating your test script.

To learn more about VAPI-XP tests, see ["VAPI-XP Tests Overview" on page 516](#).

Using the TDHelper Object

The TDHelper object supplies the following functions that you can use to perform ALM-related tasks.

RunTestSet

Executes the selected test set and returns the accumulated test set execution status.

RunTestSet([Name = "default"], [Filter = ""], [Locally = FALSE], [Host = ""], [HostGroup = ""])

Name. Test set name. Optional. Default = "default"

Filter. Test filter. Defines tests to run. If empty, instructs ALM to run all the tests in a specified test set. Optional. Default = ""

Locally. If set to `TRUE`, instructs ALM to run test set locally. Optional. Default = `FALSE`

Host. Host on which test set will be run. Optional. Default = ""

HostGroup. Host group in which test set will be run. Optional. Default = ""

RunTest

Executes the selected test and returns the test execution status.

RunTest(Name, Instance, TestSet, [Locally = FALSE], [Host = ""], [HostGroup = ""])

Name. Test name.

Instance. Test instance.

TestSet. Test set name.

Locally. If set to `TRUE`, instructs ALM to run test set locally. Optional. Default = `FALSE`

Host. Host on which test set will be run. Optional. Default = ""

HostGroup. Host group in which test set will be run. Optional. Default = ""

AddDefect

Adds a new defect to the current test, if the test is being run in debug mode. If the test is being run in test mode, a new defect is added to the current run of the test instance in the current test set. Returns a created defect object.

AddDefect([Fields], [StepKey])

Fields. Two-dimensional array—the first dimension is for the field name, and the second for the field value. Optional.

StepKey. Step ID for step related to new defect. Optional.

AddDefectUI

Adds a new defect to the current test (in debug mode) or the current run (in test mode), using the ALM New Defect dialog box.

AddDefectUI([StepKey])

StepKey. Step ID for step related to new defect. Optional.

AddStepToRun

Adds a new step to the current run. Returns a created step object.

AddStepToRun(Name, [Desc], [Expected], [Actual], [Status])

Name. Step name.

Desc. Step description. Optional.

Expected. Expected step result. Optional.

Actual. Actual step result. Optional.

Status. Step status. Optional.

DownloadAttachment

Downloads the attachment associated with a test object. Returns the local path to which the download was performed.

DownloadAttachment(Name, item)

Name. The attachment name.

item. Reference to the object with the attachment.

UploadAttachment

Uploads an attachment and associates it with a test object.

UploadAttachment(path, item)

path. The local path (fully specified file name) of the item to upload.

item. Reference to the object to which to associate the attachment.

Using the TDInput Object

The TDInput object supplies the following function that you can use to obtain an input value from an end user.

GetInput

Displays the Input dialog box, enabling you to obtain an input value from an end user.

GetInput([Caption],[Name])

Caption. Dialog box caption. Optional.

Name. Name of the input value. Optional.

Using the TDOutput Object

The TDOutput object supplies the following functions that you can use to control the VAPI-XP Output tab.

Clear Method

Clears the Output tab.

Clear

Print Method

Prints the text message to a new line in the Output tab.

Print(Msg)

HookDebug Property

Sets or removes the hook for the OutputDebugString tab API function.

HookDebug

Text Property

Gets or sets the Output tab text.

String Text

Using the XTools Object

The XTools object supplies the following functions that you can use to perform general tasks.

run

Runs command line with passed attributes.

run(Command, [Args = ""], [Timeout = -1], [UseOutput = TRUE])

Command. Application executable file.

Args. Application arguments. Optional. Default = ""

Timeout. Timeout in milliseconds. If this is -1, ALM waits an infinite amount of time for the application to finish running.

UseOutput. If TRUE, ALM replaces the standard output with the VAPI-XP output window.

WrapArray

Creates an array of variants from an array of objects. For example, if a called object returns as a method result an array of strings, none of the supported script engines is able to read the array. Calling the WrapArray function and passing the returned array as a function parameter creates an array of variants that can be understood by the scripting engine.

WrapArray (array)

array. Array to wrap.

Sleep

Suspends script execution for a specified amount of time.

Sleep(interval)

interval. Time (in milliseconds) for script execution suspension


How to Run VAPI-XP Tests in Debug Mode

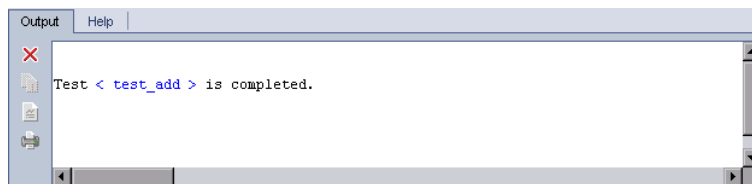
After you have created and edited your VAPI-XP test script, you can run it in debug mode or test mode. Running a VAPI-XP test in debug mode enables you to execute the test without including it in a test set and without creating test run data in the ALM project. It is generally recommended that






you use the debug mode while you are developing your test, and the test mode once you have completed creating your test.

To learn more about VAPI-XP tests, see ["VAPI-XP Tests Overview" on page 516](#).

To run a VAPI-XP test in debug mode:

1. In the Test Plan module, select a VAPI-XP test from the test plan tree, and click the **Test Script** tab.
2. Select **Test > Execute (Debug Mode)**, or click the **Execute Script** button . ALM begins executing the test script you selected.
3. Select **View > Output** to view the output generated by the test script.



- To clear the Output tab, click the **Clear Output** button .
 - To copy the output text to the clipboard, select it and click the **Copy Selected Text to Clipboard** button .
 - To view the test script output in a Web browser, click the **Open Output Text in Web Browser** button .
 - To print the test script output, click the **Print Output** button .
4. To stop executing the VAPI-XP test before it finishes running, select **Test > Stop**, or click the **Stop** button .

How to Run VAPI-XP Tests in Test Mode


You can run your VAPI-XP test in test mode once you have added the test to a test set in the Test Lab module.

When you run a VAPI-XP test in test mode, test run data is created in the ALM project. You can run your VAPI-XP test in test mode from either the Test Plan or Test Lab module.

Note: To run VAPI-XP tests remotely, you must install the HP ALM Client Registration Add-in and the HP ALM Connectivity Add-in on the host machine on which the tests are executed. For more information on add-ins, refer to the *HP Application Lifecycle Management Installation Guide*.

To learn more about VAPI-XP tests, see ["VAPI-XP Tests Overview" on page 516](#).

To run a VAPI-XP test in test mode from the Test Plan module:

1. Select a VAPI-XP test from the test plan tree, and click the **Test Script** tab.
2. Select **Test > Execute (Test Mode)**. The Select Test Set dialog box opens.
3. In the **Test Set** box, select the test set containing the current VAPI-XP test.
4. In the **Instance** box, select the test instance that you want to run.
5. In the **Run Name** box, type the name you want to assign to the test run.
6. Click **OK**. ALM begins executing the test you selected.
7. To view the output generated by the test script, select **View > Output**. For an explanation of the Output tab, see ["How to Run VAPI-XP Tests in Debug Mode " on page 530](#).
8. To stop executing the VAPI-XP test before it finishes running, select **Test > Stop**, or click the **Stop** button .

To run a VAPI-XP test in test mode from the Test Lab module:

1. From the **Test Sets** tab, select the test set containing the VAPI-XP test you want to run.
2. In the **Execution Grid**, select the test you want to run, and click the **Run** button. The Automatic Runner dialog box opens, displaying the selected test.
3. In the **Run on Host** column, select a host machine on which to run the VAPI-XP test, or choose **Run All Tests Locally** to run the test on your local machine.
4. Click the **Run** button. The VAPI-XP Test Script window opens as ALM begins executing the selected VAPI-XP test. When ALM finishes executing the test, the Automatic Runner dialog box displays the status of the test run.



How to Debug VAPI-XP Tests Scripts Test Mode

If your test run was not successfully completed, you can use VAPI-XP's Integrated Debugger to assist you in debugging your VAPI-XP test script.

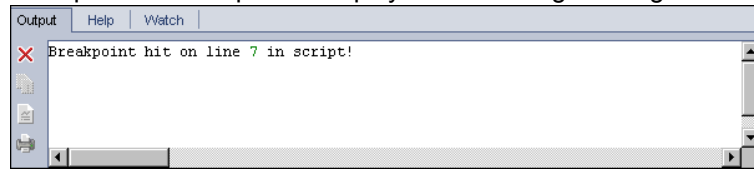
Note: You cannot use the Integrated Debugger to debug PerlScript or PythonScript test scripts.


To learn more about VAPI-XP tests, see ["VAPI-XP Tests Overview" on page 516](#).

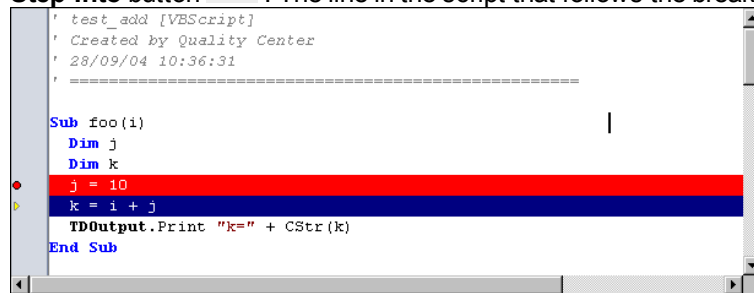
To debug a VAPI-XP test script:



1. In the **Test Script** tab of the Test Plan module, select **Debug > Integrated Debugger**. Additional buttons controlling the debugging process are displayed on the toolbar.
2. To set a breakpoint in a script, select the line in the script where you want to set the breakpoint, and choose **Debug > Toggle Breakpoint** or click the **Toggle Breakpoint** button . Alternatively, click the gray margin next to the line in the script. The line you selected is highlighted in red.
3. Click the **Execute Script** button . ALM begins executing the script, stopping at the defined

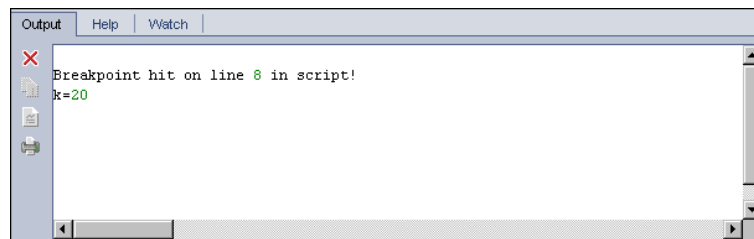
breakpoint. The Output tab displays the following message.




4. To instruct ALM to enter the script after the breakpoint, choose **Debug > Step Into** or click the **Step Into** button . The line in the script that follows the breakpoint is highlighted in blue.




5. To instruct ALM to step over a line in the script, click the **Step Over** button  or choose **Debug > Step Over**.
6. To instruct ALM to execute the script, choose **Debug > Step Out** or click the **Step Out** button . The output is displayed in the **Output** tab.

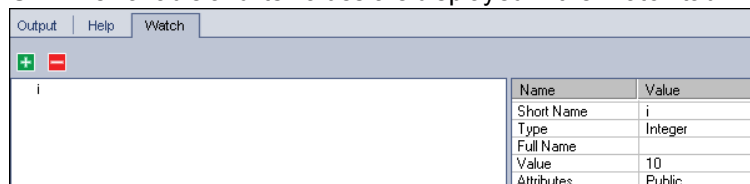




7. To view or edit the value of each variable in the script, choose **Debug > Variables** or click the **Show Variables** button . The Variables dialog box opens, displaying the variables available in the current script. Select a variable to view its properties.

To change a variable's value, type the new value you want to assign to it in the **Value** box and click **Update**. Click **OK** to save your changes and close the Variables dialog box.

8. To view information about a specific variable while debugging, choose **Debug > Watch** or click the **Show Watch Window** button  to display the Watch tab.

To add a variable to the Watch tab, click **+**, type a variable name in the **Prompt** box, and click **OK**. The variable and its values are displayed in the Watch tab.



9. To instruct ALM to resume executing the script, choose **Debug > Resume Execution** or click the **Resume Execution** button  .
10. Choose **Debug > Stop Debugging**, or click the **Stop Debugging** button  to stop the Integrated Debugger from debugging your script.

VAPI-XP User Interface

This section includes:

HP VAPI-XP Wizard	534
Test Script Tab	534

HP VAPI-XP Wizard

This wizard enables you to create VAPI-XP test scripts. For more details, see "[How to Create VAPI-XP Test Scripts](#) " on page 516.

Test Script Tab

This tab enables you to view and edit your VAPI-XP test scripts. For more details, see:

- "[How to Edit VAPI-XP Test Scripts](#) " on page 523
- "[How to Use the VAPI-XP API](#)" on page 527

Test Lab

ALM Editions: Fields and functionality related to baselining are not available with ALM Essentials Edition.

Chapter 31

Introducing Test Execution

This chapter includes:

Test Execution Overview.....	538
How to Run Tests in ALM.....	540
How to Work with Draft Runs.....	542
The Test Lab Module User Interface.....	542

Test Execution Overview

You begin test execution by creating test sets and choosing tests to include in each set. A **test set** contains a subset of the tests in an HP Application Lifecycle Management (ALM) project designed to achieve specific test goals. As your application changes, you can run the manual and automated tests in your project in order to locate defects and assess quality.

You can run ALM tests in different ways:

Run Tests using Functional Test Sets

ALM Editions: Functional test sets are not available for ALM Essentials Edition, Quality Center Enterprise Edition, and Performance Center Edition.

Tests in Functional test sets are run using server-side execution. This means you don't have to be around to initiate and control the tests. Functional test sets are run via timeslots, so you can schedule a test set to be run immediately, or you can schedule it to be run at a future time. Once you schedule the test, ALM will ensure that the necessary resources will be reserved for the test set. The test set is launched without user intervention and run in sequence with the input you provide in advance.

- You can schedule the execution of Functional tests or Functional test sets in the Timeslots module. If there are currently available hosts for your test, you can also use the Execution Grid to arrange for tests to run immediately. For details, see ["How to Run Tests in ALM" on page 540](#).
- Functional tests run on testing hosts that are configured in Lab Resources in ALM or Lab Management. In order to run tests in a Functional test set, you must have testing hosts available to your project. For more information about testing hosts, see ["Testing Hosts Overview" on page 368](#).
- When you schedule a test, an appropriate testing host is reserved for your test and that host cannot be reserved for another test unless another appropriate host can be found for your test.
- ALM manages host allocation dynamically. If the testing host reserved for your test becomes unavailable before your test can be run, ALM is able to automatically reshuffle the remaining testing hosts and, if possible, reallocate another suitable testing host for your test. For more details, see ["Host Allocation" on page 670](#).

Functional test sets are a key component in ALM's Continuous Delivery solution. They facilitate an automated, end-to-end deployment and testing framework that makes application development more efficient, reliable, and quick. For more information about how Functional test sets can be used as part of this process, see ["Deploying and Testing your Application in ALM" on page 721](#).

Run Tests using Default Test Sets

Tests in Default test sets are run using client-side execution. You control the test directly from your local computer. You can run Default test sets manually or automatically in ALM.

To run tests in Default test sets manually:

- Use **HP Sprinter**. Provides enhanced functionality to assist you in the manual testing process.
ALM Editions: Sprinter functionality is not available with ALM Essentials Edition or

Performance Center Edition.

- Use **Manual Runner**. If you don't use Sprinter, you can run tests manually using Manual Runner.

When you run a test manually, you follow the test steps and perform operations on the application under test. You pass or fail each step, depending on whether the actual application results match the expected output.

To run tests in Default test sets automatically:

- You can run tests automatically from your local machine using **Automatic Runner**.
- When you run an automated test automatically, ALM opens the selected testing tool automatically, runs the test on your local machine or on remote hosts, and exports the results to ALM.
- You can also run manual tests automatically. When you run a manual test automatically and specify a remote host, ALM notifies a designated tester by email to run the test on the specified host.

For more details about running tests in ALM, see ["How to Run Tests in ALM" on next page](#).

Following test runs, you review and analyze test results. Your goal is to identify failed steps and determine whether a defect has been detected in your application, or if the expected results of your test need to be updated. You can validate test results regularly by viewing run data and by generating reports and graphs. For details, see ["Test Results Overview" on page 644](#).

You can also set a test as a draft run to instruct ALM to ignore the run results. For details, see ["Draft Runs" below](#).

ALM Essentials Edition: Fields and functionality related to baselining are not available in the Test Lab module.

For task details, see ["How to Run Tests in ALM" on next page](#).

Draft Runs

Setting a test as a draft run instructs ALM to ignore the run results. When you set a test instance as a draft run, the outcome of the run does not impact the execution status of the test, the status of the test instance, or the coverage status. ALM also ignores draft runs when calculating the remaining number of test instances to run, and when displaying results in coverage, progress, and live analysis graphs.

You can designate a test run as a draft before you perform the test. You can also mark a test run as a draft by modifying the **Draft Run** field at any time after the run. When you change the **Draft Run** value for a run, ALM recalculates all relevant statistics, and updates relevant status fields. Graphs display updated results.

Draft runs enable you to try tests while they are still in development, or after they have been modified. For example, you may want to test that each step description is formulated correctly, or try only a part of a large test script.

Setting a test run as a draft requires the appropriate user permissions. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

For task details, see ["How to Work with Draft Runs" on page 542](#).

How to Run Tests in ALM

This task describes how to run tests in your project using the ALM Test Lab module.

Note: This task is part of a higher-level task. For details, see ["Application Lifecycle Management Roadmap" on page 36](#).

This task includes the following steps:

- ["Create test sets" below](#)
- ["Run tests in a Functional test set" below](#)
- ["Run tests in a Default test set" below](#)
- ["Run Performance tests" on next page](#)
- ["View and analyze test results" on next page](#)
- ["Link to a defect" on next page](#)

1. Create test sets

Create and define test sets in the Test Lab module. After you have created test sets, you assign test set folders to cycles defined in the releases tree in the Releases module.

For task details, see ["How to Create Test Sets" on page 571](#).

To learn more about the different types of test sets, see ["Test Set Specification Overview" on page 570](#).

2. Run tests in a Functional test set

The tests in Functional test sets run using server-side execution. You can reserve resources for running Functional test sets to ensure that they will be available for the duration of the run. To run tests in a Functional test set, use one of the following:

- Schedule a test set for the future in the **Timeslots** module to reserve resources ahead of time. For more details, see ["How to Reserve Testing Timeslots in ALM" on page 676](#).
- To arrange for a test to run in a timeslot immediately, use the **Execution Grid** tab in the **Test Lab** module. For more details, see ["How to Run Tests Automatically" on page 627](#).

ALM Editions: Functional test sets are available only for ALM Edition.

3. Run tests in a Default test set

The tests in Default test sets run using client-side execution. You control and run the tests from your machine by using the **Test Lab** module. To run tests in a Default test set, use one of the following:

- Run manual and automated tests manually, executing the test steps that you defined during test planning. For task details, see ["How to Run Tests Manually" on page 615](#).
- Arrange for manual and automated tests in a test set to run automatically. For task details, see ["How to Run Tests Automatically" on page 627](#).

4. Run Performance tests

Performance Center: You can run performance tests to create load on an application and test its performance. For details, refer to the *HP ALM Performance Center Guide*.

You can reserve the resources required for running functional test sets to ensure that they will be available for the duration of the test run.

- Use the **Timeslots** module to reserve your resources ahead of time. For more details, see ["How to Reserve Testing Timeslots in ALM" on page 676](#).
- To arrange for a test to run in an immediate timeslot, use the Execution Grid tab in the **Test Lab** module. For more details, see ["How to Run Tests Automatically" on page 627](#).

ALM Editions: Functional test sets are not available for HP ALM Essentials Edition, HP Quality Center Enterprise Edition, and HP ALM Performance Center Edition.

5. View and analyze test results

View test results. After you run tests, review results to determine if the actual results match the expected test results. For task details on viewing test results, see ["How to View Test Results" on page 644](#).

Analyze run data by creating graphs and reports. Use one of the following:

- **View dynamic graphs of test set folders.** In the test sets tree, select a test folder, and click the **Live Analysis** tab. For task details on generating live analysis graphs, see ["How to Generate Live Analysis Graphs" on page 884](#).
- **View test set data in a graph.** On the Test Lab module menu, select **Analysis > Graphs**. For task details on generating graphs, see ["How to Generate a Graph" on page 790](#).
- **Create a report of test set data.** On the Test Lab module menu, select **Analysis > Reports**. For task details on creating reports, see ["How to Manage Standard Reports" on page 876](#).

For details on additional analysis tools in ALM, see ["How to Analyze Data in ALM" on page 772](#).

6. Link to a defect

If a defect has been detected, you can create a new defect and link it to the test set, test instance, test run, or run step, or you can link it to an already-existing defect.

For user interface details, see ["Linked Defects/Entities Page" on page 762](#).

How to Work with Draft Runs

This task describes how to set test runs as draft runs. You can set a test run as a draft in the following ways:

- **Before a test run.** You can mark a test that you are running manually as a draft run before performing the test. In the Manual Runner: Run Details page, set the value of the **Draft Run** field to **Y**. For user interface details, see "Manual Runner Wizard" on page 619.
- **After a test run.** You can mark any test run as a draft by modifying the **Draft Run** field for the run. For details on accessing run details, see "How to View Test Results" on page 644.

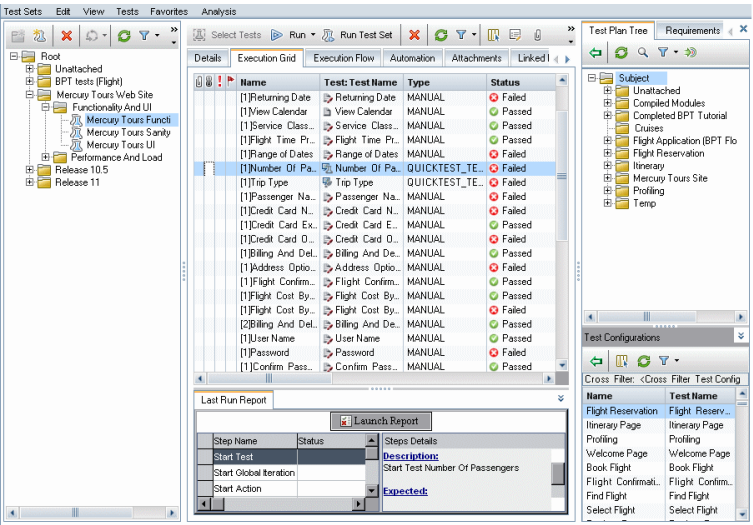
The Test Lab Module User Interface

This section includes:

Test Lab Module Window.....	542
Test Lab Module Menus and Buttons.....	545
Test Lab Module Icons.....	558
Test Lab Module Fields.....	559

Test Lab Module Window

This window enables you to create test sets and perform test runs.



To access	On the ALM sidebar, under Testing , select Test Lab .
-----------	---

Important information	<p>The Test Lab module enables you to create and modify test sets in the test sets tree.</p> <p>ALM Editions:</p> <ul style="list-style-type: none"> Functional and Performance test sets are available only for ALM Edition. Fields and functionality related to baselining are not available for ALM Essentials Edition.
Relevant tasks	<ul style="list-style-type: none"> "How to Create Test Sets" on page 571 "How to Run Tests in ALM" on page 540
See also	"Test Execution Overview" on page 538

Test Lab Module Common Elements

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<Test Lab module common UI elements>	<ul style="list-style-type: none"> Test Lab fields. For field definitions, see "Test Lab Module Fields" on page 559. Test Lab menus and buttons. For command and button descriptions, see "Test Lab Module Menus and Buttons" on page 545. Test Lab icons. For icon descriptions, see "Test Lab Module Icons" on page 558. ALM main menu and sidebar. For details on the Tools menu, Help menu and sidebar, see "ALM Common Areas" on page 45.

Test Sets Tab

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<Filter status bar>	Describes the filter currently applied to the tree. Located directly above the test sets tree.
<Test sets tree>	<p>Located on the left side of the window, organizes and displays your test sets hierarchically. A test set contains a subset of the tests in your project.</p> <p>Note: You cannot move test sets within a folder. When you refresh the tree view, test sets in a folder are alphabetized.</p>




UI Element	Description
Select Test Pane	<p>Displays the Test Plan Tree tab and the Requirements Tree tab, enabling you to select tests to add to the selected test set. For details, see "Select Tests Pane" on page 594.</p> <p>Available from: Execution Grid, Execution Flow. To display, click the Select Tests button.</p>
Details tab	<p>Displays details of the currently selected test set or folder.</p> <p>Note: For a test set folder, click the Show button to view additional information.</p>
Execution Grid tab	Displays test data in a grid. For details, see "Execution Grid Tab" on page 575 .
Requested Hosts tab	<p>Displays the hosts requested for the currently selected test set.</p> <p>The Requested Hosts tab is only available for server-side execution Functional test sets.</p> <p>For details, see "Requested Hosts Tab" on page 587.</p>
Execution Flow tab	Displays test data in a diagram. Enables you to specify conditions for test execution. For details, see "Execution Flow Tab" on page 608 .
Automation tab	Displays email notification rules and On Failure instructions for the currently selected test set. For details, see "Automation Tab" on page 589 .
Attachments tab	Lists attachments that provide additional information about the currently selected test set. For details, see "Attachments Page" on page 83 .
Linked Defects tab	Lists the defects linked to the currently selected test set. For user interface details, see "Linked Defects/Entities Page" on page 762 .
History tab	Lists changes made to the currently selected test set. For details, see "History Tab" on page 78 .
Description tab	<p>Describes the currently selected test set or test set folder.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Live Analysis	<p>A graphical representation of the test data related to the currently selected test set folder. For details, see "Live Analysis Tab" on page 885.</p> <p>Available from: Test set folder</p>




Test Lab Module Menus and Buttons


This section describes the menus and buttons available in the Test Lab module.




To access	On the ALM sidebar, under Testing, select Test Lab .
Important information	Some menu commands and buttons are not available in all Test Lab tabs.
Relevant tasks	"How to Run Tests in ALM" on page 540
See also	<ul style="list-style-type: none"> "Test Execution Overview" on page 538 "Test Lab Module Window" on page 542 "Test Lab Module Icons" on page 558





User interface elements are described below:



UI Element (A - Z)	Menu	Description
Abort Run 	<right-click menu>	<p>Performance Center: Stops a currently running performance test.</p> <p>Note: Only enabled when the selected test run is in the Initializing, Running, or Stopping states.</p>
Add Time Dependency to Flow 		<p>Adds a time dependency icon to the diagram.</p> <p>To create a time dependency for a test, link the arrow from the icon to a test in the Execution Flow. The default time dependency is the ALM server's current date and time. For details, see "Execution Flow Tab" on page 608.</p> <p>Available from: Execution Flow</p>
Add to Favorites	Favorites	Opens the Add Favorite dialog box, enabling you to add a favorite view to your private or the public folder. For details, see " Add Favorite Dialog Box " on page 104.
Alerts	Tests (Test Sets tab > Execution Grid)	<p>Opens the Alerts dialog box, enabling you to display alerts for the test instance. For details, see "Alerts Dialog Box" on page 97.</p> <p>Available from: Execution Grid</p>
Arrange Layout 	Tests	<p>Arranges the tests in the Execution Flow diagram in a hierarchical layout, enabling you to view relationships between different tests.</p> <p>Available from: Execution Flow</p>





UI Element (A - Z)	Menu	Description
Assign to Cycle 	Test Sets	Enables you to assign a test set folder to a cycle. For more details, see "Select Cycles Dialog Box" on page 166 .
Attachments 	<right-click menu>	<p>Opens the Attachments page inside the Test Instance Details dialog box, enabling you to add an attachment to a test instance. For details, see "Attachments Page" on page 83.</p> <p>Available from: Execution Grid</p>
Clear Alerts	Tests	<p>Clears displayed alerts for the module. For details, see "How to Use Alerts" on page 93.</p> <p>Available from: Execution Grid</p>
Clear Assigned Cycle 	Test Sets	Clears the assigned cycle from the test set folder.
Clear Follow Up Flag	<ul style="list-style-type: none"> Edit (In the Test Runs module) Tests (Test Lab module > Execution Grid) 	Clears the follow up flag for a selected test instance or test run. For details, see "Flag For Follow Up Dialog Box" on page 98 .
Clear Pinned Baseline	Test Sets	<p>Clears the baseline that is pinned to the test set.</p> <p>Note: Clearing a pinned test set deletes all test runs from the test set.</p>
Collapse	View	<p>Collapses the folders in the test sets tree below the selected folder.</p> <p>Available from: Test Sets tab</p>
Continue Manual Run	<ul style="list-style-type: none"> Tests (Test Lab module > Execution Grid/Flow) Test Runs (Test Runs module) 	Continues running the selected tests with the same runner that was used the first time the test was run. For details, see "How to Run Tests Manually" on page 615 .



UI Element (A - Z)	Menu	Description
Copy to Clipboard	Tests	Copies the Execution Flow diagram to the clipboard as a bitmap.
Copy URL/Paste	Edit	Copies a selected test set or test run and pastes its URL as a link. The test set or test run itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking on the link opens ALM and takes you to the test set or test run. If you are not already logged in, ALM first prompts for login details.
Copy/Paste	Edit	<p>Copies selected test sets or test set folders and pastes them to another test set folder in the same project or in another project.</p> <p>When you paste test sets to another project, the Paste Test Set Folders To Target Project dialog box opens. For details, see "Paste Test Set Folders To Target Project Dialog Box" on page 601.</p> <div> <p>Note:</p> <ul style="list-style-type: none"> When copying test sets or test set folders, test run information is not copied. To copy test sets or test set folders across projects, both projects must use the same ALM version and patch level. </div>
Cut/Paste	Edit	<p>Moves a selected test set or test set folder to a different location in the test sets tree.</p> <div> <p>Tip: You can also move a test set or test set folder to a new location in the test sets tree by dragging it.</p> </div>
 Data Processor Queue		<p>Performance Center: If you analyze a test run, recalculate the SLA, or add the test run to a trend report, the action is added to a data processing queue, enabling you to see when the action will be performed.</p> <p>Available from: Test Runs module</p>




UI Element (A - Z)	Menu	Description
Delete 	Edit	<p>Deletes a selected test set, test set folder, or test run. You cannot delete the Root folder, the Unattached folder, or the default test set.</p> <p>When deleting a test set folder, opens the Confirm Delete Folder dialog box, enabling you to select one of the following delete options:</p> <ul style="list-style-type: none"> • Delete folders only. Deletes the folder and moves all test sets to the Unattached folder. The Unattached folder contains all test sets that are no longer associated with a folder. • Delete folders and test sets. Permanently deletes the folder and all its subfolders and test sets.
Details 		<p>Opens the corresponding Details dialog box, enabling you to view and update details of the selected test set, test instance, or test run.</p> <p>For details, see:</p> <ul style="list-style-type: none"> • "Test Set Details Dialog Box " on page 598 • "Test Instance Details Dialog Box" on page 578 • "Run Details Dialog Box" on page 653
Edit Test 		<p>Performance Center: Opens the Performance Test Designer, enabling you to design the selected performance test. For details, refer to the <i>HP ALM Performance Center Guide</i>.</p>
Enable Manual Test Run Confirmation	Tests	<p>Instructs ALM to display the Manual Test Run dialog box each time you run manual tests. For details, see "Manual Test Run Dialog Box " on page 618.</p> <p>Available from: Execution Grid, Execution Flow</p>
Expand All	View	<p>Expands all folders in the test sets tree below the selected folder.</p>
Export	<ul style="list-style-type: none"> • Test Sets (Test Lab module) • Edit (Test Runs module) 	<p>Exports the data in the Test Runs tab as a text file, Microsoft Excel worksheet, Microsoft Word document, HTML document, or text document.</p>
Filter	View	<p>Enables you to filter and sort the runs in the test runs grid. For more details, "Filter Dialog Box " on page 61.</p> <p>Available from: Test Runs module</p>



UI Element (A - Z)	Menu	Description
Find	<ul style="list-style-type: none"> Tests (Test Lab module > Execution Grid) Edit (Test Runs module) 	Opens the Find dialog box, enabling you to search for a test run in the test runs grid, or a test instance in the Execution Grid. For details, see "Find Dialog Box" on page 73 .
Find Folder/Test Set	Edit	<p>Opens the Find dialog box, enabling you to search for test sets and test set folders. For details, see "Find Dialog Box" on page 73.</p> <p>Note: If you have applied filters to the test sets tree, ALM restricts the search to the test sets currently displayed.</p>
Find Test in Flow 	<right-click menu>	<p>Opens the Find Test Instance dialog box, enabling you to search for a test in the Execution Flow diagram.</p> <p>A successful search opens the Find Results dialog box. Click the Keep on Top button  to display the Find Results dialog box on top of all open windows.</p> <p>To display a selected window on top of the Find Results dialog box, click the Not on Top button .</p> <p>Available from: Execution Flow</p>
Fit in Window 		<p>Resizes the Execution Flow diagram to fit the window.</p> <p>Click the arrow to select a magnification option. Options include:</p> <ul style="list-style-type: none"> Magnification level - 25%, 50%, 150%, 200%. Normal. Displays the diagram at 100% magnification. Fit in Window. Displays the entire diagram in the window. Custom Zoom. Opens the Custom Zoom dialog box. Type a zoom level and click Zoom. <p>Available from: Execution Flow</p>


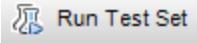

UI Element (A - Z)	Menu	Description
Flag for Follow Up 	<ul style="list-style-type: none"> Tests (Test Lab module > Execution Grid) Edit (Test Runs module) 	<p>Opens the Flag for Follow Up dialog box, enabling you to add or modify a follow up flag for a selected test instance or test run. For details, see "Flag For Follow Up Dialog Box" on page 98.</p>
Go to Configuration in Test Plan	Tests	<p>Opens the Test Plan module and highlights the selected test configuration in the Test Configurations tab.</p> <p>Available from: Execution Grid, Execution Flow</p>
Go to Test in Test Plan	Tests	<p>Opens the Test Plan module and highlights the selected test.</p> <p>Available from: Execution Grid, Execution Flow</p>
Go to Test Set	Test Sets	<p>Opens the Go to Test Set dialog box, enabling you to type a Test Set ID to find a specific test set in the test sets tree.</p> <p>To locate the Test Set ID for a test set, select the test set in the test sets tree and click the Details tab.</p>
Go to Timeslot 	<right-click menu>	<p>Opens the Timeslots module, displaying the timeslot for the selected test run.</p> <p>Available from: Test Runs module</p> <p>ALM Editions: Timeslots are only available for HP ALM Edition.</p>
Graphs	Analysis	<p>Lists the graphs you can generate for Test Lab data. Select a predefined graph, or launch the graph wizard.</p> <p>For details on the predefined graph types, see "Entity Graph Types" on page 793.</p>
Grid Filters	View	<p>Displays a grid filter box under each column name, enabling you to define a filter condition for a column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For details, see "Select Filter Condition Dialog Box" on page 70.</p>





UI Element (A - Z)	Menu	Description
Host Manager for Default Test Sets	Test Sets	Opens the Host Manager dialog box, enabling you to define hosts for remote test execution within a Default test set. For details, see "Host Manager Dialog Box (for Default test sets only)" on page 631 .
Host Manager for Functional Test Sets	Test Sets	Opens the Testing Hosts module, enabling you to manage and define hosts for server-side Functional test set execution. For details, see "Testing Hosts Overview" on page 1 .
Indicator Columns	Tests	Displays the following columns on the left-side of the Execution Grid and test runs grid:  . For details, see "Test Lab Module Icons" on page 558 .
Last Run Report	Tests	<p>Opens the Last Run Report pane, displaying results of the last test run for the selected test.</p> <p>You can also click the Show arrow to display the Last Run Report pane.</p> <p>Performance Center Edition: Opens the Last Run Results pane. For details, refer to the <i>HP ALM Performance Center Guide</i>.</p> <p>Available from: Execution Grid</p>
Live Analysis	Analysis	<p>Lists options for displaying graphs in the Live Analysis tab. Add or delete a graph, or configure its appearance. For details on live analysis, see "Analysis Overview" on page 772.</p> <p>Available from: Live Analysis Tab</p>
Most Recently Used	Analysis	Lists the most recently viewed reports and graphs in ALM. Displays up to ten items.
New Folder 	Test Sets	<p>Opens the New Test Set Folder dialog box, enabling you to add a folder under a selected folder.</p> <p>Syntax exceptions: A test set folder name cannot include the following characters: \ ^ *</p>
New Test Set 	Test Sets	Opens the New Test Set dialog box, enabling you to add a test set to a selected folder. For details, see "New Test Set Dialog Box" on page 592 .
Order Test Instances 	Tests	<p>Opens the Order Test Instances dialog box, enabling you to change the execution order of the tests in the Execution Grid or Execution Flow. For more details, see "Order Test Instances Dialog Box" on page 634.</p> <p>Available from: Execution Grid, Execution Flow</p>




UI Element (A - Z)	Menu	Description
Organize Favorites	Favorites	Opens the Organize Favorites dialog box, enabling you to organize the list of favorite views by changing properties or deleting views. For details, see "Organize Favorites Dialog Box" on page 105 . Available from: Test Sets tab
Performance Trending  Performance Trending...		Performance Center: Opens My Performance Center, displaying the Trend Reports feature. For details, refer to the <i>HP ALM Performance Center Guide</i> . Available from: Test Runs Module
Pin to Baseline	Test Sets	Opens the Select Baseline dialog box, enabling you to pin the test set to a baseline. For more details, see "Select a Baseline Page" on page 241 .
Private	Favorites	Lists the favorite views that are accessible only to the user who created them.
Project Reports	Analysis	Lists the predefined project reports that you can produce on test lab data. For details on the report types, see "Predefined Project Reports" on page 840 . Selecting a report from the list generates a preview of the report. The preview displays up to five entities per report section. To generate the full report, in the upper left corner of the preview, click the downward arrow adjacent to the Generate button and select the report format to generate.
Public	Favorites	Lists the favorite views that are accessible to all users.
Purge Runs	<ul style="list-style-type: none"> • Tests Sets (Test Lab module > Execution Grid) • Test Runs (Test Runs module) 	Opens the Purge Runs wizard, enabling you to delete old test run results in your project. For details, see "Purge Runs Wizard" on page 659 .
Refresh Flow 	Tests	Refreshes the view to display the most up-to-date information. Available from: Execution Flow


UI Element (A - Z)	Menu	Description
Refresh/Refresh All 	View	Refreshes the view to display the most up-to-date information.
Remove all Execution Conditions	Tests	<p>Enables you to delete all execution conditions and time dependencies in a selected test set.</p> <p>If your test set includes both execution conditions and time dependencies, opens the Remove All Execution Conditions dialog box.</p> <p>If your test set includes only execution conditions or time dependencies, a confirm dialog box opens.</p> <p>Available from: Execution Flow</p>
Remove Execution Condition	<right-click menu>	<p>Enables you to delete an execution condition for a selected condition arrow.</p> <p>Available from: Execution Flow</p>
Remove Test Instances from Test Set 	Tests	<p>Removes the selected test instances from the test set.</p> <p>Available from: Execution Grid, Execution Flow</p>
Remove Test's Execution Conditions	<right-click menu>	<p>Enables you to delete all execution conditions for a selected test instance.</p> <p>Available from: Execution Flow</p>
Remove Time Dependency	<right-click menu>	<p>Right-click a Time Dependency  icon connected to a test and choose Remove Time Dependency to remove the specified time dependency.</p> <p>Available from: Execution Flow</p>
Rename	Edit	<p>Enables you to rename a test set or a test set folder. You cannot rename the Root folder, the Unattached folder, or the default test set.</p>
Replace	<ul style="list-style-type: none"> Tests (Test Lab module > Execution Grid) Edit (Test Runs module) 	<p>Opens the Replace dialog box, enabling you to replace a field value in the grid. For details, see "Replace Dialog Box" on page 75.</p>

UI Element (A - Z)	Menu	Description
Report Selected	<right-click menu>	Generates a standard report for selected runs. For details, see "View Tab – Standard Reports" on page 880 . Available from: Test Runs tab
Reports	Analysis	Lists the predefined reports that you can produce on Test Lab data. For details on the report types, see "Predefined Project Reports" on page 840 .
Reset Test Set	Test Sets	Opens the Confirm Reset Test Set dialog box, enabling you to change the status of all the tests in the test set to No Run . You can also instruct ALM to delete all the test run results in the test set.
Run 	Tests	If you select a manual test: Opens one of the following to run the test: <ul style="list-style-type: none"> If Sprinter is installed on your local machine, Sprinter opens. For details, see "HP Sprinter Overview" on page 614. ALM Editions: Sprinter functionality is not available with ALM Essentials Edition and Performance Center Edition. If Sprinter is not installed, the Manual Runner dialog box opens. For details, see "Manual Runner Wizard" on page 619. If you select two or more manual tests: Opens the Manual Test Run dialog box. For details, see "Manual Test Run Dialog Box " on page 618 . If you select automated tests: Opens the Automatic Runner dialog box. For details, see "Automatic Runner Dialog Box" on page 629 . Available from: Execution Grid, Execution Flow
Run 	Test Sets	Opens the Run <Entity> Dialog box, enabling you to run the selected functional test instance. For details, see "Run <Entity> Dialog Box" on page 636 . Available from: Execution Grid

UI Element (A - Z)	Menu	Description
Run Screen 	<right-click menu>	<p>Performance Center: Opens the Performance Test Run screen, enabling you to view and manage the test run. For more information, refer to the <i>HP ALM Performance Center Guide</i>.</p> <p>Note: Only enabled when test run is in the Running state.</p> <p>Available from: Test Runs module</p>
Run Test Set 	Test Sets	<p>For Default test sets:</p> <ul style="list-style-type: none"> If the test set includes one or more automated tests, opens the Automatic Runner dialog box to run the currently selected test set. For details, see "Automatic Runner Dialog Box" on page 629. If the test set includes manual tests only, opens the Manual Test Run dialog box. For details, see "Manual Test Run Dialog Box " on page 618. <p>For Functional test sets: Opens the the Run <Entity> Dialog box, enabling you to run the selected functional test set. For details, see "Run <Entity> Dialog Box" on page 636.</p>
Run Test 	<right-click menu>	<p>Performance Center: Enables you to run a selected performance test. For more details on running performance tests, refer to the <i>HP ALM Performance Center Guide</i>.</p>
Run with Sprinter	Tests	<p>Opens Sprinter to run the selected tests. For details, see "HP Sprinter Overview" on page 614. ALM Editions: Sprinter functionality is not available with ALM Essentials Edition and Performance Center Edition.</p> <p>Available from: Execution Grid</p>
Run with Manual Runner	Tests	<p>Runs a manual or automated test manually from the Manual Runner dialog box. For details, see "Manual Runner Wizard" on page 619.</p> <p>Available from: Execution Grid, Execution Flow</p>

UI Element (A - Z)	Menu	Description
Select Columns 	<ul style="list-style-type: none"> Tests (Test Lab module > Execution Grid) View (Test Runs module) 	<p>Opens the Select Columns dialog box, enabling you to determine which columns to display and set the order in which the columns are displayed. For more details, see "Select Columns/Select Fields Dialog Box" on page 86.</p>
Select Tests 	Test Sets	<p>Enables you to select tests to add to the currently selected test set. Displays the following:</p> <ul style="list-style-type: none"> Test Plan Tree tab. Add tests from the test plan tree to a test set. Requirements Tree tab. Add tests covering requirements from the requirements tree to a test set. <p>For more details, see "Select Tests Pane" on page 594.</p> <p>Available from: Execution Grid, Execution Flow</p>
Send by Email 	Test Runs	<p>Opens the Send E-mail dialog box, enabling you to send a test run by email to recipients selected from a list, or to the tester. For more details, see "Send E-mail Dialog Box" on page 79.</p>
Set Filter/Sort 	<ul style="list-style-type: none"> View Tests (Execution Grid) 	<p>Enables you to set filter and sort options for the test sets tree or Execution Grid.</p> <p>Includes the following options:</p> <ul style="list-style-type: none"> Set Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort tests. Clear Filter/Sort. Clears any filters or sorting that you have applied. <p>For more details, see "Filter Dialog Box" on page 61.</p>
Show Full Test Names	Tests	<p>Displays full test names in the Execution Flow diagram. By default, long names are truncated.</p> <p>Available from: Execution Flow</p>

UI Element (A - Z)	Menu	Description
Switch to Functional/Default Test Set 	<right-click menu>	<p>Switch to Functional/Default Test Set. Changes the mode of execution of the selected test set. Toggles the test set between Default and Functional.</p> <ul style="list-style-type: none"> When switching from Default to Functional, each test instance in the test set is converted. <ul style="list-style-type: none"> If a test instance had no value for the Planned Host Name field, or the value does not match any of the hosts in the Testing Hosts module, then the Testing Host field is set to Automatch and the purpose is set according to the test instance type. If the value in the Planned Host name field matches one of the hosts in the Testing Hosts module, and the that testing host has a purpose which matches the test instance type, then that testing host is allocated to the test instance. When switching from Functional to Default, ALM will remove the test set from any build verification suite in which it appears. If the test had started out as part of a Default test set, then the Planned Host Name field is restored to its original value. <p>Note: Some test instance types cannot be converted. If you are changing from Default to Functional and your test set includes tests which are not supported, the conversion process will be blocked and you will receive a warning message. Supported test instances include Business Process, Flow, Quick Test Professional, Service Test, System Test, and VAPI-XP.</p>
Test Instance Details 	Tests	<p>Opens the Test Instance Details dialog box, enabling you to view and update details of the selected test instance. For details, see "Test Instance Details Dialog Box" on page 578.</p> <p>Available from: Execution Grid</p>
Test Set Details 	Test Sets	<p>Opens the Test Set Details dialog box, enabling you to view and update details of the selected test set. For details, see "Test Set Details Dialog Box" on page 598.</p>













UI Element (A - Z)	Menu	Description
Text Search	Edit	Opens the text search pane in the lower part of the Test Lab module window, enabling you to search for records in predefined fields. For details, see "Text Search Pane" on page 76 . Available from: Test Runs module
Update Selected	<right-click menu>	Opens the Update Selected dialog box, enabling you to update a field value for multiple selected tests in the grid. For more details, see "Update Selected Dialog Box" on page 88 . Available from: Execution Grid tab
View	Tests	Lists options for selecting tests in the Execution Grid. Options include: <ul style="list-style-type: none"> • Select All • Deselect All • Invert Selection Available from: Execution Grid tab
Zoom 	Tests	Changes the magnification level of the Execution Flow. Options include: Zoom In. Increases the magnification level so that you can view a section of the Execution Flow more closely. Zoom Out. Decreases the magnification level so that you can view more of the Execution Flow. Available from: Execution Flow

Test Lab Module Icons

This section describes the icons displayed in the Test Lab module.

To access	On the ALM sidebar, under Testing , select Test Lab .
See also	<ul style="list-style-type: none"> • "Test Lab Module Menus and Buttons" on page 545 • "Test Lab Module Window" on page 542

User interface elements are described below:

UI Element	Description
	<green asterisk> . The applicable tab is populated.
	Alerts. Click to view alerts for the test instance or test run. <ul style="list-style-type: none"> • Red alert. The alert is new. • Gray alert. The alert has already been read. For more details, see "Alerts Dialog Box" on page 97 .
	Assigned Test Set Folder. A test set folder that is assigned to a cycle.
	Attachments. Click to view attachments for the specified test instance or test run. For more details, see "Attachments Page" on page 83 .
	Follow Up Flags. Click to view follow up flags for the test instance or test run. <ul style="list-style-type: none"> • Gray flag. The follow up flag is new. • Red flag. The follow up date has arrived. For more details, see "Flag For Follow Up Dialog Box" on page 98 .
	Linked Defects. Click to view linked defects for the test instance or test run. For user interface details, see "Linked Defects/Entities Page" on page 762 .
	Pinned Test Set. A test set that is pinned to a baseline. For concept details, see "Pinned Test Sets" on page 209 .
	Test Set Folder. A folder for organizing test sets.
	Functional Test Set. A functional test set in the test sets tree.
	Performance Test Set. A performance test set in the test sets tree.
	Default Test Set. A default test set in the test sets tree.
	Time Dependency. Click to modify the time dependency conditions of a test instance. For more details, see "Time Dependency Page" on page 611 .

Test Lab Module Fields

This section describes the Test Lab module fields.

To access	On the ALM sidebar, under Testing, select Test Lab or Test Runs .
------------------	---

Important information	<ul style="list-style-type: none">• The Test Lab module displays test planning, test configuration, and test execution fields.<ul style="list-style-type: none">▪ Names of test planning fields displayed in the Test Lab module have the prefix Test: added. For more details on test planning fields, see "Test Plan Module Fields" on page 416.▪ Names of test configuration fields displayed in the Test Lab module have the prefix Configuration: added. For more details on test configuration fields, see "Test Configurations Tab" on page 480.• You can add user-defined fields and change the label of any of the Test Lab module fields. You can also customize project lists. For more details, see to the <i>HP Application Lifecycle Management Administrator Guide</i>.• You can use the Script Editor to restrict and dynamically change the Test Lab module fields and values. For details, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.• When you select a column with a user name value, ALM displays a list with the name and full name of each user. You can search for users, sort users, group users by user group, and select users from the users list or a group tree. For more information, see "Users List Dialog Box" on page 72.• When the word "test" is used below, it might refer to a single test run, a test set run, or a build verification suite run.
See also	"Test Lab Module Window" on page 542


The fields are described below:

UI Element (A - Z)	Description
All Tests Passed	Indicates whether the run completed successfully. Y only if all test instance runs have a status of Passed .
Assigned to cycle	The cycle to which the selected test set folder is assigned.
Average Vusers	The average number of concurrently running Vusers during the test run. Note: Available for Performance Center.
Baseline	The baseline to which the test set is pinned. ALM Editions: Not available for ALM Essentials Edition.
Build verification suite name	The name of the build verification suite.
Close Date	The planned closing date for the test set.
Configuration: Name	The name of the test configuration allocated to the selected test run.
Consume VUDs	The number of VUDs used in the test run. Note: Available for Performance Center.
Controller	The Controller involved in the test run. Note: Available for Performance Center.
Cycle end date	The date on which the cycle to which the selected test set folder is assigned ends.
Cycle start date	The date on which the cycle to which the selected test set folder is assigned starts.
Domain/Project	The test instance's domain and project.
Draft Run	Indicates whether the selected test run is a draft run. For more details, see "Draft Runs" on page 539 . Default value: N
Duration	The test run time, in minutes. Note: You should not manually edit this field.

UI Element (A - Z)	Description
End Date	<p>The end date of the run.</p> <p>Note: You should not manually edit this field.</p>
End Time	The end time of the run.
Exec Date	The date on which the test was last executed.
Exec Time	The time the test was last executed.
Host	The name of the machine on which a test run was executed.
Involved Vusers	<p>The number of Vusers that were initialized at least once during the run.</p> <p>Note: Available for Performance Center.</p>
Iterations	<p>Business Process Testing: A description of the iterations defined for the business process test or flow instance.</p> <p>For business process tests:</p> <ul style="list-style-type: none"> • Configuration Based. The iterations are as defined in the corresponding test configuration. • Modified. A link indicating that the iterations have been manually edited and no longer correspond to the test configuration. Click the link to modify the iterations. To save the modifications as a new test configuration, see the <i>HP Business Process Testing User Guide</i>. <p>For flows:</p> <ul style="list-style-type: none"> • Undefined. A link indicating that no iterations are currently defined. Click the link to specify iterations. • <iterations>. A link indicating the total number of iterations defined for the flow instance, and if specified, the range of iterations selected for the run. Click the link to modify the iterations. <p>Examples</p> <p><u>2 Iterations</u></p> <p><u>4 Iterations (2-3 Selected)</u></p> <p>For user interface details on modifying iterations, see the <i>HP Business Process Testing User Guide</i>.</p>

UI Element (A - Z)	Description
Iterations Status	<p>Business Process Testing:</p> <p>In the Manual Runner dialog box: A rich text field in which you can enter comments about the status of each iteration.</p> <p>In the Test Instance Details dialog box: The statuses of the test iterations in a bar format. The bar is divided into colors that represent the statuses of the runs and the number represents the number of iterations with each status.</p> <p>Legend:</p> <ul style="list-style-type: none"> • Passed. Green • Failed. Red • Blocked (and user-defined). White • Not Completed. Purple • No Run. Orange • N/A. Yellow <p>See also: "Legend" on page 582</p>
Load Generators	<p>The load generators involved in the test run.</p> <p>Note: Available for Performance Center.</p>
Max Vusers	<p>The maximum number of concurrently running Vusers during the run.</p> <p>Note: Available for Performance Center.</p>
Modified	The date and time of the last change to the test in the Execution Grid.
Open Date	<p>The planned opening date for the test set.</p> <p>Default: The current database server date when the test set is created.</p>
Operating System	<p>The operating system running on the host machine on which a test was executed.</p> <p>Default value: The operating system on your ALM client machine.</p>
OS Build Number	<p>The build number of the operating system running on the host machine on which a test was executed.</p> <p>Default value: The operating system build number on your ALM client machine.</p>

UI Element (A - Z)	Description
OS Service Pack	<p>The operating system service pack installed on the host machine on which a test was executed.</p> <p>Default value: The operating system service pack on your ALM client machine.</p>
Planned Exec Date	The date on which it was planned to execute the test.
Planned Exec Time	The time at which it was planned to execute the test.
Planned Host Name	The name or IP address of the machine to run the Default test.
Project ID	The test's project ID.
Purpose	<p>The purposes available from the selected testing host or the purposes required for a functional test. A single testing host can have both Functional and Performance purposes.</p> <p>The following Functional purposes are available:</p> <ul style="list-style-type: none"> • Automated Business Process Testing. A host on which Business Process Testing is run. • United Functional Testing (UFT). A host on which UFT is run. • QA Inspect. A host on which QA Inspect is run. • QTP. A host on which QuickTest Professional is run. • Service Test Runtime. A host on which Service Test Runtime is run. • Sprinter. A host on which Sprinter is run. • System Test. A host on which a system test is run. • VAPI XP. A host on which VAPI XP is run. <p>The following performance purposes are available:</p> <ul style="list-style-type: none"> • Controller. A host used to manage a performance test. During a test run, the Controller issues instructions to the load generators including which scripts to run, how many Vusers to run per script, and when to start and stop running them. There is only one Controller per test. • Load generator. A host on which Vusers run during a test. There can be any number of load generators for a given test. • Data processor. A host used for processing and publishing data gathered during a test run.
Remaining days in cycle	The total number of days remaining in the cycle to which the selected test set folder is assigned.
Remaining test instances to run	The total number of test instances in the selected test set folder that have not yet run.

UI Element (A - Z)	Description
Responsible Tester	<p>The user name of the person responsible for running the test.</p> <p>When you run a manual test automatically from the Automatic Runner dialog box, ALM notifies this user by email to run the test.</p>
Run Details	Lists details about the test instance, test set, or build verification suite run.
Run ID	A unique numeric ID for the run, assigned automatically by ALM. This number is automatically generated by the system when the run starts executing.
Run Name	<p>The name of the test run. Fast_run indicates that ALM created this run when a user changed the Status field of the test instance manually without running the test.</p> <p>The icon displayed indicates one of the following:</p> <ul style="list-style-type: none"> The test type. For details, see "Test Types" on page 401. A manual test run with Sprinter . For details on Sprinter, see "HP Sprinter Overview" on page 614.
Run Status	<p>In the Execution Report grid, indicates the status of a run.</p> <p>For a test set, indicates the status of the test set. Options include: Open, Closed.</p> <p>For a test instance or run, indicates the execution status of the run. Options include: Blocked, Failed, N/A, No Run, Not Completed, Passed.</p>
Start date	<p>The start date of the run.</p> <p>Note: You should not manually edit this field.</p>
Start time	<p>The start time of the run.</p> <p>Note: You should not manually edit this field.</p>
State	Indicates progress of a run. Possible values are: Initializing , Running , Stopping , Run Failure , Finished . This is a read-only field.

UI Element (A - Z)	Description
Status (for a run step)	<p>Indicates execution status of a run step. Execution status can be one of the following:</p> <ul style="list-style-type: none"> • Blocked. The step cannot run. For example, the test is running on a remote machine but cannot continue due to some environmental failure, such as network problems or hardware failure. • Failed. The step failed. • N/A. The current status of the step is not applicable. • No Run. The step has not been run. • Not Completed. The step was not completed. • Passed. The step was successful.
Status (for a test instance, test set, or build verification suite run)	<p>Indicates execution status of a test instance, test set, or build verification suite run. Execution status can be one of the following:</p> <ul style="list-style-type: none"> • Blocked. One or more steps cannot run. For example, the test is running on a remote machine but cannot continue due to some environmental failure, such as network problems or hardware failure. • Failed. One or more steps in the run failed, and none have the status "Blocked". • N/A. The current status of the test is not applicable. • No Run. No steps have been run. • Not Completed. One or more steps were not completed or not run, and none have the status "Blocked" or "Failed". • Passed. The run was successful.
Target Cycle	The cycle to which the test is assigned.
Temp Results Directory Path	The path of the directory where the test results are temporarily stored.
Test	The name of the test in the Test Plan module associated with the selected test run.
Test Set	The name of the test set.
Test Set End Time	The end time of the test set run.
Test Set ID	A unique numeric ID for the test set, assigned automatically by ALM.
Test Set Start date	<p>The start date of the test set run.</p> <p>Note: You should not manually edit this field.</p>

UI Element (A - Z)	Description
Test Set Start time	<p>The start time of the test set run.</p> <p>Note: You should not manually edit this field.</p>
Test Set State	The state of the test set. If a test set is stuck in a particular state, you can change it.
Test Set: Name	The name of the test set associated with the selected test run.
Test: Test Name	The name of the test associated with the selected test run.
Tester (in Execution Grid)	The username of the person who last executed the test.
Tester (in Test Runs)	The username of the person running the test.
Testing Host	<p>The testing host assigned to the selected Functional test set test instance. The testing host is taken from the project's host pool.</p> <p>In the Execution Grid tab, you can specify a host using the Select Testing Host dialog box. For details, see "Select Testing Host Dialog Box" on page 602.</p> <p>In the Requested Hosts tab , you can specify a host by clicking the Add Automatch Host or Add Specific Host buttons. For details, see "Requested Hosts Tab" on page 587.</p>
Time	The time at which the test was last executed.
Timeslot ID	The ID of the test run timeslot.
Topology ID	The ID of the test run topology.
Topology Name	The name of the test run topology.
Total test instances	The total number of test instances in the selected test set folder.
Type	<p>The test type of the test. For more details, see "Test Types" on page 401.</p> <p>This is a read-only field.</p>

Chapter 32

Test Set Specification

This chapter includes:

Test Set Specification Overview.....	570
How to Create Test Sets.....	571
Test Sets User Interface.....	575

Test Set Specification Overview

After you design tests in the Test Plan module, you organize test execution by creating test sets in the Test Lab module. A test set contains a subset of the tests in your project designed to achieve specific test goals.

ALM supports different types of test sets. The following table describes each test set type:

Test Set Type	Description
Performance	<p>For running unattended remote performance tests. You can add only performance tests to this test set.</p> <p>You arrange for a performance test to be executed from the server by scheduling a timeslot. A timeslot contains a test set, the details of the remote hosts on which the test set will run, and a time and duration for running the test set. For more details about how to run a Performance test, see "How to Run Tests in ALM" on page 540</p> <p>For more details on timeslots, see "Reserving Timeslots Overview" on page 666.</p> <p>ALM Editions: Performance execution is available only for ALM Edition and Performance Center Edition. Performance tests are only available for Performance Center Edition.</p>
Default	<p>For running client-side, locally controlled and launched functional tests. You can add both manual and automated functional tests to this test set.</p> <p>You can arrange for default tests to be run in an ad hoc manner. For more details on how to run default test sets, see "How to Run Tests in ALM" on page 540.</p>
Functional	<p>For running server-side, unattended functional tests. You can add only automated functional tests to this test set.</p> <p>You arrange for a functional test set to be executed from the server by scheduling a timeslot. A timeslot contains a test set, the details of the testing hosts on which the test set will run, and a time and duration for running the test set. For more details about how to run a Functional test set, see "How to Run Tests in ALM" on page 540</p> <p>Build verification suites are a key component in ALM's Continuous Delivery solution. They facilitate an automated, end-to-end deployment and testing framework that makes application development more efficient, reliable, and quick. For more information about how build verification suites can be used as part of this process, see "Deploying and Testing your Application in ALM" on page 721.</p> <p>For more details on timeslots, see "Reserving Timeslots Overview" on page 666.</p> <p>ALM Editions: Functional test sets available only for ALM Edition.</p>

When defining a test set, ALM adds instances of your selected tests to the test set. Each test instance contains a defined test configuration. A **test configuration** enables you to run the same

test under different scenarios. For more details on test configurations, see ["Test Configurations Overview" on page 476](#).

A **test sets tree** enables you to organize your application management process by grouping test sets in folders and organizing them in different hierarchical levels.

To decide which test sets to create, consider the goals you defined at the beginning of the application management process. Consider issues such as the current state of the application and the addition or modification of new features.

Following are examples of general categories of test sets you can create:

Test Set	Description
Sanity	Checks the entire application at a basic level—focusing on breadth, rather than depth—to verify that the application is functional and stable. This set includes fundamental tests that contain positive checks, validating that the application is functioning properly. For example, in the Mercury Tours application, you could test whether the application opens, and enables you to log in.
Regression	Tests the system in a more in-depth manner than a sanity set. This set can include both positive and negative checks. Negative tests attempt to fail an application to demonstrate that the application is not functioning properly.
Advanced	Tests both breadth and depth. This set covers the entire application, and also tests the application's advanced options. You can run this set when there is ample time for testing.
Function	Tests a subsystem of an application. This could be a single feature or a group of features. For example, in the Mercury Tours application, a function set could test all activities related to booking a flight.

After you have created test sets, you assign test set folders to cycles defined in the releases tree in the Releases module. A cycle represents a development and QA cycle based on the project timeline.

You assign remote hosts to functional or performance test instances in a test set. For details, see ["Testing Hosts Overview" on page 368](#).

ALM Essentials Edition: Fields and functionality related to baselining are not available in the Test Lab module.

For details on working with test sets, see ["How to Create Test Sets" below](#).

How to Create Test Sets

This task describes how to create and define test sets in the Test Lab module.

To learn more about test sets, see ["Test Set Specification Overview" on previous page](#).

- **Higher-level task:** This task is part of a higher-level task. For details, see ["How to Run Tests in ALM" on page 540](#).
- **ALM Essentials Edition:** Fields and functionality related to baselining are not available in the Test Lab module.

This task includes the following steps:

- ["Define test sets" below](#)
- ["Assign test set folders to cycles" on next page](#)
- ["Add tests to test sets" on next page](#)
- ["Configure execution settings for a test instance" on next page](#)
- ["Specify host criteria for a test instance in a Functional test set" on page 574](#)
- ["Manage host requests for a Functional test set" on page 574](#)
- ["Set notification rules" on page 574](#)
- ["Set On Failure rules" on page 574](#)
- ["Request test result summary report" on page 574](#)
- ["Pin a test set to a baseline - optional" on page 574](#)

1. Define test sets

Define a hierarchical framework for your test sets by creating a test sets tree that contains folders and subfolders.

- Open the Test Lab module.** On the ALM sidebar, under **Testing**, select **Test Lab**.
- Create folders.** Right-click the **Root** folder and select **New Folder**. To create a sub-folder, right-click a folder and select **New Folder**.
- Add test sets to folders.** Right-click a folder and select **New Test Set**. For user interface details, see ["New Test Set Dialog Box" on page 592](#).

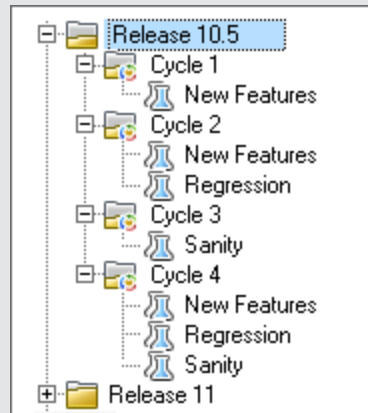
To learn more about the different types of test sets, see ["Test Set Specification Overview" on page 570](#).

Example

Suppose you want to test new features added to Release 10.5 of the Mercury Tours application. Release 10.5 consists of four cycles, and you want to test the new features for the release in Cycle 1, Cycle 2, and Cycle 4. Because the tests you need to run to test the new features are the same for each of these cycles, you want to use the same test set as a basis for testing new features in each of the cycles.

In the test sets tree, you can create the folder, **Release 10.5**, for the release. Under this folder, you create the folder, **Cycle 1**, for the first cycle of the release. In the **Cycle 1** folder, you create a test set, **New Features**, containing the tests necessary to test

new features for the release. After you create this test set and add its tests, you can copy and paste the **Cycle 1** folder and use it as a basis for the other cycles that test new features.



2. Assign test set folders to cycles

Assign test set folders to cycles defined in the releases tree in the Releases module.

Right-click a test set folder and select **Assign to Cycle**. For user interface details on the Select Cycles dialog box, see ["Select Cycles Dialog Box" on page 166](#).

3. Add tests to test sets

In the Test Lab module > Test Sets tab, select a test set and click the **Execution Grid** tab or the **Execution Flow** tab. Then click the **Select Tests** button. Add tests from the following tabs in the Select Tests pane:

- **Test Plan Tree**. Add tests from the test plan tree to the test set.
- **Requirements Tree**. Add tests covering requirements from the requirements tree to the test set.

For user interface details on the Select Tests pane, see ["Select Tests Pane" on page 594](#).

4. Configure execution settings for a test instance

Note: This option is not available for Performance test sets.

You can view or set the test parameter values for a manual or automated test instance. You can choose a remote host on which to run the manual or automatic test instance. You can also view and edit the On Failure rules for an automated test instance.

- a. In the Execution Grid or the Execution Flow, right-click a test and select **Test Instance Details**.
- b. In the **Test Instance Details** dialog box, click **Execution Settings** on the sidebar. For user interface details on the Execution Settings view, see ["Test Instance Details - Execution Settings View" on page 583](#).

5. Specify host criteria for a test instance in a Functional test set

Note: This option is not available for Default test sets.

You allocate a testing host for a test by specifying criteria in a host reservation. You can reserve a particular host from the project host pool. Alternatively, you can provide ALM with criteria from which to dynamically select hosts from the host pool allocated to your project. Host criteria include host purpose, location, and attributes.

Select a test instance. In the **Test Instance Details** dialog box, choose a set of criteria from the options listed in the **Testing Host** field.

For user interface details, see ["Test Set Specification Overview" on page 570](#).

For more details about testing hosts in ALM, see *HP ALM Lab Management Guide* ["Lab Resources Overview" on page 1](#).

For more details about managing testing hosts in Lab Management, refer to the *HP ALM Lab Management Guide*.

6. Manage host requests for a Functional test set

Note: This tab is only available for Functional test sets.

To alter the types of hosts you requested for an entire test set, use the **Requested Hosts** tab. You can modify, add, or delete host requests for the entire test set.

Select a test set, and click the **Requested Hosts** tab. For user interface details, see ["Requested Hosts Tab" on page 587](#).

7. Set notification rules

Set notification rules to instruct ALM to send email to a specified user if selected events occur for a test set.

You set notification rules in the **Automation** tab, **Notification** area. For user interface details, see ["Automation Tab" on page 589](#).

8. Set On Failure rules

Set On Failure rules to define what action ALM takes in the event that an automated test in the test set fails.

You set notification rules in the **Automation** tab, **On Automated Test Failure** area. For user interface details, see ["Automation Tab" on page 589](#).

9. Request test result summary report

You can request that a summary of test results is sent in an email to specified users when test set execution completes.

Enter details in the **Automation** tab, **Execution Summary** area. For user interface details, see ["Automation Tab" on page 589](#).

10. Pin a test set to a baseline - optional

You can pin a test set to a baseline to associate the test set with the versions of the tests stored in a baseline you select.

- In the Test Lab module, right-click a test set and select **Pin to Baseline**. For user interface details on the Select Baseline dialog box, see ["Select Baselines Dialog Box"](#) on page 231.
- To clear a pinned baseline, right-click a test set and select **Clear Pinned Baseline**.

For concept details on pinned test sets, see ["Pinned Test Sets"](#) on page 209.

Test Sets User Interface

This section includes:

Execution Grid Tab.....	575
Test Instance Details Dialog Box.....	578
Requested Hosts Tab.....	587
Automation Tab.....	589
New Test Set Dialog Box.....	592
Select Tests Pane.....	594
Test Set Details Dialog Box.....	598
On Test Failure Dialog Box.....	599
Paste Test Set Folders To Target Project Dialog Box.....	601
Select Testing Host Dialog Box.....	602

Execution Grid Tab

This tab displays test instance data in a grid. Each line in the grid displays a separate record. You can run and view tests in the Execution Grid.



Details	Execution Grid	Execution Flow	Automation	Attachments	Linked Defects	History
Name	Test: Test Name	Type	Status	Iterations	Planned Host...	
[1] Trip Type	Trip Type	QUICKTEST_TE...	Failed			
[1] Passenger Na...	Passenger Na...	MANUAL	Failed			
[1] Credit Card N...	Credit Card N...	MANUAL	Failed			
[1] Credit Card Ex...	Credit Card E...	MANUAL	Passed			
[1] Credit Card O...	Credit Card O...	MANUAL	Failed			
[1] Billing And Del...	Billing And De...	MANUAL	Passed			
[1] Address Optio...	Address Optio...	MANUAL	Failed			
[1] Flight Confirm...	Flight Confirm...	MANUAL	Passed			
[1] Flight Cost By...	Flight Cost By...	MANUAL	Passed			
[1] Flight Cost By...	Flight Cost By...	MANUAL	Failed			
[2] Billing And Del...	Billing And De...	MANUAL	Passed			
[1] User Name	User Name	MANUAL	Passed			
[1] Password	Password	MANUAL	Failed			
[1] Confirm Pass...	Confirm Pass...	MANUAL	Passed			
[1] First & Last N...	First & Last N...	MANUAL	Failed			
[1] Email (Contact...	Email (Contact...	MANUAL	Failed			
[1] Phone (Conta...	Phone (Conta...	MANUAL	Passed			
[1] Mailing Inform...	Mailing Inform...	MANUAL	Passed			
[1] Sign-On User...	Sign-On User...	MANUAL	Passed			
[1] Sign-On Pass...	Sign-On Pass...	MANUAL	Passed			

Step Name	Status	Exec Date	Steps Details
Connect to Mercury	Passed	1/31/2009	Description: Open your Web browser and type the <<<Mercury Tours URL>>>.
Sign-On to Mercury	Passed	1/31/2009	Expected: The Mercury Tours site opens.
Preparation	Passed	1/31/2009	
Find Flight	Passed	1/31/2009	
Select Flight	Passed	1/31/2009	

To access	In the Test Lab > Test Sets tab, select a test set and click the Execution Grid tab.
Relevant tasks	<ul style="list-style-type: none"> "How to Create Test Sets" on page 571 "How to Run Tests in ALM" on page 540
See also	<ul style="list-style-type: none"> "Test Set Specification Overview" on page 570 "Test Execution Overview" on page 538 "Test Lab Module Window" on page 542

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<Test Lab module common UI elements>	<ul style="list-style-type: none"> Test Lab fields. For field definitions, see "Test Lab Module Fields" on page 559. Test Lab menus and buttons. For command and button descriptions, see "Test Lab Module Menus and Buttons" on page 545. Test Lab icons. For icon descriptions, see "Test Lab Module Icons" on page 558. ALM main menu and sidebar. For details on the Tools menu, Help menu and sidebar, see "ALM Common Areas" on page 45.
<Indicator columns>	<p>Indicates that the specified test instance has attachments, linked defects, alerts, and follow up flags. For more details, see "Test Lab Module Icons" on page 558.</p> <p>To display these columns, select Tests > Indicator Columns.</p>

UI Element	Description
<Filter status bar>	Describes the filter currently applied to the grid. Located directly above the grid.
<Select Tests pane>	Displays the Test Plan Tree tab and the Requirements Tree tab, enabling you to select tests to add to the selected test set. For details, see "Select Tests Pane" on page 594 .
Criterion Results	<p>Displays the statuses of the criteria for the last run of the selected business process test instance using a certain configuration.</p> <p>To display this tab, select Tests > Last Run Result or click the Show arrow.</p> <p>Note: Functionality related to test criteria is available only for business process tests. For details, see the <i>HP Business Process Testing User Guide</i>.</p>
Last Run Report pane	<p>Displays the results of the last test run for the selected test instance. To display this pane, select Tests > Last Run Report or click the Show arrow.</p> <p>For a test run with Sprinter, also displays the Launch Sprinter Results Viewer button, which opens and displays the report in the Sprinter Results Viewer. For details, click the help button within the viewer.</p> <p>ALM Editions: Sprinter functionality is not available with ALM Essentials Edition and Performance Center Edition.</p> <p>For automated test instances, also includes one of the following:</p> <ul style="list-style-type: none">  LR Analysis Opens and displays results in LoadRunner Analysis. Available for the LR–SCENARIO test type.  Launch Report Opens and displays the report in Unified Functional Testing. Available for the QUICKTEST_TEST test type. The Launch Report button is enabled only if you have installed the Unified Functional Testing Add-in from the HP Application Lifecycle Management Add-ins page. For more details on installing add-ins, refer to the <i>HP Application Lifecycle Management Installation Guide</i>. Collected System Info link. Opens the System Information dialog box. Displays the collected system information, such as CPU, memory, and processes running on the machine when the test is run. Available for the SYSTEM-TEST test type. Captured Desktop Image. Opens the captured image of the machine executing the system test. Available for the SYSTEM-TEST test type.






Test Instance Details Dialog Box

This dialog box enables you to view run details and results for a test instance. You can also view and set test run configuration information.

To access	In the Execution Grid or the Execution Flow, right-click a test and select Test Instance Details .
Important information	<ul style="list-style-type: none"> If you edit the test information, the changes you make are reflected in the Execution Grid. You can change the label of any of the fields in the Details tab. You can also add user-defined fields to the Details tab. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.
Relevant tasks	"How to View Test Results" on page 644
See also	<ul style="list-style-type: none"> "Test Lab Module Fields" on page 559 "Test Results Overview" on page 644 "System Tests Overview" on page 492

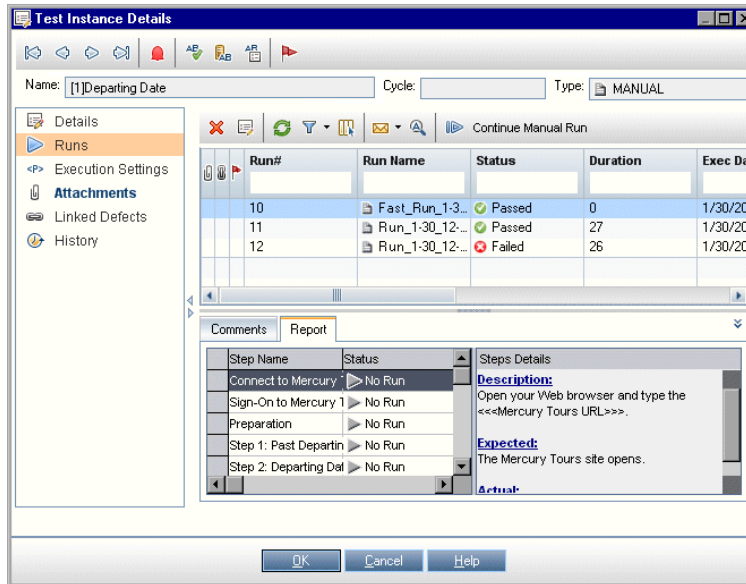
User interface elements are described below:

UI Element	Description
	<p>First/Previous Next/Last Entity. Allows you to browse through the test instances in the Execution Grid.</p> <p>Available from: This element is only available when you open the Test Instance Details dialog box from the Execution Grid.</p>

UI Element	Description
	Alerts. Opens the Alerts dialog box, enabling you to display alerts for the test instance. For details, see "Alerts Dialog Box" on page 97 .
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Flag for Follow Up. Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for the test instance. For more details, see "Flag For Follow Up Dialog Box" on page 98 .
Details	Displays run details of a test instance. For details on the available fields, see "Test Lab Module Fields" on page 559 .
Runs	Displays the results of all runs for the test instance. For details, see "Test Instance Details - Runs View" on next page . Double-click a run in the grid to view detailed results for the run.
Execution Settings	Displays run configuration information for the test instance. For details, see "Test Instance Details - Execution Settings View" on page 583 .
Attachments	Lists attachments that provide additional information about the currently selected test instance. For more details, see "Attachments Page" on page 83 .
Linked Defects	Lists the defects linked to the currently selected test instance. You can view, add, and remove defect links. For more details, see "Linked Defects/Entities Page" on page 762 .
History	Lists changes made to the currently selected test instance. For more details, see "History Tab" on page 78 .

Test Instance Details - Runs View





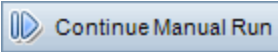
This view enables you to compare the results of a test run with the results of previous runs. You can view run details and step results for all the runs of a selected test instance.





To access	In the Test Instance Details dialog box, click the Runs button on the sidebar.
Important information	Default filter: By default, the grid is filtered to show test runs from the current calendar month only, in reverse chronological order (most recent first). To clear this filter, clear the value ThisMonth from the Exec Date field. For more details on filtering, see the "Select Filter Condition Dialog Box" on page 70.
Relevant tasks	"How to View Test Results" on page 644
See also	"Test Instance Details Dialog Box" on page 578

User interface elements are described below (unlabeled elements are shown in angle brackets>):

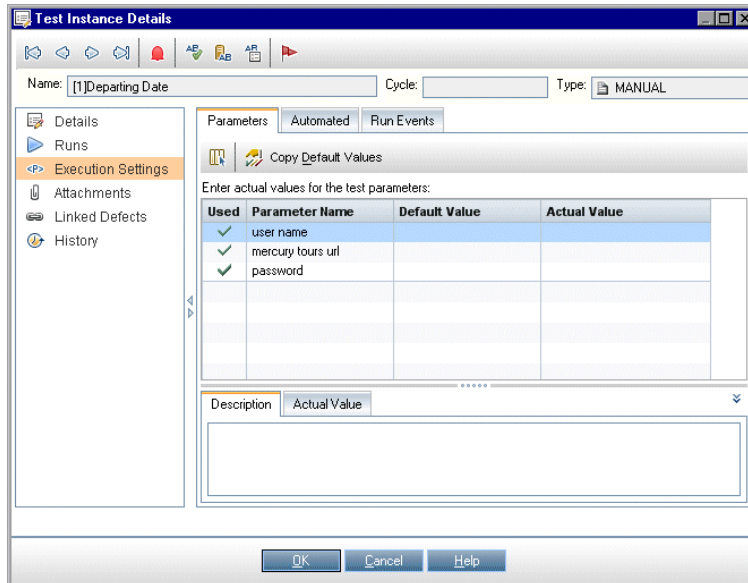
UI Element	Description
	Delete. Deletes the selected runs from the grid.
	Details. Opens the Run Details dialog box, enabling you to view and edit additional details for the selected run. For more details, see "Run Details Dialog Box" on page 653.
	Refresh. Refreshes the grid so that it displays the most up-to-date runs based on the filters you have selected.

UI Element	Description
	Filter. Enables you to filter, sort, or group the run records. For more details, see "Filter Dialog Box" on page 61 .
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which columns to display and set the order in which the columns are displayed. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .
	Send by Email. Opens the Send E-mail dialog box, enabling you to send a selected test run by email to recipients selected from a list, or to the tester. For more details, see "Send E-mail Dialog Box" on page 79 .
	Text Search. Opens the text search pane in the lower part of the dialog box, enabling you to search for records in predefined fields. For more details, see "Text Search Pane" on page 76 .
	Continue Manual Run. Resumes a manual test run. For more details, see "How to Run Tests Manually" on page 615 .
<Filter status bar>	<p>Describes the filter currently applied to the grid. Located directly above the grid.</p> <p>Showing <x> results. Indicates the number of records currently displayed out of the total records.</p> <p>Retrieve all <x> results. Click to display all records.</p>
<Grid filter box>	<p>Located below the column names. Displays the filter that is currently applied to a column. If the filter box is empty, no filter is currently applied to the column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For more details, see "Select Filter Condition Dialog Box" on page 70.</p>
Comments	Comments about the currently selected run.
Criterion Results	<p>Displays the statuses of the criteria for the last run of the selected business process test instance using a certain configuration.</p> <p>Business Process Testing: Functionality related to test criteria is available only for business process tests. For details, see the <i>HP Business Process Testing User Guide</i>.</p>

UI Element	Description
Legend	<p>Displays the color coding used to indicate the execution status of the test run instances.</p> <p>A status can be one of the following:</p> <ul style="list-style-type: none"> • Blocked. One or more steps in the test instance has an execution status of "Blocked". • Failed. One or more steps in the test instance has an execution status of "Failed", and none has an execution status of "Blocked". • No Run. All the steps in the test instance have an execution status of "No Run". • Not Completed. One or more steps in the test instance has an execution status of "Not Completed", and none has an execution status of "Blocked" or "Failed". Alternatively, steps in the test instance have execution statuses of "Passed" and "No Run". • N/A. The test instance has no steps. • Passed. All the steps in the test instance have an execution status of "Passed".
Report	<p>Displays results and test step details of the selected run.</p> <p>For automated test instances, also includes one of the following:</p> <ul style="list-style-type: none"> •  LR Analysis Opens and displays the results in LoadRunner Analysis. Available for the LR-SCENARIO test type. •  Launch Report Opens and displays the report in UFT . Available for the GUI-TEST test type. <p>The Launch Report button is only enabled if you have installed the Unified Functional Testing Add-in from the HP Application Lifecycle Management Add-ins page. For more details on installing add-ins, refer to the <i>HP Application Lifecycle Management Installation Guide</i>.</p> <ul style="list-style-type: none"> • Collected System Info link. Opens the System Information dialog box. Displays the collected system information, such as CPU, memory, and processes running on the machine when the test is run. Available for the SYSTEM-TEST test type. • Captured Desktop Image. Opens the captured image of the machine executing the system test. Available for the SYSTEM-TEST test type.

Test Instance Details - Execution Settings View

This view enables you to view or set the test parameter values for a manual test instance or an automated test instance. You can also view and edit the On Failure rules for an automated test instance.



To access	In the Test Instance Details dialog box, click the Execution Settings button on the sidebar.
Relevant tasks	"How to View Test Results" on page 644
See also	"Test Instance Details Dialog Box" on page 578

This section contains the following topics:

- ["Parameters Tab" on next page](#)
- ["Automated Tab" on next page](#)
- ["Run Events Tab" on page 585](#)
- ["Test Iterations Tab" on page 585](#)
- ["Data Tab" on page 586](#)



Parameters Tab

This tab enables you to view or set actual parameter values for manual test instances. The Parameters tab shows all the test parameters that are used in the test steps, including parameters of called tests that have not already been assigned actual values. Actual values that you assign for parameters in the test instance are used for all test runs of the test instance.

Business Process Testing: To view and edit additional parameters for business process test instances, see ["Test Instance Details - Execution Settings View" on previous page](#).

For more information, see ["Test Parameters Overview " on page 450](#)

User interface elements are described below:

UI Element (A - Z)	Description
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which columns to display and set the order in which the columns are displayed. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .
 Copy Default Values	Uses a parameter's default value as its actual value. Select a parameter and click the Copy Default Values button.
Actual Value	The value that is used for the parameter during the test run. To add or modify the actual value, type the value in the Actual Value column.
Default Value	The default value of the selected parameter.
Description	A description of the parameter.
Parameter Name	The parameter name.

Automated Tab

This tab enables you to set parameter values and other configuration options for automated test instances.

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A - Z)	Description
<Automated test configuration options>	You may be able to set additional configuration options, depending on the type of automated test you are running. For details, refer to the user guide for your automated test.
Parameter Value	Displays the value of each parameter. Under Value , you can edit parameter values. Your changes are implemented in the next test run.

Run Events Tab

This tab enables you to view and edit the On Failure rules for an automated test instance.

Important information	If you change the failure rules, your changes are implemented in the next test run.
See also	To set default On Failure rules for a test set, see "Automation Tab" on page 589 .

User interface elements are described below:

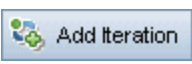
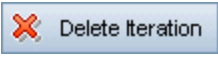
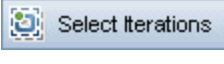
UI Element (A - Z)	Description
Cleanup test before rerun	Specifies the cleanup test ALM runs before each rerun of the selected test.
Maximum test reruns	Specifies the number of times an automated test should be rerun upon failure.
On failure	Specifies the action for ALM to take when a test run fails. Options include: <ul style="list-style-type: none">• Do nothing.• Stop the test set.• Rerun the test. Runs the test again up to the maximum number of times, as specified in the Maximum test reruns box.



Test Iterations Tab

This tab enables you to view and edit the run-time values for each parameter of each iteration of a business process test instance.

Important information	This tab is available for Business Process Testing only.
See also	For task details, see the <i>HP Business Process Testing User Guide</i> .

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element (A - Z)	Description
 Add Iteration	Add Iteration. Adds an iteration for the entity (component, group, test, or flow).
 Delete Iteration	Delete Iteration. Deletes the selected iteration for the entity (component, group, test, or flow).
 Select Iterations	Select Iterations. Opens the Select Iterations dialog box, which enables you to select which of the defined iterations you want to run during the test run. You can specify one, all, or a range of iterations.

UI Element (A - Z)	Description
 Import ...  Export ...	Import/Export. Enables you to import component parameter values for iterations from a .csv (comma separated value) file, and to save component parameter values to a .csv file.
<values>	<p>Displays the actual value of the input parameter. You can modify the value by clicking the arrow in the relevant cell, which opens the Set Value dialog box.</p> <p>If no value is specified, the default value for that parameter is used. If no default value is specified, no value is displayed and the entity may not run correctly.</p> <p>Values are saved and compared as strings, but can be specified according to different value types.</p> <p>Test or flow parameters (parameters whose values are to be taken from the business process test or flow), are shown in { } brackets. This instructs ALM to treat the parameter as a parameter and not as a fixed value.</p>
<parameter columns>	Displays the names for each parameter in the displayed iteration.
Iteration # columns/rows	Displays the current run-time values for each parameter in each iteration.
Parameter Description	<p>Displays the description for the parameter and its original source entity (business component, test, or flow).</p> <p>Parameter descriptions are initially entered in the module in which they were created (the Business Components module or the Test Plan module), or in UFT for automated components.</p>
Value columns	Displays the run-time value for each parameter in the displayed iteration.

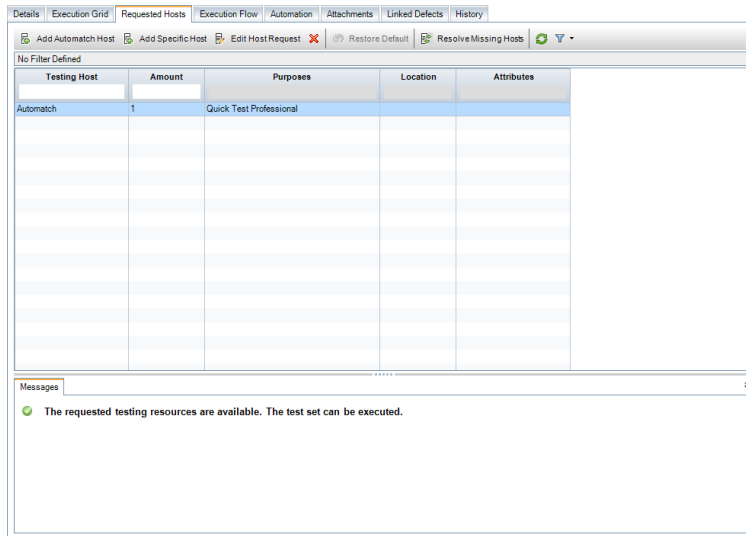
Data Tab

This tab enables you to view dynamic data settings for business process and UFT test configurations.

Important information	<p>This tab is available for Business Process Testing and UFT test configurations that access dynamic data.</p> <p>When accessing this tab from the Execution Settings View, some of the information in this tab is read-only.</p>
See also	For user interface details, see the <i>HP Business Process Testing User Guide</i> and the <i>HP Unified Functional Testing User Guide</i> .

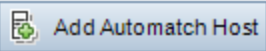
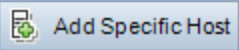
Requested Hosts Tab



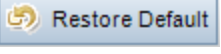
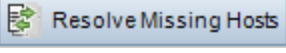


This tab enables you to manage which hosts are requested for a Functional test set execution.



To access	<ul style="list-style-type: none"> In the Test Lab module > Test Sets tab, select a test set and click the Requested Hosts tab. In the Build Verification module, select a build verification suite from the build verification suite's tree, and click the Requested Hosts tab.
Important Information	<ul style="list-style-type: none"> Even if more than one test instance in a test set requires a particular host or type of host, only one host request entry is created for each host or host type. This tab is available only for Functional test sets. ALM Editions: Functional test sets are available only in ALM Edition.
Relevant tasks	"How to Create Test Sets" on page 571
See also	<ul style="list-style-type: none"> "Test Set Specification Overview" on page 570 "Test Lab Module Window" on page 542

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
	Add Automatch Host. Opens the Select Automatch Host dialog box, enabling you to add a new host request based on criteria you specify. ALM will automatically allocate and reserve a testing host which fits the criteria.
	Add Specific Host. Opens the Select Specific Testing Host dialog box, enabling you to request a specific testing host. You can select from the remaining available hosts in the project's host pool.

UI Element	Description
	Edit Host Request. Enables you to edit the selected host request.
	Remove. Removes the selected host request. Caution: If you remove a host request that is required for a specific test instance, the test will not be able to run.
	Restore Default. Resets the host requests to their default state. ALM will remove all current host requests and create a default set of requests. One host request will be created for each type of test in the test set.
	Resolve Missing Hosts. Enables you to automatically generate the remaining host requests if the current host requests are insufficient for executing the selected test set. The requested hosts will be determined based on the Execution Grid.
	Refresh All. Refreshes the grid so that it displays the most up-to-date host requests based on the filters you have selected.
	Set Filter/Sort. Enables you to filter, sort, or group the host requests. For more details, see "Filter Dialog Box" on page 61 .
<filter status bar>	Describes the filter currently applied to the grid. Located directly above the grid filter boxes.
Testing Host	Displays the name of the host specified in the host request. If the value Automatch is displayed in this field, it indicates that no particular host was specified. ALM will automatically allocate and reserve a host based on the criteria in the Purposes , Location , Amount , and Attributes fields. For details about how ALM allocates and reserves testing hosts, see "Host Allocation" on page 670 .
Amount	Displays the number of hosts specified in the host request.
Purposes	Lists the purposes specified in the host request. For more details, see "Test Lab Module Fields" on page 559 .
Location	Displays the host location specified in the host request.
Attributes	Lists the host attributes specified in the host request.
Messages	Displays all messages related to host request validation. For example, if a test set cannot run because the requested hosts have not been reserved, ALM will inform you that the tests cannot be run and provide the reason.

Automation Tab

This tab enables you to set test set notification rules and On Failure rules to define what action ALM takes when selected events occur for a test set run from the Automatic Runner. For example, you can arrange for ALM to send email to specified users when a test fails, or to rerun a test upon failure.

DetailsExecution GridExecution FlowAutomationAttachmentsLinked DefectsHistory

On Automated Test Failure

☐ Rerun test

Maximum test reruns:0

Cleanup test before rerun:

On final failure:Do nothing

Maximum test set reruns:0

Settings per test...

Notification

Send email in the event of:

☐ Any test in the Automatic Runner finishes with status "Failed"

☐ Environmental failure (network problems, hardware failure, etc.)

☐ All tests in the Automatic Runner that were run have finished

To:

Execution Summary

☐ Send summary of results after test set execution

Select Fields:Run Name, Test, Status, Tester, Exec Date, Exec Time

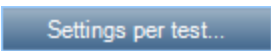
To:

To access	In the Test Lab module > Test Sets tab, select a test set and click the Automation tab.
Relevant tasks	"How to Create Test Sets" on page 571
See also	<ul style="list-style-type: none">"Test Set Specification Overview" on page 570"Test Lab Module Window" on page 542

On Automated Test Failure Area

You can set On Failure rules for a test set to instruct ALM in the event that an automated test in the test set fails.

User interface elements are described below:

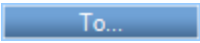
UI Element	Description
Rerun test	<p>Instructs ALM to rerun an automated test if it fails. If selected, the following options are available:</p> <ul style="list-style-type: none"> • Maximum test reruns. Specifies the number of times an automated test should be rerun upon failure. • Cleanup test before rerun. Runs a cleanup test before each test rerun. <p>Click the down arrow to select a cleanup test.</p>
On final failure	<p>Specifies the action for ALM to take on the final failure of any test in the test set. Includes the following options:</p> <ul style="list-style-type: none"> • Do nothing. • Stop the test set. • Rerun the test set. Runs the test set again up to the maximum number of times as specified in the Maximum test set reruns box.
Maximum test set reruns	The number of times a test set should be rerun on final failure of any test in the test set.
	<p>Opens the On Test Failure dialog box, enabling you to change the default failure rules for a test in the test set. For details, see "On Test Failure Dialog Box" on page 599.</p>

Notification Area

You can instruct ALM to send an email to a specified user if certain events occur.

User interface elements are described below (unlabeled elements are shown in angle brackets):


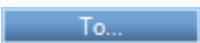
UI Element	Description
<Message area>	<p>The text for the email ALM sends to the specified user.</p> <div> <p>Tip: Clicking in the Message area on this page displays a toolbar for formatting and spell checking the text.</p> </div>

UI Element	Description
Send email in the event of	<p>Notifies a specified user if any of the selected events occur. Includes the following options:</p> <ul style="list-style-type: none">• Any test in the Automatic Runner finishes with status "Failed".• Environmental failure (network problems, hardware failure, etc.). Environmental failure could include, for example, function calls not returning, access violations, version incompatibility between application components, a missing DLL, or inadequate permissions.• All tests in the Automatic Runner that were run have finished.
	<p>The user who should receive the email.</p> <p>Enter a valid email address or user name. Alternatively, click the To button to select users. The Select Recipients dialog box opens. Select the users or user groups to which you want to send the email.</p>

Execution Summary Area

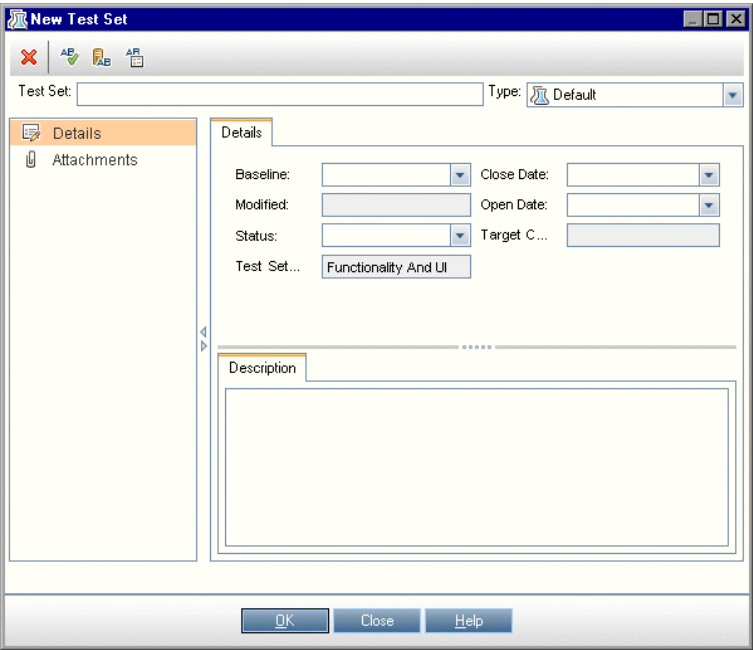
You can instruct ALM to send a summary of test results in an email to specified users when test set execution completes.

User interface elements are described below:

UI Element	Description
Send summary of results after test set execution	<p>Sends a summary report of test results in an email to specified users after test set execution is complete.</p>
	<p>Opens the Select Columns dialog box, enabling you to specify which test run fields are displayed in the execution summary.</p>
	<p>Enter a valid email address or user name. Alternatively, click the To button to select users.</p>

New Test Set Dialog Box

This dialog box enables you to add a test set to a test set folder.



To access	In the Test Lab module > Test Sets tab, right-click a test set folder and select New Test Set .
Important information	You cannot add test sets directly to the Root folder. You must first add a folder to the Root folder.
Relevant tasks	"How to Create Test Sets" on page 571
See also	<ul style="list-style-type: none">• "Test Set Specification Overview" on page 570• "Test Lab Module Window" on page 542

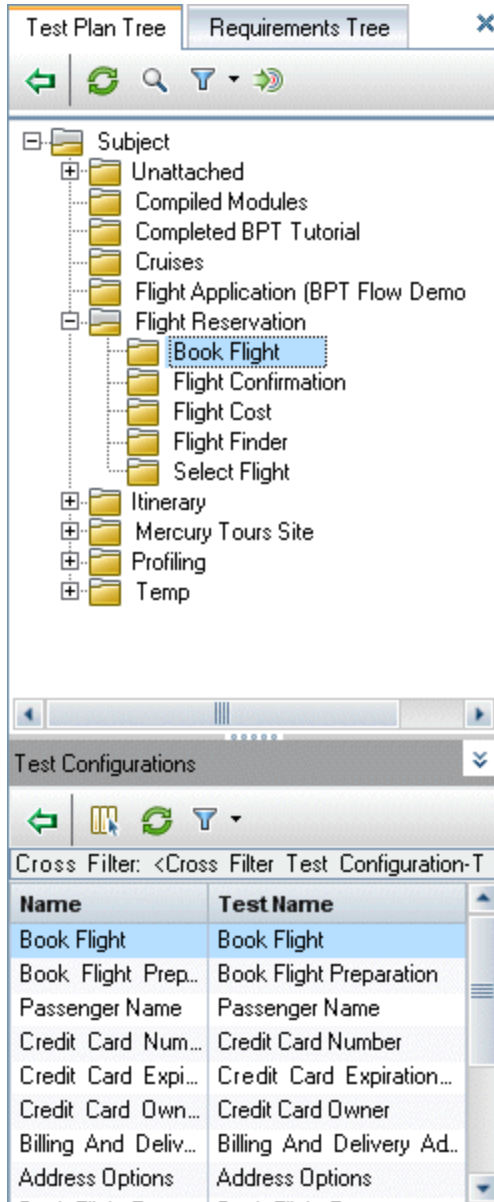
User interface elements are described below:

UI Element	Description
Attachments	Enables you to add attachments that provide additional information about the test set. For more details, see "Attachments Page" on page 83 .
Details	<p>Lists test set fields. Required fields are displayed in red. For details on the available fields, see "Test Lab Module Fields" on page 559.</p> <div>Tip: Clicking in the Description field on this page displays a toolbar for formatting and spell checking the text.</div>

UI Element	Description
Name	The name you assign to the new test set. Syntax exceptions: A test set name cannot include the following characters: \ ^ , " *
Test Set Folder	Displays the preselected folder name.
Type	The test set type. Select the test set type that corresponds to the types of tests you are grouping together. For more details, see " Test Set Specification Overview " on page 570.

Select Tests Pane

This pane enables you to select tests for inclusion in a test set. ALM adds instances of the selected tests to the test set. Each instance contains a defined test configuration.





To access	In the Test Lab module > Test Sets tab, select a test set and click the Execution Grid tab or the Execution Flow tab. Then click the Select Tests button.
-----------	--







Important information	<ul style="list-style-type: none"> You can include instances of the same test in different test sets or add more than one instance to the same test set. If you are adding a folder to the test set, only tests that match the current filter in the Test Plan Tree tab or Requirements Tree tab are added. Performance Center: You can view and add performance tests to a Performance test set type only. For more details, see "New Test Set Dialog Box" on page 592.
Relevant tasks	"How to Create Test Sets" on page 571
See also	<ul style="list-style-type: none"> "Test Set Specification Overview" on page 570 "Test Lab Module Window" on page 542 "Test Configurations Overview" on page 476

Test Plan Tree Tab

Displays the test plan tree, enabling you to select tests to add to the test set.

User interface elements are described below (unlabeled elements are shown in angle brackets>):









UI Element	Description
	<p>Add Tests to Test Set. Adds an instance of the selected test to the test set, including any test configurations associated with the selected test.</p> <p>Note:</p> <ul style="list-style-type: none"> If any of the tests you are adding are already in the test set, the Create Instance dialog box opens. It displays the test configurations that already exist in the test set and how many instances there are. Select the test configurations you still want to add to the test set and click Create. If you are adding tests to a Functional test set, you cannot add Performance tests <p>Tip:</p> <ul style="list-style-type: none"> You can also add tests by double-clicking or dragging a folder or test in the tree to the Execution Grid or Execution Flow. To add selected configurations of a test to the test set, select the test configurations from the Test Configurations pane. For more details, see "Test Configurations Pane" on page 486.
	<p>Show Entity Details. Opens the Details dialog box for the selected entity in read-only mode.</p>


UI Element	Description
	Go to Entity in Module Tree. Navigates to the selected entity's location in that entity's module, and highlights the entity.
	Refresh All. Refreshes the tree to display the most up to date information.
	Set Filter/Sort. Includes the following options: <ul style="list-style-type: none"> • Set Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort tests. • Clear Filter/Sort. Clears any filters or sorting that you have applied. For more details, see "Filter Dialog Box" on page 61 .
	Find. Searches for a specific test in the tree.
	Go to Test by ID. Opens the Go to Test dialog box, enabling you to locate the test in the tree according to Test ID.
	Show/Hide. Shows/hides the Test Configurations pane.
<Filter status bar>	Describes the filter currently applied to the tree. Located directly above the tree.
Test Configurations pane	Enables you to add selected test configurations to the test set. For more details, see "Test Configurations Pane" on page 486 .

Requirements Tree Tab

Displays the requirements tree, enabling you to select tests covering requirements to add to the test set.

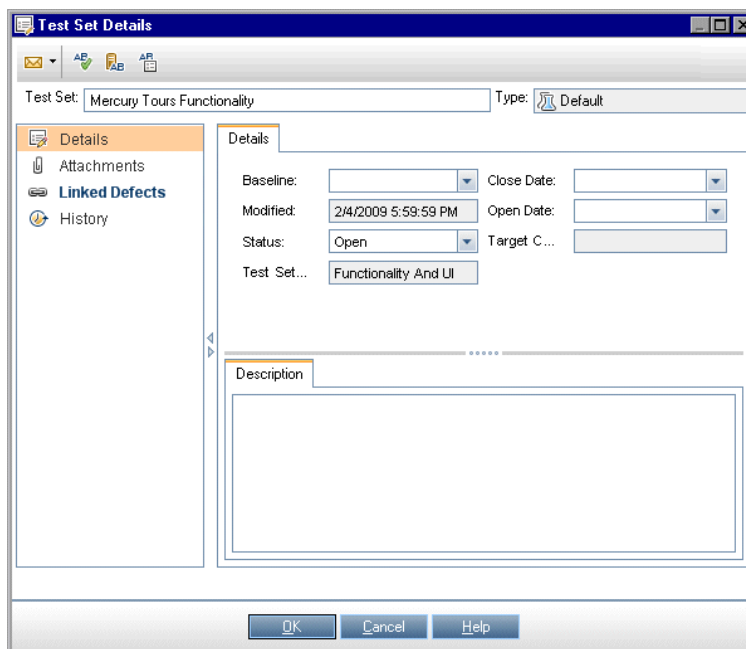
User interface elements are described below (unlabeled elements are shown in angle brackets>):


UI Element	Description
	<p>Includes the following options:</p> <ul style="list-style-type: none"> • Add Tests Covering Requirement. Adds all tests that cover a selected requirement. The associated test configurations are added to the test set. • Add Tests Covering Requirement and Children. Adds all tests that cover a selected requirement and its children. The associated test configurations are added to the test set. <p>Note: If any of the tests you are adding are already in the test set, the Create Instance dialog box opens. It displays the test configurations that already exist in the test set and how many instances there are. Select the test configurations you still want to add to the test set and click Create.</p> <p>Tip:</p> <ul style="list-style-type: none"> • You can also add tests by double-clicking or dragging a folder or requirement in the tree to the Execution Grid or Execution Flow. • To add selected tests that cover a selected requirement to the test set, select a test from the Test Coverage pane.
	Show Entity Details. Opens the Details dialog box for the selected entity in read-only mode.
	Go to Entity in Module Tree. Navigates to the selected entity's location in that entity's module, and highlights the entity.
	Refresh All. Refreshes the tree to display the most up to date information.
	<p>Set Filter/Sort. Includes the following options:</p> <ul style="list-style-type: none"> • Set Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort tests. • Clear Filter/Sort. Clears any filters or sorting that you have applied. <p>For more details, see "Filter Dialog Box" on page 61.</p>
	Find. Searches for a specific test in the tree.
	Go to Requirement by ID. Opens the Go to Requirement dialog box, enabling you to locate the requirement in the tree according to Requirement ID.
	Show/Hide. Shows/hides the Test Coverage pane.

UI Element	Description
<Filter status bar>	Describes the filter currently applied to the tree. Located directly above the tree.
Test Coverage pane	Enables you to add selected tests that cover a selected requirement to the test set. Select a test and click Add Test  . The associated test configurations are added to the test set.





Test Set Details Dialog Box

This dialog box enables you to view and update details of a test set.



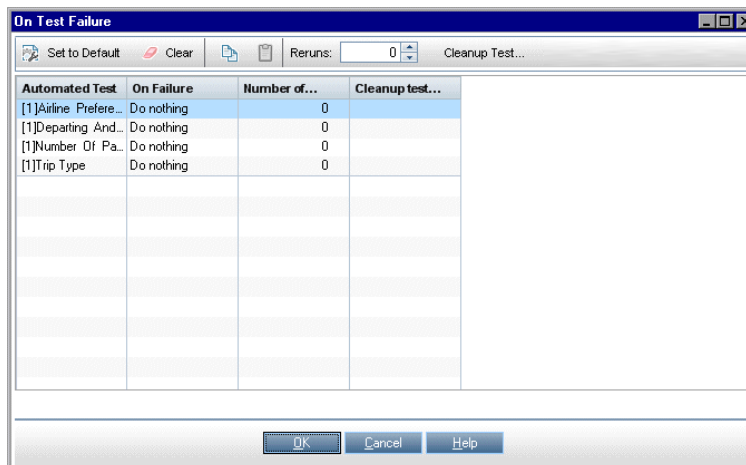
To access	In the Test Lab module > Test Sets tab, select a test set in the test sets tree and click the Test Set Details button  .
Relevant tasks	"How to Create Test Sets" on page 571
See also	"Test Lab Module Window" on page 542

User interface elements are described below:

UI Element (A - Z)	Description
	Send by Email. Opens the Send E-mail dialog box, enabling you to send a test set by email to recipients selected from a list. For more details, see "Send E-mail Dialog Box" on page 79 .
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Details	Displays details of the currently selected test set. Required fields are displayed in red. For details on available fields, see "Test Lab Module Fields" on page 559 .
Attachments	Lists attachments that provide additional information about the currently selected test set. For details, see "Attachments Page" on page 83 .
Linked Defects	Lists the defects linked to the currently selected test set. For details, see "Linked Defects/Entities Page" on page 762 .
History	Lists changes made to the currently selected test set. For details, see "History Tab" on page 78 .

On Test Failure Dialog Box

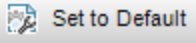
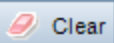

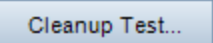
This dialog box enables you to change the default failure rules for tests in a test set. These rules instruct ALM in the event that an automated test in the test set fails.



To access	In the Automation tab, click the Settings per test button.
Important information	This dialog box displays only automated tests in the test set.

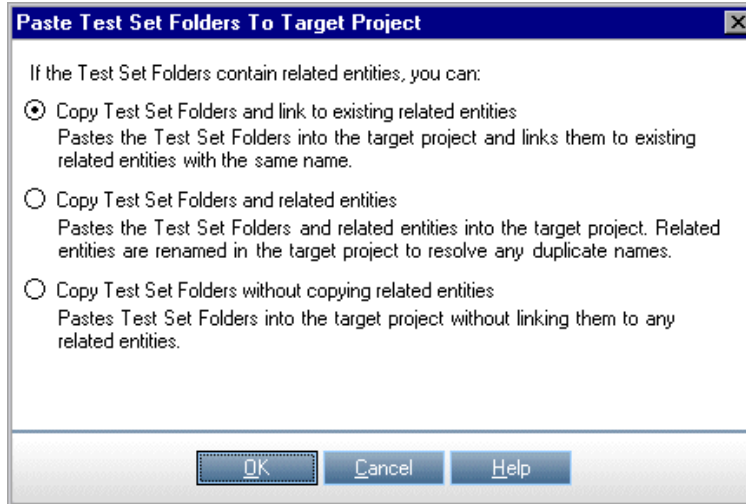
Relevant tasks	"How to Create Test Sets" on page 571
See also	"Automation Tab" on page 589

User interface elements are described below:

UI Element	Description
	Resets the default failure rules according to the settings of a selected test. The default failure rules are defined in the Automation tab.
	Clears the settings for a selected test.
	Copy/Paste Settings. Copies the settings from one test to another. Select a test and click the Copy Settings button. Select another test and click the Paste Settings button.
Reruns	Specifies the number of times an automated test should be rerun upon failure. Select one or more tests in the grid and select a number in the Reruns box on the toolbar. To specify the number of reruns for a specific test, you can also select the number from the Number of Reruns column.
	Opens the Select Test dialog box, enabling you to select a cleanup test. ALM runs the cleanup test before each rerun of the selected test. Select one or more tests in the grid and click the Cleanup Test button. To select a cleanup test for a specific test in the test set, you can also click the down arrow in the Cleanup Test Before Rerun column.
Automated Test	The Automated Test column displays all automated tests in the selected test set.

Paste Test Set Folders To Target Project Dialog Box

This dialog box enables you to select the way in which test sets are copied from one project to another project.



To access	<ol style="list-style-type: none">1. In the source project, right-click a test set or a test set folder and select Copy.2. Open the target project in a separate browser window.3. In the target project, right-click a test set folder below which you want to insert the copied test set or test set folder, and select Paste.
Important information	<ul style="list-style-type: none">• Test run information is not copied.• The source and target projects must use the same ALM version and patch level.
See also	"Test Lab Module Window" on page 542

User interface elements are described below:

UI Element	Description
Copy Test Set Folders and link to existing related entities	ALM copies the test sets or test set folders and pastes them into the target project. The copied test sets or test set folders are linked to existing test resources and called tests with the same name and path. If a related test resource or a test does not exist in the target project, ALM copies it to the target project.
Copy Test Set Folders and related entities	ALM copies the test sets or test set folders along with the related test resources and called tests, and pastes them into the target project. If a related test resource or a called test already exists in the target project, the copied related test resource or called test is renamed to resolve the duplicate name.

UI Element	Description
Copy Test Set Folders without copying related entities	ALM copies the test sets or test set folders without copying the related test resources or called tests, and pastes them into the target project. The copied items are not linked to any related entities.

Select Testing Host Dialog Box

This dialog box enables you to select a testing host to run a test in a Functional test set.

To access	In the Test Lab module > Test Sets tab, click the Execution Grid. Select a test set from the grid. From within the grid, or from within the Test Instance Details dialog box, click the adjacent down arrow of the Testing Host field.
Relevant tasks	"How to Run Tests in ALM" on page 540
See also	"Test Lab Module Fields" on page 559

User interface elements are described below:

UI Element	Description
Select Host Properties	<p>Enables you to select a set of properties to determine the testing host selection. ALM provides the following property categories:</p> <ul style="list-style-type: none"> • Purpose. Testing hosts can have one or multiple purposes, based on the testing tools installed on the host. For more information about available testing host purposes, see the HP ALM Lab Management Guide. • Attributes. Testing hosts can be defined with attributes relating to the host's hardware or software specifications. Custom attributes can also be added from within Lab Management. For details, see the HP ALM Lab Management Guide. • Location. Testing hosts are created with a location property.
Host match	Lists the number of available testing hosts that match the selected host properties.
<Host Selection>	<p>Enables you to select a testing host based on your criteria. ALM provides the following two ways to select a testing host:</p> <ul style="list-style-type: none"> • Automatch host. ALM will automatically allocate and reserve a host based on the criteria provided in the Purpose, Location, and Attributes fields. For details, see "Host Allocation" on page 670. • Use host. You can reserve a specific host from the list of hosts that ALM found based on the criteria provided in the Purpose, Location, and Attributes fields.

Chapter 33

Test Run Schedules

This chapter includes:

Test Run Schedules Overview.....	606
How to Schedule Test Runs.....	606
Test Run Schedules User Interface.....	607

Test Run Schedules Overview

You can control the execution of test instances in a test set. Using the Execution Flow tab of the Test Lab module, you can specify a date and time, and set conditions for executing a test instance. A **condition** is based on the results of another specified test instance in the Execution Flow. By setting conditions, you can instruct the Test Lab module to postpone execution of the current test instance until the other specified test instance has either finished running or passed. You can also set the sequence in which to execute the test instances.

For task details, see ["How to Schedule Test Runs" below](#).

How to Schedule Test Runs

This task describes how to schedule test runs in the Execution Flow tab.

To learn more about scheduling test run, see ["Test Run Schedules Overview" above](#).

Note: This task is part of a higher-level task. For details, see ["How to Run Tests in ALM" on page 540](#).

This task includes the following steps:

- ["Display a test set" below](#)
- ["Schedule a test run" below](#)
- ["View the execution flow diagram" below](#)

1. Display a test set

In the Test Lab module, select a test set from the test lab tree. Click the **Execution Flow** tab. For user interface details, see ["Execution Flow Tab" on page 608](#).

2. Schedule a test run

- a. In the Execution Flow tab, right-click a test instance and choose **Test Run Schedule**. The Run Schedule dialog box opens.
- b. In the Execution Conditions tab, specify the execution conditions for the test instance. For user interface details, see ["Execution Condition Page" on page 609](#).
- c. In the Run Schedule dialog box, click the **Time Dependency** tab. Specify the date and time for running each test instance. For user interface details, see ["Time Dependency Page" on page 611](#).

Example

You can determine that **test_2** will run only if **test_1** passed, and **test_3** will run only if **test_2** passed. **test_1** is scheduled to run at 9:00 AM.

3. View the execution flow diagram

You can change the way the Execution Flow is displayed. This includes zooming in and out of

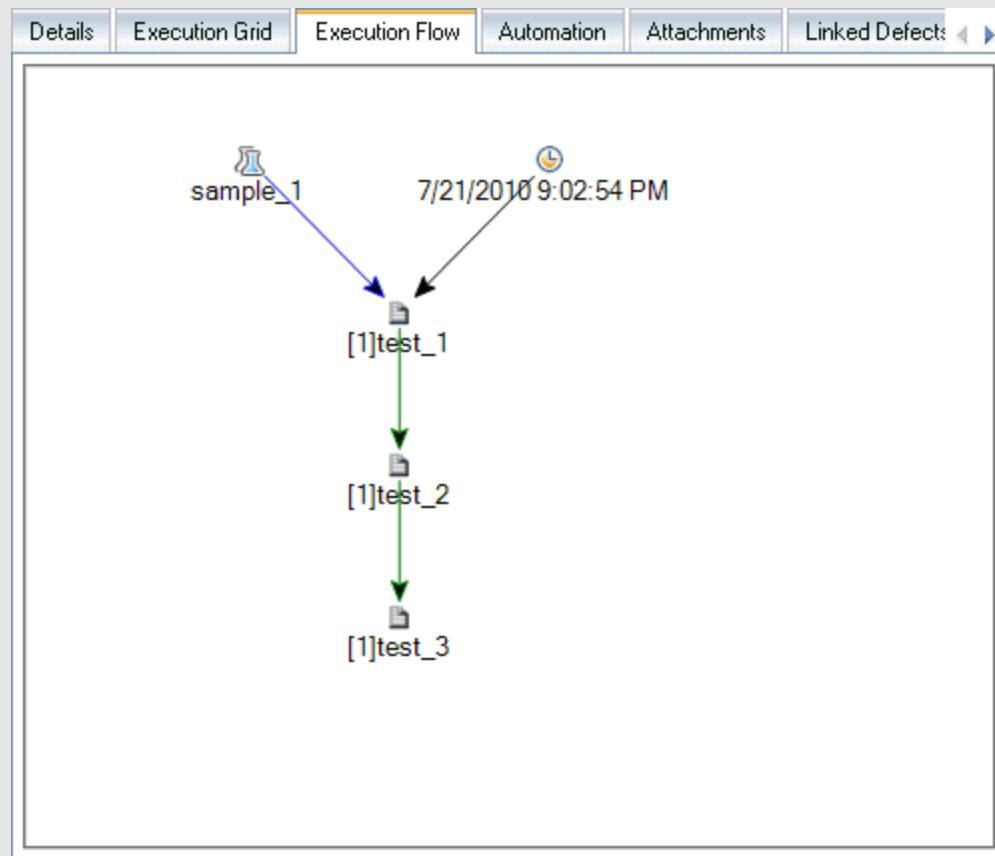
the diagram, rearranging the tests in a hierarchical layout, refreshing the diagram, and displaying full test names in the diagram. You can also copy the diagram to the Clipboard.

For user interface details on the menus and buttons available in the Execution Flow tab, see ["Test Lab Module Menus and Buttons" on page 545](#).

For user interface details on the various elements in the Execution Flow diagram, see ["Execution Flow Tab" on next page](#).

Example

The scheduled test run is displayed in the Execution Flow tab.



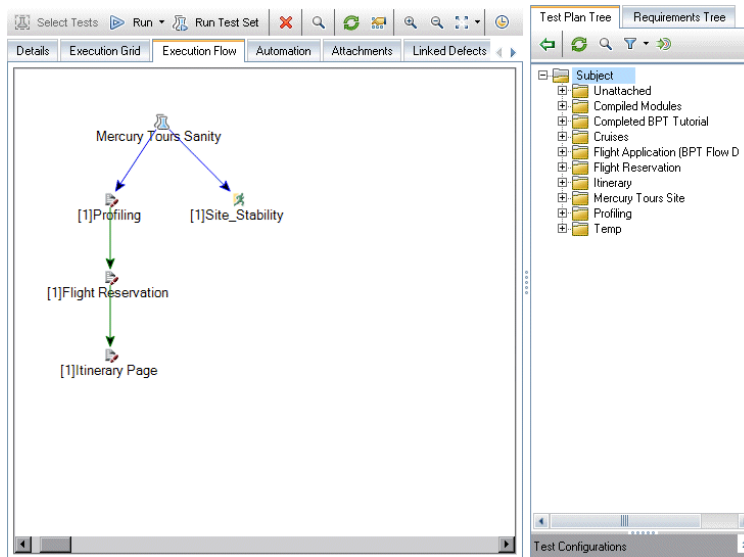
Test Run Schedules User Interface

This section includes:

Execution Flow Tab.....	608
Execution Condition Page.....	609
Time Dependency Page.....	611

Execution Flow Tab





This tab displays test data in a diagram. You use the Execution Flow to control the way your test instances are executed. You can specify when and under what conditions you want a test to be executed.



To access	In the Test Lab module > Test Sets tab, select a test set and click the Execution Flow tab.
Relevant tasks	<ul style="list-style-type: none"> • "How to Schedule Test Runs" on page 606 • "How to Run Tests in ALM" on page 540
See also	<ul style="list-style-type: none"> • "Test Run Schedules Overview" on page 606 • "Test Execution Overview" on page 538 • "Test Lab Module Window" on page 542

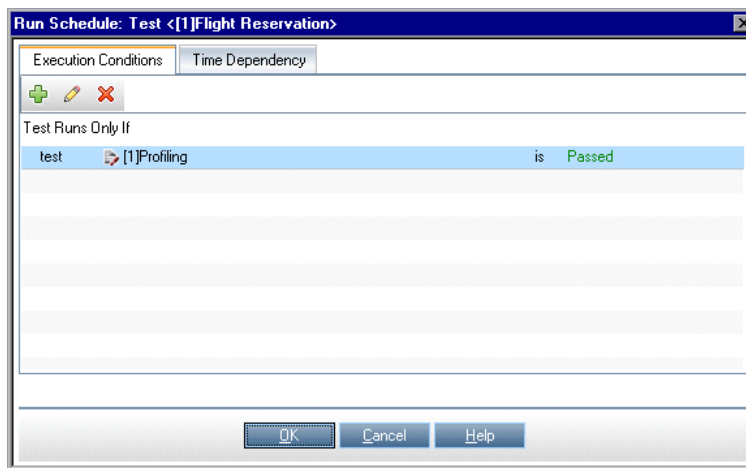
User interface elements are described below (unlabeled elements are shown in angle brackets):

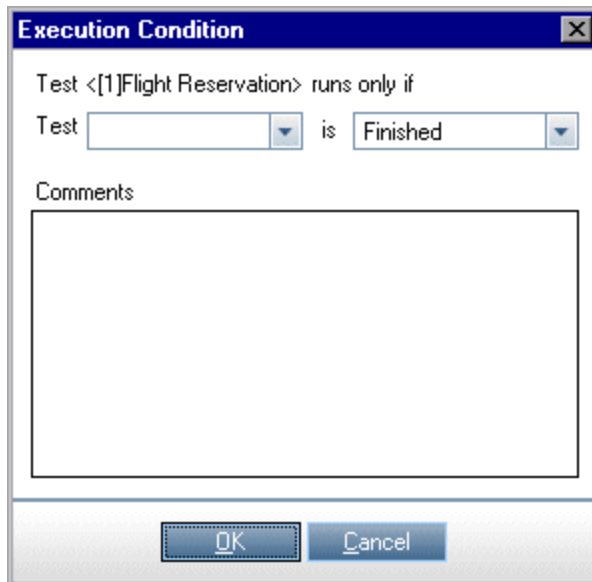
UI Element	Description
<Test Lab module menus and buttons>	For details on the menu options and toolbar buttons available in the Test Lab module, see "Test Lab Module Menus and Buttons" on page 545 .
<Test Lab module icons>	For details on the icons available in the Test Lab module, see "Test Lab Module Icons" on page 558 .

UI Element	Description
<Execution Flow diagram area>	<p>Displays the test instances with conditions in a diagram.</p> <ul style="list-style-type: none"> A blue line  arrow indicates that the test instance is to be executed after the previous test instance, with no conditions. A green line  arrow indicates that the test instance is to be executed only if the previous test instance has status Passed. A black line  arrow indicates that the test instance is to be executed only if the previous test instance has finished running. When a test instance is time-dependent, a Time Dependency  icon is added to the diagram.
<Select Tests pane>	<p>Displays the Test Plan Tree tab and the Requirements Tree tab, enabling you to select tests to add to the selected test set. For details, see "Select Tests Pane" on page 594.</p>

Execution Condition Page



This page enables you to specify under what conditions you want a test instance to be executed.






To access	<p>Use one of the following in the Execution Flow tab:</p> <ul style="list-style-type: none"> • Right-click a test instance and choose Test Run Schedule. The Run Schedule dialog box opens and displays the Execution Conditions tab. • Right-click a condition arrow and choose Execution Condition. The Execution Condition dialog box opens.
Important information	<p>Tip: You can also add a condition directly in the Execution Flow. Click a test icon (not the test name) and drag the arrow to another test. By default, the condition is set to Finished. To change the condition, double-click the condition arrow and select Passed.</p>
Relevant tasks	<p>"How to Schedule Test Runs" on page 606</p>
See also	<ul style="list-style-type: none"> • "Time Dependency Page" on next page • "Test Run Schedules Overview" on page 606

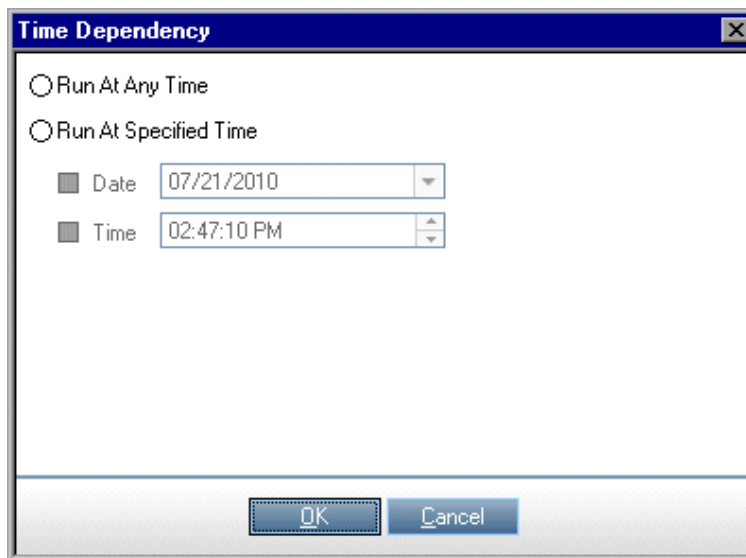
User interface elements are described below:

UI Element	Description.
	<p>New Execution Condition. Opens the New Execution Condition dialog box, enabling you to define a new execution condition.</p> <p>Available from: The Run Schedule dialog box > Execution Conditions tab.</p>
	<p>Edit Execution Condition. Opens the Execution Condition dialog box, enabling you to edit an execution condition.</p> <p>Available from: The Run Schedule dialog box > Execution Conditions tab.</p>


UI Element	Description.
	Delete Execution Condition. Deletes a selected execution condition. Available from: The Run Schedule dialog box > Execution Conditions tab.
Test runs only if	The execution conditions of the specified test instance.
Test	The test instance on which you want the current test to be dependent.
is	Specifies the execution condition. It includes the following options: Finished. Executes the current test instance only after the specified test instance has finished executing. Passed. Executes the current test instance only if the specified test instance has finished executing and has passed.
Comments	Comments regarding the condition. Click in the text box to display a toolbar for formatting and spell checking the text. Available from: The Execution Condition dialog box.


Time Dependency Page

This page enables you to specify when you want a test to be executed.



The Time Dependency dialog box has a title bar with a close button. It contains two radio buttons: "Run At Any Time" and "Run At Specified Time". Below these, there are two groups of controls. The first group, labeled "Date", has a text box showing "07/21/2010" and a dropdown arrow. The second group, labeled "Time", has a text box showing "02:47:10 PM" and a spinner control. At the bottom, there are "OK" and "Cancel" buttons.

To access	<p>Use one of the following in the Execution Flow tab:</p> <ul style="list-style-type: none"> Right-click a test instance and choose Test Run Schedule. Click the Time Dependency tab. Right-click the Time Dependency  icon connected to a test instance. The Time Dependency dialog box opens.
------------------	---

Important information	<p>Tip: You can schedule the test run date and time by clicking the Add Time Dependency To Flow  button, and linking the arrow from the icon to a test instance. Double-click the icon to set the time in the Time Dependency dialog box.</p>
Relevant tasks	<p>"How to Schedule Test Runs" on page 606</p>
See also	<ul style="list-style-type: none">• "Execution Condition Page" on page 609• "Test Run Schedules Overview" on page 606

User interface elements are described below:

UI Element	Description.
Run at any time	The test runs at a non-specific time.
Run at specified time	<p>The test runs at a specific time. You can specify the following:</p> <ul style="list-style-type: none">• Date. Indicates the date for running the test instance.• Time. Indicates the time for running the test instance.

Chapter 34

Manual Test Execution

This chapter includes:

- Manual Test Execution Overview..... 614
- HP Sprinter Overview..... 614
- How to Run Tests Manually..... 615
- Manual Test Execution User Interface..... 618

Manual Test Execution Overview

When you run tests manually, you follow the test steps and perform operations on the application under test. You pass or fail each step, depending on whether the actual application results match the expected output. You can run both manual and automated tests manually.

You can execute tests more than once in the same set. Each execution is considered a new test run. You can also resume a manual test run that was paused during execution.

If you decide to modify test steps during a test run, you can choose to save the modifications in the original test and in the test instance. Alternatively, you can save them for the current test run only.

After test execution is complete, you can view a summary of results for all test runs, and view more detailed results for each test instance.

You run tests manually in ALM using HP Sprinter, HP's solution for manual testing. For details, see ["HP Sprinter Overview" below](#).

If you are not working with Sprinter, you run tests manually using Manual Runner.

For task details, see ["How to Run Tests Manually" on next page](#).

HP Sprinter Overview

You run tests manually from HP Application Lifecycle Management (ALM) using HP Sprinter. Sprinter provides advanced functionality and tools to assist you in the manual testing process. Sprinter is fully integrated with ALM, enabling you to get the maximum benefit from both solutions.

- **ALM Editions:** Sprinter functionality is not available with ALM Essentials Edition or Performance Center Edition.
- If you are not working with Sprinter, you can run tests manually with the Manual Runner.

Manual testing often requires that you leave your testing application to accomplish tasks related to your test. For example, you may need to use graphic software to take a screen capture of your application, you may want to record a movie of the application during the test, and you need to switch to your defect tracking software to report defects.

Sprinter addresses these needs of the manual testing process, and enables you to accomplish these tasks without disrupting your test flow. With Sprinter, you can also perform many of the repetitive and tedious tasks of manual testing automatically. Sprinter includes many tools to help you detect and submit defects. These features ensure that you can perform all the tasks necessary for your manual test with minimum interruptions to your testing work.

With Sprinter you can:

- create and annotate screen captures
- capture movies of your run
- record and run macros on your test application
- automatically enter data into fields in your application

- automatically include the list of your steps or user actions in any defect you submit
- replicate your user actions on multiple machines with different configurations

All this functionality is available from within Sprinter, and can be used without interrupting the flow of your manual test.

For full details on installing and working with Sprinter, refer to the *HP Sprinter Readme* and the *HP Sprinter User Guide*, available on the HP Application Lifecycle Management Add-ins page (select **Help > Add-ins Page**).

For details on customizing ALM default settings for Sprinter, see the *HP Application Lifecycle Management Administrator Guide*.

To run tests manually in ALM using Sprinter, see "[How to Run Tests Manually](#)" below.

How to Run Tests Manually

This task describes how to run tests manually.

To learn more about running tests manually, see "[Manual Test Execution Overview](#)" on previous page.

Note:

- This task is part of a higher-level task. For details, see "[How to Run Tests in ALM](#)" on page 540.
- **ALM Editions:** Sprinter functionality described in this section is not available with ALM Essentials Edition or Performance Center Edition.

This task includes the following steps:

- "[Prerequisites](#)" below
- "[Run tests with Sprinter](#)" below
- "[Run tests from the Manual Runner dialog box](#)" on next page
- "[Edit test steps during a test run](#)" on next page
- "[Resume a manual test run](#)" on page 617
- "[Results](#)" on page 617

1. Prerequisites



For enhanced functionality and a variety of tools to assist in the manual testing process, run tests with HP Sprinter. To learn more about Sprinter, see "[HP Sprinter Overview](#)" on previous page.

To run tests with Sprinter, you must install Sprinter on your client machine. To download and install Sprinter, select **Help > Add-ins Page** to open the HP Application Lifecycle Management Add-ins page, and click the **HP Sprinter** add-in link.

2. Run tests with Sprinter

If Sprinter is installed on your computer, you can run tests manually with Sprinter from the Test Lab module.


In the Test Lab module > Test Sets tab, select a test set and click the **Execution Grid** tab.

- To run a single manual test, select the test and click the **Run** button .
- To run two or more manual tests, select the tests. Click the drop-down arrow  next to the **Run** button and select **Run with Sprinter**.

For details on working with Sprinter, refer to the *HP Sprinter User Guide*, available on the HP Application Lifecycle Management Add-ins page.

3. Run tests from the Manual Runner dialog box

If you are not working with Sprinter, you can also run tests manually from the Manual Runner dialog box.

- a. In the Test Lab module > Test Sets tab, select a test set and click the **Execution Grid** tab or **Execution Flow** tab. Select the tests, click the drop-down arrow  next to the **Run** button, and select **Run with Manual Runner**. For user interface details on the Manual Runner wizard, see "[Manual Runner Wizard](#)" on page 619.
- b. Open the application being tested and execute the test steps. Follow the instructions detailed in the test step descriptions.
- c. Compare the actual results with the expected results. When performing the steps, decide whether the application responds according to the expected results.
- d. Assign a pass or fail status to each step, depending on whether or not the expected results match the actual results.
- e. If a step fails, explain how the application actually responded. A test fails if one or more steps fail.

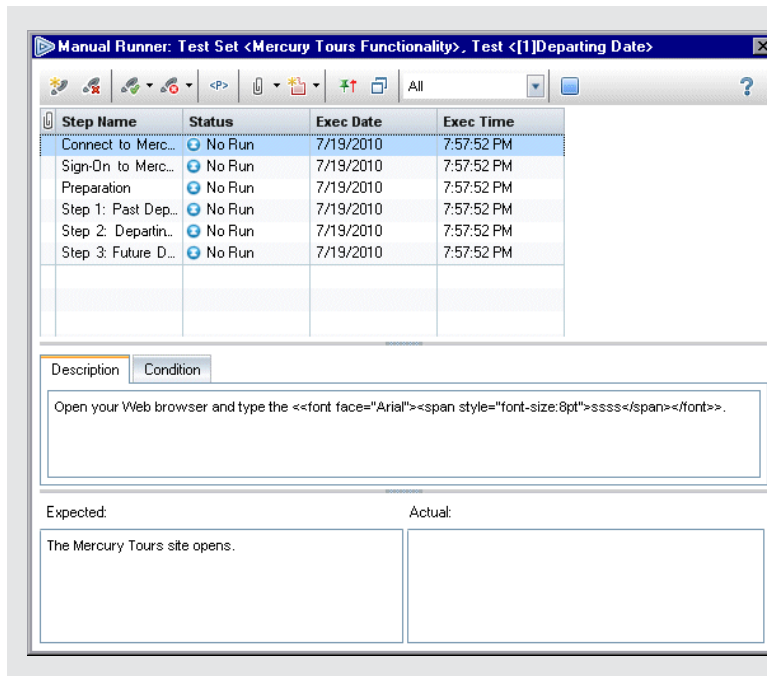
4. Edit test steps during a test run

While executing a test using the Manual Runner, you can add, delete, or modify test steps. After you finish executing the test, you can save your design steps with the changes you make.

Edit test steps during a manual run from the **Manual Runner: Step Details** page. For user interface details, see "[Manual Runner: Step Details Page](#)" on page 622.

Example:

You can read and review each step, and also add, delete, or modify test steps.



5. Resume a manual test run

If a manual test run was paused during execution, you can continue the run at a later stage. This continues the run using the same runner that was used the first time the test was run (Sprinter or the Manual Runner).

Use one of the following:

- In the Execution Grid tab or Execution Flow tab, select the test you want to resume running, and select **Tests > Continue Manual Run**. Alternatively, click the **Run** arrow and choose **Continue Manual Run**.

Note: This continues the last run of the selected test. If you want to resume running a previous run, click the **Test Instance Details** button, click **Runs** on the sidebar, and select the test run you want to resume. Click the **Continue Manual Run** button.

- In the Test Lab > Test Runs tab, select the test run you want to resume and click the **Continue Manual Run** button.

If you select multiple test instances in the Execution Grid, or multiple runs in the Test Runs tab, all selected runs continue. If, however, the last test selected in the grid was run with Sprinter, only that run continues.

6. Results

After test execution is complete, you can view a summary of test results in the following modules:

- **Test Lab.** The updated status for each test run is displayed in the Execution Grid. Results for each test step appear in the **Last Run Report** pane. You can view more detailed results

in the Test Instance Details dialog box.

- **Test Runs.** The updated status for each test run in the project is displayed. You can generate reports based on test execution details.

For more details on viewing test results, see "How to View Test Results" on page 644.

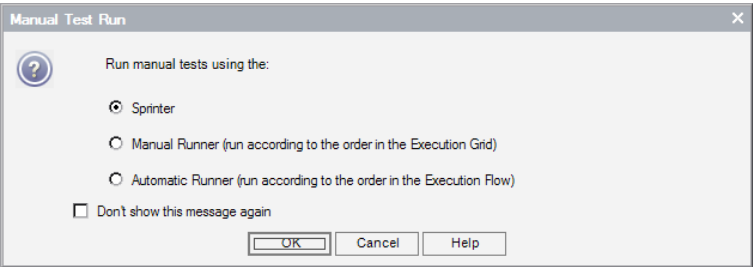
Manual Test Execution User Interface

This section includes:

Manual Test Run Dialog Box	618
Manual Runner Wizard	619

Manual Test Run Dialog Box

This dialog box enables you to select whether to run tests using Sprinter, the Manual Runner, or the Automatic Runner.



To access	In the Test Lab module > Test Sets tab, select a test set and use one of the following: <ul style="list-style-type: none">• To run an entire test set that contains only manual tests, click the Run Test Set button.• In the Execution Grid tab or Execution Flow tab, select two or more manual tests and click the Run button.
Relevant tasks	"How to Run Tests Manually" on page 615
See also	"Manual Test Execution Overview" on page 614

User interface elements are described below:

UI Element	Description
Sprinter	<p>Opens Sprinter and runs the selected tests manually according to the order displayed in the Execution Grid. For details on Sprinter, see the "HP Sprinter Overview" on page 614.</p> <p>This option is displayed only if Sprinter is installed on your computer.</p> <p>ALM Editions: Sprinter functionality is not available with ALM Essentials Edition or Performance Center Edition.</p>
Manual Runner	<p>Runs the selected tests manually from the Manual Runner dialog box according to the order displayed in the Execution Grid. For more details on the Manual Runner, see "Manual Runner Wizard" below.</p>
Automatic Runner	<p>Runs the selected tests automatically according to conditions defined in the Execution Flow. For more details on running tests automatically, see "Automatic Runner Dialog Box" on page 629.</p>
Don't show this message again	<p>Instructs ALM to run manual tests without first displaying this dialog box. To enable, select Tests > Enable Manual Test Run Confirmation.</p>

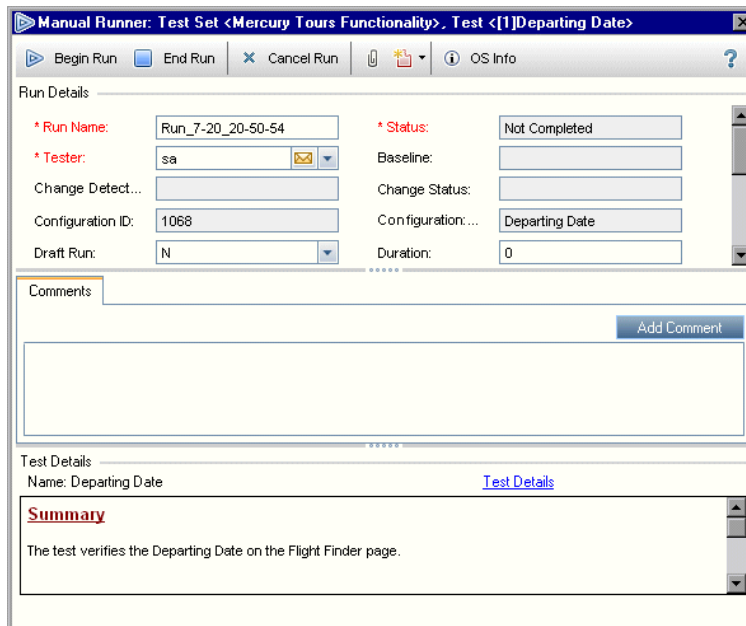
Manual Runner Wizard

This wizard enables you to run tests manually. You can run both manual and automated tests manually.

To access	In the Test Lab module > Test Sets tab, select a test set and click the Execution Grid tab or Execution Flow tab. Select one or more tests and select Tests > Run with Manual Runner .
Relevant tasks	"How to Run Tests in ALM" on page 540
Wizard map	<p>This wizard contains:</p> <p>"Manual Runner: Run Details Page" on next page > "Manual Runner: Step Details Page" on page 622</p>
See also	<ul style="list-style-type: none">• "Test Execution Overview" on page 538• "Manual Test Execution Overview" on page 614


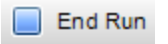
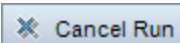


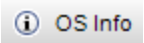
Manual Runner: Run Details Page

This wizard page enables you to review run details and run tests manually.



Important information	<ul style="list-style-type: none"> General information about this wizard is available here: "Manual Runner Wizard" on previous page. You can run a test instance as a draft run using the Draft Run field. For more details, see "Draft Runs" on page 539. If you are running a business process test or flow, see also the <i>HP Business Process Testing User Guide</i>.
Wizard map	<p>The "Manual Runner Wizard" on previous page contains:</p> <p>"Manual Runner: Run Details Page " above > "Manual Runner: Step Details Page" on page 622</p>
See also	"Manual Test Execution Overview" on page 614

User interface elements are described below:

UI Element	Description
	<p>Starts the test run.</p> <p>If the test you are running has parameters that have not been assigned actual values, the Parameters of Test dialog box opens. Assign actual values for the parameters. For details, see "Called Test Parameters/Parameters of Test Dialog Box" on page 455.</p> <p>Business Process Testing: Even if the business process test you are running has parameters that have not been assigned actual values, the Parameters of Test dialog box does not open. Instead, specify actual values in the Parameters pane of the Manual Runner: Step Details page.</p>
	Ends the test run. ALM saves the test run.
	<p>Cancels the test run.</p> <p>If this test is being run as part of a test set, a confirmation dialog box opens. You are prompted to choose if you want to cancel the run of the remaining tests. You can save or discard the current test run by selecting or clearing Save the current test run.</p>
	Attach to Run. Opens the Attachment page, enabling you to view and add attachments to the test run. For details, see "Attachments Page" on page 83 .
	<p>New Defect. Opens the New Defect dialog box, enabling you to add a defect to the test run. For details, see "New Defect Dialog Box" on page 756. ALM automatically creates a link between the test run and the new defect. For details, see "Defect Linkage" on page 738.</p> <p>To view linked defects for a selected test run, click the New Defect arrow and select Linked Defects.</p>
	<p>Operating System Information. Opens the Operating System Information dialog box. You can edit the following:</p> <ul style="list-style-type: none"> • Operating System. The operating system on the machine where you perform your test steps. By default, the operating system on your ALM client machine is displayed. • OS Service Pack. The operating system service pack. • OS Build Number. The operating system build number. <p>Business Process Testing: This button is not available. Instead, click the Operating System Info link in the Run Details pane.</p>
Run Details	Displays information about the test run. Required fields are displayed in red. For details on the available fields, see "Test Lab Module Fields" on page 559 .
Comments tab	Comments for the current test run. Click Add Comment to add a comment.

UI Element	Description
Test Details	<p>Opens the Test Details dialog box, enabling you to view and update details about the test. For more details, see "Test Plan Module Window" on page 403.</p> <p>Business Process Testing: This link is called More.</p>

Manual Runner: Step Details Page

This wizard page enables you add, delete, or modify test steps during the test run. After you finish executing the test, you can save your design steps with the changes you make.

Step Name	Status	Exec Date	Exec Time
Connect to Merc...	No Run	7/20/2010	8:54:38 PM
Sign-On to Merc...	No Run	7/20/2010	8:54:38 PM
Preparation	No Run	7/20/2010	8:54:38 PM
Step 1: Past Dep...	No Run	7/20/2010	8:54:38 PM
Step 2: Departin...	No Run	7/20/2010	8:54:38 PM
Step 3: Future D...	No Run	7/20/2010	8:54:38 PM

Description

Open your Web browser and type the <<Mercury Tours URL>>.










Expected: The Mercury Tours site opens.


Actual:

Important information	<ul style="list-style-type: none"> General information about this wizard is available here: "Manual Runner Wizard" on page 619. If you modify test steps during a test run, you can choose to save the modifications in the original test in the Test Plan module and in the test instance in the Test Lab module. Alternatively, you can save them for the current test run only. The Test Lab module enables you to update changes made to called tests in the current test run only. The called tests are not affected. For more information on called tests, see "Design Steps Tab/Design Step Details Dialog Box" on page 464. If you are running a business process test, refer to the <i>HP Business Process Testing User Guide</i>.
Wizard map	<p>The "Manual Runner Wizard" on page 619 contains:</p> <p>"Manual Runner: Run Details Page" on page 620 > "Manual Runner: Step Details Page" above</p>

See also	"Manual Test Execution Overview" on page 614
-----------------	--

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A - Z)	Description
	Add Step. A new step with a default step name is added to the test. You can type details about the new step in the Description box.
	Delete Selected. Deletes the selected steps.
	Pass Selected. Changes the status of selected test steps to Passed . To pass all test steps at once, click the Pass Selected arrow and select Pass All .
	Fail Selected. Changes the status of selected test steps to Failed . To fail all test steps at once, click the Fail Selected arrow and select Fail All .
	Show Parameters. Opens the Parameters of Test Run dialog box, enabling you to view the values of test parameters. For details, see "Parameters Tab/Parameters Dialog Box" on page 452 .
	Attach to Step. Opens the Attachment page, enabling you to view and add attachments to the test step. For details, see "Attachments Page" on page 83 . To add attachments to the entire test run, click the Attachments arrow and select Attach to Run .
	New Defect. Opens the New Defect dialog box, enabling you to add a defect to the step. ALM automatically creates a link between the test step and the new defect. For details, see "New Defect Dialog Box" on page 756 and "Defect Linkage" on page 738 . To view linked defects for a selected test step, click the New Defect arrow and select Linked Defects .
	Keep on Top. Displays the Manual Runner: Step Details dialog box on top of all open windows. To display selected windows on top of the Manual Runner: Step Details dialog box, click the Not on Top button.
	Compact View. Opens the compact view display of this dialog box, enabling you to conveniently read each test step and record the results. To return to the steps grid, click the Back to Steps Grid button.
<Filter by>	Filters the steps in the test according to the Status column.

UI Element (A - Z)	Description
	<p>End Run. Ends the run.</p> <p>If you added, deleted, or modified test steps during the run, a confirmation box opens. Select one of the following:</p> <ul style="list-style-type: none">• Yes. Saves your changes and updates the test in the Test Plan and Test Lab modules.• No. Saves your changes in the current test run only.
<Grid fields>	View or edit details about the test steps. For details on the available fields, see "Test Lab Module Fields" on page 559 .
Description	A description of the selected test step.
Expected	The expected result of the selected test step.
Actual	The actual result of the selected test step.

Chapter 35

Automatic Test Execution

This chapter includes:

- Automatic Test Execution Overview..... 626
- How to Run Tests Automatically..... 627
- Automatic Test Execution User Interface..... 629

Automatic Test Execution Overview

You can run tests automatically directly from HP Application Lifecycle Management (ALM). You can choose to run tests on your machine or on remote hosts. A **host** is any machine connected to your network on which a testing tool has already been installed.

You can choose to run all of the tests in a test set, or specific tests, including both automated and manual tests.

- When you run an automated test, ALM opens the selected testing tool automatically, runs the test on your local machine or on remote hosts, and exports the results to ALM.
- When you run a manual test from the Automatic Runner dialog box and specify a remote host, ALM notifies a designated tester by email to run the test on the specified host.

You can also run an automated system test to provide system information, capture a desktop image, or restart a machine. For details on system tests, see ["System Tests Overview" on page 492](#).

For task details, see ["How to Run Tests Automatically" on next page](#).

Unified Functional Testing (UFT) GUI Test Execution

When running UFT GUI tests, consider the following:

- To enable ALM to run GUI tests on a remote host, open the relevant application on the remote host and select the required option. For details, see the *HP Unified Functional Testing User Guide*.
- Before running a GUI test, ALM loads the UFT add-ins that are associated with the selected GUI test. You must ensure that you run the GUI test on a machine on which the required UFT add-ins are installed. For details on working with add-ins and associated add-in lists in UFT, refer to the documentation and the relevant add-in documentation.
- When you run GUI tests from the Test Lab module, they are automatically run in **Fast** mode. They cannot be run in **Normal** mode.
- By default, ALM closes UFT at the end of a test set run. This ensures that the UFT license is released at that point and made available for other UFT users. To keep UFT open after a test set run, you can edit the **SUPPORT_TESTSET_END** parameter in the Site Configuration tab in Site Administration. For details, see the *HP Application Lifecycle Management Administrator Guide*.

Note: HP Unified Functional Testing (UFT) comprises the products known as HP QuickTest Professional and HP Service Test.

- Functionality provided by QuickTest is known as GUI testing in UFT.
- Functionality provided by Service Test is known as API testing in UFT.

How to Run Tests Automatically

This task describes how to run tests automatically. To learn more about running tests automatically, see ["Automatic Test Execution Overview" on previous page](#).

Note: This task is part of a higher-level task. For details, see ["How to Run Tests in ALM" on page 540](#).

This task includes the following steps:

- ["Prerequisites" below](#)
- ["Schedule and order test execution" below](#)
- ["Run Functional and Performance tests" below](#)
- ["Run Default test sets" on next page](#)
- ["Results" on next page](#)

1. Prerequisites

- **Set up hosts for remote test execution.** Before running tests automatically, you must set up host computers for the remote execution of automated tests, and assign testers for the execution of manual tests. For information on setting up remote hosts for Functional and Performance tests, see the *HP ALM Lab Management Guide*.
- **Designate testers for running manual tests.** When you run a manual test automatically and specify a remote host, ALM notifies a designated tester by email to run the test. This notification can be sent only if you have designated a tester for the test with a valid email address.

To designate a tester, locate the test in the Execution Grid tab, and select a user in the **Responsible Tester** column.

2. Schedule and order test execution

You can decide how and when tests are run using the following methods:

Scheduling. You can specify the date and time, and set conditions for executing your tests. For task details on scheduling Default test sets, see ["How to Schedule Test Runs" on page 606](#).

Ordering. You can set the order in which you want your tests to be executed, using the Order Test Instances dialog box. Use one of the following:

- In the Execution Flow, press the CTRL key and select two or more tests. Right-click a test and select **Order Test Instances**.
- In the Execution Grid, select **Tests > Order Test Instances**.

For user interface details on the Order Test Instances dialog box, see ["Order Test Instances Dialog Box" on page 634](#).

3. Run Functional and Performance tests

ALM Editions: Functional and Performance test sets are available only for ALM Edition.

In the **Test Lab** module > **Test Sets** tab, do one of the following:

- To run selected functional or performance tests, select a test set and click the **Execution Grid** tab or **Execution Flow** tab. Select one or more tests and click the **Run** button.
- To run all the tests in a functional test set, select a functional test set and click the **Run Test Set** button.

If your system is integrated with HP Continuous Delivery Automation (CDA), you can instruct ALM to provision machines and deploy the build on a dynamic environment. For more information on the integration between ALM and CDA, see ["How to Work with AUT Environments" on page 371](#).

For user interface details, see ["Run <Entity> Dialog Box" on page 636](#).

4. Run Default test sets

Run manual and automated default tests automatically on your machine using the Automatic Runner.

In the **Test Lab** module > **Test Sets** tab, do one of the following:

- Select a Default test set that includes one or more automated tests and click the **Run Test Set** button.
- To run selected tests, select a Default test set and click the **Execution Grid** tab or **Execution Flow** tab. Select one or more automated tests and click the **Run** button.
- To run only manual tests, select the tests and click the **Run** button. In the Manual Test Run dialog box, select **Automatic Runner** and click **OK**.

To run the same test concurrently on multiple remote hosts, add multiple instances of the test to your test set. For user interface details on adding test instances to test sets, see ["Select Tests Pane" on page 594](#).

For user interface details on the Automatic Runner, see ["Automatic Runner Dialog Box" on next page](#).

5. Results

For Default test sets, you can view details about the automatic test execution after execution is complete. In the Automatic Runner dialog box, select **Run > View Execution Log**. For user interface details, see ["Execution Log Dialog Box" on page 635](#).

For Functional and Performance tests and Functional test set runs, ALM generates an Execution Report. The Execution Report provides general details about the run, overall information per test, as well as drilled-down run information for each individual test within the test set. For user interface details, see ["Execution Report Page" on page 639](#).

After the test execution is complete, you can view a summary of test results in the following modules:

- **Test Lab.** The updated status for each test run is displayed in the Execution Grid. Results for each test step appear in the Last Run Result pane. You can view more detailed results in

the Test Instance Details dialog box.

- **Test Runs.** The updated status for each test run in the project is displayed. You can generate reports based on test execution details.

For more details on viewing test results, see "How to View Test Results" on page 644.

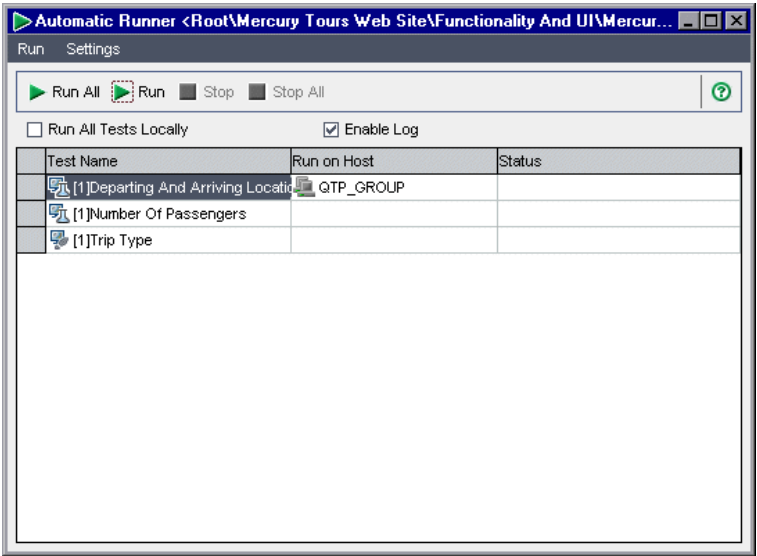
Automatic Test Execution User Interface

This section includes:

Automatic Runner Dialog Box.....	629
Host Manager Dialog Box (for Default test sets only).....	631
Order Test Instances Dialog Box.....	634
Execution Log Dialog Box.....	635
Run <Entity> Dialog Box.....	636
Execution Report Page.....	639

Automatic Runner Dialog Box

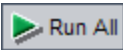



This dialog box enables you to run tests from a **Default** test set automatically. You can run an entire test set or specific tests, including both automated and manual tests.



To access	<p>In the Test Lab module > Test Sets tab, use one of the following methods:</p> <ul style="list-style-type: none"> • Select a test set that includes one or more automated tests and click the Run Test Set button. • To run selected tests, select a test set and click the Execution Grid tab or Execution Flow tab. Select one or more tests and click the Run button. • To run only manual tests, select the tests and click the Run button. In the Manual Test Run dialog box, select Automatic Runner and click OK.
Important information	<ul style="list-style-type: none"> • The Automatic Runner is used only for tests in Default test sets. • For an automated test, ALM opens the selected testing tool automatically and runs the test. Test execution commences only when the selected host becomes available to run tests. • For a manual test that you define to run on a remote host, ALM notifies a designated tester by email to run the test on the specified host. This notification can be sent only if you designate a tester for the test in the Responsible Tester field in the Execution Grid. • To run several test sets concurrently on multiple remote hosts, open a new Automatic Runner dialog box instance for each test set. • For additional considerations when running UFT tests, see "Unified Functional Testing (UFT) GUI Test Execution" on page 626.
Relevant tasks	"How to Run Tests in ALM" on page 540
See also	<ul style="list-style-type: none"> • "Test Execution Overview" on page 538 • "Automatic Test Execution Overview" on page 626 • "Test Lab Module Window" on page 542

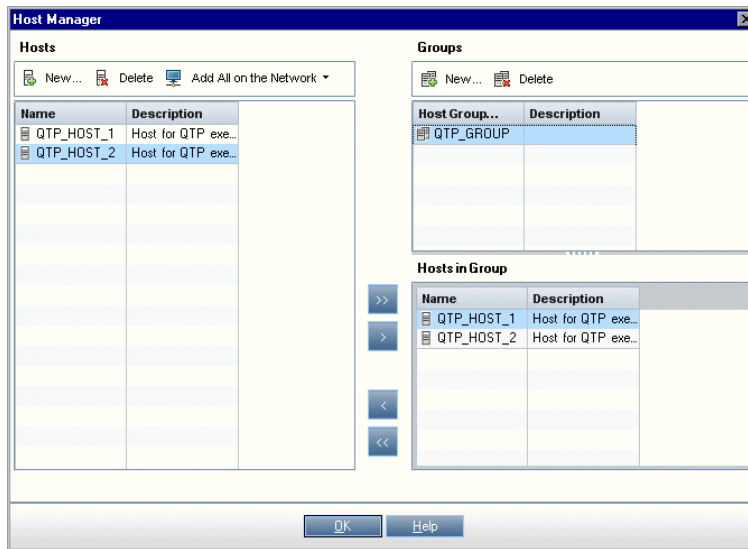
User interface elements are described below:

UI Element	Description
Run Selected	<p>Runs selected tests in the Automatic Runner dialog box.</p> <p>Available from: Run menu</p>
Select All	<p>Selects all tests in the Automatic Runner dialog box.</p> <p>Available from: Run menu</p>
Deselect All	<p>Clears selection of all tests in the Automatic Runner dialog box.</p> <p>Available from: Run menu</p>
Invert Selection	<p>Selects or clears the selection of all tests in the Automatic Runner dialog box.</p> <p>Available from: Run menu</p>

UI Element	Description
	Run All Tests. Runs all the tests in the Automatic Runner dialog box.
	Run Selected Tests. Runs the selected tests.
	Stop the Run. Terminates text execution before it completes.
	Stop All Runs. Terminates all tests that are running in the Automatic Runner dialog box.
Run All Tests Locally	Executes all tests on your local machine.
Enable Log	Creates an execution log file during the test run. To view the execution log after text execution, select Run > View Execution Log . For more details, see " Execution Log Dialog Box " on page 635.
Test Name	The name of the test to be run.
Run on Host	The host machine designated to remotely run the test. To execute tests remotely, select a host machine for each test. You must first clear the Run All Tests Locally check box. Click the Run on Host grid box, and click the browse button. The Select Host dialog box opens. Under <Any Host> , select a host or host group to run the test. If you select a host group, ALM runs the test on the first available host in the group, not on every host in the group.
Status	Displays text execution progress.
Detect Changes	Business Process Testing: Enables you to run the test in change detection mode. For task details, see the <i>HP Business Process Testing User Guide</i> . Available for: Business Process Testing Enterprise Extension users

Host Manager Dialog Box (for Default test sets only)





This dialog box enables you to create a list of available hosts for remote test execution within a **Default** test set. You can also organize hosts into groups to be used for a specific project.



To access	In the Test Lab module, Test Sets tab, select Test Sets > Host Manager .
Important information	<p>If you specify a host group for remote test execution, ALM runs the test on the first available host, and not on every host in the host group.</p> <p>The Host Manager dialog box is used to arrange remote hosts only for Default test sets.</p>
Relevant tasks	"How to Run Tests Automatically" on page 627
See also	"Automatic Test Execution Overview" on page 626

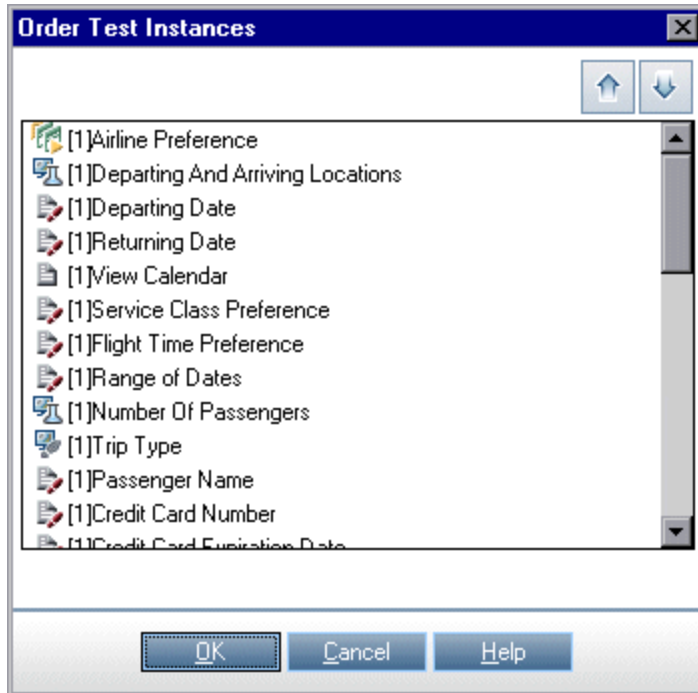
User interface elements are described below:

UI Element	Description
New...	New Host. Opens the New Host dialog box, enabling you to add a host to the Hosts list.
Delete	Delete Host. Deletes a selected host from the Hosts list.
Add All on the Network ▼	<p>Add All on the Network. Includes the following options:</p> <ul style="list-style-type: none"> • Add All on the Network. ALM scans the Network Neighborhood directory and inserts each host found into the Hosts list. • Synchronize Hosts in the Project with Hosts on Net. Synchronizes the hosts in the Hosts list with the hosts in the Network Neighborhood directory. ALM adds hosts found in the Network Neighborhood directory and deletes hosts that were not found in the Network Neighborhood directory.
Name	The name of the host.

UI Element	Description
Description	A description of the selected host or group.
	<p>Adds hosts to a host group.</p> <p>Select a group from the Groups list. Then select a host from the Hosts list. To select multiple hosts, press the CTRL key and select the hosts. Click the Add Host to Host Group button.</p> <p>To add all hosts to a host group, select a group from the Groups list and click the Add All Hosts to Host Group button.</p>
	<p>Removes a host from a host group.</p> <p>Select a group from the Groups list. Then select a host from the Hosts in Group list and click the Remove Host From Host Group button.</p> <p>To remove all hosts from a host group, select a group from the Groups list and click the Remove All Hosts to Host Group button.</p>
Groups	The host groups for the project.
	New Host Group. Opens the New Host Group dialog box, enabling you to create a new host group.
	Delete Host Group. Deletes a selected group from the Groups list.
Hosts	The available hosts for the project.
Hosts in Group	The hosts included in the selected group.


Order Test Instances Dialog Box

This dialog box enables you to change the execution order of the tests in the Execution Grid or Execution Flow.



To access	<p>In the Test Lab module, Test Sets tab, use one of the following:</p> <ul style="list-style-type: none">• In the Execution Flow, press the CTRL key and select two or more tests. Right-click a test and select Order Test Instances.• In the Execution Grid, select Tests > Order Test Instances.
Important information	<ul style="list-style-type: none">• When determining the order for running tests, ALM first checks the Execution Flow. The order you define in the Execution Grid is only used if there are no conditions set in the Execution Flow.• In the Execution Grid, ALM runs the tests according to the specified order, grouped by host type. For example, if you have your tests ordered as test1, test2, and test3, ALM runs test1 and test3 first if they are set to run on the same host, followed by test2 on a different host.
Relevant tasks	"How to Run Tests Automatically" on page 627
See also	"Test Execution Overview" on page 538

User interface elements are described below (unlabeled elements are shown in angle brackets):


UI Element	Description
	Move Selected Up/Down. Enables you to set the execution order by moving the selected test up or down in the list.
<Test pane>	In the Execution Grid, displays the tests in the selected test set. In the Execution Flow, displays the tests that you selected. Select a test from the list and click the up or down arrow to change the position of the test in the sequence. Alternatively, you can drag the tests up or down.

Execution Log Dialog Box

This dialog box enables you to view details about **Default** tests executed by the Automatic Runner.

To access	In the Automatic Runner dialog box, select Run > View Execution Log .
Important information	You can view the Execution Log only if you selected Enable Log in the Automatic Runner dialog box before you executed the test.
Relevant tasks	"How to Run Tests Automatically" on page 627
See also	"Automatic Runner Dialog Box" on page 629

User interface elements are described below (unlabeled elements are shown in angle brackets):

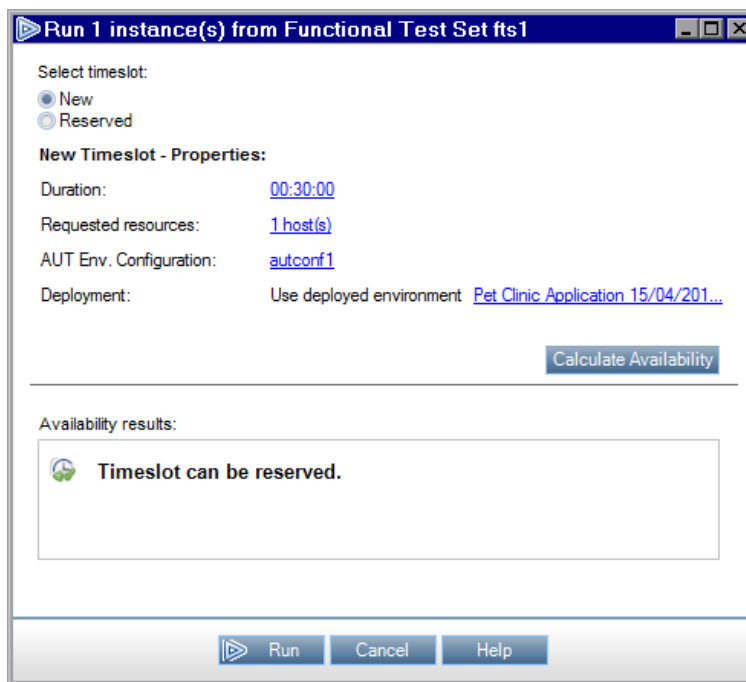
UI Element	Description
	Refreshes the details of a selected test.
<Test details pane>	Displays execution details of the test selected in the Test box, including name, date and time of run, and remote host.
<Results pane>	Displays a description of the run. May indicate cause of run failure.
Database	The project in which the executed tests are located.
Delete	Deletes the execution log. Available from: Log menu
Exit	Closes the Execution Log dialog box. Available from: Log menu
Host	Filters the tests displayed by the selected host. To filter, select a host and click the Refresh button.

UI Element	Description
Open	Enables you to select another execution log to display. Available from: Log menu
Test	The test for which execution details are displayed.
Test Set	The test set in which the executed tests are located.
User name	The user who ran the tests.

Run <Entity> Dialog Box

This dialog box enables you to run **Functional** and **Performance** tests, test sets, and build verification suites.

New



Reserved

Run 1 instance(s) from Functional Test Set fts1

Select timeslot:

☐ New
☒ Reserved

Reserved Timeslots:

ID	Name	Created By	Start Time	Remaini...	Host
1002	timeslot1	sa	15/04/2012 14:39:00	00:59:56	1

Selected Timeslot Details:

Duration: [00:59:55](#)

Requested resources: [1 host\(s\)](#)

AUT Env. Configuration: [autconf1](#)

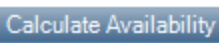

Deployment: Use deployed environment [Pet Clinic Application 15/04/201...](#)

Run Cancel Help

To access	<p>For test sets, go to the Test Lab module > Test Sets tab. Use one of the following methods:</p> <ul style="list-style-type: none"> To run all the tests in a functional test set, select a functional test set and click the Run Test Set button. To run selected functional or performance tests, select a test set and click the Execution Grid tab or Execution Flow tab. Select a test and click the Run button. <p>For build verification suites, go to the Build Verification module. Select a build verification suite and click the Run Build Verification Suite button.</p>
Important information	<p>This dialog box is used to allocate ad-hoc timeslots for Functional/Performance tests, test sets, and build verification suites. Whenever the generic term "test" is used below, it refers to a Functional/Performance test, test set, or build verification suite.</p> <p>ALM Editions: Performance tests are available only Performance Center Edition. Functional test sets are available only for ALM Edition.</p>
Relevant tasks	<p>"How to Run Tests in ALM" on page 540</p>
See also	<ul style="list-style-type: none"> "Test Execution Overview" on page 538 "Automatic Test Execution Overview" on page 626 "Test Lab Module Window" on page 542

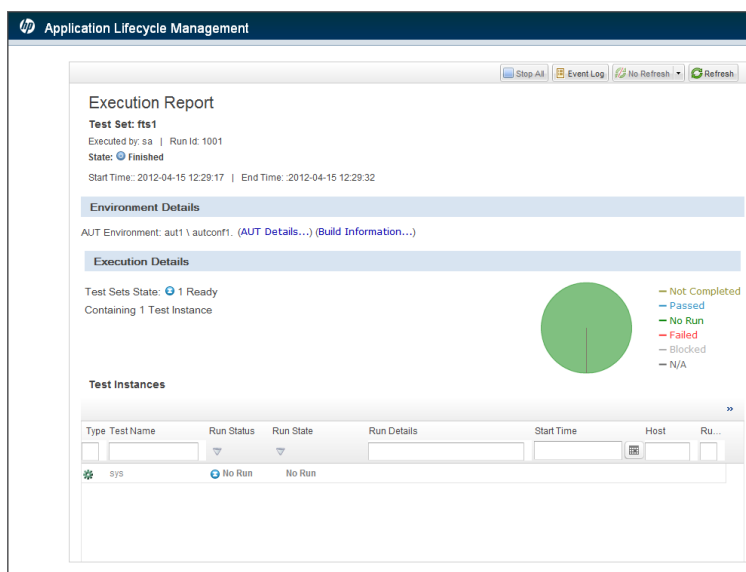
User interface elements are described below:


UI Element	Description
Select timeslot	<p>Select New or Reserved.</p> <p>New. Allows you to create a new timeslot. If the current resources are insufficient for the selected test, you will be unable to reserve a timeslot to run the test.</p> <p>Reserved. Allows you to run a test in a reserved manual timeslot that has been assigned to your test or has not been assigned to any test. If there are no timeslots available, you will be unable to schedule your test.</p>
<Reserved Timeslots Grid>	<p>Displayed when you use a Reserved timeslot.</p> <p>This grid includes the details of manual, non-autostart timeslots currently reserved but not assigned to another test. In addition, only timeslots with sufficient duration remaining to run the test.</p> <p>Note: If a timeslot is available, but does not have sufficient resources for your run, the message "Update needed" will be displayed in the Status field. ALM will automatically allocate the necessary resources if you choose to run your test in that timeslot.</p>
Timeslot Properties	<p>Duration. The amount of time, in hours and minutes, that you need the resources reserved.</p> <p>Requested Resources. The resources being requested for this test.</p> <p>Vusers. The number of Vusers being allocated.</p> <p>Note: Only for performance tests. For more details, see "Timeslot Reservation Dialog Box" on page 692.</p> <p>Post Run. The action to be taken when the test run is complete.</p> <p>Note: Only for performance tests. For more details, see "Timeslot Reservation Dialog Box" on page 692.</p> <p>AUT Env. Configuration. Select an AUT environment configuration to be used for the test. For more information, see "How to Work with AUT Environments" on page 371.</p> <p>Deployment. If you select a CDA-linked AUT environment configuration, deployment details are displayed here. For more details about CDA deployment, see "How to Work with AUT Environments" on page 371.</p> <p>Note: When running a Functional test set from the Run <Entity> dialog box, you can only use a deployed environment.</p>

UI Element	Description
	Calculate Availability. Calculates the availability of the resources required for running the test and checks whether a new timeslot can be created.
Availability results	Displays the results of the availability verification. If your timeslot cannot be reserved, the reason will be displayed.
	Uses the hosts reserved by the selected timeslot and runs the test.

Execution Report Page

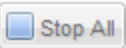

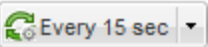
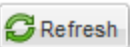
This page enables you to view the current state of **Functional** tests, test sets, and build verification suite runs.





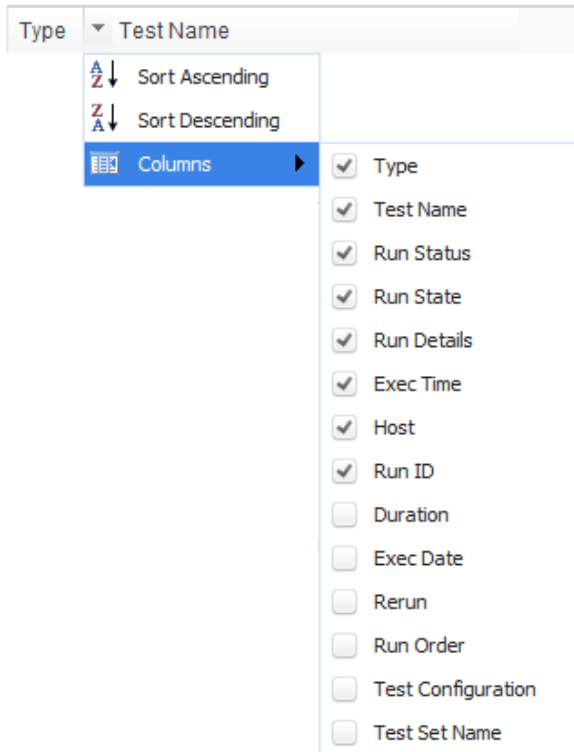
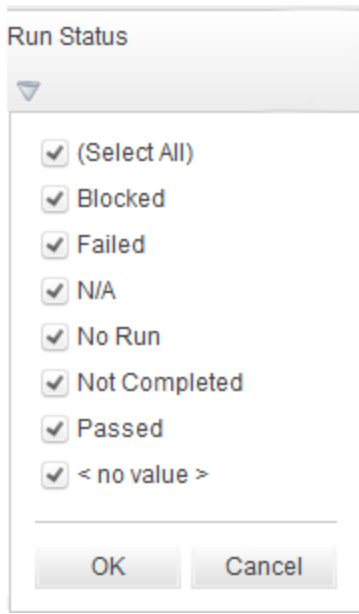
To access	<p>The Execution Report automatically appears when you run a Functional test or test set, or a build verification suite.</p> <p>There are also several ways you can view the Execution Report after or during a run:</p> <ul style="list-style-type: none"> You can view the Execution Report for a test set run or build verification suite run from the Test Runs module. Select test set or build verification suite run and click the Show Report button . You can view the Execution Report for a test set run from the Execution Grid tab in the Test Lab module. Select a test and click the Last Run Report button. You can view the Execution report for a build verification suite from the Build Verification module. Select a build verification suite and click the Last Run Report button.
------------------	--

Important information	<p>The Execution Report provides general details about the run, overall information per test set, as well as drilled-down run information for each individual test within the run.</p> <p>The Execution Report is available only for Functional test and test set runs, and build verification suite runs.</p> <p>ALM Editions: The Execution Report page is available only in ALM Edition.</p>
Relevant tasks	<ul style="list-style-type: none"> • "How to Work with AUT Environments" on page 371 • "How to Run Tests in ALM" on page 540
See also	<ul style="list-style-type: none"> • "Test Lab Module Fields" on page 559 • "Test Lab Module Window" on page 542

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
	Enables you to stop all tests in the run.
	Opens the event log. For more information, see "Event Log" (on page 1) .
AutoRefresh 	Automatically refreshes the run data at the selected interval.
	Refreshes the run data.
<Run details section>	<p>Contains the details of the run. The details include the following:</p> <ul style="list-style-type: none"> • The name of the run. • The name of the user who executed the run. • The time the run started and ended. • The current state of the run. • The ID of the run.
Environment Details	<p>Note: This section is visible only when an AUT environment configuration has been implemented for the selected run.</p> <p>Displays the AUT Environment details and state. You can click AUT Details to see a drilldown view of the AUT Environment details and CDA topology. You can click Build information for further details about the selected build.</p> <p>For more information about Deployment details, see "How to Work with AUT Environments" on page 371.</p>

UI Element	Description
Execution Details	Details about the test sets or test instances included in the run.
 Stop Selected Run	Enables you to stop the selected run.
 Run Screen	<p>For Performance test runs, opens the Performance Test Run screen, enabling you to view and manage the test run. For more information, refer to the <i>HP ALM Performance Center Guide</i>.</p> <p>Note: Only enabled when the test run is in the Running state.</p>

UI Element	Description
<Execution Report Grid>	<p>Displays a list of the tests or test sets contained in this run. For field definitions see "Test Lab Module Fields" on page 559.</p> <p>To sort a column alphabetically, click the drop-down arrow that appears when you hover over the right corner of a column heading. You can also add or remove columns from the grid by checking and unchecking them here.</p>  <p>To filter a column, type a filter string into the text box, or click on the arrow below the column heading.</p> 

Chapter 36

Test Results

- Test Results Overview..... 644
- How to View Test Results..... 644
- Test Results User Interface..... 646

Test Results Overview

After running tests, you can view the results in the **Test Runs** module in HP Application Lifecycle Management (ALM). The **Test Runs** module contains tabs which let you study the results of test runs, test set runs, and build verification suite runs.

ALM Editions: The **Test Set Runs** and **Build Verification Suite Runs** tabs are available only for ALM Edition.

In the **Test Runs** tab, you can view the results of test executions.

- Manual test results consist of the overall pass/fail status of a test and the pass/fail status of each step in a test run.
- The results available for automatic tests vary depending on the test type.

These results help you determine whether a defect was detected in your application. In some cases, you may decide that a step failed because the expected results are no longer valid and need to be updated.

Following the execution of manual and automated tests, you can view results and general information for a test run. You can view test run details, compare the results of the most recent test run with previous runs, manage attachments, view and edit test run configuration information, manage linked defects, and view a history of test run changes.

You can also view and compare the results of all runs in your project displayed in a grid. You can then filter the grid to display only those runs that meet the criteria that you define.

In the **Test Set Runs** and **Build Verification Suite Runs** tabs, you can view the results of test set and build verification suite executions. You can also abort a test set or build verification suite run, or go to a specific test set or build verification suite.

In addition, you can analyze the progress of a test set or of overall test execution in your project by periodically generating execution reports and graphs. For details, see ["How to Analyze Data in ALM" on page 772](#).

For related task details, see ["How to View Test Results" below](#).

How to View Test Results

This task describes how to view test results. To learn more about test results, see ["Test Results Overview" above](#).

Note: This task is part of a higher-level task. For details, see ["How to Run Tests in ALM" on page 540](#).

This task includes the following steps:

- ["View results for a test instance run" on next page](#)
- ["View results for a test set run" on next page](#)
- ["View results for a build verification suite run" on next page](#)

- ["Manage linked defects" on next page](#)
- ["Purge test runs - optional" on next page](#)

View results for a test instance run

After running a test, you can analyze the execution results to determine which steps succeeded and which tests failed.

1. On the ALM sidebar, under **Testing**, select **Test Runs**. Go to the **Test Runs** tab. For user interface details on the Test Runs tab, see ["Test Runs Module Window" on page 647](#).

Filter and sort the grid to display only those runs that meet your criteria. For example, you can define filters to display:

- Tests that are currently running
- Failed runs
- Runs executed this month

For user interface details on filtering data, see ["Filter Dialog Box" on page 61](#).

2. Select a test run and click **Details** to view detailed run results. For user interface details on the **Run Details** dialog box, see ["Run Details Dialog Box" on page 653](#).

View results for a test set run

ALM Editions: The **Test Set Runs** tab is available only for ALM Edition.

After running a test set, you can analyze the test set results to determine which tests in a test set failed, and which steps caused the failure.

1. On the ALM sidebar, under **Testing**, select **Test Runs**. Go to the **Test Set Runs** tab. For user interface details on the Test Set Runs tab, see ["Test Runs Module Window" on page 647](#).
2. To see the execution report of a test set run, select the run and click **Show Report**. To see a soft copy of an executed run, select the run and click **Export Run**. You can also see the execution report of a test set run by clicking the **Last Run Report** button in the **Execution Grid** tab in the **Test Lab** module.

For more information on the execution report, see ["Execution Report Page" on page 639](#).

For user interface details on the Test Runs tab, see ["Test Runs Module Window" on page 647](#).

View results for a build verification suite run

ALM Editions: The **Build Verification Suite Runs** tab is available only for ALM Edition.

After running a build verification suite, you can analyze the build verification suite results to determine which test runs in a build verification suite failed, and which steps caused the failure.

1. On the ALM sidebar, under **Testing**, select **Test Runs**. Go to the **Build Verification Suite Runs** tab. For user interface details on the Build Verification Suite Runs tab, see ["Test Runs Module Window" on page 647](#).
2. To see the execution report of a build verification suite run, select the run and click **Show Report**. To see a soft copy of an executed run, select the run and click **Export Run**. You can

also see the execution report of a build verification suite run by clicking the **Last Run Report** button in the **Build Verification** module.

For more information on the execution report, see "Execution Report Page" on page 639.

For user interface details on the Test Runs Module, see "Test Runs Module Window" on next page.

Manage linked defects

You can view, add, and remove defect links for test runs and test run steps. In the Test Details dialog box, the Run Details dialog box, or the Run Step Details dialog box, click the **Linked Defects** button on the sidebar.

- For user interface details on linking defects, see "Linked Defects/Entities Page" on page 762.
- For user interface details on the Test Details dialog box, see "Test Instance Details Dialog Box" on page 578.
- For user interface details on the Run Details dialog box, see "Run Details Dialog Box" on page 653.
- For user interface details on the Run Step Details dialog box, see "Run Step Details Dialog Box" on page 655.

Purge test runs - optional

You can delete old runs from your project.

Select a run and then click the **Delete**  button.

Note:

- You can only use purge runs for test runs, not test set or build verification suite runs.
- You cannot delete test runs which are part of a currently running test set run or build verification suite run.

Alternatively, the Purge Runs wizard enables you to select one or more runs to delete. Use one of the following:

- In the **Test Lab > Test Sets** tab, select **Test Sets > Purge Runs**.
- In the **Test Runs > Test Runs** tab, select **Test Runs > Purge Runs**.

For user interface details on the Purge Runs wizard, see "Purge Runs Wizard" on page 659.

Test Results User Interface

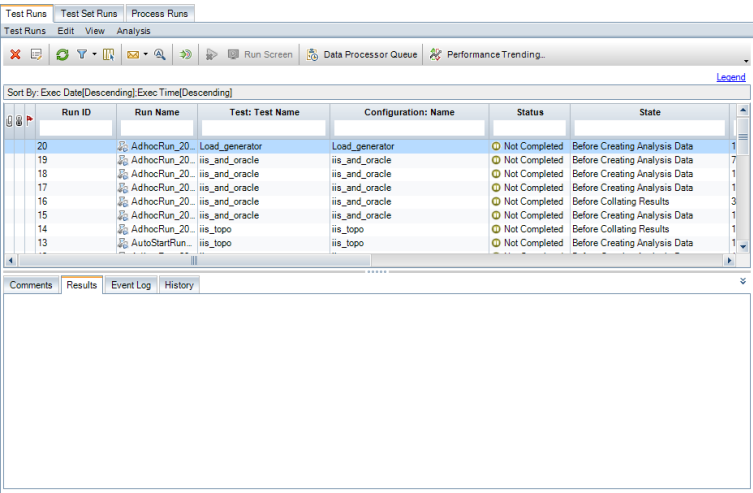
This section includes:

Test Runs Module Window.....	647
Test Runs Module Menus and Buttons.....	650
Run Details Dialog Box.....	653
Run Step Details Dialog Box.....	655
Test Set Run Details Dialog Box.....	657

Build Verification Suite Run Details Dialog Box.....	658
Purge Runs Wizard.....	659

Test Runs Module Window


This module enables you to view the results of test runs, test set runs, and process runs.





To access	On the ALM sidebar, under Testing , select Test Runs . Select one of the following tabs. <ul style="list-style-type: none">• Test Runs. Enables you to view your test runs.• Test Set Runs. Enables you to view your Functional test set runs.• Build Verification Suite Runs. Enables you to view your build verification suite runs.
Important information	ALM Editions: <ul style="list-style-type: none">• The Test Set Runs and Build Verification Suite Runs tabs are available only for ALM Edition.• Fields and functionality related to baselining are not available for ALM Essentials Edition.
Relevant tasks	"How to View Test Results" on page 644
See also	"Test Results Overview" on page 644

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
Test Runs tab	Displays the test runs.

UI Element	Description
Test Set Runs tab	Displays the test set runs. Test runs are also displayed as test set runs in the Test Set Runs tab.
Build Verification Suite Runs tab	Displays the build verification suite runs.
<Test Runs module common UI elements>	<ul style="list-style-type: none"> • Test Runs fields. For field definitions, see "Test Lab Module Fields" on page 559. • Test Runs menus and buttons. For command and button descriptions, see "Test Runs Module Menus and Buttons" on page 650. • ALM main menu and sidebar. For details on the Tools menu, Help menu and sidebar, see "ALM Common Areas" on page 45.
<Filter status bar>	<p>Describes the filter currently applied to the grid. Located directly above the grid.</p> <p>Showing <x> results. Indicates the number of records currently displayed out of the total records.</p> <p>Retrieve all <x> results. Click to display all records.</p>
<Grid filters>	<p>Displays a grid filter box under each column name, enabling you to define a filter condition for a column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For more details, see "Select Filter Condition Dialog Box" on page 70.</p>
	Show/Hide. Displays or hides additional tabs in the lower pane of the window.
Comments	<p>Comments about the currently selected run.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p> <p>Available from: Test Runs tab.</p>





UI Element	Description
Report	<p>Displays results and details of the selected run.</p> <p>In the Test Runs tab:</p> <p>For a test run with Sprinter, also displays the Launch Sprinter Results Viewer button, which opens and displays the report in the Sprinter Results Viewer. For details, click the help button within the viewer.</p> <p>ALM Editions: Sprinter functionality is not available with ALM Essentials Edition or Performance Center Edition.</p> <p>For automated test instances, also includes one of the following:</p> <ul style="list-style-type: none">  LR Analysis Opens and displays the results in LoadRunner Analysis. Available for the LR-SCENARIO test type.  Launch Report Opens and displays the report in UFT . Available for the GUI-TEST test type. <p>The Launch Report button is only enabled if you have installed the Unified Functional Testing Add-in from the HP Application Lifecycle Management Add-ins page. For more details on installing add-ins, refer to the <i>HP Application Lifecycle Management Installation Guide</i>.</p> <ul style="list-style-type: none"> Collected System Info link. Opens the System Information dialog box. Displays the collected system information, such as CPU, memory, and processes running on the machine when the test is run. Available for the SYSTEM-TEST test type. Captured Desktop Image. Opens the captured image of the machine executing the system test. Available for the SYSTEM-TEST test type. <p>In the Test Set Runs and Build Verification Suite Runs tabs: Displays execution details.</p>
Results	<p>Displays the results of the last test criteria run for the selected run.</p> <p>Business Process Testing: Functionality related to test criteria is available only for business process tests. For details, see the <i>HP Business Process Testing User Guide</i>.</p> <p>Available from: Test Runs tab.</p>
History	<p>Lists changes made to the currently selected run. For details, see "History Tab" on page 78.</p> <p>Available from: Test Runs tab.</p>
Event Log	<p>Performance Center: Displays a list of the events that were logged during the selected run. For details, see the <i>HP ALM Lab Management Guide</i>.</p>
Results	<p>Performance Center: Enables you to manage result files generated during the selected test run. For details, refer to the <i>HP ALM Performance Center Guide</i>.</p> <p>Available from: Test Runs tab.</p>






Test Runs Module Menus and Buttons









This section describes the menus and buttons available in the Test Runs module.

To access	On the ALM sidebar, under Testing , select Test Runs .
Important information	<ul style="list-style-type: none"> ALM Editions: The Test Set Runs and Build Verification Suite Runs tab are available only in ALM Edition.
Relevant tasks	"How to View Test Results" on page 644
See also	"Test Results Overview" on page 644

Common menus and toolbars of the Test Runs module are described below:

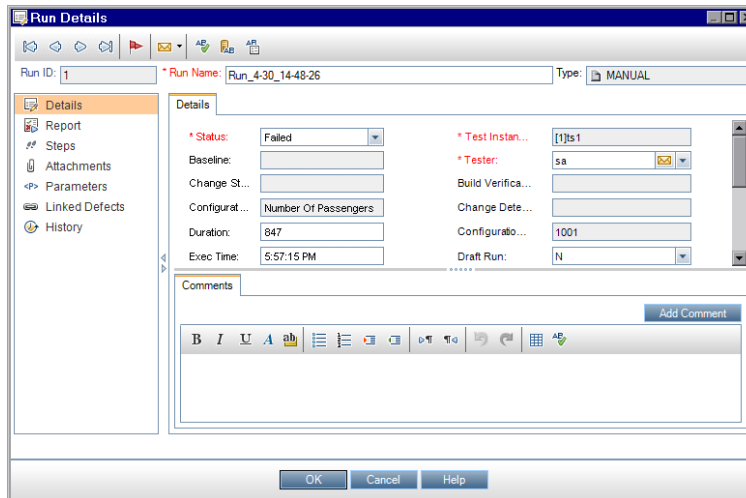
UI Elements (A-Z)	Where	Description
 Abort Run	<right-click menu>	<p>Stops a currently executing run.</p> <p>Note: Only enabled when the selected run is in the Initializing, Running, or Stopping states.</p>
Add to Favorites	Favorites	Opens the Add Favorite dialog box, enabling you to add a favorite view to your private or the public folder. For details, see the "Add Favorite Dialog Box" on page 104 .
 Copy URL	Test Runs and <right-click menu>	Copies a selected run and pastes its URL as a link. The test run itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens up ALM and takes you to the run file or folder. If you are not already logged in, ALM first prompts for login details.
 Delete	Edit and <right-click menu>	<p>Deletes the selected run or runs.</p> <p>Note: Only enabled when the selected run is not in one of the active states.</p>
 Data Processor Queue	<toolbar> Test Runs tab only	<p>If you analyze a test run after it has run, recalculate the SLA, or add the run to a trend report, the action is added to a data processing queue. Adding the action to the queue enables you to see when the action will be performed.</p> <p>Available for: Performance Center</p>

UI Elements (A-Z)	Where	Description
Export	Edit (Test Runs Tab) and <right-click menu>	Opens the Export All Grid Data dialog box, enabling you to export the runs in the grid as a text file, Microsoft Excel worksheet, Microsoft Word document, or HTML document. Select one of the following options: <ul style="list-style-type: none"> • All. Exports all runs in the grid. • Selected. Exports selected runs in the grid.
 Export Report	<toolbar>	Creates a soft copy of the selected run report.
 Find	View	Opens the Find dialog box, enabling you to search runs in the module. For details about search options, see the "Find Dialog Box" on page 73 .
 Go to Run	Runs	Opens the Go To Run dialog box, enabling you to find a specific run by its ID number. You can only go to runs that are in the current filter.
 Go to Timeslot	<right-click menu>	Opens the Timeslots module, displaying the timeslot for the selected run.
 Go to Test Set/Build Verification Suite	<toolbar> Test Set Runs tab and Build Verification Suite Runs tab	Opens the Test Lab module, displaying the test set or build verification suite for the selected run.
Grid Filters	View and <right-click menu>	Enables you to filter the data according to an entry in the filter box. For details about filtering options, see the "Select Filter Condition Dialog Box" on page 70 .
Information Panel	View and <right-click menu>	Shows/Hides the Information Panel in the lower area of the module window.
Organize Favorites	Favorites	Opens the Organize Favorites dialog box, enabling you to organize the list of favorite views by changing properties or deleting views. For details, see the "Organize Favorites Dialog Box" on page 105 .

UI Elements (A-Z)	Where	Description
 Performance Trending...	<toolbar> Test Runs tab only	Enables you to create trend reports in order to identify performance improvements and regressions. For more information about trending, see <i>HP ALM Performance Center Guide</i> . Available for: Performance Center
Private	Favorites	Lists the favorite views that are accessible only to the user who created them.
Public	Favorites	Lists the favorite views that are accessible to all users.
 Refresh All	View	Refreshes the grid so that it displays the most up-to-date information.
 Run Details	Runs and <right-click menu>	Opens the Run Details dialog box, enabling you to view and edit details of the selected run.
 Run Screen	<right-click menu> Test Runs tab only	Opens the Performance Test Run screen, enabling you to view and manage the test run. For more information, refer to the <i>HP ALM Performance Center Guide</i> . Note: Only enabled when the test run is in the Running state.
 Select Columns	View	Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For more details, see the " Select Columns/Select Fields Dialog Box " on page 86. For details about the test run fields, see " Test Lab Module Fields " on page 559.
 Set Filter/Sort	View	Enables you to filter and sort the runs in the grid. Any currently applied filters or sorting orders are displayed below the toolbar. For details, see " Filter Dialog Box " on page 61.
 Show Report	<toolbar> Test Set Runs and Build Verification Suite Runs tabs only	Shows an execution report of the selected run. For more information, see " Execution Report Page " on page 639.
 Stop Run	<toolbar>	Stops execution of the selected run.

Run Details Dialog Box





This dialog box displays test and step details for a test run.



To access	In Testing > Test Runs , click Test Runs . Select a run and click Details .
Important information	The buttons and options available may vary according to test type or runner.
Relevant tasks	"How to View Test Results" on page 644
See also	<ul style="list-style-type: none"> "Test Lab Module Fields" on page 559 "Test Results Overview" on page 644 "Run Step Details Dialog Box" on page 655

User interface elements are described below:

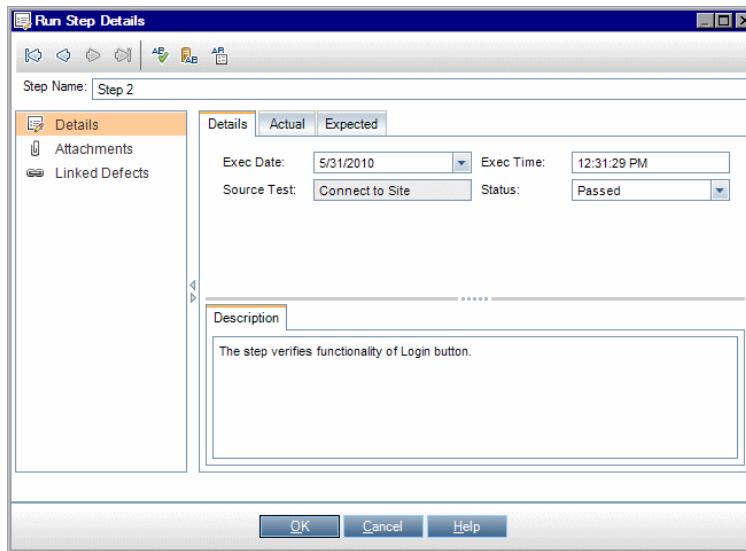
UI Element	Description
	First/Previous Next/Last Entity . Allows you to browse through the runs in the grid.
	Flag for Follow Up . Opens the Flag for Follow Up dialog box, enabling you to define a follow up flag for the run. For more details, see " Flag For Follow Up Dialog Box " on page 98.
	Send by Email . Opens the Send E-mail dialog box, enabling you to send a run by email to recipients selected from a list. For more details, see " Send E-mail Dialog Box " on page 79.
	Spell Check . Checks the spelling for the selected word or text box.


UI Element	Description
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Details	<p>Displays details of the run. For details on the available fields, see "Test Lab Module Fields" on page 559.</p> <p>Click in the Comments box to display a toolbar for formatting and spell checking the text.</p>
Report	<p>Displays results and test step details of the run.</p> <p>For automated test instances, also includes one of the following:</p> <ul style="list-style-type: none">  LR Analysis Opens and displays the results in LoadRunner Analysis. Available for the LR-SCENARIO test type.  Launch Report Opens and displays the report in UFT. Available for the GUI-TEST test type. <p>The Launch Report button is only enabled if you have installed the Unified Functional Testing Add-in from the HP Application Lifecycle Management Add-ins page. For more details on installing add-ins, refer to the <i>HP Application Lifecycle Management Installation Guide</i>.</p> <ul style="list-style-type: none"> Collected System Info link. Opens the System Information dialog box. Displays the collected system information, such as CPU, memory, and processes running on the machine when the test is run. Available for the SYSTEM-TEST test type. Captured Desktop Image. Opens the captured image of the machine executing the system test. Available for the SYSTEM-TEST test type.
Results	<p>Performance Center: Enables you to manage result files generated during the selected test run. For details, refer to the <i>HP ALM Performance Center Guide</i>.</p> <p>Note: This tab is only available from the Test Runs tab.</p>
Event Log	Displays a list of the events that were logged during the selected run. For details, see the <i>HP ALM Lab Management Guide</i> .

UI Element	Description
Steps	<p>Displays test step details and results for the run. Double-click a step in the grid to view detailed results for the step. For more details, see "Run Step Details Dialog Box" below.</p> <p>Note: Not available for runs of some test types and runners.</p>
Attachments	<p>Lists attachments that provide additional information about the run. For details, see "Attachments Page" on page 83.</p>
Parameters	<p>Displays the manual test parameters that are used in the test steps. For details on the available fields, see "Test Lab Module Fields" on page 559 and "Test Plan Module Fields" on page 416.</p>
Linked Defects	<p>Lists the defects linked to the run. You can view, add, and remove defect links. For more details, see "Linked Defects/Entities Page" on page 762.</p>
History	<p>Displays a list of changes made to the run. For more details, see "History Tab" on page 78.</p>
Criterion Results	<p>Displays the results of the last test criteria run for the selected business process test.</p> <p>Business Process Testing: Functionality related to test criteria is available only for business process tests. For details, see the <i>HP Business Process Testing User Guide</i>.</p>
Iterations	<p>Displays the status of each iteration for the selected business process test.</p> <p>Business Process Testing: Functionality related to iterations is available only for business process tests. For details, see the <i>HP Business Process Testing User Guide</i>.</p>





Run Step Details Dialog Box

This dialog box displays test step details for the run.



To access	In the Run Details dialog box — Steps view, select a step and click the Details button  .
Important information	This dialog box is not available for Sprinter runs.
Relevant tasks	"How to View Test Results" on page 644
See also	<ul style="list-style-type: none"> • "Test Lab Module Fields" on page 559 • "Test Results Overview" on page 644

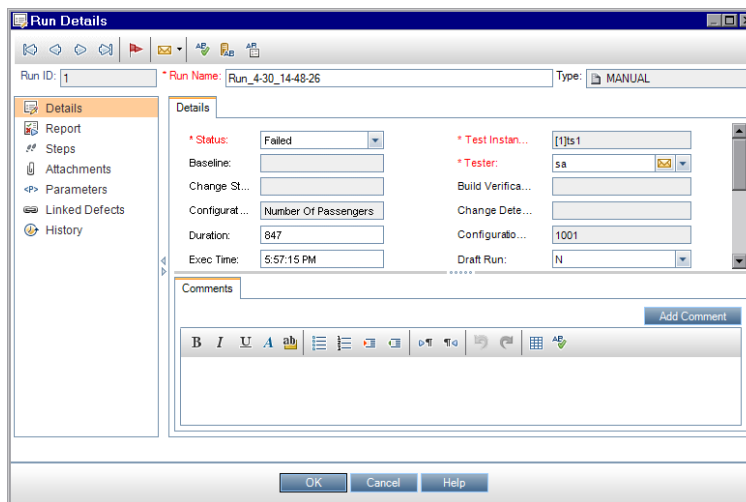
User interface elements are described below:

UI Element	Description
	First/Previous Next/Last Entity. Allows you to browse through the steps in the run.
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Details	<p>Displays details of the step. For details on the available fields, see the "Test Lab Module Fields" on page 559.</p> <p>Click in the Description box to display a toolbar for formatting and spell checking the text.</p> <p>Click the other tabs to view additional details of the step, such as expected results, actual results, and run conditions.</p>

UI Element	Description
Attachments	Lists attachments that provide additional information about the step. For details, see "Attachments Page" on page 83 .
Linked Defects	Lists the defects linked to the step. You can view, add, and remove defect links. For more details, see "Linked Defects/Entities Page" on page 762 .

Test Set Run Details Dialog Box



This dialog box displays details for a test set run.



To access	In Testing > Test Runs , click on Test Set Runs . Select a run and click on Test Set Details .
Relevant tasks	"How to View Test Results" on page 644
See also	<ul style="list-style-type: none"> "Test Lab Module Fields" on page 559 "Test Results Overview" on page 644

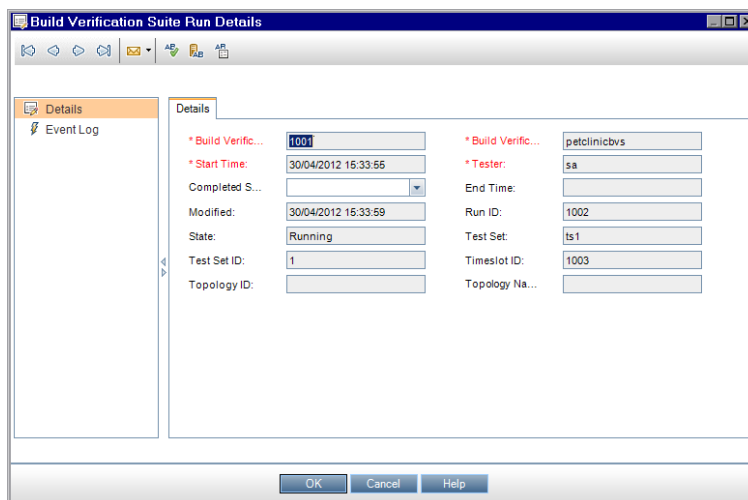
User interface elements are described below:

UI Element	Description
	First/Previous Next/Last Entity. Allows you to browse through the runs in the grid.
	Send by Email. Opens the Send E-mail dialog box, enabling you to send a run by email to recipients selected from a list. For more details, see "Send E-mail Dialog Box" on page 79 .
	Spell Check. Checks the spelling for the selected word or text box.

UI Element	Description
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Details	Displays details of the test set run. For details on the available fields, see "Test Lab Module Fields" on page 559 .



Build Verification Suite Run Details Dialog Box




This dialog box displays details for a build verification suite run.



To access	In Testing > Test Runs , click on Build Verification Suite Runs . Select a run and click on Procedure Details .
Relevant tasks	"How to View Test Results" on page 644
See also	<ul style="list-style-type: none"> "Test Lab Module Fields" on page 559 "Test Results Overview" on page 644

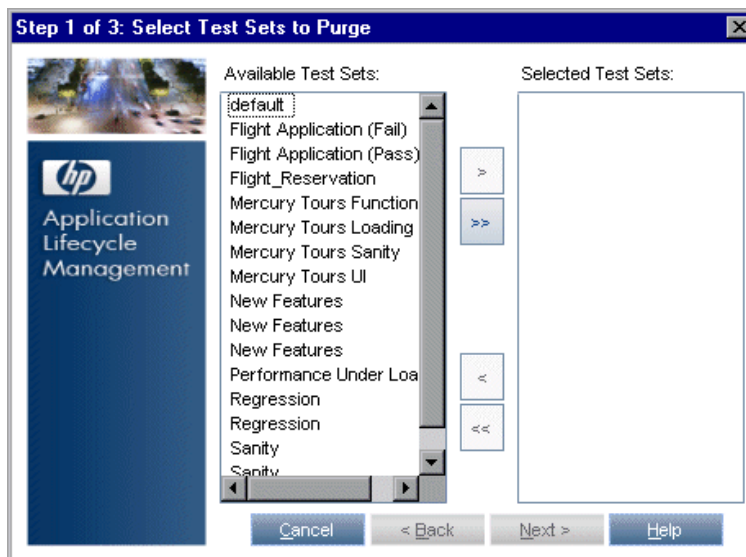
User interface elements are described below:

UI Element	Description
	First/Previous Next/Last Entity. Allows you to browse through the runs in the grid.
	Send by Email. Opens the Send E-mail dialog box, enabling you to send a run by email to recipients selected from a list. For more details, see "Send E-mail Dialog Box" on page 79 .

UI Element	Description
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Details	Displays details of the test set run. For details on the available fields, see "Test Lab Module Fields" on page 559 .

Purge Runs Wizard

This wizard enables you to delete old test run results in your project.





To access	In the Test Lab module, use one of the following: <ul style="list-style-type: none"> In the Test Sets tab, select Test Sets > Purge Runs. In the Test Runs tab, select Test Runs > Purge Runs.
Relevant tasks	"How to Create Test Sets" on page 571
Wizard map	This wizard contains: <ul style="list-style-type: none"> "Select Test Sets to Purge Page" on next page > "Choose Type of Purge Page" on next page > "Confirm Purge Request Page" on page 661
See also	<ul style="list-style-type: none"> "Test Results Overview" on page 644 "Test Lab Module Window" on page 542

Select Test Sets to Purge Page

This wizard page enables you to select test sets to purge.

Important information	General information about this wizard is available in "Purge Runs Wizard" on previous page .
Wizard map	The "Purge Runs Wizard" on previous page contains: "Select Test Sets to Purge Page" above > "Choose Type of Purge Page" below > "Confirm Purge Request Page" on next page
See also	"Test Results Overview" on page 644

User interface elements are described below:

UI Element (A - Z)	Description
	Moves selected test sets between Available Test Sets and Selected Test Sets . Tip: You can also drag the test set names between panes or double-click a test sets name to move it across to the other pane.
	Moves all test sets between Available Test Sets and Selected Test Sets .
Available Test Sets	Lists all test sets in your project that are not currently selected to purge.
Selected Test Sets	Lists the test sets that you have selected to purge.

Choose Type of Purge Page

This wizard page enables you to select the purge type and define the purge conditions.

Important information	General information about this wizard is available in "Purge Runs Wizard" on previous page .
Wizard map	The "Purge Runs Wizard" on previous page contains: "Select Test Sets to Purge Page" above > "Choose Type of Purge Page" above > "Confirm Purge Request Page" on next page
See also	"Test Results Overview" on page 644

User interface elements are described below:

UI Element (A - Z)	Description
Delete	Includes the following options: Runs. Deletes test run results. Run Steps Only. Deletes run steps but keeps the overall run details.
From runs older than	The time before which you want to delete the data from the selected run.
Number of runs per test to keep	The number of test run results to keep for each test.
Purge draft runs only	Purges only runs marked as Draft Run . For details on draft runs, see "Draft Runs" on page 539 .

Confirm Purge Request Page

This wizard page enables you to review a summary of your request and confirm the purge.

Important information	General information about this wizard is available in "Purge Runs Wizard" on page 659 .
Wizard map	The "Purge Runs Wizard" on page 659 contains: "Select Test Sets to Purge Page" on previous page > "Choose Type of Purge Page" on previous page > "Confirm Purge Request Page" above
See also	"Test Results Overview" on page 644

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<Request details area>	Summarizes the deletions you chose to make.
Finish	Deletes the test run results according to your selections.

Timeslots

Chapter 37

Reserving Timeslots

This chapter includes:

- Reserving Timeslots Overview..... 666
- How to Reserve Testing Timeslots in ALM..... 676
- How to Reserve Maintenance Timeslots (Lab Management only)..... 677
- Reserving Timeslots User Interface..... 678

Reserving Timeslots Overview

When running tests, or performing maintenance on host machines (administrators only), the resources needed for these tasks must be available, and must fall within the project and license limits. ALM's timeslots feature enables you to reserve resources in advance to ensure that the required resources are available when you are ready to perform these tasks.

ALM reserves timeslots automatically:

- When working with Performance Center projects, ALM itself also reserves resources needed for data processing tasks.
- When certain host operations are executed, maintenance timeslots are automatically created.

Timeslots are a key component in ALM's Continuous Delivery solution. They facilitate an automated, end-to-end deployment and testing framework that makes application development more efficient, reliable, and quick. For more information about how timeslots can be used as part of this process, see ["Deploying and Testing your Application in ALM" on page 721](#).

This section includes:

Types of Timeslot Reservations.....	666
Autostart Timeslots.....	668
Prolonging Performance Test Timeslot Reservations.....	669
Modifying Timeslot Reservations.....	669
Understanding Timeslot Failure.....	669
Host Allocation.....	670
Example of Allocating and Reshuffling Hosts.....	671

Types of Timeslot Reservations

Timeslots can be reserved ad hoc or in advance. This section describes these two types of timeslot reservations.

Ad Hoc Timeslot Reservations

An ad hoc timeslot reserves resources for a task at hand.

- **Administration:** If you want to perform administrative tasks on particular hosts, such as installing patches, when you start the task—and provided that the hosts are available at the time—ALM automatically reserves the requested hosts in an ad hoc maintenance timeslot during which the hosts cannot be used for any other purpose.
- **Testing:** When you manually execute a test using server-side execution (such as from within a functional test set), before the test starts to run, you specify the time and resources you need to run the test. ALM checks if the required resources are currently available for the required amount of time. If the resources are not available, you cannot run the test at that time and need to try

again later.

Example

When running a performance test, ALM checks if the required number of hosts and Vusers exceeds the license/project limits. If the limits are exceeded, you will not be able to run the test.

- **Data Processing:** When working with Performance Center projects, tasks such as test result analysis, SLA status publication, and trending are performed on a data processor host. ALM estimates how long a data processor host is needed for the task at hand. As soon as a data processor becomes available for this task, an ad hoc reservation is automatically made.

Advance Timeslot Reservations

If you know which testing resources you need for running a test, or the hosts on which you need to perform maintenance, you can reserve the resources in advance for a specified amount of time.

When reserving resources for a testing timeslot, there are three types of timeslot reservations:

- **Performance Test.** Enables you to reserve the resources needed for running a single instance of a performance test.
- **Functional Test Set.** Enables you to reserve the resources needed for running a single functional test set containing several functional tests. The tests are executed consecutively.
- **Build Verification Suite.** Enables you to reserve the resources needed for running several functional test sets together with a single instance of a performance test with the purpose of checking the overall status of your build. The tests in the test set are executed consecutively, followed by the single performance test. This type of timeslot reservation enables you to integrate your system with HP Continuous Delivery Automation (CDA) for provisioning, deployment, and so on. For more information, see ["Build Verification" on page 717](#).

When reserving a testing timeslot, you can request either specific hosts or automatch hosts. That is, you can specify the exact hosts which will run the test, and if they are available, ALM reserves the host for you. Alternatively you can select automatch hosts, which allow ALM to allocate any available host with properties that match the ones you defined.

When you add a test to a test set in the Test Lab module, ALM automatically allocates automatch hosts to the test based on the test type. You can change the allocation before reserving the timeslot in the Test Lab module's Requested Hosts tab. Alternatively, you can change the allocation as part of the timeslot reservation.

For performance test timeslots, you must select at least one Controller and one load generator. For more details, see the *HP ALM Performance Center Guide*.

For functional test set and maintenance time slots, you must select at least one host.

A timeslot can be reserved successfully only if all of the requested resources are available.

Tip: All users in your project can use the timeslot that you have reserved.

It is important to note that many conditions and changes in the system can affect host allocation, and can cause a shuffling around of the hosts. For more details about host allocation and examples of resource shuffling, see ["Host Allocation" on page 670](#).

Autostart Timeslots

Some tests might require a lot of time and many resources. ALM's **Autostart** feature enables you to reserve these resources when resources are more readily available, and/or when you might not be available to run the test manually. This allows for maximum resource usage because your resources can then be used around the clock.

For example, suppose a project has a total of eight hosts for allocation and the employees assigned to the project work a standard 09:00-17:00 day. The hours between 09:00 and 17:00 are peak hours for host usage, during which time all the hosts are usually reserved for testing, data processing, and maintenance tasks. Because of this, there may be periods during the day that employees cannot perform tasks because there are no available hosts. In contrast, the non-standard work hours pass with very little host resource usage.

To extend host resource usage, employees might come in early or stay late to run tests, but this only extends the peak usage by one or two hours at the beginning and end of the day.

Reserving timeslots during non-standard work hours and setting the tests to run during these timeslots allows for maximum resource usage.

Best Practices for Reserving Autostart Timeslots

This section describes some best practices to follow when reserving an autostart timeslot:

- Where possible, run the test manually to get an indication as to how long it takes for the test to run. This information can assist you when selecting the timeslot duration.
- The following suggestions apply to running performance tests:

Note: When a performance test is added to a Build Verification Suite timeslot, the performance test runs only after all included functional tests have completed running.

- Always ensure that the Scheduler is set to stop as soon as all the Vusers have stopped running. This allows more time for post-run actions during the duration of the timeslot. For details on setting test options, refer to the *HP ALM Performance Center Guide*.
- If you want to analyze the test results straight after the run, take into account that the analysis process can take a long time, so be sure to reserve enough time for this operation.
- If you want to perform auto-collate and analyze operations at the end of the run, you should take the time required for these operations into account when reserving the timeslot.

Note: To prevent loss of run data, we recommend, whenever possible, to collate the results immediately after the run finishes. If your timeslot ends before result collation is completed, collation continues as it does not require reserved resources.

- 15 minutes before the end of a timeslot, ALM automatically stops the test run. Five minutes before the end of the timeslot, even if all the Vusers have not yet finished running, ALM aborts the run. To ensure that the test ends properly as designed, make sure that you reserve more time than defined in the test schedule.

Prolonging Performance Test Timeslot Reservations

When a test is running and your testing timeslot is coming to a close, you can prolong the timeslot for a number of minutes, provided the resources you need are available. If any of the resources you are using are already reserved for a timeslot immediately following your timeslot, you cannot prolong the timeslot.

Note: Performance Testing. If the Vusers are in the process of stopping gradually, the system will prolong the timeslot automatically for 15 minutes, provided the resources are still available.

If a timeslot cannot be prolonged, the task at hand stops without completing properly.

Modifying Timeslot Reservations

When you modify an open timeslot, depending on the modification, the timeslot might split into two separate timeslots.

A timeslot splits when:

- You stop a run and select to keep the reserved resources for the remaining time (for performance test timeslots only).
- The run ends more than 30 minutes before the timeslot ends (for performance test timeslots that are not "NEW" ad-hoc timeslots).
- You modify an open timeslot that is not active, i.e., no tests are currently running.

Note: Performance Testing. When a performance test is running, the timeslot can be modified from within the tests' Test Run Page only. Changes that can be made include: prolonging a timeslot, adding Vusers, adding hosts. For more information, refer to the *HP ALM Performance Center Guide*.

Understanding Timeslot Failure

Timeslots can be reserved successfully only when all the requested resources are available for the requested duration of time.

Many factors render a valid timeslot invalid. Such factors include:

- Changes to the ALM licenses (This does not affect maintenance timeslots)
- Resources can become unavailable
- A test linked to a timeslot can become invalid

In some cases, such as issues with hosts, the system can perform a reshuffle of hosts to try to rectify the situation and revalidate the timeslot. For more information, see ["Host Allocation" below](#). Other factors, such as test invalidation, can be corrected manually.

Tip: You can configure the system to alert you by email when a timeslot becomes invalid. The alert provides as much detail as possible as to the cause of the failure. For details on configuring timeslot alerts, refer to the *HP ALM Lab Management Guide*.

Host Allocation

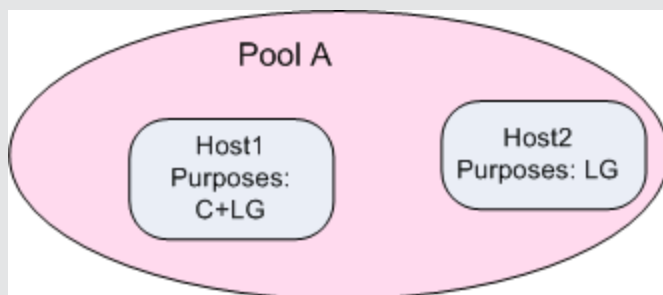
When reserving a timeslot, the system calculates the availability of all the requested hosts and, in the case of a Performance Test timeslot, Vusers. A timeslot can be reserved successfully only if all of the requested hosts can be allocated, and in the case of a Performance Test timeslot, if all the requested Vusers are available.

Note: Performance Testing. You must request at least one Controller and one load generator. If you have linked a test to the timeslot, the hosts and Vusers defined in the test are automatically requested for the timeslot.

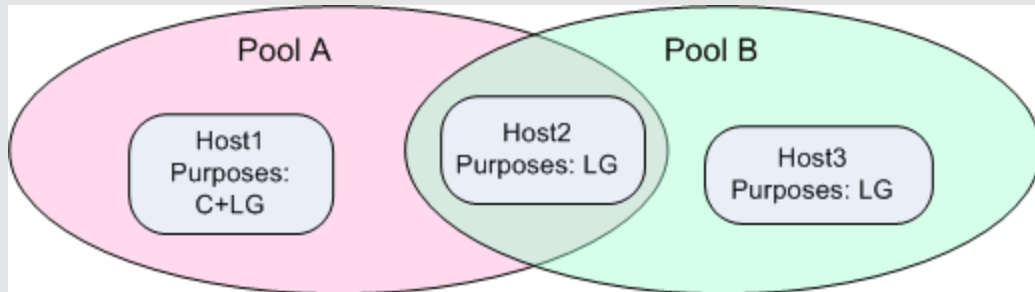
Hosts are allocated as follows:

- A **specific host** defined in the system can be allocated for testing as long as it is available and operational. A **specific host** can be allocated for maintenance even if it is non-operational.
- An automatch host is matched up with a specific host that has the same properties. A host is allocated after the following criteria have been checked:
 - The system creates a list of all the hosts in the project's host pool that are operational and available, and that match the properties of the automatch host.
 - From this list of candidate hosts, the system allocates the host that best fits the requested properties, taking into account the host priority, the number of pools the host belongs to, the purposes assigned to the host, and the host's attributes. The system tries to allocate hosts in such a way that other hosts with similar but also additional properties may still be available for allocation elsewhere.

Examples:



- A load generator is requested for the timeslot. If Host1 belongs to Pool A and has C+LG purposes, and Host2 belongs to Pool A and Pool B and has the Load Generator purpose, then the system prefers Host1 over Host2, leaving Host2 available for other allocation, including for projects that use Pool B if necessary.



It is important to note that many conditions and changes in the system can occur that can affect host allocation. At such times, the system attempts to optimize the overall resource usage by reshuffling the hosts that are available among the timeslots.

It is not always possible to shuffle the hosts appropriately. When this happens, a timeslot might become **partially allocated**, and thus invalid. As soon as the requested host becomes available again or another host can be allocated instead, the timeslot becomes valid again.

For example:

- If an allocated host becomes non-operational the system will try to find another host to replace the non-operational host.
- In a version-enabled project, if a test is linked to an autostart timeslot and is checked out, modified, and checked in again before the timeslot starts, the timeslot recalculates the availability of the updated resources.

To view an example of how hosts are allocated, and how they are reshuffled when necessary, see ["Example of Allocating and Reshuffling Hosts" below](#).

Example of Allocating and Reshuffling Hosts

There are many factors that can affect the allocation of hosts among timeslots. Consider the following scenarios which illustrate how hosts are allocated among timeslots and how changes in the system can affect the host allocation. You will see that the system attempts to optimize the overall resource usage by reshuffling the hosts that are available among the timeslots.

Assume the following hosts belong to the project's host pool:

Host	Properties
Host1	Controller
Host2	Controller + Load Generator

Host	Properties
Host3	Load Generator with the following property: <ul style="list-style-type: none"> • Priority = 1_Lowest
Host4	Load Generator with the following properties: <ul style="list-style-type: none"> • Citrix. The host can run scripts based on Citrix protocols. • Priority = 9_Highest

At 07:00 am, John reserves the following timeslot:

Timeslot	Reserved at	Reserved for	Requested Resources, Properties
TS1	07:00	08:00am - 10:00am	1 Controller, Any 1 Load Generator, Any

John submits the request. The system allocates Host1 as the Controller, leaving Host2 available to serve as either load generator or Controller in other timeslots. Additionally, the system allocates Host4 as the load generator, since it has higher priority than both Host2 and Host3. The following hosts are allocated successfully:

Requested Hosts	Allocated Hosts
1 Controller, Any	Host1
1 Load Generator, Any	Host4



At 07:30 am, Sue submits the following timeslot reservation:

Timeslot	Reserved at	Reserved for	Requested Resources, Properties
TS2	07:30	09:00am - 11:00am Autostart	1 Controller, Any 1 Load Generator, Citrix

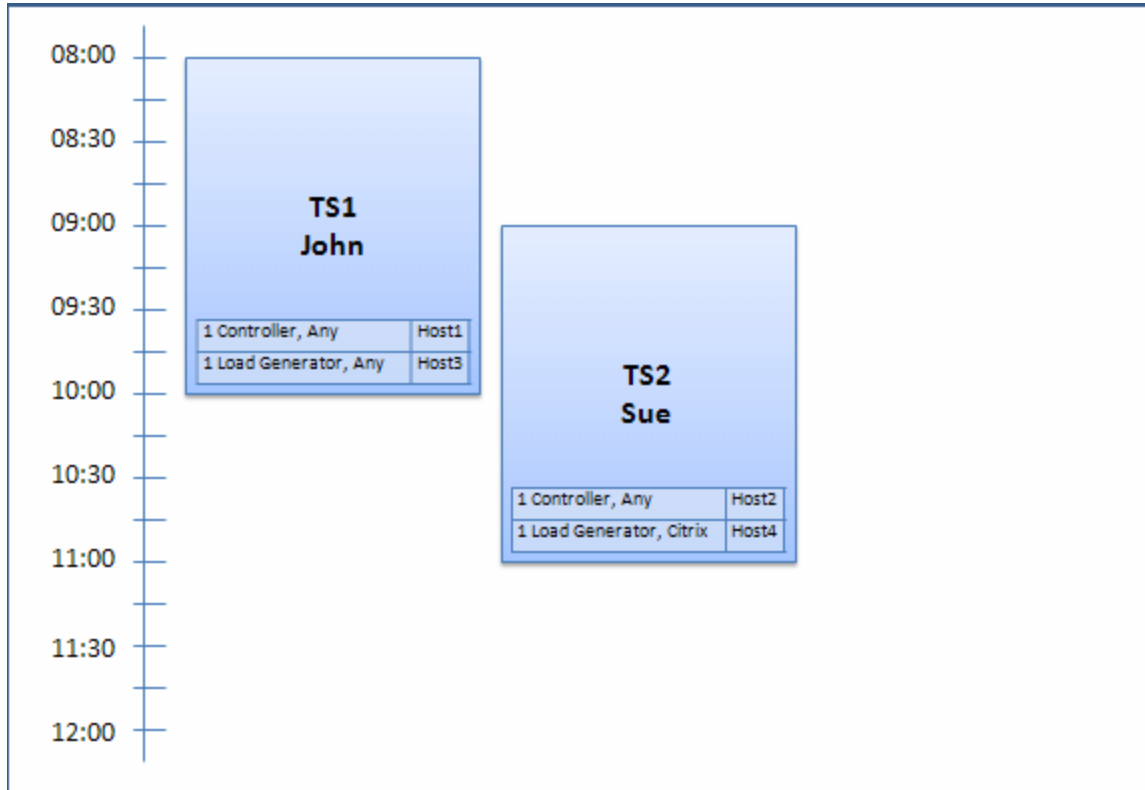
Because Host4 is the only Citrix load generator, the system checks if it can allocate a different load generator to John's timeslot so that Host4 can be allocated to Sue's timeslot instead.

The necessary hosts are available, so the following reshuffle occurs:

- Host3 is allocated to John; Host4 is allocated to Sue
- John's Controller, Host1 remains allocated to John; Host2, also a Controller, (not yet allocated), is allocated to Sue

Sue successfully submits the request. The new host allocation looks as follows:

Timeslot	Requested Hosts	Allocated Hosts
TS1	1 Controller, Any 1 Load Generator, Any	Host1 Host3 (replaced Host4)
TS2	1 Controller, Any 1 Load Generator, Citrix	Host2 Host4



Note: Host allocation works on a "first-come, first-served" basis. Since John reserved Host4 first, if there had been no other host to allocate to his timeslot, Host4 would have remained allocated to John, and Sue would not have been able to reserve her timeslot successfully.

At 07:45am, Peter reserves the following timeslot:

Timeslot	Reserved at	Reserved for	Requested Resources, Properties
TS3	07:45	10:00am - 12:00pm	1 Controller, Host2 1 Load Generator, Any

Peter is specifically requesting Host2 for his Controller, and any load generator. The system checks if the requested hosts can be allocated, taking into consideration requests and timing of the other timeslots:

- To allocate Host2 to Peter's timeslot, it must be available by 10:00.
- Sue is willing to have any Controller.
- John's timeslot will end at 10:00 and free resources.

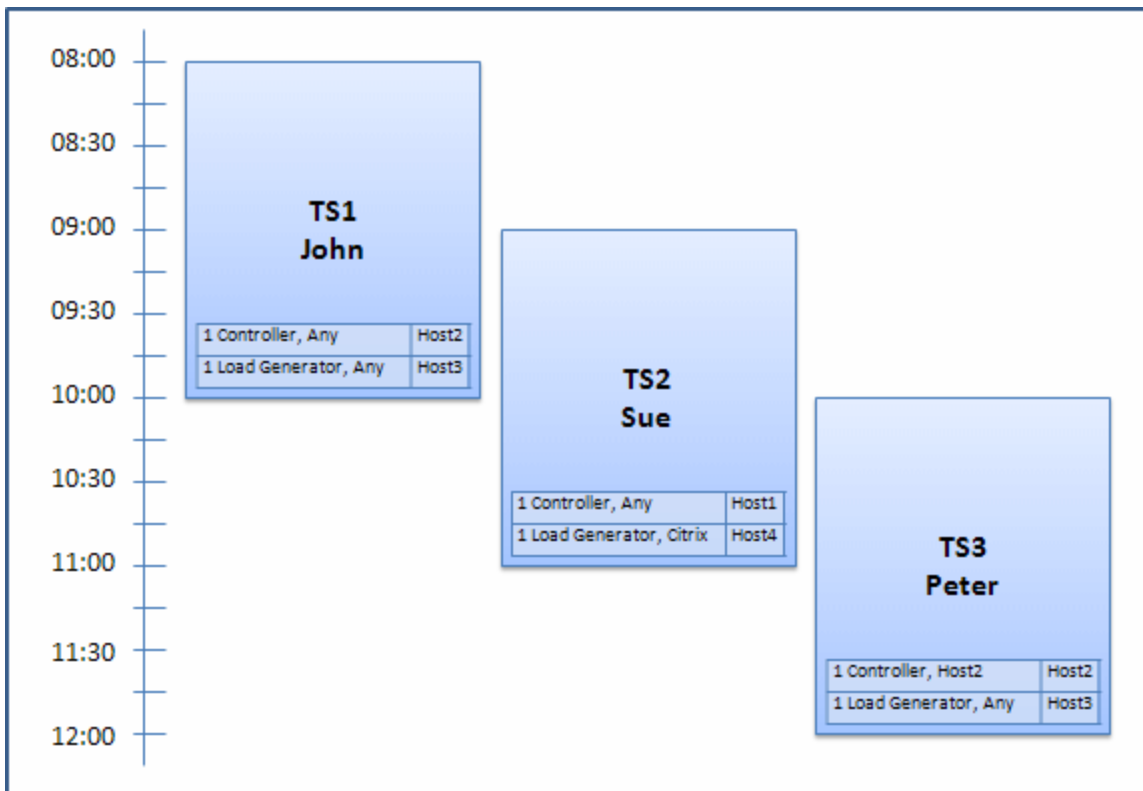
The following reshuffle occurs so that all the timeslots can be accommodated:

- Sue's timeslot gives up Host2, and is allocated Host1 instead; Host4 (Citrix) remains allocated to Sue's timeslot

- Host2 is allocated to John's timeslot; Host3 remains allocated to John's timeslot
- Host2 and Host3 can then be allocated to Peter's timeslot because John's timeslot will be finished by 10:00 when Peter's starts.

Peter successfully submits his request. The new host allocation looks as follows:

Timeslot	Requested Hosts	Allocated Hosts
TS1	1 Controller, Any 1 Load Generator, Any	Host2 Host3
TS2	1 Controller, Any 1 Load Generator, Citrix	Host1 Host4
TS3	1 Controller, Host2 1 Load Generator, Any	Host2 Host3



Note: If John and Peter's timeslots had overlapped, Host2 would not have been available for part of Peter's timeslot. In this case, the reshuffle would not have been possible and Peter would not have been able to reserve his timeslot successfully.

Now let's say at 07:55 Host2 becomes non-operational. As a result, TS1 takes back Host1, and starts at 08:00. It follows from the information above, that TS2 and TS3 both become invalid as their resources have become partially allocated.

Then, at 09:05, Host2 becomes operational again. It is allocated to TS2, and TS2 starts, though five minutes late, but still during the specified autostart retries period. (For details about configuring autostart retries, refer to the *HP ALM Lab Management Guide*.)

At 11:00, TS3 remains invalid (partially allocated) and is unable to start because Host2 is still being used by TS2.

How to Reserve Testing Timeslots in ALM

This task describes how to reserve resources for running tests.

Note:

- This task is part of a higher-level task. For details, see [How to Conduct a Performance Test](#).
- **Product Feature Movie.** To view a movie that demonstrates how to reserve timeslots, select **Help > Product Feature Movies** in the ALM main window.

To learn more about timeslot reservations, see "[Reserving Timeslots Overview](#)" on page 666.


1. Prerequisites

Ensure that there is a host pool defined and allocated to the project. For information about managing host pools, see "[How to Manage Lab Resources](#)" on page 1.

If running a test, and you know which test you want run during the timeslot, ensure that an instance of that test is included in a test set.

Note: Performance Testing: Make sure that at least one of the hosts in the host pool can be designated as a Controller, and that Host, Vuser, and Concurrent Run limits are defined in the project settings.

2. Create a timeslot

- a. On the ALM sidebar, under **Testing**, select **Timeslots**.
- b. On the Timeslots toolbar, click the **New Timeslot**  button.
- c. Enter the details of the timeslot and select resources. For user interface details, see "[Timeslot Reservation Dialog Box](#)" on page 692.

3. Verify availability of requested resources

Do one of the following:

- (Recommended) Click **Calculate Availability**. The system checks the availability of the requested resources. The results of this calculation are displayed in the Timeslot Status tab

and graphically on the resource availability timeline.

If the timeslot cannot be reserved, consider the reasons displayed in the **Timeslot Status** tab when reselecting your resources. If the timeslot can be reserved, you can click **Submit** to save the timeslot.

- Click **Submit**. The system calculates the availability of the requested resources during the selected timeslot. If all of the resources are available, the Timeslot Reservation dialog box closes and the timeslot is reserved and displayed in the Timeslots module. If the timeslot cannot be reserved, the reasons are displayed in the Timeslot Status tab.

How to Reserve Maintenance Timeslots (Lab Management only)


This task describes how to reserve hosts for performing maintenance tasks.

Note:

This task is part of a higher-level task. For more details, see the *HP ALM Performance Center Guide*.

To learn more about timeslot reservations, see "[Reserving Timeslots Overview](#)" on page 666.

1. Create a maintenance timeslot

- a. On the Lab Management sidebar, under **Testing Hosts**, select **Timeslots**.
- b. In the Timeslots toolbar, click the **New Maintenance Timeslot**  button.
- c. Enter the details of the timeslot and select hosts. For user interface details, see "[Timeslot Reservation: Maintenance Dialog Box \(Lab Management Only\)](#)" on page 702.

2. Verify the availability of the requested hosts

Do one of the following:

- (Recommended) Click **Calculate Availability**. The system checks the availability of the requested hosts for the selected timeslot. The results of this calculation are displayed in the **Timeslot Status** tab and graphically on the resource availability timeline.

If the timeslot cannot be reserved, consider the reasons displayed in the Timeslot Status tab when reselecting your hosts. If the timeslot can be reserved, you can click **Submit** to save the timeslot.

- Click **Submit**. The system calculates the availability of the requested hosts during the selected timeslot. If all of the hosts are available, the Timeslot Reservation dialog box closes and the timeslot is reserved and displayed in the Timeslots module. If the timeslot cannot be reserved, the reasons are displayed in the Timeslot Status tab.

Note: If a host that you are trying to reserve for maintenance is reserved for another

timeslot that has not yet started, and you cannot delay the maintenance task, first consult with the user who reserved the other timeslot. If he/she agrees, move the start time of the other timeslot, or delete it accordingly.

Reserving Timeslots User Interface

This section includes:

Timeslots Module Window.....	678
Timeslots Module Menus and Buttons.....	685
Timeslots Module Fields.....	689
Timeslots Module Icons.....	692
Timeslot Reservation Dialog Box.....	692
Timeslot Reservation: Maintenance Dialog Box (Lab Management Only).....	702
Timeslot Reservation: Data Processing Dialog Box.....	706
Select Controller Dialog Box.....	708
Select Automatch Load Generators/Hosts Dialog Box.....	710
Select Specific Load Generators/Hosts Dialog Box.....	712
Add Specific Host(s) Dialog Box.....	714
Time Zone Options Dialog Box.....	715

Timeslots Module Window

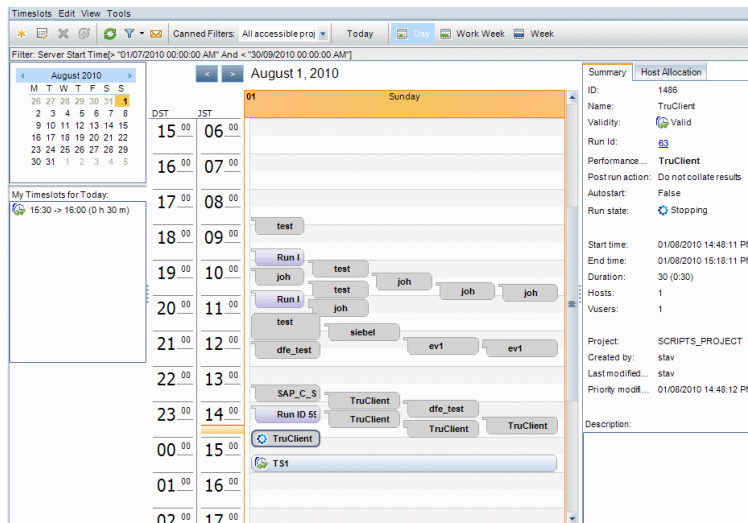
This module enables you to reserve timeslots for running tests or performing maintenance tasks.

The module contains the following views: Calendar View, Grid View.

You select a view from the **View** menu.

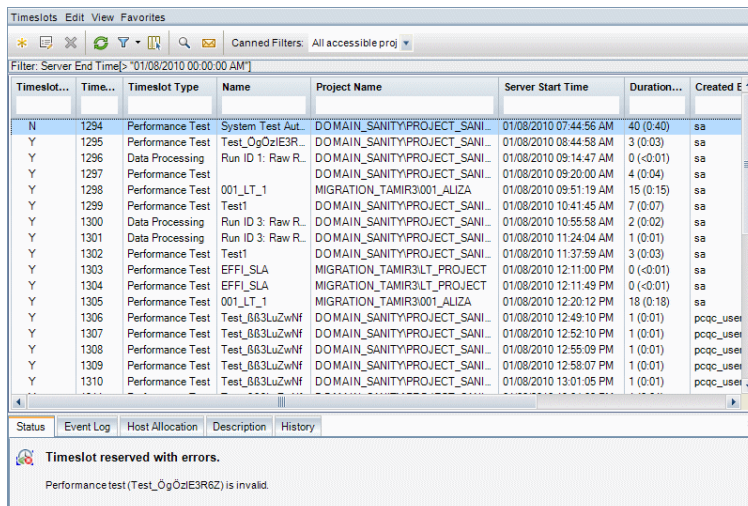
Calendar View

This view enables you to view the timeslots in a calendar view. The Calendar view is time-oriented. It allows you to view your timeslots scheduled for the same day, and to get a visual indication of overlapping timeslots.



Grid View

Enables you to view timeslots in a flat, non-hierarchical view. Each line in the grid displays a separate timeslot. This view is useful for filtering the timeslots and for viewing the details of multiple timeslots simultaneously.



To access

Use one of the following:

- **Maintenance timeslots:** On the Lab Management sidebar, under **Lab Resources**, select **Timeslots**.
- **Testing timeslots:** On the ALM sidebar, under **Testing**, select **Timeslots**.

Important information	<ul style="list-style-type: none"> The Calendar and Grid views display different types of information about the timeslots. To view full details about a particular timeslot, open the timeslot in the Timeslot Reservation dialog box. For details, see: <ul style="list-style-type: none"> "Timeslot Reservation Dialog Box" on page 692 "Timeslot Reservation: Maintenance Dialog Box (Lab Management Only)" on page 702
Relevant tasks	"How to Reserve Testing Timeslots in ALM" on page 676
See also	"Reserving Timeslots Overview" on page 666

Main Timeslots Area

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Elements (A-Z)	Description
<Timeslots module common UI elements>	<ul style="list-style-type: none"> Timeslot menus and buttons. For command and button descriptions, see "Timeslots Module Menus and Buttons" on page 685. Timeslot fields. For field definitions, see "Timeslots Module Fields" on page 689. Timeslot icons. For icon descriptions, see "Timeslots Module Icons" on page 692. ALM main menu and sidebar. For details on the Tools menu, Help menu and sidebar, see "ALM Common Areas" on page 45.
<Calendar>	<p>Displays the reserved timeslots in your projects in calendar form.</p> <p>The timeslots in the calendar view are color-coded as follows:</p> <ul style="list-style-type: none"> Blue. Performance timeslots Orange. Functional timeslots Green. Build Verification Suite timeslots Yellow. Maintenance timeslots Grey. Testing timeslots reserved in other projects Lilac. Data processing timeslots (Performance Center projects only) <p>Available from: Calendar view only</p>
<Date navigator>	Enables you to select the day/week to display in the main calendar grid.

UI Elements (A-Z)	Description
<grid filters>	<p>Located under each column name. Displays the filter that is currently applied to a column. If the filter box is empty, no filter is currently applied to the column.</p> <p>Type directly into the box, or click the box to display the Browse button which opens the Select Filter Condition dialog box. For more details, see the "Select Filter Condition Dialog Box" on page 70.</p> <p>Available from: Grid view only</p>
Description tab	<p>Describes the currently selected timeslot.</p> <p>Available from: Grid view only</p>
Event Log tab	<p>Displays a log of events related to the currently selected timeslot. For details, refer to the <i>HP ALM Lab Management Guide</i>.</p> <p>Available from: Grid view only</p>
History tab	<p>Lists changes made to the currently selected timeslot. For more details, see "History Tab" on page 78.</p> <p>Available from: Grid view only</p>
Host Allocation tab	<p>Displays the temporary allocation of the hosts for the selected timeslot. For more details, see the "Host Allocation tab" above below.</p> <p>Note:</p> <ul style="list-style-type: none"> • Calendar view: Located on right of calendar, when a timeslot is selected in the calendar. • Grid view: Located in the information panel.
My Timeslots for Today	<p>Displays open and future timeslots that you reserved for the current day in the current project.</p> <p>Available from: Calendar view only</p>
Status tab	<p>Displays the status and validity of the selected timeslot.</p> <p>Available from: Grid view only</p>
Summary tab	<p>Displays a summary of the timeslot selected in the calendar. For more details, see the "Summary tab" above below.</p> <p>Available from: Calendar view only, when a timeslot is selected in the calendar.</p>
Timeslots grid	<p>Displays the timeslots in your projects in a grid.</p> <p>Available from: Grid view only</p>

Host Allocation Tab

This tab displays the allocation of hosts for the selected timeslot. For future timeslots, the host allocation is a temporary allocation.

Important information	<p>If an allocated host becomes unavailable, the system attempts to replace the allocated host with another host with similar properties. If no host is available, the timeslot becomes partially allocated and is rendered invalid.</p> <ul style="list-style-type: none"> • Calendar view: Located on right of calendar, when a timeslot is selected in the calendar. • Grid view: Located in Information panel
------------------------------	---

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Elements	Description
Requested	Displays the requested hosts, including the requested properties.
Actual	<p>Displays the specific hosts allocated for the timeslot.</p> <p>May display the following in place of specific host names:</p> <ul style="list-style-type: none"> • Not Allocated. Requested host(s) could not be allocated. • Allocated (Deleted). The allocated host was deleted after the timeslot start time. • From another pool. The host belongs to a host pool in another project to which you do not have access.

Summary Tab

This tab displays a summary of the timeslot details.

User interface elements are described below in alphabetical order (unlabeled elements are shown in angle brackets>):

UI Elements (A – Z)	Description
AUT Env. configuration	<p>The set of environment parameters allocated to the timeslot, or Not Connected indication.</p> <p>Click the link to go to the AUT environment in the AUT Environments module.</p>
Autostart	<p>Indicates that you selected to start the linked entity automatically.</p> <p>Available for: All testing timeslots, excluding maintenance.</p>

UI Elements (A – Z)	Description
Build Verification Suite	<p>A link containing the name of the build verification suite associated with the timeslot, or Not Connected indication.</p> <p>Click the link to go to the build verification suite in the Build Verification module.</p> <p>Available for: Build Verification Suite timeslots only.</p>
Created by	The user who created the timeslot.
Description	Displays a description of the timeslot.
Duration	<p>The duration of the timeslot (in minutes).</p> <p>Also displays the in HH:MM format in parentheses.</p>
End time	The end time of the timeslot.
Hosts	The number of hosts requested for the timeslot.
Last modified by	The user who last modified the timeslot.
Maintenance state	<p>The state of the maintenance timeslot.</p> <p>Available for: Maintenance timeslots only.</p>
Name	The name of the timeslot.
Performance Test	<p>The name of the performance test linked to the timeslot.</p> <p>Available for: Performance Test timeslots only.</p>
Post-run action	<p>The post-run action specified for the linked performance test.</p> <p>Available for: Performance Test timeslots only.</p>
Priority modified	The date and time that the priority of the timeslot was modified.
Processing state	<p>The state of the data processing timeslot.</p> <p>Available for: Data processing timeslots only.</p>
Project	The project in which the timeslot was created.
Realized environment name	<p>After linking to CDA, the name of the actual environment for the timeslot.</p> <p>Available for: Build Verification Suite timeslots only.</p>


UI Elements (A – Z)	Description
Run ID	<p>Link containing the ID of the run associated with the timeslot.</p> <p>Click the link to go to the run in the Test Runs module > Build Verification Suite Runs tab.</p> <p>Available for: All testing timeslots, and when an entity is linked to the timeslot.</p>
Run state	<p>The run state of the entity linked to the timeslot.</p> <p>Available for: Testing timeslots only, and when an entity is linked to the timeslot.</p>
Start	<p>How the timeslot is started:</p> <p>Manually. The timeslot reservation reserves testing resources only.</p> <p>Automatically. The linked tests or test sets automatically start running at the start of the timeslot, without any manual intervention.</p>
Start time	The start time of the timeslot.
Test set	<p>The name of the test set associated with the timeslot.</p> <p>Available for: Testing timeslots only.</p>
Timeslot ID	The timeslot ID.
Topology action	<p>Topological deployment, provisioning and deprovisioning actions defined for the timeslot.</p> <div> <p>Example:</p> <p>Provision and deploy, deprovision at end</p> </div> <p>Available for: Build Verification Suite timeslots only.</p>
Validity	<p>The validity of the timeslot:</p> <ul style="list-style-type: none"> • Valid. The timeslot is valid. • Failed. The timeslot failed: <ul style="list-style-type: none"> ■ Because resources unexpectedly became unavailable ■ Because of a change in license definitions ■ Because of changes in project settings ■ In the case of a testing timeslot, due to changes such as in the validity of a test, a test set, an AUT environment configuration, or a build verification suite
Vusers	<p>The number of Vusers requested for the timeslot.</p> <p>Available for: Performance Test timeslots only.</p>


Timeslots Module Menus and Buttons





The section describes the menus and buttons available in the Timeslots module.



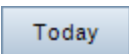
To access	Use one of the following: <ul style="list-style-type: none">• Maintenance timeslots: On the Lab Management sidebar, under Lab Resources, select Timeslots.• Testing timeslots: On the ALM sidebar, under Testing, select Timeslots.
Important information	Some menu commands and buttons are not available in all timeslot views.
Relevant tasks	"How to Reserve Testing Timeslots in ALM" on page 676
See also	"Reserving Timeslots Overview" on page 666

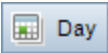
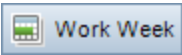

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Elements (A-Z)	Menu	Description
Abort and Free Resources 	Edit and <right-click menu>	<p>Aborts the current timeslot and frees the reserved resources.</p> <p>For testing timeslots, if a test, test set, or build verification suite is running, the run is aborted.</p> <p>Notes for aborting and freeing testing timeslots:</p> <ul style="list-style-type: none">• You can perform this operation from Lab Management or from the project where the timeslot was reserved only.• If an entity (test, test set, build verification suite) is running, you must have Abort and Edit permissions to perform this operation. If there is no test running, then you need only have Edit permissions to perform this operation.
Add to Favorites	Favorites	<p>Opens the Add Favorite dialog box, enabling you to add a favorite view to your private or the public folder. For details, see the "Add Favorite Dialog Box" on page 104.</p> <p>Available from: Grid view only</p>
Calendar View	View	When selected, the timeslots are displayed in the Calendar view.

UI Elements (A-Z)	Menu	Description
Canned Filters	None	<p>Enables you to filter the timeslots as follows:</p> <ul style="list-style-type: none"> • All accessible projects. Displays all timeslots from all of your projects. • Mine (This project). Displays all of the timeslots that you created in this project. • My Failed (This project). Displays all of the timeslots that you created in this project that have failed. • Mine (All projects). Displays all of the timeslots that you created in all of your projects. • My Failed (All projects). Displays all of the timeslots that you created in all of your projects that have failed.
Copy URL/Paste	Timeslots and <right-click menu>	Copies the selected timeslot and pastes its URL as a link. The timeslot itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the timeslot file or folder. If you are not already logged in, ALM first prompts for login details.
Copy/Paste	Edit and <right-click menu>	Copies the selected timeslot within the same project.
Cut/Paste	Edit and <right-click menu>	Moves selected timeslots to a different location.
Delete 	Edit and <right-click menu>	<p>Deletes the selected timeslot.</p> <p>Note: You can only delete future timeslot reservations in the current project.</p> <p>Note for Administrator: You can also delete future testing timeslots from Lab Management.</p>
Export	Timeslots and <right-click menu>	<p>Opens the Export Grid Data dialog box, enabling you to export the resources in the grid as a text file, Microsoft Excel worksheet, Microsoft Word document, or HTML document.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Export All. Exports all resources in the grid. • Export Selected. Exports selected resources in the grid. <p>Available from: Grid view only</p>

UI Elements (A-Z)	Menu	Description
Find 	View	<p>Opens the Find dialog box, enabling you to search for a timeslot in the module. For details about search options, see the "Find Dialog Box" on page 73.</p> <p>Available from: Grid view only</p>
Go To Timeslot 	Timeslots	<p>Opens the Go To Timeslot dialog box, enabling you to find a specific timeslot by its ID.</p>
Go To Timeslot in Calendar/Grid 	Right-click menu	<ul style="list-style-type: none"> • Calendar view: Goes to the selected timeslot in the Grid view. • Grid view: Goes to the selected timeslot in the Calendar view. <p>Note: Toolbar button available in Calendar view only.</p>
Grid Filters	View and <right-click menu>	<p>Enables you filter the data according to an entry in the filter box. For details about filtering options, see the "Select Filter Condition Dialog Box" on page 70.</p> <p>Available from: Grid view only</p>
Grid View	View	<p>When selected, the timeslots are displayed in the Grid view.</p>
Information Panel	View and <right-click menu>	<p>Shows/Hides the Information Panel in the lower area of the module.</p> <p>Available from: Grid view only</p>
New Timeslot 	Timeslot and <right-click menu>	<p>Enables you to reserve a new timeslot.</p> <p>Available from: Right-click menu in calendar view only.</p>
Organize Favorites	Favorites	<p>Organizes your favorite views. For details, see the "Organize Favorites Dialog Box" on page 105.</p> <p>Available from: Grid view only</p>
Private	Favorites	<p>Lists the favorite views that are accessible only to the user who created them.</p> <p>Available from: Grid view only</p>
Public	Favorites	<p>Lists the favorite views that are accessible to all users.</p> <p>Available from: Grid view only</p>

UI Elements (A-Z)	Menu	Description
Refresh All 	View	Refreshes the grid so that it displays the most up-to-date information.
Select Columns 	View	<p>Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For more details, see the "Select Columns/Select Fields Dialog Box" on page 86.</p> <p>For details about the Timeslot module fields, see "Timeslots Module Fields" on next page.</p> <p>Available from: Grid view only</p>
Send by E-mail 	Timeslots and <right-click menu>	<p>Opens the Send E-mail dialog box, enabling you to send timeslot details to recipients selected from a list or to the user who reserved the timeslot. For more details, see the "Send E-mail Dialog Box" on page 79.</p>
Set Filter/Sort 	View	<p>Enables you to filter and sort the timeslots. Any currently applied filters or sorting orders are displayed below the toolbar. For more details, see the "Filter Dialog Box" on page 61.</p> <p>Note: In the Calendar view you can filter the timeslots only.</p>
Show Timeslot Details	View	<p>Displays the Summary and Host Allocation tabs (to the right of the calendar grid) which contain details about the selected timeslot.</p> <p>Available from: Calendar view only</p>
Time Zone Options	Tools	<p>Opens the Time Zone Options dialog box, enabling you to display an additional time zone in the Timeslots calendar view. For details, see "Time Zone Options Dialog Box " on page 715.</p> <p>Available from: Calendar view only</p>
Timeslot Details 	Timeslot and <right-click menu>	<p>Opens the Timeslot Reservation dialog box, enabling you to view and modify details of the selected timeslot.</p> <p>For details, see</p> <ul style="list-style-type: none"> • "Timeslot Reservation Dialog Box" on page 692 • "Timeslot Reservation: Maintenance Dialog Box (Lab Management Only)" on page 702 <p>Note: In some cases, you can only view, and not modify, the timeslot. For example, you cannot modify past timeslots.</p>
		<p>Displays the current day only on the calendar.</p> <p>Available from: Calendar view only</p>

UI Elements (A-Z)	Menu	Description
 Day		Displays the date selected in the date selector. Available from: Calendar view only
 Work Week		Displays the 5-day work week around the date selected in the date selector. Available from: Calendar view only
 Week		Displays the full week around the date selected in the date selector. Available from: Calendar view only

Timeslots Module Fields

This section describes the fields in the Timeslots module.

UI Elements (A-Z)	Description
Additional Requested Vusers	The number of Vusers requested for a Performance Test timeslot in addition to those defined in the linked performance test.
Autostart Enabled	Y indicates that the linked entity/entities will start running when the timeslot starts. You enable autostart by setting the timeslot to start automatically. Note: For maintenance timeslots, this field is empty.
Consumes VUDs	Y indicates that the timeslot will use/used Vusers from the VUDs license.
Created	The date and time the timeslot was reserved.
Created By	The user who reserved the timeslot.
Description	A description of the timeslot.
Duration in Minutes	The duration of the timeslot in minutes. Note: This field displays the duration in HH:MM format in parentheses.
End Time	The date and time the timeslot is due to end/ended.

UI Elements (A-Z)	Description
Is Active	<p>Y indicates an active operation currently occurring in the scope of the timeslot.</p> <p>Examples:</p> <ul style="list-style-type: none"> • A performance test is running. • A host is rebooting. <p>Note: You cannot edit an active timeslot.</p>
Modified	The date and time on which the timeslot details were last modified.
Modified By	The user who last modified the timeslot details.
Name	The timeslot's name.
Post Run Action	The action taken after the performance test completes its run.
Build Verification Suite ID	The ID of the build verification suite linked to the timeslot.
Build Verification Suite Name	The name of the build verification suite linked to the timeslot.
Build Verification Suite Validity	Indicates whether a linked build verification suite is valid or not.
Project Name	The name of the project to which the timeslot belongs.
Requested Hosts	The number of hosts requested for the timeslot.
Run ID	The ID of the run created in the context of the timeslot.
Server End Time	The date and time that the timeslot is due to end/ended, in terms of the server's time zone.
Server Start Time	The date and time that the timeslot is due to start/started, in terms of the server's time zone.
Start Time	The date and time that the timeslot is due to start/started.




UI Elements (A-Z)	Description
State	<p>The state of the timeslot.</p> <p>Testing timeslot states:</p> <ul style="list-style-type: none"> • None. No entity is linked to the timeslot. • Not Started. An entity is linked to the timeslot but has not started running. • <Run states>. Run and post-run states. <p>Maintenance and data processing timeslot states:</p> <ul style="list-style-type: none"> • Active. An operation is running during the timeslot. • Inactive. No operation is running during the timeslot.
Test ID	The ID of the performance test linked to the timeslot.
Test Instance ID	The ID of the performance test instance linked to the timeslot.
Test Name	<p>The name of the performance test linked to the timeslot.</p> <p>Note: If a test that is linked to a timeslot is deleted, this will affect the timeslot.</p>
Test Set ID	The ID of the test set linked to the timeslot.
Test Set Name	The name of the test set linked to the timeslot.
Test Set Validity	Indicates whether a linked test set is valid or not.
Test Validity	The validity of the performance test linked to the timeslot.
Timeslot ID	The ID of the timeslot.
Timeslot Type	The type of timeslot: performance testing, maintenance, or data processing.
Timeslot Validity	<p>The validity of the timeslot based on allocation of resources.</p> <ul style="list-style-type: none"> • Y. Indicates that the timeslot is valid, and that all resources were allocated as requested. • N. Indicates that a valid timeslot became invalid, due to license, resource, or test validation issues. In this state, the timeslot is partially allocated. For more details, see "Understanding Timeslot Failure" on page 669.
Total Vusers	The total number of Vusers reserved for the timeslot.
Vusers from Test	The number of Vusers defined in the linked performance test.

Timeslots Module Icons

This section describes the icons available in the Timeslots module.

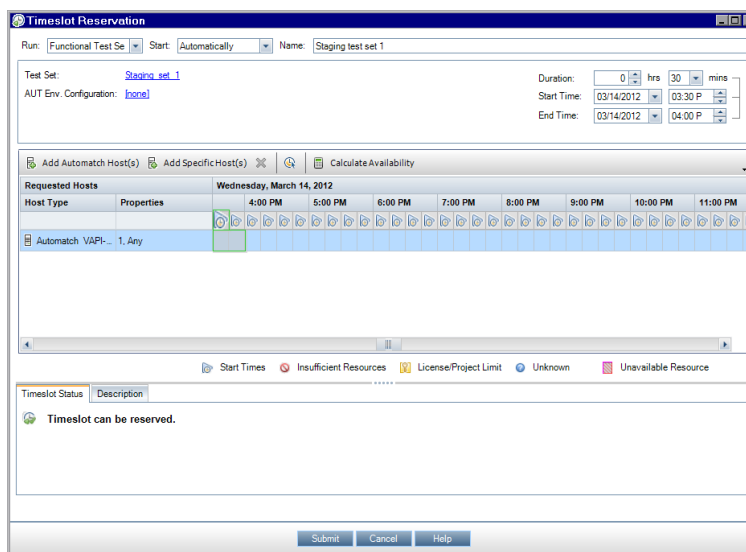
To access	Use one of the following: <ul style="list-style-type: none"> Maintenance timeslots: On the Lab Management sidebar, under Lab Resources, select Timeslots. Testing timeslots: On the ALM sidebar, under Testing, select Timeslots.
See also	"Timeslots Module Window" on page 678

The icons are described below:

UI Elements	Description
	Indicates a valid timeslot.
	Indicates a partially allocated (invalid) timeslot.
	Indicates an active timeslot.

Timeslot Reservation Dialog Box

This dialog box enables you to reserve a testing timeslot and view details of a reserved testing timeslot.



Timeslot Reservation

Run: Functional Test Set Start: Automatically Name: Staging test set 1

Test Set: [Staging set 1](#) Duration: 0 hrs 30 mins

AUT Env. Configuration: [None](#) Start Time: 03/14/2012 03:30 P End Time: 03/14/2012 04:00 P

Add Automatch Host(s) Add Specific Host(s) Calculate Availability

Requested Hosts	Wednesday, March 14, 2012								
Host Type	Properties	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
Automatch VAPI-1, Any									

Start Times Insufficient Resources License/Project Limit Unknown Unavailable Resource

Timeslot Status Description

Timeslot can be reserved.

Submit Cancel Help

To access	<ul style="list-style-type: none"> • New Testing Timeslot Reservation: On the ALM sidebar, under Testing, select Timeslots. Then use one of the following: <ul style="list-style-type: none"> ■ On the Timeslots toolbar, click the New Timeslot button. ■ Calendar view only: Double-click anywhere on the calendar, or right-click the target time and select New Timeslot. • Existing Timeslot Reservation: From Lab Management: On the sidebar, under Lab Resources, select Timeslots. From ALM: On the sidebar, under Testing, select Timeslots. Then use one of the following: <ul style="list-style-type: none"> ■ Grid View: Right-click a testing timeslot and select Timeslot Details. ■ Calendar view only: Right-click a testing timeslot (blue, orange, or green) and select Timeslot Details.
Important information	<ul style="list-style-type: none"> • Use this dialog box to reserve or view a testing timeslot. • For maintenance timeslots, see "Timeslot Reservation: Maintenance Dialog Box (Lab Management Only)" on page 702. • For data processing timeslots, see "Timeslot Reservation: Data Processing Dialog Box " on page 706.
Relevant tasks	"How to Reserve Testing Timeslots in ALM" on page 676
See also	"Reserving Timeslots Overview" on page 666

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Elements	Description
Run	<p>Choose the type of timeslot to reserve:</p> <ul style="list-style-type: none"> • Performance Test. Reserves resources for running a single instance of a performance test. • Functional Test Set. Reserves resources for running an entire functional test set. • Build Verification Suite. Reserves resources for running a collection of functional test sets as well as single performance tests, as defined in the Build Verification module. For more information, see "Build Verification" on page 717.

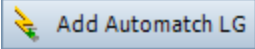
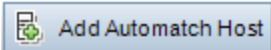
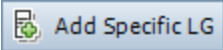
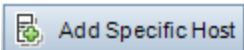
UI Elements	Description
Start	<p>Choose the method for executing linked tests or test sets:</p> <ul style="list-style-type: none"> • Manually. The timeslot reservation reserves testing resources only. You manually execute the linked test or test sets from the Test Lab module. For more information on running tests manually, see "Test Execution Overview" on page 538. • Automatically. The linked tests or test sets automatically start running at the start of the timeslot, without any manual intervention. Setting the test to start automatically enables autostart for the timeslot. <p>Note: To set autostart retry settings, refer to "Timeslot Settings Page" in <i>HP ALM Lab Management Guide</i>.</p> <p>Version Control: The last checked-in version of a test always runs, even if you have the test checked out at the start of the timeslot.</p>
Name	A descriptive name for the timeslot.
Select a test instance	<p>Enables you to link a performance test to the timeslot.</p> <p>By default, there is no linked test, and the selection appears as none.</p> <p>You do not have to link a test to the timeslot. However, linking a test gives you the option of running the test automatically without your manual intervention. For details, see "Autostart Timeslots" on page 668.</p> <p>In order to link a performance test to the timeslot, an instance of the test must be included in a test set. To link the test, click none. A window displaying the Test Lab tree opens. Navigate to the performance test to link and click OK.</p> <p>Note: If you make changes to the linked test (in the Performance Test Designer), the timeslot is updated automatically, and you do not need to relink the test manually. Bear in mind that changing a linked test might affect the validity of the timeslot.</p> <p>Version Control: You cannot link a test that is checked out.</p> <p>Available for: Performance Test timeslots only.</p>




UI Elements	Description
Select a test set	<p>Enables you to link a functional test set to the timeslot.</p> <p>By default, there is no linked test set, and the selection appears as none.</p> <p>You do not have to link a test set to the timeslot. However, linking a test set gives you the option of running the test set automatically without your manual intervention. For details, see "Autostart Timeslots" on page 668.</p> <p>To select a test set, click none. A window displaying the Test Lab tree opens. Navigate to the functional test set to link to the timeslot and click OK.</p> <div><p>Note: If you make changes to the linked test set, the timeslot is updated automatically, and you do not need to relink the test set manually. Bear in mind that changing a linked test set might affect the validity of the timeslot.</p></div> <p>Available for: Functional Test Set timeslots only.</p>
Select a build verification suite	<p>Enables you to link a build verification suite to the timeslot.</p> <p>By default, there is no linked suite, and the selection appears as none.</p> <p>You do not have to link a suite to the timeslot. However, linking a suite gives you the option of running the suite automatically without your manual intervention. For details, see "Autostart Timeslots" on page 668.</p> <p>To link a build verification suite, click none. A window displaying the Build Verification tree opens. Navigate to the build verification suite to link and click OK.</p> <div><p>Note: If you make changes to the build verification suite, the timeslot is updated automatically, and you do not need to relink the suite manually. Bear in mind that changing a build verification suite might affect the validity of the timeslot.</p></div> <p>Version Control: You cannot link a build verification suite that contains tests that are checked out.</p> <p>Available for: Build Verification Suite timeslots only.</p>






UI Elements	Description
Test	<p>Displays the name and status of a performance test that has been linked to the timeslot.</p> <p>To link a different test to the timeslot, click the test name. A window displaying the Test Lab tree opens. Navigate to the performance test to link and click OK. To unlink the test, click Clear.</p> <p>For more information regarding linking performance tests to timeslots, see Select a test instance above.</p> <p>Available for: Performance Test timeslots only, and only when a performance test has been linked to the timeslot.</p>
Vusers	<p>Displays the number of Vusers/VUDs that are defined in the linked test.</p> <p>To use VUDs instead of Vusers or vice versa, click Vusers/VUDs and change the selection.</p> <p>To add additional Vusers/VUDs, click Add More.</p> <div style="background-color: #f0f0f0; padding: 10px; margin: 10px 0;"> <p>Note: The sum of all Vusers/VUDs reserved for the requested timeslot and other timeslots must not exceed the limits specified in the project settings (Tools > PC Project Settings), and must not exceed the number of Vusers/VUDs specified in the license.</p> </div> <p>For more information about VUDs, refer to the <i>HP ALM Lab Management Guide</i>.</p> <p>Available for: Performance Test timeslots only, and only when a performance test has been linked to the timeslot.</p>

UI Elements	Description
Post Run	<p>Enables you to define the action to be taken when the performance test run is complete:</p> <ul style="list-style-type: none"> • Do not collate results. Frees the machines immediately after the performance test ends. When the run has finished, the run results are left on the load generators. You can analyze the results at a later stage from the Results tab. • Collate. When the run has finished, the run results are collected from all the load generators. <p>Note: To prevent loss of or inaccessibility to run data, select this option so that the results are collected immediately upon completion of the test run.</p> <ul style="list-style-type: none"> • Collate and Analyze. When the run has finished, the run results are collected and analyzed. Data analysis requires some time, depending on the size of the results file. If there is no timeslot available to include the data analysis, then select the Collate option instead, and run late Analysis when a data processor becomes available. You run late Analysis from the Results tab. For Results tab details, see the <i>HP ALM Performance Center Guide</i>. <p>Default value: Collate. Click Collate to change the selection.</p> <p>Available for: Performance Test timeslots only, and only when a performance test has been linked to the timeslot.</p>
Test Set	<p>Displays the name and status of a functional test set that has been linked to the timeslot.</p> <p>To link a different test set to the timeslot, click the test set name. A window displaying the Test Lab tree opens. Navigate to the test set to link and click OK. To unlink the test set, click Clear.</p> <p>For more information regarding linking test sets to timeslots, see Select a test set above.</p> <p>Available for: Functional Test Set timeslots only</p>
Build Verification Suite	<p>Displays the name and status of a build verification suite that has been linked to the timeslot.</p> <p>To link a different suite to the timeslot, click the suite's name. A window displaying the Build Verification Suite tree opens. Navigate to the suite to link and click OK. To unlink the suite, click Clear.</p> <p>For more information regarding linking suites to timeslots, see Select a build verification suite above.</p> <p>Available for: Build Verification Suite timeslots only, and only when a suite has been linked to the timeslot.</p>

UI Elements	Description
AUT Env. Configuration	<p>Enables you to select an AUT environment configuration for the timeslot.</p> <p>By default, there is no configuration selected, and the selection appears as none.</p> <p>To link an AUT Environment Configuration, click the [none] link. A window displaying the AUT Environments tree opens. Navigate to the AUT environment configuration to add and click OK.</p> <p>For more information regarding AUT Environments, see "How to Work with AUT Environments" on page 371.</p> <p>Available for: All timeslots types, but only when an entity has been linked to the timeslot.</p>
Deployment	<p>When your system is integrated with HP Continuous Delivery Automation (CDA), these options enable you to select deployment actions for the application under test. For more information on the integration between AUT environment configuration and CDA, see "How to Work with AUT Environments" on page 371.</p> <p>ALM provides the following options for deployment:</p> <ul style="list-style-type: none"> • Provision and deploy. Allocates machines on which to deploy the application under test, and prepares the required image so that the application can be installed. That is, the operating system, database server and all required software are installed based on CDA parameters. Following provisioning, the application under test itself is installed. • Deploy. Deploys and runs the application under test environment on machines that have already been provisioned. • Use deployed. Uses an existing installation to run the test. <p>When you select an option, the environment name appears in blue. Click the name to change the selection.</p> <p>Note: When deciding which option to select, bear in mind that the provisioning and deployment actions can be very time consuming. For routine testing, it is advisable to select Use Deployed.</p>

UI Elements	Description
Deprovisioning	<p>When your system is integrated with HP Continuous Delivery Automation (CDA), these options enable you to select the action to be taken after an environment has been deployed. For more information on the integration between AUT environment configuration and CDA, see "How to Work with AUT Environments" on page 371.</p> <p>ALM provides the following options for deprovisioning:</p> <ul style="list-style-type: none"> • Leave environment deployed. Leaves the AUT environment deployed indefinitely. The deployed environment can be used for future tests. • Deprovision at end. After the tests have completed running, the environment is undeployed and the machines are deprovisioned, freeing them up for other use.
Duration	<p>The duration of the timeslot, in hours and minutes.</p> <p>Note: A timeslot can be reserved for a minimum of 30 minutes and maximum of 480 hours (20 days).</p>
Start Time	The date and time (in hours and minutes) that the timeslot starts.
End Time	The date and time (in hours and minutes) that the timeslot ends.
 	<p>Opens the Select Automatch Load Generators/Host dialog box, enabling you to select automatch load generators/host with specific properties for the timeslot. For more details, see "Select Automatch Load Generators/Hosts Dialog Box " on page 710.</p> <p>Note: Performance Test timeslots must include at least one load generator (automatch or specific), and Functional Test Set or Build Verification Suite timeslots must include at least one host (automatch or specific).</p> <p>Available For: For new, open, or future testing timeslots</p>
 	<p>Opens the Select Specific Load Generator/Host dialog box, enabling you to select specific load generators/host for the timeslot. For more details, see "Select Specific Load Generators/Hosts Dialog Box " on page 712.</p> <p>Note: Performance Test timeslots must include at least one load generator (automatch or specific), and Functional Test Set or Build Verification Suite timeslots must include at least one host (automatch or specific).</p> <p>Available For: new, open, or future testing timeslots</p>

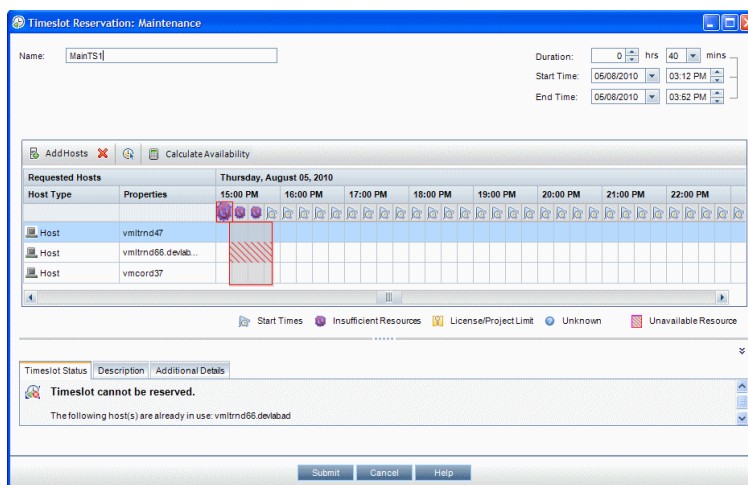
UI Elements	Description
	<p>Remove. Removes selected load generators/hosts.</p> <p>Note: Performance Test timeslots: You can change the selected Controller, but you cannot delete it.</p>
	<p>Set Start Time as Now. Selects the current time in the resource availability chart.</p> <p>Note: A timeslot whose start time is set to the current time opens immediately upon submitting the reservation.</p>
 Calculate Availability	<p>Calculates the availability of the requested resources for the selected timeslot. The results are displayed graphically on the resource availability chart, and a message is displayed in the Timeslot Status tab.</p>
<Message bar>	<p>Located at the top of the dialog box. Displays messages and warnings about the timeslot.</p> <p>Available for: Existing timeslots only.</p>

UI Elements	Description
<Resource availability timeline>	<p>Displays the availability of requested resources on a timeline:</p> <ul style="list-style-type: none"> • Availability not calculated. Displayed on the timeline before you calculate the availability of the requested resources for a new timeslot, or when modifying a timeslot. This is not displayed for Data Processing timeslots. •  Start Times. Indicates available start times for the timeslot, when the requested resources are available. •  Insufficient Resources. Indicates that not all the requested resources are available at the start times indicated on the timeline. •  Unknown. Displayed before calculating the availability of the requested resources for the timeslot. •  License/Project Limit. Indicates license or project limit issues at the start times indicated on the timeline. Example. More hosts requested than available in the license limit. •  Unavailable Resource. Indicates that a requested resource is not available at the start times indicated on the timeline.
ID	The ID of the timeslot.
Requested Hosts grid	<p>Displays the resources requested for the timeslot.</p> <p>For Performance Test timeslots, an automatch Controller is selected by default. You can change this by browsing for a specific Controller.</p> <div> <p>Note: Resources that are defined as part of a linked entity's creation (such as resources that are requested for a functional test set in the Test Lab module's Required Hosts tab) are automatically displayed in the grid. These pre-selected resources are indicated by an asterisk.</p> </div>
Timeslot Status tab	<p>Displays the status of the timeslot reservation.</p> <p>For details about timeslot failure, see "Understanding Timeslot Failure" on page 669.</p>

UI Elements	Description
Description tab	Describes the currently selected timeslot. Tip: Right-clicking in this area displays a toolbar for formatting and spell checking the text.
Additional Details tab	Displays additional details related to the timeslot. Available for: Existing timeslots only.
Event Log tab	Displays a log of events related to the timeslot. For details, refer to the <i>HP ALM Lab Management Guide</i> . Available for: Existing timeslots only.

Timeslot Reservation: Maintenance Dialog Box (Lab Management Only)

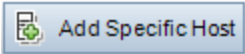



This dialog box enables you to reserve a maintenance timeslot and view details of a reserved maintenance timeslot.








To access	<ul style="list-style-type: none"> • New maintenance timeslot reservation (Lab Management only): On the Lab Management sidebar, under Lab Resources, select Timeslots. Then use one of the following: <ul style="list-style-type: none"> ■ On the Timeslots toolbar, click the New Timeslot button. ■ Calendar view only: Double-click anywhere on the calendar, or right-click the target time and select New Timeslot. • Existing maintenance timeslot reservation: From Lab Management: On the sidebar, under Lab Resources, select Timeslots. From ALM: On the sidebar, under Testing, select Timeslots. Then use one of the following: <ul style="list-style-type: none"> ■ Grid View: Right-click a timeslot of type Maintenance and select Timeslot Details. ■ Calendar view only: Right-click a maintenance (yellow) timeslot and select Timeslot Details.
Important information	<ul style="list-style-type: none"> • Use this dialog box to reserve or view a maintenance timeslot (administrator only). • For testing timeslots, see "Timeslot Reservation Dialog Box" on page 692. • For data processing timeslots, see "Timeslot Reservation: Data Processing Dialog Box " on page 706.
Relevant tasks	"How to Reserve Maintenance Timeslots (Lab Management only)" on page 677
See also	"Reserving Timeslots Overview" on page 666

User interface elements are described below (unlabeled elements are shown in angle brackets):

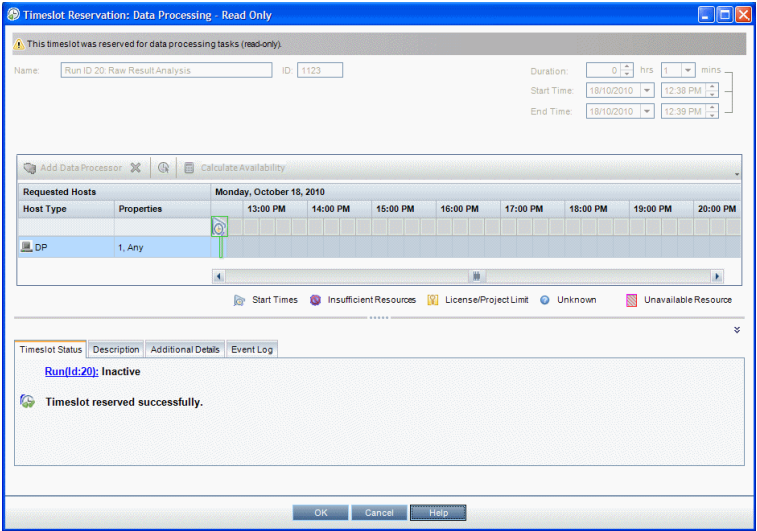
UI Elements	Description
Run	Indicates that the timeslot is a maintenance type.
Start	Indicates that the maintenance task is performed manually. Note: This field is disabled and the selection cannot be changed.
Name	A descriptive name for the timeslot.
Duration	The duration of the maintenance timeslot, in hours and minutes. Note: A maintenance timeslot can be reserved for a minimum of between 15 minutes and maximum of 480 hours (20 days).

UI Elements	Description
Start Time	<p>The date and time (in hours and minutes) that the timeslot starts.</p> <p>Note: If you need to reserve a host for a maintenance task, and the host is already reserved for running a test in the same timeslot, then you can modify the start of the testing timeslot, or delete the testing timeslot. Consult with the user who reserved the testing timeslot before making any changes.</p>
End Time	<p>The date and time (in hours and minutes) that the timeslot ends.</p>
	<p>Opens the Add Specific Host dialog box, enabling you to select hosts for the maintenance timeslot. For more details, see "Add Specific Host(s) Dialog Box " on page 714.</p> <p>Note: You must select at least one host for the timeslot.</p> <p>Available: For new, open, or future maintenance timeslots.</p>
	<p>Remove. Removes the selected host from the lists of requested hosts.</p>
	<p>Set Start Time as Now. Selects the current time in the resource availability chart.</p> <p>Note: A timeslot whose start time is set to the current time opens the immediately upon submitting the reservation.</p>
	<p>Calculates the availability of the requested resources for the selected timeslot. The results are displayed graphically on the resource availability timeline, and a message is displayed in the Timeslot Status tab.</p>
<Message bar>	<p>Located at the top of the dialog box. Displays messages and warnings about the timeslot.</p> <p>Available for: Existing timeslots only.</p>

UI Elements	Description
<Resource availability timeline>	<p>Displays the availability of requested resources on a timeline:</p> <ul style="list-style-type: none"> • Availability not calculated. Displayed on the timeline before you calculate the availability of the requested resources for a new timeslot, or when modifying a timeslot. •  Start Times. Indicates suggested start times for the timeslots, when the requested resources are available. •  Insufficient Resources. Indicates that not all the requested resources are available at the start times indicated on the timeline. •  License/Project Limit. Indicates license or project limit issues at the start times indicated on the timeline. Example. More hosts requested than available in the license limit. •  Unknown. Displayed before calculating the availability of the requested resources for the timeslot. •  Unavailable Resource. Indicates that a requested resource is not available at the start times indicated on the timeline.
Requested Hosts grid	<p>Displays the hosts requested for the timeslot.</p> <p>Note: You must select at least one host for the timeslot.</p>
Timeslot Status tab	<p>Displays the status of the timeslot reservation.</p> <p>For details about timeslot failure, see "Understanding Timeslot Failure" on page 669.</p>
Description tab	<p>Describes the currently selected timeslot.</p> <p>Tip: Right-clicking in this area displays a toolbar for formatting and spell checking the text.</p>
Additional Details tab	<p>Displays additional details related to the timeslot.</p> <p>Available for: Existing timeslots only.</p>
Event Log tab	<p>Displays a log of events related to the timeslot. For details, refer to the <i>HP ALM Lab Management Guide</i>.</p> <p>Available: Existing timeslot details.</p>

Timeslot Reservation: Data Processing Dialog Box






This dialog box enables you to view the details of an open or past data processing timeslot.



To access	<p>From Lab Management: On the sidebar, under Lab Resources, select Timeslots.</p> <p>From ALM: On the sidebar, under Testing, select Timeslots.</p> <p>Then use one of the following:</p> <ul style="list-style-type: none">• Grid View: Right-click a timeslot of type Data Processing and select Timeslot Details.• Calendar view only: Right-click a data processing (lilac) timeslot and select Timeslot Details.
Important information	<ul style="list-style-type: none">• Use this dialog box to view the details of a current or past data processing timeslot.• For testing timeslots, see "Timeslot Reservation Dialog Box" on page 692.• For maintenance timeslots, see "Timeslot Reservation: Maintenance Dialog Box (Lab Management Only)" on page 702.• Data Processing timeslots are available only for Performance Tests.

User interface elements are described below (unlabeled elements are shown in angle brackets>):

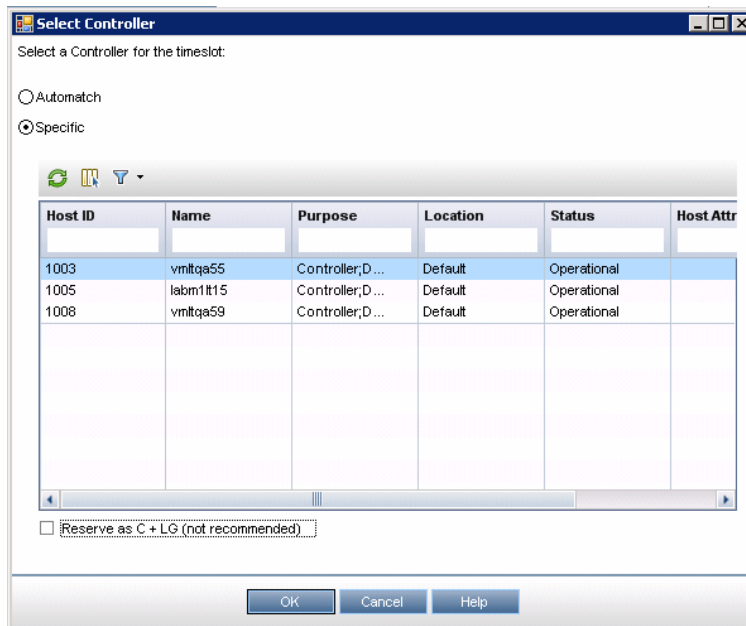
UI Elements	Description
Run	Indicates that the timeslot is a data processing type. Note: This field is disabled and the selection cannot be changed.


UI Elements	Description
Start	Indicates that the data processing tasks are performed automatically. Note: This field is disabled and the selection cannot be changed.
Name	A descriptive name for the timeslot. The name is given to the timeslot according to data processing task at hand.
Duration	The duration of the data processing timeslot, in hours and minutes. Note: A duration of a data processing timeslot is determined internally by the system, depending on the processing task at hand.
Start Time	The date and time (in hours and minutes) that the timeslot started.
End Time	The date and time (in hours and minutes) that the timeslot ended or is scheduled to end.
<Message bar>	Located at the top of the dialog box. Displays messages and warnings about the timeslot. Available for: Existing timeslots only.
<Resource availability timeline>	Displays the availability of requested resources on a timeline: <ul style="list-style-type: none"> • Availability not calculated. Displayed on the timeline before you calculate the availability of the requested resources for a new timeslot, or when modifying a timeslot. •  Start Times. Indicates suggested start times for the timeslots, when the requested resources are available. •  Insufficient Resources. Indicates that not all the requested resources are available at the start times indicated on the timeline. •  License/Project Limit. Indicates license or project limit issues at the start times indicated on the timeline. For example, more hosts requested than available in the license limit. •  Unknown. Displayed before calculating the availability of the requested resources for the timeslot. •  Unavailable Resource. Indicates that a requested resource is not available at the start times indicated on the timeline.
Requested Hosts grid	Displays the data processor host reserved for the timeslot. Note: The data-processor host is selected automatically by the system.

UI Elements	Description
Timeslot Status tab	Displays the status of the timeslot reservation. For details about timeslot failure, see "Understanding Timeslot Failure " on page 669.
Description tab	Describes the currently selected timeslot. Tip: Right-clicking in this area displays a menu for formatting and spell checking the text.
Additional Details tab	Displays additional details related to the timeslot. Available for: Existing timeslots only.
Event Log tab	Displays a log of events related to the timeslot. For details, refer to the <i>HP ALM Lab Management Guide</i> . Available for: Existing timeslots only.




Select Controller Dialog Box

This dialog box enables you to select a Controller for a performance testing timeslot.



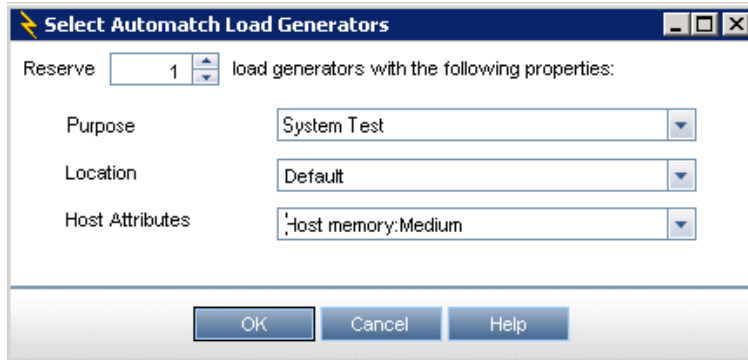
To access	<ol style="list-style-type: none"> On the ALM sidebar, under Testing, select Timeslots. On the toolbar, click the New Timeslot  button. In the upper left corner of the dialog box, select Run > Performance Test. In the Requested Hosts grid, click the Controller's Properties column, and click the gray box that appears.
Important information	<p>If you select a Controller host that has multiple purposes (C+LG+DP), it is recommended to dedicate the host for Controller functionality, and not to select it for other functionality as well, to avoid performance issues during runtime.</p> <p>This dialog box is available for performance testing timeslots only.</p>
Relevant tasks	"How to Reserve Testing Timeslots in ALM" on page 676
See also	"Reserving Timeslots Overview" on page 666

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Elements	Description
	Refresh All. Refreshes the grid so that it displays the most up-to-date list of Controller hosts based on the filters you have selected.
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For more details, see the "Select Columns/Select Fields Dialog Box" on page 86.</p> <p>For details about the host fields, refer to the <i>HP ALM Lab Management Guide</i>.</p>
	Filter/Sort. Enables you to filter and sort the Controller hosts in the grid. Any currently applied filters or sorting orders are displayed below the toolbar. For details about filtering options, see the "Filter Dialog Box" on page 61 .
<Host grid>	<p>Lists all the specific Controller hosts.</p> <p>Note: Enabled when Specific is selected.</p>
Select a Controller for the timeslot	<ul style="list-style-type: none"> Automatch. Enables the system to allocate an available Controller for the timeslot. Specific. Enables you to select a specific Controller for the timeslot.
Reserve as C + LG	<p>Allows the selected host to serve both as a Controller and as a load generator.</p> <p>Note: This option is not recommended. The Controller host should be dedicated for Controller functionality, and it is recommended not to run Vusers on this host.</p>


Select Automatch Load Generators/Hosts Dialog Box

This dialog box enables you to select automatch load generators for a Performance Test timeslot, or automatch hosts for Functional test Set or Build Verification Suite timeslots.



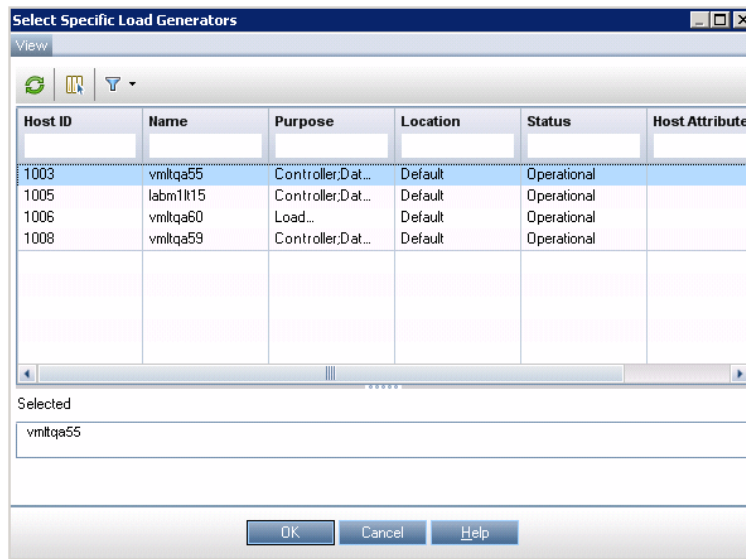
To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Lab Resources, select Timeslots. 2. On the toolbar, click the New Timeslot button. 3. In the Requested Hosts grid, click Add Automatch LG (for Performance Test timeslots), or Add Automatch Hosts (for Functional Test Set or Build Verification Suite timeslots).
Important information	Specific load generators/hosts matching the automatch load generators'/hosts' properties are allocated in place of the automatch load generators/hosts.
Relevant tasks	"How to Reserve Testing Timeslots in ALM" on page 676
See also	"Reserving Timeslots Overview" on page 666


User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Elements	Description
Reserve <xx> load generators/hosts...	<p>The number of automatch load generators/hosts to reserve for the timeslot.</p> <p>Note: Performance Testing timeslots: The total number of hosts (Controller + load generators) reserved for the timeslot may not exceed the Performance Center project's host and host pool limits defined in the project's settings. For more details, refer to the <i>HP ALM Lab Management Guide</i>.</p> <p>Tip: To select multiple automatch load generators/hosts with the same properties, you can do one of the following:</p> <ul style="list-style-type: none"> In the Reserve <xx> box, enter 1, and select the relevant properties. Repeat this for the other automatch load generators/hosts. If you do this five times, for example, then five identical automatch load generators/hosts are displayed in the Requested Hosts grid. In the Reserve <xx> box enter the number of automatch load generators/hosts you want to select with the same properties. For example, enter 5. One entry is displayed in the Requested Hosts grid, representing all five automatch load generators/hosts.
<Load Generator/Host Properties>	<p>Enables you to specify properties for the requested automatch load generators:</p> <ul style="list-style-type: none"> Purpose. (Hosts only) The purpose for the host, depending on the type of tests that are linked to the timeslot. <p>Location. The location of the load generators/hosts. To find a specific location, enter the value in the Find box, and click  .</p> <ul style="list-style-type: none"> Host Attributes. Load generator/host attributes. <p>The list of attributes can be customized. For details, refer to the <i>HP ALM Performance Center Guide</i>.</p> <p>Note: If no properties are specified, any available load generators/hosts are allocated.</p>


Select Specific Load Generators/Hosts Dialog Box



This dialog box enables you to reserve specific load generators/hosts for a testing timeslot.



To access	<ol style="list-style-type: none"> On the ALM sidebar, under Lab Resources, select Timeslots. On the toolbar, click the New Timeslot  button. In the Requested Hosts grid, click Add Specific LG (for Performance Test timeslots), or Add Specific Hosts (for Functional Test Set or Build Verification Suite timeslots).
Important information	<ul style="list-style-type: none"> To avoid a timeslot becoming partially allocated in the case that a specific load generator/host unexpectedly becomes unavailable, it is recommended to rather reserve automatch load generators/hosts. For details about selecting automatch load generators/hosts, see "Select Automatch Load Generators/Hosts Dialog Box " on page 710. This dialog box is available for testing timeslots only.
Relevant tasks	"How to Reserve Testing Timeslots in ALM" on page 676
See also	"Reserving Timeslots Overview" on page 666

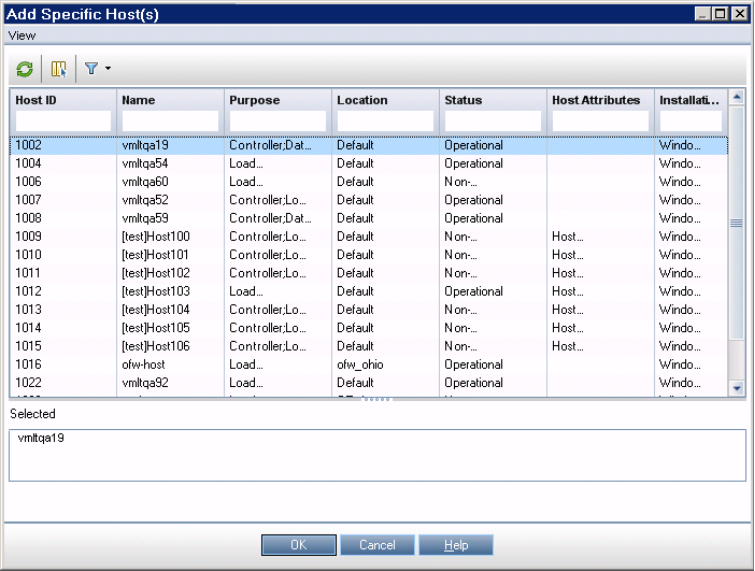
User interface elements are described below (unlabeled elements are shown in angle brackets>):



UI Elements	Description
	Refresh All. Refreshes the grid so that it displays the most up-to-date list of load generators/hosts based on the filters you have selected.

UI Elements	Description
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86.</p> <p>For field details, refer to the <i>HP ALM Lab Management Guide</i>.</p>
	<p>Filter/Sort. Enables you to filter and sort the load generators/hosts in the grid. Any currently applied filters or sorting orders are displayed below the toolbar. For details about filtering options, see "Filter Dialog Box" on page 61.</p>
View menu	<p>Enables you to:</p> <ul style="list-style-type: none"> • Show/hide the grid filters • Show/hide the Summary panel which displays the selected load generators • Filter/sort and the grid • Refresh the grid • Select columns to view in the grid
<Specific load generators grid>	<p>Displays the specific load generators/hosts available for the reservation.</p> <div> <p>Tip: To select multiple hosts, hold down the CTRL button on your keyboard while selecting load generators in the list.</p> </div>
Selected pane	<p>Displays the load generators/hosts selected in the grid.</p>


Add Specific Host(s) Dialog Box



This dialog box enables you to reserve hosts for a maintenance timeslot.



To access	<ol style="list-style-type: none">On the Lab Management sidebar, under Lab Resources, select Timeslots.On the toolbar, click the New Maintenance Timeslot  button.In the Timeslot Reservation: Maintenance dialog box, in the Requested Hosts grid, click  Add Specific Host.
Important information	This dialog box is available in Lab Management only.
Relevant tasks	"How to Reserve Maintenance Timeslots (Lab Management only)" on page 677
See also	"Reserving Timeslots Overview" on page 666

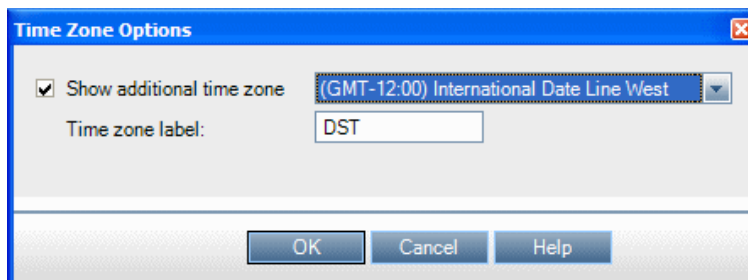
User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Elements	Description
	Refresh All. Refreshes the grid so that it displays the most up-to-date list of hosts based on the filters you have selected.

UI Elements	Description
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For more details, see the "Select Columns/Select Fields Dialog Box" on page 86.</p> <p>For details about the Host fields, refer to the <i>HP ALM Lab Management Guide</i></p>
	<p>Filter/Sort. Enables you to filter and sort the hosts in the grid. Any currently applied filters or sorting orders are displayed below the toolbar. For details about filtering options, see the "Filter Dialog Box" on page 61.</p>
View menu	<p>Enables you to:</p> <ul style="list-style-type: none"> • Show/hide the grid filters • Show/hide the Summary panel which displays the selected hosts • Filter/sort and the grid • Refresh the grid • Select columns to view in the grid
<Hosts grid>	<p>Displays the hosts available for the reservation.</p> <p>Tip: To select multiple hosts, hold down the CTRL button on your keyboard while selecting hosts in the list.</p>
Selected pane	<p>Displays the hosts selected in the grid.</p>

Time Zone Options Dialog Box

This dialog box enables you to display an additional time zone in the Timeslots module calendar view..



To access	<p>In the Timeslots module, in calendar view, select Tools > Time Zone Options.</p> <p>Available from: Calendar view only</p>
------------------	--

Important information	Displaying an additional time zone is useful if you are located in a different time zone to the ALM server or other users. The default time displayed on the calendar is based on the local client machine time.
See also	"Reserving Timeslots Overview" on page 666

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Elements	Description
Show additional time zone	When selected, enables you to select an additional time zone to display in the calendar view.
Time zone label	The label by which to display the additional time zone in the calendar view. Available: When Show additional time zone is selected.

Build Verification

Chapter 38

Build Verification Process

This chapter includes:

- Build Verification Overview..... 720
- How to Work with the Build Verification Suite in ALM..... 720
- Deploying and Testing your Application in ALM..... 721
- Build Verification User Interface..... 724

Build Verification Overview

The Build Verification module enables you to define a suite of automated functional test sets bundled together with a single performance test (called a build verification suite). When run together, the build verification suite checks the overall status of your build.

When defining a build verification suite, you can select an AUT environment configuration which represents the build on which ALM checks the status. For more information about AUT environment configuration, see ["AUT Environments" on page 369](#).

If your system is integrated with HP Continuous Delivery Automation (CDA), you can instruct ALM to provision machines and deploy the build on a dynamic environment. For more information on the integration between ALM and CDA, see ["How to Work with AUT Environments" on page 371](#).

Build verification suites are a key component in ALM's Continuous Delivery solution. They facilitate an automated, end-to-end deployment and testing framework that makes application development more efficient, reliable, and quick. For more information about how build verification suites can be used as part of this process, see ["Deploying and Testing your Application in ALM" on next page](#).

For task details, see ["How to Work with the Build Verification Suite in ALM" below](#).

How to Work with the Build Verification Suite in ALM

This task describes how to create a build verification suite, which enables you to test the status of a particular build of your application under test.

To learn more about build verification, see ["Build Verification Overview" above](#).

This task includes the following steps:

- [Prerequisites](#)
- [Create a build verification suite](#)
- [Add Functional Test Sets and Performance Tests to the Suite](#)
- [Run the Suite](#)
- [View Test Results](#)

1. Prerequisites


In the Test Lab module, create the functional test sets that will be included in the build verification suite. For more information about creating test sets, see ["How to Create Test Sets" on page 571](#).

Create the performance test to be added to the build verification suite. For information about creating performance tests, refer to the *HP ALM Performance Center Guide*.

Note: You can include existing functional test sets and performance tests in the build

verification suite. You do not need to create new ones specifically for this purpose.

2. Create a build verification suite

- a. On the ALM sidebar, under **Testing**, select **Build Verification**.
- b. Click the **Build Verification Suites** folder and on the toolbar click the **New Build Verification Suite Folder** button.
- c. Click the **New Build Verification Suite**  button and enter a name for your build verification suite. Click **OK**. The build verification suite is added to the tree.

3. Add Functional Test Sets and a Performance Test to the Suite

Add functional test sets to the suite from the Functional Test Sets tab. For user interface details, see ["Functional Test Sets Tab" on page 728](#)

Add a performance test to the suite from the Performance Test tab. For user interface details, see ["Performance Test Tab" on page 729](#)

4. Run the Suite

Use one of the following methods:

- **Run the suite immediately.** On the Build Verification Suites page toolbar, click **Run**. The Run Build Verification Suite dialog box opens, enabling you to select immediate timeslot for the suite. For user interface details, see ["Run <Entity> Dialog Box" on page 636](#).
- **Run the suite at a specified time.** Reserve a future timeslot for the suite to enable you to run it at a later date. For more information, see ["Reserving Timeslots" on page 665](#).

5. View Test Results

For each build verification suite that runs, ALM generates an Execution Report. The Execution Report provides general details about the suite, overall information per test set, as well as drilled-down run information for each individual test within the suite.

If you ran the suite from within the Build Verification module via an ad-hoc timeslot, you can view the Execution Report details in real time. Irrespective of which method you use to run the suite, you can access the report by clicking the **Last Run Report** button on the Build Verification Suites page toolbar.

For user interface details, see ["Execution Report Page" on page 639](#).

Deploying and Testing your Application in ALM

ALM enables you to completely automate the complicated process of taking a build of an application through deployment and testing. You can use ALM, in conjunction with the Lab Management features, to schedule deployments and test sets to be run nightly or hourly. This deployment and testing is run without user intervention and can be scheduled to run immediately following the completion of your build. You can also arrange for your build to be deployed on a specific environment that you define, or even integrate with HP Continuous Delivery Automation (CDA) to be deployed dynamically on a private or public cloud.

ALM and Lab Management provide the testing components which allow your application team to achieve a state of Continuous Delivery, where software can be developed, packaged, deployed, and tested in an automated fashion, resulting in the ability to provide software reliably, efficiently, and with great speed.

This section will describe the different components ALM provides to facilitate end-to-end deployment and testing.

- [Create Automated Tests](#)
- [Create Test Sets](#)
- [Create Build Verification Suites](#)
- [Define AUT Environment Configuration](#)
- [Schedule Timeslots for your Deployments and Tests](#)

1. **Create Automated Tests**

ALM provides several different types of automated tests for testing the functionality of your application under test (AUT).

The two main categories of test types are Functional and Performance.

- Functional tests are used to check that the application works as it should.
- Performance tests are used to check that the application can withstand load and demand.

You create tests in the **Testing > Test Plan** module. For task information, see ["How to Create Tests" on page 398](#).

For more information about the test types ALM provides and supports, see ["Test Types" on page 401](#).

In order to make sure you create a comprehensive set of tests, first see ["Test Plan Overview" on page 394](#).

2. **Create Test Sets**

ALM provides a container for your tests, called a Test Set. ALM provides test set types for each type of automated test: Functional test sets and Performance test sets.

You can group your tests into test sets in different ways. You can group them in terms of features and aspects in the application. Alternatively, you can create groups of tests that check positive flow and create groups of tests that check negative flow.

You create test sets in the **Testing > Test Lab** module. For task information, see ["How to Create Test Sets" on page 571](#).

For more information about the test set types, see ["Test Set Specification Overview" on page 570](#).

3. **Create Build Verification Suites**

ALM provides a way to bundle several test sets together, regardless of their type, to create a Build Verification Suite. The build verification suite is used to check the overall status of your build. A build verification suite may contain both Functional test sets and a single Performance

test set.

You can create multiple build verification suites to check the application at varying levels of comprehensiveness. One large build verification suite can be created and scheduled to run every night, and another build verification suite containing only the core test sets can be created scheduled to run every hour, or manually every time a build is produced.

You create build verification suites in the **Testing > Build Verification** module. For task information, see ["How to Work with the Build Verification Suite in ALM" on page 720](#).

For more information about build verification suites, see ["Build Verification Overview" on page 720](#)

4. Define AUT Environment Configuration

ALM provides a way to define a set of environment parameters that you can bundle with your build configuration suites and test sets, called an AUT Environment Configuration.

Instead of defining and running several different tests that use the same logic but need different environment parameters, you can simply bundle a set of environment parameters into an AUT environment configuration. When you run your build verification configuration suites or functional test sets, you can provide your AUT environment configuration, and ALM will use those parameters to run your tests.

If your application environment is dynamic and changing, you may want to use ALM and Lab Management to link your AUT environment configurations to CDA. Linking the environment parameters in your AUT environment configuration to CDA allows you to dynamically provision and deploy your application environment using a private or public cloud.

You create AUT environment configurations in the **Lab Resources > AUT Environments** module. For task information, see ["How to Work with AUT Environments" on page 371](#).

For more information about AUT Environments, see ["AUT Environments Overview" on page 370](#)

For more information about CDA servers, see ["CDA Servers Overview" on page 1](#).

For task information about managing CDA servers in Lab Management, see the *HP ALM Lab Management Guide*. For more information about linking AUT environment configurations and parameters to CDA in ALM, see ["Link AUT Environments to CDA" on page 370](#) and ["How to Work with AUT Environments" on page 371](#).

5. Schedule Timeslots for your Deployments and Tests

ALM allows you to schedule deployment and testing of your application for the future using Timeslots. ALM will ensure that the testing resources required for your timeslot are reserved ahead of time.

Instead of having to manually run a set of tests after producing a build, ALM allows you to automatically allocate resources and initiate provisioning, deployment, and testing of an application in an environment. You can use timeslots to reserve resources for a build verification suite or a test set run, and if you integrate CDA into your build verification suites, you can even arrange for scheduled dynamic provisioning and deployment.

There are a few ways to schedule a run. The simplest is to schedule a test and allocate resources in advance by creating a timeslot in the **Testing > Timeslots** module. Alternatively, if the testing resources are available, you can arrange for a run to be executed immediately.

For details about timeslot reservation, see ["How to Reserve Testing Timeslots in ALM"](#) on page 676

For task information about executing tests and test sets, see ["How to Run Tests Automatically"](#) on page 627.

For task information about executing build verification suites, see ["How to Work with the Build Verification Suite in ALM"](#) on page 720.

For more information about timeslots, see ["Reserving Timeslots Overview"](#) on page 666

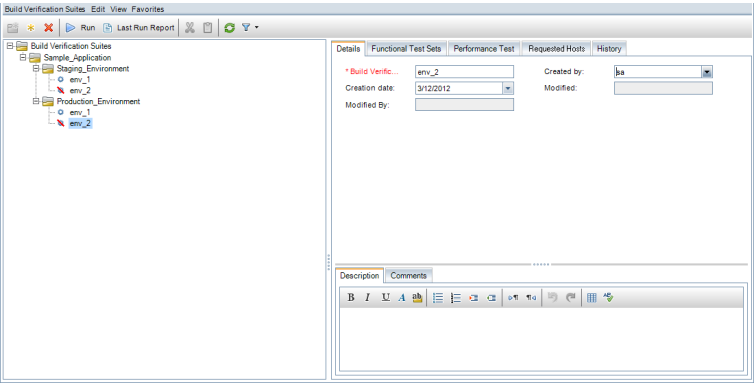
Build Verification User Interface

This section includes:

Build Verification Module Window.....	724
Build Verification Module Menus and Buttons.....	725
Build Verification Module Fields.....	727
Functional Test Sets Tab.....	728
Performance Test Tab.....	729
Build Verification Suite Details Dialog Box.....	731
New Build Verification Suite Dialog Box.....	732

Build Verification Module Window

This window enables you to create and manage build verification suites.



To access	On the ALM sidebar, under Testing , select Build Verification.
Relevant tasks	"How to Work with the Build Verification Suite in ALM" on page 720
See also	"Build Verification Overview" on page 720

Build Verification Module Common Elements

User interface elements are described below (unlabeled elements are shown in angle brackets):




UI Element	Description
<Build Verification module common UI elements>	<ul style="list-style-type: none">• Build Verification fields. For field definitions, see "Build Verification Module Fields" on page 727• Build Verification menus and buttons. For command and button descriptions, see "Build Verification Module Menus and Buttons" below• ALM main menu and sidebar. For details on the Tools menu, Help menu and sidebar, see "ALM Common Areas" on page 45.
<Build Verification Suites Tree>	Contains a tree which enables you to organize your build verification suites.
Details tab	Displays details of the selected build verification suite. For more details, see "Build Verification Suite Details Dialog Box" on page 731 .
Functional Test Sets tab	Enables you to add functional test sets to the suite. For more details, see "Functional Test Sets Tab" on page 728 .
Performance Test tab	Enables you to add a single instance of a performance test to the suite. For more details, see "Performance Test Tab" on page 729 .
Requested Hosts tab	Displays requested hosts for selected test sets and enables you to edit the host requests as required. For more details, see "Requested Hosts Tab" on page 587 .
History tab	Lists changes made to the currently selected build verification suite. For more details, see "History Tab" on page 78 .





Build Verification Module Menus and Buttons

This section describes the menus and buttons available in the Build Verification module.

To access	On the ALM sidebar, under Testing , select Build Verification
Relevant tasks	"How to Work with the Build Verification Suite in ALM" on page 720
See also	"Build Verification Overview" on page 720

User interface elements are described below:

UI Elements (A - Z)	Menu	Description
Add to Favorites	Favorites	Opens the Add Favorite dialog box, enabling you to add a favorite view to your private or the public folder. For details, see "Add Favorite Dialog Box" on page 104 .
Build Verification Suite Details 	Build Verification Suites	Opens the Build Verification Suite Details dialog box, enabling you to view and update details of the selected test set. For details, see "Build Verification Suite Details Dialog Box" on page 731 .
Collapse	View	Collapses the folders in the tree below the selected folder.
Copy URL/Paste	Build Verification Suites/Edit	Copies a selected suite and pastes its URL as a link. The suite itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking on the link opens ALM and takes you to the suite. If you are not already logged in, ALM first prompts for login details.
Cut/Paste	Edit	Moves a selected suite or folder to a different location in the business verification suites tree. Tip: You can also drag a suite to a new location in the test sets tree.
Delete 	Edit	Deletes a selected suite or folder. You cannot delete the Root folder.
Expand All	View	Expands all folders in the tree below the selected folder.
Filter/Sort	View	Enables you to filter and sort the runs in the test runs grid. For more details, "Filter Dialog Box" on page 61 .
Go to Build Verification Suite 	<ul style="list-style-type: none"> Build Verification Suites <right-click menu> 	Opens the Go To Build Verification Suite dialog box, enabling you to find a specific build verification suite by its ID.
Last Run Report	<right-click menu>	Opens the Last Run Report pane, displaying results of the last run for the selected build verification suite. You can also click the Show arrow to display the Last Run Report pane.

UI Elements (A - Z)	Menu	Description
New Build Verification Suite Folder 	Build Verification Suites	Opens the New Build Verification Suite Folder dialog box, enabling you to add a folder to the build verification suites tree. Syntax exceptions: A test set folder name cannot include the following characters: \ ^ *
New Build Verification Suite 	Build Verification Suites	Opens the New Build Verification Suites dialog box, enabling you to suite to a selected folder. For details, see "New Build Verification Suite Dialog Box" on page 732 .
Organize Favorites	Favorites	Opens the Organize Favorites dialog box, enabling you to organize the list of favorite views by changing properties or deleting views. For details, see "Organize Favorites Dialog Box" on page 105 .
Refresh/Refresh All 	View	Refreshes the view to display the most up-to-date information.
Rename	Edit	Enables you to rename a suite or folder. You cannot rename the Root folder.
Run 	<right-click menu>	Opens the Run <Entity> Dialog box, enabling you to run the selected build verification suite. For details, see "Run <Entity> Dialog Box" on page 636 .
Update Selected	Edit	Opens the Update Selected dialog box, enabling you to update a field value for multiple selected suites in the tree or grid. For more details, see "Update Selected Dialog Box" on page 88 .

Build Verification Module Fields

This section describes the Build Verification module fields.

To access	On the ALM sidebar, under Testing , select Build Verification .
See also	"Build Verification Module Window" on page 724

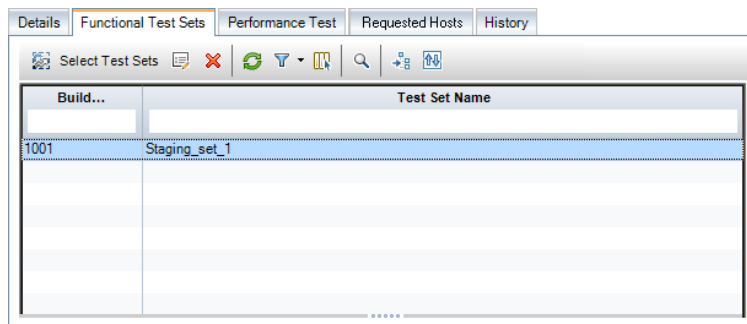
The fields are described below:

UI Element (A - Z)	Description
BVS ID	The ID of the build verification suite.

UI Element (A - Z)	Description
Build Verification Suite Test Set ID	The ID of the test set in the Build Verification module. Note: This is not the same ID as the Test Set ID in the Test Lab module.
Build Verification Suite Name	The name of the build verification suite.
Build Verification Suite Test Set Order	The place of the test set in the test set order.
Test Set Name	The test set's name.
Created by	The user who create the suite.
Creation date	The date the suite was created.
Modified	The date and time on which the suite was last modified.
Modified By	The user who last modified the suite.

Functional Test Sets Tab









This tab enables you to add functional test sets to a build verification suite.



To access	On the ALM sidebar, under Testing , select Build Verification . Select a build verification suite from the tree, then select the Functional Test Sets tab.
Relevant tasks	"How to Work with the Build Verification Suite in ALM" on page 720
See also	"Build Verification Overview" on page 720

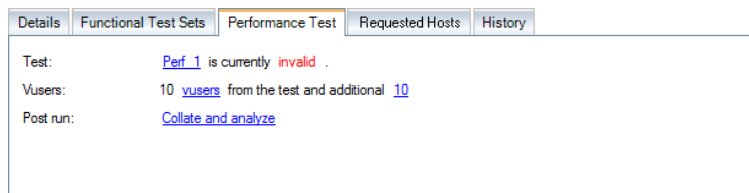
Build Verification Module Common Elements

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
 Select Test Sets	Opens the Test Sets Tree dialog box on the right, enabling you to add test sets to the build verification suite. Note: Only functional test sets are displayed in the tree.
	Build Verification Suite Test Set Details. Opens the Build Verification Suite Test Set Details dialog box, displaying details of the selected test set.
	Refresh. Refreshes the tab so that it displays the most up-to-date information.
	Set Filter/Sort: Enables you to filter the information displayed in the tab. For more details on filtering, see "Filter Dialog Box" on page 61 .
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the tab and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86 .
	Find. Searches the tab for values you specify in the Find box. For more details, see "Find Dialog Box" on page 73 .
	Go to Test Set. Goes to the selected test set in the Execution Grid.
	Order Test Sets. Opens a dialog box which enables you to change the order the test sets appear in the grid. You can change the order by using the arrow buttons in the top right corner, or by dragging the test sets to the desired place in the order.

Performance Test Tab

This dialog box enables you to add a performance test to a build verification suite.



The screenshot shows the 'Performance Test' tab in a dialog box. It has tabs for 'Details', 'Functional Test Sets', 'Performance Test' (selected), 'Requested Hosts', and 'History'. The 'Performance Test' tab contains the following text:

Test: [Perf_1](#) is currently **invalid**.

Users: 10 [users](#) from the test and additional [10](#)

Post run: [Collate and analyze](#)

To access	On the ALM sidebar, under Testing , select Build Verification. Select a build verification suite from the tree, then select the Performance Test tab.
Important information	You do not have to link a performance test to a build verification suite in order for the suite to be valid.

Relevant tasks	"How to Work with the Build Verification Suite in ALM" on page 720
See also	"Build Verification Overview" on page 720

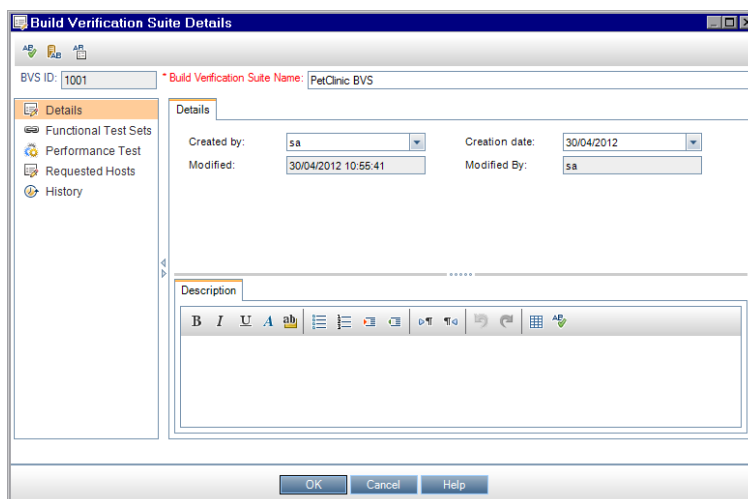
User interface elements are described below (unlabeled elements are shown in angle brackets):


UI Elements	Description
Select a test instance	<p>Enables you to link a performance test to a build verification suite.</p> <p>By default, there is no linked test, and the selection appears as none.</p> <p>In order to link a performance test to a suite, an instance of the test must be included in a test set. To link the test, click none. A window displaying the Test Lab tree opens. Navigate to the performance test to link and click OK.</p> <p>When you link a test, the test name appears by the selection. To select a different test, click the test name and change the test as necessary.</p> <p>Note: If you make changes to the linked test (in the Performance Test Designer), the timeslot is updated automatically, and you do not need to relink the test manually. Bear in mind that changing a linked test might affect the validity of the timeslot.</p> <p>Version Control: You cannot link a test that is checked out.</p>
Vusers	<p>Displays the number of Vusers/VUDs that are defined in the linked test.</p> <p>To use VUDs instead of Vusers or vice versa, click Vusers/VUDs and change the selection.</p> <p>To add additional Vusers/VUDs, click Add More.</p> <p>Note: The sum of all Vusers/VUDs reserved for the requested timeslot and other timeslots must not exceed the limits specified in the project settings (Tools > PC Project Settings), and must not exceed the number of Vusers/VUDs specified in the license.</p> <p>For more information about VUDs, refer to the <i>HP ALM Lab Management Guide</i>.</p>

UI Elements	Description
Post Run	<p>Enables you to define the action to be taken when the performance test run is complete:</p> <ul style="list-style-type: none"> • Do not collate results. Frees the machines immediately after the performance test ends. When the run has finished, the run results are left on the load generators. You can analyze the results at a later stage from the Results tab. • Collate. When the run has finished, the run results are collected from all the load generators. <p>Note: To prevent loss of or inaccessibility to run data, select this option so that the results are collected immediately upon completion of the test run.</p> <ul style="list-style-type: none"> • Collate and Analyze. When the run has finished, the run results are collected and analyzed. Data analysis requires some time, depending on the size of the results file. If there is no timeslot available to include the data analysis, then select the Collate option instead, and run late Analysis when a data processor becomes available. You run late Analysis from the Results tab. For Results tab details, see the <i>HP ALM Performance Center Guide</i>. <p>Default value: Collate. Click Collate to change the selection.</p> <p>Available for: Performance Test timeslots only, and only when a performance test has been linked to the timeslot.</p>

Build Verification Suite Details Dialog Box

This dialog box enables you to view and update details for a build verification suite.



To access	<p>In the Testing > Build Verification module, select a build verification suite and click the Build Verification Suite Details button .</p>
------------------	--

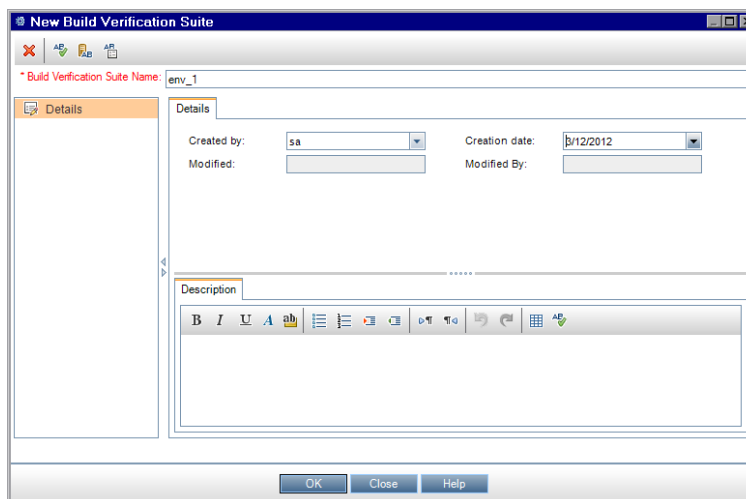
Relevant tasks	"How to Work with the Build Verification Suite in ALM" on page 720
See also	"Build Verification Overview" on page 720


User interface elements are described below:

UI Elements	Description
Details	Displays the suite's details. Required fields are displayed in red. For details on available fields, see "Build Verification Module Fields" on page 727 .
Functional Test Sets	Enables you to add functional test sets to a build verification suite. For more information, see "Functional Test Sets Tab" on page 728
Performance Test	Enables you to add a performance test to a build verification suite. For more information, see "Performance Test Tab" on page 729 .
Requested Hosts	Displays the hosts which have been requested for the tests in the suite, and enables you to edit the host requests as required. For more details, see "Requested Hosts Tab" on page 587 .
History	Lists changes made to the currently selected build verification suite. For more details, see "History Tab" on page 78 .





New Build Verification Suite Dialog Box

This dialog box enables you to create a build verification suite.



To access	On the ALM sidebar, Under Testing , select Build Verification . Then click the New Build Verification Suite  button.
Relevant tasks	"How to Work with the Build Verification Suite in ALM" on page 720
See also	"Build Verification Overview" on page 720

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Elements	Description
	Clear All Fields. Clears the data.
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure how to check the spelling.
Build Verification Suite Name	The name for the new suite. Tip: Give the suite a meaningful name. This can be derived from the purpose of the build you are checking. For example: ABC Application - Staging Build.
Details	Required fields are marked with an asterisk (*) and are displayed in red. For details on the available host fields, see "Build Verification Module Fields" on page 727 .

Defects

Chapter 39

Defect Tracking

This chapter includes:

- Defect Tracking Overview..... 738
- How to Track Defects in ALM..... 739
- How to Search for Defects..... 745
- How to Link Defects..... 746
- Defect User Interface..... 746

Defect Tracking Overview

Locating and repairing application defects efficiently is essential to the development process. Using the HP Application Lifecycle Management (ALM) Defects module, you can report design flaws in your application and track data derived from defect records during all stages of the application management process.

You use the Defects module to:

- Create application defects for an ALM project.
- Track defects until application developers and testers determine that the defects are resolved.

Defect records inform members of the application development and quality assurance teams of new defects discovered by other members. As you monitor the progress of defect repair, you update the information in your project.

You can share defects across multiple ALM projects. You share and synchronize defects using the HP Quality Center Synchronizer. For more information, see the *HP Quality Center Synchronizer User Guide*, available from the Add-ins Page.

ALM Editions: Sharing defects across multiple ALM projects is available for ALM Edition only.

This section also includes ["Defect Linkage"](#) below.

For task details about working with defects, see ["How to Track Defects in ALM"](#) on next page.

Defect Linkage

You can link a defect to the following ALM entities: requirements, tests, test sets, business process tests, flows, test instances, runs, run steps, and other defects.

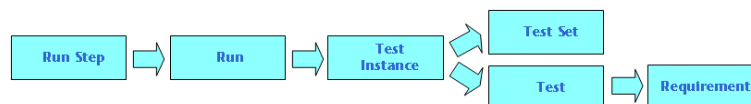
Examples of when defect linkage is useful include:

- A new test is created specifically for a defect. By creating a link between the test and the defect, you can determine if the test should be run based on the status of the defect.
- During a manual test run, if you add a defect, ALM automatically creates a link between the test run and the new defect.

You can link defects directly to other defects or entities. When you add a defect link to an entity, ALM adds a direct link to the entity and indirect links to related entities.

Indirect linkage is a one-directional flow; ALM indirectly links higher-level related entities only.

The diagram below shows the indirect links that ALM creates if a defect is linked to a run step.



To learn more about defects, see ["Defect Tracking Overview"](#) above.

For task details, see ["How to Link Defects"](#) on page 746.

Example

If you link a defect to a run:

- The defect is indirectly linked to the run, the run's test instance, the test set, and the test.
- If the corresponding test is covered by a requirement, an indirect link is also added to the requirement.
- The defect is not indirectly linked to the run's steps, because the run steps are lower-level related entities.

Note: Only direct links to defects from an entity can be deleted.

How to Track Defects in ALM

This task describes how to track application defects during the development process.

To learn more about defects, see ["Defect Tracking Overview" on previous page](#).

Note:


- **Use-case:** For a use-case scenario related to this task, see ["Track Defects - Use-Case Scenario" on page 741](#).
- **Higher-level task:** This task is part of a higher-level task. For details, see ["Application Lifecycle Management Roadmap" on page 36](#).

This task includes the following steps:

- ["Create defects" below](#)
 - ["Import defects - optional" on next page](#)
 - ["Link defects and other entities" on next page](#)
 - ["Search for defects" on next page](#)
 - ["Assign, repair, and update defects" on next page](#)
 - ["Analyze defects" on page 741](#)
 - ["Establish baseline" on page 741](#)
1. **Create defects**
 - a. On the ALM sidebar, select **Defects**.
 - b. Click **New Defect** in the Defects grid toolbar to open the New Defect dialog box. For user interface details on the New Defect dialog box, see ["New Defect Dialog Box" on page 756](#).

Tip: Creating a defect can be an ongoing process that may require switching between the New Defect dialog box, other ALM modules, and possibly the browser itself.

To switch to another module while creating a defect, click **Close** without submitting the defect. To return to the defect you are creating, click **New Defect** from the Defects module again. ALM retains the data so you can continue working on the same defect.

If you want to start work on a different defect, click the **Clear All Fields**  button to clear the retained data.

c. In the New Defect dialog box, fill in the fields.

2. Import defects - optional

In addition to creating defects directly in ALM, you can also import defects to your ALM project from Microsoft Word or Microsoft Excel. To import defects, you must first install the appropriate add-in. For details on add-ins, see the *HP Application Lifecycle Management Installation Guide*.

3. Link defects and other entities

You can link defects to requirements, tests, test sets, test instances, runs, run steps, business process tests, flows, and other defects.

For task details on how to link defects, see ["How to Link Defects" on page 746](#).

4. Search for defects

In the Defects module, you can search for defects from:

- The Defects grid, for example, to find defects related to a specific issue, or to modify a specific defect.
- The New Defect dialog box, for example, to avoid creating duplicate defects.

For task details on how to search for defects, see ["How to Search for Defects" on page 745](#).

5. Assign, repair, and update defects

Periodically review defects in the project, decide which ones to fix, and modify defect statuses, target releases, target cycles, and other fields accordingly.

In the Defects module, double-click a defect in the Defects grid. In the Defect Details dialog box, fill in the fields. For user interface details on the Defect Details dialog box, see the ["Defect Details Dialog Box " on page 758](#).

Among other tasks, you can:

- Change the status of defects that are candidates to be fixed to **Open**, and assign the defects to members of the development team.
- In the **Target Release** and **Target Cycle** fields, assign the open defects to the releases and cycles in which they are targeted to be fixed.
- Fix the open defects. This involves identifying the cause of the defects, modifying and

rebuilding the application, and rerunning your tests. For example, if a defect does not recur, you can assign to the defect the status **Closed**. If a defect is detected again, you can reassign to the defect the status **Open**. When a defect is repaired, you can assign it the status **Fixed**.

6. Analyze defects

Analyze defect data by generating reports and graphs.

Use one of the following:

- **View defect data in a graph.** On the Defects module menu, select **Analysis > Graphs**. For task details on generating graphs, see the ["How to Generate a Graph" on page 790](#).
- **Create a report of defect data.** On the Defects module menu, select **Analysis > Reports**. For task details on creating reports, see the ["How to Manage Standard Reports" on page 876](#).

For task details on additional analysis tools in ALM, see the ["How to Analyze Data in ALM" on page 772](#).

7. Establish baseline

Create a baseline to sign off on or compare significant milestones in your application lifecycle. For task details, see ["How to Use Libraries and Baselines in ALM" on page 210](#).

Track Defects - Use-Case Scenario

This use-case scenario provides an example of how to track defects.

Note: For a task related to this scenario, see ["How to Track Defects in ALM" on page 739](#).

This scenario includes the following steps:

- ["Create defects" below](#)
- ["Search for duplicate defects" on next page](#)
- ["Link defects and other entities" on page 743](#)
- ["Assign and repair defects while testing new application builds" on page 743](#)
- ["Analyze defects" on page 744](#)

1. Create defects

You are working on a flight reservation application. In four months, you plan on releasing version 10.5. Your release includes four cycles: `Cycle 1`, `Cycle 2`, `Cycle 3`, and `Cycle 4`. Throughout the development process, you need to track and fix defects for each cycle.

Defects, when created, automatically are assigned a unique defect ID and the status **New**.

Tip:

- When a defect is first detected in your application, you generally know only basic information about the defect, such as the defect summary, description, category, and severity. You can edit the defect as you continue tracking the defect.
- You can associate a defect with the cycle and release in which it was detected. For task details on releases and cycles, see ["How to Use Releases and Cycles in ALM" on page 146](#).
- While keeping your defect summary short, try to use relevant and specific keywords to facilitate efficient searches later. For example, a summary whose text is **Empty password problem** might not be specific enough to produce meaningful results when searching; **User profile is registered when Password is empty** could produce better search results.

Suppose, after running the **Password** test in the **Mercury Tours Functionality** test set, you discover that a user profile was registered even though no password was supplied. You might supply the following basic information when creating the new defect:

New Defect

* Summary: User profile is registered when Password is empty

Details

* Detected By: alex_alm
* Severity: 3-High
Assigned To: alice_alm
Closing Date:
Detected in Release:
Estimated Fix Time:
Planned Closing:
* Detected on Date: 10/3/2010
Actual Fix Time:
Closed in Version:
Detected in Cycle:
Detected in Version:
Modified:
Priority:

Description:

Test set: Mercury Tours Functionality
Test: (1) Password
Run: Run_10_25_11-44-37
Step: Step 5: Empty

Description:
1. Skip the Password and Confirm Password fields.
2. Click the Submit button.
3. Check the results on the next page.

Submit Close Help

You can assign the **Detected in Release** field to the **Release 10.5** release, and the **Detected in Cycle** field to the **Cycle 1** cycle, and click **Submit**.

2. Search for duplicate defects

Suppose you are among several quality assurance testers who test the same application. To avoid duplicate defects, it is good practise to search for similar defects.

From the Defects grid, click the **Find Similar Defects**  button and select **Find Similar Text**. The Similar Defects pane opens.

Defect ID	Summary	Description
-----------	---------	-------------

To search for the word **Password** to see all defects related to password issues. If you limit your results to 10 percent, the search may return the following results:

Defect ID	Summary	Description
22	User Name and Password fields have a different leng...	Test Set: Mercury Tours UI Test: [1]Welcome Page Run: Run_9-11_11-4
44	Password is empty	Test Set: Mercury Tours Functionality Test: [1]Password Run: Run_10-2

Item 1 of 2

Note: If you limit your results to 100%, the search is likely to return no results because there is no 100% match for the single word **Password**.

In this case, there is no duplicate defect among the similar defects listed.

If duplicate defects did appear in the project, you could change their status to either **Closed** or **Rejected**, or delete them from the project in the Defects grid.

3. Link defects and other entities

The following example demonstrates how, in the Test Lab module, you can link a defect to a test instance using the Linked Defects tab in the Test Instance Details dialog box:

Defect ID	Defect: Summary	Linked Entity Name	Linked By Status
40	User profile is registered when Password is empty	Test instance <[1]Password> in...	Failed

4. Assign and repair defects while testing new application builds

You, as a quality assurance manager, review a defect, determine a repair priority, change the defect's status to **Open**, and assign it to a member of the development team.

If the defect is planned to be fixed in the next cycle, assign the **Target Release** field and the **Target Cycle** field, for example, to **Release 10.5** and **Cycle 2** respectively.

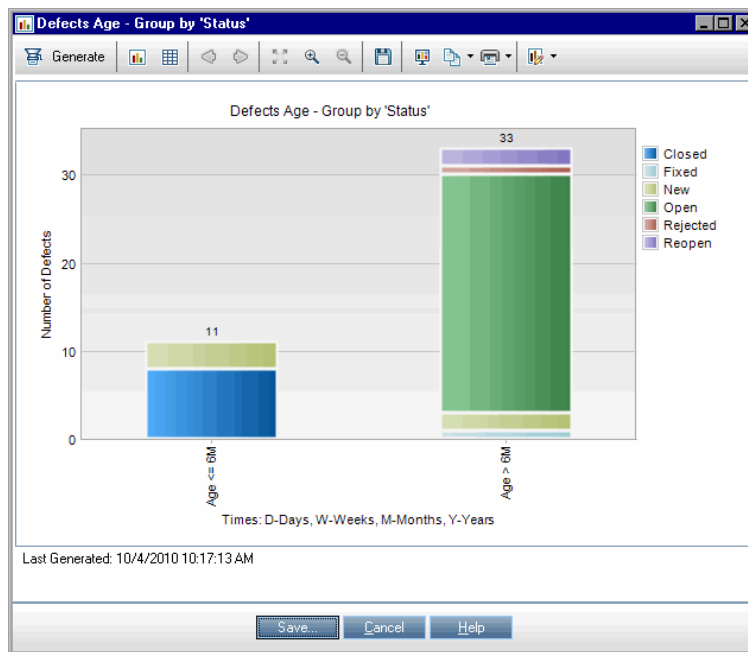
A developer repairs the defect in a new application build and updates the defect status to **Fixed**. The developer retests the application, making sure that the defect does not recur. You determine that the defect is actually repaired and assign it the status **Closed**.

At any point in the process, the managers or the developers can add comments and send emails regarding the defect.

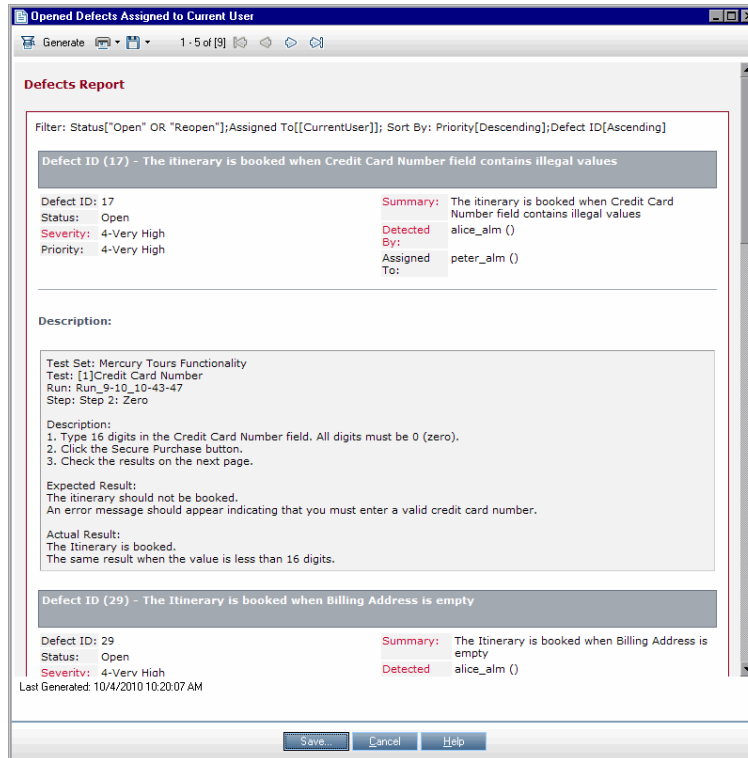
5. Analyze defects

Using various reports and graphs available in the Defects module, you can analyze the defects and their rate of repair.

The following graph shows a summary of defects by age:



The following report lists the defects that the current user, in this case, **peter_alm**, has open.



How to Search for Defects

This task describes how to search for defects using the Similar Defects Dialog Box/Pane. You can search for defects at any time from the Defects grid, for example, to find defects related to a specific issue, or to modify a specific defect. When creating a new defect, you can search for similar defects, for example, to avoid creating duplicate defects.

For user interface details on the Similar Defects Dialog Box/Pane, see ["Similar Defects Dialog Box/Pane" on page 759](#).

1. Display the defect

Display the defect for which you want to find similar defects by doing one of the following:

- Select a defect from the Defects grid.
- While creating a new defect in the New Defect dialog box, enter descriptive information in the **Summary** and **Description** fields.

2. Start the search

Click the **Find Similar Defects**  button.

- Select **Find Similar Defects** to find defects similar to the current defect.
- Select **Find Similar Text** to find defects whose summary or description is similar to a specified text string.

How to Link Defects

The following steps describe how to link defects to ALM entities (requirements, tests, test sets, test instances, runs, run steps and other defects).

For user interface details on the Linked Defects/Entities page, see the "[Linked Defects/Entities Page](#)" on page 762.


1. Link the defect





From the module of the entity to which you want to link a defect, select the Linked Defects or Linked Entities page, and do one of the following:

- **Add new defect:** Create the defect to which to link.
- **Select existing defect:** Select an existing defect to which to link.

2. View results

You can view the linked entity from the corresponding defect, and you can view the linked defect from the corresponding entity.

In grid views, when an entity is linked to a defect, ALM adds the **Linked Defects**  icon to the entity.

				Name	Direct Cover Status	Author	Req ID
				Requirements	---		0
				Mercury Tours Application	---	alex_qc	133
				Online Travel Booking Services	---	alex_qc	134
				Products/Services On Sale	▼ Not Covered	shelly_qc	135
				Flight Tickets	✖ Failed	shelly_qc	136
				Flight Search	✖ Failed	robert_qc	141
				Search Conditions	▼ Not Covered	shelly_qc	142
				Origin And Destination	✖ Failed	peter_qc	143
				One-Way Trip	✖ Failed	robert_qc	149

Defect User Interface

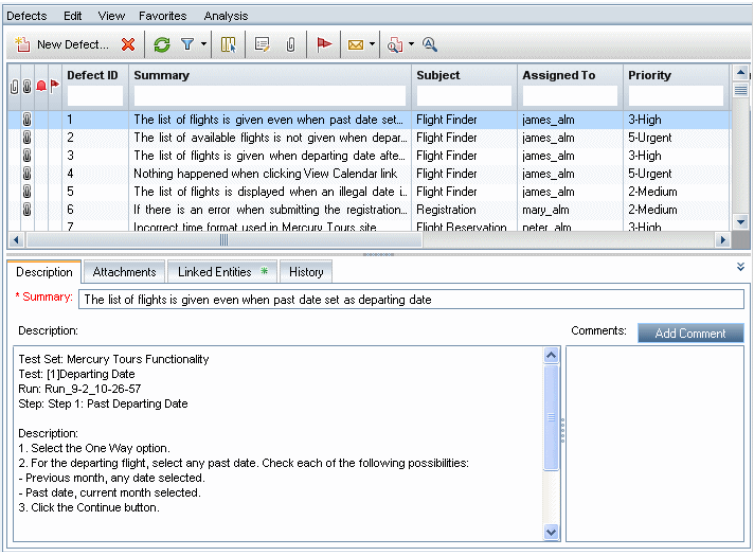
This section includes:

Defects Module Window.....	747
Defects Module Menus and Buttons.....	748
Defects Module Icons.....	752
Defects Module Fields.....	753
New Defect Dialog Box.....	756
Defect Details Dialog Box.....	758
Similar Defects Dialog Box/Pane.....	759
Linked Defects/Entities Page.....	762

Defects to Link Dialog Box.....	765
Select Requirements Dialog Box.....	767

Defects Module Window

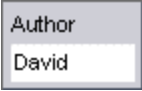

This window enables you to define and maintain ALM defects. ALM organizes and displays defect data in the Defects grid.



To access	On the ALM sidebar, select Defects .
Relevant tasks	"How to Track Defects in ALM" on page 739
See also	"Defect Tracking Overview" on page 738

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<Defects module common UI elements>	<ul style="list-style-type: none">• Defect fields. For field definitions, see "Defects Module Fields" on page 753.• Defect menus and buttons. For command and button descriptions, see "Defects Module Menus and Buttons" on next page.• Defect icons. For icon descriptions, see "Defects Module Icons" on page 752.• ALM main menu and sidebar. For details on the Tools menu, Help menu, and sidebar, see "ALM Common Areas" on page 45.

UI Element	Description
<filter status bar>	<p>Describes the filter currently applied to the grid. Located directly under the toolbar.</p> <ul style="list-style-type: none"> • Showing <x> results. Indicates the number of records currently displayed out of the total records. • Retrieve all <x> results. Click to display all records.
<grid filters> 	<p>Displays a grid filter box under each column name, enabling you to define a filter condition for a column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For user interface details, see "Select Filter Condition Dialog Box" on page 70.</p>
<similar defects pane>	<p>Enables you to check for similar defects from the Defects grid. For user interface details, see "Similar Defects Dialog Box/Pane" on page 759.</p> <p>Available: After selecting the Find Similar Defects  button in the Defects grid.</p>
Description tab	<p>Describes the currently selected defect.</p> <p>Click in the Description or Comments text boxes in this tab to display a toolbar for formatting and spell checking the text.</p>
Attachments tab	<p>Lists attachments that provide additional information about the currently selected defect. For user interface details, see "Attachments Page" on page 83.</p>
Linked Entities tab	<p>Lists the defects and other entities linked to the currently selected defect. For user interface details, see "Linked Defects/Entities Page" on page 762.</p>
History tab	<p>Lists changes made to the currently selected defect. For user interface details, see "History Tab" on page 78.</p>

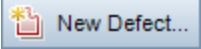




Defects Module Menus and Buttons





This section describes the menus and buttons available in the Defects module.







To access	On the ALM sidebar, select Defects .
Important information	<p>Tip: You can access the Defects menu bar from the Defects module by pressing the shortcut key ALT. Additionally, you can perform many other ALM operations using shortcut keys. For a list of shortcut keys, see "ALM Keyboard Shortcut Reference" on page 132.</p>
Relevant tasks	"How to Track Defects in ALM" on page 739

See also	<ul style="list-style-type: none"> • "Defects Module Icons" on page 752 • "Defect Tracking Overview" on page 738
-----------------	--

User interface elements are described below:

UI Element	Menu	Description
New Defect 	Defects	<p>Opens the Create New Defect dialog box, enabling you to add a defect, or continue editing a defect that you started to add. For user interface details, see "New Defect Dialog Box" on page 756.</p> <p>Tip: Creating a defect can be an ongoing process that may require switching between the New Defect dialog box, other ALM modules, and possibly the browser itself.</p> <p>To switch to another module while creating a defect, click Close without submitting the defect. To return to the defect you are creating, click New Defect from the Defects module again. ALM retains the data so you can continue working on the same defect.</p> <p>If you want to start work on a different defect, click the Clear All Fields  button to clear the retained data.</p>
Go to Defect 	Defects	<p>Opens the Go To Defect dialog box, enabling you to find a specific defect by Defect ID.</p>
Send by E-mail 	Defects	<p>Opens the Send E-mail dialog box, enabling you to send a defect by email to recipients selected from a list. For user interface details, see "Send E-mail Dialog Box" on page 79.</p>
Defect Details 	Defects	<p>Opens the Defect Details dialog box, displaying the details of the selected defect. For user interface details, see "Defect Details Dialog Box " on page 758.</p>
Export	Defects	<p>Opens the Export Grid Data dialog box, enabling you to export the defects in a grid as a text file, Microsoft Excel worksheet, Microsoft Word document, or HTML document.</p> <p>Select one of the following options:</p> <ul style="list-style-type: none"> • All. Exports all defects in the grid. • Selected. Exports selected defects in the grid.

UI Element	Menu	Description
Copy/Paste	Edit	Copies selected defects within the same project or across projects. Note: To copy defects across projects, both projects must use the same ALM version and patch level. Copying defects works only when no groupings are applied.
Copy URL/Paste	Edit	Copies a selected defect and pastes its URL as a link. The defect itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the defect. If you are not already logged in, ALM first prompts for login details.
Delete 	Edit	Deletes the selected defect. When you delete a defect, ALM does not reuse the Defect ID.
Select All	Edit	Selects all defects in the grid.
Invert Selection	Edit	Unselects all previously selected defects in the grid and selects all previously unselected defects.
Find	Edit	Opens the Find dialog box, enabling you to search for a defect in the Defects module. For user interface details, see "Find Dialog Box" on page 73 .
Find Next	Edit	Searches for the next item in the Defects grid that meets the previously-defined search criteria.
Replace	Edit	Opens the Replace dialog box, enabling you to replace a field value. For user interface details, see "Replace Dialog Box" on page 75 .
Update Selected	Edit	Opens the Update Selected dialog box, enabling you to update a field value for multiple selected defects in the grid. For user interface details, see "Update Selected Dialog Box" on page 88 .
Text Search 	Edit	Opens the text search pane in the lower part of the Defects module window, enabling you to search for records in predefined fields. For user interface details, see "Text Search Pane" on page 76 .
Find Similar Defects 	Edit	Search keywords in the Summary and Description fields for defects similar to the selected defect. Similar defects are displayed according to the percentage of similarity in the pane at the bottom of the window. For user interface details, see the "Similar Defects Dialog Box/Pane" on page 759 .
Find Similar Text 	Edit	Search keywords in the Summary and Description fields for defects similar to a text string. For user interface details, see the "Similar Defects Dialog Box/Pane" on page 759 .

UI Element	Menu	Description
Alerts	Edit	Opens the Alerts dialog box, enabling you to display alerts for the defect. For user interface details, see "Alerts Dialog Box" on page 97 .
Clear Alerts	Edit	Clears displayed alerts for the module. For user interface details, see "How to Use Alerts" on page 93 .
Flag for Follow Up 	Edit	Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for the selected defect. For user interface details, see "Flag For Follow Up Dialog Box" on page 98 .
Clear Follow Up Flag	Edit	Clears a follow up flag of a selected defect. For concept details, see "Follow Up Flags Overview" on page 93 .
Set Default Values	Edit	Opens the Set Default Values dialog box, enabling you to set default values for certain defect fields. For user interface details, see "Set Default Values Dialog Box" on page 89 .
Clear Default Values	Edit	Removes default values set using the Set Default Values dialog box. No defaults are available when creating new defects.
Grid Filters 	View	Displays a grid filter box under each column name, enabling you to define a filter condition for a column. Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For more details, see "Select Filter Condition Dialog Box" on page 70 .
Indicator Columns	View	Display indicators on the left-side of the Defects grid. For user interface details, see "Defects Module Icons" on next page .
Information Panel	View	Displays information panel tabs on the bottom of the Defects grid. For more details, see "Defects Module Window" on page 747 .
Filter/Sort 	View	Enables you to filter and sort the defects in the grid. Any currently applied filters or sorting orders are displayed below the toolbar. For user interface details, see "Filter Dialog Box" on page 61 .
Refresh All 	View	Refreshes the Defects grid so that it displays the most up-to-date defects based on the filters you have selected.
Select Columns 	View	Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For user interface details, see "Select Columns/Select Fields Dialog Box" on page 86 .
Attachments 	<toolbar>	Opens the Attachments page, enabling you to view attachments for, and add attachments to, the selected defect. For user interface details, see "Attachments Page" on page 83 .






UI Element	Menu	Description
Add to Favorites	Favorites	Opens the Add Favorite dialog box, enabling you to add a favorite view to your private or the public folder. For user interface details, see "Add Favorite Dialog Box" on page 104 .
Organize Favorites	Favorites	Organizes your favorite views. For user interface details, "Organize Favorites Dialog Box" on page 105 .
Private	Favorites	Lists the favorite views that are accessible only to the user who created them.
Public	Favorites	Lists the favorite views that are accessible to all users.
Project Reports	Analysis	<p>Lists the predefined project reports you can produce on defects data. For details on the report types, see "Predefined Project Reports" on page 840.</p> <p>Selecting a report from the list generates a preview of the report. The preview displays up to five entities per report section. To generate the full report, in the upper left corner of the preview, click the downward arrow adjacent to the Generate button and select the report format to generate.</p>
Graphs	Analysis	<p>Lists the graphs you can generate for defects data. Select a predefined graph, or launch the graph wizard.</p> <p>For details on the predefined graph types, see "Entity Graph Types" on page 793.</p>
Most Recently Used	Analysis	Lists the most recently viewed reports and graphs in ALM. Displays up to ten items.
Standard Defect Report	Analysis > Reports	Lists the defects that appear in the Defects grid. For details, see "Standard Reports" on page 875
Report Selected	Analysis > Reports	Displays a report of the selected defects.

Defects Module Icons

This section describes the icons available in the Defects module.

To access	On the ALM sidebar, select Defects .
Relevant tasks	"How to Track Defects in ALM" on page 739
See also	<ul style="list-style-type: none">• "Defect Tracking Overview" on page 738• "Defects Module Menus and Buttons" on page 748• "Defects Module Fields" on next page

The icons are described below:

UI Element (A - Z)	Description
	<green asterisk> . The applicable tab is populated.
	Alerts. Click to view alerts for the defect. <ul style="list-style-type: none"> • Red alert. The alert is new. • Gray alert. The alert has already been read. For user interface details, see "Alerts Dialog Box" on page 97 .
	Attachments. Click to view attachments for the specified defect. For user interface details, see "Attachments Page" on page 83 .
	Follow Up Flags. Click to view follow up flags for the defect. <ul style="list-style-type: none"> • Gray flag. The follow up flag is new. • Red flag. The follow up date has arrived. For user interface details, see "Flag For Follow Up Dialog Box" on page 98 .
	Linked Entities. Click to view linked entities for the defect in the Defect Details dialog box. For user interface details, see "Linked Defects/Entities Page" on page 762 .

Defects Module Fields

This section describes the Defects module fields.

To access	On the ALM sidebar, select Defects .
Important information	<ul style="list-style-type: none"> • You can add user-defined fields and change the label of any of the fields in the Defects module. You can also customize project lists. For details, see the <i>HP Application Lifecycle Management Administrator Guide</i>. • You can use the Script Editor to restrict and dynamically change the fields and values in the Defects module. For details, see the <i>HP Application Lifecycle Management Administrator Guide</i>. • When you select a defects column with a user name value (including user-defined fields), ALM displays a list with the name and full name of each user. You can search for users, sort users, group users by user group, and select users from the users list or a group tree. For user interface details, see "Users List Dialog Box" on page 72.
Relevant tasks	"How to Track Defects in ALM" on page 739

See also	<ul style="list-style-type: none"> • "Defect Tracking Overview" on page 738 • "Defects Module Menus and Buttons" on page 748 • "Defects Module Window" on page 747
-----------------	---

User interface elements are described below:


UI Element (A - Z)	Description
Actual Fix Time	The actual number of days needed to fix the defect. If this field is left blank, ALM automatically calculates the Actual Fix Time as Closing Date–Detected on Date .
Assigned To	The user name of the person who is assigned to fix the defect.
Closed in Version	The application version in which the defect was closed.
Closing Date	The date on which the defect was closed.
Comments	Comments about the defect. To add a new comment, click the Add Comment button. A new section is added to the Comments box, displaying your user name and the database's current date.
Defect ID	A unique numeric ID for the defect, assigned automatically by ALM. The Defect ID is read-only.
Description	Describes the defect in detail.
Detected By	The user name of the person who submitted the defect.
Detected in Cycle	The cycle in which the defect was detected. When assigning a defect to a cycle in the Detected in Cycle field, ALM automatically assigns its release to the Detected in Release field.
Detected in Release	The release in which the defect was detected.
Detected in Version	The application version in which the defect was detected.
Detected on Date	The date on which the defect was detected. Default: The current database server date.
Estimated Fix Time	The estimated number of days required for fixing the defect.
Modified	The date and time when this defect was last changed.

UI Element (A - Z)	Description
Planned Closing Version	The version in which the defect is planned to be fixed.
Priority	The priority of the defect, ranging from low priority (level 1) to urgent priority (level 5).
Project	The name of the project where the defect occurs.
Reproducible	Whether the defect can be recreated under the same conditions by which it was detected. Default: Y
Severity	The severity of the defect, ranging from low (level 1) to urgent (level 5).
Status	The current status of the defect. Defect status can be one of the following: Closed, Fixed, New, Open, Rejected, Reopen . Default: New
Subject	The subject folder.
Summary	A brief summary of the defect.
Target Cycle	The cycle in which the defect is targeted to be fixed. When assigning a defect to a cycle in the Target Cycle field, ALM automatically assigns its release to the Target Release field.
Target Release	The release in which the defect is targeted to be closed.









New Defect Dialog Box

This dialog box enables you to create defects.

The screenshot shows the 'New Defect' dialog box. It features a title bar with standard window controls. Below the title bar is a toolbar with icons for cancel, save, print, and a dropdown menu. Two checkboxes, 'Use Default Values' and 'Set Default Values', are located below the toolbar. The main content area is divided into two tabs: 'Summary' and 'Details'. The 'Details' tab is currently selected, displaying various input fields for defect information. These include 'Category', 'Detected By' (pre-filled with 'peter_alm'), 'Project' (pre-filled with 'Mercury Tours Web Sit'), 'Severity', 'Reproducible' (pre-filled with 'Y'), 'Priority', 'Subject', 'Detected on D...' (pre-filled with '10/4/2010'), 'Detected in Ver...', 'Status' (pre-filled with 'New'), 'Regression' (pre-filled with 'N'), and 'Assigned To'. A large text area for 'Description' is positioned below these fields. At the bottom of the dialog are three buttons: 'Submit', 'Close', and 'Help'.

To access	Use one of the following: <ul style="list-style-type: none">From the Defects module, click  New Defect...From any module, select Tools > New Defect.
Important information	Tip: You can set default values for certain defect fields. For user interface details, see "Set Default Values Dialog Box" on page 89.
Relevant tasks	"How to Track Defects in ALM" on page 739
See also	"Defect Tracking Overview" on page 738

User interface elements are described below:

UI Element	Description
	<p>Clear All Fields. Clears the data.</p> <p>Tip: Creating a defect can be an ongoing process that may require switching between the New Defect dialog box, other ALM modules, and possibly the browser itself.</p> <p>To switch to another module while creating a defect, click Close without submitting the defect. To return to the defect you are creating, click New Defect from the Defects module again. ALM retains the data so you can continue working on the same defect.</p> <p>If you want to start work on a different defect, click the Clear All Fields  button to clear the retained data.</p>
	<p>Find Similar. Opens the Similar Defects dialog box, enabling you to find:</p> <ul style="list-style-type: none"> Defects similar to the new defect. Defects similar to a text string. <p>For user interface details, see "Similar Defects Dialog Box/Pane" on page 759.</p>
	<p>Check Spelling. Checks the spelling for the selected word or text box.</p>
	<p>Thesaurus. Displays a synonym, antonym, or related word for the selected word.</p>
	<p>Spelling Options. Enables you to configure the way ALM checks spelling.</p>
 Use default values	<p>Use Default Values. Fills in certain fields with default values, as specified in the Set Default Values dialog box. For user interface details, see "Set Default Values Dialog Box" on page 89.</p>
 Set default values	<p>Set Default Values. Enables you to specify default values for certain fields using the Set Default Values dialog box. For user interface details, see "Set Default Values Dialog Box" on page 89.</p>
Details	<p>Lists the defect fields. For details on defect fields, see "Defects Module Fields" on page 753.</p>
Attachments	<p>Enables you to add attachments that provide additional information about the new defect. For user interface details, see "Attachments Page" on page 83.</p>







Defect Details Dialog Box

This dialog box enables you to update defect details, add attachments, view defect history, and link to other defects. You can also view other entities that are linked to the defect.

To access	Right-click a defect in the Defects grid and select Defect Details .
Relevant tasks	"How to Track Defects in ALM" on page 739
See also	<ul style="list-style-type: none"> "Defect Tracking Overview" on page 738 "Defects Module Fields" on page 753

User interface elements are described below:

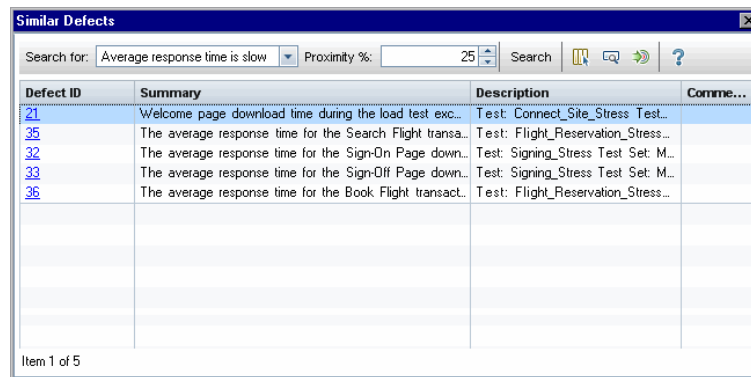
UI Element (A - Z)	Description
	First/Previous/Next/Last Entity. Allows you to browse through the defects.
	Go to Defect. Opens the Go To Defect dialog box, enabling you to find a specific defect by Defect ID. You can only go to defects that are in the current filter. After specifying the defect ID, click one of the following: <ul style="list-style-type: none"> Open Details. Opens the defect in the Defects Details dialog box. Show in Grid. Highlights the defect in the Defects grid, after you close the Defects Details dialog box.
	Flag for Follow Up. Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for selected defects. For user interface details, see "Flag For Follow Up Dialog Box" on page 98.

UI Element (A - Z)	Description
	<p>Alerts. Opens the Alerts dialog box, enabling you to display alerts for the defect. For user interface details, see "Alerts Dialog Box" on page 97.</p> <p>Available when: The selected defect has an alert associated with it.</p>
	<p>Standard Defect Report. Select one of the following reports:</p> <ul style="list-style-type: none"> • Execution Report. Displays detailed information about the linked test run. <p>Available: If the defect is linked to a test run.</p> <ul style="list-style-type: none"> • Standard Defect Report. A standard defect report for the selected defect.
	<p>Send by E-mail. Opens the Send E-mail dialog box, enabling you to send a defect by email to recipients selected from a list. For user interface details, see "Send E-mail Dialog Box" on page 79.</p>
	<p>Spell Check. Checks the spelling for the selected word or text box.</p>
	<p>Thesaurus. Displays a synonym, antonym, or related word for the selected word.</p>
	<p>Spelling Options. Enables you to configure the way ALM checks spelling.</p>
Details	<p>Lists the defect fields. For details on defect fields, see "Defects Module Fields" on page 753.</p>
Attachments	<p>Lists attachments that provide additional information about the currently selected defect. For user interface details, see "Attachments Page" on page 83.</p>
Linked Entities	<p>Lists the entities linked to the currently selected defect. For user interface details, see "Linked Defects/Entities Page" on page 762.</p>
History	<p>Lists changes made to the currently selected defect. For user interface details, see "History Tab" on page 78.</p>

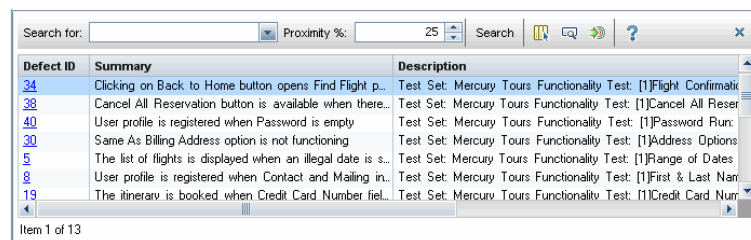
Similar Defects Dialog Box/Pane


The Similar Defects dialog box enables you to check for similar defects before submitting a new defect. The Similar Defects pane enables you to check for similar defects at any time from the Defects grid.

Similar Defects Dialog Box






Similar Defects Pane



To access	<p>In the Defects grid or the New Defect dialog box, select a defect and click the Find Similar Defects  button.</p> <p>Select either Find Similar Defects or Find Similar Text.</p>
Important information	<ul style="list-style-type: none"> Checking for similar defects is done by comparing a selected defect with other defects in your project or by comparing defects to a text string. When performing a Find Similar operation, results are displayed with the most likely candidates on top. If no similar defects are found, a message is displayed.
Relevant tasks	"How to Search for Defects" on page 745
See also	"Defect Tracking Overview" on page 738

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
Search for:	<p>Text string to find.</p> <p>Letter case does not affect the results.</p> <p>The following are ignored:</p> <ul style="list-style-type: none"> articles (a, an, the); coordinate conjunctions (and, but, for, nor, or); boolean operators (and, or, not, if, then); wildcards (?, *, [])
Proximity %	<p>When searching for similar text, ALM limits the results of defects found to those with a minimum similarity according to this percentage.</p> <p>Default: ALM returns defects with a similarity of at least 25 percent.</p>
Search	Start search.
	Select columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For user interface details, see "Select Columns/Select Fields Dialog Box" on page 86 .
	Searchable Fields. The fields used to find similar defects. The fields are read-only.
	Go To. Locates the selected defect in the Defects grid.
<defects>	List of similar defects. For details of the fields displayed for the similar defects, see "Defects Module Fields" on page 753 .
Item	<p>The number of the current defect in relation to the total number of similar defects found.</p> <p>Example: Item 2 of 10</p>

Linked Defects/Entities Page

This page enables you to define and maintain links to defects from defects and other entities.

Linked Defects Tab

Defect: Summary	Linked Entity ID	Link Comment
The list of flights is given even when past date set as departing date	1	
The list of flights is given when departing date after returning date	3	
The list of flights is displayed when an illegal date is set as the depart...	5	
If there is an error when submitting the registration form, all fields are...	6	
Incorrect time format used in Mercury Tours site	7	

Linked Entities Tab

Created By	Creation Date	Link Comment	Link ID	Link Type	Linked By Sta
alex_alm	2/3/2009		164		Failed







To access





Use one of the following:

- **From the Defects module:** On the Defect Details dialog box sidebar, select **Linked Entities**. Click the **Defects** tab for linked defects or the **Others** tab for linked entities that are not defects.
- **From other modules and dialog boxes:** Click **Linked Defects** on the sidebar or the **Linked Defects** tab.

Important information	<ul style="list-style-type: none"> You can link defects to the following ALM entities: requirements, business, tests, test sets, business process tests, flows, test instances, runs, run steps, and other defects. From within the Defects module, you can link to other defects. To link a defect to other ALM entities, go to the module or Details dialog box for that entity.
Relevant tasks	"How to Link Defects" on page 746
See also	"Defect Tracking Overview" on page 738

User interface elements are described below (unlabeled elements are shown in angle brackets>):


UI Element (A - Z)	Description
	<p>First/Previous/Next/Last Entity. Allows you to browse through the entities.</p> <p>Available from: Linked Defects tab.</p>
	<p>Add and Link Defect. Opens the New Defect dialog box, enabling you to add a defect link by submitting a new defect. For user interface details, see "New Defect Dialog Box" on page 756.</p> <p>Available from: All modules except the Defects module.</p>
	<p>Link Existing Defect. Enables you to add a link to an existing defect:</p> <ul style="list-style-type: none"> By ID. In the Link Existing Defect dialog box, select a defect by typing the defect ID. Select. In the Defects to Link dialog box, select a defect from the grid. For user interface details, see "Defects to Link Dialog Box" on page 765.
	<p>Link From Requirement. Enables you to add a link to an existing requirement:</p> <ul style="list-style-type: none"> By ID. In the Link Existing Requirement dialog box, select a requirement by typing the requirement ID. Select. In the Select Requirements dialog box, select a requirement from the grid. For user interface details, see "Select Requirements Dialog Box" on page 767. <p>Available from: This page's Others tab in the Defects module.</p>
	<p>Remove Link. Removes the selected link.</p>
	<p>Refresh All. Refreshes the list of linked defects or entities so that it displays the most up-to-date defects based on the filters you have selected.</p>

UI Element (A - Z)	Description
	Filter/Sort. Enables you to filter and sort the list of linked defects and entities. Any currently applied filters or sorting orders are displayed below the toolbar. For user interface details, see "Filter Dialog Box" on page 61 .
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For user interface details, see "Select Columns/Select Fields Dialog Box" on page 86 .
	Defect Details. Opens the Defect Details dialog box, displaying the details of the selected defect. For user interface details, see "Defect Details Dialog Box " on page 758 .
Type of Link	<p>Select an option:</p> <ul style="list-style-type: none"> • Direct links. Displays direct links only. • All links. Displays all links. <p>For information about direct and indirect links, see "Defect Tracking Overview" on page 738.</p> <p>Available from: All modules except the Defects module.</p>
Show Links for	<p>Determines which links to display:</p> <ul style="list-style-type: none"> • Current Req Links. Defect links added to the current requirement only. • Including Children's Links. Defect links added to the current requirement and its children. <p>Available from: Requirements module</p>
<filter status bar>	Describes the filters currently applied to the grid. Located directly above the grid filter boxes.
<Defects module fields>	For user interface details, see "Defects Module Fields" on page 753 .
<grid filters> 	<p>Displays a grid filter box under each column name, enabling you to define a filter condition for a column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For user interface details, see "Select Filter Condition Dialog Box" on page 70.</p>
Created By	The user name of the person who created the link.
Creation Date	The date on which the link was created.
Link Comment	Enables you to add comments about the link.
Link ID	A unique numeric ID for the link, assigned automatically by ALM. The Link ID is read-only.





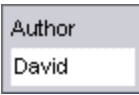
UI Element (A - Z)	Description
Link Type	A value of the Link Type customized list. For more information on lists, see the <i>HP Application Lifecycle Management Administrator Guide</i> .
Linked By Status	The current status of the linked entity.
Linked Entity ID	A unique numeric ID for the linked entity, assigned automatically by ALM. The Linked Entity ID is read-only.
Linked Entity Name	The linked entity name. For example, the requirement name.
Linked Entity Type	The linked entity type (for example: step, test, test set).
Defects	A list of defects linked to the current defect.
Others	A list of other entities linked to the current defect.

Defects to Link Dialog Box

This dialog box enables you to link defects to other defects in the Defects module.

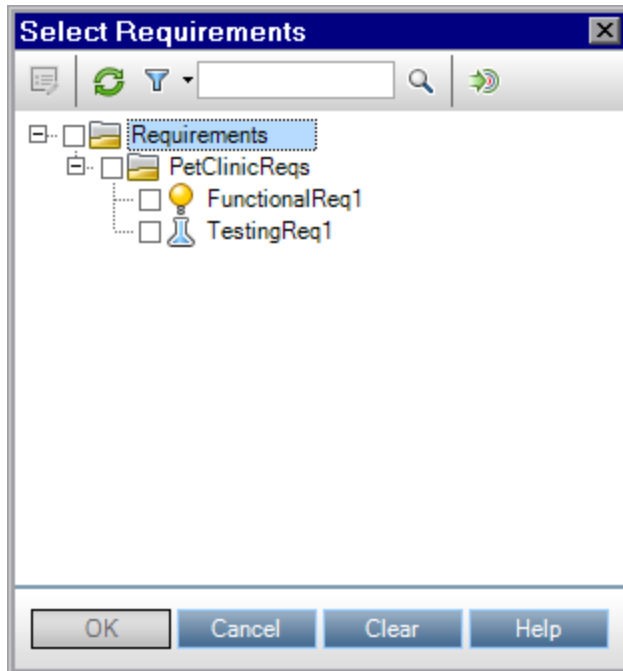
To access	Open the Defect Details dialog box for a defect, click the Linked Entities tab and then the Defects tab. Click Link Existing Defect  and then select Select .
Relevant tasks	"How to Link Defects" on page 746
See also	"Defect Linkage" on page 738


User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
	Refresh. Refreshes the list of defects.
	Filter/Sort. Enables you to filter the data according to the criteria that you choose. For more details, see "Filter Dialog Box" on page 61 .
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the data grid, and their order. For user interface details, see "Select Columns/Select Fields Dialog Box" on page 86 .
	Search. Opens the Similar Defects dialog box, enabling you to find defects similar to a text string. For user interface details, see "Similar Defects Dialog Box/Pane" on page 759 .
<filter status bar>	Describes the filter currently applied to the grid. Located directly above the grid filter boxes.
<grid filters> 	<p>Displays a grid filter box under each column name, enabling you to define a filter condition for a column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For user interface details, see "Select Filter Condition Dialog Box" on page 70.</p> <p>Available from: Model Grid view</p>
<defects>	Displays the defects in the Defects module in a data grid.
Description	Displays the summary, description and comments for the selected defect in the data grid.




Select Requirements Dialog Box




This dialog box enables you to link requirements to defects in the Defects module.



To access	Open the Defect Details dialog box for a defect, click the Linked Entities tab and then the Others tab. Click Link From Requirement  and then click Select .
Relevant tasks	"How to Link Defects" on page 746
See also	"Defect Linkage" on page 738

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
	Show Requirement Details. Opens the Requirement Details dialog box for the requirement selected in the tree.
	Refresh. Refreshes the requirements tree so that it displays the most up-to-date information.
	Filter/Sort. Enables you to filter the data according to the criteria that you choose. For more details, see " Filter Dialog Box " on page 61.
<Find box>	Enter the name of the requirement you want to search for and click the Find button.

UI Element	Description
	Find. Searches the requirements tree for the value you specify in the Find box.
	Go to Entity by ID. Opens the Go to Requirement dialog box, enabling you to locate the requirement in the tree according to Requirement ID.
<requirements tree>	Displays the requirements tree in the Requirements module. Expand the tree and select a requirement. You can assign more than one requirement to a defect.
	Clears the assigned requirement from the defect.

Analysis

Chapter 40

Introducing Analysis

This chapter includes:

Analysis Overview.....	772
How to Analyze Data in ALM.....	772
Dashboard User Interface.....	774

Analysis Overview

HP Application Lifecycle Management (ALM) provides you with analysis tools enabling you to analyze and display ALM data in various formats.

Dashboard Modules

In the Dashboard modules, you analyze ALM data by creating graphs, standard reports, and Excel reports. You can also create dashboard pages that display multiple graphs side-by-side.

Dashboard contains the following modules:

- **Analysis View module.** Contains the analysis tree in which you organize all of your analysis items. Analysis items can be any of the following analysis types: graphs, project reports, and Excel reports.

Users with the required administrator permissions also have access to the Analysis Menus tab. This tab enables you to manage the analysis items that are generated from within the Analysis menu in specific modules, such as Requirements and Test Lab.

- **Dashboard View module.** Contains the dashboard tree in which you organize dashboard pages. In **dashboard pages** you arrange multiple graphs that you created in the analysis tree, and display them in a single view.

Additional Analysis Tools

- **Live Analysis graphs.** Enables you to create and display a dynamic graphic representation of data related to test plans and test sets. For more details, see ["Live Analysis Graphs" on page 883](#).
- **Document Generator.** Enables you to create a Microsoft Word document containing a project's requirements, test plans, test set folders, and defect tracking data. For more details, see ["Project Documents" on page 889](#).

For task details, see ["How to Analyze Data in ALM" below](#).

Note: Run step information of runs executed in Sprinter are not included in any of the reporting tools.

How to Analyze Data in ALM

This task describes how to analyze data in ALM using various analysis tools.

To learn more about data analysis, see ["Analysis Overview" above](#).

Note: This task is part of a higher-level task. For details, see ["Application Lifecycle Management Roadmap" on page 36](#).

This task includes the following steps:

- ["Generate a graph" below](#)
- ["Generate a dashboard page" below](#)
- ["Generate a project report" below](#)
- ["Generate an Excel report" below](#)
- ["Manage analysis items and dashboard pages" below](#)
- ["Generate a Live Analysis graph" below](#)
- ["Generate a project document" below](#)

Generate a graph

- View selected data in a graph format. For task details, see ["How to Generate a Graph" on page 790](#).
- View selected Project Planning and Tracking data in a graph format. For task details, see ["How to Generate a PPT Graph" on page 826](#).

Generate a dashboard page

Group together selected graphs and view them in a single display.

For task details, see ["How to Generate a Dashboard Page" on page 792](#).

Generate a project report

Produce a project report of selected data.

For task details, see ["How to Create Project Reports" on page 836](#).

Generate an Excel report

Extract data from the project database with SQL queries, and format the data in Microsoft Excel.

For task details, see ["How to Generate an Excel Report" on page 860](#).

Manage analysis items and dashboard pages

Organize analysis items and dashboard pages in the analysis and dashboard trees. Create folders, move, copy, rename, and delete items.

For user interface details, see ["Analysis View Menus and Buttons" on page 777](#).

Generate a Live Analysis graph

Live Analysis graphs enable you to create and display dynamic graphs related to test plan subjects and test sets.

For task details, see ["How to Generate Live Analysis Graphs" on page 884](#).

Generate a project document

Project Documents enable you to create a Microsoft Word document containing selected project data.

For task details, see ["How to Generate a Project Document" on page 890](#).

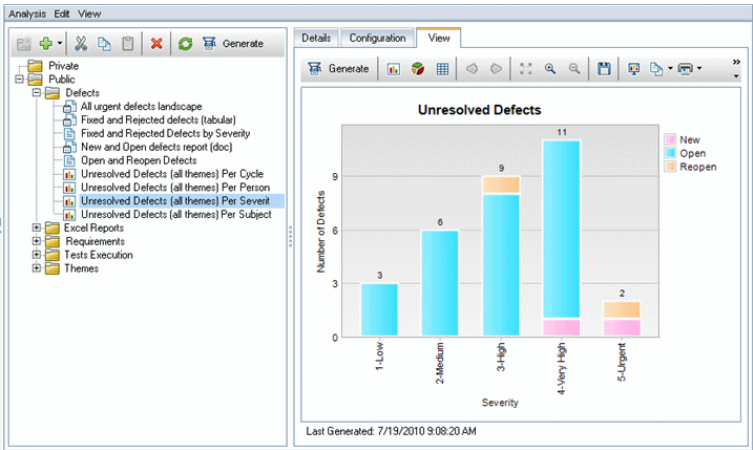
Dashboard User Interface

This section includes:

Analysis View Window.....	774
Dashboard View Window.....	776
Analysis View Menus and Buttons.....	777
Dashboard View Menus and Buttons.....	781
Dashboard Icons.....	783
Details Tab.....	784
Share Analysis Item Dialog Box.....	785

Analysis View Window

This window enables you to create, manage and view analysis items. Analysis items include graphs, project reports, Excel reports, and standard reports.



To access	On the ALM sidebar, under Dashboard , select Analysis View .
Relevant tasks	"How to Analyze Data in ALM" on page 772
See also	"Analysis Overview" on page 772

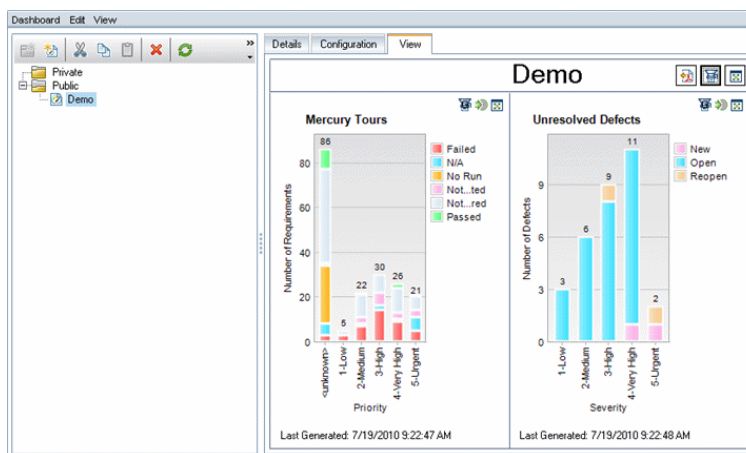
User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
Analysis View tab	<p>Contains a tree which enables you to organize your analysis items under private and public root folders.</p> <ul style="list-style-type: none"> Analysis items that you create in a public folder are accessible to all users. Analysis items that you create in a private folder are accessible only to the user that created them. <div> <p>Note:</p> <ul style="list-style-type: none"> Analysis items in public folders may show different results for different users, depending on the data hiding definitions for the user group. For more information on data permissions, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>. You cannot move analysis items within a folder. When you refresh the tree view, folder items are alphabetized. </div>
Analysis Menus tab	<p>Enables you to view and manage the behavior of analysis items that are generated from within modules, such as Requirements and Test Plan.</p> <p>Analysis items are listed according to the modules in which they appear.</p> <p>Available for: Users with the required administrator permissions only.</p>
<Analysis View common UI elements>	<ul style="list-style-type: none"> Analysis View menus and buttons. For command and button descriptions, see "Analysis View Menus and Buttons" on page 777. Dashboard icons. For icon descriptions, see "Dashboard Icons" on page 783. ALM main menu and sidebar. For details on the Tools menu, Help menu and sidebar, see "ALM Common Areas" on page 45.
Details tab	<p>Displays details of the selected analysis item or folder. For more details, see "Details Tab" on page 784.</p>
Configuration tab	<p>Enables you to configure the selected analysis item. For user interface details, see:</p> <ul style="list-style-type: none"> Graphs: "Configuration Tab/Window - Graphs" on page 797 Project reports: "Configuration Tab - Project Reports" on page 845 Excel reports: "Configuration Tab - Excel Reports" on page 862 Standard reports: "Configuration Tab – Standard Reports" on page 878

UI Element	Description
View tab	<p>Displays the selected graph or standard report. For user interface details, see:</p> <ul style="list-style-type: none"> Graphs: "View Tab - Graphs/Graph Window" on page 803 Standard reports: "View Tab – Standard Reports" on page 880 <p>Note: Project reports and Excel reports are viewed in external applications, such as Microsoft Excel and Word.</p>

Dashboard View Window

This window enables you to create, manage, and view dashboard pages.



To access	On the ALM sidebar, under Dashboard , select Dashboard View .
Relevant tasks	"How to Generate a Dashboard Page" on page 792
See also	"Analysis Overview" on page 772

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<Dashboard View common UI elements>	<ul style="list-style-type: none"> Dashboard View menus and buttons. For command and button descriptions, see "Dashboard View Menus and Buttons" on page 781. Dashboard icons. For icon descriptions, see "Dashboard Icons" on page 783. ALM main menu and sidebar. For details on the Tools menu, Help menu and sidebar, see "ALM Common Areas" on page 45.




UI Element	Description
<dashboard tree>	<p>Organizes dashboard pages under public and private root folders.</p> <ul style="list-style-type: none">• Dashboard pages that you create in a public folder are accessible to all users.• Dashboard pages that you create in a private folder are accessible only to the user that created them.• Public dashboard pages can include only public graphs. <p>Note:</p> <ul style="list-style-type: none">• Dashboard pages in public folders may show different results for different users, depending on the data hiding definitions for the user group. For more information on data permissions, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.• You cannot move dashboard pages within a folder. When you refresh the tree view, dashboard pages in a folder are alphabetized.
Details tab	Displays details of the selected dashboard page or folder. For more details, see "Details Tab" on page 784 .
Configuration tab	Enables you to configure the selected dashboard page. For user interface details, see "Configuration Tab - Dashboard Pages" on page 808 .
View tab	Displays the selected dashboard page. For user interface details, see "View Tab – Dashboard Pages" on page 809 .

Analysis View Menus and Buttons

This section describes the menus and buttons available in the Analysis View module.


To access	On the ALM sidebar, under Dashboard , select Analysis View .
Important information	<p>Tip: You can access the menu bar from the Analysis View module by pressing the shortcut key ALT. Additionally, you can perform many other ALM operations using shortcut keys. For a list of shortcut keys, see "ALM Keyboard Shortcut Reference" on page 132.</p>
Relevant tasks	"How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none">• "Dashboard Icons" on page 783• "Analysis View Window" on page 774

User interface elements are described below:

UI Element (A - Z)	Menu	Description
Copy URL/Paste	Edit	<p>Copies a selected analysis item or folder and pastes its URL as a link. The item itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the item. If you are not already logged in, ALM first prompts for login details.</p> <p>Note: Not available in the Analysis Menus tab.</p>
Copy/Paste 	Edit	<p>Copies selected analysis items or folders within the same project or across projects.</p> <p>Note: You can copy a project report to another project under the following conditions:</p> <ul style="list-style-type: none"> • The name, type, and category of project templates used by the report are the same in both projects. • The report is not based on a baseline. • All entities covered in the report are defined in the target project.
Cut/Paste 	Edit	<p>Moves selected analysis items or folders to a different location in the tree.</p> <p>When you move an analysis item from a public folder to a private folder, it is removed from public dashboard pages in which it is included.</p> <p>Tip: You can also move an analysis item by dragging it to a new location in the tree.</p>
Delete 	Edit	<p>Deletes selected analysis items or folders. You cannot delete the root folders.</p> <p>Note:</p> <ul style="list-style-type: none"> • Deleting a folder deletes all the items included in it. • Deleting a graph removes it from dashboard pages that contain it. • When you delete graphs or project reports from the Analysis Menus tab, you must log out and then log in again in order for the graph/report to be removed.

UI Element (A - Z)	Menu	Description
Expand/Collapse	View	Expands/collapses all the nodes under the selected folder.
Export Excel Report Definition	Edit	<p>Enables you to export the selected Excel report definition to an XML file. You can then import the Excel report definition to another project.</p> <p>Note: Not available in the Analysis Menus tab.</p>
 Generate	Analysis	<p>Generates the selected analysis item.</p> <p>Graphs and Standard Reports: The results are displayed in the View tab. If the View tab is already selected, the analysis item is refreshed with the most up-to-date data.</p> <p>Project Reports and Excel Reports: The results are displayed in an external application.</p>
Graph Wizard	Analysis	Opens the graph wizard, enabling you to create and configure a graph. For more details, see "Graph Wizard" on page 811 .
Import Excel Report Definition	Edit	<p>Enables you to import an Excel report definition that was previously exported to an XML file. The report definition is added to the selected analysis tree folder.</p> <p>Note: Not available in the Analysis Menus tab.</p>
New Business View Graph	Analysis	Opens the New Business View Graph dialog box, enabling you to create a new business view graph in the analysis tree.
New Excel Report	Analysis	<p>Opens the New Excel Report dialog box, enabling you to create a new Excel report in the analysis tree. For more details, see "New Excel Report Dialog Box" on page 872.</p> <p>Note: Not available in the Analysis Menus tab.</p>
New Folder 	Analysis	<p>Opens the New Folder dialog box, enabling you to add a folder under a selected folder in the analysis tree.</p> <p>Folders you create under the Private root folder are available to the owner only. Folders you create under the Public root folder are available to all users.</p> <p>Syntax exceptions: The folder name cannot include the following characters: \ ^ *</p> <p>Note: Not available in the Analysis Menus tab.</p>

UI Element (A - Z)	Menu	Description
New Graph	Analysis	Opens the New Graph dialog box, enabling you to create a new graph in the analysis tree. For more details, see "New Graph Dialog Box" on page 817 .
New Item 	Toolbar	<p>Enables you to launch the graph wizard, or add a new graph, business view graph, project report, Excel report, or standard report to the analysis tree.</p> <div> <p>Note:</p> <ul style="list-style-type: none"> Excel reports and standard reports are not available in the Analysis Menus tab. When adding a new graph or project report in the Analysis Menus tab, you must log out and then log in again in order to view the added graph/report. </div>
New Project Report	Analysis	Opens the New Project Report dialog box, enabling you to create a new project report in the analysis tree. For more details, see "New Project Report Dialog Box" on page 853 .
New Release Analysis > Release Scorecard	Analysis	<p>Opens the New Graph dialog box, enabling you to create a new Release Scorecard graph in the analysis tree. For more details, see "New Graph Dialog Box" on page 817.</p> <p>ALM Editions: Functionality related to PPT is available for ALM Edition.</p>
New Release Analysis > KPI Over Time Graph	Analysis	<p>Opens the New Graph dialog box, enabling you to create a new KPI Over Time graph in the analysis tree. For more details, see "New Graph Dialog Box" on page 817.</p> <p>ALM Editions: Functionality related to PPT is available for ALM Edition.</p>
New Release Analysis > KPI Breakdown Graph	Analysis	<p>Opens the New Graph dialog box, enabling you to create a new KPI Breakdown graph in the analysis tree. For more details, see "New Graph Dialog Box" on page 817.</p> <p>ALM Editions: Functionality related to PPT is available for ALM Edition.</p>
New Release Analysis > KPI Breakdown Over Time Graph	Analysis	<p>Opens the New Graph dialog box, enabling you to create a new KPI Breakdown Over Time graph in the analysis tree. For more details, see "New Graph Dialog Box" on page 817.</p> <p>ALM Editions: Functionality related to PPT is available for ALM Edition.</p>

UI Element (A - Z)	Menu	Description
Refresh 	View	Refreshes the analysis tree so that it displays the most up-to-date information.
Rename	Edit	Enables you to rename the selected analysis item or folder.
Share Analysis Item	Edit	<p>Enables others to view the selected graph or project report outside ALM. For more details, see "Share Analysis Item Dialog Box" on page 785.</p> <p>Available from: Graphs, Project Reports</p> <p>Note: Not available in the Analysis Menus tab.</p>




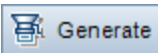
Dashboard View Menus and Buttons




This section describes the menus and buttons available in the Dashboard View module.

To access	On the ALM sidebar, under Dashboard , select Dashboard View .
Important information	<p>Tip: You can access the menu bar from the Dashboard View module by pressing the shortcut key ALT. Additionally, you can perform many other ALM operations using shortcut keys. For a list of shortcut keys, see "ALM Keyboard Shortcut Reference" on page 132.</p>
Relevant tasks	"How to Generate a Dashboard Page" on page 792
See also	<ul style="list-style-type: none">• "Dashboard Icons" on page 783• "Dashboard View Window " on page 776

User interface elements are described below:

UI Element (A - Z)	Menu	Description
Copy URL/Paste	Edit	Copies a selected dashboard page or folder and pastes its URL as a link. The item itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the item. If you are not already logged in, ALM first prompts for login details.

UI Element (A - Z)	Menu	Description
Copy/Paste 	Edit	<p>Copies selected dashboard pages or folders within the same project or across projects.</p> <p>When you paste a dashboard page, you choose how ALM copies the graphs included in the dashboard page.</p>
Cut/Paste 	Edit	<p>Moves selected dashboard pages or folders to a different location in the tree.</p> <p>When you move a dashboard page from a private folder to a public folder, ALM removes any private graphs from the dashboard page.</p> <p>Tip: You can also move a dashboard page by dragging it to a new location in the tree.</p>
Delete 	Edit	<p>Deletes selected dashboard pages or folders. You cannot delete the root folders.</p> <p>Note: Deleting a folder deletes all the items included in it.</p>
Expand/Collapse	View	Expands/collapses all the nodes under the selected folder.
Export	Dashboard	<p>Saves the selected dashboard page as a PDF file, enabling you to print the dashboard page.</p> <p>The following options are available:</p> <p>Dashboard Page Layout. The dashboard page is saved in its original format.</p> <p>One Item Per Page Layout. Each graph on the dashboard page is saved on a separate page.</p> <p>Available from: View tab</p>
	Dashboard	<p>Generates the selected dashboard page, and displays it in the View tab.</p> <p>If the View tab is already selected, the dashboard page is refreshed with the most up-to-date data.</p>







UI Element (A - Z)	Menu	Description
New Folder 	Dashboard	<p>Opens the New Folder dialog box, enabling you to add a folder under a selected folder in the dashboard tree.</p> <p>Folders you create under the Private root folder are available to the owner only. Folders you create under the Public root folder are available to all users.</p> <p>Syntax exceptions: The folder name cannot include the following characters: \ ^ *</p>
New Page 	Dashboard	<p>Opens the New Dashboard Page dialog box, enabling you to create a new dashboard page. For more details, see "New Dashboard Page Dialog Box" on page 818.</p>
Refresh 	View	<p>Refreshes the dashboard tree so that it displays the most up-to-date information.</p>
Rename	Edit	<p>Enables you to rename the selected dashboard page or folder.</p>





Dashboard Icons

This section describes the icons displayed in the Dashboard modules.

To access	On the ALM sidebar, under Dashboard , select Analysis View or Dashboard View .
Relevant tasks	"How to Analyze Data in ALM" on page 772

User interface elements are described below:

UI Element (A - Z)	Description
	Analysis Folder. A folder for organizing analysis items or dashboard pages.
	Dashboard Page. A dashboard page in the dashboard tree.
	Excel Report. An Excel report in the analysis tree.
	Graph. A graph in the analysis tree.
	KPI Breakdown Graph. A project planning and tracking (PPT) graph in the analysis tree.
	KPI Breakdown Progress Graph. A project planning and tracking (PPT) graph in the analysis tree.

UI Element (A - Z)	Description
	KPI Progress Graph. A project planning and tracking (PPT) graph in the analysis tree.
	Project Report. A project report in the analysis tree.
	Release Scorecard Graph. A project planning and tracking (PPT) graph in the analysis tree.
	Standard Report. A standard report in the analysis tree.

Details Tab

This tab displays details of the selected analysis item, dashboard page, or folder.

Details
Configuration
View

Entity: Unspecified Entity Type: Project Report
Sub Type: Project Report * Name: Requirements with Traced
Modified: 7/18/2010 1:32:09 AM Modified By: sa
Owner: alice_alm

Description

Project report options
1. Created by user templates are used for the requirements and Requirements traced from reports

- Not default table color is used
- Not default list of fields
- Rich Text is included

2. Attachements are embedded to text
3. Table of content is included by default

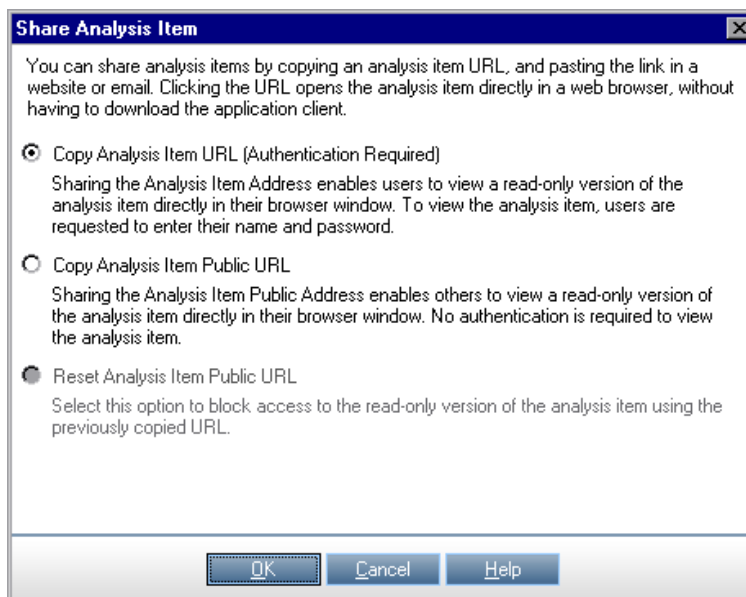
To access	On the ALM sidebar, under Dashboard , select Analysis View or Dashboard View , and select an item or folder.
Important information	<ul style="list-style-type: none"> You can edit the Name and Title fields. Other fields in this dialog box are read-only. Clicking in the Description field in this tab displays a toolbar for formatting and spell checking the text.
Relevant tasks	"How to Analyze Data in ALM" on page 772
See also	"Analysis View Window" on page 774

User interface elements are described below:

UI Elements	Description
Entity	The data set sampled by the analysis item. Available from: Analysis items
Type	The analysis item type. Available from: Analysis items
Sub Type	The type of graph or standard report.
Name	The tree display name of the analysis item, dashboard page, or folder. In graphs, the default title displayed above the graph.
Last Modified	The date and time on which the analysis item or dashboard page was last modified.
Modified By	The user who last modified the analysis item or dashboard page.
Owner/Page Owner	The user that created the analysis item, dashboard page, or folder. Permissions to modify public items may be limited to the owner only.
Title	The title displayed in the header of the dashboard page. Available from: Dashboard pages

Share Analysis Item Dialog Box

This dialog box enables you to share a graph or a project report for viewing outside ALM client.



To access	In the analysis tree, right-click a graph or project report, and select Share Analysis Item .
Important information	<ul style="list-style-type: none">You can adjust the width and height of a graph by adding the &width=xx or &height=xx attributes to the end of the URL.This option is not available in the Analysis Menus tab.
Relevant tasks	<ul style="list-style-type: none">"How to Generate a Graph" on page 790"How to Create Project Reports" on page 836
See also	"Analysis View Window" on page 774

User interface elements are described below:

UI Element	Description
Copy Analysis Item URL (Authentication Required)	Copies a URL of the selected graph or report to the clipboard. You are required to enter an ALM user name and password to view the graph or report.
Copy Analysis Item Public URL	Copies a URL of the selected graph or report to the clipboard. No authentication is required.
Reset Analysis Item Public URL	If you previously selected Copy Analysis Item Public URL , selecting this option blocks access to the public read-only version of the selected graph or report.

Chapter 41

Graphs and Dashboard Pages

This chapter includes:

- Graphs and Dashboard Pages Overview..... 788
- How to Generate a Graph..... 790
- How to Generate a Dashboard Page..... 792
- Entity Graph Types..... 793
- Graphs and Dashboard Pages User Interface..... 797

Graphs and Dashboard Pages Overview

HP Application Lifecycle Management (ALM) graphs help you analyze and view the relationships between different types of data.

You can create the following types of graphs in ALM:

- **Business View Graphs.** A graph based on a business view represents either a single entity or multiple entities, and reflects business value information only. For more information about business view graphs, see ["Business View Graphs Overview " on next page](#).
- **Entity Graphs.** Each graph is based on a single entity only, such as requirements or defects, and enables you to view any of the entity's attributes.

When creating an Entity graph, you can use several graph types. For more information on available types, see ["Entity Graph Types" on page 793](#).

When viewing Entity graphs, you can drill down to the records represented by each bar or segment.

After you have created graphs in the Analysis View module, you can select and arrange multiple graphs, and view them side-by-side in a **dashboard page**.

You can create graphs that include data from multiple ALM projects.

Creating Graphs

The following table lists the various options for creating graphs:

Option	Description	Available From	Graph Types
Predefined	Enable you to quickly analyze data related to a specific module. Predefined graphs display data from the existing module filter. You can save predefined graphs in the Analysis View module for future reference.	<ul style="list-style-type: none">• Business Components module• Defects module• Requirements module• Test Lab module• Test Plan module	Entity
Analysis View module	Enables you to filter data, set various configurations, and organize the graphs in folders.	Analysis View module	<ul style="list-style-type: none">• Entity• Business View

Option	Description	Available From	Graph Types
Graph Wizard	Guides you through the stages of creating and configuring a graph.	<ul style="list-style-type: none">• Analysis View module• Business Components module• Defects module• Requirements module• Test Lab module• Test Plan module	<ul style="list-style-type: none">• Entity• Business View (from Analysis View module only)

ALM Editions: Cross-project graphs are not available for Quality Center Enterprise Edition or Performance Center Edition.

For related tasks, see ["How to Generate a Graph" on next page](#) and ["How to Generate a Dashboard Page" on page 792](#).

Business View Graphs Overview

A business view is a data layer that exists on top of the database and which reflects only those project entity fields that represent information that is useful from a business perspective.

For example, a business view based on the Baselines entity could contain the **Name**, **Description**, and **Baseline ID** fields. This is because these fields convey information that could be of importance to the graph consumer who needs to understand baseline information from a business perspective only. By the same logic, the same business view would not include the **Attachment** and **Auto complete type** fields, as they are of little business significance.

Business views can be based on single entities, such as **Baselines** or **Defects**, while others can represent more complex relationships between entities, such as **Defects With Linked Requirements**.

The advantage of creating graphs based on business views is that it ensures a standardization across the graphs. Different graphs based on the same business view reflect a common frame of reference. This provides genuine business value to the graphs' consumer, thereby making them more meaningful.

In addition to the pre-defined business views, additional views can be created in Project Customization. For more information, refer to the HP Application Lifecycle Management Administrator Guide.

Business View graphs are always the Summary graph type.

By default, Business View graphs display 100MB of data. You can change this setting by modifying the MAX_GRAPH_RESULT_DATA_TABLE_VOLUME parameter in the Site Configuration tab. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

How to Generate a Graph

This task describes how to analyze data in ALM using graphs.

To learn more about graphs, see ["Graphs and Dashboard Pages Overview" on page 788](#).

This section contains:

- ["Create a graph" below](#)
- ["Configure a graph" on next page](#)
- ["View a graph" on next page](#)
- ["Edit graph categories" on next page](#)
- ["Entity graphs: Drill down to graph data" on next page](#)
- ["Share a graph outside ALM" on page 792](#)
- ["Create a dashboard page" on page 792](#)

1. Create a graph

Use one of the following:

■ Launch the Graph Wizard

The Graph Wizard guides you through the steps involved in creating a Business View or an Entity graph and configuring its settings. You launch the graph wizard either from the Analysis View module, or while working in one of the other ALM modules.

In the Analysis View module. On the ALM sidebar, under **Dashboard**, select **Analysis View**, right-click a folder, and select **Graph Wizard**. You use this method to create Business View and Entity graphs.

In other modules. In the Requirements, Business Components, Test Plan, Test Lab, or Defects module, select **Analysis > Graphs > Graph Wizard**. This method creates Entity graphs only.

For user interface details, see ["Graph Wizard" on page 811](#).

■ Entity graphs: Create a predefined graph

While working in the Requirements, Business Components, Test Plan, Test Lab, or Defects module, generate an impromptu graph to analyze the module data.

In any of the above modules, select **Analysis > Graphs** and select one of the predefined graphs. For user interface details, see ["View Tab - Graphs/Graph Window" on page 803](#).

■ Create a graph in the Analysis View module

- i. **Open the Analysis View module.** On the ALM sidebar, under **Dashboard**, select **Analysis View**.
- ii. **Add a folder to the analysis tree.** Right-click a folder under the Private or Public root folder, and select **New Folder**.
- iii. **Create a new graph.** Right-click a folder, and select the graph type. For entity graphs, select **New Graph**, and for business view graphs select **New Business View Graph**. Fill in the fields in the New Graph dialog box or New Business View Graph dialog box respectively.

For New Graph dialog box user interface details, see ["New Graph Dialog Box" on page 817](#).

2. Configure a graph

Configure graph settings, such as data filtering, grouping, and x-axis values.

Click the **Configuration** tab. For user interface details, see ["Configuration Tab/Window - Graphs" on page 797](#).

Available from: Analysis View module

3. View a graph


Use one of the following:

- **In the Analysis View module.** Click the **View** tab.
- **In other modules.** From the module menu, select **Analysis > Most Recently Used** and select a recently used graph. The selected graph opens in the Analysis View module.

For user interface details, see ["View Tab - Graphs/Graph Window" on page 803](#).

4. Edit graph categories

You can group together values in the grouped-by or x-axis field, and display the combined data as a single category.

- a. In the View tab or graph window, click the **Edit Categories** arrow , and select one of the available options.
- b. Create or change existing categories. For user interface details, see ["Edit <Type> Categories Dialog Box" on page 820](#).

Example

Suppose the **Priority** field is selected in the graph **Grouped By** field, and the **Priority** field has five values: Low, Medium, High, Very High, and Urgent. You might combine the values Medium and High into a category Important, and the values Very High and Urgent into a category Critical. The graph would then display data divided into three categories: Low, Important, and Critical.

5. Entity graphs: Drill down to graph data

In bar and pie charts, you can drill down to the records represented by a selected bar or

segment, and view details of individual records.

ALM Editions: Cross-project graphs are not supported in Quality Center Enterprise Edition.

- a. In the View tab or graph window, click a segment or bar in the graph.
- b. If the segment or bar represents records from multiple projects, the Project Selection dialog box opens. Select a project.
- c. If you selected to view data from another project, or if the segment or bar represents records from only another project, the project opens in a separate browser window. If applicable, you are prompted to log in. The records are displayed in the relevant ALM module.
- d. If the segment or bar represents records from only the current project, or if you selected to view data from the current project, the records are displayed in the Drill Down Results dialog box. For user interface details, see ["Drill Down Results Dialog Box" on page 822](#).

6. Share a graph outside ALM

Allow ALM users or others to view read-only versions of graphs outside ALM.

- a. In the analysis tree, right-click a graph, and select **Share Analysis Item**.
- b. In the Share Analysis Item dialog box, select a share option. For details of the options, see ["Share Analysis Item Dialog Box" on page 785](#).

A URL of the selected graph is copied to the clipboard.

- c. Paste the URL in a website or email.
- d. Click the URL to open a read-only version of the graph in a Web browser. Each time you access the graph, after set intervals, it displays the most up-to-date information.

Note: You can change the frequency at which graph data is updated by adding and configuring the **GRAPH_RESULTS_LIFESPAN** site configuration parameter. For more details, refer to the *HP Application Lifecycle Management Administrator Guide*

Available from: Analysis View module

7. Create a dashboard page

View several graphs together in a dashboard page. For task details, see ["How to Generate a Dashboard Page" below](#).

How to Generate a Dashboard Page

This task describes how to generate a dashboard page in which you can arrange multiple graphs in a single view.

This task includes the following steps:

- ["Prerequisites" on next page](#)
- ["Create a dashboard page" on next page](#)

- ["Configure a dashboard page" below](#)
- ["View a dashboard page" below](#)

1. Prerequisites

Graphs are defined in the Analysis View module. For task details on how to create graphs, see ["How to Generate a Graph" on page 790](#).

2. Create a dashboard page

Add a dashboard page to a folder in the dashboard tree.

- Open the Dashboard View module.** On the ALM sidebar, under **Dashboard**, select **Dashboard View**.
- Add a folder to the dashboard tree.** Right-click a folder under the Private or Public root folder, and select **New Folder**.
- Create a new dashboard page.** Right-click a folder, and select **New Page**. Type a name for the dashboard page. For user interface details, see ["New Dashboard Page Dialog Box" on page 818](#).
- Click the **Details** tab, and add a description of the dashboard page. For user interface details, see ["Details Tab" on page 784](#).

3. Configure a dashboard page

Arrange the graphs you want to include on a dashboard page.

In the Dashboard View module, select a dashboard page, and click the **Configuration** tab. For user interface details, see ["Configuration Tab - Dashboard Pages" on page 808](#).

4. View a dashboard page

Generate and view dashboard pages.

In the Dashboard View module, select a dashboard page, and click the **View** tab. For user interface details, see ["View Tab – Dashboard Pages" on page 809](#).

Entity Graph Types

ALM enables you to generate graphs for requirements, tests, test instances, test runs, defects, and business components. For each entity, different graph types are available.

This section includes:

- ["Requirements Graphs " below](#)
- ["Test Plan Graphs" on next page](#)
- ["Test Lab Graphs" on page 795](#)
- ["Defects Graphs" on page 795](#)
- ["Business Component Module Graphs" on page 796](#)

Requirements Graphs

You can generate the following graphs for requirements:

Graph	Description
Requirements Coverage Graph	<p>Shows how many requirements are currently in an ALM project, according to their test coverage status.</p> <p>Note:</p> <ul style="list-style-type: none"> Available from the Requirements module only. The Coverage Graph is a specific type of the Requirements Summary Graph. If you select a different x-axis value, a regular Summary Graph is displayed.
Requirements Progress Graph	<p>Shows how many requirements accumulated in an ALM project at specific points during a period of time.</p> <p>Specify the time interval displayed along the x-axis, and the requirement information by which ALM groups the data. Specify whether you want to view the number of requirements or the change in the number of requirements.</p>
Requirements Summary Graph	<p>Shows how many requirements are currently in an ALM project.</p> <p>Specify the type of data displayed along the x-axis, and the requirement information by which ALM groups the data.</p>
Requirements Trend Graph	<p>Shows the history of changes to specific requirement fields in an ALM project, for each time interval displayed.</p> <p>Specify the field for which you want to view the number of changes, and the time period for which you want to view data.</p> <p>Each status change is only recorded once for the purpose of this graph. For example, if a field was changed from Not Completed to Passed to Not Completed, the Not Completed status change will only be recorded once in this graph.</p>

Test Plan Graphs

You can generate the following graphs for tests:

Graph	Description
Test Plan Progress Graph	<p>Shows how many tests accumulated in an ALM project at specific points during a period of time.</p> <p>Specify the time interval displayed along the x-axis and the test plan information by which ALM groups the data. Specify whether you want to view the number of tests or the change in the number of tests.</p>
Test Plan Summary Graph	<p>Shows how many tests are currently in an ALM project.</p> <p>Specify the type of data displayed along the x-axis, and the test plan information by which ALM groups the data.</p>

Graph	Description
Test Plan Trend Graph	<p>Shows the history of changes to specific Test Plan fields in an ALM project, for each time interval displayed.</p> <p>Specify the field for which you want to view the number of changes, and the time period for which you want to view data.</p> <p>Each status change is only recorded once for the purpose of this graph. For example, if a field was changed from <code>Ready</code> to <code>Repair</code> to <code>Ready</code>, the <code>Ready</code> status change will only be recorded once in this graph.</p>

Test Lab Graphs

You can generate the following graphs for test instances and runs:

Test Set Graphs

Graph	Description
Test Set Progress Graph	<p>Shows how many tests accumulated in test sets at specific points during a period of time.</p> <p>Specify the time interval displayed along the x-axis, and the test information by which ALM groups the data. Specify whether you want to view the number of tests or the change in the number of tests.</p> <p>Note: If you create the graph in the Test Lab module, you can choose whether to include only the current test set or all test sets.</p>
Test Set Summary Graph	<p>Shows how many tests in an ALM project belong to test sets.</p> <p>Specify the type of data displayed along the x-axis, and the test plan and test in test set information by which ALM groups the data.</p> <p>Note: If you create the graph in the Test Lab module, you can choose whether to include only the current test set or all test sets.</p>

Test Run Graphs

Graph	Description
Test Run Summary Graph	Shows the status of runs in the project, grouped by Tester.

Defects Graphs

You can generate the following graphs for defects:

Graph	Description
Defects Age Graph	<p>Shows the lifetime of defects in an ALM project. The lifetime of a defect begins when it is reported, and ends when it is closed.</p> <p>Specify the defect information by which ALM groups the data, and the data displayed along the y-axis. Specify the time interval that you want to use to divide the data.</p> <p>The age of a Closed defect is the difference between the date on which it was reported and the date on which it was closed. After a defect is closed, its age remains static.</p>
Defects Progress Graph	<p>Shows the accumulation of defects in an ALM project, or the estimated/actual amount of time taken to fix these defects, at specific points during a period of time.</p> <p>Specify the time interval displayed along the x-axis, the defect information by which ALM groups the data, and the data displayed along the y-axis. Specify whether you want to view the number of defects or the change in the number of defects.</p>
Defects Summary Graph	<p>Shows a summary of the number of defects in an ALM project, or the estimated/actual amount of time taken to fix these defects.</p> <p>Specify the type of data displayed along the x-axis, the type of data displayed along the y-axis, and the defect information by which ALM groups the data.</p>
Defects Trend Graph	<p>Shows the history of changes to specific defect fields in an ALM project, for each time interval displayed.</p> <p>Specify the field for which you want to view the number of changes, and the time period for which you want to view data. Each priority change is only recorded once for the purpose of this graph. For example, if a field was changed from Urgent to Very High to Urgent, the Urgent priority change will only be recorded once in this graph.</p>

Business Component Module Graphs

You can generate the following graphs for business components:

Graph	Description
Components Summary - Group by 'Status' Graph	<p>Shows how many components are currently in the ALM project. The number of components is displayed according to the criteria that you specify.</p> <p>Specify the type of data displayed along the x-axis, and the test plan information by which ALM groups the data. By default, the graph appears as a bar chart.</p>

Graph	Description
Components Progress - Group by 'Status'	Shows the history of changes to specific component fields in a ALM project, at each point during a period of time. Specify the field for which you want to view the number of changes, and the time period for which you want to view data. The graph can be viewed as a bar chart only.
Components Trend - Group by 'Status'	Shows the history of changes to specific component fields in a ALM project, at each point during a period of time. Specify the field for which you want to view the number of changes, and the time period for which you want to view data. The graph can be viewed as a bar chart only.

Graphs and Dashboard Pages User Interface

This section includes:

Configuration Tab/Window - Graphs.....	797
View Tab - Graphs/Graph Window.....	803
Configuration Tab - Dashboard Pages.....	808
View Tab – Dashboard Pages.....	809
Graph Wizard.....	811
New Graph Dialog Box.....	817
New Dashboard Page Dialog Box.....	818
Select Projects Dialog Box.....	819
Edit <Type> Categories Dialog Box.....	820
Graph Appearance Dialog Box.....	821
Drill Down Results Dialog Box.....	822

Configuration Tab/Window - Graphs

The Configuration tab in the Analysis View module and the graph configuration window in the project reports' Configuration tab enable you to select data to be included in a graph.

ALM Editions: Cross-project graphs are not supported in Quality Center Enterprise Edition.

Details Configuration View

Period: Last 7 Day(s)

Resolution: Auto Select

Display Options: ☒ Raw Data ☐ Changes Over Time

Y-Axis: Count Defects

Grouped By: Status

- Filter

- Project Selection

Domain	Project
DEFAULT	ALM_Demo

Select Projects




To access	<p>Configuration tab:</p> <p>Use one of the following:</p> <ul style="list-style-type: none"> • In the Analysis View module, select a graph, and click the Configuration tab. • If you have the required administrator permissions, in the Analysis View module's Analysis Menus tab, select a graph and click the Configuration tab. <p>Configuration window:</p> <ol style="list-style-type: none"> 1. On the ALM sidebar, under Dashboard, select Analysis View. 2. Expand the analysis tree and select a project report. 3. In the project report, select a section node. 4. In the Graph Selection area, select a graph and click Configure.
Important information	The available configuration options depend on the graph type.
Relevant tasks	<ul style="list-style-type: none"> • "How to Generate a Graph" on page 790 • "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none"> • "Graphs and Dashboard Pages Overview" on page 788 • "Analysis View Window" on page 774


User interface elements are described below:

UI Element	Graph Type	Description
Business View	Business View	Enables you to select a business view on which to base the graph. Click the browse button next to the box, and select the desired business view from the list and click OK .
Period	Entity (progress and trend graphs only)	<p>The time period covered by the graph. Select a time period from the drop-down list:</p> <ul style="list-style-type: none"> • Custom. A time period between any two dates. Set the start and end dates. • Week/Month/Quarter/Year. A fixed time period any time in the past. Use the arrows to jump to the next or previous period, or set the start or end date of the period in the drop-down calendars. • Last. A time period ending at the current date. Select a time unit (day, week, month, quarter, or year) and set the number of time units you want to cover in the graph. • All days. Includes all time periods from the beginning of the project until the current date.
Age Grouping	Entity (Defects only)	<p>You can group all defects older than a certain period (for example, older than six months) in one column, and all defects more recent than that period in a second column. Alternatively, you can group the defects by all available periods.</p> <ul style="list-style-type: none"> • Select a period to group the defects in two columns. • Select No grouping to view all of the available periods.
Resolution	Entity (progress and trend graphs only)	The time interval at which data is grouped on the x-axis.
Display Options	Entity (progress graphs only)	<ul style="list-style-type: none"> • Select Raw Data to view the number of requirements, tests, or defects over the period of time you selected. • Select Changes over Time to view the change in the number of requirements, tests, or defects over the period of time you selected. Each record begins at 0.

UI Element	Graph Type	Description
Y-Axis	<ul style="list-style-type: none"> Business View Entity (summary and age graphs only) 	<p>Select the data that displays on the y-axis.</p> <ul style="list-style-type: none"> Select Count to display the total number of items (for example, a count of open defects). Business View graphs. Select Count Distinct and choose a field to display distinct values for that field. Select Sum of and choose a numerical field. For example, in Defects graphs, choose Estimated Fix Time to display the estimated time required for fixing the defects. Choose Actual Fix Time to display the actual time spent on fixing the defects.
X-Axis	<ul style="list-style-type: none"> Business View Entity (summary graphs only) 	<p>The information displayed along the x-axis of the graph.</p> <p>Tip: In cross-project graphs, select QC Projects to display the data by project.</p>
Grouped By	<ul style="list-style-type: none"> Business View Entity 	<p>Select a field to determine the information by which ALM groups data in the graph. You can group the data only by string or list fields.</p> <p>Tip: For cross-project graphs, select QC Projects to group the data by project.</p> <p>Progress or Trends graphs: If you set a filter on the same field as the Group By field, groups in the graphs may include values that you filtered out. This is because in progress and trend graphs the filter operates on current values, while groupings operate on historical values. For example, say the Group By field in a Defects graph is set to Status, and the current filter includes all defects whose status is Open. When the graph is generated, all previous statuses of the open defects, such as Rejected, will appear in the graph even if Rejected was not included in the filter.</p>
Show 'Not Covered' parents	Entity (Requirements only)	Choose whether to include parent requirements with a Not Covered status.
Show full path	Entity (summary graphs only)	In summary graphs, if you select Subject , Plan: Subject , Test: Subject , or Test Set: Name in the X-Axis field, ALM displays the full path of the test subject folder.

UI Element	Graph Type	Description
Filter State		<p>Enables you to set dynamic filter conditions for graphs that are generated from within the Analysis menu in specific modules.</p> <ul style="list-style-type: none"> • Custom. Enables you to define a customized filter in the Analysis Menus tab. • Special filters. The following predefined filtering options are provided: <div data-bbox="776 546 1396 856" style="background-color: #f0f0f0; padding: 10px; margin: 10px 0;"> <p>Note: When adding a graph to an Analysis Menu of a different module type from the new graph, you must use the Custom filter type. Selecting a special filter results in the graph being generated with no filter at all. For example, if you add a Defects graph to the Requirements Analysis Menu, and select the Context filtering option, ALM ignores the selection and generates the graph with no filter at all.</p> </div> <ul style="list-style-type: none"> ■ Context. Filters information according to the filter that is currently selected in the module. ■ Selected. Includes information for the currently selected entity in the module only. <div data-bbox="795 1050 1396 1192" style="background-color: #f0f0f0; padding: 10px; margin: 10px 0;"> <p>Note: In the Test Lab module, the selected entity is the selected test run instance, and not the selected test set.</p> </div> <ul style="list-style-type: none"> ■ Selected with Children. For hierarchical entities, includes information for the selected parent entity as well as child entities. ■ Current Entity Based. Includes information for the currently focused item in the module. You use this option to generate a graph in the Test Lab module on the test set level. <p>Available from: Analysis Menus tab only. You must have the required administrator permissions to view this tab.</p>

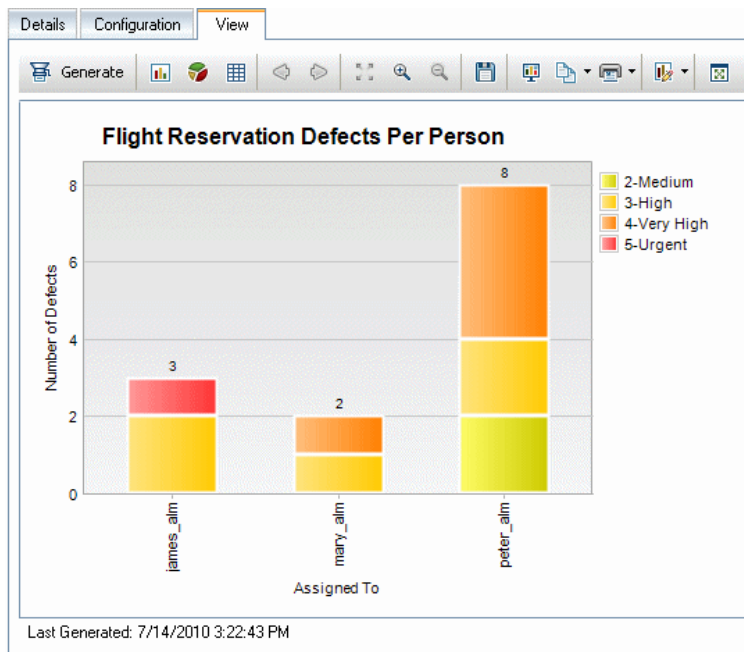
UI Element	Graph Type	Description
	Entity	<p>Set Filter. Enables you to filter the data according to the criteria you choose. For details, see "Select Filter Condition Dialog Box" on page 70.</p> <p>The current filter is displayed in the filter box.</p> <p>Note: Setting the filter to the same field as the Grouped By field, may cause historical data to appear in the graph.</p>
	<ul style="list-style-type: none"> Business View Entity 	<p>Clear Filter. Clears the current filter.</p>
	Business View	<p>Copy/Paste Filter Settings. Enables you to copy and paste filter settings from one Business View graph to another.</p> <p>This is useful for reproducing complex filters in several graphs.</p> <p>Note: You can perform this action only if the following conditions are met:</p> <ul style="list-style-type: none"> The source and the target graphs must contain fields with the same technical names. The target graph does not contain more fields than the source graph, though it may contain less.
<field filter table>	Business View	<p>Enables you to filter data for Business View graphs.</p> <ul style="list-style-type: none"> Field name. Lists the fields in the business view. Criteria. Enables you to define filter criteria for each field. OR. An optional column that appears when you define a filter condition for a field. Enables you to define additional filters for that field. <p>Note: Filter criteria for dates and strings must be preceded by an equals sign.</p>

UI Element	Graph Type	Description
	<ul style="list-style-type: none"> Business View Entity 	<p>Opens the Select Projects dialog box, enabling you to change the list of projects in the Cross Project Selection grid. For details, see "Select Projects Dialog Box" on page 819.</p> <p>Available from: Configuration tab (not available in the Analysis Menus tab)</p>
Project Selection	<ul style="list-style-type: none"> Business View Entity 	<p>Projects included in the graph.</p> <p>To change the list of projects included in the graph, click the Select Projects button.</p> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p>Note:</p> <p>When working with Entity graphs, be aware of the following:</p> <ul style="list-style-type: none"> Every time you add or remove projects in your graph, ALM updates the fields in the Filter dialog box and the drop-down lists of the following boxes: X-Axis, Y-Axis and Grouped By. The lists contain only fields that are identical in all the selected projects. Identical fields are fields that have the same field name, label and data type. For more information on customizing fields, see the <i>HP Application Lifecycle Management Administrator Guide</i>. If you defined a filter condition using a field that becomes unavailable, that condition is removed. If you selected a field in the X-Axis, Y-Axis and Grouped By boxes that becomes unavailable, the first field in the drop-down list is selected. </div> <p>Available from: Configuration tab (not available in the Analysis Menus tab)</p>

View Tab - Graphs/Graph Window











The View tab enables you to view saved graphs in the Analysis View module, and analyze the graph data.





The graph window in the Requirements, Business Components, Test Plan, Test Lab, and Defects modules enables you to view predefined graphs to analyze data during your work in those modules.


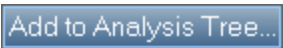


To access	<p>View tab:</p> <p>Use one of the following:</p> <ul style="list-style-type: none"> • In the Analysis View module, select a graph, and click the View tab. • If you have the required administrator permissions, in the Analysis View module's Analysis Menus tab, select a graph and click the View tab. • In the Requirements, Test Plan, Test Lab, Defects, or Business Components module, choose Analysis > Most Recently Used, and select a graph. <p>Graph window:</p> <p>Use one of the following:</p> <ul style="list-style-type: none"> • In the Requirements, Test Plan, Test Lab, Defects, or Business Components module, choose Analysis > Graphs, and select a graph type. • In the Analysis View module, select a project report in the analysis tree. In the project report, select a section node and in the Graph Selection area click View.
Relevant tasks	<ul style="list-style-type: none"> • "How to Generate a Graph" on page 790 • "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none"> • "Graphs and Dashboard Pages Overview" on page 788 • "Analysis View Window" on page 774

User interface elements are described below (unlabeled elements are shown in angle brackets>):

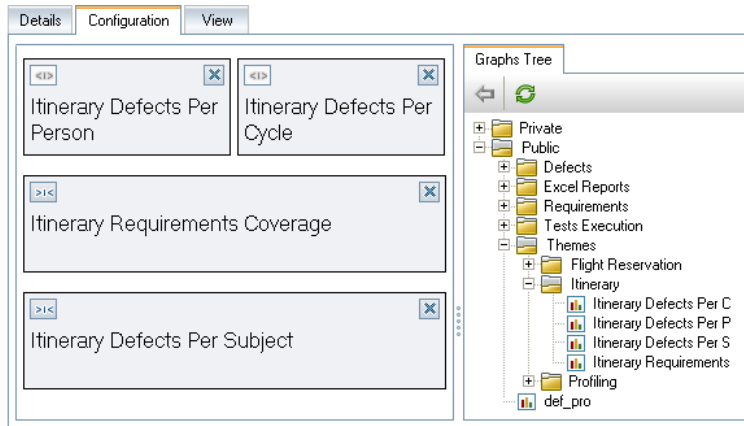
UI Element	Description
 Generate	Generate. Refreshes the graph so that it displays the most up-to-date information.
	Bar Chart. In summary, trend and age graphs, switches the chart format to a bar chart.
	<p>Pie Chart. In summary graphs, switches the chart format to a pie chart.</p> <p>In pie charts, the x-axis categories are displayed as pie segments. The y-axis quantities are represented by the size of the segments.</p> <p>Note: Pie charts do not display the Grouped By field.</p>
	Line Chart. In progress graphs, switches the chart format to a line chart.
	Data Grid. The grid creates a matrix of the graph's x-axis and Grouped By categories. A Total row is added that displays the total of each Grouped By category. Available in all graph types.
	<p>Show/Hide Total Values. In progress graphs, shows/hides a <total> category to the graph, representing the sum of all the other Grouped By categories.</p> <p>Tip: After showing the <total> category, click its label in the legend to hide the category.</p>
	Scroll to the Left/Right. Scrolls the graph to the left or right. These buttons are enabled when the Zoom In and Zoom Out buttons are in use.
	Show All. Restores the graph to its normal size. This button is enabled when the Zoom In and Zoom Out buttons are in use.
	Zoom In/Out. Changes the magnification of the graph.
	<p>Save Graph Image. When viewing a graph as a bar, pie chart, or line chart, saves the graph image. You can select from a variety of graphic file formats.</p> <p>Save Graph Data. When viewing a data grid, saves the graph data. You can save the data as an Excel spreadsheet, a Word file, an HTML document, or a text file.</p>

UI Element	Description
	<p>Set Graph Appearance. Opens the Graph Appearance dialog box, enabling you to customize the graph title, graph color, and graph display. For more details, see "Graph Appearance Dialog Box" on page 821.</p>
	<p>Copy Graph to Clipboard. Includes the following options:</p> <ul style="list-style-type: none"> • Copy Graph (Color). Copies the graph in color to the Clipboard. • Copy Graph (Monochrome). Copies the graph in monochrome to the Clipboard. • Copy Full Screen Graph (Color). Copies the graph in color to the Clipboard, enlarged to fit full screen. • Copy Full Screen Graph (Monochrome). Copies the graph in monochrome to the Clipboard, enlarged to fit full screen.
	<p>Print Graph. Includes the following options:</p> <ul style="list-style-type: none"> • Print Graph (Color). Prints the graph in color. This is the default button option. • Print Graph (Monochrome). Prints the graph in monochrome. • Print Graph and Details (Color). Prints the graph and its description in color. • Print Graph and Details (Monochrome). Prints the graph and its description in monochrome.
	<p>Edit Categories. Enables you to combine X-Axis and Grouped By field values into categories. The following options are available:</p> <ul style="list-style-type: none"> • Edit X-Axis Categories. Opens the Edit X Axis Categories dialog box, enabling you to display combined x-axis values as a single category in the graph. This option is available only for summary graphs and Requirements Coverage graphs. This is the default button option. For details, see "Edit <Type> Categories Dialog Box" on page 820. • Reset X-Axis Categories. Removes combined categories of x-axis values, and resets the graph display. • Edit Group by Categories. Opens the Edit 'Group By' Categories dialog box, enabling you to display combined grouped-by values as a single category in the graph. For details, see "Edit <Type> Categories Dialog Box" on page 820. • Reset Group by Categories. Removes combined categories of grouped-by values, and resets the graph display. <p>For more details, see "Edit <Type> Categories Dialog Box" on page 820.</p>

UI Element	Description
	<p>Full Screen. Opens the graph in a new window and maximizes its display.</p> <p>Note: The toolbar remains visible in full-screen mode.</p> <p>Tip: To return to the standard view, click the Close button in the top-right corner of the window.</p> <p>Available from: View tab</p>
	<p>In the graph window, opens the New Graph dialog box, enabling you to save the graph to a folder in the Analysis View module.</p> <p>Available from: Graph window</p>
<graph area>	<p>You can perform the following actions in the graph area:</p> <ul style="list-style-type: none"> • In bar or pie charts, to further analyze the data, drill down to the graph's data by clicking on a segment in the graph. • Right-click an area in the chart to change its color. • Hover over a bar or segment to view a tooltip containing the area's category, x-axis, and y-axis values.
<graph title>	<p>Click a graph title to change the graph's titles and appearance. For user interface details, see "Graph Appearance Dialog Box" on page 821.</p>
<legend>	<p>In line or bar charts, displays the chart categories and their corresponding color.</p> <p>You can perform the following actions in the legend box:</p> <ul style="list-style-type: none"> • In progress and trend graphs, click a category checkbox to show or hide the category in the graph. • Right-click a category to change its color.

Configuration Tab - Dashboard Pages







This tab enables you to design a dashboard page by selecting and arranging graphs on the page.



To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Dashboard, select Dashboard View. 2. Expand the dashboard tree, and select a dashboard page. 3. Click the Configuration tab.
Important information	In public dashboard pages you can include only public graphs.
Relevant tasks	<ul style="list-style-type: none"> • "How to Generate a Dashboard Page" on page 792 • "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none"> • "Graphs and Dashboard Pages Overview" on page 788 • "Analysis View Window" on page 774

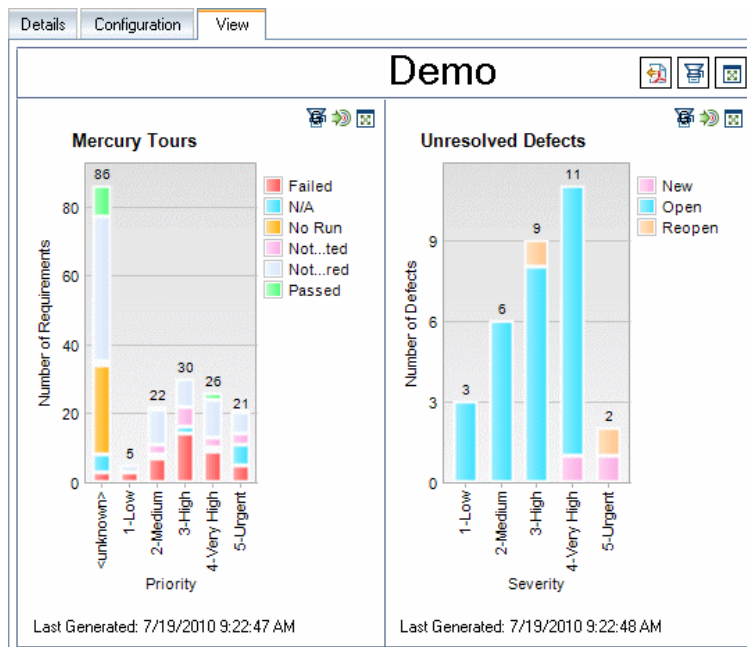
User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<configuration pane>	<p>Contains placeholders representing graphs selected for the current dashboard page.</p> <p>Rearrange the graphs on the page:</p> <ul style="list-style-type: none"> • Drag the placeholders to new positions. • Expand or reduce the placeholders. <p>Note: The maximum number of graphs that a dashboard page can display is limited by the DASHBOARD_PAGE_ITEM_LIMIT site parameter. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.</p>

UI Element	Description
	Expand. Maximizes the size of the graph to cover a whole row. Contract. Reduces the size of the graph to cover half a row.
	Remove. Removes the graph from the dashboard page.
Graphs Tree pane	This pane displays graphs in the analysis tree. Expand the tree and drag graphs to the configuration pane.
	Add Graph to Dashboard Page. Adds the selected graph to the configuration pane. A placeholder representing the graph is created in the next vacant row.
	Show Entity Details. Opens the Details dialog box for the selected entity in read-only mode.
Go to Entity in Module Tree 	Go to Entity in Module Tree. Navigates to the selected entity's location in that entity's module, and highlights the entity.
	Refresh. Refreshes the graph tree so that it includes the most up-to-date information.


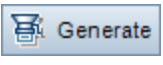


View Tab – Dashboard Pages

This tab enables you to view a dashboard page, and drill down to the graph data.



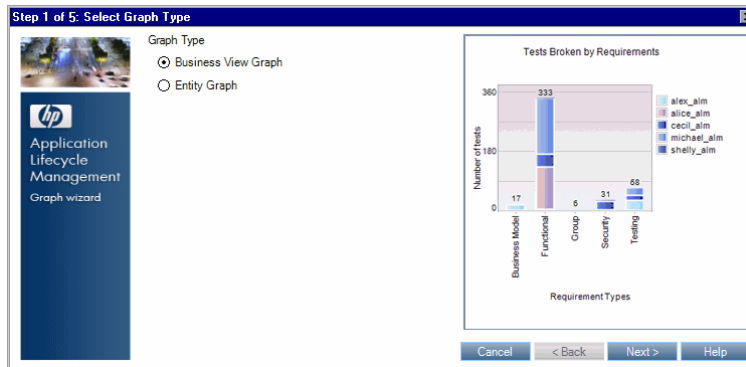
To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Dashboard, select Dashboard View. 2. Expand the dashboard tree, and select a dashboard page. 3. Click the View tab.
Important information	The View tab displays two rows of the dashboard page. Use the vertical scroll bar to scroll up or down the dashboard page.
Relevant tasks	<ul style="list-style-type: none"> • "How to Generate a Dashboard Page" on page 792 • "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none"> • "Graphs and Dashboard Pages Overview" on page 788 • "Analysis View Window" on page 774

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
	Export to PDF. Enables you to save the dashboard page as a PDF file.
	Generate All Graphs in Page/Generate Graph. Refreshes all the graphs on the page, or the selected graph, so that they display the most up-to-date information. ALM updates the Last Generated time and date.
	<p>View Page in Full Screen. Displays the dashboard page in full-screen mode.</p> <p>View Graph in Full Screen. Displays the graph in full-screen mode. You can use the toolbar buttons to adjust the graph's display, save or print the graph. The adjustments you make to the graph's display are reset when you regenerate the graph. For more details on viewing the graph, see "View Tab - Graphs/Graph Window" on page 803.</p> <p>Tip: To return to the standard view, click the Close button, located in the upper-right corner of the page.</p>
	Go To Graph in Analysis Tree. Navigates to the selected graph in the analysis tree, enabling you to configure the graph data, or change the graph viewing settings.
<chart area>	In bar or pie charts, drill down to the graph's data by clicking on a segment in the graph.
<legend>	In bar or pie charts, displays the chart categories and their corresponding color.

Graph Wizard

This wizard enables you to create and configure a new graph in the Analysis View module.



To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> On the menu of the Requirements, Test Plan, Test Lab, or Defects module, select Analysis > Graphs > Graph Wizard. On the ALM sidebar, under Dashboard, select Analysis View, and select Analysis > Graph Wizard. On the ALM sidebar, under Dashboard, select Analysis View. Expand the analysis tree and select a project report. In the project report, select a section node and in the Graph Selection area click New.
Relevant tasks	<ul style="list-style-type: none"> "How to Generate a Graph" on page 790 "How to Analyze Data in ALM" on page 772
Wizard map	<p>This wizard contains:</p> <p>"Select Graph Type Page" below > "Select Business View Page" on next page > "Select Entity Type Page" on page 813 > "Select Projects Page" on page 813 > ("Select Test Set Option Page" on page 814) > "Select Filter Page" on page 815 > "Select Graph Attributes Page" on page 816 > ("Select Coverage Page" on page 817)</p>
See also	<ul style="list-style-type: none"> "Graphs and Dashboard Pages Overview" on page 788 "Analysis View Window" on page 774

Select Graph Type Page

This wizard page enables you to select the type of graph to create.

Important information	<p>General information about this wizard is available here: "Graph Wizard" above.</p> <p>Available from: Analysis View module.</p>
------------------------------	---

Wizard map	<p>The "Graph Wizard" on previous page contains:</p> <p>"Select Graph Type Page" on previous page > "Select Business View Page" below > "Select Entity Type Page" on next page > "Select Projects Page" on next page > ("Select Test Set Option Page" on page 814) > "Select Filter Page" on page 815 > "Select Graph Attributes Page" on page 816 > ("Select Coverage Page" on page 817)</p>
-------------------	--

User interface elements are described below:

UI Element	Description
Graph Type	<p>The type of graph that you want to create:</p> <p>Business View Graph. Based on a business view, which is defined in project customization. For more information about business view graphs, see "Graphs and Dashboard Pages Overview" on page 788.</p> <p>Entity Graph. Based on a specific entity. For the entity you select, different graph types are available.</p>

Select Business View Page

This wizard page enables you to select the business view on which to base the graph.

Important information	<ul style="list-style-type: none"> General information about this wizard is available here: "Graph Wizard" on previous page. Available only if you selected Business View Graph in the "Select Graph Type Page" on previous page.
Wizard map	<p>The "Graph Wizard" on previous page contains:</p> <p>"Select Graph Type Page" on previous page > (Select Business View) > "Select Entity Type Page" on next page > "Select Projects Page" on next page > ("Select Test Set Option Page" on page 814) > "Select Filter Page" on page 815 > "Select Graph Attributes Page" on page 816 > ("Select Coverage Page" on page 817)</p>

User interface elements are described below:

UI Element	Description
Business Views tree	Lists the business views available for selection.

Select Entity Type Page

This wizard page enables you to set the entity and type.

Important information	<ul style="list-style-type: none">General information about this wizard is available here: "Graph Wizard" on page 811.When the wizard is launched from the Analysis View module, this page is only available if you selected Entity Graph in the "Select Graph Type Page" on page 811.
Wizard map	The "Graph Wizard" on page 811 contains: "Select Graph Type Page" on page 811 > "Select Business View Page" on previous page > (Select Graph Entity Type Page) > "Select Projects Page" below > ("Select Test Set Option Page" on next page) > "Select Filter Page" on page 815 > "Select Graph Attributes Page" on page 816 > ("Select Coverage Page" on page 817)

User interface elements are described below:

UI Element	Description
Entity	The ALM entity covered by the graph. Note: Applicable only if you launched the graph wizard from the Analysis View module.
Graph Type	The type of graph that you want to create. The available types of graph depend on the graph. For a description of the available graph types, see "Entity Graph Types" on page 793 .
Description	Describes the selected entity/graph type.

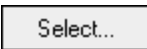
Select Projects Page

This wizard page enables you to select the projects that are included in the graph.

Important information	<ul style="list-style-type: none">General information about this wizard is available here: "Graph Wizard" on page 811.ALM Editions: Not available in ALM Essentials Edition or Quality Center Enterprise Edition.
------------------------------	---

Wizard map	<p>The "Graph Wizard" on page 811 contains:</p> <p>"Select Graph Type Page" on page 811 > "Select Business View Page" on page 812 > ("Select Entity Type Page" on previous page > "Select Projects Page" on previous page > ("Select Test Set Option Page" below) > "Select Filter Page" on next page > "Select Graph Attributes Page" on page 816 > ("Select Coverage Page" on page 817)</p>
-------------------	--

User interface elements are described below:

UI Element	Description
Use Current Project	Includes only the current project in the graph.
Use Selected Projects	Includes the projects listed in the project grid in the graph. To change the selection of the projects, click the Select button.
	Opens the Select Projects dialog box, enabling you to change the projects in the projects grid. For details, see "Select Projects Dialog Box" on page 819.

Select Test Set Option Page

This wizard page enables you to choose which test sets are included in the graph.

Important information	<p>General information about this wizard is available here: "Graph Wizard" on page 811.</p> <p>Available from: Test Lab module</p>
Wizard map	<p>The "Graph Wizard" on page 811 contains:</p> <p>"Select Graph Type Page" on page 811 > "Select Business View Page" on page 812) > "Select Entity Type Page" on previous page > "Select Projects Page" on previous page > ("Select Test Set Option Page" above) > "Select Filter Page" on next page > "Select Graph Attributes Page" on page 816 > ("Select Coverage Page" on page 817)</p>

User interface elements are described below:

UI Element	Description
Show Current Test Set	Includes only the current test set in the graph.
Show all Test Sets	Includes all test sets in the graph.

Select Filter Page

This wizard page enables you to set the filter that is applied to the graph data.

Important information	<ul style="list-style-type: none"> General information about this wizard is available here: "Graph Wizard" on page 811. If your graph includes multiple projects, you can filter using only fields that are in all the selected projects. ALM Editions: Including multiple projects in graphs is not available for Quality Center Enterprise Edition. Progress or Trends graphs: If you set a filter on the same field as the Group By field, groups in the graphs may include values that you filtered out. This is because in progress and trend graphs the filter operates on current values, while groupings operate on historical values. For example, say the Group By field in a Defects graph is set to Status, and the current filter includes all defects whose status is Open. When the graph is generated, all previous statuses of the open defects, such as Rejected, will appear in the graph even if Rejected was not included in the filter.
Wizard map	<p>The "Graph Wizard" on page 811 contains:</p> <p>"Select Graph Type Page" on page 811 > "Select Business View Page" on page 812 > "Select Entity Type Page" on page 813 > "Select Projects Page" on page 813 > ("Select Test Set Option Page" on previous page) > "Select Filter Page" above > "Select Graph Attributes Page" on next page > ("Select Coverage Page" on page 817)</p>

User interface elements are described below:

UI Element	Description
Use current filter	Available if you launched the graph wizard from the Requirements, Test Plan, Test Lab, or Defects modules. Uses the current filter applied to the data.
Do not use a filter	Includes all records of the selected entity.
Define a new filter	Enables you to define a new filter or cross-filter. Click the Filter button to open the Filter dialog box, and define the filter. For user interface details, see "Select Filter Condition Dialog Box" on page 70 .

Select Graph Attributes Page

This wizard page enables you to set the **Group By** and **X-Axis** attributes in the graph.

Important information	General information about this wizard is available here: "Graph Wizard" on page 811 .
Wizard map	The "Graph Wizard" on page 811 contains: "Select Graph Type Page" on page 811 > "Select Business View Page" on page 812 > "Select Entity Type Page" on page 813 > "Select Projects Page" on page 813 > ("Select Test Set Option Page" on page 814) > "Select Filter Page" on previous page > "Select Graph Attributes Page" above > ("Select Coverage Page" on next page)

User interface elements are described below:

UI Element	Description
Group By field	<p>The field by which you want data to be grouped in the graph. For progress and trend graphs, you can only select a field for which history is enabled. For more information on enabling history for a field, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.</p> <p>If your graph includes multiple projects, you can only select from fields that are in all the selected projects. To group the data by project, select the QC Project value.</p> <p>Progress or Trends graphs: If you set a filter on the same field as the Group By field, groups in the graphs may include values that you filtered out. This is because in progress and trend graphs the filter operates on current values, while groupings operate on historical values. For example, say the Group By field in a Defects graph is set to Status, and the current filter includes all defects whose status is Open. When the graph is generated, all previous statuses of the open defects, such as Rejected, will appear in the graph even if Rejected was not included in the filter.</p> <p>ALM Editions: Including multiple projects in graphs is not available for Quality Center Enterprise Edition.</p>
X-axis field	<p>If you are creating a summary graph, the field that you want to use for the x-axis.</p> <p>If your graph includes multiple projects, you can only select from fields that are in all the selected projects. To list the projects along the x-axis, select the QC Project value.</p> <p>ALM Editions: Including multiple projects in graphs is not available for Quality Center Enterprise Edition.</p>

Select Coverage Page

This wizard page enables you to choose whether to display requirements with no coverage.

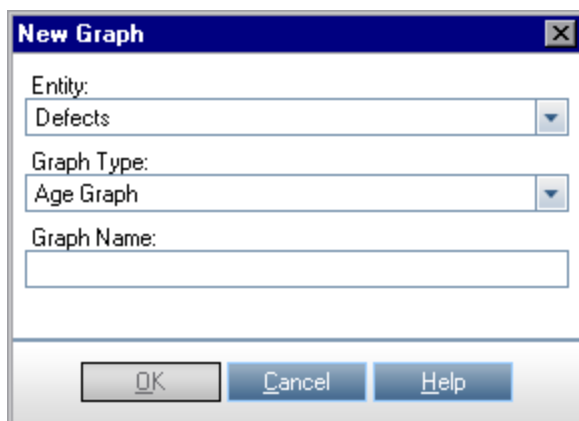
Important information	<ul style="list-style-type: none">General information about this wizard is available here: "Graph Wizard" on page 811.For details on requirements coverage, see "Requirement and Test Coverage Overview" on page 428. <p>Available from: Requirements graphs.</p>
Wizard map	The "Graph Wizard" on page 811 contains: "Select Graph Type Page" on page 811 > "Select Business View Page" on page 812 > "Select Entity Type Page" on page 813 > "Select Projects Page" on page 813 > ("Select Test Set Option Page" on page 814) > "Select Filter Page" on page 815 > "Select Graph Attributes Page" on previous page > ("Select Coverage Page" above)

User interface elements are described below:

UI Element	Description
Do not show 'Not Covered' Parents	Excludes parent requirements with a 'Not Covered' status from the graph.
Show 'Not Covered' Parents	Includes all requirements in the graph.

New Graph Dialog Box

This dialog box enables you to add a new Entity graph to the analysis tree.



To access	<ol style="list-style-type: none">On the ALM sidebar, under Dashboard, select Analysis View.Right-click the folder under which you want to add a graph, and select New Graph.
------------------	---

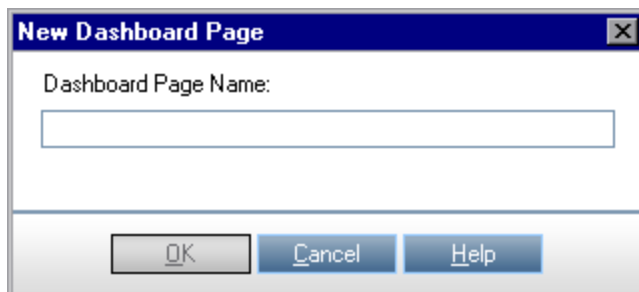
Important information	Graphs you create under private folders are available to the owner only. Graphs you create under public folders are available to all users.
Relevant tasks	<ul style="list-style-type: none"> • "How to Generate a Graph" on page 790 • "How to Generate a PPT Graph" on page 826 • "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none"> • "Graphs and Dashboard Pages Overview" on page 788 • "PPT Graphs Overview " on page 826 • "Analysis View Window" on page 774

User interface elements are described below:

UI Element	Description
Entity	<p>The ALM entity covered by the graph.</p> <p>Note: This field is not available for the project planning and tracking (PPT) graph type.</p>
Graph Type	<p>The type of graph you want to create. For details, see "Entity Graph Types" on page 793.</p> <p>Note: This field is not available for the project planning and tracking (PPT) graph type.</p>
Graph Name	The graph's display name in the analysis tree. By default, the Graph Name is used as the graph's title.

New Dashboard Page Dialog Box

This dialog box enables you to add a new dashboard page to the dashboard tree.



To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Dashboard, select Dashboard View. 2. Right-click the folder under which you want to add a page, and select New Page.
------------------	---

Important information	Dashboard pages you create under private folders are available to the owner only. Dashboard pages you create under public folders are available to all users.
Relevant tasks	"How to Generate a Dashboard Page" on page 792
See also	"Graphs and Dashboard Pages Overview" on page 788

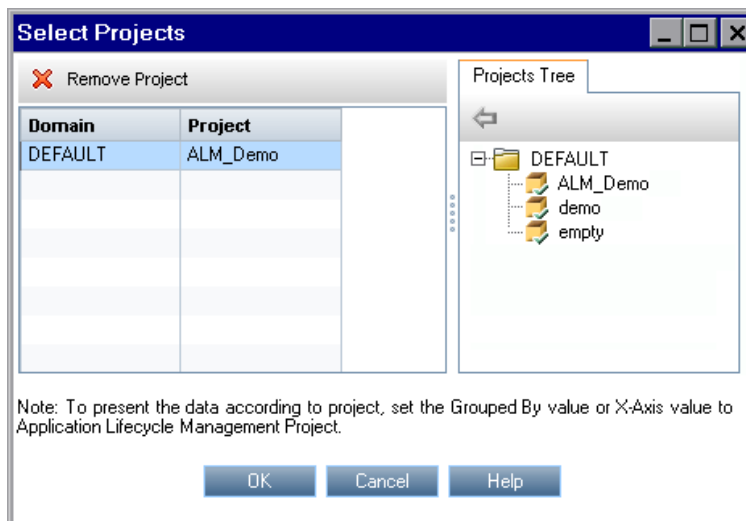
User interface elements are described below:

UI Element	Description
Dashboard Page Name	<p>The dashboard page display name in the dashboard tree. By default, the Dashboard Page Name is displayed as the dashboard page's title.</p> <p>Syntax exceptions: A dashboard page name cannot include the following characters: \ ^ *</p>

Select Projects Dialog Box

This dialog box enables you to select projects that are included in cross-project graphs.

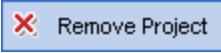

ALM Editions: This dialog box is not available for Quality Center Enterprise Edition.



To access	<ul style="list-style-type: none"> • In the graph wizard: Proceed to the Select Projects dialog box, and click the Select button. • In the graph Configuration tab: Click the Select Projects button.
Important information	<ul style="list-style-type: none"> • You can select only projects in which you are listed as a user. • You can change the maximum number of projects that ALM allows you to include in a graph, by setting the PROJECT_SELECTION_MAX_PROJECTS site parameter. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>

Relevant tasks	"How to Generate a Graph" on page 790
-----------------------	---

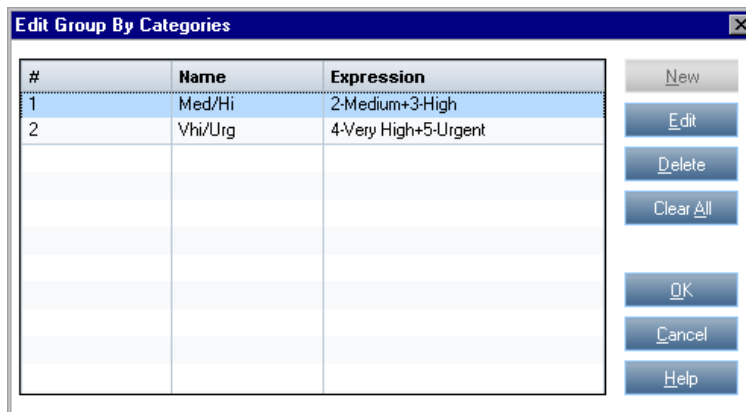
User interface elements are described below:


UI Element (A - Z)	Description
 Remove Project	Removes the selected project from the grid. Note: You cannot remove a project if it is the only project in the grid.
Domain/Project	A list of projects and their domains selected to be included in the graph.
Projects Tree	A list of domains and projects in which you are listed as a user.
	Add. Adds the selected project or domain to the grid. If you selected a domain, all the domain's projects are added to the grid. Tip: Drag or double-click a project or domain to add it to the grid.

Edit <Type> Categories Dialog Box




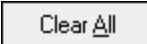
The Edit Group By Categories dialog box enables you to group together values of the field selected in the **Grouped By** field, and display the combined data as one category.

The Edit X Axis Categories dialog box enables you to group together values of the field selected in the **X-axis** field, and display the combined data as one category.



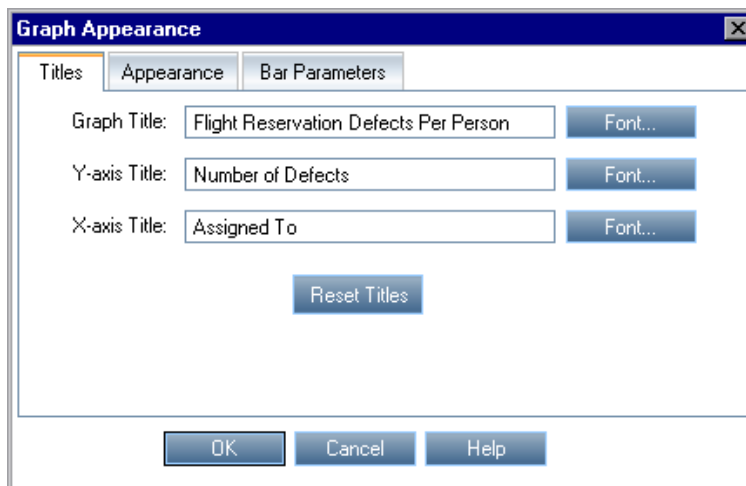
To access	On the View tab or graph window toolbar, click Edit Categories  .
Important information	The Edit X Axis Categories dialog box is available only for summary graphs and Requirements Coverage graphs.
Relevant tasks	"How to Generate a Graph" on page 790


User interface elements are described below:

UI Element	Description
	<p>Opens the New Category dialog box, enabling you to create a new category.</p> <p>In the Category Name box, type a name for the category.</p> <p>To choose which field values are included in the category, select field values and click the arrow buttons (> and <) to move them between Available groups and Groups in new category. Click the double arrow buttons (>> and <<) to move all the field values from one list to the other. You can also drag field values between lists. You cannot include a field value in more than one category.</p>
	Opens the Edit Category dialog box, enabling you to edit the selected category.
	Deletes the selected category.
	Deletes all categories.

Graph Appearance Dialog Box

This dialog box enables you to change a graph's titles and appearance. For a bar chart, you can specify the display parameters for the bars. For a line chart, you can specify the display parameters for the lines.



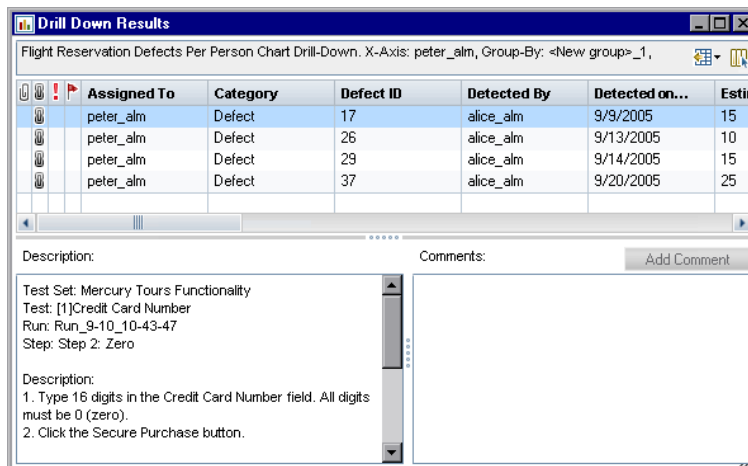
To access	On the View tab or graph window toolbar, click Set Graph Appearance  or click the graph title.
Relevant tasks	<p>"How to Generate a Graph" on page 790</p> <p>"How to Generate Live Analysis Graphs" on page 884</p>

User interface elements are described below:

UI Element	Description
Titles tab	<p>Enables you to change the titles of the graph, the y-axis, or the x-axis.</p> <p>Font. Enables you to change a title's font or color.</p> <p>Reset Titles. Enables you to restore the original titles.</p> <p>Note: For a pie chart, you can only change the title of the graph.</p>
Appearance tab	Enables you to set the default format of your graph, modify the orientation of the labels at the base of the graph (for a bar chart and a line chart only), determine the format in which dates are displayed on the x-axis, display the graph with a 3D effect, or change the colors of the various components in your graph.
Bar Parameters tab	In bar charts, enables you to specify whether you want the values for each bar to be displayed. You can also adjust the bar width. If you specify that the values of each bar are to be displayed, you can change the data that is displayed for each bar, or its position relative to the bar.
Line Parameters tab	In line charts, enables you to specify whether you want the line frame to be displayed.



Drill Down Results Dialog Box

This dialog box enables you to view the records that constitute a graph bar or segment.



To access	Click a bar or segment on the graph.
------------------	--------------------------------------

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<Segment parameters>	Located above the data grid, displays parameters of the selected graph area, and the number of records displayed.
<Data grid>	<p>A list of the records that are included in the selected graph area.</p> <p>To open a particular record, double-click a record. The <Module> Details dialog box opens, enabling you to view or edit the record. Use the navigation buttons to browse through the drill down results.</p>
	<p>Export. Opens the Export Grid Data dialog box, enabling you to export the records as a text file, Microsoft Excel worksheet, Microsoft Word document, or HTML document.</p> <p>Select one of the following options:</p> <ul style="list-style-type: none">• All. Exports all records in the grid.• Selected. Exports selected records in the grid.
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the data grid, and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 86.</p>

Chapter 42

Project Planning and Tracking (PPT) Graphs

This chapter includes:

PPT Graphs Overview.....	826
How to Generate a PPT Graph.....	826
PPT Graphs User Interface.....	827

PPT Graphs Overview

When working with PPT, you can create and customize graphs in the Analysis View module, relating to KPI data in the Releases module. Creating graphs in the Analysis View module enables you to filter the data, set various configurations, and organize the graphs in folders.

When viewing graphs, you can drill down to the records represented by each bar or segment.

After you have created graphs in the Analysis View module, you can select and arrange multiple graphs, and view them side-by-side in a **dashboard page**.

ALM Editions: Functionality related to PPT is available with ALM Edition only.

For related tasks, see ["How to Generate a PPT Graph" below](#) and ["How to Generate a Dashboard Page" on page 792](#).

How to Generate a PPT Graph

This task describes how to generate PPT data in ALM using graphs.

ALM Editions: Functionality related to PPT is available with ALM Edition only.

This task includes the following steps:

- ["Prerequisites" below](#)
- ["Create a graph in Analysis View" below](#)
- ["Configure a graph" on next page](#)
- ["View a graph" on next page](#)
- ["Share a graph outside ALM" on next page](#)
- ["Create a dashboard page" on next page](#)

1. Prerequisites

Under **Management**, select **Releases**. Define a release, release scope items, milestones, and KPIs. For task details, see ["How to Work with PPT" on page 172](#).

2. Create a graph in Analysis View

Create a graph in the Analysis View module.

- Open the Analysis View module.** On the ALM sidebar, under **Dashboard**, select **Analysis View**.
- Add a folder to the analysis tree.** Right-click a folder under the Private or Public root folder, and select **New Folder**.

- c. **Create a new graph.** Right-click a folder. Select **New Release Analysis** and choose a PPT graph. The New Graph dialog box opens. Enter the graph name and click **OK**.
- 3. **Configure a graph**
In the Analysis View module, select a graph, and click the **Configuration** tab. For user interface details, see ["Configuration Tab - PPT Graphs" below](#).
- 4. **View a graph**
Select a graph in the analysis tree, and click the **View** tab. For user interface details, see ["View Tab - PPT Graphs" on page 830](#).
- 5. **Share a graph outside ALM**
Allow ALM users or others to view read-only versions of graphs outside ALM. For task details, see ["How to Generate a Graph" on page 790](#).
- 6. **Create a dashboard page**
View several graphs together in a dashboard page. For task details, see ["How to Generate a Dashboard Page" on page 792](#).

PPT Graphs User Interface

This section includes:

Configuration Tab - PPT Graphs	827
View Tab - PPT Graphs	830

Configuration Tab - PPT Graphs

This tab enables you to select project planning and tracking (PPT) data to be included in a graph, and set graph display options.

To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Dashboard, select Analysis View. 2. Expand the analysis tree, and select a PPT graph. 3. Click the Configuration tab.
Important information	<ul style="list-style-type: none"> • The available configuration options depend on the graph type. • ALM Editions: Functionality related to PPT is available with ALM Edition only.
Relevant tasks	<ul style="list-style-type: none"> • "How to Generate a PPT Graph" on page 826 • "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none"> • "PPT Graphs Overview " on page 826 • "PPT Releases Overview" on page 172 • "Analysis View Window" on page 774

Configuring KPI Graphs






Important information	Some fields are not available in all graphs.
------------------------------	--

User interface elements are described below:

UI Element (A - Z)	Description
Aggregation Function	The aggregation function used in grouping the data by time resolution. Possible values are last , average , max , and min .
Breakdown	Select a field to determine the information by which ALM groups data in the graph.
Data updated to	Displays data results based on selected date.
KPI	The KPI name.
Milestone	The milestone name.
Period	The time period for which you want to view data.
Release	The release name.
Resolution	The time resolution of the data. Possible values are day , week , month , year , auto select (the server determines the optimal time resolution).
Scope Item	The scope item name.
Show Last Result	Displays data results based on last run date.

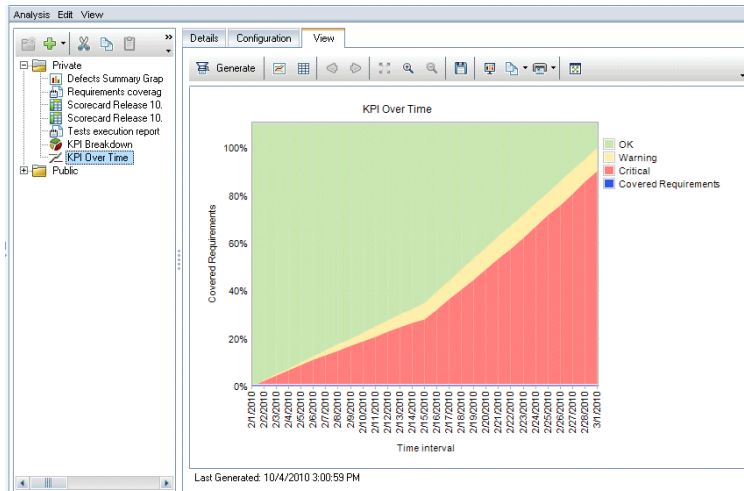
Configuring Scorecard Graph

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element (A - Z)	Description
	Sets the order in which row or column names appear in scorecard table.
	Moves selected fields between Rows and Columns .
	Set Filter/Sort. Enables you to narrow and sort the Milestone , Scope Item , or KPI data according to your chosen criteria. For more details on filtering, see "Filter Dialog Box" on page 61 .
	Clear Filter. Clears the defined filter.
	Restores default filter definitions.
Columns	Lists columns that are currently displayed in the scorecard table.
Data Updated to	Displays data results based on selected date.
Display Planned KPI Target	Displays the acceptable threshold value for each KPI in the Planned column of the scorecard table. Note: The Planned column is displayed only when this option is enabled.
Group Scope Items by Field	Groups according to a specified scope item field.
Release	The release name.
Rows	Lists rows that are currently displayed in the scorecard table.
Show Last Results	Displays data results based on last run date.



View Tab - PPT Graphs










This tab enables you to view project planning and tracking (PPT) graphs.






To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Dashboard, select Analysis View. 2. Expand the analysis tree, and select a PPT graph. 3. Click the View tab.
Important information	<ul style="list-style-type: none"> • The available view options depend on the graph type. • ALM Editions: Functionality related to PPT is available with ALM Edition only.
Relevant tasks	<ul style="list-style-type: none"> • "How to Generate a PPT Graph" on page 826 • "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none"> • "PPT Graphs Overview " on page 826 • "PPT Releases Overview" on page 172 • "Analysis View Window" on page 774

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element (A - Z)	Description
 Generate	Generate. Refreshes the graph so that it displays the most up-to-date information.
	Bar Chart. Switches the chart format to a bar chart.

UI Element (A - Z)	Description
	<p>Pie Chart. Switches the chart format to a pie chart.</p> <p>In pie charts, the x-axis categories are displayed as pie segments. The y-axis quantities are represented by the size of the segments.</p> <p>Note: Pie charts do not display the Grouped By field.</p>
	<p>Line Chart. Switches the chart format to a line chart.</p>
	<p>Data Grid. The grid creates a matrix of the graph's x-axis and Grouped By categories. A Total row is added that displays the total of each Grouped By category.</p>
	<p>Show/Hide Total Values. Shows/hides a <total> category to the graph, representing the sum of all the other Grouped By categories.</p> <p>Tip: After showing the <total> category, click its label in the legend to hide the category.</p>
	<p>Scroll to the Left/Right. Scrolls the graph to the left or right. These buttons are enabled when the Zoom In and Zoom Out buttons are in use.</p>
	<p>Show All. Restores the graph to its normal size. This button is enabled when the Zoom In and Zoom Out buttons are in use.</p>
	<p>Zoom In/Out. Changes the magnification of the graph.</p>
	<p>Save Graph Image. Saves the graph image. You can select from a variety of graphic file formats.</p> <p>Save Graph Data. When viewing a data grid, saves the graph data. You can save the data as an Excel spreadsheet, a Word file, an HTML document, or a text file.</p>
	<p>Set Graph Appearance. Opens the Graph Appearance dialog box, enabling you to customize the graph title, graph color, and graph display. For more details, see "Graph Appearance Dialog Box" on page 821.</p>

UI Element (A - Z)	Description
	<p>Copy Graph to Clipboard. Includes the following options:</p> <ul style="list-style-type: none"> • Copy Graph (Color). Copies the graph in color to the Clipboard. • Copy Graph (Monochrome). Copies the graph in monochrome to the Clipboard. • Copy Full Screen Graph (Color). Copies the graph in color to the Clipboard, enlarged to fit full screen. • Copy Full Screen Graph (Monochrome). Copies the graph in monochrome to the Clipboard, enlarged to fit full screen.
	<p>Print Graph. Includes the following options:</p> <ul style="list-style-type: none"> • Print Graph (Color). Prints the graph in color. This is the default button option. • Print Graph (Monochrome). Prints the graph in monochrome. • Print Graph and Details (Color). Prints the graph and its description in color. • Print Graph and Details (Monochrome). Prints the graph and its description in monochrome.
	<p>Full Screen. Opens the graph in a new window and maximizes its display.</p> <p>Note: The toolbar remains visible in full-screen mode.</p> <p>Tip: To return to the standard view, click the Close button in the top-right corner of the window.</p>
<graph area>	<p>You can perform the following actions in the graph area:</p> <ul style="list-style-type: none"> • Hover over a graph segment to view a tooltip containing additional information. • Click the Break Over Time link to drill down to the graph's data and show specific points during a period of time. Opens a breakdown over time graph. For more details, see "Breakdown Over Time Graph" on page 201. <p>Available from: View tab - KPI Breakdown</p>
<KPI cell>	<p>You can perform the following actions in a KPI cell:</p> <ul style="list-style-type: none"> • Click a KPI cell to display a graph representation of this cell. For more details, see "KPI Drill Down Graph" on page 198. • Hover over a KPI cell to view a tooltip containing the KPI's threshold values. <p>Available from: View tab - Release Scorecard</p>

UI Element (A - Z)	Description
<legend>	Displays the chart categories and their corresponding color. Click a category to show or hide the category in the graph.

Chapter 43

Project Reports

This chapter includes:

- Project Reports Overview..... 836
- How to Create Project Reports..... 836
- How to Create a Custom Report Template..... 840
- Predefined Project Reports..... 840
- Project Reports User Interface..... 844

Project Reports Overview

Project reports enable you to design and generate comprehensive reports containing information from your HP Application Lifecycle Management (ALM) project.

In a project report, you define sections and sub-sections, each listing records of a specified ALM entity. You can choose to display data of a selected baseline.

To each report section, you assign a template that determines the fields and layout of the section. You also assign document and style templates that determine the overall report appearance.

Note: Report templates are managed in Project Customization. For more details, refer to the *HP Application Lifecycle Management Administrator Guide*.

You can generate project reports in HTML, Microsoft Word, or PDF formats.

For details on creating project reports, see ["How to Create Project Reports" below](#).

How to Create Project Reports

This task describes how to create project reports.

To learn more about project reports, see ["Project Reports Overview" above](#).

This task includes the following steps:

- ["Create a project report" below](#)
- ["Define sections" below](#)
- ["Configure document-level settings" on next page](#)
- ["Configure sections" on next page](#)
- ["Preview a template report" on page 838](#)
- ["Generate a template report" on page 838](#)
- ["Share a report outside ALM" on page 839](#)

1. Create a project report

- a. **Open the Analysis View module.** On the ALM sidebar, under **Dashboard**, select **Analysis View**.
- b. **Add a folder to the analysis tree.** Right-click a folder under the Private or Public root folder, and select **New Folder**.
- c. **Create a new project report.** Right-click a folder, and select **New Project Report**. Fill in the New Project Report dialog box.

2. Define sections

- a. **Select a project report.** In the Analysis View module, select a project report, and click the

Configuration tab.

- b. **Add a section.** Right-click the **Document** root node, and select **Add Report Section**. Select an ALM entity to include in the report.
- c. **Add a sub-section.** You can add a sub-section of related information. For example, add a sub-section of defects linked to requirements, or a sub-section of defect attachments.

Each section can have multiple sub-sections and, where applicable, you can add further sub-sections to sub-sections.


Right-click a section in the report tree, and select **Add Report Section**.

Note: You can add sub-sections only to sections that are assigned a full-page template. For more details on full-page templates, refer to the *HP Application Lifecycle Management Administrator Guide*.

3. Configure document-level settings

At the **Document** root level, you assign templates and define settings that apply to the overall design and content of the project report.

- a. In the Configuration tab, select the **Document** root node. For user interface details, see ["Configuration Tab - Project Reports" on page 845](#).
- b. Set the document output format.
- c. Assign document, style and history templates, or keep the default templates. For details on the template types, refer to the *HP Application Lifecycle Management Administrator Guide*.

- d. Click **Edit Document Field Values**  to type values for custom fields in areas such as the title page, headers and footers, as defined in the document template.

- e. To create a baseline report, select **Select a Baseline**, and select a baseline.

To create a baseline report, all report sections must support baselines.

- f. Select **Embed Text and Image Attachments**, to embed text and image attachments in the report.

To display attachments, you must add attachment sub-sections to the report.

Note: If you do not select this option, links to text and image attachments are inserted in the report, that open the files in a separate window. ALM opens the most up-to-date version of the attachments and if they have changed since the report was first generated, the information displayed may contradict other information contained in the report.

- g. Select **Auto-Update Table of Contents** to instruct ALM to update table of contents entries in the report output.

To display a table of contents, the document template must include a **TOC** field.

4. Configure sections

- a. In the Configuration tab, select a section or sub-section in the report tree. For user interface details, see ["Configuration Tab - Project Reports" on page 845](#).
- b. Optionally, rename the section title.
- c. Assign a project template, or keep the default template.

Note: Depending on your user group permissions, you can assign a custom template. For details on creating a custom template, see ["How to Create a Custom Report Template" on page 840](#).

- d. Define a data filter, where applicable, to define the records that are included in the section.
- e. For top-level sections that include entities that are listed hierarchically (for example, requirements, tests), select whether records are ordered hierarchically in the report.
- f. Add existing graphs to the report, or create new graphs directly in the report.

5. Preview a template report

Click **Preview** to display a preview of your report.

A preview contains up to five records of each section in the report. The preview is displayed in the output format you selected for the **Document** root node.

6. Generate a template report

Click **Generate**. The report generation process begins.

When the report generation is complete, it is displayed in the output format you selected for the **Document** root node.

The report is saved on the client machine, under the following directory:

%Temp%\TD_80\<ALM_PATH>\<Project_id>\Reports

Where <Project_id> is a string representing your ALM project.

Example

1 Models

1.1 Model ID : 1001 - Internal Order Master

Field Label	Field Value	Field Label	Field Value
Created By:	sa	Imported File Name:	ARISAMLExport.xml
Creation Date:	6/20/2010 3:50:25 PM	Model Author:	is38972
Guid:	92fb8120-6888-11dd-53ac-005056a61fbb	Model ID:	1001
Import Date:	6/20/2010 3:50:25 PM	Name:	Internal Order Master
Imported By:	sa	Prototype	

Description

Comments

1.1.1 Model Activities

1.1.1.1 Activity ID : 1005 - Determine Which Internal Order Type fulfill the needed

Field Label	Field Value	Field Label	Field Value
Created By:	sa	Imported By:	sa
Creation Date:	6/20/2010 3:50:27 PM	Activity ID:	1005
Guid of referenced model:		Name:	Determine Which Internal Order Type fulfill the needed
Import Date:	6/20/2010 3:50:27 PM		

Description

Comments

7. Share a report outside ALM

Allow ALM users or others to view read-only versions of reports outside ALM.

- In the analysis tree, right-click a report, and select **Share Analysis Item**.
- In the Share Analysis Item dialog box, select a share option. For details of the options, see ["Share Analysis Item Dialog Box" on page 785](#).

A URL of the selected report is copied to the clipboard.

- Paste the URL in a website or email.
- Click the URL to open a read-only version of the report in a Web browser. Each time you access the report, after set intervals, it displays the most up-to-date information.

Note: You can change the frequency at which report data is updated by adding and configuring the **REPORT_RESULTS_LIFESPAN** site configuration parameter. For more details, refer to the *HP Application Lifecycle Management Administrator Guide*



Available from: Analysis View module

How to Create a Custom Report Template


This task describes how to create a custom template for your personal use. Depending on your user group permissions, you can assign custom templates to report sections and sub-sections.

- "Create a copy of an existing report template" below
- "Create a new custom report template" below

Create a copy of an existing report template

1. In the report tree, select a report section, and click the **Download Template** button  next to the project or custom template that you want to modify. A copy of the template is saved on your computer file system, and opens in Microsoft Word.
2. Modify the template in Microsoft Word using commands in the Template Creator tab. For details on the Template Creator tab, refer to the *HP Application Lifecycle Management Administrator Guide*.
3. Save and close the template file.
4. To assign the new custom template to a report section, select a report section. Then select **Custom Template** or click **Upload Custom Template** , and select the template file.

Create a new custom report template

1. In the report tree, select a report section for which you want to create a custom template.
2. Click **Template Creator**. Microsoft Word opens with the **Template Creator** tab. Design a new template file for the selected report section. For details on working with the Template Creator, refer to the *HP Application Lifecycle Management Administrator Guide*.
3. Save and close the template file.
4. To assign the new custom template to a report section, select a report section. Then select **Custom Template** or click **Upload Custom Template** , and select the template file.

Predefined Project Reports

The following predefined reports are available in the Requirements, Test Plan, Test Lab, Defects, and Business Components modules.

Note:

- If you have the required administrator permissions, you can configure the predefined reports in the Analysis View module's Analysis Menus tab. You can also you can add reports or delete predefined reports.
- By default, predefined project reports do not display filter information. To include filter information, edit the current template to include the **Section Filter** field, or create a new

template for the report where this field is included. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

This section includes:

- ["Requirements Module Reports" below](#)
- ["Test Plan Module Reports" on next page](#)
- ["Test Lab Module Reports" on page 843](#)
- ["Defects Module Reports" on page 843](#)
- ["Business Component Module Reports" on page 844](#)

Requirements Module Reports

The following reports are available for the Requirements module:

Report	Description
Standard Requirement Report	Lists the requirements that appear in the current requirements view.
Tabular Report	Displays the requirements that appear in the current requirements view, in a grid format.
Requirements with Coverage Tests	Lists the requirements that appear in the current requirements view, with their test coverage information.
Requirements with Coverage Tests and Steps	Lists the requirements that appear in the current requirements view, with their test coverage information. It also displays the test steps for each tests coverage.
Requirements with Linked Defects	Lists the requirements that appear in the current requirements view, with their linked defects.
Requirements with Traceability	Lists the requirements that appear in the current requirements view, with their associated traced to and traced from requirements.
Report Selected	Lists the requirements currently selected in the requirements tree or grid.
Report Selected with Children	Lists the requirements currently selected in the requirements tree or grid, including child requirements.

Test Plan Module Reports

The following reports are available for the Test Plan module:

Report	Description
Standard Test Planning Report	Lists the tests in the current test plan view.
Subject Tree Report	Lists the tests in the current test plan view by subject.
Tests with Design Steps	Lists the tests that appear in the current test plan view, including their design steps.
Tests with Covered Requirements	Lists the tests that appear in the current test plan view, with their requirement coverage information.
Tests with Linked Defects	Lists the tests that appear in the current test plan view, with their linked defects.
Report Selected	Lists the tests currently selected in the test plan tree or grid.
Business Process Tests with Script	Lists all the business process tests and flows currently in the ALM project, including some detail fields, the test or flow descriptions, and the components included in each test or flow. This report also includes information about groups, iterations, On Failure status, and contents of flows inside business process tests.

Test Lab Module Reports

The following reports are available for the Test Lab module:

Test Set Reports

Report	Description
Current Test Set	Lists the tests that appear in the current test set.
Cross Test Set	Lists the test sets that appear in the Test Sets list, without listing their tests.
Test Set Hierarchy with Tests	Lists the test sets hierarchically, as well as the status of each of the test sets.
Cross Test Set with Tests	Lists the test sets that appear in the Test Sets list, including their tests.
Current Test Set with Failed Test Runs	Lists tests from the current test set, with "Failed" test run status.
Cross Test Set with Failed Test Runs	Lists tests from all test sets, with "Failed" test run status.
Execution Notification	Lists the tests that are displayed in the current test set with the results of their last test run.
Report Selected	Displays an execution report of the test instances currently selected in the execution grid.

Test Run Reports

Report	Description
Cross Run	Lists the runs matching the current filter in the Test Runs module.
Cross Run with Steps	Lists the runs matching the current filter in the Test Runs module with their run steps.
Runs by Test	Lists the runs in the Test Runs module under their tests.
Runs by Test Set	Lists the runs in the Test Runs module under their test sets and tests.
Report Selected	Displays a runs report of the test runs currently selected in the Test Runs module.

Defects Module Reports

The following reports are available for the Defects module:

Report	Description
Standard Defect Report	Lists the defects that appear in the defects grid.

Report	Description
Tabular Report	Displays the defects that appear in the defects grid, in a grid format.
Defects with Linked Tests and Runs	Lists the defects with their linked tests and test run results.
Fixed or Rejected Defects	Lists defects with "fixed" or "rejected" status.
Fixed or Rejected Defects Detected by Current User	Lists defects with "fixed" or "rejected" status that were detected by the current user.
Opened Defects Assigned to Current User	List defects with "open" status that are assigned to the current user.
Report Selected	Lists defects currently selected in the defects grid.

Business Component Module Reports

The following reports are available for the Business Components module:

Report	Description
Standard Component Report	Lists all the components currently in the ALM project, including all detail fields, the component descriptions, history, and whether it includes a snapshot.
Component Hierarchy Report	Lists the components currently in the ALM project, including all detail fields and the component descriptions. Obsolete components and component requests are not shown in this report.
Components with Steps	Lists all the components currently in the ALM project, including some detail fields, the component descriptions, and each component's facet steps.
Components Used By	Lists all the components currently in the ALM project, including some detail fields, the component descriptions, and the business process tests and flows that use each component.
Components with Application Area	Lists all the components currently in the ALM project, including some detail fields, the component descriptions, and the application area (if any) used by each component.
Report Selected	Lists components currently selected in the tree.

Project Reports User Interface

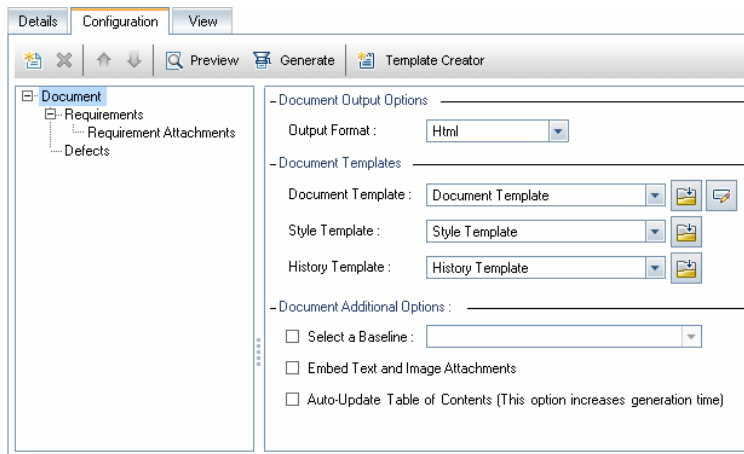
This section includes:

Configuration Tab - Project Reports.....	845
New Project Report Dialog Box.....	853

Add Report Section Dialog Box.....	854
Edit Document Template Field Values Dialog Box.....	855

Configuration Tab - Project Reports







This tab enables you to define document-level settings, and configure report sections.




To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • In the Analysis View module, select a project report, and click the Configuration tab. • If you have the required administrator permissions, in the Analysis View module's Analysis Menus tab, select a project report and click the Configuration tab.
Important information	The available configuration options depend on the selected section in the report tree.
Relevant tasks	<ul style="list-style-type: none"> • "How to Create Project Reports" on page 836 • "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none"> • "Project Reports Overview" on page 836 • "Analysis View Window" on page 774

Configuration Tab Common Elements

User interface elements are described below. (Unlabeled elements are described in angle brackets>)

UI Element	Description
	<p>Add Report Section. Opens the Add Report Section dialog box, enabling you to add a section to the report. For user interface details, see Add Report Section.</p> <p>Note:</p> <ul style="list-style-type: none"> You can add a sub-section only to sections that are assigned full-page templates. Where applicable, you can add additional layers of sub-sections to sub-sections. At each level you can include multiple sub-sections.
	<p>Delete Report Section. Deletes the selected section.</p> <p>Note: When you delete a section, all its sub-sections are deleted too.</p>
	<p>Move Up/Move Down. Enables you to move the selected report section higher or lower in the project report.</p> <p>Note: The selected section moves in relation to sections on the same level.</p>
 Preview	<p>Generates a preview of the report that includes the first five records of each of the report sections.</p> <p>The preview is generated in the selected report output format.</p>
 Generate	<p>Generates the report in the selected report output format.</p>
 Template Creator	<p>Opens Microsoft Word with the Template Creator tab, enabling you to design a custom template file.</p> <p>After creating a custom template, assign it to a report section in the Custom Template field.</p> <p>Note: To enable the Template Creator, you must first allow macros in Microsoft Word. In Word, click the Office Button, and then click Word Options. Select Trust Center > Trust Center Settings > Macro Settings. Select Enable all macros.</p>

UI Element	Description
	<p>Enables you to download the report locally to your computer as a .zip file. The file includes all attachments contained in the report.</p> <p>Note: For reports in HTML format, you must extract all the files from the zipped folder before opening them.</p> <p>Tip: This format should be used for emailing reports to users who do not have access to ALM.</p>
<report section tree>	Displays the sections and sub-sections included in the report. The Document root node contains settings that apply to the overall report design and content.

Document Output Options Area

You can define the file format in which the report is generated.

Important information	<ul style="list-style-type: none">• Available from: Document root node.• In the Analysis Menus tab, this option is disabled and set to HTML.
-----------------------	---

User interface elements are described below:


UI Element	Description
HTML	Displays the report in a Web browser.
Docx	Displays the report in Microsoft Word 2007 or 2010.
Doc	Displays the report in Microsoft Word 2003.
PDF	Displays the report in PDF readers.

Document Templates Area

Important information	Available from: Document root node.
-----------------------	--

You can define which template is assigned to the report.

User interface elements are described below:

UI Element	Description
Document Template	Defines fields on the title page, headers and footers, page orientation, and other document layout settings.
Style Template	Defines formatting (for example, tables, headings, and paragraph) applied to Microsoft Word styles. The Style template styles override those defined in the templates used in the report sections.
History Template	Defines the style in which history information is displayed in report sections.
No Template	<p>Generates a report section without a template and renders its subsections immediately.</p> <p>This option is useful when you want to link a parent section to a sub-section.</p> <p>For example, if your report contains a Requirements and a Coverage Tests section, you can add a Requirement Coverage section in between them that uses the No Template option. When the report is generated, tests will appear immediately below the requirement that they are covering without any intermediate section.</p>
	Edit Document Field Values. Opens the Edit Document Template Field Values dialog box, enabling you to type values for fields in areas such as the title page, headers and footers, as defined in the document template. For user interface details, see "Edit Document Template Field Values Dialog Box" on page 855.

Document Additional Options Area

Important information	Available from: Document root node.
------------------------------	--

User interface elements are described below:

UI Element	Description
Auto-Update Table of Contents	<p>Instructs ALM to update table of contents entries in the report output.</p> <p>Note:</p> <ul style="list-style-type: none">• To display a table of contents, the document template must include a TOC field.• If this option is not selected, and if you selected the Doc or Docx output format, you can manually update the table of contents in Microsoft Word after the report is generated.
Embed Text and Image Attachments	<p>Embeds plain text and image attachments in the report.</p> <p>Other attachment types (for example, document or video files) are always displayed as links.</p> <p>Note:</p> <ul style="list-style-type: none">• To display attachments, you must add attachment sub-sections to the report.• If this option is not selected, links to plain text and image attachments are inserted in the report, that open the files in a separate window.• To access the links, you use the REST API. Using the REST API requires REST authentication, unless the report was generated using a public REST URL.• ALM opens the most up-to-date version of the attachments and if they have changed since the report was first generated, the information displayed may contradict other information contained in the report.

UI Element	Description
Select a Baseline	<p>Select this option to generate a report of a selected baseline data.</p> <p>Clear this option to include current data in your report.</p> <p>Note:</p> <ul style="list-style-type: none">• You can create a baseline report only if all sections and sub-sections of the report support baselines.• Selecting this option disables the ability to add graphs to the report.• This option is disabled in the Analysis Menus tab.

Report Section Details Area

Important information	Available from: Section nodes
------------------------------	--------------------------------------

User interface elements are described below:

UI Element	Description
Name	The name of the section title in the report.
Entity	The ALM entity that is included in the section.
Relationship Type	Describes the relationship between the entity in the selected section and the entity in the parent section.



Template Details Area

You can define which template is assigned to the currently selected section of the report. A template can be either in a full-page or tabular layout. You can only add sub-sections to sections that are assigned full-page templates. For more details on report templates, refer to *HP Application Lifecycle Management Administrator Guide*.

Filter Area

Important information	Available from: Section nodes
------------------------------	--------------------------------------

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
Filter State	<p>Enables you to set filter conditions for reports that are generated from within the Analysis menu in specific modules.</p> <ul style="list-style-type: none"> • Custom. Enables you define a customized filter in the Analysis Menus tab. • Special filters. The following predefined filtering options are provided: <div data-bbox="542 556 1153 903" data-label="Text"> <p>Note: When adding sections to a report that lists a different entity type to the module from which the report is generated, you must use the Custom filter type. Selecting a special filter results in the section being excluded from the report. For example, if you add a Defects section to the Standard Requirement Report, and select the Context filtering option, the added section will not appear in the generated report.</p> </div> <ul style="list-style-type: none"> ■ Context. Filters information according to the filter that is currently selected in the module. ■ Selected. Includes information for the currently selected entity in the module only. <div data-bbox="574 1094 1153 1241" data-label="Text"> <p>Note: In the Test Lab module, the selected entity is the selected test run instance, and not the selected test set.</p> </div> ■ Selected with Children. For hierarchical entities, includes information for the selected parent entity as well as child entities. ■ Current Entity Based. Includes information for the currently focused item in the module. You use this option to generate a report in the Test Lab module on the test set level. <p>Available from: Analysis Menus tab. You must have the required administrator permissions to view this tab.</p>
	<p>Set Filter/Sort. Enables you to filter and sort the data according to the criteria you choose. For details, see "Select Filter Condition Dialog Box" on page 70.</p>
	<p>Clear Filter. Clears all filters and sorting priorities.</p>

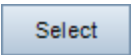

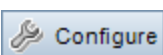


UI Element	Description
<filter box>	Displays the current selection.

Graph Selection Area

You can add existing graphs to the report, or create new graphs directly in the report.

Important information	<ul style="list-style-type: none"> Available from: Section nodes <div style="background-color: #f0f0f0; padding: 10px; margin: 10px 0;"> <p>Note: You cannot add a graph to a sub-section of a report.</p> </div> <ul style="list-style-type: none"> If you selected the Select a Baseline option in the Document Additional Options area, this option is not available.
------------------------------	---

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
	Opens the Graphs Tree pane on the right side of the Graph Selection area. The pane displays graphs in the analysis tree. Expand the tree and drag graphs to the graph list.
	Opens the Graph Wizard, enabling you to create graphs directly in the report. For user interface details, see "Graph Wizard" on page 811 .
	Opens the graph configuration window, enabling you to define axis data and set filter options. For user interface details, see "Configuration Tab/Window - Graphs" on page 797 .
	Opens the View Graph window, enabling you to view the selected graph and to set graph display options. For user interface details, see "View Tab - Graphs/Graph Window" on page 803 .
	Move Up/Move Down. Enables you to move the selected graph higher or lower in the graph list.
<graph list>	Lists the graphs that are included in the report.

Special Properties Area

Important information	Available from: Top-level sections that contain entities that are listed hierarchically in ALM (for example, requirements, test folders).
------------------------------	--

User interface elements are described below:

UI Element	Description
Keep Hierarchical	Instructs ALM to list records in hierarchical order in the report.

New Project Report Dialog Box

This dialog box enables you to add a new project report to the analysis tree.

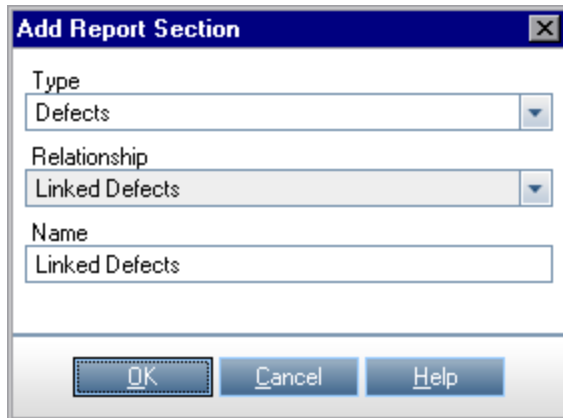
To access	<ol style="list-style-type: none">On the ALM sidebar, under Dashboard, select Analysis View.Right-click the folder under which you want to add a report, and select New Project Report.
Important information	Reports you create under private folders are available to the owner only. Reports you create under public folders are available to all users.
Relevant tasks	<ul style="list-style-type: none">"How to Create Project Reports" on page 836"How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none">"Project Reports Overview" on page 836"Analysis View Window" on page 774

User interface elements are described below:

UI Element	Description
Project Report Name	The report's display name in the analysis tree and in the report title.

Add Report Section Dialog Box

This dialog box enables you to add a new section to a project report.



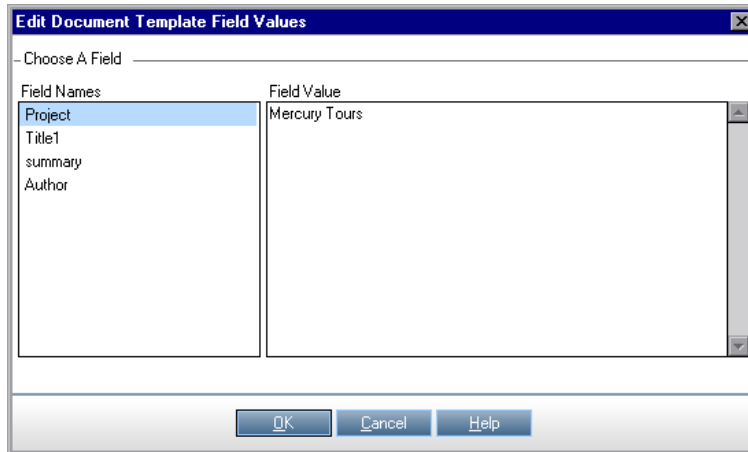
To access	In a project report, right-click the root node or a section node, and select Add Report Section .
Important information	You can add a sub-section only to sections that are assigned a full-page template.
Relevant tasks	<ul style="list-style-type: none">• "How to Create Project Reports" on page 836• "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none">• "Project Reports Overview" on page 836• "Analysis View Window" on page 774


User interface elements are described below:

UI Element	Description
Type	The entity that is included in the new section. For sub-sections, the available types depend on the entity in the parent section.
Relationship	Describes the relationship between the entity in the new section and the entity in the parent section. Available from: Section nodes
Name	The name of the new section. This field is used as the section title in the report.

Edit Document Template Field Values Dialog Box

This dialog box enables you to type actual values for custom merge fields as defined in the assigned document template.



To access	In a template report, select the Document root node, and click Edit Document Field Values  .
Relevant tasks	"How to Create Project Reports" on page 836
See also	<ul style="list-style-type: none">• "Project Reports Overview" on page 836• "Analysis View Window" on page 774

User interface elements are described below:

UI Element	Description
Field Names	A list of the custom merge fields defined in the assigned document template.
Field Value	The text that is displayed in the report in place of the selected field.

Chapter 44

Excel Reports

This chapter includes:

Excel Reports Overview.....	858
How to Generate an Excel Report.....	860
Excel Reports User Interface.....	861

Excel Reports Overview

Performance Center Edition: Excel reports are not available for Performance Center entities.

You can export HP Application Lifecycle Management (ALM) data to Microsoft Excel. This enables you to analyze your data using any of the capabilities available in Excel. An Excel report consists of a set of data defined by SQL queries on the project database. You can also run a Visual Basic script on the extracted data to process and analyze the data.

For example, create a pivot table to summarize Defects module data, such as to display in tabular format the number of defects assigned to different users with different statuses.

Count of STATUS	STATUS			
ASSIGNED_TO	Closed	Open	Reopen	Grand Total
james_qc	3	6	1	10
mary_qc		13	1	14
peter_qc	5	9		14
Grand Total	8	28	2	38

You can also create a report with parameters. This enables you to create a more flexible report that you only need to create once but can be used in a number of different contexts.

Caution: Users who belong to groups that have data-hiding filters, are able to access the restricted data through Excel reports. To overcome this, you can exclude user groups from performing Excel report tasks. For more information on user groups and permissions, refer to the *HP Application Lifecycle Management Administrator Guide*.

For task details, see ["How to Generate an Excel Report" on page 860](#).

This section also includes:

- ["Protecting the Database" below](#)
- ["Parameters in SQL Queries" on next page](#)
- ["Guidelines for Creating a Post-Processing Script" on next page](#)

For task details, see ["How to Generate an Excel Report" on page 860](#).

Protecting the Database

To ensure the integrity of the database, you should run only queries that extract data from the project database. You should not run queries that alter the project database by adding, modifying, or deleting database records.

By default, to ensure that your queries are valid and do not alter the project database, ALM checks that the following conditions are fulfilled:

- The query starts with the command **SELECT**.
- The query contains only one SQL statement.

- The query does not contain any of the following commands (except in comments): **INSERT**, **DELETE**, **UPDATE**, **DROP**, **CREATE**, **COMMIT**, **ROLLBACK**, **ALTER**, **EXEC**, **EXECUTE**, **MERGE**, **GRANT**, **REVOKE**, **SET**, **INTO**, or **TRUNCATE**.

You can customize whether this verification is performed, and how it is performed, using the **SQL_QUERY_VALIDATION_ENABLED** and **SQL_QUERY_VALIDATION_BLACK_LIST** parameters in Site Administration.

You can also customize the maximum number of records that can be retrieved from the database and the maximum length of time that ALM waits for an SQL query for an Excel report to be executed, using the **REPORT_QUERY_RECORDS_LIMIT** and **REPORT_QUERY_TIMEOUT** parameters in Site Administration.

For more information on setting parameters, see the *HP Application Lifecycle Management Administrator Guide*.

Parameters in SQL Queries

You can include parameters in the SQL queries for your Excel reports. For each query parameter, you can assign a default value. When you generate the report, you are prompted to enter the value of the parameter, or confirm the default value. Alternatively, you can choose to always use the default value, without being prompted by ALM each time you generate the report.

For example, suppose you want to create a report that displays a graph of the number of requirements added to your project over a period of time. You might want to run the report several times, each time for a different period of time. You can avoid the need to create multiple reports by creating a single report with query parameters for the start date and end date of the period. Each time you generate the report, you are prompted to enter the start and end dates for the period.

You first add query parameters to the parameters list. You can add global parameters that are accessible to all queries in a report, or you can add parameters that can only be used in particular queries. After you add parameters to the parameters list, you insert parameters into the query.

Caution:

- You cannot use parameters for SQL identifiers, such as a table name or a column name.
- Parameter values cannot include an SQL statement.

Guidelines for Creating a Post-Processing Script

When writing a post-processing script, consider the following guidelines:

- Your post-processing script must contain a sub-procedure named **QC_PostProcessing**. This procedure serves as the entry point to your script. This procedure cannot return a value and cannot take any arguments.
- Before you can work with the report data in Excel, you must first define the range containing the report data. You define this range in two steps:

- You first define the worksheet containing the report data by creating a worksheet object containing the data. For example, if the worksheet is named `Query1`, you can use the statement `Set MainWorksheet = ActiveWorkbook.Worksheets("Query1")`.
- After you define the worksheet containing the report data, you define the range containing the data by creating a range object containing the data. For example, if you defined the worksheet object with name `MainWorksheet`, you can use the statement `Set DataRange = MainWorksheet.UsedRange`.

After you define this range, you can manipulate the data contained in it using Visual Basic code.

- Before you run a post-processing script, you must configure your Microsoft Excel security settings so that Excel can run the script.

Office 2007: In Excel, click the Microsoft Office Button, and then click **Excel Options**. Select **Trust Center > Trust Center Settings > Macro Settings**. Select **Trust access to the VBA project object model**. Close Excel.

Caution: Enabling macros in Excel allows access to core Microsoft Visual Basic objects, methods and properties, and represents a potential security hazard.

How to Generate an Excel Report

This task describes how to analyze data in ALM using Excel reports.

Tip: The ALM Demo Project contains sample Excel reports. You can use the SQL queries and post-processing scripts in those reports as a basis for developing your own queries and scripts.

To learn more about Excel reports, see ["Excel Reports Overview" on page 858](#).

This task includes the following steps:

- ["Prerequisites" below](#)
- ["Add an Excel report to the analysis tree" below](#)
- ["Create an SQL query" on next page](#)
- ["Create a post-processing script" on next page](#)
- ["Generate an Excel report" on next page](#)

1. Prerequisites

To verify supported versions of Microsoft Excel, refer to the *HP Application Lifecycle Management Readme*.

2. Add an Excel report to the analysis tree

Add an Excel report to a folder in the analysis tree.

- a. **Open the Analysis View module.** On the ALM sidebar, under **Dashboard**, select **Analysis View**.
 - b. **Add a folder to the analysis tree.** Right-click a folder under the Private or Public root folder, and select **New Folder**.
 - c. **Create a new Excel report.** Right-click a folder, and select **New Excel Report**. Enter a name for the Excel report in the New Excel Report dialog box.
3. **Create an SQL query**
- Define the project data that you want to include in the report. You define this data by creating SQL queries. You can create multiple queries in an Excel report. When you generate the report, the results of each query are displayed in separate Excel worksheets.
- a. **Open the Query Builder.** In the Configuration tab, click the **Query** tab, and click **Query Builder**. For user interface details, see ["Excel Report Query Builder Dialog Box" on page 865](#).
 - b. **Write an SQL query.** Type a query in the SQL editor.
 - c. **Add ALM entities to an SQL query.** Select ALM entities in the Entities pane.
 - d. **Define parameters in an SQL query.** Use parameters in SQL queries to modify the results of an Excel report, based on parameter values that you enter. In the Query Builder dialog box, use the buttons in the Query Parameters tab.
4. **Create a post-processing script**
- You can create a Visual Basic script to run after the data is exported to Excel. You use this script to manipulate the data in Excel.
- For example, you can present requirements data in Excel as a pivot table, you could perform calculations on defects data to calculate the average time an open defect takes to be fixed, or you could create a graph based on exported data.
- In the Configuration tab, click the **Post-processing** tab. Write a Visual Basic script. For user interface details, see ["Post-processing Tab" on page 869](#).
5. **Generate an Excel report**
- Generating an Excel report extracts the data you specified in the SQL queries from the project database, saves the data in an Excel workbook, and runs the post-processing script.
- a. In the Configuration tab, click the **Generation Settings** tab. Set options for running an Excel report. For user interface details, see ["Generation Settings Tab" on page 870](#).
 - b. Click **Generate**.

Excel Reports User Interface

This section includes:

Configuration Tab - Excel Reports	862
Query Tab	863
Excel Report Query Builder Dialog Box	865
Post-processing Tab	869

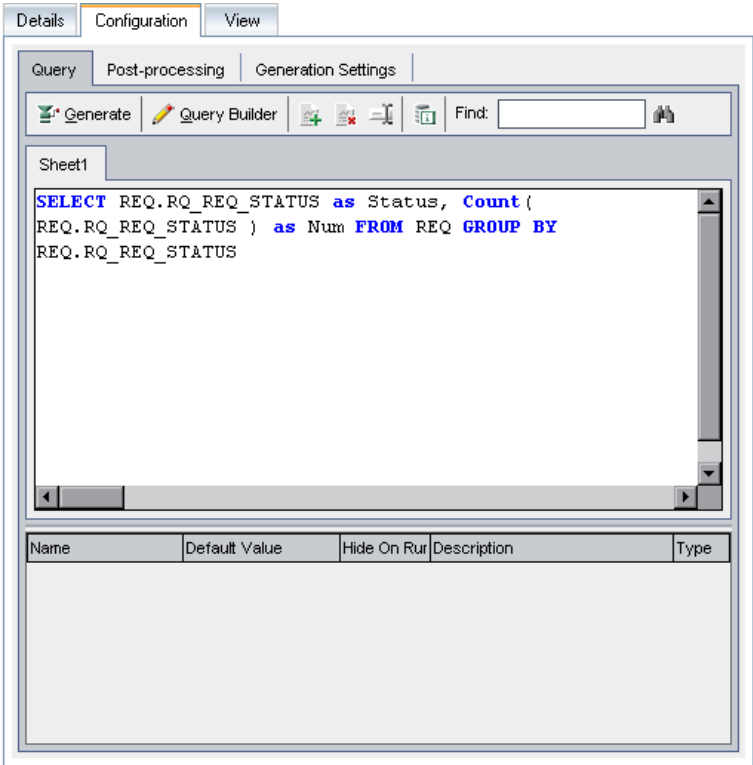
Generation Settings Tab..... 870

New Excel Report Dialog Box..... 872

New Query Parameter/Edit Query Parameter Dialog Box..... 872

Configuration Tab - Excel Reports

This tab contains tabs that enable you to configure Excel reports.



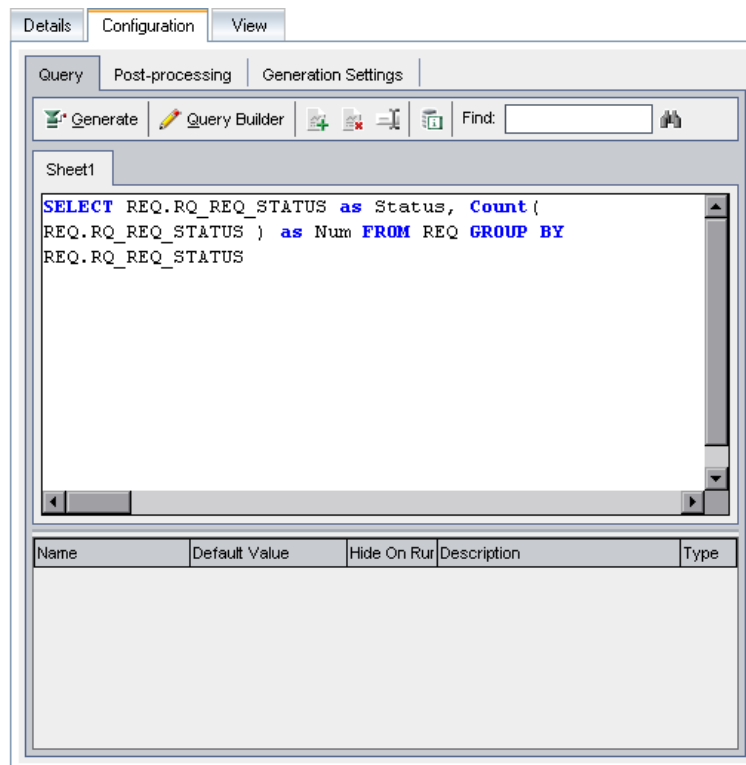
To access	<div>1. On the ALM sidebar, under Dashboard, select Analysis View.</div> <div>2. Expand the analysis tree, and select an Excel report.</div> <div>3. Click the Configuration tab.</div>
Relevant tasks	<div>"How to Generate an Excel Report" on page 860</div> <div>"How to Analyze Data in ALM" on page 772</div>
See also	<div>"Excel Reports Overview" on page 858</div> <div>"Analysis View Window" on page 774</div>

User interface elements are described below:

UI Element	Description
Query tab	Enables you to write an SQL query that defines the data that is exported to Excel. For more details, see "Query Tab" below .
Post-processing tab	Enables you to write a Visual Basic script that runs in Excel after the report data is exported to Excel. For more details, see "Post-processing Tab" on page 869 .
Generation Settings tab	Enables you to set options for running the Excel report. For more details, see "Generation Settings Tab" on page 870 .

Query Tab








This tab enables you to create an SQL script that defines the data that is exported to Excel.



To access	<ol style="list-style-type: none">1. On the ALM sidebar, under Dashboard, select Analysis View.2. Expand the analysis tree and select an Excel report.3. Under the Configuration tab, click the Query tab.
------------------	---

Important information	<ul style="list-style-type: none"> To ensure the integrity of the database, you should run only queries that extract data from the project database. For more details, see "Protecting the Database" on page 858. The query builder provides enhanced functionality for creating SQL queries. For more details, see "Excel Report Query Builder Dialog Box" on next page.
Relevant tasks	<ul style="list-style-type: none"> "How to Generate an Excel Report" on page 860 "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none"> "Excel Reports Overview" on page 858 "Analysis View Window" on page 774

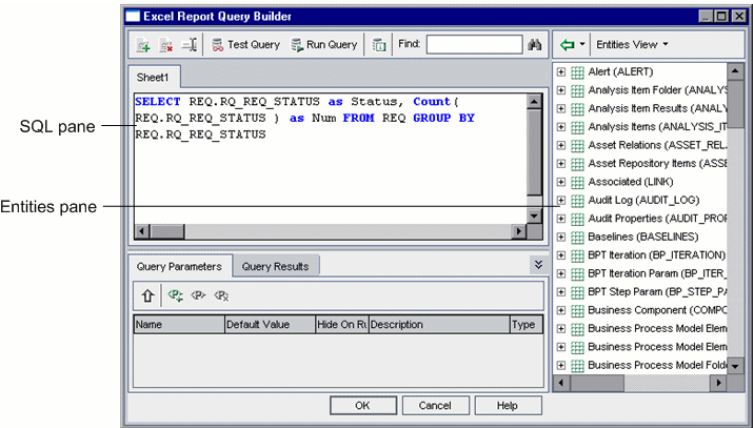
User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
	Generate. Generates the Excel report.
	Query Builder. Opens the Excel Report Query Builder dialog box, offering extended functionality for creating SQL queries, including testing the query and adding parameters to the query. For more details, see "Excel Report Query Builder Dialog Box" on next page .
	<p>Add Query. Enables you to create a new query. A new tab is added to the query builder with the default name Query<number>.</p> <p>When you generate the report, the results of each query are displayed in separate Excel worksheets.</p>
	Delete. Deletes the selected query.
	<p>Rename Query. Enables you to rename the current query.</p> <p>Note: The Excel worksheet containing the data extracted by the query will have the same name as the query.</p>
	<p>Database Type. Displays the type of database used for your project database.</p> <p>You must write the SQL query using the syntax used by the project database type.</p>
	<p>Find. Searches the query for text that you entered in the find box.</p> <p>Tip: Click the Find button again to find the next occurrence of the text.</p>

UI Element	Description
<Query Parameters grid>	Contains a list of parameters available for use in the queries. Note: To add and edit query parameters, work in the Excel Report Query Builder. For more details, see "Excel Report Query Builder Dialog Box" below.
<SQL pane>	Contains the SQL query that defines the data set that is extracted to the Excel report. Syntax exception: The @ and \ characters have a special meaning and are not read literally when running SQL queries on the project database. If you want these characters to be read literally, you should replace @ with \@ and \ with \\. For example, if you want the statement <pre>SELECT * FROM BUG WHERE BUG.BG_SUMMARY = '@parameter@' to be run literally on the ALM database, type SELECT * FROM BUG WHERE BUG.BG_SUMMARY = '\\@parameter\\@'.</pre>

Excel Report Query Builder Dialog Box

This dialog box enables you to create an SQL query.










To access	<ol style="list-style-type: none">1. On the ALM sidebar, under Dashboard, select Analysis View.2. Expand the analysis tree and select an Excel report.3. Under the Configuration tab, click the Query tab, and then click the Query Builder button.
Important information	<ul style="list-style-type: none">• To ensure the integrity of the database, you should run only queries that extract data from the project database. For more details, see "Protecting the Database" on page 858.• You can include parameters in SQL queries. For more details, see "Parameters in SQL Queries" on page 859.

Relevant tasks	"How to Generate an Excel Report" on page 860
See also	<ul style="list-style-type: none"> "Excel Reports Overview" on page 858 "Parameters in SQL Queries" on page 859

SQL Editor Area

User interface elements are described below (unlabeled elements are shown in angle brackets>):



UI Element	Description
	<p>Add Query. Enables you to create a new query. A new tab is added to the query builder with the default name Query<number>.</p> <p>When you generate the report, the results of each query are displayed in separate Excel worksheets.</p>
	<p>Delete. Deletes the selected query.</p>
	<p>Rename Query. Enables you rename the current query.</p> <p>Note: The Excel worksheet containing the data extracted by the query will have the same name as the query.</p>
 Test Query	<p>Test Query. Displays the first ten results of the query in the Query Results tab. If your query contains parameters, ALM uses the default values for the parameters.</p>
 Run Query	<p>Run Query. Displays results of the query in the Query Results tab. If your query contains parameters, ALM prompts you for values.</p>
	<p>Database Type. Displays the type of database used for your project database.</p> <p>You must write the SQL query using the syntax used by the project database type.</p>
	<p>Find. Searches the query for text that you entered in the find box.</p> <p>Tip: Click the Find button again to find the next occurrence of the text.</p>

UI Element	Description
<SQL editor>	<p>Contains the SQL query that defines the data set that is extracted to the Excel report.</p> <p>Note: Separate project entities with commas.</p> <p>Syntax exception: The @ and \ characters have a special meaning and are not read literally when running SQL queries on the project database. If you want these characters to be read literally, you should replace @ by \@ and \ by \\. For example, if you want the statement</p> <pre>SELECT * FROM BUG WHERE BUG.BG_SUMMARY = '@parameter@' to</pre> <p>be run literally on the ALM database, type <code>SELECT * FROM BUG WHERE BUG.BG_SUMMARY = '\\@parameter\\'</code>. Contains the SQL query that defines the data set that is used for the Excel report.</p>
Copy/Paste	<p>Copies selected text from one place in the SQL editor to another.</p> <p>Available from: Query editor right-click menu</p>
Cut/Paste	<p>Moves selected text from one place in the SQL editor to another.</p> <p>Available from: Query editor right-click menu</p>

Entities Pane

Contains a list of ALM database fields and entities that you can add to the query.





User interface elements are described below:

UI Element	Description
	<p>Add Entity to Query. Adds the selected project entity to the SQL query. The entity is inserted at the cursor position.</p> <p>To add a project entity with the column alias defined by the entity title, click the Add Entity to Query arrow and select Add Entity to Query with Entity Title as Alias.</p> <p>Available from: Entities pane</p>
	<p>Entities View. Enables you to view fields and entities in the Entities pane by their name, their database column name, or both.</p> <p>Available from: Entities pane</p>

Query Parameters Tab

Contains a list of parameters available for use in the queries.

User interface elements are described below:

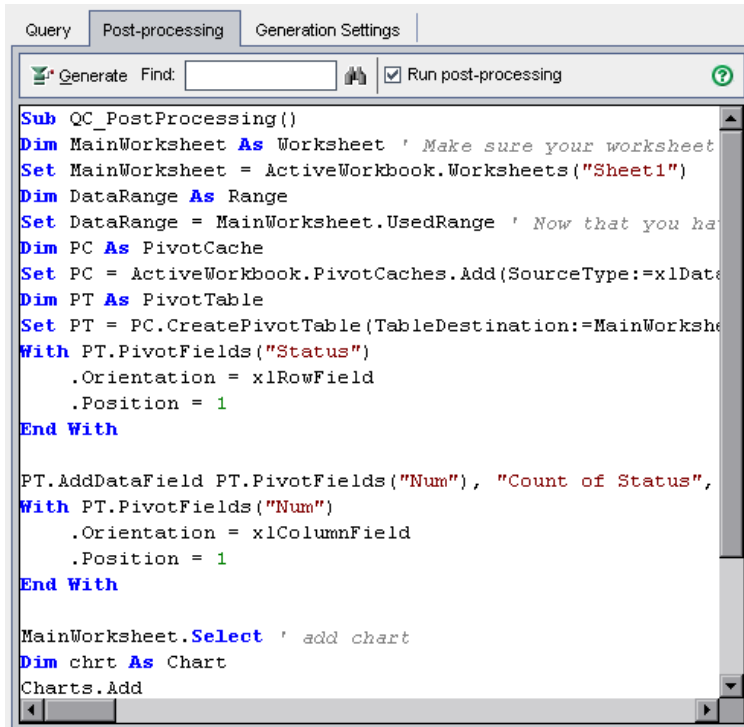
UI Element	Description
	<p>Add Parameter to Query. Adds the selected parameter to the SQL query. The parameter is added at the cursor position.</p> <p>Note: For a parameter representing a text value, you must manually add single quotes (') around the parameter in the SQL pane. For example, if the SQL pane contains the phrase <code>WHERE BUG.BG_DETECTED_BY = @name@</code>, you must replace the text <code>@name@</code> with <code>'@name@'</code>.</p> <p>Available from: Query Parameters tab</p>
	<p>New Query Parameter. Opens the New Query Parameter dialog box, enabling you to add a parameter to the parameters grid. For more details, see "New Query Parameter/Edit Query Parameter Dialog Box" on page 872.</p> <p>Available from: Query Parameters tab</p>
	<p>Edit Query Parameter. Opens the Edit Query Parameter dialog box, enabling you to edit the selected parameter. For more details, see "New Query Parameter/Edit Query Parameter Dialog Box" on page 872.</p> <p>Available from: Query Parameters tab</p>
	<p>Delete Query Parameter. Deletes the selected parameter from the parameters grid.</p> <p>Caution: If you delete a parameter that is in use in a report query, queries containing the parameter will not be valid.</p> <p>Available from: Query Parameters tab</p>

Query Results Tab

Displays preview results of an SQL query.


Post-processing Tab


This tab enables you to create a Visual Basic script that runs after the extracted data is exported to Excel.



To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Dashboard, select Analysis View. 2. Expand the analysis tree and select an Excel report. 3. Under the Configuration tab, click the Post-processing tab.
Important information	When writing a post-processing script, consider important guidelines. For more details, see "Guidelines for Creating a Post-Processing Script" on page 859 .
Relevant tasks	<ul style="list-style-type: none"> • "How to Generate an Excel Report" on page 860 • "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none"> • "Excel Reports Overview" on page 858 • "Analysis View Window" on page 774

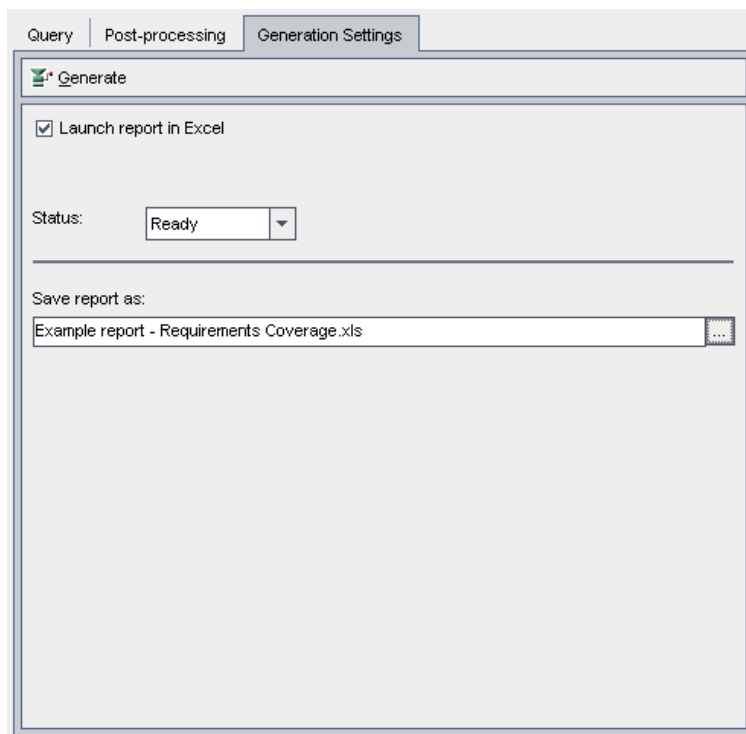
User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element	Description
 Generate	Generate. Generates the Excel report


UI Element	Description
	<p>Find. Searches the post-processing script for text that you entered in the find box.</p> <p>Tip: Click the Find button again to find the next occurrence of the text.</p>
Run post-processing	Instructs ALM to run the post-processing script after the data is exported to Excel. Clear this option if you do not want to run the script when you generate the report.
<script editor box>	<p>Contains the Visual Basic script that runs in Excel after the report data is exported to Excel.</p> <p>Tip: Base the script on the template script already displayed in the Script Editor box.</p>

Generation Settings Tab

This tab enables you to define settings for generating the Excel report.



Query | Post-processing | **Generation Settings**

 Generate

☒ Launch report in Excel


Status: ▼

Save report as:

...

To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Dashboard, select Analysis View. 2. Expand the analysis tree and select an Excel report. 3. Under the Configuration tab, click the Generation Settings tab.
Relevant tasks	<ul style="list-style-type: none"> • "How to Generate an Excel Report" on page 860 • "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none"> • "Excel Reports Overview" on page 858 • "Analysis View Window" on page 774

User interface elements are described below:

UI Element (A - Z)	Description
	<p>Generate. Generates the Excel report.</p> <p>If the status of the report is Not Ready, a warning displays.</p> <p>If the report query contains parameters, the Report Parameters dialog box opens. Type the parameter values in the Value column.</p> <p>The report is saved in the location you define. If you selected Launch report in Excel, Excel opens and displays the report. If not, a confirmation message displays.</p>
Launch report in Excel	Instructs ALM to open the report in Excel after the report is generated. If this option is not selected, you can load the saved report in Excel at a later stage.
Status	<p>Informs other users whether the report is ready to be generated. The following options are available for the report status:</p> <ul style="list-style-type: none"> • Ready. Indicates that the report is ready to be generated. • Not Ready. Indicates that the report is not ready to be generated. If a user tries to generate a report with this status, a warning message displays.
Save report as	<p>The location and name of the Excel file to which the data is exported.</p> <p>Tip: Click the browse button to select a folder.</p>

New Excel Report Dialog Box

This dialog box enables you to add a new Excel report to the analysis tree.

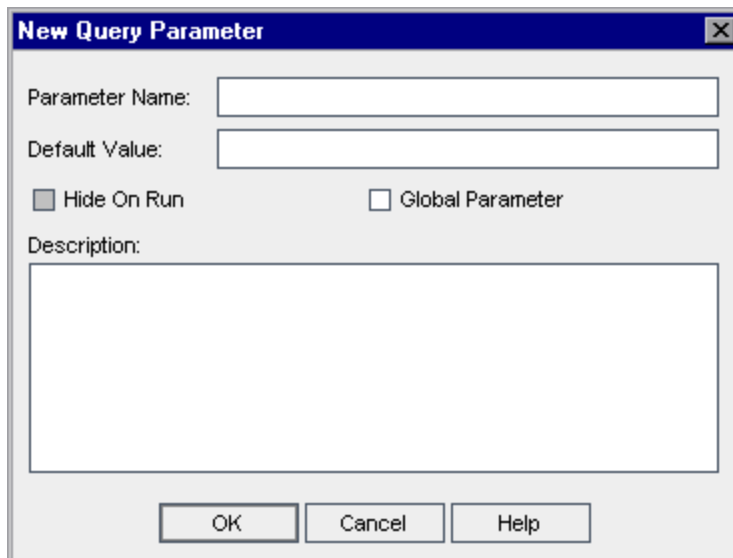
To access	<ol style="list-style-type: none">1. On the ALM sidebar, under Dashboard, select Analysis View.2. Right-click the folder under which you want to add a report, and select New Excel Report.
Important information	Excel reports you create under private folders are available to the owner only. Excel reports you create under public folders are available to all users.
Relevant tasks	<ul style="list-style-type: none">• "How to Generate an Excel Report" on page 860• "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none">• "Excel Reports Overview" on page 858• "Analysis View Window" on page 774

User interface elements are described below:

UI Element	Description
Excel Report Name	The report's display name in the analysis tree.

New Query Parameter/Edit Query Parameter Dialog Box

This dialog box enables you to edit or create a new query parameter.



New Query Parameter [X]

Parameter Name:

Default Value:

☐ Hide On Run ☐ Global Parameter

Description:

OK Cancel Help

To access	<ol style="list-style-type: none">1. In an Excel report, under the Configuration tab, click the Query tab, and then click the Query Builder button.2. In the Query Parameters tab, right-click and select New Parameter or Edit Parameter.
Relevant tasks	"How to Generate an Excel Report" on page 860
See also	"Parameters in SQL Queries" on page 859

User interface elements are described below:

UI Element	Description
Parameter Name	<p>The parameter name.</p> <div>Note: If you rename a parameter, the change is automatically applied to the parameter wherever it is used in the SQL query.</div> <p>Syntax exception: A parameter name cannot include special characters, except the underscore character.</p>
Default Value	The value that the parameter uses by default.
Hide On Run	Instructs ALM to use the default value every time you generate the report. Clear this option if you want to be prompted to keep or change the default value when you generate the report.
Global Parameter	Indicates that the parameter is available to all queries in the current Excel report.
Description	An extended description of the parameter.

Chapter 45

Standard Reports

This chapter includes:

- Standard Reports Overview..... 876
- How to Manage Standard Reports..... 876
- Available Sub-Reports..... 876
- Standard Reports User Interface..... 877

Standard Reports Overview

From HP Application Lifecycle Management 11.5 onwards, you can no longer automatically create new Standard Reports. To create a report that provides comprehensive information for your ALM project, see ["Project Reports" on page 835](#). You can view and edit existing Standard Reports from previous versions of ALM.

Note: You can enable the ability to create Standard Reports by configuring the **ENABLE_CREATE_STANDARD_REPORT** site configuration parameter. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

For task details, see ["How to Manage Standard Reports" below](#).

How to Manage Standard Reports

This task describes how to configure and view existing standard reports from previous versions of ALM. The ability to create new Standard Reports is not available from ALM 11.50 onwards. To create a report that provides comprehensive information for your ALM project, see ["Project Reports" on page 835](#).

To learn more about standard reports, see ["Standard Reports Overview" above](#).

Configure an existing standard report

Add sub-reports, and define standard report settings, such as data filtering and page layout.

In the Analysis View module, select an existing Standard Report and click the **Configuration** tab. For user interface details, see ["Configuration Tab – Standard Reports" on page 878](#).

View an existing standard report

In the Analysis View module, select an existing Standard Report and click the **View** tab. For user interface details, see ["View Tab – Standard Reports" on page 880](#).

Available Sub-Reports

The following sub-reports are available depending on the type of parent report:

Report	Description
Component Steps	Lists the steps for a component.
Components Used By	Lists the business process tests and flows that use a component.
Components with Application Area	Lists the application area associated with a component.
Contained Test Sets	Lists the test sets in a test set folder.
Contained Tests	Lists the test instances in a test set.

Report	Description
Coverage Requirements	Lists information for requirements covered by a test.
Design Steps	Lists the design steps for a test.
Linked Defects	Lists the defects that are linked to an entity.
Linked Entities	List all entities that are linked to a defect.
Parent Test	Lists the parent test instance of a test run.
Related Requirements	Lists the requirements that are linked to a defect.
Requirements Coverage	Lists the tests that cover a requirement.
Run Steps	Lists the run steps for a test run.
Runs	Lists all runs of a test instance.
Source Execution Test	Lists the executed test instances that are linked to a defect.
Source Run	Lists the test runs that are linked to a defect.
Source Test	Lists the tests that are linked to a defect.
Trace To	Lists the requirements traced to a requirement.
Trace From	Lists the requirements traced from a requirement.

Standard Reports User Interface

This section includes:

Configuration Tab – Standard Reports.....	878
View Tab – Standard Reports.....	880

Configuration Tab – Standard Reports




This tab enables you to select the data and fields to be included in a standard report, add sub-reports, and set the report's layout.


The screenshot displays the 'Configuration' tab for a standard report in HP ALM. The interface includes the following elements:

- Tabs:** Details, Configuration (active), View.
- Page:**
 - Limit items per page to: 5 (selected)
 - All items in one page (radio button)
- Template:**
 - URL: C:\DOCUMENT1\user\LOCALS~1\Temp\TD_80\server\9755b87\Reports\default.xml
- Filter:**
 - Filter text box (empty)
- Fields:**
 - All Fields (auto-layout) (selected)
 - Custom Fields (layout) (radio button)
- Options:**
 - Keep Parent-Child Order (disables filter sort order) (checkbox)
 - Show Paragraph Number (checkbox)
 - Show Full Coverage (applies to test sub-report) (checkbox)
 - Rich Text (checkbox)
 - Grid View (checkbox)
 - Attachments (checkbox)
 - History (checkbox)
- Left Sidebar:**
 - Requirement Report (selected)

To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Dashboard, select Analysis View. 2. Expand the analysis tree, and select a standard report. 3. Click the Configuration tab.
Important information	<ul style="list-style-type: none"> • Only available for existing reports from ALM 11.00 and below. • The available configuration options depend on the selected report type in the reports pane.
Relevant tasks	<ul style="list-style-type: none"> • "How to Manage Standard Reports" on page 876 • "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none"> • "Standard Reports Overview" on page 876 • "Analysis View Window" on page 774

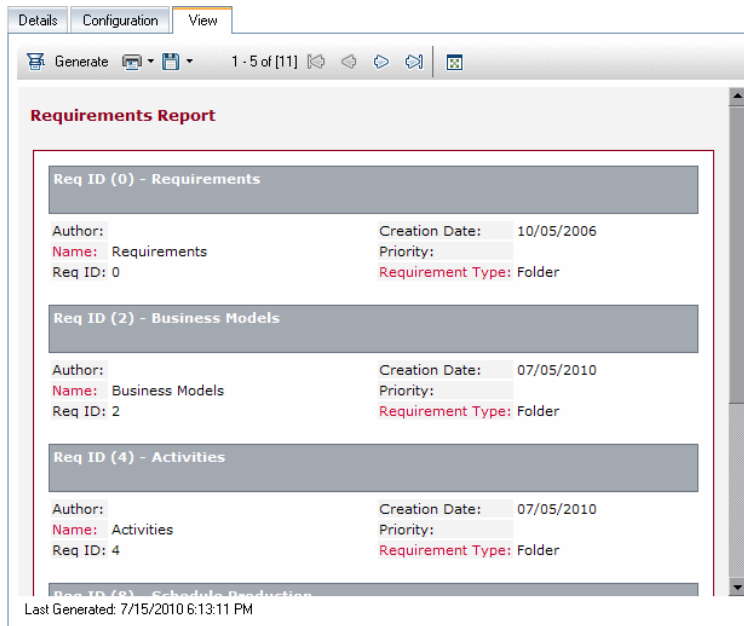
User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
Page	<p>Enables you to set the number of items from the main report that are displayed in each page:</p> <ul style="list-style-type: none"> To limit the number of items per page, select Limit items per page to and specify the number of items per page. To display all items in one page, select All items in one page.
Template	<p>Enables you to choose a template for the selected standard report.</p> <p>In the URL field, select the ALM default report template, or a customized template.</p> <p>Tip: Click the browse button to select a template in a different folder.</p>
	<p>Add Sub Report. Opens the Add Sub-Report dialog box, enabling you to select a sub-report to add to the currently selected report. For details on available sub-reports, see "Available Sub-Reports" on page 876.</p> <p>Note:</p> <ul style="list-style-type: none"> To each sub-report you can add further sub-reports. At each level you can include multiple sub-reports.
	<p>Delete Sub Report. Deletes the selected sub-report.</p> <p>Note: When you delete a parent report, all its sub-reports are deleted too.</p>
<reports pane>	<p>Displays a tree of reports and sub-reports. The top level is the report type of the current report.</p> <p>Select a report and configure its filter, fields and options.</p>
	<p>Set Filter/Sort. Enables you to filter and sort the data according to the criteria you choose. For details, see "Select Filter Condition Dialog Box" on page 70.</p> <p>Clear Filter. Clears all filters and sorting priorities.</p> <p>The current filter is displayed in the filter box.</p> <p>Note: This option applies to the report selected in the reports pane.</p>

UI Element	Description
Fields	<p>Enables you to set the fields that are included in the report and their order.</p> <ul style="list-style-type: none"> Select All Fields (auto layout) to display all fields in the report. Select Custom Fields (layout) and click Select Fields  to choose fields and set their order. For details, see "Select Columns/Select Fields Dialog Box" on page 86. <p>Note: This option applies to the report selected in the reports pane.</p>
Keep Parent-Child Order	<p>Displays the requirement topic with the child requirement below it. Selecting this option deactivates your defined filters and sorting priorities.</p> <p>Available from: Requirements reports</p>
Show Paragraph Number	<p>Displays the assigned hierarchical numbers to each requirement in the tree.</p> <p>Note: These numbers are not related to the unique Req ID assigned to each requirement.</p> <p>Available from: Requirements reports</p>
Show Full Coverage	<p>Displays the test coverage for each requirement in the tree.</p> <p>Available from: Requirements reports</p>
Rich Text	<p>Includes rich text for requirements in the report.</p> <p>Available from: Requirements reports</p>
Show Steps only for "Failed" Runs	<p>If you add a Run Steps sub-report, displays steps only for failed runs. To display steps for all runs, clear this selection.</p> <p>Available from: Test run reports</p>
Grid View	Displays the report as a grid.
Attachments	Displays a list of associated attachments.
History	Displays a list of all the changes made to a requirement, test, or defect.




View Tab – Standard Reports



This tab enables you to view standard reports in the Analysis View module.



To access	In the Analysis View module, select a standard report, and click the View tab.
Important Information	Only available for existing reports from ALM 11.00 and below.
Relevant tasks	<ul style="list-style-type: none"> • "How to Manage Standard Reports" on page 876 • "How to Analyze Data in ALM" on page 772
See also	<ul style="list-style-type: none"> • "Standard Reports Overview" on page 876 • "Analysis View Window" on page 774

User interface elements are described below:

UI Element	Description
 Generate	Generate. Refreshes the report so that it displays the most recent data.
	Print Report. Prints the standard report. Select one of the following options: <ul style="list-style-type: none"> • Current Page. Prints the current report page. • All Pages. Prints all the report pages.
	Save Report. Saves the standard report. Select one of the following options: <ul style="list-style-type: none"> • Current Page. Saves the current report page. • All Pages. Saves all the report pages. <p>The Save Web Page dialog box opens, enabling you to save the standard report as a Web page or a text file. Select the format in the Save as type list.</p>

UI Element	Description
	First/Previous/Next/Last Page. Enables you to browse through the report pages.
	Full Screen. In the View tab, enables you to view the report in full-screen. Note: The toolbar remains visible in full-screen mode. Tip: To return to the standard view, click the Close button in the top-right corner of the window.

Chapter 46

Live Analysis Graphs

This chapter includes:

Live Analysis Graphs Overview.....	884
How to Generate Live Analysis Graphs.....	884
Live Analysis Graphs User Interface.....	885

Live Analysis Graphs Overview

Live analysis enables you to create and display dynamic charts illustrating:

- Test subject data in the Test Plan module.
- Test set folder data in the Test Lab module.
- Business component subject folders in the Business Components module.

In each module you can create up to two live analysis graphs.

Live Analysis graphs differ from the graphs described in ["Graphs and Dashboard Pages" on page 787](#) in that you do not have to re-generate a graph to view data that has changed. In addition, the layout and settings of the graph are preserved for all the folders in the same module. This enables you to view the same graphical analysis of different folders without the need to redesign the graphs.

For task details, see ["How to Generate Live Analysis Graphs" below](#).

How to Generate Live Analysis Graphs

This task describes how to create and view auto-generated graphs for test subjects, test sets, and business components.

To learn more about Excel reports, see ["Live Analysis Graphs Overview " above](#).

This task includes the following steps:

- ["Prerequisites" below](#)
- ["Create Live Analysis graphs" below](#)
- ["View Live Analysis graphs" below](#)

1. Prerequisites

For test plan Live Analysis graphs, test subject folders are defined in the Test Plan module.

For test lab Live Analysis graphs, test set folders are defined in the Test Lab module.

For business component Live Analysis graphs, component subject folders are defined in Business Components module.

2. Create Live Analysis graphs

- a. On the sidebar, under **Testing**, select **Test Plan**, **Test Lab**, or **Business Components**.
- b. Select a folder in the module tree.
- c. Click the **Live Analysis** tab.
- d. Click the **Add Graph** link in the pane in which you want to display a graph. Follow the wizard to design a live analysis graph. For user interface details, see ["Live Analysis Graph Wizard" on page 887](#).

3. View Live Analysis graphs

You can change the way a Live Analysis graph is displayed. This includes maximizing the

graph to full-screen view, changing the graph appearance, and drilling down to the graph data.

- a. On the sidebar, under **Testing**, select **Test Plan**, **Test Lab**, or **Business Components**.
- b. Select a folder in the module tree.
- c. Click the **Live Analysis** tab. For user interface details, see "Live Analysis Tab" below.

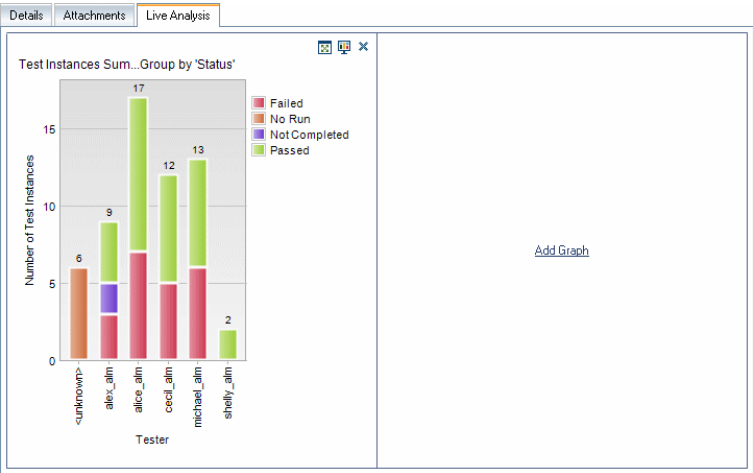
Live Analysis Graphs User Interface

This section includes:

Live Analysis Tab.....	885
Live Analysis Graph Wizard.....	887

Live Analysis Tab




This tab enables you to create and display Live Analysis graphs for test subjects, test set folders, and business component subjects.



To access	<div>1. On the ALM sidebar, under Testing, select Test Plan, Test Lab, or Business Components.</div> <div>2. Select a folder in the module tree, and click the Live Analysis tab.</div>
Important information	<div>• The Live Analysis graphs that you create are unique for your user login. Each project user can create Live Analysis graphs which will be visible only to that user but will not be visible to other users.</div> <div>• Live Analysis graphs represent only nodes that are located directly below the selected folder. They do not include tests, test sets, or business components located at a lower hierarchical level in child folders of the selected folder.</div> <div>• The data displayed in the graph reflects the filters that you have set for the module.</div>

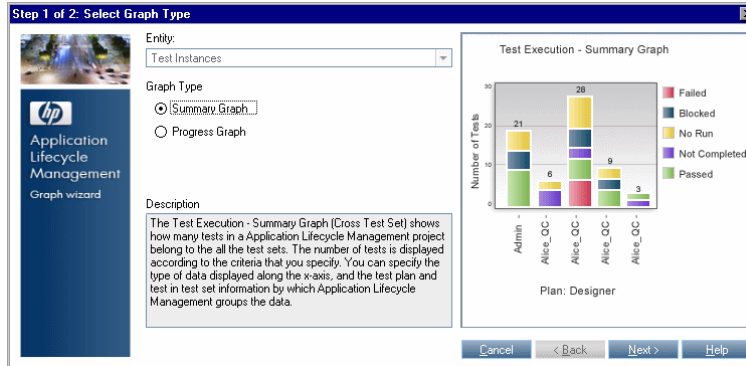
Relevant tasks	"How to Generate Live Analysis Graphs" on page 884
See also	"Live Analysis Graph Wizard" on next page

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
Add Graph	Launches the Live Analysis Graph Wizard, enabling you to design a Live Analysis graph. For user interface details, see "Live Analysis Graph Wizard" on next page .
	View Graph in Full Screen. Maximizes the current graph to full-screen view. Tip: To return to the normal view, click the Close button.
	Set Graph Appearance. Opens the Graph Appearance dialog box, enabling you to change the current graph's title, color, and display. For more details, see "Graph Appearance Dialog Box" on page 821 .
	Delete Graph. Removes the current Live Analysis graph from the Live Analysis tab. Note: If you have two Live Analysis graphs displayed for a folder and you want to create a new graph, you must first delete one of the existing graphs.
<graph area>	You can perform the following actions in the chart area: Drill Down. To further analyze your data, click a bar or segment in the graph. The Drill Down Results dialog box opens. For user interface details, see "Drill Down Results Dialog Box" on page 822 . Set Colors. To change the graph colors, right-click a bar or line. In the Color dialog box that opens, select the new color from one of the color palettes.
<legend>	Displays the chart categories and their corresponding color. Set Colors. Right-click a category to change its color. In the Color dialog box that opens, select the new color from one of the color palettes.

Live Analysis Graph Wizard

This wizard enables you to create Live Analysis graphs for test subjects, test set folders, and business component subjects.



To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Testing, select Test Plan, Test Lab, or Business Components. 2. Select a folder in the module tree, and click the Live Analysis tab. 3. Click the Add Graph link in the pane in which you want to display the graph.
Important information	After you define the data that you want to display, the graphs are automatically updated each time the data changes in the tests or test sets in the folder for which you created the graph.
Relevant tasks	"How to Generate Live Analysis Graphs" on page 884
Wizard map	<p>This wizard contains:</p> <p>"Select Graph Type Page" below > "Select Graph Attributes Page " on next page</p>
See also	"Live Analysis Tab" on page 885

Select Graph Type Page

This wizard page enables you to select the Live Analysis graph type.

Important information	General information about this wizard is available here: "Live Analysis Graph Wizard" above .
Wizard map	<p>The "Live Analysis Graph Wizard" above contains:</p> <p>"Select Graph Type Page" above > "Select Graph Attributes Page " on next page</p>

User interface elements are described below:

UI Element (A - Z)	Description
Description	A description of the selected graph type.
Entity	The ALM entity covered by the graph.
Graph Type	Select the type of graph that you want to display: Summary Graph. Shows the number of tests in a test subject; the number of tests in test sets in a folder; or the number of components in a business component subject. Progress Graph. Shows how many tests accumulated in a test subject, in the test sets in a folder, or components in a business component subject, at specific points during a period of time. Trend Graph. In the Test Plan module, shows the history of changes to specific Test Plan fields in the selected test subject folder, for each time interval displayed. In the Business Components module, shows the history of changes to specific Business Components fields in a project, at each point during a period of time.

Select Graph Attributes Page

This wizard page enables you to set attributes for the Live Analysis graph.

Important information	General information about this wizard is available here: "Live Analysis Graph Wizard" on previous page .
Wizard map	The "Live Analysis Graph Wizard" on previous page contains: "Select Graph Type Page" on previous page > "Select Graph Attributes Page" above

User interface elements are described below:

UI Element (A - Z)	Description
Group By field	The field by which tests or components are grouped in the graph. Note: For progress graphs, you can select only fields for which history has been enabled. For more information on enabling history for a field, refer to the <i>HP Application Lifecycle Management Administrator Guide</i> .
X-axis field	In summary graphs, the field whose values are displayed along the x-axis.

Chapter 47

Project Documents

This chapter includes:

Project Documents Overview.....	890
How to Generate a Project Document	890
Document Generator User Interface	892

Project Documents Overview

You can generate a hard copy of the data contained in an HP Application Lifecycle Management (ALM) project by using the Document Generator. The Document Generator enables you to create a Microsoft Word document containing a project's requirements, test plans, test set folders, defect tracking, and business process testing data.

Note: From HP Application Lifecycle Management 11.50 onwards, you can create new project documents, but you cannot add them to your favorites list. You can still access project documents from previous versions of ALM.

To work with reports that provide comprehensive information for your ALM project, see ["Project Reports" on page 835](#).

For task details, see ["How to Generate a Project Document" below](#).

How to Generate a Project Document

This task describes how to create project documents using the Document Generator.

Note: From HP Application Lifecycle Management 11.50 and above, you can create new project documents, but you cannot add them to your favorites list.

To work with reports that provide comprehensive information for your ALM project, see ["Project Reports" on page 835](#).

This task includes the following steps:

- ["Prerequisites" below](#)
- ["Set document formats" below](#)
- ["Specify document content" on next page](#)
- ["Generate a document" on next page](#)
- ["Result" on next page](#)

1. Prerequisites

- The Document Generator can only be run if Microsoft Word has been enabled to run macros. If you receive a security message while using the Document Generator, you must set the security level of Microsoft Word to medium or low.
- To verify supported versions of Microsoft Word, refer to the *HP Application Lifecycle Management Readme*.

2. Set document formats

Set formatting instructions to determine how your project document will look.

For example, you can print a company logo on each page of the document, create a table of contents and an index, and place test scripts and file attachments in the text of your document.

- a. **Open the Document Generator.** On the ALM menu, select **Tools > Document Generator**.
- b. In the Document Generator tree, click the **Document** link. For user interface details, see ["Document Page" on page 896](#).

3. **Specify document content**

Specify the project data that will be presented in your document. You can select information from the ALM modules.

For example, you can choose which folders and tests to include from the test plan tree, sort the data alphabetically or in a custom sort order, and display the data as lists or tables.

- a. **Open the Document Generator.** On the ALM menu, select **Tools > Document Generator**.
- b. **Open an entity page.** Expand the Document Generator tree, and click a link for an entity that you want to include in the document. For user interface details, see ["Document Generator Tree" on page 895](#).

4. **Generate a document**

- a. Use the buttons on the Document Generator toolbar to preview, generate, and save a document. For user interface details, see ["Document Generator Window " on page 893](#).
- b. Alternatively, reload a saved document by selecting a favorite view.

5. **Result**

After document generation is complete, you can view and edit the document in Microsoft Word. The information for each module that you select is printed in a separate chapter of the project document.

Example

Below is a sample page from a Microsoft Word project document generated by the Document Generator.

HP Software		
Chapter 1. Track Defects		
1.1. Defect ID: 1		
Status: Fixed		
Assigned To: james_qc		
Project: Mercury Tours (HTML Edition)		
Subject: Flight Finder		
Summary: The list of flights is given even when past date set as Departing date		
Reproducible: Y		
Severity: 3-High		
Priority: 3-High		
Detected By: alice_qc		
Detected on Date: 09/01/05		
Detected in Version: Version 1.0		
Planned Closing Version: Version 1.01		
Estimated Fix Time: 5		
Actual Fix Time: 0		
Description: Test Set: Mercury Tours Functionality		
Test: [1]Departing Date		
Run: Run_9-2_10-26-57		
Step: Step 1: Past Departing Date		
Description:		
1. Select the One Way option.		
2. In Departing Date, select any past date. Check each of the following possibilities:		
- Previous month, any date selected.		
- Past date, current month selected.		
3. Click the Continue button.		
Expected result:		
The list of flights should not be given.		
You should be requested to insert valid departing date.		
Actual Result:		
	3	04/10/07

Document Generator User Interface

This section includes:

Document Generator Window.....	893
Document Generator Tree.....	895
Document Page.....	896

Requirements Page..... 898

Business Components Page..... 900

Subject Tree Page..... 901

Subject Tests Page..... 902

Test List Page..... 904

Test Lab Page..... 906

Test Sets Page..... 907

Tests Page..... 908

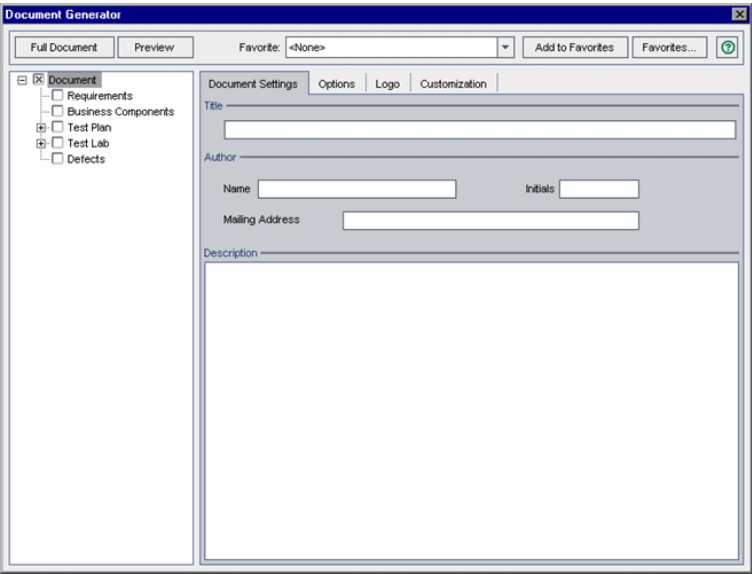
Runs Page..... 910

Defects Page..... 911

Organize Favorites Dialog Box..... 913

Document Generator Window

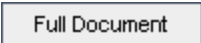

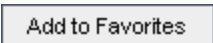

The Document Generator enables you to create a Microsoft Word document containing data from a project's requirements, test plans, test set folders, business components, and defects.



To access	On the masthead, select Tools > Document Generator .
Important Information	From ALM 11.50 onwards, you can create new project documents, but you cannot add them to your favorites list. To generate a report that provides comprehensive information for your project, it is recommended that you use Project Reports. For more information, see " Project Reports " on page 835.

Relevant tasks	<ul style="list-style-type: none"> • "How to Generate a Project Document" on page 890 • "How to Analyze Data in ALM" on page 772
-----------------------	--

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
	<p>Opens the Save As dialog box, enabling you to generate the project document.</p> <p>If there are open project document files from previous runs of the Document Generator, first close the files.</p> <p>After you assign a document name, ALM begins generating the document.</p> <p>When the process is complete, Microsoft Word opens and displays the document.</p> <p>Note: If the generated document contains links to attachments, a folder is created in the same location as the document, and the attachment files are copied to this folder. The name of the attachment folder is the name of the document with the suffix "_Attachments". If you send the document to someone, you can send the attachment folder along with it so that the recipient can access the attachments by using the links.</p>
	<p>Enables you to quickly see how the document will look, without all the details included. ALM opens Microsoft Word and displays the preview project document.</p>
Favorite	<p>Enables you to reload a view from a drop-down list of existing favorite views.</p> <p>Tip: Save changes to a favorite view by clicking the Add to Favorites button.</p>
	<p>By default, this option is disabled from ALM 11.5 onwards.</p> <p>To enable the option, configure the ENABLE_CREATE_DOCGEN_FAVORITE site configuration parameter. For more information, refer to the <i>HP Application Lifecycle Management Administrator Guide</i>.</p>
	<p>Opens the Organize Favorites dialog box, enabling you to organize saved project documents. For more details, see "Organize Favorites Dialog Box" on page 913.</p>
<Document Generator tree>	<p>Lists links to pages in which you configure the document template, and specify project content to include in the document. For more details, see "Document Generator Tree" on next page.</p>

Document Generator Tree

This area enables you to specify project data to include in your project document, and design the document template.

To access	On the masthead, select Tools > Document Generator .
Important information	Select the check box next to the appropriate nodes to include the data in the project document.
Relevant tasks	"How to Generate a Project Document" on page 890

User interface elements are described below:

UI Element	Description
Document	Enables you to set formatting instructions that control how the document will look and what is included in the cover page. For details, see " Document Page " on next page.
Requirements	Enables you to specify which requirements, traced requirements, test coverage, and linked defects from the Requirements module are included in the project document. For details, see " Requirements Page " on page 898.
Business Components	Enables you to specify which components from the Business Components module are included in the project document. For details, see " Business Components Page " on page 900.
Test Plan	<p>Enables you to specify which test subject folders and which tests from the Test Plan module are included in the project document.</p> <p>Expand to select which subject folders and tests to include.</p> <p>Click Subject Tree to specify which test subject folders from the test plan tree are included in the project document. For details, see "Subject Tree Page" on page 901.</p> <p>Click Subject Tests to specify which tests from the selected subject folders are included in the project folder. For details, see "Subject Tests Page" on page 902.</p> <p>Click Test List to specify which tests from the test grid are included in the project document. For details, see "Test List Page" on page 904.</p>

UI Element	Description
Test Lab	<p>Enables you to specify which test set folders from the Test Lab module are included in the project document. For details, see "Test Lab Page" on page 906.</p> <p>Expand to select which test sets, tests and test runs to include.</p> <p>Click Test Sets to specify which test sets are included in the project document. For details, see "Test Sets Page" on page 907.</p> <p>Click Tests to specify which tests from the selected test sets are included in the project document. For details, see "Tests Page" on page 908.</p> <p>Click Runs to specify which test runs from the selected tests in a test set are included in the project document. For details, see "Runs Page" on page 910.</p>
Defects	<p>Enables you to specify which defects from the Defects module are included in the project document. For more details, see "Defects Page" on page 911.</p>

Document Page

This page enables you to set formatting instructions that control how the document appears and what is included in the cover page.

To access	In the Document Generator tree, click the Document link.
Relevant tasks	"How to Generate a Project Document" on page 890
See also	"Document Generator Window " on page 893

Document Settings Tab

User interface elements are described below:

UI Element	Description
Title	A title that is displayed on the document cover page.
Author	Details of the document author that are displayed on the document cover page.
Description	A description of the document.

Options Tab

User interface elements are described below:



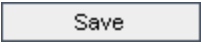
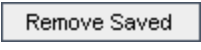

UI Element	Description
Include with Document	Select additional sections to include in the project document: <ul style="list-style-type: none">• First Page. The cover page of the project document. This displays the title of the document, the date the document was created, and the name of the document's author. You specify this information in the Document Settings tab.• Table of contents. A list of all sections in the project document.• Index. An alphabetical list of all the information in the project document. The index appears at the end of the document.
Attachment Placement Options	Choose where attachments will appear in the document: <ul style="list-style-type: none">• In text. Displays attachments in the main text of the document.• In appendix. Places attachments in a separate appendix.
Attachment Embedding Options	Choose whether the project document contains the data from attachments as a linked icon or as embedded text: <ul style="list-style-type: none">• As icons. Places a link to the attachment in the document as an icon.• As expanded text. Adds the attachment to the document as expanded text.
Test Script Options	Choose where test scripts will appear in the document: <ul style="list-style-type: none">• In text. Displays test scripts in the main text of the document.• In appendix. Places test scripts in a separate appendix.
Graph Options	Choose where graphs will appear in the document: <ul style="list-style-type: none">• In text. Displays graphs in the main text of the document.• In appendix. Places graphs in a separate appendix.
Do not generate a paragraph if there is no corresponding project information	Instructs ALM to not include empty data fields in the project document.

Logo Tab

This tab enables you to set the image that is placed at the top of each page of the project document.

Important information	<ul style="list-style-type: none">• The logo is placed at the top of each page of the project document.• If you do not define a logo, the Document Generator uses the HP logo in the project document.
------------------------------	---


User interface elements are described below:

UI Element	Description
	Load from File. Opens the Open dialog box, enabling you to select an image in your file system to use as a logo in the project document. The image is displayed in the Logo tab.
	Unload. Removes the displayed logo.
	Save. Saves the displayed image in the current project.
	Remove Saved. Deletes the saved image from the current project. Note: To remove the displayed logo, click the Unload button.
	Load from Saved. Displays the image that was saved to the project, and uses it as a logo in the project document.

Customization Tab

This tab enables you to set the document paper properties.

User interface elements are described below:

UI Element	Description
	Page Setup. Opens the Page Setup dialog box, enabling you to set the measurement units, margins, orientation, and paper size to be used for project documents.

Requirements Page

This page enables you to specify the requirement information from the Requirements module that should appear in the Requirements section of the project document.

To access	In the Document Generator tree, click the Requirements link.
Important information	<ul style="list-style-type: none">• Select the check box next to the Requirements link to include the data in the project document.• Microsoft Word is limited to nine header levels in the table of contents. If the requirements tree has more than nine hierarchical levels, these levels will not appear in the table of contents of the generated project document.
Relevant tasks	"How to Generate a Project Document" on page 890
See also	"Document Generator Window " on page 893

User interface elements are described below:

UI Element	Description
Requirements	<p>Select one of the following options:</p> <ul style="list-style-type: none"> • All. Includes all the requirements from the requirements tree. • By status. Includes only requirements with the selected status. • Selected. Includes only selected requirements. To include child requirements, click First Selected with Children. <p>Click the Filter & Sort button to specify the criteria for selecting requirements. For more details, see "Filter Dialog Box" on page 61.</p>
Requirements Layout	<p>Select one of the following options:</p> <ul style="list-style-type: none"> • Full page. Displays a list of the selected requirements. Click the Customize button to choose the information to appear in the document. • Tabular. Displays the requirements as a table. Click the Customize button to open the Tabular Layout dialog box to customize the table. Use the Tabular Layout dialog box to choose the columns that will appear in the table, and set the column order, width, and captions. • Coverage Analysis. Displays a graphical breakdown of the direct cover status for each requirement. Click the Customize button to open the Coverage Analysis dialog box to choose whether to display the analysis in color or black and white, the number of hierarchical levels to display, and whether to display a legend.
Page break after each requirement	<p>Inserts page breaks in the project document after each requirement.</p> <p>Note: Available if you selected Full page as the Requirements Layout.</p>
Rich text	<p>Includes Microsoft Word content for each requirement.</p> <p>Note: Available if you selected Full page as the Requirements Layout.</p>
Trace from	<p>Includes traced from requirements in the document. Click the Customize button to open the Tabular Layout dialog box to customize the traceability table. Use the Tabular Layout dialog box to choose the columns that will appear in the table, and set the column order, width, and captions.</p> <p>Note: Available if you selected Full page as the Requirements Layout.</p>

UI Element	Description
Trace to	<p>Includes traced to requirements in the document. Click the Customize button to open the Tabular Layout dialog box to customize the traceability table. Use the Tabular Layout dialog box to choose the columns that will appear in the table, and set the column order, width, and captions.</p> <p>Note: Available if you selected Full page as the Requirements Layout.</p>
Coverage	<p>Includes test coverage for the requirements in the document. Click the Customize button to open the Tabular Layout dialog box to customize the coverage table. Use the Tabular Layout dialog box to choose the columns that will appear in the table, and set the column order, width, and captions.</p> <p>Note: Available if you selected Full page as the Requirements Layout.</p>
Attachments	<p>Includes requirement attachments in the document. Requirement attachments are files that have been associated with the requirement, such as text files, images, or URLs.</p> <p>Note: Available if you selected Full page as the Requirements Layout.</p>
Linked defects	<p>Includes linked defects in the document. Click the Customize button to open the Tabular Layout dialog box to customize the linked defects table. Use the Tabular Layout dialog box to choose the defect columns that will appear in the table, and to set the column order, width and captions. You can also specify whether to display only defects that have been directly linked to requirements or to include indirectly-linked defects as well.</p> <p>Note: Available if you selected Full page as the Requirements Layout.</p>
Graphs	<p>Enables you to include graphs in the project document. Select graphs from the graph list located at the bottom of the page.</p> <p>Note: Only graphs that are saved in the Dashboard module are included in the list.</p>

Business Components Page

This page enables you to specify the component information from the Business Components module that should appear in the Business Components section of the project document.

To access	In the Document Generator tree, click the Business Components link.
------------------	--

Important information	Select the check box next to the Business Components link to include the data in the project document.
Relevant tasks	"How to Generate a Project Document" on page 890
See also	"Document Generator Window " on page 893

User interface elements are described below:

UI Element	Description
Components	Select one of the following options: <ul style="list-style-type: none">• All components. Includes all the components from the components tree.• Selected. Includes only selected components. Click the Filter & Sort button to specify the criteria for selecting components. For more details, see "Filter Dialog Box" on page 61 .
Full Page Layout	Full page. Displays a list of all the components in the components tree. Click the Customize button to choose the information to appear in the document.
Tests that use the component	Include business process tests that use the component in the document.
Steps	Includes steps from the business component in the document.
Snapshot	Include business component's snapshots in the document.
Page break after each component	Inserts page breaks in the project document after each test.

Subject Tree Page

This page enables you to specify the information from the test plan tree view of the Test Plan module that should appear in the project document.

To access	In the Document Generator tree, expand the Test Plan node, and click the Subject Tree link.
Important information	<ul style="list-style-type: none">• Select the check box next to the Subject Tree link to include the data in the project document.• Microsoft Word is limited to nine header levels in the table of contents. If the test plan tree has more than nine hierarchical levels, these levels will not appear in the table of contents of the generated project document.
Relevant tasks	"How to Generate a Project Document" on page 890
See also	"Document Generator Window " on page 893

User interface elements are described below:

UI Element	Description
Tree Sort	<p>Determine the order of the test plan tree information in the document:</p> <ul style="list-style-type: none">• Alphabetical: The contents of the folders will be organized according to the alphabetical order of the folders in the test plan tree. For example, suppose the test plan tree contains two folders, Automated Tests and Manual Tests. The tests in the Automated Tests folder will be printed before the tests in the Manual Tests folder.• Custom. The contents of the folders will be organized according to the custom sort order you set for displaying test plan tree folders. By default, subject folders in the test plan tree appear in alphabetical order (by name). For example, suppose the test plan tree contains two folders, Automated Tests and Manual Tests. You can create a sort order that prints the tests in the Manual Tests folder before the tests in the Automated Tests folder. For user interface details on creating a custom sort order for the test plan tree, see "Sort Folders in Test Plan Tree Dialog Box" on page 423.
Folders	<p>Specify which test plan tree folders you want to include in the document:</p> <ul style="list-style-type: none">• All. Includes all the folders in the test plan tree.• Selected. Includes only the folders you choose from the test plan tree. You select the folders from the test plan tree displayed on the right side of the Subject Tree page.
Attachments	<p>Includes test subject attachments in the document. Test subject attachments are files that have been associated with the test subject, such as text files, images, or URLs.</p>
Page break after each folder	<p>Inserts page breaks in the project document after each test subject folder.</p>
Graphs	<p>Enables you to include graphs in the project document. Select graphs from the graph list located at the bottom of the page.</p> <div><p>Note: Only graphs that are saved in the Dashboard module are included in the list.</p></div>

Subject Tests Page

This page enables you to include test data in the project document.

To access	In the Document Generator tree, expand the Test Plan > Subject Tree node, and click the Subject Tests link.
------------------	--

Important information	Select the check box next to the Subject Tests link to include the data in the project document.
Relevant tasks	"How to Generate a Project Document" on page 890
See also	"Document Generator Window " on page 893

User interface elements are described below:

UI Element	Description
Tests	Specify which tests you want to include in the document: <ul style="list-style-type: none"> • All tests. Includes all the tests from the selected test plan tree folders. • Selected. Includes only selected tests. Click the Filter & Sort button to specify the criteria for selecting tests. For more details, see "Select Filter Condition Dialog Box" on page 70.
Design Steps	Includes design steps from the test.
Layout	Specify how design steps will be organized: <ul style="list-style-type: none"> • Full page. Displays a list of all the design steps in a test. Click the Customize button to choose the information to appear in the document. • Tabular. Displays all the design steps in a test as a table. Click the Customize button to open the Tabular Layout dialog box to customize the table. Use the Tabular Layout dialog box to choose the columns that will appear in the table, and set the column order, width, and captions.
Properties	Specify what to include from the design steps: <ul style="list-style-type: none"> • Recursive. Includes called tests from the design steps. • Attachments (Design Steps). Includes all design step attachments.
Test Scripts	Includes test scripts in the document.
Components detailed layout	If you use Business Process Testing, includes the layout of the components defined in the tests. Choose what to include in the detailed layout: <ul style="list-style-type: none"> • Component steps. Includes component steps. Click the Customize button to open the Tabular Layout dialog box to customize the component steps table. Use the Tabular Layout dialog box to choose the defect columns that will appear in the table, and to set the column order, width and captions. • Iterations list. Includes the iteration list.
Attachments (Subject Tests)	Include test attachments in the document.
History	Display a list of all the changes made to the tests, and which user made each change.

UI Element	Description
Page break after each test	Inserts page breaks in the project document after each test.
Linked defects	Includes a table of linked defects. Click the Customize button to open the Tabular Layout dialog box to customize the linked defects table. Use the Tabular Layout dialog box to choose the defect columns that will appear in the table, and to set the column order, width and captions. You can also specify whether to display only defects that have been directly linked to tests or to include indirectly-linked defects as well.

Test List Page

This page enables you to specify the tests from the Test Grid that should appear in the project document.

To access	In the Document Generator tree, expand the Test Plan node, and click the Test List link.
Important information	Select the check box next to the Test List link to include the data in the project document.
Relevant tasks	"How to Generate a Project Document" on page 890
See also	"Document Generator Window " on page 893

User interface elements are described below:

UI Element	Description
Tests	<p>Specify which tests you want to include in the document:</p> <ul style="list-style-type: none">• All tests. Includes all the tests from the Test Grid.• Selected. Includes only selected tests. Click the Filter & Sort button to specify the criteria for selecting tests. For more details, see "Select Filter Condition Dialog Box" on page 70.
Test Layout	<p>Specify how the tests will be organized:</p> <ul style="list-style-type: none">• Full Page. Displays a list of all the tests in the project. Click the Customize button to choose the information to appear in the document.• Tabular. Displays all the tests as a table. Click the Customize button to open the Tabular Layout dialog box to customize the table. Use the Tabular Layout dialog box to choose the columns that will appear in the table, and set the column order, width, and captions.

UI Element	Description
Page break after each test	Inserts page breaks in the project document after each test.
Design steps	<p>Includes design steps from the test.</p> <p>Note: Available if you selected Full page as the Test Layout.</p>
Layout	<p>If you selected Design steps, specify how design steps will be organized:</p> <ul style="list-style-type: none"> • Full Page. Displays a list of all the design steps in a test. Click the Customize button to choose the information to appear in the document. • Tabular. Displays all the design steps in a test as a table. Click the Customize button to open the Tabular Layout dialog box to customize the table. Use the Tabular Layout dialog box to choose the columns that will appear in the table, and set the column order, width, and captions.
Properties	<p>If you selected Design steps, specify what to include from the design steps:</p> <ul style="list-style-type: none"> • Recursive. Includes called tests from the design steps. • Attachments. Includes all design step attachments.
Test scripts	<p>Includes test scripts in the document.</p> <p>Note: Available if you selected Full page as the Test Layout.</p>
Components detailed layout	<p>If you use Business Process Testing, you can include the detailed layout of the components included in the tests. Choose what to include in the detailed layout:</p> <ul style="list-style-type: none"> • Component steps. Includes component steps. Click the Customize button to open the Tabular Layout dialog box to customize the component steps table. Use the Tabular Layout dialog box to choose the defect columns that will appear in the table, and to set the column order, width and captions. • Iterations list. Includes the iteration list. <p>Note: Available if you selected Full page as the Test Layout.</p>
Attachments	<p>Includes test attachments in the document.</p> <p>Note: Available if you selected Full page as the Test Layout.</p>

UI Element	Description
Linked defects	<p>Includes a table of linked defects. Click the Customize button to open the Tabular Layout dialog box to customize the linked defects table. Use the Tabular Layout dialog box to choose the defect columns that will appear in the table, and to set the column order, width and captions. You can also specify whether to display only defects that have been directly linked to tests or to include indirectly-linked defects as well.</p> <p>Note: Available if you selected Full page as the Test Layout.</p>
History	<p>Displays a list of all the changes made to the tests, and who made them.</p> <p>Note: Available if you selected Full page as the Test Layout.</p>
Graphs	<p>Enables you to include graphs in the project document. Select graphs from the graph list located at the bottom of the page.</p> <p>Note: Only graphs that are saved in the Dashboard module are included in the list.</p>

Test Lab Page

This page enables you to specify the information from the Test Lab module that should appear in the project document.

To access	In the Document Generator tree, click the Test Lab link.
Important information	<ul style="list-style-type: none">• Select the check box next to the Test Lab link to include the data in the project document.• Microsoft Word is limited to nine header levels in the table of contents. If the test plan tree has more than nine hierarchical levels, these levels will not appear in the table of contents of the generated project document.
Relevant tasks	"How to Generate a Project Document" on page 890
See also	"Document Generator Window " on page 893

User interface elements are described below:

UI Element	Description
Folders	<p>Specify which test lab folders you want to include in the document:</p> <ul style="list-style-type: none">• All. Includes all the folders in the test set tree.• Selected. Includes only the folders you choose from the test set tree. You select the folders from the test set tree displayed under Folders.

UI Element	Description
Attachments	Includes test set attachments in the document.
Page break after each test set folder	Inserts page breaks in the project document after each test set folder.
Graphs	<p>Includes graphs in the project document. Select graphs from the graph list located at the bottom of the page.</p> <p>Note: Only graphs that are saved in the Dashboard module are included in the list.</p>

Test Sets Page

This page enables you to include test set data in the project document.

To access	In the Document Generator tree, expand the Test Lab node, and click the Test Sets link.
Important information	Select the check box next to the Test Sets link to include the data in the project document.
Relevant tasks	"How to Generate a Project Document" on page 890
See also	"Document Generator Window " on page 893

User interface elements are described below:

UI Element	Description
Available Test Sets	<p>Specify which test sets you want to include in the document:</p> <ul style="list-style-type: none">• All. Includes all the test sets in the selected test set folder.• Selected. Includes only selected test sets. Click the Filter & Sort button to specify the criteria for selecting the test sets. For more details, see "Filter Dialog Box" on page 61.
Linked defects	<p>Includes linked defects.</p> <p>Click the Customize button to customize the linked defects. Use the Tabular Layout dialog box to choose the defect columns that will appear in the table, and to set the column order, width and captions. You can also specify whether to display only defects that have been directly linked to test sets or to include indirectly-linked defects as well.</p>

UI Element	Description
Page break after each test set	Inserts page breaks in the project document after each test set.
Graphs	Includes graphs in the project document. Select graphs from the graph list. Note: Only graphs that are saved in the Dashboard module are included in the list.

Tests Page

This page enables you to include test data in the project document.

To access	In the Document Generator tree, expand the Test Lab >Test Sets nodes, and click the Tests link.
Important information	Select the check box next to the Tests link to include the data in the project document.
Relevant tasks	"How to Generate a Project Document" on page 890
See also	"Document Generator Window " on page 893

User interface elements are described below:

UI Element	Description
Tests	Specify which tests you want to include in the document: <ul style="list-style-type: none">• All tests. Includes all the tests in the selected test set.• Selected. Includes only selected tests. Click the Filter & Sort button to specify the criteria for selecting tests. For more details, see "Select Filter Condition Dialog Box" on page 70.

UI Element	Description
Test Layout	<p>Specify how the tests will be organized:</p> <ul style="list-style-type: none"> • Full Page. Displays test information as a list. Click the Customize button to choose the information to appear in the document. • Tabular. Displays test information as a table. Click the Customize button to open the Tabular Layout dialog box to customize the table. Use the Tabular Layout dialog box to choose the columns that will appear in the table, and set the column order, width, and captions. <p>Note: If you select Tabular, you cannot include test runs in the document.</p>
Test scripts	<p>Includes test scripts in the document.</p> <p>Note: Available if you selected Full page as the Test Layout.</p>
Components detailed layout	<p>If you use Business Process Testing, you can include the detailed layout of the components included in the tests. Choose what to include in the detailed layout:</p> <ul style="list-style-type: none"> • Component steps. Includes component steps. Click the Customize button to open the Tabular Layout dialog box to customize the component steps table. Use the Tabular Layout dialog box to choose the defect columns that will appear in the table, and to set the column order, width and captions. • Iterations list. Includes the iteration list. <p>Note: Available if you selected Full page as the Test Layout.</p>
Attachments	<p>Includes test attachments in the document.</p> <p>Note: Available if you selected Full page as the Test Layout.</p>
Linked defects	<p>Includes a table of linked defects. Click the Customize button to open the Tabular Layout dialog box to customize the linked defects table. Use the Tabular Layout dialog box to choose the defect columns that will appear in the table, and to set the column order, width and captions. You can also specify whether to display only defects that have been directly linked to tests or to include indirectly-linked defects as well.</p> <p>Note: Available if you selected Full page as the Test Layout.</p>
History	<p>Displays a list of all the changes made to the tests, and who made them.</p> <p>Note: Available if you selected Full page as the Test Layout.</p>

UI Element	Description
Page break after each test	Inserts page breaks in the project document after each test.

Runs Page

This page enables you to include run data in the project document.

To access	In the Document Generator tree, expand the Test Lab >Test Sets > Tests nodes, and click the Runs link.
Important information	Select the check box next to the Runs link to include the data in the project document.
Relevant tasks	"How to Generate a Project Document" on page 890
See also	"Document Generator Window " on page 893

User interface elements are described below:

UI Element	Description
Runs	Choose one of the following options: <ul style="list-style-type: none">• Last run. Includes only the last run of the test.• All runs. Includes all runs of the test.• Selected. Includes only selected runs in the document. Click the Filter & Sort button to specify the criteria for selecting tests. For more details, see "Select Filter Condition Dialog Box" on page 70.
Run Layout	Specify how the runs will be organized: <ul style="list-style-type: none">• Full Page. Displays a list of all the test runs. Click the Customize button to choose the information to appear in the document.• Tabular. Displays all the test runs as a table. Click the Customize button to open the Tabular Layout dialog box to customize the table. Use the Tabular Layout dialog box to choose the columns that will appear in the table, and set the column order, width, and captions.
Run steps	Includes a list of run steps in the document. <div>Note: Available if you selected the Full page Run Layout.</div>

UI Element	Description
Layout	<p>If you are including run steps in the document, choose one of the following options:</p> <ul style="list-style-type: none">• Full Page. Displays a list of all the steps in a run. Click the Customize button to choose the information to appear in the document.• Tabular. Displays all the steps in a run as a table. Click the Customize button to open the Tabular Layout dialog box to customize the table. Use the Tabular Layout dialog box to choose the columns that will appear in the table, and set the column order, width, and captions.
Defects	<p>Includes a table of defects linked with run steps.</p> <p>Click the Customize button to open the Tabular Layout dialog box to customize the linked defects table. Use the Tabular Layout dialog box to choose the defect columns that will appear in the table, and to set the column order, width and captions. You can also specify whether to display only defects that have been directly linked to run steps or to include indirectly-linked defects as well.</p>
Attachments (Run Steps)	<p>Includes run step attachments in the document.</p> <p>Note: Available if you selected the Full page Run Layout.</p>
Linked defects	<p>Includes a table of linked defects. Click the Customize button to open the Tabular Layout dialog box to customize the linked defects table. Use the Tabular Layout dialog box to choose the defect columns that will appear in the table, and to set the column order, width and captions. You can also specify whether to display only defects that have been directly linked to tests or to include indirectly-linked defects as well.</p> <p>Note: Available if you selected the Full page Run Layout.</p>
Attachments (Runs)	<p>Includes test run attachments in the document.</p>

Defects Page

This page enables you to specify the defects information from the Defects module that should appear in the Defects section of the project document.

To access	In the Document Generator tree, click the Defects link.
Important information	Select the check box next to the Defects link to include the data in the project document.
Relevant tasks	"How to Generate a Project Document" on page 890
See also	"Document Generator Window " on page 893

User interface elements are described below:

UI Element	Description
Defects	<p>Select one of the following options:</p> <ul style="list-style-type: none"> • All defects. Includes all the defects from the defects grid. • Selected. Includes only selected defects. Click the Filter & Sort button to specify the criteria for selecting defects. For more details, see "Select Filter Condition Dialog Box" on page 70.
Defects Layout	<p>Select one of the following options:</p> <ul style="list-style-type: none"> • Full page. Displays the selected defects as a list. Click the Customize button to choose the information to appear in the document. • Tabular. Displays the selected defects as a table. Click the Customize button to open the Tabular Layout dialog box to customize the table. Use the Tabular Layout dialog box to choose the columns that will appear in the table, and set the column order, width, and captions.
Attachments	<p>Includes defect attachments in the document.</p> <p>Note: Available if you selected Full page as the Defects Layout.</p>
Linked defects	<p>Includes linked defects as a table. Click the Customize button to open the Tabular Layout dialog box to customize the linked defects table. Use the Tabular Layout dialog box to choose the defect columns that will appear in the table, and to set the column order, width, and captions. You can also specify whether only direct links will be displayed.</p> <p>Note: Available if you selected Full page as the Defects Layout.</p>
Linked entities	<p>Includes linked entities as a table. Click the Customize button to open the Tabular Layout dialog box to customize the linked entities table. Use the Tabular Layout dialog box to choose the defect columns that will appear in the table, and to set the column order, width, and captions. You can also change the captions and the width of the table columns.</p> <p>Note: Available if you selected Full page as the Defects Layout.</p>
History	<p>Displays a list of all the changes made to the defects.</p>
Page break after each requirement	<p>Inserts page breaks in the project document after each defect.</p> <p>Note: Available if you selected Full page as the Defects Layout.</p>



UI Element	Description
Graphs	Enables you to include graphs in the project document. Select graphs from the graph list. Note: Only graphs that are saved in the Dashboard module are included in the list.

Organize Favorites Dialog Box

This dialog box enables you to organize the list of favorite views in the private and public folders by changing the properties of a view and by deleting views.

To access	In the Document Generator, click the Favorites button.
------------------	---

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<favorite views tree>	Displays the list of favorite views alphabetically by location.
	Opens the Properties dialog box, enabling you to change the following properties of the selected favorite view: Name. The name of the favorite view. Location. The folder in which you store the favorite view, private or public.
	Deletes the selected favorite view.

Glossary

This glossary lists terminology that is used throughout HP Application Lifecycle Management (ALM).

See also the Business Process Testing glossary in the *HP Business Process Testing User Guide*.

A

Term	Description
activity	A business process model entity that represents a function, task, or sub-process. Activities are imported to ALM together with their parent business process model.
alert	A notification that informs specified users of changes in requirements , tests or defects . An alert can be triggered as a result of automatic notification rules or as a follow up reminder that you set up for yourself.
ALM Editions	<p>HP Application Lifecycle Management (ALM) is also available in several editions which provide subsets of ALM functionality:</p> <p>ALM Essentials Edition: Provides a subset of HP ALM product functionality, and is designed to help smaller teams get up and running quickly. It provides core functionality for requirements management, test management, and defect management.</p> <p>Quality Center Enterprise Edition: Resides on the same unified platform as HP ALM. It delivers core functionality for quality management. It supports building a quality center of excellence through tight integrations with HP Unified Functional Testing, HP Business Process Testing, and HP Sprinter.</p> <p>Performance Center Edition: Functionality for the complete management, scheduling, running, and monitoring of performance test scripts. It resides on the same platform as HP ALM and integrates directly with HP ALM and HP LoadRunner.</p>
associated libraries	Two libraries in the same project or in different projects, in which one library, the source library , was used as the basis for creating the other, imported library . You can compare associated libraries to track changes over time, or synchronize libraries to update one library with changes made to the other library.

B

Term	Description
baseline	A snapshot of a library at a specific point in time. It includes all the entities defined in the library and the relationships between them, such as coverage and requirements traceability . You can compare baselines to track changes in a project over time, or use a baseline to reuse or share the entities in a library.
Build Verification module	Functional area of ALM accessible by selecting Build Verification on the ALM sidebar under Testing. Enables you to define and manage build verification suites. A build verification suite is a collections of functional test sets together with a single instance of a performance test, that when run together check the status of a defined application under test environment.
Business Components module	Functional area of ALM accessible by selecting Business Components on the ALM sidebar under Testing. This module enables subject matter experts to work with Business Process Testing, the HP test automation solution. You use reusable business process components and flows to create business process tests. You can also combine manual components to manually test your application. Access to this module is dependent on your ALM license.
business criticality	A risk-based quality management (RBQM) category that measures how crucial a requirement is for the business. Risk is calculated based on the combined results of the Business Criticality and the Failure Probability assessment.
Business Models module	Functional area of ALM accessible by selecting Business Models on the ALM sidebar under Requirements. This module enables you to import business process models, and test the quality of the models and their components. Access to this module is dependent on your ALM license.
business process model	<p>A diagram that represents the activities and workflows that take place in an organization. Business process models are imported to ALM for testing in the Business Models module.</p> <p>Alternatively, an ALM entity in the Business Models module that represents a business process model as a whole.</p>
business view	A data set based on project entities which reflects only that information that is useful from a business perspective. The view is then used as a basis for the various ALM reporting tools. Business views are created and managed in Project Customization.

C

Term	Description
check in	When using version control , the process in which a new, updated version of an entity is created and made available to other users. After you check out the entity and make changes, you check in a new version of the entity.

Term	Description
check out	When using version control , the process in which you lock an entity to make changes, preventing other users from overwriting your changes. The checked out version of an entity is not visible to other users.
client-side	Running a test on your local machine.
coverage	The links you create to keep track of the relationship between your requirements and tests . In the Test Plan module, you create requirements coverage by selecting requirements to link to a test. Alternatively, in the Requirements module , you create test coverage by selecting tests to link to a requirement. A test can cover more than one requirement, and a requirement can be covered by more than one test.
cross filter	An advanced, second-level filter on an associated item, such as requirements, tests, test sets, or defects. For example, in the Requirements module, you can define a cross filter to exclude requirements whose covering tests have the Passed status.
cross project customization	The process of customizing a template project to define and maintain a common set of project customizations for multiple ALM projects. You link a template project to one or more other projects . You then customize the template and apply customization to the linked projects. Template customization applied to linked projects can include user groups and permissions, project entities, requirement types, lists, and workflow .
cycle	A set of development and quality assurance efforts performed to achieve a common goal based on the release timeline. After you define a release , you add cycles to the release. You can then assign requirements , defects , and test set folders to the cycles.

D

Term	Description
Dashboard module	Functional area of ALM accessible by selecting Dashboard on the ALM sidebar. This module enables you to analyze ALM data by creating, viewing and managing graphs, standard reports, and Excel reports. You also create dashboard pages that display multiple graphs side-by-side.
dashboard page	A selection of graphs that you view in a single display. You design and view dashboard pages in the Dashboard View tab of the Dashboard module .
default test set	A test set that contains automated and manual tests. Tests in this test set use client-side execution.

Term	Description
defect	A problem detected in the project application during any phase of the application management process. You can link defects to other project entities, such as requirements, tests, or other defects. A defect can be linked directly or indirectly to other entities. When you add a defect link to an entity, ALM adds a direct link to this entity and indirect links to other related entities.
Defects module	Functional area of ALM accessible by selecting Defects on the ALM sidebar. This module enables you to submit and track defects , determine repair priorities, and analyze the data.
domain	ALM projects are grouped by domain. A domain contains a group of related ALM projects and assists you in organizing and managing a large number of projects. Each domain contains a Projects folder and a Template Projects folder to organize your ALM projects and template projects.
draft run	A test run whose outcome does not impact test statistics such as execution status or coverage. You can set a test run as a draft before or after the run, enabling you to try out tests while they are in development, or after they have been modified. When you change the draft run value, ALM recalculates tests statistics and updates status fields.

E

Term	Description
entity	A data set in an ALM project that works as a unit, such as the requirement entity which stores data on all ALM requirements. Entities contain data entered by users for a specific application management process and the data is stored in tables. Some entities contain both system fields and user-defined fields. Alternatively, an individual record containing unique data, such as a single requirement in the Requirements module . You can create and modify an entity, mail an entity, maintain a history of changes made to an entity, or create links between entities.
Excel add-in	You can import requirement , test plan , or defect data from a Microsoft Excel worksheet to an ALM project . To import from Excel, you first install the HP ALM Microsoft Excel Add-in on your client machine.
execution report	A dialog box that enables you to view the current state of test runs. You can also use this dialog box to stop test runs which are currently executing.

F

Term	Description
failure probability	A risk-based quality management (RBQM) category that indicates how likely a test based on the requirement is to fail. Risk is calculated based on the combined results of the Failure Probability and the Business Criticality assessment.

Term	Description
functional complexity	A risk-based quality management (RBQM) category that indicates the complexity of the requirement's implementation.
functional test set	A test set that contains automated tests. Tests in this test set use server-side execution.

I

Term	Description
imported library	You can create a new library by importing an existing library. An imported library is a library that you create by importing an existing library from the same project or from a different project.

K

Term	Description
key performance indicator (KPI)	You define a KPI in a project planning and tracking (PPT) milestone. A KPI is a quantifiable measure designed to track a critical performance variable over time, and measure the essential outcome of a release scope item. For each KPI, you define threshold limits for allowable deviations.

L

Term	Description
Libraries module	Functional area of ALM accessible by selecting Libraries on the ALM sidebar under Management. This module enables you to define and create libraries and baselines to track changes in your project, reuse entities in a project, or share entities across multiple projects.
library	A defined set of entities in a project and the relationships between them, such as coverage and requirements traceability . The entities in a library can include requirements, tests, test resources, and business components. After you define a library, you then create a baseline , enabling you to track changes in a project over time, reuse the entities in a project, or share entities across multiple projects.
linked project	A project connected to a template project . You apply template customization updates to the linked project as a part of cross project customization .

M

Term	Description
Management module	Functional area of ALM accessible by selecting Management on the sidebar. This module includes two sub-modules: Releases module and Libraries module .

Term	Description
milestone	To measure the progress of a project planning and tracking (PPT) release scope item, you associate it with milestones. A milestone is a point in the time-line of a release that signifies the completion of a deliverable. It enables you to validate the progress of the release. A milestone can be associated with one or more release scope items.

P

Term	Description
path	A business process model entity that represents a series of transitions between activities. You define paths in ALM that are critical for quality testing.
performance test set	A test set that contains performance tests.
pinned test set	A test set that is linked to a baseline . In the Test Lab module, after you create a test set, you can link the test set to a baseline that you specify. When you run the test set, ALM runs only the versions of the test stored in the baseline.
project	Collects and stores data relevant to the application lifecycle management process, including, but not limited to, requirements, tests, defects, and additional resources. Projects are stored in the ALM project repository on the application server's file system.
project customization	The process of adapting a project to meet the specific needs of your organization. Using the Project Customization window, you can control access to a project by defining the users who can access the project, determining the types of tasks each user can perform, and adding and modifying fields.
project planning and tracking (PPT)	A feature that enables quality assurance managers to track application readiness by defining goals and activities involved in the quality assurance process of an application release. This feature is accessed from the Releases module and it includes the following tabs: Release Scope, Master Plan, and Scorecard.

R

Term	Description
release	A group of changes to the application that will be available for distribution at the same time. You can divide a release into cycles. You can then assign requirements and defects to the release and cycles.
release scope item	A subdivided section of a project planning and tracking (PPT) release. For each release scope item you define the related requirements, tests, and defects. To measure the progress of a release scope item, you associate it with a milestone.

Term	Description
Releases module	Functional area of ALM accessible by selecting Releases on the ALM sidebar under Management. This module allows you to organize and track your upcoming releases by defining releases and cycles for the application management process.
representative requirement	A requirement that corresponds to a business process model, activity, or path . Representative requirements link model entities to their associated requirements, tests, and defects.
requirement	A detailed description of a specific objective of your application under development. You organize your requirements in a requirements tree, a hierarchical structure in which you can group your application's requirements according to function or objective. You can link a requirement to releases and cycles in the Releases module. You can also create links between a requirement and other requirements, tests, and defects.
requirements coverage	The links you create to keep track of the relationship between your requirements and tests. In the Test Plan module, you create requirements coverage by selecting requirements to link to a test. Requirements coverage assists you in assessing the impact of a change in the test or requirement. A test can cover more than one requirement. The direct cover status of a requirement reflects the execution status of the tests covering the requirement.
Requirements module	Functional area of ALM accessible by selecting Requirements on the ALM sidebar under Requirements. This module enables you to create, manage and analyze requirements in a hierarchical tree-structure. You can also create links between requirements and other requirements, tests, or defects.
requirements traceability	A link you create to establish a relationship between requirements. When analyzing the impact of a proposed change in a requirement, traceability identifies other requirements that may be affected by the change. You define traceability relationships in the Requirements Traceability tab of the Requirements module. You can add traceability links to and from a selected requirement.
requirement type	A category for a requirement that describes the purpose of the requirement, such as a functional requirement, or a testing requirement. You assign each requirement to one of the ALM default requirement types, or to a customized requirement type that the project administrator can create.
risk-based quality management (RBQM)	A feature that assists you in determining a testing strategy for your requirements, based on risk and functional complexity, testing time, and the resources you have available. You work with risk-based quality management in the Risk Analysis and Risk Assessment tabs of the Requirements module.

S

Term	Description
server-side	Running a test on a remote testing host. Your local machine is not necessary during the execution of the test.
source library	You can create a new library by importing an existing library from the same project or from a different project. A source library is a library used as the basis for creating another library.
Sprinter	HP's manual testing solution, providing advanced functionality and a variety of tools to assist in the manual testing process. Sprinter is fully integrated with ALM, enabling you to run tests manually from the Test Lab module using Sprinter.
system field	An ALM default field for entering data in an ALM project. System fields cannot be added or deleted, only modified.

T

Term	Description
template project	A customized project used to apply a common set of project customizations to other projects as a part of cross project customization . Enables you to standardize policies and procedures across projects in your organization.
template test	A test that includes common steps you often want to perform as part of other tests. You can mark a manual test in the test plan tree as a template test so that you can easily select it for calling from another test.
test	One or more steps you define to verify a specific function or requirement of your application. You can create manual tests, or automated tests that are executed by a testing tool. You organize your tests in a test plan tree, a hierarchical structure that divides your application into testing units, or subjects. A test can contain multiple test configurations .
test configuration	A data set that describes a specific use-case of a test . For example, a test configuration can specify a subset of data. A test configuration is contained in a test instance .
test coverage	The links you create to keep track of the relationship between your requirements and tests. In the Requirements module, you create test coverage by linking tests to a requirement. Test coverage assists you in assessing the impact of a change in the test or requirement. A requirement can be covered by more than one test, or by selected configurations of different tests.
test instance	An occurrence of a test in a test set . Each test instance contains a defined test configuration .
test criteria	When creating coverage between requirements and business process tests, instead of covering each requirement only at the level of a test, test criteria enables coverage by defined business components of a test.

Term	Description
Test Lab module	Functional area of ALM accessible by selecting Test Lab on the ALM sidebar under Testing. This module enables you to create and manage test sets, and perform test runs. You can schedule tests to run either manually or automatically.
Test Plan module	Functional area of ALM accessible by selecting Test Plan on the ALM sidebar under Testing. This module enables you to develop and manage tests in a hierarchical tree-structure. Tests can be linked to requirements and defects .
test resource	Test resources are files or folders stored in the ALM repository that can be used by multiple tests. For example, a test resource can be a data file containing data needed as input for a number of tests.
Test Resources module	Functional area of ALM accessible by selecting Test Resources on the ALM sidebar under Testing. This module enables you to manage test resources in a hierarchical tree-structure. Test resources can be associated with tests.
test run	The execution of a test instance in a test set . You run tests in the Test Lab module . You can run tests manually or automatically, schedule the date and time of test runs, and set the conditions for when a test can be run. You can view results for a single test run, or view and compare details of all the runs for a selected test instance.
Test Runs module	Functional area of ALM accessible by selecting Test Runs on the sidebar under Testing. This module enables you to view and analyze test run data for test runs, test set runs, and build verification suite runs (Lab Management only). You can also generate live execution reports.
test set	A group of tests in an ALM project designed to achieve a specific testing goal, such as sanity or regression testing. Grouping the tests in your project into test sets helps you organize test execution to meet your testing goals. You can assign test set folders to cycles .
test step	Detailed instructions on how to execute a test. Can include the action to perform on your application, the input to enter, or the expected outcome.
testing host	A machine that runs a testing tool utilized by ALM to execute automated tests.
Testing Hosts module	Functional area of ALM accessible by selecting Testing Hosts on the sidebar under Lab Resources. This module enables you to view the remote testing hosts in your project. You can also create and manage new private testing hosts.
timeslot	A defined period of time in which the resources needed for running tests, or for performing maintenance tasks are reserved exclusively for the specified purpose.
traceability matrix	Determines the extent of relationships between requirements and other requirements, and between requirements and tests.

U

Term	Description
user-defined field (UDF)	Data fields that you can add to an ALM project. You can customize user-defined fields to meet the specific needs of your organization.

V

Term	Description
version control	Tracks changes made to entities in your project, by maintaining previous versions of entities. In a version control enabled project, version history is maintained for entities, including requirements , tests , test resources , and business components. You can view and compare previous versions of an entity, or restore a previous version.

W

Term	Description
Word add-in	You can import requirement or test plan data from a Microsoft Word document to an ALM project . To import from Word, you first install the HP ALM Microsoft Word Add-in on your client machine.
workflow	A feature that offers tools to generate or edit scripts used to customize fields and values of the ALM modules, and to control the actions that users can perform. You can customize workflow from the Workflow page, available from the Project Customization window.

