



HP ALM

Software Version: 12.50

What's New

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Chapter 1: What's New in ALM 12.50

This What's New guide provides an overview of the features that were introduced or enhanced in HP Application Lifecycle Management (ALM) 12.50.

Tip: For what's new in Performance Center 12.50, see "[What's New in Performance Center 12.50](#)" on page 37.

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

- "[HP ALM Updates](#)" below
- "[ALM Web Client Updates](#)" on the next page
- "[Business Process Testing Updates](#)" on page 7

HP ALM Updates

Integrating External Tests

ALM enhances your testing capabilities by enabling you to synch externally executed test results with ALM. Automation tests executed by Jenkins or other testing frameworks will be integrated into ALM along with the latest test runs, giving quality teams comprehensive quality coverage. When working with Jenkins, this integration enhances the Continuous Testing process.

ALM provides two methods for synchronizing your results with ALM:

Synchronizing results from Jenkins	After configuring Jenkins to synch results with ALM, each time you run a job from Jenkins, the external results are synchronized automatically with ALM.
Synchronizing results by external testing tools	When working with an external testing tool, you synchronize an external result file to ALM by manually importing the file to ALM.

Client Side Deployment

The ALM Client is deployed once for each ALM version. When client download begins, the ALM Platform loader compares the ALM version on the server with the ALM version on the client machine, and only deploys the client if the versions are not the same. As a result, you can now install ALM in advance. For example, you can:

1. Install the new version of ALM or the new patch on your staging server.
2. From your client machine, link to the staging server. The new ALM Client is now deployed on your client machine.

You can then continue to access the production server, working with the old ALM Client. When the production server is upgraded to the new version of ALM, each client machine automatically works with the new ALM Client.

Also, you no longer need to specify additional servers in the MSI Generator to have a single MSI available for multiple ALM servers.

Data Hiding

Certain critical fields in ALM cannot be hidden. These fields are marked with a plus sign in Project Customization.

Add Images to Memo Fields

You can add images to ALM records. You can attach an image, a snapshot of your application, or items from the Clipboard. You can add images to any memo field of an entity that support attachments, such as the **Description** and **Comments** sections of a defect.

Locking Out Users

The ALM site administrator can lock out a user who invalidly attempts to log in. When a user is locked out, the user's status is set to **Inactive**. You can then activate the user, or set a time period to automatically activate the user and end the lockout.

Global Search

A powerful global search engine enabling you to search across all or a specific ALM module. It includes the following modules: Defects, Requirements, Tests, Test Sets, and Analysis. For more details on how to install and enable Global Search, see <https://hpln.hp.com/contentoffering/alm-global-search>.

System Requirements Updates

- Operating system service packs and updates are supported, provided they are compatible with the vendor's general availability release.
- Database server' service packs and updates are supported, provided they are compatible with the vendor's general availability release.

ALM Web Client Updates

Changes in Feature Availability

Web Client is targeted for release as part of our next major release cycle. If you are using the 12.00,

12.01, 12.20, or 12.21 Web Client you will need to remain on those versions in order to keep working with the Web Client, as it is not available for version 12.50.

Business Process Testing Updates

Extended View for Test Script Tab

- You can view information in the Test Script tab's grid view using the new extended view. This enables you to see a more comprehensive view of test components without clicking additional links. The additional information you can see include:
 - Snapshot thumbnails, instead of an icon.
 - Separate columns for input and output parameters, which include parameter names and if only one iteration, the value for the parameter.
 - Links between input and output parameters, without having to open the I/O Parameters dialog box.

Additionally, when working in extended view, you can adjust row heights for your convenience.

For details, see [Test Script Tab for Business Process Testing](#).

Chapter 2: What's New in ALM

12.21/12.20

This What's New provides an overview of the features that were introduced or enhanced in HP Application Lifecycle Management (ALM) 12.21 and 12.20.

Tip: For what's new in Performance Center 12.20, see ["What's New in Performance Center 12.20" on page 39](#).

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

Version 12.21

- ["HP ALM Updates" below](#)
- ["Business Process Testing Updates" on the next page](#)

HP ALM Updates

Integrating External Tests

ALM enhances your testing capabilities by enabling you to synch externally executed test results with ALM. Automation tests executed by Jenkins or other testing frameworks will be integrated into ALM along with the latest test runs, giving quality teams comprehensive quality coverage. When working with Jenkins, this integration enhances the Continuous Testing process.

ALM provides two methods for synchronizing your results with ALM:

Synchronizing results from Jenkins	After configuring Jenkins to synch results with ALM, each time you run a job from Jenkins, the external results are synchronized automatically with ALM.
Synchronizing results by external testing tools	When working with an external testing tool, you synchronize an external result file to ALM by manually importing the file to ALM.

Locking Out Users

The ALM site administrator can lock out a user who invalidly attempts to log in. When a user is locked out, the user's status is set to **Inactive**. You can then activate the user, or set a time period to automatically activate the user and end the lockout.

API References

- **HP ALM REST API Reference.** You can use the REST API to access and work with ALM data. This version supports working with Defects and provides the infrastructure needed to support the work with Defects.
- **HP ALM REST API Technical Preview Reference.** In addition to the HP ALM REST API product, the REST API Technical Preview is still available. The Technical Preview has wider coverage of ALM functionality.
- **HP ALM Custom Test Type Reference.** Provides an online reference to the classes and interfaces a developer uses to integrate a testing tool with ALM and a guide to development

Supported Environments

ALM now supports Microsoft SQL Server 2014.

Business Process Testing Updates

Ability to set up iterations for business components using Microsoft Excel and dynamic configurations

You can now define multiple sheets in an Excel worksheet (data table). The first sheet lists test parameters, as in previous Business Process Testing versions. But now, subsequent sheets can be used to list component parameters, and values for multiple component iterations. For details, see the *HP Application Lifecycle Management User Guide*.

Because dynamic test configurations can access different data tables, this enhancement lets your business process tests run components varying numbers of times. For example, if a test in a flight application has a component for ordering airline tickets, the same test can, using the same component, order one ticket when one of its configurations runs, and then seven sets of tickets to different countries when its next configuration runs.

Recording components, flows, and business process tests

Recording enables you to create component steps, or even a full business process test or flow, in your application without the need to manually create separate components and their associated application areas before starting to create steps. When recording, you perform user actions and create additional components as necessary.

You can record both scripted and keyword automated components.

Also, you can scan keyword components to add controls to the local object repository from within ALM. For details, see **Scan Kwd** in [Keyword View Pane](#).

For more details, see the *Business Process Testing User Guide* and the *Unified Functional Testing User Guide*.

Integration with BPT Packaged Apps Kit

BPT Packaged Apps Kit adds additional functionality to ALM and Business Process Testing that enables you to test packaged apps, such as SAP GUI and SAP Fiori. This functionality includes features such as learning components and inserting them into flows and business process tests. Also, the change detection feature lets you view if, or how, features in your packaged app have changed since you learned your tests and flows.

BPT Packaged Apps Kit includes the following benefits:

- BPT Packaged Apps Kit can automatically learn the actions you perform on your apps, and then generate a flow or business process test containing components based on the screens and transactions within your apps. You can reuse learned components instead of creating new components. For details, see *Learn Process*.
- BPT Packaged Apps Kit enables you to run tests and flows on apps in Change Detection mode. This enables you to determine how the apps have changed since the test or flow was built, and resolve the changes. For details, see the *Business Process Testing User Guide*.

Note: SAP Fiori is a technical preview. Learning is supported; Change detection will be supported in the future.

For details about the supported packaged apps, see the *Business Process Testing User Guide*.

For details about enabling BPT Packaged Apps Kit, see the *HP Application Lifecycle Management Administrator Guide*.

Additional information is available in the *Unified Functional Testing User Guide*.

Version 12.20

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- ["Business Process Testing Updates" on page 13](#)

HP ALM Updates

Editions

Two new introductory editions of HP ALM are available:

- **HP Quality Center Express Edition:** Provides core functionality for test management, including manual and automatic tests, and defect management. This license is limited to 20 named or concurrent users.
- **HP Quality Center Community Edition:** Provides core functionality for test management and defect management. This license is free, and is limited to five named users.

Supported Environments

Here are some of the main additions we've made to the supported system environments:

Microsoft Office. 64 bit versions of Microsoft Office are now supported

Operating systems. Red Hat Enterprise and Oracle Linux 7.0 64 Bit

Database servers. Oracle 12.1.0.1

For a complete listing of supported environments, see the *HP ALM Readme*.

Administration Updates

LDAP. You can import and authenticate users based on multiple LDAP servers.

Site parameters. The list of available site parameters can be found with the ALM12.50 manuals on the HP Software Support web site (<https://softwaresupport.hp.com>).

Usability Improvements

Sort by column header. You can now sort grid and tree items (Requirements) by clicking a column header. When no sort condition is defined, data is sorted in ascending order.

Drag and drop attachments. Upload attachments by dragging and dropping them from your file explorer or email program to the **Attachments** tab. Similarly, you can drag items from the Attachments tab to your desktop to download the attachments.

Email enhancements:

- When sending an entity by email, select to add a comment to the entity, including the recipients of the mail, and any text you type in the **Additional Comments** field of the email.
- Send yourself a copy of an email, by selecting a checkbox in the Send Email dialog box.

Business Models

ALM now supports **BPMN 2.0** models exported to **XPDL 2.2** files.

Lab Management Hosts

You can exclude hosts from being automatically allocated to a timeslot. Limit the host to being selected by name, or limit the host availability to a specific user.

ALM Web Client Updates

The ALM Web Client offers an alternative user interface for managing the lifecycle of your application, and is part of HP's ongoing commitment to providing innovative products and solutions. The ALM Web Client is user-friendly and easy to navigate, and with its new features and functionality, shortens work processes and provides an improved user experience.

Note: Currently, the modules supported by ALM Web Client are Requirements and Defects.

HP Application Lifecycle Management 12.20 introduces the following new features and enhancements to the ALM Web Client:

Traceability

- When adding traceability, a preview pane displays the details of the selected entity, making it easier to identify the correct entity.

Customization

Customization enhancements include:

- Define rules that validate fields when an entity is created, deleted, or modified.
- Define rules that set field values by copying the value from another field.
- Select multiple list values within a business rule condition field. The values are connected with an Or indicator. For example, Priority is 2-Medium or 3-High.
- Business rules override predefined values, but are themselves overridden by user defined values.

Additional Usability Enhancements

- **Inline editing.** Fields of grid items can now be edited directly in the grid.
- **Bulk update.** Modify up to three fields simultaneously in multiple entities.
- **Email entities.** Users can now send an entity by email. Recipients can click the link in the mail to navigate directly to the entity.
- **Data export.** You can now export grid data to an Excel file, in addition to the existing formats.
- A new **Report defect** button on the main toolbar simplifies defect reporting. When you report a defect in this way, the defect is automatically linked to the entity from which it was reported.

Business Process Testing Updates

Business Process Testing 12.20 introduces the following enhancements:

Run Conditions for business components and flows in business process tests

Until Business Process Testing 12.20, you could only create run conditions for business components in flows. Now, you can also create run conditions for:

- Business components in business process tests
- Flows in business process tests

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

Automatic promotion of parameters

You can now promote parameters automatically to higher levels when creating a business component or flow parameter.

This option can be enabled or disabled by the project administrator.

Automatic deletion of unused parameters

You can now delete unused parameters automatically from higher-level flows and tests when a lower-level parameter is deleted. For example, if you delete a component parameter, if it is unused at the flow level, it is deleted from the flow also.

This option can be enabled or disabled by the project administrator.

Changes to Manual Runner functionality

When running a business process test or flow in the Manual Runner, any steps whose component's run condition was not met are now skipped when clicking **Next**. The steps' statuses are set to **No Run**, since they have not been run.

Administration changes for Business Process Testing

You can now customize more Business Process Testing features. For details on each of these changes, see the *HP Application Lifecycle Management Administrator Guide*.

- Include component instance iterations in the run results report.
- Enable automatic promotion or deletion of parameters. See details above.
- Set the default **On Failure** behavior if a component fails during a test run.

Integration with Sprinter

You can author manual business components in Sprinter.

This feature is supported according to the following matrix:

	ALM 11.52	ALM 12.01	ALM 12.20
Sprinter 11.52 Patch 25	Yes	No	No
Sprinter 12.01	Yes	Yes	No
Sprinter 12.20	Yes	Yes	Yes

Chapter 3: What's New in ALM 12.01

This What's New guide provides an overview of the features that were introduced or enhanced in HP Application Lifecycle Management (ALM) 12.01. 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 > Movies** in the ALM main window.

HP Application Lifecycle Management 12.01

HP Application Lifecycle Management (ALM) empowers organizations 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 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 "[What's New in Performance Center 12.01](#)" on page 41.

Updates to the ALM Web Client

The ALM Web Client offers a new alternative user interface for managing the lifecycle of your application, and is part of HP's ongoing commitment to providing innovative products and solutions. ALM Web Client is user-friendly and easy to navigate, and with its new features and functionality, shortens work processes and provides an improved user experience.

Note: Currently, the modules supported by ALM Web Client are Requirements and Defects.

HP Application Lifecycle Management 12.01 introduces the following new features and enhancements to the ALM Web Client:

Author mode

Improved functionality when authoring multiple requirements as part of a single document now lets you:

- Add or delete requirements from within the document view.
- Choose between using the ALM Desktop Client **Rich Text** tab or the **Description** field as the body of each requirement in the document.
- Now includes the ability to export requirements to HTML, PDF and Word formats.

Defects module

Grid data can now be exported to HTML, PDF and Word formats.

Traceability

New features provide more comprehensive traceability capabilities:

- Grid views are available for drilling-down to specific traceability links. In these views you can filter items and select the fields to be displayed.
- When viewing traceability for requirements, you can choose to include child requirements. You can also include both direct and indirect links when viewing defects linked to a requirement.
- You can now search requirements by description name and then link them, rather than just linking them by ID.

Customization

• Forms

Improvements to the form designer and to form rendering make it easier to create forms:

- Drag and drop fields to reorder them while designing a form.
- A read-only system default form is now available. You can duplicate this form to create your own forms. You can also always revert to the system default form if necessary.
- The ALM Web Client can now optimize space by determining how many fields fit on one line in a form.

• Business Rules

Additional functionality provides the administrator with more capabilities for enforcing organization policies and for dictating workflow. Key new business rules features include:

- Filtering the list of rules in the grid by entering text. Only rules whose action, condition, or remark match the text are listed.
- Creating rules without a condition, which will be evaluated unconditionally.
- You can base your rule condition on the values of fields that refer to other modules, such as a **Target Release** or **Target Cycle** from the Releases module.
- Defining rules that:
 - Select different lookup lists for both user-defined and system fields.
 - Limit field lookup list values to a subset of those values.
 - Send emails when an entity is created, deleted, or modified.
 - Set field values when an entity is created or a field is modified.

- **General**

General enhancements added to customization include:

- A new **Edit & Lock** feature that enables one administrator to have exclusive access to customization, while others can view existing settings.
- **Staging and production.** You can now define your business rules and forms in a project set up for staging, and when ready, export the business rules to the project in production.

Additional functionality and useability enhancements

New features and useability improvements provide an enhanced user experience:

- A preview pane is now available for more convenient viewing and editing of entity details in grid views.
- You can define and load preset value templates for automatic completion of field values, saving time when adding entities.
- When using filters and categorization, the new **Hierarchy with children** view displays the parent-child path leading to the matching requirements, as well as the children of the matching requirements. This gives you a better overall perspective of your requirements.
- You can modify the location of a requirement in the hierarchy by changing its associated parent requirement.
- Requirements can now be added in **Flat** view when the hierarchy is not displayed, by assigning a parent requirement.
- Attachments can now be added when adding a new entity, without having to first save the entity.
- You can now cut, copy, paste, and delete requirements in the **Details** view.
- Improvements to memo fields let you paste images directly into memo fields, and make use of native browser spell-check functionality.

For details on each of these features, see the *ALM Web Client User Guide*.

Tip: The ALM demo project, **ALM_Demo**, contains data and entities that can be used for learning ALM Web Client. For details on importing projects, see the *HP Application Lifecycle Management Administrator Guide*.

Site Configuration Updates

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

- ALLOW_HTTP_METHOD_OVERRIDE
- ALLOW_WEBUI_HTTP_METHOD_OVERRIDE
- REQUIREMENT_AUTHOR_USE_RICHTEXT

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

ALM Help

The *ALM Installation and Upgrade Guide* has been split into two new guides, one for Windows users and one for Linux users. By customizing these guides, we present users with the information that is relevant to their environment. The new guides can be found under Installation Guides on the ALM Help page.

Chapter 4: What's New in ALM 12.00

This What's New guide provides an overview of the features that were introduced or enhanced in HP Application Lifecycle Management (ALM) 12.00. 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 > Movies** in the ALM main window.

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HP ALM 12.00

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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 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 ["What's New in Performance Center 12.00" on page 43](#).

External Authentication

ALM supports external authentication systems, such as Smart Card Authentication and Single Sign-on.


- **Smart Card Authentication:** Smart cards are physical devices used to identify users in secure systems. These cards can be used to store certificates both verifying the user's identity and allowing access to secure environments. Currently, ALM supports one type of smart card authentication, CAC (Common Access Card). ALM is JITC certified. For details, see http://jitc.fhu.disa.mil/pki/pke_lab/app_testing/application_status.html.
- **Single Sign-on:** Single sign-on (SSO) is a session/user authentication process that permits a user to enter one name and password to access multiple applications. Currently, ALM supports one type of single sign-on authentication, SiteMinder.

ALM can be configured to use these external authentication systems in place of the standard model of each user manually entering a user name and password. External authentication users log in to ALM without entering a user name and password.




New Look and Feel









There is a brand new look and feel to this version of ALM. For details, see *How to Start* and *Common Areas* in the *HP Application Lifecycle Management User Guide*.

In keeping with the design changes, two significant changes have been made in the ALM main window, as follows:

- The Tools menu, previously in the masthead, has been removed. Most of the items that were in the menu are now accessible from  in the masthead.
- The Help menu, also in the masthead in previous versions, is now at the bottom of the sidebar.

The following table shows specific changes.

Previous versions	ALM 12.00
Tools > Change Project	<Domain, Project>
Tools > Customize	 > Customize
Tools > New Defect	 > New Defect
Tools > Spelling and Grammar	 > Spelling and Grammar

Previous versions	ALM 12.00
Tools > Clear History	 > Clear History
Tools > Task Manager	 > Task Manager
Tools > Download Standalone Applications (PC only)	 > Download Standalone Applications (PC only)
Tools > Event Log (PC and ALM Edition)	 > Event Log (PC only)
Tools > Lab Settings (PC and ALM Edition only)	 > Lab Settings (PC and ALM Edition only)
Tools > Performance Center Controller Options (PC only)	 > Performance Center Controller Options (PC only)
Tools > My Performance Center (PC only)	 > My Performance Center (PC only)
Help > Help on this page	
Help > Documentation Library	Help > ALM Help
Help > HP Software Support	Help > Software Support Online
Help > HP Software Website	Help > HP Software Quality Center Website
Help > ALM Website	Help > HP Software Application Lifecycle Management Website
Help > ALM Community Forum	Help > ALM Community
Help > About HP Application Lifecycle Management Software	Help. The versions of ALM components that are currently running are listed on the right side of the window.

The following menu items have been removed :

- Tools > Document Generator
- Help > Welcome Page

New ALM Web Client

The ALM Web Client offers a new alternative user interface for managing the lifecycle of your application, and is part of HP's ongoing commitment to providing innovative products and solutions. ALM Web Client is user-friendly and easy to navigate, and with its new features and functionality, shortens work processes and provides an improved user experience.

Note: Currently, the modules supported by ALM Web Client are Requirements and Defects.

Because the ALM Web Client does not download client components on to your computer, you no longer need administrative privileges to use ALM. The ALM Web Client is not browser-dependent and works on various operating systems. See the *ALM Release Notes* for supported browsers and operating systems.

The ALM Web Client has features not available in the ALM Desktop Client, such as:

- **Author mode.** A document-centric viewing mode that enables you to see a list of requirements in a single document view, and allows for quick editing of descriptions. This helps you to better understand the big picture.
- **Category Views.** A dynamic hierarchical structure based on virtual folders allows for flexibility in manipulating the requirements view. Views can be updated on-the-fly by selecting new category fields. This flexibility lets you determine the way in which requirements are organized.

For details on each of these features, see the *ALM Web Client User Guide*.

Tip: The ALM demo project , ALM_Demo, contains data and entities that can be used for learning ALM Web Client. For details on importing projects, see the *HP Application Lifecycle Management Administrator Guide*.

General Updates

HP Application Lifecycle Management 12.00 contains the following usability enhancements:

Quick Access to Attachments

Clicking the attachment icon for an entity now lets you view the list of attachments. You can open the attached files directly from the list.

Pinned Items

You can now pin requirements, test plans, or defects. For details, see the *HP Application Lifecycle Management User Guide*.

Zoom In and Zoom Out for Memo Fields

Zoom In and Zoom Out buttons have been added to the toolbar for rich content memo fields.

Cross Project Business View Excel Reports

Business View Excel reports can now be created with data from multiple projects. The data will be shown and sorted per project.

Changes in Feature Availability

The following features are no longer fully available from HP Application Lifecycle Management 12.00:

- Excel Reports

Administration Updates

This section describes administration enhancements in HP Application Lifecycle Management 12.00.

Site Configuration

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

Customization:

- DISABLE_ASYNC_CUSTOMIZATION_LOAD

External Authentication:

- EXTERNAL_AUTH_CERTIFICATE_CRL_CHECK
- EXTERNAL_AUTH_CERTIFICATE_CRL_FOLDER
- EXTERNAL_AUTH_CERTIFICATE_DELTA_CRL_CHECK
- EXTERNAL_AUTH_CERTIFICATE_LOCAL_CRL_CHECK
- EXTERNAL_AUTH_CERTIFICATE_OCSP_CHECK
- EXTERNAL_AUTH_CERTIFICATE_OCSP_REQUIRED
- EXTERNAL_AUTH_CERTIFICATE_POLICY_CHECK
- EXTERNAL_AUTH_CERTIFICATE_VALID_POLICY
- EXTERNAL_AUTH_CERTIFICATES_FILE
- EXTERNAL_AUTH_DEBUG_LEVEL
- EXTERNAL_AUTH_EXECUTION_MODE_HEADER_NAME
- EXTERNAL_AUTH_EXTENDED_HARDWARE_KEYS
- EXTERNAL_AUTH_HARDWARE_CARD_IS_REQUIRED

- EXTERNAL_AUTH_HEADER_NAME
- EXTERNAL_AUTH_IS_POLICY_REQUIRED
- EXTERNAL_AUTH_MODE
- EXTERNAL_AUTH_USER_FIELD_PATTERN
- EXTERNAL_AUTH_USER_FIELD_TYPE
- EXTERNAL_AUTH_VALIDATE_USER_IN_LDAP

Input Validation:

- INPUT_VALIDATION_LOGPATH
- INPUT_VALIDATION_MODE

Project Planning and Tracking:

- PPT_KPI_FAILURES_PERCENTAGE_PER_RELEASE_FUSE
- PPT_RECENTLY_USED_PROJECTS_THRESHOLD_MINUTES

REST API:

- DOWNLOAD_REST_ATTACHMENTS
- REST_API_HTTP_CACHE_ENABLED
- REST_API_MAX_BULK_SIZE
- REST_API_MAX_ENTITY_TREE_SIZE

Security:

- ENABLE_JMX_CONSOLE
- ENABLE_OUTPUT_SANITIZATION
- ENABLE_XSRF_VALIDATION
- OUTPUT_SANITIZATION_BY_CLIENT_TYPE
- TEXT_ENCODING_BY_CLIENT_TYPE

Web UI:

- ALLOW_WEBUI_ACCESS

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

For details on the External Authentication parameters, refer to the *HP Application Lifecycle Management External Authentication Configuration Guide*.

Business Process Testing Updates

New HP Application Lifecycle Management 12.00 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 12.00.

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

- ["Manual Runner Improvements" below](#)
- ["Testing Manual Business Process Tests from a Printout" below](#)
- ["Site Administration and Customization" below](#)
- ["Integration with Sprinter" on the next page](#)
- ["Integration with UFT" on the next page](#)

Manual Runner Improvements

In addition to user interface and performance improvements to the manual runner for business process tests, you can now view business component snapshots during the manual run. For details, see the information about running business process tests manually in the *HP Business Process Testing User Guide*.

Testing Manual Business Process Tests from a Printout

Two new reports enable you to run business process tests manually by performing the test steps from a printout. The reports print out the corresponding parameter values for flows, iterations, groups, components, and manual steps in the business process test. For details on the available project reports, see the *HP Application Lifecycle Management User Guide*.

The reports are available from the Test Plan module > Analysis menu > Project Reports option:

- Business Process Tests with Component Steps
- Business Process Tests with Component Steps and Component Details

The details report provides additional information about each component in the test and snapshots.

Tip: You can also run these reports for auditing purposes.

Site Administration and Customization

In site administration, you can set permissions for customizing Business Process Testing by group. For example, site administrators can now allow members of the Viewers group to customize Business Process Testing. For details, see the **Customize Business Process Test** permission level in the Administration tab.

Integration with Sprinter

You can author manual business components in Sprinter.

This feature is supported according to the following matrix:

	ALM 11.00 with Service Pack 3 and later	ALM 11.50	ALM 11.51	ALM 11.52	ALM 12.00
Sprinter 11.00	Yes	No	No	No	No
Sprinter 11.50	No	Yes	Yes	No	No
Sprinter 11.50 with patch 14 or patch 18	Yes	Yes	Yes	No	No
Sprinter 11.52	Yes	No	No	Yes	No
Sprinter 12.00	Yes	No	No	Yes	Yes

Integration with UFT

The following improvements have been made for integrating with UFT:

- **API testing.** When running a business process test that contains a component with API automation, you can view the resulting report using the HP Run Results Viewer. Previously, this was only supported for GUI test automation.
- **New test runtime mechanism.** Business process tests and flows do not use the BPT wrapper test mechanism when running with UFT. Instead, a new test runtime mechanism is provided.
- **Business process tests are available for edit and running directly from within UFT.** Business process tests and flows now behave as native tests within the UFT IDE, providing enhanced test editing, smoother debugging of business process tests, and better performance for business process test authoring from within the UFT IDE. For details, see the *HP Unified Functional Testing User Guide*.

Lab Management Updates

This section describes Lab Management enhancements in HP Application Lifecycle Management 12.00.


Configure Proxy Server Settings for the Lab Service

The Lab Service Settings page now includes a tab to configure proxy server settings. Proxy server settings support authentication using a username and password.

Automatically Extend Functional Timeslots

When the new Auto-Extend functionality is enabled, a functional test set or build verification suite that reaches the end of its timeslot before all tests complete, will have its timeslot automatically extended so that the tests can finish.

Help

An interactive glossary was added to the HP ALM Help. Terms that are included in the glossary are displayed in blue and have a glossary icon  next to them. Click on the term to view its definition in a pop-up window.

Chapter 5: What's New in ALM 11.52

This What's New guide provides an overview of the features that were introduced or enhanced in HP Application Lifecycle Management (ALM) 11.52. 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 > Movies** in the ALM main window.

Note: *An Integration Enablement Pack was released to enable integration between ALM 11.50 and Unified Functional Testing 11.50 or LoadRunner 11.51.

- ["General Usability Enhancements " below](#)
- ["Business View Excel Reports " below](#)
- ["Project Planning and Tracking \(PPT\) Release Enhancements " on the next page](#)
- ["Administration Updates " on the next page](#)
- ["Business Process Testing " on the next page](#)
- ["Lab Management " on the next page](#)
- ["ALM Advisor " on the next page](#)
- ["ALM Help " on the next page](#)
- ["Supported Environments " on page 33](#)
- ["Integrations Matrix " on page 33](#)

General Usability Enhancements

The ALM Options Window has an Open in Full Screen mode icon that opens ALM in Full Screen mode, allowing you to take advantage of the entire screen when using HP ALM.

Business View Excel Reports

ALM professionals can now easily slice and dice, shape and share any ALM data using the new Business Views Excel add-in. Once installed, the add-in appears as an additional tab in Excel, allowing you to populate worksheets based on ALM Business Views—without opening ALM, and to use the rich Excel toolset to view and analyze the data.

Project Planning and Tracking (PPT) Release Enhancements

When selecting content to be included in release scope items, you can now include defects that link to selected requirements, tests, and tests sets (and their associated test instances, runs, and run steps).

Administration Updates

Several new site configuration parameters were added, and some parameter names were changed.

Business Process Testing

New HP Application Lifecycle Management 11.52 features are also supported for Business Process Testing entities. In addition, business process tests and flows no longer use the BPT wrapper test mechanism when running with UFT 11.50.

Lab Management

Several enhancements were made to Lab Management. When running tests from functional test sets and build verification suites, you can use the Suggested Duration feature to set the duration of your test based on previous test executions. Updates were also made to HP ALM Lab service - with the Auto Login feature, you can configure Lab Service to automatically log in to the testing host to run a test. The version of Lab Service you are running can also be viewed in the Lab Management Testing Hosts grid. An open source Jenkins plugin has been developed that enables you to trigger a server side execution (functional test set or build verification suite) as a Jenkins build step. The results are reported in Jenkins and in the ALM Test Runs module. Support for this open source plugin is provided by the Jenkins community. For download and documentation, go to: <https://wiki.jenkins-ci.org/display/JENKINS/HP+Application+Automation+Tools>.

ALM Advisor

ALM Advisor helps you to better analyze your current ALM/QC Enterprise deployment, and provides tailored recommendations for improving your ALM/QC Enterprise configuration. Upload the data collected on your current environment to the [HP ALM Advisor website](#).

ALM Help

The online help has a new Home page giving easier access to information on getting started with ALM, and key tasks. "Show Me How" movies have been added to demonstrate how to perform specific tasks. The search tab in the online help now includes a filter that enables you to limit your search to a specific book within the ALM Help.

Supported Environments

For the supported and recommended system configurations for your ALM server and client machine, refer to [HP Software Support Online](#).

Integrations Matrix

ALM offers integration and synchronization solutions with HP and third-party tools. To integrate ALM with other tools, you may need to install an add-in. Refer to the [Integrations Matrix](#) to verify that you are using a supported version of the tool.

Chapter 6: What's New in ALM 11.50

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 > Movies** in the ALM main window.

- ["Installation" below](#)
- ["Business Views " below](#)
- ["Lab Management " below](#)
- ["Project Reports " on the next page](#)
- ["Administration Updates " on the next page](#)
- ["Business Process Testing" on the next page](#)
- ["ALM Help " on the next page](#)
- ["Supported Environments " on the next page](#)
- ["Integrations Matrix " on the next page](#)

Installation

The application server is now part of the core ALM functionality so there is no need to install a third party application server to host ALM. ALM extensions providing added functionality to ALM, such as HP Enterprise Integration module for SAP applications and HP Service Test Management, are now an integrated part of the ALM installation.

Business Views

You can now create business view graphs based on single or multiple entities. ALM also provides a set of pre-defined business views that are fully customizable and can be continually edited according to your needs.

Lab Management

HP ALM Lab Management enables you to implement continuous integration and delivery practices. Lab Management provides tools for automatically deploying test environments and scheduling Functional and Performance tests that run without user intervention. With Lab Management, the ALM server controls test execution, so that tests continue to run on testing hosts even after the user logs out of ALM. Lab Management offers QA professionals new ways to schedule automated Functional tests,

including the automatic allocation of matching testing hosts. The new Execution Report page helps you analyze Functional test set runs and Build Verification Suite runs, even as they are running. Testing resources can be managed more effectively from a central location, and Build Verification Suites filled with test sets can be defined to check the environment continuously. Communication security between the testing hosts and ALM has been improved, allowing you to seamlessly run functional tests on testing hosts residing behind a firewall. By integrating HP ALM with HP Continuous Delivery Automation (CDA), you can automatically deploy test environments on a private or public cloud.

Project Reports

Project reports can now be downloaded locally as .zip files. 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.

Administration Updates

You can now run multiple side-by-side Site Admin clients. Additional enhancements include Unicode support for ALM projects on SQL Server, a modified Licenses tab and new Site Configuration parameters.

Business Process Testing

New features such as the Test Script Canvas, as well as general enhancements and enhancements to business component design have been introduced.

ALM Help

The online Help has a redesigned browser with enhanced functionality. The ALM Help now also includes the HP ALM Lab Management Guide, additions to the Best Practices Guides and new API References documentation.

Supported Environments

For the supported and recommended system configurations for your ALM server and client machine, refer to the [HP Software Web Site](#).

Integrations Matrix

ALM offers integration and synchronization solutions with HP and third-party tools. To integrate ALM with other tools, you may need to install an add-in. Refer to the [Integrations Matrix](#) to verify that you are using a supported version of the tool.

Chapter 7: What's New in Performance Center 12.50

This What's New provides an overview of the features that were introduced or enhanced in HP ALM Performance Center 12.50. For more information on using HP ALM Performance Center, refer to the *HP ALM Performance Center Guide*.

Tip: For what's new in ALM 12.50, see ["What's New in ALM 12.50" on page 5](#).

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

- ["Performance Application Lifecycle \(PAL\)" below](#)
- ["Improved HP Network Virtualization \(NV\) integration" below](#)
- ["Improved HP Service Virtualization integration" on the next page](#)
- ["Noise Generator Scripts " on the next page](#)
- ["Uploading VuGen Vuser Scripts" on the next page](#)
- ["Script Runtime Settings Updates" on the next page](#)
- ["Copying Monitor Profiles" on the next page](#)
- ["HP Performance Center Protocol Usage Report" on the next page](#)
- ["VuGen Enhancements" on the next page](#)

Performance Application Lifecycle (PAL)

The improved PAL feature allows for complete end-to-end testing and DevOps feedback. Users can accurately compare performance test results with real production data benchmarks. Analysis of these results provides a framework to assist you in creating performance test scenarios to resemble realistic environments as closely as possible, which reduces test assumptions and risks.

Improved HP Network Virtualization (NV) integration

The NV integration includes a range of usability improvements and enhancements.

- Ability to integrate NV virtual locations in the end-to-end testing in PAL.
- Ability to install NV during the Performance Center installation.
- Unified licensing management (Performance Center and Network Virtualization).

Improved HP Service Virtualization integration

Improved HP Service Virtualization dialog box for configuring services before the test run.

Noise Generator Scripts

New noise testing capabilities, allowing you to run a simple noise test alongside standard Vuser scripts. The noise test performs basic load testing without an actual business process.

Uploading VuGen Vuser Scripts

When uploading scripts to Performance Center, you can now upload more than five script at a time.

Script Runtime Settings Updates

When uploading VuGen Vuser scripts to Performance Center, Performance Center updates the runtime settings of the uploaded scripts, as follows:

- Under **General > Log** view, the **Enable logging** option is not selected by default.
- Under **General > Think Time** view, the **Replay think time as recorded** option is selected by default.
- Under **General > Miscellaneous** view, the **Generate snapshot on error** option is not selected by default.

Copying Monitor Profiles

When managing monitors, you can now copy a profile to another monitor.

HP Performance Center Protocol Usage Report

A new reporting tool with advanced capabilities is provided as a technical preview. This standalone tool enables you to query ALM to extract information on the system's usage. This information can be manipulated offline to generate reports on the usage of Vusers, licenses, hosts, protocols and more. This tool is available for Performance Center 11.xx - 12.5x. For more details, see HP Software Self-solve knowledge base article KM01764543

(<https://softwaresupport.hp.com/group/softwaresupport/search-result/-/facetsearch/document/KM01764543>).

VuGen Enhancements

Usability improvements for LoadRunner's VuGen. For example, JavaScript language support for Web - HTTP/HTML protocol.

Chapter 8: What's New in Performance Center 12.20

This What's New guide provides an overview of the features that were introduced or enhanced in HP ALM Performance Center 12.20. For more information on using HP ALM Performance Center, refer to the *HP ALM Performance Center Guide*.

Tip: For what's new in ALM 12.20 and 12.21, see ["What's New in ALM 12.21/12.20" on page 9](#).

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

- ["Support for Microsoft Azure Cloud" below](#)
- ["Continuous Testing" below](#)
- ["Protocol Granularity Report" below](#)
- ["Test Runs Trend" on the next page](#)
- ["User Experience" on the next page](#)
- ["Miscellaneous" on the next page](#)
- ["Virtual User Generator Enhancements" on the next page](#)
- ["Protocol Enhancements" on the next page](#)
- ["Controller Enhancements" on the next page](#)

Support for Microsoft Azure Cloud

Ability to provision cloud hosts for performance testing from Microsoft Azure Cloud. For details on cloud hosts, see the *HP ALM Lab Management Guide* and the *HP ALM Performance Center Guide*.

Continuous Testing

Performance Center now enables you to transform NUnit, JUnit, or Selenium tests into VuGen scripts. You can then upload the VuGen scripts to Performance Center. For details, see the *HP ALM Performance Center Guide*.

Protocol Granularity Report

This newly added usage report enables you to view the Vuser script's protocol usage. For details, see the *HP ALM Lab Management Guide*.

Test Runs Trend

This newly added trend graph shows the test runs of a selected test over time. For details, see the *HP ALM Performance Center Guide*.

User Experience

- **New Look and Feel.** There is a brand new look and feel to this version of Performance Center. For details, see the *HP ALM Performance Center Guide*.
- **Topology Module.** This module is now available from Performance Center. To access, on the My Performance Center navigation bar, select **Resources > Topologies**. For details, see the *HP ALM Performance Center Guide*.
- **Timeslots Module.** This module is now available from Performance Center. To access, on the My Performance Center navigation bar, select **Resources > Timeslots**. For details, see the *HP ALM Performance Center Guide*.
- **Runtime Settings.** A newly designed runtime settings view with simplified layout. For details, see the *HP ALM Performance Center Guide*.

Miscellaneous

- Significant performance and stability improvements in uploading scripts.
- In addition to Microsoft Internet Explorer, Performance Center now supports Google Chrome and Apple Safari browsers.
- **Allows choosing a system user during installation.** While installing a Performance Center server, you can now choose to create a new system user or use the IUSR_METRO system user. For details, see the *Installing and Configuring Performance Center Servers and Hosts* section in the *HP ALM Performance Center Installation Guide*.

Virtual User Generator Enhancements

Usability improvements for LoadRunner's Virtual User Generator (VuGen). For more details, see the What's New section in the *HP LoadRunner 12.02 Readme*, available from [HP Live Network \(HPLN\)](#).

Protocol Enhancements

Enhancements to several Virtual User Generator protocols and support for latest versions of their technologies. For more details, see the What's New section in the *HP LoadRunner 12.02 Readme*, available from [HP Live Network \(HPLN\)](#).

Controller Enhancements

Stability improvements for LoadRunner's Controller. For more details, see the What's New section in the *HP LoadRunner 12.02 Readme*, available from [HP Live Network \(HPLN\)](#).

Chapter 9: What's New in Performance Center 12.01

This What's New guide provides an overview of the features that were introduced or enhanced in HP ALM Performance Center 12.01. 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 > Movies** in the ALM main window.

- ["Support for HP Public Cloud" below](#)
- ["Using VUsers and VUDs during a Test Run" below](#)
- ["Performance Center Community License Bundle" below](#)
- ["Log Collator Tool" on the next page](#)
- ["Mobile License Bundle" on the next page](#)
- ["Virtual User Generator Enhancements" on the next page](#)
- ["Protocol Enhancements" on the next page](#)

Support for HP Public Cloud

Ability to provision cloud hosts for performance testing from HP Public Cloud. For more information on cloud hosts, see the *HP ALM Lab Management Guide* and the *HP ALM Performance Center Guide*.

Using VUsers and VUDs during a Test Run

Performance Center now enables you to mix VUsers and VUDs in the same test while reserving timeslots and running performance tests.

For more information, see *HP Application Lifecycle Management User Guide* and the *HP ALM Performance Center Guide*.

Performance Center Community License Bundle

Performance Center now delivered with a free perpetual community license bundle. The bundle includes: 1 Controller allowing 1 concurrent run, 1 PC Lifecycle user, and 50 perpetual VUsers. The VUsers are valid for all protocols except for GUI (UFT), COM/DCOM, and template protocols. The community license bundle does not include support.

For more information on how to install community license bundle, see the *HP ALM Lab Management Guide*.

Log Collator Tool

This application enables you to collate logs from ALM, Performance Center servers, and host machines to a ZIP file.

This tool is available from the Performance Center Server. Select **Start > All Programs > HP Software > HP Performance Center Server > Tools > Log Collator**.

Mobile License Bundle

A custom license bundle for testing mobile applications, including the Mobile Application - HTTP/HTML, TruClient Ajax - Mobile, and SMP protocols. This bundle includes Performance Center Mobile VUsers and an equivalent number of Network Virtualization for PC VUsers licenses.

For more details, see the What's New section in the *HP LoadRunner 12.01 Readme*. The *HP LoadRunner 12.01 Readme* is available from [HP Live Network \(HPLN\)](#).

Virtual User Generator Enhancements

Usability, stability, and performance improvements for LoadRunner's Virtual User Generator (VuGen). For more details, see the What's New section in the *HP LoadRunner 12.01 Readme*.

The *HP LoadRunner 12.01 Readme* is available from [HP Live Network \(HPLN\)](#).

Protocol Enhancements

Enhancements to several Virtual User Generator protocols and support for latest versions of their technologies. For more details, see the What's New section in the *HP LoadRunner 12.01 Readme*.

The *HP LoadRunner 12.01 Readme* is available from [HP Live Network \(HPLN\)](#).

Chapter 10: What's New in Performance Center 12.00

This What's New guide provides an overview of the features that were introduced or enhanced in HP ALM Performance Center 12.00. 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 > Movies** in the ALM main window.

- ["Provision Cloud Hosts for Performance Testing" below](#)
- ["My Performance Center Updates" below](#)
- ["Analysis Templates" on the next page](#)
- ["PAL Enhancements" on the next page](#)
- ["Performance Center REST API Reference" on the next page](#)
- ["Protocol Enhancements" on the next page](#)
- ["Virtual User Generator Enhancements" on the next page](#)

Provision Cloud Hosts for Performance Testing

You can now provision hosts for performance testing in the cloud. The new cloud host functionality enables you to:

- Define cloud accounts for your projects.
- Provision hosts using standard host templates or create your own templates.
- Manage cloud host usage by assigning credits to projects.
- View cloud host usage reports and receive cloud host notifications.

For more information about cloud hosts, see the *HP ALM Lab Management Guide* and the *HP ALM Performance Center Guide*.

My Performance Center Updates

My Performance Center now enables you to:

- Create test plan trees and test sets, and fully manage your tests from within Performance Center.
- Provision and manage your cloud testing hosts.
- View cloud host usage reports.
- Easily create tests using the Test Express Designer.
- View and manage your tests and resources using newly created System Perspectives.

For more information on My Performance Center, see the *HP ALM Performance Center Guide*.

Analysis Templates

After creating a custom designed template for displaying test results in the HP LoadRunner Analysis, you can upload the template to the ALM Test Resources module and apply it to other performance tests of your choice. For details, see the *HP ALM Performance Center Guide*.

PAL Enhancements

Performance Application Lifecycle (PAL) now enables you to create production data sets using GoogleAnalytics and IIS W3C Extended Log File Format. After you create the data sets using the PAL Data Set Creator wizard, you upload the data sets from My Performance Center and use them in your PAL reports. For details, see the *HP ALM Performance Center Guide*.

Performance Center REST API Reference

A newly created online reference for the Performance Center REST-based API. You can use the REST API to execute actions to support automation and continuous integration.

Protocol Enhancements

Enhancements to several Virtual User Generator protocols and support for latest versions of their technologies. For more details, see the What's New section in the *HP LoadRunner 12.00 Readme*.

The *HP LoadRunner 12.00 Readme* is available from the following locations:

- [HP Software Manuals Web site](#)
- [HP Live Network \(HPLN\)](#)

Virtual User Generator Enhancements

Usability, stability, and performance improvements for LoadRunner's Virtual User Generator (VuGen). For more details, see the What's New section in the *HP LoadRunner 12.00 Readme*.

The *HP LoadRunner 12.00 Readme* is available from the following locations:

- [HP Software Manuals Web site](#)
- [HP Live Network \(HPLN\)](#)

Chapter 11: What's New in Performance Center 11.52

This What's New guide provides an overview of the features that were introduced or enhanced in HP ALM Performance Center 11.52. 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 > Movies** in the ALM main window.

- ["Performance Application Lifecycle \(PAL\) " below](#)
- ["Shunra Network Virtualization Enhancements " below](#)
- ["My Performance Center Login Access" below](#)
- ["VuGen Enhancements " on the next page](#)
- ["Host - Linux Distributions " on the next page](#)
- ["Analysis Enhancements " on the next page](#)
- ["Protocols " on the next page](#)

Performance Application Lifecycle (PAL)

You can now tune a test during runtime or afterward. When tuning a test during runtime, the framework enables you to continuously adjust the data to view your changes almost immediately.

Performance Center Licenses Updates

When installing Performance Center and host licenses, you can now install both licenses using a single license file. The PC Licenses Module window user interface is now more informative and intuitive.

Shunra Network Virtualization Enhancements

Improved integration between HP ALM Performance Center and Shunra Network Virtualization (formerly known as Shunra WAN Emulation) enables you to perform network virtualization per Vuser group, and to define multiple locations per load generator. Other enhancements include added support for shared or non-shared bandwidth that simulate mobile networks, and new network virtualization graphs in the Performance Test Run Page and LoadRunner Analysis.

My Performance Center Login Access

You can now log in to My Performance Center from the HP Application Lifecycle Management Options window.

VuGen Enhancements

Usability, functionality and performance improvements have been added to VuGen.

Host - Linux Distributions

Additional Linux distributions are now supported.

Analysis Enhancements

There are performance improvements in starting Analysis, loading test results, generating rich reports, and statistic calculation in Analysis APIs.

Protocols

Enhancements have been made to existing protocols.

Chapter 12: What's New in Performance Center 11.50

This What's New guide provides an overview of the features that were introduced or enhanced in HP ALM Performance Center 11.50. 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 > Movies** in the ALM main window.

- ["Installation " below](#)
- [" Performance Application Lifecycle \(PAL\) " below](#)
- ["Integrating Virtualized Services " below](#)
- ["VuGen Enhancements " below](#)
- ["Protocols" below](#)
- ["Recording 64-bit Applications " on the next page](#)

Installation

The Performance Center extension is now installed and deployed as part of the main ALM installation process, and can be enabled on a per project basis.

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.

Integrating Virtualized 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.

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 scripting easier and more productive.

Protocols

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

Recording 64-bit Applications

Recording of 64-bit applications has been added to the existing support for 64-bit operating systems.

Send Us Feedback



Can we make this What's New better?

Tell us how: SW-Doc@hp.com

