HP Application Lifecycle Management

Software Version: 11.50

What's New

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

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- 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

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.

> **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 What's New contains the following parts:

Part	Description
"What's New in HP ALM 11.50" on page 8	Provides an overview of the features that were introduced or enhanced in ALM 11.50.
"What's New in HP ALM 11.00" on page 24	Provides an overview of the features that were introduced or enhanced in ALM 11.00.

What's New in HP ALM 11.50

Chapter 1

What's New in HP ALM

This What's New guide provides an overview of the features that were introduced or enhanced in HP Application Lifecycle Management (ALM) 11.50. For more information on using ALM, refer to the *HP Application Lifecycle Management User Guide*.

You can also view video demonstrations of HP Application Lifecycle Management features by choosing **Help > Product Feature Movies** in the ALM main window.

HP Application Lifecycle Management 11.50

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.

ALM supports you through all the phases of application lifecycle management. By integrating the tasks involved in application management, ALM enables you to better align IT with your business needs.

ALM also includes Performance Center 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. For details on new features in Performance Center, see

HP ALM Editions

ALM 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 requirement, 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.

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

Installation

The following updates have been made to the installation process. For more information, refer to the *HP Application Lifecycle Management Installation Guide*.

Supported Environments

For the supported and recommended system configurations for your ALM server and client machine, refer to the *HP Application Lifecycle Management 11.50 Readme*.

> **Important:** The supported environment information in the *HP Application Lifecycle Management 11.50 Readme* is accurate for the ALM 11.50 release, but there may be updates for ALM 11.50 patches. For the most up-to-date supported environments, refer to the HP Software Web site using the following URL: http://www.hp.com/go/TDQC_SysReq.

ALM offers integrations with other HP testing tools. To verify that you are using a supported version, on the Add-ins page, click the **More HP Application Lifecycle Management Add-ins** link. Choose the **ALM 11.50** integration matrix.

Application Server

You no longer need to install a third party application server to host ALM. The application server is now part of the core ALM functionality.

This provides the following benefits:

- Reduces third party application server dependencies, maintenance, and costs.

- Simplifies troubleshooting.

- Lowers the memory footprint of ALM.

- Simplifies installation, upgrade and product updates.

- Enables ALM to be a 'Cloud Ready' platform.

Extension Deployment

ALM extensions, such as HP Enterprise Integration module for SAP applications and HP Service Test Management, provide added functionality to ALM. Previously available for download from the ALM Add-ins site, extensions are now an integrated part of the ALM installation. 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.

Business Views

Previously, graphs could be based on single entities only, such as requirements or defects. Now, you can create graphs based on business views, which are defined and managed in Project Customization.

You can create business views based on single or multiple entities. For example, you could create a view that combines the **Runs** entity with the **Test Set** entity. This would enable you to analyze test runs according to test sets.

ALM provides a set of pre-defined business views that are available for selection. These pre-defined views, in addition to user-defined views, are fully customizable and can be continually edited according to your needs.

You create business views using DQL, a domain query language. DQL is based on ANSI SQL 9.2, with the following advantages:

- DQL enforces data hiding in accordance with user's permission levels.

- DQL queries run equally well on Oracle and SQL database servers.

- The DQL query creates a database abstraction which is then used as a basis for the business view. Since the basis of the view is an abstraction of the database and not the database itself, you do not need to identify entity fields according to their actual names. Rather the query simplifies them and makes them easier to identify. For example, all fields that relate to an object's identification appear with the suffix "ID", such as Defect ID, Cycle ID, and Release ID.

Lab Management

HP ALM Lab Management supports continuous integration and delivery practices, by providing tools for automatically deploying test environments, and scheduling functional and performance tests with or without user intervention.

By integrating HP ALM with HP Continuous Delivery Automation (CDA), you can automatically deploy test environments on a private or public cloud.

To test the environment, you can define Build Verification Suites, consisting of multiple test sets and a performance test. You run the Build Verification Suite against a dynamic environment, which is provisioned and deployed by CDA at the beginning of the test schedule.

Lab Management offers QA professionals new ways for planning test executions. You can create timeslots dedicated to running automated functional tests, and request testing hosts required for the automation run. To ensure that the QA professional has the testing tools required for the run, you can either name specific hosts, or specify the type and amount of hosts needed for a specific test set run. In this case, the system will automatically allocate matching hosts.

In addition, new Test Set Run reports allow QA Professionals to analyze each individual test set run, by viewing either previous Test Set Runs or Runs in progress.

With Lab Management, testing resources can be managed more effectively from a central location, allowing you to allocate testing resources to projects, based on project scale and priority. This ensures that each project has the testing resources it needs.

The Lab Administrator can specify the number of testing hosts, or specify named hosts, that will be allocated to projects. Testing hosts can be automatically allocated according to their priority or volume.

Lab Management also ensures more secure communications with testing hosts, allowing you to run tests on testing hosts over a firewall. This is enabled by controlling test execution from the ALM server. The new server execution continues even if the ALM Client disconnects or is logged out.

> **ALM Editions**: Lab Management functionality is available for HP ALM and Performance Center editions.

User Updates

This section describes usability enhancements in HP Application Lifecycle Management 11.50.

Product Movies

Product movies are removed from the server, and moved to an external site. You can copy selected movies to the server, and link to them from a custom link in the Help menu. For details, see the *HP Application Lifecycle Management User Guide*.

Default Entity Values

Creating new entities, such as tests, test configurations, and defects, sometimes requires entering a large number of fields. Often, the values for these fields are the same, and entering the data is a repetitive and time consuming task.

Now, default values for certain entities can be created per entity, per user, and per project. Each time you create an entity, these default values can be automatically filled in, or filled in at the click of a button. For details, see the *HP Application Lifecycle Management User Guide*.

Mail Enhancements

The following updates were made to the ALM mail command:

- When sending an entity with parameters, the parameters are included in the mail.

- You can send test instances including details, history, attachments, run summary, and last run steps.

- You can send runs with their run steps and run results.

- Mail is now sent asynchronously, and does not interfere with your work in ALM.

Data Awareness Enhancements

The following enhancements were made to data awareness features such as test configurations:

- You can automatically map business process and UFT test configuration parameters to the dynamic data in an external data table resource.

- You can select business process and UFT test configuration parameter names using a drop-down list, that contains all the resource (Excel) headers, instead of typing names manually.

- You can preview the data in the external data table resource according to predefined filters in the Test Configuration tab.

For user interface details, see the *HP Business Process Testing User Guide*.

Test Resource Enhancements

The following enhancement was made in the Test Resources module:

- You can now add API shared resources. These resources contain locally stored services for use with API automated tests.

Manual Runner Enhancements

The following enhancement was made to Manual Runner:

- When running a test set, you can cancel the run of remaining tests when canceling a test run.

Project Report Enhancements

The following enhancements were made to Project Reports:

- You can download the report locally as a **.zip** file.

- You can add existing graphs to the report, or create new graphs directly in the report.

- Pre-defined project reports can now be accessed from within the Requirements, Test Plan, Test Lab, Defects, and Business Components modules.

Analysis View Enhancements

The following enhancement was made to the Analysis View module:

- A new Analysis Menu tab has been added to the Analysis View module. This tab enables project administrators to manage the analysis items that are available to users in the Requirements, Test Plan, Test Lab, Defects, and Business Components modules.

Administration Updates

This section describes administration enhancements in HP Application Lifecycle Management 11.50.

Side-by-Side Site Administration Clients

- Multiple versions of Site Administration can run side-by-side on a workstation, similar to the side-by-side support of ALM.

- Instances of Quality Center 10.00 Site Administration can be opened side-by-side with instances of ALM11.50 Site Administration.

- Third-party tools can integrate Site Administration operations into their scripts by registering the Site Administration client component. For details, see the HP ALM Client Registration add-in on the HP ALM Add-ins page.

License Management

Using the modified Licenses tab in Site Administration, you can now dynamically allocate licenses to specific domains, projects, and users. For details, see the *HP Application Lifecycle Management Administrator Guide*.

Unicode Support

ALM projects on SQL Server now support Unicode.

Site Configuration

In the Site Configuration tab, the following parameters were added:

- ASYNC_MAIL_ENABLED

- CLEAN_ORPHAN_ANALYSIS_DATA_JOB_SLEEP_INTERVAL

- CUSTOM_HELP_MENU_LINK

- CUSTOM_PREREQUISITES_PAGE_URL

- DISABLE_DEFAULT_VALUES

- DISABLE_GET_CHILDREN_LISTS_WITH_VERSIONING

- DOWNLOAD_REST_ATTACHMENTS

- ENABLE_CREATE_STANDARD_REPORT

- ENABLE_CREATE_LEGACY_EXCEL_REPORT

- ENABLE_CREATE_DOCGEN_FAVORITE

- GET_COVERAGE_FROM_BL_FOR_PINNED_TESTSET

- GRAPH_RESULTS_LIFESPAN

- LDAP_RESULT_SIZE_LIMIT

- MAX_CONCURRENT_REPORTS

- MAX_GRAPH_RESULT_DATA_TABLE_VOLUME

- ORPHAN_ANALYSIS_DATA_FILE_INACTIVE_PERIOD

- QPM_KPI_FAILURES_PERCENTAGE_PER_RELEASE_FUSE

- QPM_RECENTLY_USED_PROJECTS_THRESHOLD_MINUTES

- REPORT_MAX_ALLOWED_SIZE

- REPORT_RESULTS_LIFESPAN

- REST_API_HTTP_CACHE_ENABLED

- REPOSITORY_GC_DELAY_CANDIDATE_TIME

- SKIP_CLIENT_PREREQUISITES_CHECK

- UPLOAD_ATTACH_MAX_SIZE

The following parameter was removed:

- ANALYSIS_ITEM_RESULTS_LIFESPAN

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

Changes in Feature Availability

The following features are no longer fully available from HP Application Lifecycle Management 11.50.

Standard Reports

You can no longer create new standards reports. Existing reports from previous versions of ALM can still be viewed and edited.

Document Generator

You cannot add new project documents to the Favorites list. All existing favorites from previous versions can still be accessed and generated.

Business Process Testing

New HP Application Lifecycle Management 11.50 features are also supported for Business Process Testing entities. In addition, the Business Process Testing features described below have been introduced or enhanced in ALM 11.50.

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

Test Script Canvas

A new canvas view is available from the Test Plan module's Test Script tab. The view enables users to visualize the data flow in the test/flow (including parameters and links). With the canvas, users can modify test scripts using a graphical display. The canvas includes all the functionality of the Test Script Pane grid, including:

- Setting the level of detail you want to view, and collapse and expand flows and groups, for easier navigation.

- Dragging and dropping entities from the Components and Flows pane into your business process test or flow.

- Performing functions, such as setting iterations and creating run conditions, directly from the canvas.

Manual and Automated Business Components

You can now create a business component without determining in advance if the component will be automated or manual. A component can contain manual design steps, automation, or both. You can add manual design steps or automation to a component at any point.

General Enhancements

You can now insert component and flow parameters between existing parameters in the grid, not just at the end.

API and Database Updates

The HP ALM REST API, first introduced in ALM 11.00, now provides REST resources for most day-to-day functionality. The functionality will continue to be expanded in upcoming releases. The REST API provides a platform-independent method of working with ALM data using standard web services. This enables the REST API:

- To support activities like server-to-server integration, which are difficult to implement using the older OTA API.

- To be a platform for developing applications that can be maintained in the future as the underlying ALM technology evolves to support modern infrastructures.

See the following sections of the *HP ALM REST API Reference*:

- What's new in this release

- Compatibility Breaks between versions 11.00 and 11.50

ALM 11.50 can use Client-Side Deployment so that a client can connect to more than one instance of ALM. This affects APIs in the following ways:

- The OTA type library and the Site Administration type libraries are no longer registered automatically on the client machine. Before connecting to ALM with an OTA or Site Administration application, register the libraries for the server by running HP ALM Client Registration from the ALM Add-ins page. For more information, see the information about registering ALM on a workstation in the *HP Application Lifecycle Management Installation Guide*.

- The installation of custom test types has changed. See the *HP ALM Custom Test Type Guide*.

See the topic *What's new in this release* in the HP ALM Open Test Architecture Reference.

Documentation Library

The following updates were made to the HP ALM Documentation Library.

Online Help

The online help browser has been redesigned, and includes the following enhancements:

- An improved search engine returns more relevant results for your searches in the documentation library.

- Forward and Back buttons enable you to return to topics that you previously viewed.

- You can flag favorite topics for future reference, that are then listed together in a Favorites pane.

New Documentation

The following additions have been made to the documentation:

- The HP ALM Documentation Library now includes the *HP ALM Lab Management Guide*. Sections in this guide were previously included in the *HP ALM Performance Center Guide*.

- Best Practices Documentation includes the following new guides:

  - The *HP ALM Agile Testing Best Practices Guide* provides best practices for the implementation of agile testing principles in various organizations.

  - The *HP ALM Versioning and Baselining Best Practices Guide* provides best practices for the implementation of version control and the creation and maintenance of baselines in various organizations.

  - The *HP ALM Project Topology Best Practices Guide* provides best practices for structuring HP ALM projects in various organizations.

  - The *HP ALM Entities Sharing Best Practices Guide* provides best practices for implementation of entities sharing in various organizations.

  - The *HP ALM Project Planning and Tracking Best Practices Guide* provides best practices for implementation of managing and tracking releases in various organizations.

- API References documentation includes the following new guide:

  - The *HP ALM .NET Custom Test Type Developer Guide* contains instructions for creating and installing custom test types on a .NET platform. The COM guide has been renamed the *HP ALM COM Custom Test Type Developer Guide*.

Chapter 2

What's New in HP ALM Performance Center

This What's New guide provides an overview of the features that were introduced or enhanced in HP ALM Performance Center11.50. For more information on using HP ALM, refer to the *HP ALM Performance Center Guide*.

You can also view video demonstrations of HP ALM Performance Center features by choosing **Help > Product Feature Movies** in the ALM main window.

Installation

The Performance Center extension is now installed and deployed as part of the main ALM installation process. If you have a license for Performance Center, you can utilize the added functionality by enabling the extension on a per project basis. For more details on enabling the extension, refer to the *HP Application Lifecycle Management Administrator Guide*.

Performance Application Lifecycle (PAL)

Performance Application Lifecycle (PAL) enables you to share performance information between development and operations to better plan your performance tests and application deployment. This includes information such as scripts, user traffic, and system monitors. You can use this information to create scripts and load tests that better resemble a production environment. Sharing performance testing information with production can be used to determine when to deploy an application. PAL supports data from HP Business Service Management (BSM) and Webtrends Analytics.

For details, see the *HP ALM Performance Center Guide*.

Integrating Virtualized Services

As part of your performance test, you may want to test applications that depend on other services which are a part of your business scenario. Instead of loading actual services, you can use simulated services in your test run. The virtualized services are a simulation of actual services. To facilitate load testing business processes that contain services that are not readily available or too

costly, Performance Center integrates with HP Service Virtualization. This integration allows you to run virtual services that simulate actual services.

For details, see the *HP ALM Performance Center Guide*.

VuGen Enhancements

The VuGen user interface has been improved and enhanced to provide a more flexible and customizable user experience. An all new IDE makes LoadRunner scripting easier and more productive.

The following enhancements have been added:

- New look and feel – Flexible panes, layouts, and more

- Solution Explorer – An easier way to group multiple scripts, access script items, and perform script-related operations.

- Snapshots – Multiple views, improved performance, snapshot synchronization, and search functionality.

- Improved editor – Context-sensitive support, code completion support, and provides enhanced coloring and formatting.

- Debugger – Real C language debugger.

- Search and replace – New capabilities include search in log and snapshots.

- Step navigator – The new Step Navigator replaces the tree view, providing a single view of the script with easy filtering and search mechanisms.

- New panes – Errors, Tasks, and Bookmarks panes display all errors, messages, and tags in simple, easy to locate views.

- Join the Community – Community integration provides easy access to conversations and threads in the HP Software Community.

Protocols

Ajax TruClient Firefox Enhancements

This ground breaking protocol has been enhanced to support the latest technologies, and includes many usability improvements in response to customer needs.

The Ajax TruClient Firefox protocol has been improved with the following enhancements:

- Moving to Firefox 8 for improved performance.

- HTML5 support.

- Create functions to easily reuse and share code.

- Think-time recording.

- Event handlers to support asynchronous behavior.

- API for URL filtering.

- API for setting HTTP headers.

- Automatic transactions per step.

- Ajax TruClient Internet Explorer. A new protocol that brings TruClient capabilities to Internet Explorer 9. This new addition to the Ajax TruClient family expands support to Internet Explorer (IE) based applications.

Web Protocol Asynchronous Support

Support for asynchronous behavior has been added. This new capability enables recording of Poll, Long Poll, and Push interactions.

Advanced Web applications contain a lot of asynchronous communication designed to keep information current and up to date. Applications such as chat, messaging, stock tickers, and news updates all use various asynchronous mechanisms such Poll, Long Poll, and Push to maintain data. Support for these mechanisms has been added to Web (HTTP/HTML) Vuser scripts, and web-based functions inside Flex, Silverlight, and Web Services Vuser scripts. These unique communication patterns are recognized automatically and the recorded script is updated accordingly.

Improved Correlations

A new response correlation capability has been added so correlation is easier and faster. Correlations can now be found based on server responses during recording, in many cases eliminating the need to replay iteratively to find dynamic values. Coupling this with the new Correlation Studio interface and new APIs for locating parameters based on XPath and Regular Expressions, makes scripting easier and faster.

Flex Enhancements

Various enhancements have been added to better support this important environment.

Flex enhancements include:

- Using Web correlation mechanisms (rules, studio, response based correlation, web correlation APIs).

- Supporting Web requests.

- Adobe Flex platform jars bundled in the product so application jars are not needed for message serialization.

- RTMP FMS streaming support.

- RTMPT & RTMPS support.

- GraniteDS support.

Mobile Protocols

New protocols enabling you to develop scripts for mobile applications. Traffic based analysis is used for native applications and Ajax TruClient technology is used for browser based mobile applications.

Data Format Extension (DFE) for Google Web Toolkit (GWT)

Web protocol includes a built-in DFE to support decoding and encoding of GWT information exchanged as part of GWT remote procedure calls. This facilitates easy correlation and

parameterization of GWT based Web applications. The DFE feature is designed to help ease scripting of applications that exchange formatted data. By turning the formatted data into a more readable format the script can be easily correlated and parameterized. GWT DFE is the latest addition to the already supported formats of Base64, JSON, URLEncoding, XML, and Prefix-Postfix.

GWT support includes:

- Format the GWT RPC data into readable and correlate-able content.

- Expose more data, such as object field names.

- Enable simple parameterization.

- Solve specific correlations for GWT.

.NET4 Support

The .NET protocol now supports .NET4 framework.

.NET4 support has been added to the existing support for .NET frameworks 2-3.5.

Web Services Enhancements

The Web Services protocol includes new features for better security support, improved handling of WCF, as well as additional improvements based on customer feedback.

The Web Services protocol includes the following enhancements:

- Improved interface for security settings, including addressing versions.

- Easier certificate selection.

- Flexible definition of signature and encryption algorithms. Also includes the option to exclude timestamps.

- Support of custom extensions to WCF.

- Support of LoadRunner HTTP capabilities for WCF.

Recording 64-bit Applications

Recording of 64-bit applications has been added to the existing support for 64-bit operating systems. 64-bit applications can usually be recognized when the '*32' suffix is not displayed in the Windows Task Manager for their process. Replay is in 32-bit.

What's New in HP ALM 11.00

Chapter 3

What's New in HP ALM

This What's New guide provides an overview of the features that were introduced or enhanced in HP Application Lifecycle Management (ALM) 11.00. For more information on using ALM, refer to the *HP Application Lifecycle Management User Guide*.

You can also view video demonstrations of HP Application Lifecycle Management features by choosing **Help > Product Feature Movies** in the ALM main window.

Installation

The following updates have been made to the installation process. For more information, refer to the *HP Application Lifecycle Management Installation Guide*.

Installation Wizard

- Validations have been added throughout the installation process.

- The installation wizard now consists of two stages: file delivery and server configuration. This means that you can reconfigure the server without having to reinstall the application.

Data Security

ALM encrypts information for accessing external systems (databases, Windows, and LDAP), and secures communication with other HP BTO applications.

ALM Client

Installing an ALM client no longer requires administrator privileges on the machine. Administrator privileges are still required for installing certain add-ins.

Optimized Project Repositories

Project files are now saved over an optimized repository system, that ensures better performance for common actions, and extends the capacity of the file system.

Files in the project repository are stored in an optimized folder structure that allows maximum storage space. In addition, any two files with identical content are stored in the repository only once. This results in a significant reduction in disk space. For example, if you attach the same file to several ALM records, the file is stored only once in the project repository.

In addition, you can browse the optimized repositories using an FTP client (available with ALM 11.00 Patch 01).

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

When upgrading from Quality Center 9.2 or 10.00, ALM migrates files from the legacy project repository to the optimized project repository.

Side-by-Side ALM Clients

You can now run multiple versions of HP Application Lifecycle Management (ALM) side-by-side on a workstation. This includes multiple ALM 11.00 clients connecting to different ALM servers, and a single Quality Center 10.00 or 9.2 client.

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

Project Planning and Tracking (PPT) Releases

Using the Project Planning and Tracking (PPT) feature, you can now track application readiness by defining milestones for activities of an application release in the Releases module. PPT uses key performance indicators (KPIs) to analyze the data of your defined milestones. The overall health and deployment readiness of a release in displayed 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.

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

Quality Center Editions: PPT is not available for Quality Center Starter Edition, Quality Center Enterprise Edition, or HP ALM Performance Center Edition.

Business Process Model Integration

You can now import business process models created in external model authoring tools. Importing business process models into the new Business Models module automatically creates a framework of requirements representing each model and activity. You can then create test coverage and assess the quality of your business process models.

In addition, you can add path entities to your models that represent end-to-end sequences of activities, enabling you to test your business flows.

For more information, refer to the *HP Application Lifecycle Management User Guide* and to the *HP ALM Business Models Best Practices Guide*.

> **Quality Center Editions**: The Business Models module is not available for Quality Center Starter Edition or HP ALM Performance Center Edition.

Traceability Matrix

You can now determine the extent of relationships between different requirements, and between requirements and tests, using the Traceability Matrix view in the Requirements module. The traceability matrix helps you verify that all requirements are met, and identify changes to the scope of your requirements when they occur. For more information, refer to the *HP Application Lifecycle Management User Guide*.

Test Configurations

Using the Test Configurations tab in the Test Plan module, you can now design tests that run according to different use-cases, each with different sets of data. Each use-case is called a test configuration. Values for the test configurations are supplied from within your ALM project or from an external data resource.

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

New Manual Runner—HP Sprinter

You can now run manual tests in ALM from the Test Lab module using the new HP Sprinter. Sprinter provides enhanced functionality and a variety of tools to assist in the manual testing process, including the ability to:

- 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

For more information, refer to the *HP Sprinter User Guide*, available from the HP Application Lifecycle ManagementAdds-ins Page (select **Help > Add-ins Page**).

> **ALM Editions**: Sprinter functionality is not available with Quality Center Starter Edition or HP ALM Performance Center Edition.

Project Reports

A new Project Report reporting tool is available in the Analysis View module, enabling you to design and generate comprehensive reports of project data. Using templates designed by the project administrator for each ALM entity, users create project reports, by selecting the entities that are included in report sections, and defining data filters.

Project reports offer the following advantages:

- rich style and layout option using MS Word templates
- enhanced performance
- single configuration for multiple output formats (doc, docx, html, pdf)
- centralized template management

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

User Updates

This section describes usability enhancements in HP Application Lifecycle Management 11.00. For more information, refer to the *HP Application Lifecycle Management User Guide*.

Module Navigation

A new module navigation sidebar enables quick access to the modules available in ALM.

Favorite Views

You can now add subfolders to help you organize your favorite views. For example, you can create folders to organize favorite views by product, release version, or team.

Library Enhancements

The following enhancements were made in the Libraries module:

- **Improved library creation process:**

  - **Filtered libraries.** Previously, when you created a library, all records within the folders you selected were added to the library. In ALM 11.00, when you create a library, you can also define a filter for each entity tree you include, providing you with better control over library content.

  - **Automatically include related entities during baseline creation.** Previously, when you created a library that included tests, you also needed to select all the related entities that were required for the tests to run, such as called tests and test resources. In ALM 11.00, these related entities are automatically included when you create a baseline for the library.

- **Add tests to a library based on coverage.** When you select tests to include in a library, you now have the option to automatically include only those tests that cover requirements in the library.

- **Export baseline and library comparison results.** You can now save baseline and library comparison results in .csv file format.

> **Quality Center Editions:** The Libraries module functionality is not available for Quality Center Starter Edition.

Requirements Enhancements

The following enhancements were made in the Requirements module:

- **Requirements Ordering.** Previously, requirements were added to the requirements tree by order of creation. To arrange the order, you sorted the tree by selected fields. In ALM 11.00, you can move the requirements in any logical order in the tree.

- **Rich Text Editor.** The rich text feature has been improved in ALM 11.00. It includes the following enhancements:

  - changed from a Microsoft Word-based editor to an HTML editor

  - expanded the viewable area

  - improved performance of opening and saving rich text

  - available as searchable field

  - enables using a rich text template

Test Execution Enhancements

The following enhancements were made in the Test Lab module:

- The Test Lab module now contains two main tabs:

  - The Test Sets tab displays the test sets tree view.

  - The Test Runs tab displays all project runs in a grid.

  The Test Sets Grid View is no longer available.

- **Run Management.** You can now view and filter all runs for your project in a single grid view. This is available from the new Test Runs tab in the Test Lab module.

- **Draft runs.** You can now set a test as a draft run to instruct ALM to ignore the run results. This enables you to try out tests while they are still in development or after they have been modified without impacting statistics such as test or coverage status.

- **Run State field.** The new test run **State** field enables you to track the status of a run in progress.

- **Blocked run status.** A new status has been added to test runs. The **Blocked** status indicates that the test cannot run. This enables you to distinguish between tests that were not completed, possibly due to lack of time, and those that could not be completed for some other reason, such as network problems or hardware failure.

- **Execution summary.** You can now instruct ALM to send a summary of test results in an email to specified users when test set execution completes. This option is available from the Automation tab.

- The Test Instance Properties dialog box is renamed the Test Instance Details dialog box.

Dashboard Enhancements

The following enhancements were made in the Dashboard module:

- **Dashboard Module.** The Dashboard module now contains two sub-modules:

  - The **Analysis View** module contains the analysis items that were previously displayed in the Analysis View tab.

  - The **Dashboard View** module contains the dashboard pages that were previously displayed in the Dashboard View tab.

- **Graphs.** The following enhancements are introduced in graphs:

  - **Sharing Graphs.** You can now share graphs for viewing in a Web browser, without downloading an ALM client.

  - **Configuration Options.** In progress and trend graphs, you now have full control over the time period that is covered by graphs.

Task Manager

You can now view the progress and status of asynchronous tasks run in your project. The new Task Manager dialog box enables you to view tasks that run in the background, such as creating a baseline or importing a library.

Session Reconnect

When your ALM session is inactive for a period of time, the session expires. Previously this required you to log out and log in again, which includes reloading project customization.

Now when your session expires, you are prompted to reconnect. If the project administrator has not made any significant changes to the project customization, the customization does not reload, enabling you to reconnect quickly and continue working where you left off.

Administration Updates

This section describes administration enhancements in HP Application Lifecycle Management 11.00.

Importing LDAP Users

Previously, you could import LDAP users by browsing and filtering the LDAP tree. In ALM 11.00, you can search LDAP users by entering keywords. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

Enabling Project Extensions

Previously, you could enable an extension for a project only after creating the project. You can now enable extensions for a project while creating the project. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

Cross Project Customization

When you apply template customization, module access customization in the template is now applied to linked projects. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

> **Quality Center Editions**: Cross Project Customization is not available for Quality Center Starter Edition or Quality Center Enterprise Edition.

Deactivating Users

You can now deactivate users in Site Administration. An inactive user cannot log in to any ALM project. This enables you to temporarily deny a user access to projects, while maintaining user details, and preserving a user's settings and permissions. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

Update Test Types

After registering custom test types with ALM, you are now required to synchronize changes with active projects in Site Administration. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

QC Sense

You can now analyze ALM usage and performance data using QC Sense, the new internal monitoring tool. QC Sense collects data on user actions performed in the ALM user interface, and monitors all client and server activity resulting from those actions. You can generate reports based on QC Sense data, enabling you to examine and compare performance. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

Saving Customization Changes

You can now save a change that you make to project customization as a major change or a minor change. The option you select determines if customization is reloaded when a user reconnects after a session expires. If you have not made any major changes to the project customization, the customization does not reload, enabling users to reconnect quickly. For more information, refer to the *HP Application Lifecycle Management Administrator Guide*.

Site Configuration

In the Site Configuration tab, the following parameters were added:

- DEBUG_CLOSURE_LOG_DOM_PROJ
- DISABLE_PASSWORD_OTA_ENCRYPTION
- ENTITY_LINK_HOST
- ENTITY_LINK_PORT
- EVENT_LOG_PURGE_PERIOD_DAYS
- EXTENDED_MEMO_FIELDS
- FAST_RECONNECT_MODE
- FETCH_LIMIT (available with ALM 11.00 Patch 01)

- LIBRARY_FUSE

- QC_SENSE_REPORT_USERS (available with ALM 11.00 Patch 01)

- REQUIREMENTS_LIBRARY_FUSE

- REST_API_DEFAULT_PAGE_SIZE

- REST_API_MAX_PAGE_SIZE

- REST_SESSION_MAX_IDLE_TIME

- SSO_EXPIRATION_TIME

- SUPPORT_TESTSET_END

The following parameters were removed:

- ALLOW_REQ_COVERAGE_BY_TEST_INSTANCE

- LIBRARY_BROKEN_LINKS_VERIFICATION_FUSE

Workflow Events

Workflow event procedures were added for the following modules:

Module	Events
Releases	- ReleaseFolder_AfterPost
Business Models	- CanReImportModels - A set of events (such as _MoveTo, _FieldChange) for the BusinessModel, BusinessModel_Activity, BusinessModelPath, and BusinessModelFolder entities.
Business Components	- CanAddComponentstoTest - CanRemoveComponentsFromTest - CanAddFlowsToTest - CanRemoveFlowsFromTest - CanDeleteGroupsFromTest - Component_CanDelete and ComponentFolder_CanDelete. (Separate CanDelete event syntaxes are now available for components and component folders.) - A set of events (such as _New, _FieldChange) for the ComponentFolder entity.
Test Plan	- Test_CanDelete and TestFolder_CanDelete. (Separate CanDelete event syntaxes are now available for tests and test folders.) - A set of events (such as _New, _FieldChange) for the TestFolder and TestConfiguration entities.

Module	Events
Test Lab	• RunTests_Sprinter • TestSet_CanDelete and TestSetFolder_CanDelete. (Separate CanDelete event syntaxes are now available for test sets and test set folders.) • A set of events (such as _New, _FieldChange) for the TestSetFolder entity.

Other enhancements include:

- The GetDetailsPageName event is now supported for all entities, not just defect entities.

- Certain events are no longer supported for new projects, but for purposes of backward compatibility, are available in upgraded projects (for example, MoveToSubject and GetNewReqPageName).

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

Changes in Feature Availability

The following features are no longer supported in HP Application Lifecycle Management 11.00:

WinRunner EOL

You can no longer create WinRunner tests in ALM 11.00. However, if you are upgrading from a previous version of Quality Center, you can still run your existing WinRunner tests.

Defect Customization: Visible Fields in Add Defect Dialog Box

The Visible Fields in Add Defect Dialog Box field in Groups customization is no longer available in ALM 11.00. To determine which Defect fields are visible, use the Select Fields dialog box from the Data-hiding tab of the Groups and Permissions page in the Customization module. Alternatively, you can create a workflow script.

Printing Defects

In the Defects module, you can no longer print defects directly from the Defects Grid. Instead, you can export defect data, or generate graphs and reports of defect data.

Library Broken Links Verification

The verification of broken links is no longer a part of the baseline creation process in ALM 11.00. The baseline creation process now automatically includes all the related entities that tests in the library need in order to run. For more information, see "Library Enhancements" on page 29.

Fixed Columns in the Defects Grid

The option of setting non-scrolling columns displayed in the Defects grid is no longer available.

Add Required Fields to Grid

When adding a test to a test set, or creating or updating a defect, the option to automatically add required fields to the grid is no longer available. Instead, you can use the Select Columns option to add the required fields.

Assigning Existing Sets of Permissions to User Groups

When you create a new user group, you can assign the privileges of an existing user group that has similar access privileges to those you want to assign to the new group. The option of later resetting one user group's permissions according to another group's permissions is no longer available.

Adding Users to Projects from a Previous Version

In ALM 11.00, you cannot add users to a project from an earlier version before you upgrade the project.

Business Process Testing

New HP Application Lifecycle Management 11.00 features are also supported for Business Process Testing entities. In addition, the Business Process Testing features described below have been introduced or enhanced in ALM 11.00.

Improved Performance when Running QuickTest Automated Components

To improve performance, business process tests or flows that contain only QuickTest automated components now compile as QuickTest tests using a mechanism called BPT wrapper tests. The tests and flows are automatically wrapped when the test is executed, without any action on the user's part. For more information on running tests with the BPT wrapper test mechanism, refer to the *HP Business Process Testing User Guide*.

Enhanced User Interface

The following enhancements were made to the Business Process Testing user interface:

- The "look and feel" for business process tests and flows in the Test Plan is redesigned. For example, the flat list of components is now replaced by a tree-like view, enabling you to collapse and expand groups of components in the tree.

- The Iterations dialog box now provides additional capabilities such as searching for values, toggling between single and multiple iteration views, and more.

Application Area Improvements

Application areas are now standard test resources and are available from the ALM Test Resources module. As a result, you can easily recognize the components linked to each application area and each application area's content (such as object repositories and function libraries).

Improvements include:

- Application areas can now be created in the ALM Test Resources module, without having to open the QuickTest Professional testing tool. For more information, refer to the *HP Business Process Testing User Guide*.

- Component dependencies on application areas can now be viewed.

- Application areas are included in libraries and baselines, and can be compared and imported.

- Application areas (excluding the BusinessComponentTemplate10 template application area) that are not associated with a component can be deleted from within ALM without having to open the QuickTest Professional testing tool.

Test Configurations that Access Static and Dynamic Data

Business Process Testing supports test configurations that access static data and test configurations that access dynamic data.

- While ALM test configurations access static data at a configuration level, Business Process Testing configurations can also access different sets of data values for each iteration of each configuration.

- You can create test configurations for business process tests that access dynamic data. Dynamic data enable you to run test instances using test configurations based on an external data resource file, such as Microsoft Excel.

The granularity of requirement coverage is expanded, because a requirement can be covered by a business process test and several of its test configurations (use cases). Each test configuration can test different data for a run of the same test script.

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

Criteria

When creating coverage between requirements and business process tests, instead of covering each requirement only at the level of a test, you can define coverage by a test criterion such as a business component and/or a flow.

This feature expands the granularity of requirement coverage, allowing more accurate results to be propagated to the ALM Requirements module. You can select which components and flows interest you from the coverage perspective, and only those components and flows affect requirement coverage calculations.

For more details on test criteria, see the *HP Business Process Testing User Guide*.

Additional Features in the New Manual Runner—HP Sprinter

In addition to the features listed under "New Manual Runner—HP Sprinter" on page 28, the following enhanced functionality is available for Business Process Testing:

- the ability to view parameters in your steps

- flows can be expanded and collapsed as any other entity in the test hierarchy

- the ability to navigate to the previous/next components in the Steps sidebar

For more information, refer to the *HP Sprinter User Guide*, available from the HP Application Lifecycle Management Adds-ins Page (select **Help > Add-ins Page**).

Changes in Feature Availability

- The grid view for the Business Components module was removed.

- Parameter types were removed. All parameters are now of type string.

REST-based API Set

There are now ALM REST resources available. For details, see the *HP ALM REST API Reference*.

The REST-based API provides a platform-independent way to access ALM data with HTTP applications and with a browser.

API and Database Updates

This section describes API updates:

- ALM 11.00 can use Client-Side Deployment so that a client can connect to more than one instance of ALM. This affects APIs in the following ways:

  - The OTA type library is no longer registered automatically on the client machine. Before connecting to ALM with an OTA application, register the library for the server by running HP ALM Client Registration from the ALM Add-ins page. For more information, see the information about registering ALM on a workstation in the *HP Application Lifecycle Management Installation Guide*.

  - The installation of custom test types has changed. See the *HP ALM Custom Test Type Guide*.

- The content of the *HP Quality Center Entity Dependencies API Reference* that was published with Quality Center has been merged into the *HP ALM Open Test Architecture Reference*. The dependencies reference is not delivered as a separate help with ALM.

- The OTA TreeMananager object is now responsible only for the Test Subject tree. For project lists, use Customization.Lists.

- Rich text fields are now saved as memo fields and not as .DOC files.

- The Site Administration API's CreateProjectCopy method no longer supports the SA_PROJECT_CREATION_FORCE_IF_ACTIVE option. A project must be deactivated before it can be copied.

- The HISTORY table no longer exists. Events are now logged in the AUDIT_LOG and AUDIT_PROPERTIES tables. There are corresponding changes to OTA.

- New items in the API and database references are marked with a red tag in the table of contents. The tag is at the object or table level. Individual fields, methods, and properties are not tagged.

Documentation Library

The following updates were made to the HP ALM Documentation Library.

New Look

For some user related functionality, the documentation content has been reorganized to enable quicker access, with feature descriptions divided into topics:

- Use concept topics for background, descriptive, or conceptual information about what a feature does.

- Use task topics for step-by-step guidance to help you work with the application and accomplish your goals.

- Use reference topics to look up specific reference information relevant to a particular feature. This includes understanding user interface elements, such as a window, dialog box, or wizard.

New Documentation

The following additions have been made to the documentation:

- The HP ALM Documentation Library now includes Performance Center documentation. Note that the previous HP Performance Center Monitor Reference is now incorporated into the new *HP ALM Performance Center Guide*. This guide now includes both user and administration documentation.

- Best Practices Documentation includes the following new guides:

  - The *HP ALM Upgrade Best Practices Guide* provides methodologies for preparing and planning your ALM upgrade.

  - The *HP ALM Business Models Module Best Practices Guide* provides best practices for working with the new Business Models module.

  - The *HP Performance Center of Excellence Best Practices Guide* provides best practices for successfully building and operating Performance Centers of Excellence.

  - The *HP Performance Monitoring Best Practices Guide* provides best practices for monitoring the performance of applications under test.

- API References now includes a new online HP ALM REST API Reference. You can use the REST API to access and work with ALM data.

Discontinued Documentation

The following deliverables have been discontinued:

- *HP Quality Center Upgrade Preparation Guide*: The content of this guide is now available as part of the *HP Application Lifecycle Management Administrator Guide*.

- *HP Quality Center Entity Dependencies API Reference*: The content from this help file is now available as part of the *HP ALM Open Test Architecture Reference*.

- *HP Business Process Testing Tutorial*: Refer instead to the Product Feature Movies for Business Process Testing.

Chapter 4

What's New in HP ALM Performance Center

This What's New guide provides an overview of the features that were introduced or enhanced in HP ALM Performance Center 11.00. For more information on using HP ALM, refer to the *HP ALM Performance Center Guide*.

You can also view video demonstrations of HP ALM Performance Center features by choosing **Help > Product Feature Movies** in the ALM main window.

Administration and Lab Management

The following administration enhancements have been added:

Enhanced Project Management

Projects are now created and managed on ALM. The main benefits are:

- The ability to group projects into domains based on various criteria, for example, Line of Business, Application.

- Flexible project customization that includes adding fields and properties to existing entities.

- Project templates enabling you to define and maintain a common set of project customizations for multiple projects.

- Import and export capabilities enabling easy archiving of projects.

Virtual User Days (VUDs)

Performance Center 11.00 provides a new pay-per-use licensing model that helps service providers and enables sporadic testing. VUDs are licensed on a daily basis and can be used for any protocol.

Once a license for a VUD is activated, it can be used for 24 hours for multiple performance tests and for any protocol. After 24 hours the VUD expires and is deducted from the license.

VUDs can be used as a more flexible licensing model or when a temporary license for additional Vusers is needed. VUDs can also be used when you do not have a permanent license for a particular protocol.

Improved Host Management

There is now more flexibility in the way hosts are assigned to projects and used in performance tests (previously known as load tests).

Merged pools have been removed and instead, any host can be assigned to multiple pools. This enhancement facilitates host sharing among projects.

In addition, hosts can be linked to a host pool directly from the pool itself.

Another important enhancement is the Host Properties feature. Using Project Customization, the list of available properties (for example, location, CPU Power, Memory Size, Software Installations, and so on) can be defined and can be selected for each host. These properties can be used when designing performance tests and reserving timeslots to narrow down the automatch hosts (previously known as virtual hosts) and find an appropriate match.

Enhanced System Health Checks

The new Check Host and Check Server features enable tracking and maintaining the system's status. These periodic checks are run automatically and ensure constant monitoring of the system's key components. In addition, several automated tasks have been added to locate and fix any failures that may occur.

Full Redundancy

ALM Performance Center is based on ALM, which supports multiple nodes. Multiple Performance Center Servers with internal load balancing mechanisms can also be added.

User Features

The following user enhancements have been added:

Requirements to Defects Traceability

You can now manage performance requirements, and trace their status down to defects. A defect can be linked directly to a requirement, or to the performance test that covers it.

The following workflow is recommended:

1. Define a performance requirement.

2. Cover the requirement by a performance test.

3. Define the appropriate service level agreement.

4. Link relevant defects to the test runs.

> **Note:** The use of requirements and defects within Performance Center may require additional licenses.

Timeslot Reservations

The timeslot reservation user interface is now more informative and intuitive and includes the following improvements:

- The calendar view includes the following enhancements:

  - Displays multiple reservations in parallel.

  - The ability to view complete details of timeslot reservations, including the allocated hosts,

from your project and any other project accessible to you.

- Displays dual time zones.

- The ability to select a daily or weekly view.

- Displays a quick view of upcoming reservations.

- Reserving new timeslots includes the following enhancements:

  - The ability to define a name for the timeslot.

  - The scheduling assistant provides a clear indication of when requested resources are available.

  - Reserves a mixture of specific and automatch hosts (previously known as actual and virtual hosts respectively) in the same timeslot.

  - Automatch hosts can be refined using host properties that provide more specific characteristics about the hosts that are needed.

  - There is a new type of timeslot: a maintenance timeslot. This is scheduled by the Performance Center administrator in Lab Management and is used to allocate hosts for maintenance tasks such as patch installations.

- Error handling includes the following enhancements:

  - Comprehensive and detailed information in case of allocation problems.

  - Timeslot failure generates email notifications.

  - Changes to a performance test are automatically propagated to a timeslot linked to the performance test.

- A grid view is available with more advanced filtering and sorting capabilities.

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

Application Under Test (AUT) Management

This feature introduces the capability to manage an inventory of application under test (AUT) hosts. The AUT hosts can be grouped into AUT host pools, similar to Performance Center hosts and host pools.

The AUT hosts are a core element of the new Topology and SiteScope integration features. As such, they can be added not only in Lab Management, but also in the ALM project itself.

For details, see the *HP ALM Performance Center Guide*.

Topology and SiteScope Integration

ALM Performance Center can now articulate the Application Under Test topology (deployment view) and use it as an interface for defining performance monitors using the new integration with HP SiteScope.

Key added value introduced:

- All stakeholders in the project can visually understand the tested environments.

- Monitor template deployment facilitates monitor configuration.

- Runtime performance issues are pinpointed by highlighting a topology node's status based on the SiteScope monitor threshold.

- New and improved SiteScope integration:

  - The SiteScope user interface is hosted in ALM Performance Center, enabling leveraging SiteScope functionality in a use-case oriented approach, without requiring additional monitor configuration on the Performance Center side.

  - Ability to control whether or not to run monitors outside the context of the performance test. This contributes to the scalability of the SiteScope server, and reduces network noise when no tests are running.

  - SiteScope data is displayed in different graphs in the Performance Center run screen and measurement names can be easily identified and filtered.

For details, see the *HP ALM Performance Center Guide*.

Enhanced Performance Test Assets Management

Management of performance testing assets (tests, scripts, and monitors) has been improved and includes the following enhancements:

- Manages your assets in a hierarchal folder tree view.

- Manages test execution cycles.

- Copies all testing assets within and between projects.

- Uses version control to track changes.

- Manages assets in libraries that are shareable between projects.

- You can now benefit from advanced management of dependencies between testing assets, for example, performance tests and scripts.

Performance Test Design Enhancements

ALM Performance Center has improved the usability and capabilities provided in the performance test design phase. The following capabilities and enhancements have been added:

- The ability to select a Controller host for a test.

- The ability to assign properties to hosts (for example, installed on a Citrix client) for allocating appropriate hosts during a run.

- The ability to assign both automatch (virtual) and specific (actual) hosts in the same test.

- The ability to tag Vuser groups to facilitate test design and modifications.

- The ability to assign multiple scripts to a test simultaneously.

- Runtime Settings: The ability to manage Additional Attributes in ALM Performance Center.

- J2EE/.NET Diagnostics Integration (HP Diagnostics 9.0 only): The ability to filter probes using the health status field.

- Enhanced test summary view.

- Service Level Agreements (SLAs):

- The ability to measure a Transaction Percentile SLA.

- The ability to set decimal-valued thresholds.

- The ability to measure an unlimited number of transactions in the SLA.

- The ability to view a report that displays the SLA status.

Start Run

The following enhancements have been made to the Start Run process:

- The process now covers more test initialization steps, such as host allocation.

- Performance tests now start faster than before.

- Performance tests can be cancelled in the initialization phase if a critical error occurs.

For details, see the *HP ALM Performance Center Guide*.

My Performance Center

My Performance Center is an additional view which provides an interface specifically designed for test execution. It allows you to create a personalized view of performance testing features, facilitating execution of day-to-day performance testing activities.

For details, see the *HP ALM Performance Center Guide*.

Standalone Applications

The following standalone application enhancements have been added:

VuGen and Protocols

New protocols and features have been added, and enhancements have been made to existing features:

- **Ajax TruClient.** A new advanced protocol for modern JavaScript-based applications, including Ajax. The protocol emulates user activity within a Web browser. Scripts are developed interactively in Mozilla Firefox.

- **Silverlight.** A new protocol for Silverlight-based applications emulating user activity at the transport level. This protocol allows the generation of high-level scripts by automatically importing and configuring WSDL files used by the application.

- **Java over HTTP.** A new protocol designed to record Java-based applications and applets. This protocol produces a Java language script using Web functions, and is distinguished from other Java protocols in that it can record and replay Java remote calls over HTTP.

- **Data Format Extension (DFE).** A new feature that enhances data format capabilities for the Web (HTTP/HTML) protocol family. This feature allows the conversion of raw HTTP traffic into a maintainable and structured XML format, and enables correlations by XPATH.

- **Correlation Studio.** This Web (HTTP/HTML) automatic correlation mechanism has been enhanced to search for possible correlations in the larger scope of snapshot data created during code generation, including data formatted by DFE.

- **Snapshot View.** New snapshot view for the Web (HTTP/HTML) protocol steps enables viewing complete HTTP traffic in both raw and DFE generated formats.

For more information, refer to the *HP Virtual User Generator User Guide*.

Analysis

The following enhancements were made to HP Analysis:

Area	Enhancement
Reporting capabilities	- Fully customizable report templates that allow you to control the content and format of a report. - Exports the report to different formats, such as Word, Excel, PDF, or HTML, for any reporting purpose. - The Analysis Session template enables you to associate multiple report templates, each in a different time range. - Automatically generates reports upon creation of Analysis data via standalone Analysis.
Service Level Agreement (SLA)	- Added the Transaction percentile SLA type. - Sets decimal threshold values.
Usability	- Filters the graph legend, graph data, or raw data by any column by using wildcards and 'like' statements. - Filters a graph before opening it. **Note:** This may reduce the Analysis process footprint when working with large sessions. - Whole Measurement names in the graph legend in the HTML report are now visible. - Enhanced user interface for managing Analysis session templates.

For more information, refer to the *HP LoadRunner Analysis User Guide*.

Feature Mapping

This section includes mapping information that enables you to locate HP Performance Center 9.5x features in HP ALM Performance Center 11.00.

Performance Center 9.5x Administration Site Feature Mapping

The following table shows the location of Performance Center 9.5x Administration site features in ALM Performance Center 11.00 Lab Management. For information on how to log in to Lab Management, refer to the *HP ALM Performance Center Guide*.

Feature	Performance Center 9.5x Module	HP ALM Performance Center 11.00 Lab Management
Hosts	Resources	On the Lab Management sidebar, under **Lab Resources**, select **Hosts**.
MI Listeners	Resources	On the Lab Management sidebar, under **Lab Resources**, select **MI Listeners**.
Host Locations	Resources	On the Lab Management sidebar, under **Lab Resources**, select **Locations**.
Host Pools	Resources	On the Lab Management sidebar, under **Lab Resources**, select **Host Pools**.
Servers	Resources	On the Lab Management sidebar, under **Lab Resources**, select **PC Servers**.
Test Runs	Site Management	On the Lab Management sidebar, under **Lab Resources**, select **Test Runs**.
Timeslots	Site Management	On the Lab Management sidebar, under **Lab Resources**, select **Timeslots**.
Autostart Viewer	Site Management	• **Past autostart performance tests.** On the Lab Management sidebar, under **Lab Usage**, select **Test Runs**. • **Future autostart performance tests.** On the Lab Management sidebar, under **Lab Usage**, select **Timeslots**. The future tests can be identified by their start date.
Event log	Site Management	• On the Lab Management sidebar, under **Lab Resources**, select **Hosts**. • On the Lab Management sidebar, under **Lab Usage**, select **Test Runs**. • On the Lab Management sidebar, under **Lab Settings**, select **PC Servers**. • In Lab Management common toolbar, select **Tools > Event Log**.
License	System Configuration	On the Lab Management sidebar, under **Lab Settings**, select **License**.
General Settings	System Configuration	In the Lab Management common toolbar, select **Tools > Performance Center General Settings.**
Diagnostics	System Configuration	On the Lab Management sidebar, under **Lab Settings**, select **Diagnostics**.

Feature	Performance Center 9.5x Module	HP ALM Performance Center 11.00 Lab Management
Server Configuration	System Configuration	On the Lab Management sidebar, under **Lab Settings**, select **Diagnostics**.
Server Authentication	System Configuration	Server authentication is now performed using ALM User Management functionality.
Alerts Configuration	System Configuration	Monitoring is now performed by an internal periodic check host mechanism that replaces SiteScope.
Reports	Reports	On the Lab Management sidebar, under **Lab Usage**, select **Usage Reports** ● Two new reports are available: ■ **VUDs License Project Usage Report** ■ **VUDs License Site Usage Report** ● The **Site Users Report** is no longer available.
Personal Details	User Management	In the ALM Project, select **Tools > Customize > User Properties**.
Users	User Management	In the ALM Project, select **Tools > Customize > Project Users**.
Roles & Privilege Management	User Management	In the ALM Project, select **Tools > Customize > Groups and Permissions**.
Projects	User Management	**Add project:** You create projects in Site Administration. For information about accessing Site Administration, refer to the *HP Application Lifecycle Management Administrator Guide*. **Project information:** To define project settings, on the Lab Management sidebar, under **Lab Settings**, select **Project Settings**.

Performance Center 9.5x User Site Feature Mapping

The following table shows the location of Performance Center 9.5x User site features in ALM Performance Center 11.00. For information on how to start ALM, refer to the *HP Application Lifecycle Management User Guide*.

Feature	Performance Center 9.5x Module	HP ALM Performance Center 11.00
Status > General	Project	Only available in Performance Perspectives. For more information on Performance Perspectives, refer to the *HP ALM Performance Center Guide*.
Status > Dashboard	Project	On the ALM sidebar, under **Requirements**, select **Requirements**. Then select **View > Coverage Analysis**. **Note:** This is not an exact reproduction of the Performance Center Dashboard. In ALM Performance Center 11.00: ● Transaction level status can only be viewed in the SLA report. ● You must define the requirements in order to get full status information.
Hosts	Project	On the ALM sidebar, under **Lab Resources**, select **Hosts**.
Timeslots	Project	On the ALM sidebar, under **Lab Resources**, select **Timeslots**.
Topologies		On the ALM sidebar, under **Lab Resources**, select **Topologies**. **Note:** Topologies is a new feature.
Vuser Scripts	Project	On the ALM sidebar, under **Testing**, select **Test Plan**. **Note:** A table detailing basic information for all the scripts in the project is not available. To view information for an individual script, select **Script Folder > <desired script>**. The information displays in the upper right hand pane.
Monitor Profiles	Project	On the ALM sidebar, under **Testing**, select **Test Resources**.
Autostart Viewer	Project	● **Past autostart performance tests.** On the ALM sidebar, under **Testing**, select **Test Resources**. ● **Future autostart performance tests.** On the ALM sidebar, under **Lab Resources**, select **Timeslots**. The future tests can be identified by their start date.
Options	Project	On the ALM sidebar, under **Tools**, select **PC Project Settings**.
Change Project	Project	On the ALM sidebar, under **Tools**, select **Change Project**.

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Manage	Load Tests	On the ALM sidebar, under **Testing**, select **Test Plan**.
Test Runs	Load Tests	On the ALM sidebar, under **Testing**, select the **Test Runs** tab.
Trend Reports	Load Tests	On the ALM sidebar, under **Testing**, select **Test Lab**. Then select the **Test Runs** tab and click the **Performance Trending** button .
Personal Details	User Management	In the common toolbar, select **Tools > Customize > User Properties**.
Users	User Management	In the common toolbar, select **Tools > Customize > Project Users**.
Roles	User Management	In the common toolbar, select **Tools > Customize > Groups and Permissions**.
Projects		Not available in ALM Performance Center 11.00.
Privilege Management	User Management	In the common toolbar, select **Tools > Customize > Project Users**.
Downloads	Miscellaneous	In the common toolbar, select **Tools > Download Standalone Applications**.
What's New	Miscellaneous	In the common toolbar, select **Help > What's New**.