

HPE ALM

Software Version: 12.50

User Guide



**Hewlett Packard
Enterprise**

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Contents

HPE ALM	1
Part 1: ALM Basics	19
Chapter 1: ALM Introduction	21
Introducing ALM	22
Why use ALM?	22
How do I get started?	22
New to ALM?	23
ALM Projects	23
User Privileges	23
Project History Management	24
Data Import from Microsoft Word and Microsoft Excel	24
Data Import from Word	24
Data Import from Excel	24
How to Start ALM	25
How to Reset Your Password	28
How to View Administrator Messages	29
ALM Common User Interface	29
ALM Common Areas	30
ALM Options	35
ALM Fields	36
ALM Icons	37
User Properties Page	38
Clear History Dialog Box	40
Task Manager Dialog Box	41
Send Error Details Dialog Box	44
Chapter 2: ALM Common Functionality	47
ALM Common Functionality Overview	48
How to Display ALM Data	48
Work with Complex Filters - Use-Case Scenario	50
How to Modify Attachments	52
How to Search and Replace ALM Data and to Update Multiple Records	52
ALM Common Functionality User Interface	53
Filter Dialog Box	54
Select Filter Condition Dialog Box	65
Users List Dialog Box	67
Find Dialog Box	68
Replace Dialog Box	70
Text Search Pane	72

History Tab	75
Send E-mail Dialog Box	76
Attachments Page	80
Select Image Dialog Box	82
Snapshot Dialog Box	84
Select Columns>Select Fields Dialog Box	85
Update Selected Dialog Box	87
Set Default Values Dialog Box	88
Chapter 3: Alerts and Flags	91
Alerts Overview	92
Follow Up Flags Overview	93
How to Use Alerts	94
Alerts and Flags User Interface	95
Alerts Dialog Box	96
Flag For Follow Up Dialog Box	97
Chapter 4: Favorite Views	99
Favorite Views Overview	100
How to Use Favorite Views	100
Favorite Views User Interface	101
Add Favorite Dialog Box	102
Organize Favorites Dialog Box	103
Chapter 5: Pinned Items	105
Pinned Items Overview	106
Pinned Items Panel	106
Chapter 6: Version Control	109
Version Control Overview	110
How to Use Version Control	111
How to Filter by Version Control Fields	114
Non-versioned Fields	114
Moving, Copying, and Deleting Checked-out Entities	115
Version Control User Interface	116
Versions Menu and Buttons	117
Version Control Fields	118
Check In Dialog Box	120
Check Out Dialog Box	120
Pending Check In Dialog Box	121
Versions Tab	123
Chapter 7: ALM Editions	125
 Part 2: Management	133
Chapter 8: Releases and Cycles	135

Releases and Cycles Overview	136
How to Use Releases and Cycles in ALM	137
Releases and Cycles User Interface	139
Releases Module Window	140
Releases Module Menus and Buttons	141
Releases Module Icons	145
Releases Module Fields	146
New Release/Release Details Dialog Box	147
New Cycle/Cycle Details Dialog Box	149
Progress Tab	151
Quality Tab	152
Configure Outstanding Defects Dialog Box	154
Select Cycles Dialog Box	155
Select Releases Dialog Box	156
Reschedule Release/Cycle/Milestone Dialog Box	157
Chapter 9: Project Planning and Tracking (PPT) Releases	159
PPT Releases Overview	160
How to Work with PPT	160
KPI Types	162
Defect Content Included in PPT Release Scope Items	163
PPT User Interface	164
PPT Fields	165
Release Scope Tab	166
New Scope Item/Scope Item Details Dialog Box	169
New Milestone Dialog Box	170
Milestone Scope Tab	172
KPIs Tab	173
New KPI/KPI Details Dialog Box	176
Thresholds Page	178
New Threshold Value Dialog Box	180
Master Plan Tab	181
Milestone Details Dialog Box	182
Scorecard Tab	184
KPI Drill Down Graph	185
KPI Drill Down Results Dialog Box	187
Breakdown Over Time Graph	188
Scorecard Layout Dialog Box	190
New Release From Template Dialog Box	191
Chapter 10: Libraries and Baselines	193
Libraries Overview	194
Baselines Overview	194
Pinned Test Sets	196

How to Use Libraries and Baselines in ALM	198
Libraries and Baselines User Interface	201
Libraries Module Window	202
Libraries Module Menus and Buttons	203
Libraries Module Icons	206
Libraries Module Fields	207
New Library/Library Details Dialog Box	208
Content Tab	209
Create Baseline Wizard	211
Baseline Verification Page	212
New Baseline Page	213
Compare Baselines Tool Dialog Box	213
Compare Entities Dialog Box	216
Comparison Settings Dialog Box	218
Baselines Tab	219
Select Baselines Dialog Box	220
Chapter 11: Imported Libraries	223
Imported Libraries Overview	224
Library Synchronization Overview	226
Library Verification	227
How to Share Libraries	227
Imported Libraries User Interface	230
Import Library Wizard	231
Select a Baseline Page	231
Library Verification Page	232
Select Target Root Folders Page	233
Imported By Tab	234
Imported From Tab	235
Compare Libraries Tool Dialog Box	236
Library Verification Dialog Box	239
Troubleshooting and Limitations	240
Part 3: Requirements	241
Chapter 12: Introducing Requirements	243
Requirements Overview	244
How to Use Requirements in ALM	244
Chapter 13: Requirements Specification	247
Requirements Specification Overview	248
How to Create Requirements	248
Requirements User Interface	249
Requirements Module Window	250

Requirements Module Menus and Buttons252
Requirements Module Icons261
Requirements Module Fields263
Requirement Details Page270
New Requirement Dialog Box272
Convert to Tests Wizard273
Select Automatic Conversion Method Page274
Manual Change Conversion Page275
Select Destination Path Page276
Chapter 14: Requirements Traceability279
Requirements Traceability Overview280
How to Trace Requirements280
Requirements Traceability User Interface281
Relationships Tab282
Impact Analysis Tab285
Chapter 15: Traceability Matrix287
Traceability Matrix Overview288
How to Use the Traceability Matrix288
Traceability Matrix User Interface289
Traceability Matrix View290
Configure Traceability Matrix Wizard294
Define Source Requirements Page294
Filter By Linked Requirements Page295
Filter By Linked Tests Page296
Chapter 16: Risk-Based Quality Management299
Risk-Based Quality Management Overview300
How to Assess Risk300
Risk-Based Quality Management User Interface302
Risk Assessment Tab303
Risk Analysis Tab307
Generate Report Dialog Box312
Chapter 17: Business Process Models313
Business Process Models Overview314
Business Process Models File Import314
Re-importing models315
Business Process Model Paths315
How to Work with Business Process Models316
Link Requirements and Tests to Model Entities318
Business Models Module User Interface320
Business Models Module Window321
Model Analysis View324
Business Models Module Menus and Buttons329

Business Models Module Icons334
Business Models Module Fields335
Import Models Dialog Box337
Map Imported Attributes to User Fields Dialog Box339
Model Details/Model Activity Details Dialog Box340
New Model Path/Model Path Details Dialog Box342
Linkage Tab344
Requirements Tree and Test Plan Tree Pane347
Represented Items Tab348
Part 4: Cloud Settings	351
Part 5: Lab Resources	353
Chapter 18: Introducing Lab Resources355
Lab Resources Overview356
How to Use Lab Resources in ALM356
Chapter 19: Testing Hosts357
Testing Hosts Overview358
Chapter 20: AUT Environments359
AUT Environments Overview360
Link AUT Environments to CDA360
How to Work with AUT Environments361
AUT Environments User Interface364
AUT Environments Module Window365
AUT Environments Module Menus and Buttons366
AUT Environments Module Fields369
AUT Environments Module Icons370
AUT Environment Details Dialog Box371
New AUT Environment Dialog Box372
AUT Environment Configuration Details Dialog Box372
New AUT Environment Configuration Dialog Box373
New AUT Parameter Dialog Box374
AUT Parameter Details Dialog Box375
Link to CDA Dialog Box376
Part 6: Test Plan	379
Chapter 21: Introducing Test Planning381
Test Plan Overview382
How should you test your application?382
What resources do you require?382
How to Plan Tests in ALM382

Chapter 22: Test Plan Specification	385
Test Plan Specification Overview	386
How to Create Tests	386
Test Types	390
Test Plan User Interface	391
Test Plan Module Window	392
Test Plan Module Menus and Buttons	395
Test Plan Module Icons	404
Test Plan Module Fields	406
Test Details Dialog Box	410
New Test Dialog Box	412
Sort Folders in Test Plan Tree Dialog Box	414
Paste Tests/Folders to Target Project Dialog Box	415
Chapter 23: Requirement and Test Coverage	417
Requirement and Test Coverage Overview	418
How to Create Coverage	418
Requirement and Test Coverage User Interface	420
Coverage Analysis View	421
Req Coverage Tab	422
Add Configuration Coverage Dialog Box	426
Add Advanced Coverage Dialog Box	427
Business Models Linkage Tab	427
Test Coverage Page	430
Analysis Settings Dialog Box	434
Coverage Analysis Dialog Box	435
Add Criterion Coverage Dialog Box	437
Chapter 24: Test Parameters	439
Test Parameters Overview	440
How to Use Test Parameters	440
Test Parameters User Interface	442
Parameters Tab/Parameters Dialog Box	443
New Test Parameter/Test Parameter Details Dialog Box	447
Called Test Parameters/Parameters of Test Dialog Box	448
Chapter 25: Test Design	451
Test Design Overview	452
Test Automation	452
How to Design Test Steps	453
Design Steps User Interface	456
Design Steps Tab/Design Step Details Dialog Box	457
Test Script Tab	462
Select Test Dialog Box	463
Paste Design Steps to Target Project Dialog Box	464

Criteria Tab	465
Chapter 26: Test Configurations	467
Test Configuration Overview	468
Data for Test Configurations	469
Test Types and Test Configuration Data Association	469
How to Work with Test Configurations	470
How to Associate Static Data	472
How to Associate Dynamic Data	472
Test Configuration User Interface	479
Test Configurations Tab	480
New Test Configuration/Test Configuration Details Dialog Box	482
Data Tab: Static View	483
Data Tab: Dynamic View	485
Test Configuration Settings Tab	487
Test Configurations Pane	488
Test Configuration Status Tab	489
Generate Test Configuration Dialog Box	490
Map Parameters Dialog Box	491
Data Resource Settings Dialog Box	493
Chapter 27: System Tests	497
System Tests Overview	498
How to Create System Tests	498
System Test User Interface	499
Test Script Tab - System Tests	500
Chapter 28: Test Resources	501
Test Resources Overview	502
Entity Dependencies Overview	502
How to Use Test Resources	503
Test Resources User Interface	504
Test Resources Module Window	505
Test Resources Module Menus and Buttons	506
Test Resources Module Icons	509
Test Resources Module Fields	511
Resource Viewer Tab	513
Application Area Viewer Tab	514
Dependencies Tab	514
New Resource/Resource Details Dialog Box	516
Paste Resources To Target Project Dialog Box	517
Chapter 29: VAPI-XP Tests	519
VAPI-XP Tests Overview	520
How to Create VAPI-XP Test Scripts	520
How to Edit VAPI-XP Test Scripts	528

Additional Editing Functions	531
How to Use AUT Environments with VAPI-XP	532
How to Use the VAPI-XP API	533
Using the TDHelper Object	533
Using the TDInput Object	535
Using the TDOutput Object	535
Using the XTools Object	536
How to Run VAPI-XP Tests in Debug Mode	537
How to Run VAPI-XP Tests in Test Mode	537
How to Debug VAPI-XP Tests Scripts Test Mode	538
VAPI-XP User Interface	540
HP VAPI-XP Wizard	541
Test Script Tab	541
 Part 7: Test Lab	543
Chapter 30: Introducing Test Execution	545
Test Execution Overview	546
Draft Runs	548
How to Run Tests in ALM	548
How to Work with Draft Runs	550
Deploying and Testing your Application in ALM	550
The Test Lab Module User Interface	553
Test Lab Module Window	554
Test Lab Module Menus and Buttons	556
Test Lab Module Icons	575
Test Lab Module Fields	576
Chapter 31: Test Set Specification	587
Test Set Specification Overview	588
How to Create Test Sets	590
Test Sets User Interface	594
Execution Grid Tab	595
Select Testing Host Dialog Box	597
Test Instance Details Dialog Box	598
Test Instance Details - Runs View	599
Test Instance Details - Execution Settings View	602
Requested Hosts Tab	607
Automation Tab	610
New Test Set Dialog Box	612
Select Tests Pane	613
Test Set Details Dialog Box	617
On Test Failure Dialog Box	618

Paste Test Set Folders To Target Project Dialog Box619
Chapter 32: Test Run Schedules621
Test Run Schedules Overview622
How to Schedule Test Runs622
Test Run Schedules User Interface623
624	
Execution Condition Page625
Time Dependency Page626
Chapter 33: Functional Test Execution629
Functional Test Execution Overview630
How to Run Functional Tests632
Troubleshooting Functional Testing634
Functional Test Execution User Interface634
Run <Entity> Dialog Box635
Suggested Duration Dialog Box638
Execution Report Page - Desktop Client639
Execution Report Page - Web Client643
Chapter 34: Default Test Execution645
Default Test Execution Overview646
Manual Test Execution646
Manual Test Execution Overview647
HPE Sprinter Overview648
How to Run Tests Manually649
Manual Test Execution User Interface651
Manual Test Run Dialog Box651
Manual Runner Wizard652
Manual Runner: Run Details Page653
Manual Runner: Step Details Page655
Automatic Test Execution657
Automatic Test Execution Overview658
How to Run Tests Automatically658
How to Run Unified Functional Testing (UFT) GUI Tests660
Automatic Test Execution User Interface661
Automatic Runner Dialog Box661
Host Manager Dialog Box (for Default test sets only)663
Order Test Instances Dialog Box665
Execution Log Dialog Box665
Chapter 35: Integrating External Tests667
Integrating External Tests Overview668
Workflow for Integrating Results with ALM669
How to Integrate Tests from Jenkins670
How to Integrate Tests from an External Tool671

How to View External Results in ALM	672
Integrating External Tests User Interface	674
Generate Tests from External Test Results Dialog Box	675
Import External Test Results Dialog Box	675
Part 8: Build Verification	677
Chapter 36: Build Verification Suites	679
Build Verification Overview	680
How to Work with Build Verification Suites in ALM	680
Build Verification User Interface	681
Build Verification Module Window	682
Build Verification Module Menus and Buttons	683
Build Verification Module Icons	685
Build Verification Module Fields	686
Functional Test Sets Tab	687
Performance Test Tab	688
Build Verification Suite Details Dialog Box	690
New Build Verification Suite Dialog Box	691
Build Verification Suite Test Set Details Dialog Box	692
Test Sets Tree Pane	693
Part 9: Timeslots	695
Chapter 37: Reserving Timeslots	697
Reserving Timeslots Overview	698
Types of Timeslot Reservations	699
Automatic Timeslots	700
Best Practices for Reserving Automatic Timeslots	701
Extending Timeslot Reservations	701
Extending Functional Test and Build Verification Suite Timeslot Reservations	702
Extending Performance Test Timeslot Reservations	702
Modifying Timeslot Reservations	702
Understanding Timeslot Failure	703
Host Allocation	703
Example of Allocating and Reshuffling Hosts	705
How to Reserve Testing Timeslots in ALM	709
Reserving Timeslots User Interface	711
Timeslots Module Window	712
Timeslots Module Menus and Buttons	718
Timeslots Module Fields	723
Timeslots Module Icons	726
Timeslot Reservation Dialog Box	727

Select Specific Hosts Dialog Box	738
Timeslot Reservation: Data Processing Dialog Box	740
Select Controller Dialog Box	742
Select Automatch Load Generators/Edit Hosts Dialog Box	743
Select Specific Load Generators/Hosts Dialog Box	745
Time Zone Options Dialog Box	746
Part 10: Test Runs	749
Chapter 38: Viewing Test Runs	751
Test Runs Overview	752
How to View Test Runs	753
Test Runs User Interface	755
Test Runs Module Window	756
Test Runs Module Menus and Buttons	759
Test Runs Module Fields	763
Run Details Dialog Box	767
Run Step Details Dialog Box	770
Test Set/BVS Run Details Dialog Box	772
Purge Runs Wizard	773
Select Test Sets to Purge Page	773
Choose Type of Purge Page	774
Confirm Purge Request Page	775
Part 11: Defects	777
Chapter 39: Defect Tracking	779
Defect Tracking Overview	780
Defect Linkage	780
How to Track Defects in ALM	781
How to Search for Defects	783
How to Link Defects	784
Defect User Interface	785
Defects Module Window	786
Defects Module Menus and Buttons	787
Defects Module Icons	792
Defects Module Fields	793
New Defect Dialog Box	796
Defect Details Dialog Box	798
Similar Defects Dialog Box/Pane	800
Linked Defects/Entities Page	801
Defects to Link Dialog Box	804
Select Requirements Dialog Box	805

Part 12: Analysis	807
Chapter 40: Introducing Analysis	809
Analysis Overview	810
How to Analyze Data in ALM	810
Dashboard User Interface	812
Analysis View Window	813
Dashboard View Window	814
Analysis View Menus and Buttons	815
Dashboard View Menus and Buttons	820
Dashboard Icons	822
Details Tab	823
Share Analysis Item Dialog Box	824
Chapter 41: Graphs and Dashboard Pages	827
Graphs and Dashboard Pages Overview	828
Business View Graphs Overview	829
How to Generate a Graph	830
How to Generate a Dashboard Page	833
Entity Graph Types	834
Graphs and Dashboard Pages User Interface	838
Configuration Tab/Window - Graphs	839
View Tab - Graphs/Graph Window	846
Configuration Tab - Dashboard Pages	850
View Tab – Dashboard Pages	852
Graph Wizard	853
Select Graph Type Page	853
Select Business View Page	854
Select Entity Type Page	855
Select Projects Page	856
Select Test Set Option Page	856
Select Filter Page	857
Select Graph Attributes Page	858
Select Coverage Page	860
New Graph Dialog Box	860
Select Business View Dialog Box	861
New Dashboard Page Dialog Box	862
Select Projects Dialog Box	862
Edit <Type> Categories Dialog Box	863
Graph Appearance Dialog Box	865
Drill Down Results Dialog Box	865
Chapter 42: Project Planning and Tracking (PPT) Graphs	867
PPT Graphs Overview	868
How to Generate a PPT Graph	868

PPT Graphs User Interface	869
Configuration Tab - PPT Graphs	870
View Tab - PPT Graphs	872
Chapter 43: Project Reports	877
Project Reports Overview	878
How to Create Project Reports	878
How to Create a Custom Report Template	881
Predefined Project Reports	882
Project Reports User Interface	886
Configuration Tab - Project Reports	887
New Project Report Dialog Box	896
Add Report Section Dialog Box	896
Edit Document Template Field Values Dialog Box	897
Chapter 44: Excel Reports	899
Excel Reports Overview	900
Protecting the Database	901
Parameters in SQL Queries	901
Guidelines for Creating a Post-Processing Script	902
How to Generate an Excel Report	902
Excel Reports User Interface	904
Configuration Tab - Excel Reports	905
Query Tab	905
Excel Report Query Builder Dialog Box	907
Post-processing Tab	911
Generation Settings Tab	912
New Excel Report Dialog Box	913
New Query Parameter/Edit Query Parameter Dialog Box	914
Chapter 45: Business View Excel Reports	917
Business View Excel Reports Overview	918
How to Generate a Business View Excel Report	918
Business Views Excel Reports User Interface	921
Configuration Tab - Business View Excel Reports	922
HP ALM Tab - Microsoft Excel	922
Worksheet Configuration Pane - Fields Tab	925
Worksheet Configuration Pane - Filter Tab	927
Worksheet Configuration Pane - Sorting Tab	929
Worksheet Configuration Pane - Advanced Tab	930
Edit Query Dialog Box	933
Select Projects Dialog Box	935
Business View Options Dialog Box	936
Save Business View Excel Report Dialog Box	936
Chapter 46: Live Analysis Graphs	939

Live Analysis Graphs Overview	940
How to Generate Live Analysis Graphs	940
Live Analysis Graphs User Interface	941
Live Analysis Tab	942
Live Analysis Graph Wizard	943
Select Graph Type Page	944
Select Graph Attributes Page	944
Send Us Feedback	947

Part 1: ALM Basics

Chapter 1: ALM Introduction

This chapter includes:

• Introducing ALM	22
• ALM Projects	23
• User Privileges	23
• Project History Management	24
• Data Import from Microsoft Word and Microsoft Excel	24
• How to Start ALM	25
• How to Reset Your Password	28
• How to View Administrator Messages	29
• ALM Common User Interface	29

Introducing ALM

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.

"Introducing ALM" above

"Introducing ALM" above

"Introducing ALM" above

Why use ALM?

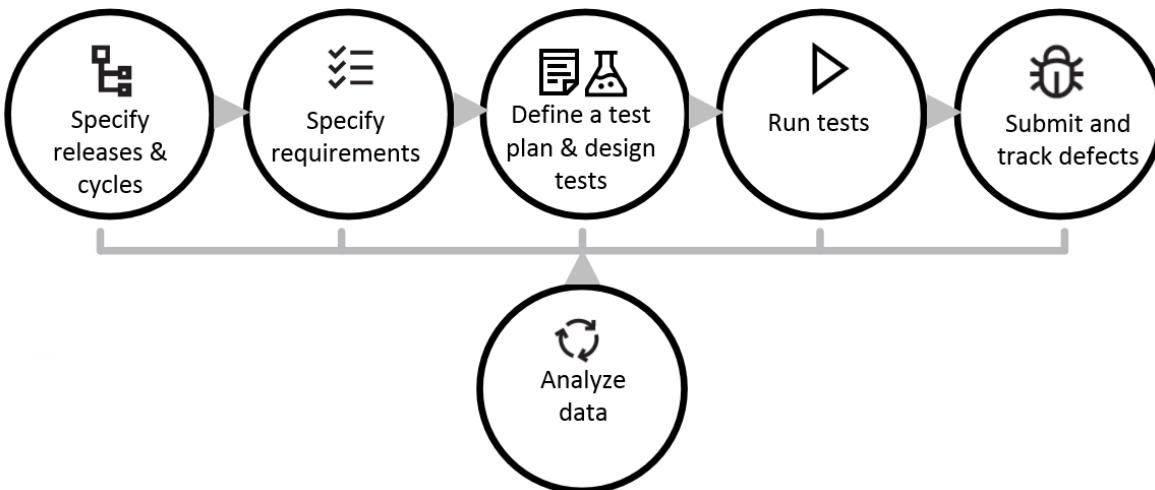
With ALM, you can:

- Develop a release-cycle management plan
- Define and maintain requirements and tests
- Create tests
- Create subsets of tests to achieve testing goals
- Schedule and run tests
- Analyze and collect test results
- Submit defects and track their repair progress
- Share libraries across projects
- Integrate with [[[Undefined variable _rscB_Branding_Variables._rsc_Company_Name]]] and third-party tools

How do I get started?

This flow demonstrates how to define a release-cycle plan, define requirements, build test plans, execute tests, and submit defects. Throughout the application lifecycle, you can analyze data by generating reports and graphs.

 Select an image to learn more.



New to ALM?

Follow the steps in the [ALM Tutorial](#) to instruct you how to use the ALM application to organize and manage all phases of the application lifecycle.

See also:

- [What's New](#)
- [ALM Editions](#)

ALM Projects

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

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

User Privileges

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

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

Project History Management

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

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

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

For user interface details, see "[Clear History Dialog Box](#)" on page 40.

Data Import from Microsoft Word and Microsoft Excel

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

Data Import from Word

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

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

Data Import from Excel

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

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

How to Start ALM

This task describes how to launch ALM on your machine from your Web browser. You can work with multiple versions of ALM side-by-side on a client machine. This includes multiple ALM clients of version 12.00 or later connecting to different ALM servers, and a single Quality Center 10.00 or 9.2 client.

Note: To enable ALM to work with HP testing tools as well as third-party and custom testing tools, you must log in to the client machine with administrator privileges and register ALM on client machines. For more information, refer to the *HPE Application Lifecycle Management Installation and Upgrade Guide*.

To start ALM:

1. Open your Web browser and type your ALM URL
`http://<ALM server name/IP address>[:port number]/qcbin`. Contact your system administrator if you do not have the correct URL.
The HPE Application Lifecycle Management Options window opens.

Application Lifecycle Management

- [ALM Desktop Client](#)
- [Lab Management](#)
- [Site Administration](#)
- [Tools](#)
- [Readme](#)

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

Note:

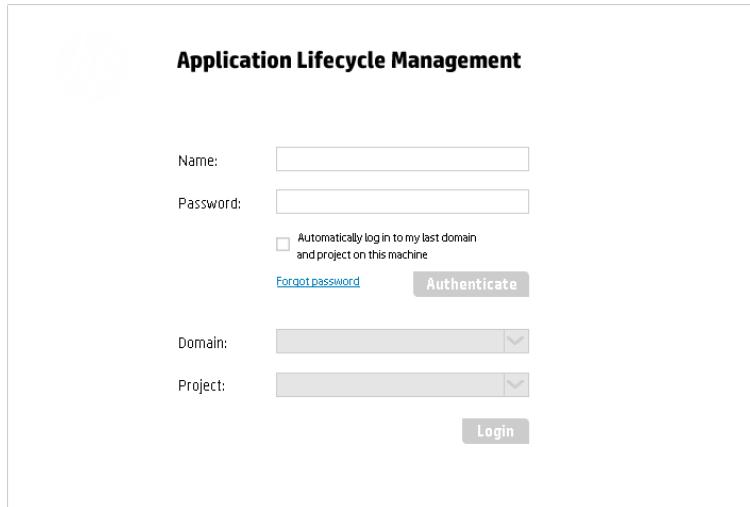
- **Windows 7/8/2008R2/2012:** If you do not have administrator privileges on your machine, and a Security Warning displays, click **Don't Install**. You are redirected to the Install screen.

- If file downloads are prohibited through your browser, you can install these files by using the HPE ALM Client MSI Generator add-in, available from the HPE Application Lifecycle Management Add-ins page ([Help > Add-ins](#)).
- If you run ALM over a virtual environment, such as Citrix or VMware, only the system administrator can install a new version.
- Click the **Open in Full Screen mode** icon  to open ALM in Full Screen mode. Full Screen mode enables you to take advantage of the entire screen when using ALM.

3. Follow the on-screen instructions.

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

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



The screenshot shows the 'Application Lifecycle Management' login interface. It features fields for 'Name' and 'Password', an 'Automatically log in to my last domain and project on this machine' checkbox, and links for 'Forgot password' and 'Authenticate'. Below these are dropdown menus for 'Domain' and 'Project', and a final 'Login' button at the bottom.

Note: If ALM was configured for external authentication, the Name and Password fields do not appear in this window. Continue with step 9.

4. In the **Name** box, type your user name.
5. In the **Password** box, type the password assigned to you by your site administrator. If you cannot remember your password, click the **Forgot Password** link. For more details, see "[How to Reset Your Password](#)" on page 28.

6. Select the **Automatically log in to my last domain and project on this machine** check box if you want ALM to automatically log in to the last project in which you were working.
7. Click the **Authenticate** button. ALM verifies your user name and password and determines which domains and projects you can access. If you specified automatic login, ALM opens.
8. If authentication fails, check that your user name and password are correct and try again. If authentication fails multiple times, you can be locked out of ALM. The number of authentication attempts you are allowed is determined by your site administrator. For more information, refer to the *HPE Application Lifecycle Management Administrator Guide*.
9. In the **Domain** list, select a domain. By default, the last domain in which you were working is displayed.
10. In the **Project** list, select a project. By default, the last project in which you were working is displayed.

If the demonstration project was installed on the ALM server, you can select the **ALM_Demo** project (make sure that you select **DEFAULT** in the **Domain** list). The project includes sample data to help introduce you to ALM. For more information, refer to the *HPE Application Lifecycle Management Tutorial*.
11. Click the **Login** button. ALM opens and displays the module in which you last worked during your previous session.

The first time you run ALM, the Welcome page opens.

From the Welcome page, you can directly access the ALM documentation. If you do not want to display the Welcome page each time you log in to ALM, select **Don't show this again**.
12. To exit and return to the ALM Login window, click the **Logout** button located in the upper-right corner of the window.

Alternatively, on the ALM masthead, click <**Domain, Project**> and select **Select** to log in to a different project.

Note: When an ALM user session is inactive for a period of time, the session expires.

This releases the license in use, making it available for other users.

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

You can edit reconnect options by modifying the **FAST_RECONNECT_MODE** parameter in the Site Configuration tab. This parameter is not valid for external authentication, since the user must always be certified when reconnecting. For more

information, refer to the *HPE Application Lifecycle Management Administrator Guide*.

How to Reset Your Password

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

Note: The **Forgot Password** link is unavailable in either of the following situations:

- It is deactivated by the **PASSWORD_RESET_DISABLE** Site Configuration parameter. For more information, refer to the *HPE Application Lifecycle Management Administrator Guide*.
- LDAP authentication is enabled. For more information, refer to the *HPE Application Lifecycle Management Administrator Guide*.

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

To reset your password:

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

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

Note: Use the **FROM_EMAIL_ADDRESS** Site Configuration parameter to change the email address that sends the password. For more information, refer to the *HPE Application Lifecycle Management Administrator Guide*.

How to View Administrator Messages

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

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

To view administrator messages:

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

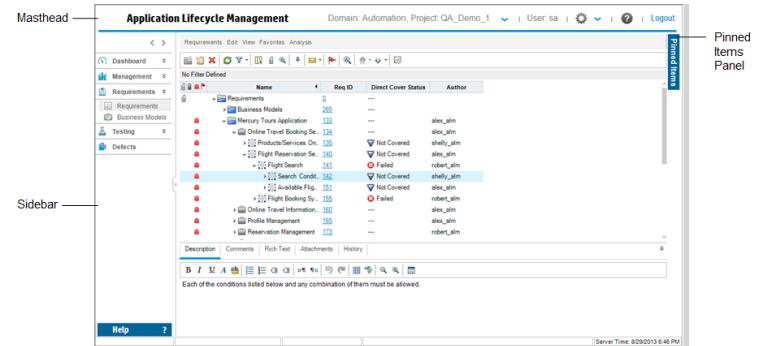
ALM Common User Interface

This section includes:

• ALM Common Areas30
• ALM Options35
• ALM Fields36
• ALM Icons37
• User Properties Page38
• Clear History Dialog Box40
• Task Manager Dialog Box41
• Send Error Details Dialog Box44

ALM Common Areas

The ALM masthead, sidebar, and Pinned Items panel are common to all ALM views.



To access	The common areas are available from all ALM views.
Relevant tasks	"How to Start ALM" on page 25

Masthead

Displays the current domain, project, and user name and provides buttons for accessing other projects, common tools, and documentation.

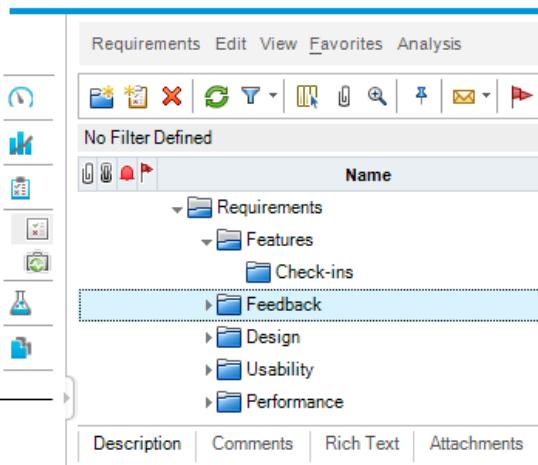
User interface elements are described below:

UI Element	Description
<Domain, Project>	Displays details of the current domain and project.
<User>	Click to switch to another open project on the same machine, or to select a different project from the Login window.
 	Provides commands that you can run from each of the ALM modules. For details, see " ALM Options " on page 35.
	<p>Tip: To customize the Tools menu, refer to the <i>HPE Application Lifecycle Management Installation and Upgrade Guide</i>.</p>
	Displays help for the current page.

UI Element	Description
Logout	Logs you out of your current project and returns you to the ALM Login window.

Sidebar

This area contains buttons for navigating between ALM views, switching between ALM modules, and accessing various online resources.

Important information	<p>ALM Editions: ALM is also available in several editions which provide subsets of ALM functionality: Quality Center Enterprise Edition, Performance Center Edition, Quality Center Express Edition, and Quality Center Community Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p> <p>If the sidebar is hidden, click the expand button.</p> 
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User interface elements are described below:

UI Element	Description
< >	<p>Enables you to navigate to your previous/next view in ALM.</p> <p>Tip: Use the Forward button after you navigate to a previous view.</p>

UI Element	Description
Dashboard	<p>Includes the following modules:</p> <ul style="list-style-type: none">• Analysis View. Enables you to create graphs, reports, and Excel reports.• Dashboard View. Enables you to create dashboard pages, in which you can view multiple graphs in a single display.
Management	<p>Includes the following modules:</p> <ul style="list-style-type: none">• Releases. Enables you to define releases and cycles for the application management process.• Libraries. Enables you to define libraries to track changes in your project, reuse entities in a project, or share entities across multiple projects.
Requirements	<p>Includes the following modules:</p> <ul style="list-style-type: none">• Requirements. Enables you to manage requirements in a hierarchical tree-structure. Requirements can be linked to other requirements, tests, or defects.• Business Models. Enables you to import business process models, and test the quality of the models and their components. Access to this module is dependent on your ALM license.
Cloud Settings	<p>Includes the following modules:</p> <ul style="list-style-type: none">• Cloud Accounts. Enables you to add your external cloud accounts to ALM. These cloud accounts can then be used to provision cloud testing hosts.• Host Templates. Enables you to create and modify the templates used to provision cloud hosts.

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

UI Element	Description
Performance Center	<p>Includes the following modules:</p> <ul style="list-style-type: none"> • Usage Reports. Enables you to analyze Performance Center site users and resource usage. • Performance Lifecycle. Enables you to access trending and performance application lifecycle (PAL) reports. For details, refer to the <i>HPE ALM Performance Center Guide</i>. • AUT Hosts. Enables you to manage the host machines that make up the Application Under Test (AUT). For details, refer to the <i>HPE ALM Lab Management Guide</i>. • Topologies. Enables you to create topologies that graphically display the logical components that make up the Application Under Test (AUT) and the relationships between them. For details, refer to the <i>HPE ALM Performance Center Guide</i>.
Help	<p>Enables you to open additional online HPE Application Lifecycle Management resources.</p> <p>Displays version information for each ALM client component.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note: For details on understanding version information, see the Obsolescence Policy on the HP Support Site: www.hp.com/go/hpsoftwaresupport.</p> </div> <p>If an error occurs, ALM collects detailed system and usage information, which you can send as an email attachment. This feature is useful for when you contact ALM support. To send an error report, select Help > Send Error Details. For more details, see "Send Error Details Dialog Box" on page 44.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Tip: To rename, rearrange or delete items in the Help menu, refer to the <i>HPE Application Lifecycle Management Installation and Upgrade Guide</i>.</p> </div>

Pinned Items Panel

When you hover over **Pinned Items**, a panel opens to display the ALM items you have pinned. You can click a pinned requirement, test, or defect to jump to it quickly.

- To pin a requirement, test, or defect, select it and click the **Pin/Unpin**  button. The item is added to the **Pinned Items** tab.

- To unpin a pinned requirement, test, or defect, select it and click the **Pin/Unpin**  button, or in the tab, click  in the item you want to unpin.

For user interface details, see "[Pinned Items Panel](#)" on page 106.

ALM Options

To access	Click  on the masthead.
See also	"ALM Common Areas" on page 30

User interface elements are described below:

UI Element	Description
Customize	Opens the Project Customization window, enabling you to customize your project. For details, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i> . Tip: You can change your ALM password and user details in the Project Customization window. For user interface details, see " User Properties Page " on page 38.
Clear History	Opens the Clear History dialog box, enabling you to delete history data from your project. Clearing history requires the appropriate user permissions. For details, see " Clear History Dialog Box " on page 40.
Task Manager	Opens the Task Manager dialog box, enabling you to view the status and progress of asynchronous tasks run in your project. For details, see " Task Manager Dialog Box " on page 41.
Spelling and Grammar	Spelling Options. Opens the Spelling Options dialog box, enabling you to configure the way ALM checks spelling. Thesaurus. Opens the Thesaurus dialog box and displays a synonym, antonym, or related word for the selected word. You can replace the selected word or look up new words. Check Spelling. Checks the spelling for the selected text or text box. If there are no errors, a confirmation message opens. If errors are found, the Spelling dialog box opens and displays the word together with replacement suggestions.

UI Element	Description
New Defect	Opens the New Defect dialog box, enabling you to add a new defect. For details, see " Defect Details Dialog Box " on page 798.
Event Log	Performance Center: Displays information about all events that occur during a performance test run. For details, refer to the <i>HPE ALM Lab Management Guide</i> .
Download Standalone Applications	Performance Center: Opens the Application Download window, enabling you to download standalone applications needed for Performance Center.
Lab Settings	Opens the Project Settings Details dialog box, enabling you to configure Lab Management settings for your project. For details, refer to the <i>HPE ALM Lab Management Guide</i> . Available for: Performance Center Edition and ALM Edition.
Performance Center Controller Options	Performance Center: Opens the Performance Center Controller Options dialog box, enabling you to configure global Controller options for your Performance Center project. For details, refer to the <i>HPE ALM Lab Management Guide</i> .
My Performance Center	Performance Center: Opens the My Performance Center dialog box, allowing you to facilitate execution of day to day performance testing activities. For details, refer to the <i>HPE ALM Performance Center Guide</i> .

ALM Fields

This section lists the fields available in ALM.

Module Name	Description
Business Components	See the <i>HPE Business Process Testing User Guide</i>
Business Models	"Business Models Module Fields" on page 335
Build Verification	"Build Verification Module Fields" on page 686 Available for: ALM Edition only
Defects	"Defects Module Fields" on page 793

Module Name	Description
Management	"Releases Module Fields" on page 146 "Libraries Module Fields" on page 207
Lab Resources	See the <i>HPE ALM Lab Management Guide</i> "AUT Environments Module Fields" on page 369 Available for: Performance Center Edition and ALM Edition only
Requirements	"Requirements Module Fields" on page 263
Test Plan	"Test Plan Module Fields" on page 406 Business Process Testing: See the <i>HPE Business Process Testing User Guide</i>
Test Resource	"Test Resources Module Fields" on page 511 Business Process Testing: See the <i>HPE Business Process Testing User Guide</i> .
Test Runs	"Test Runs Module Fields" on page 763
Timeslots	"Timeslots Module Fields" on page 723 Available for: Performance Center Edition and ALM Edition only

ALM Icons

This section lists the icons available in ALM.

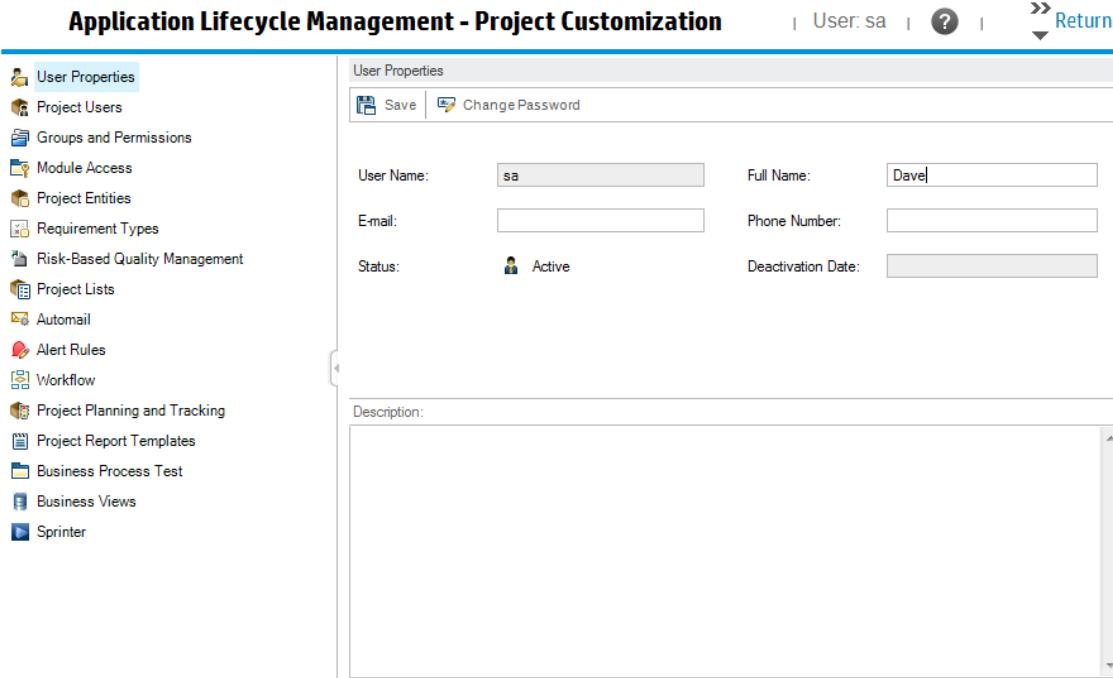
Module Name	Description
Business Components	See the <i>HPE Business Process Testing User Guide</i>
Dashboard	"Dashboard Icons" on page 822
Management	"Releases Module Icons" on page 145 "Libraries Module Icons" on page 206
Requirements	"Requirements Module Icons" on page 261
Test Resource	"Test Resources Module Icons" on page 509
Test Plan	"Test Plan Module Icons" on page 404
Test Lab	"Test Lab Module Icons" on page 575

Module Name	Description
Timeslots	"Timeslots Module Icons" on page 726 Available for: Performance Center Edition and ALM Edition only
Build Verification	"Build Verification Module Icons" on page 685 Available for: ALM Edition only
Defects	"Defects Module Icons" on page 792

User Properties Page

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

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

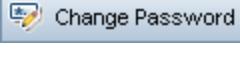


The screenshot shows the 'Application Lifecycle Management - Project Customization' interface. On the left is a navigation sidebar with various links: User Properties (selected), Project Users, Groups and Permissions, Module Access, Project Entities, Requirement Types, Risk-Based Quality Management, Project Lists, Automail, Alert Rules, Workflow, Project Planning and Tracking, Project Report Templates, Business Process Test, Business Views, and Sprinter. The main panel is titled 'User Properties' and contains fields for User Name (sa), Full Name (Dave), E-mail, Phone Number, Status (Active), and Deactivation Date. There is also a large 'Description:' text area with a scroll bar. At the top right, there are links for 'User: sa', a question mark icon, and a 'Return' button.

- | | |
|------------------|--|
| To access | <ol style="list-style-type: none">1. In the common toolbar, select Tools > Customize.2. In the Project Customization window, click the User Properties link. |
|------------------|--|

Important information	<ul style="list-style-type: none"> Email information is important because it enables you to receive email notifications and alerts directly to your mailbox. The site administrator can change and override a user's properties or password. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.
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User interface elements are described below:

UI Element	Description
Return	Closes the Project Customization window, and returns to the ALM window.
 Save	Saves changes to your user properties.
 Change Password	<p>Opens the Change Password for [user name] dialog box, enabling you to change your login password.</p> <p>Note: The maximum length of the password is twenty characters.</p> <p>This field is not available for LDAP or external authentication users.</p>
User Name	Your ALM login name. Note: This field is read-only.
Full Name/ Description	User details.
E-mail	Determines the email address to which notifications and alerts are delivered.
Phone Number	Your phone number.
Status	User status is displayed as Active . Only active users can log in to ALM projects.

UI Element	Description
Deactivation Date	The date on which the user is scheduled to be deactivated. A deactivated user cannot log in to an ALM project. Note: This field is set by the site administrator and is read-only.

Clear History Dialog Box

This dialog box enables you to delete history data.

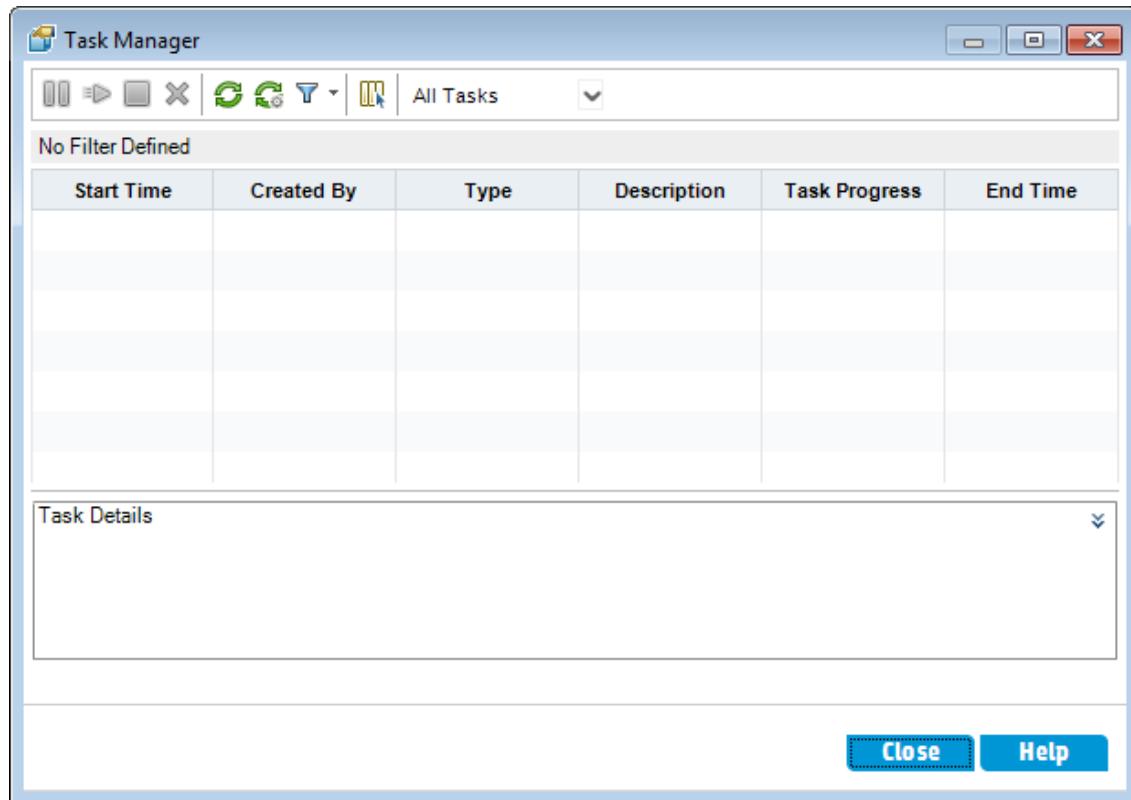
To access	On the masthead, click  and select Clear History .
Important information	You must have the appropriate user permissions to clear history.
See also	"Project History Management" on page 24

User interface elements are described below:

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

Task Manager Dialog Box

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



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

User interface elements are described below:

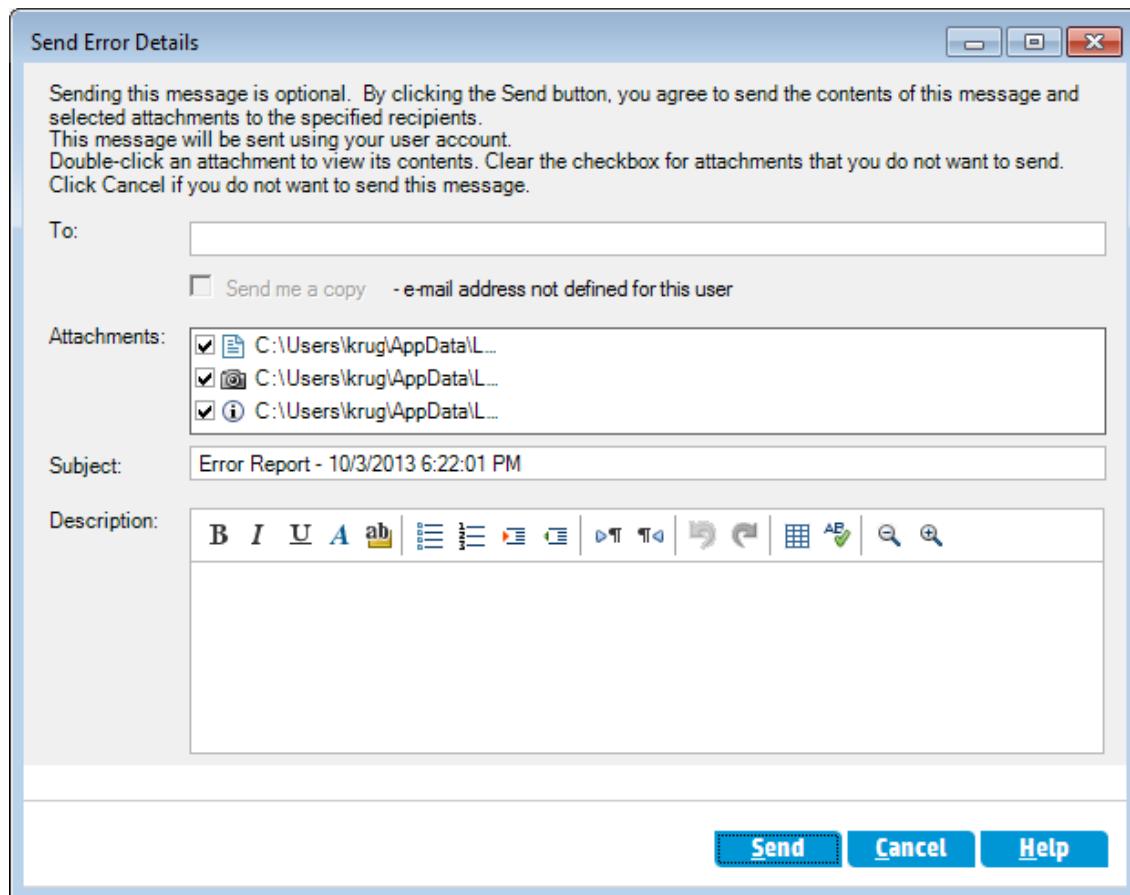
UI Element	Description
	Pause. Pauses the currently selected tasks. Note: You can only pause running tasks.

UI Element	Description
	<p>Resume. Resumes the currently selected tasks.</p> <div data-bbox="458 418 551 449" style="background-color: #e0f2e0; padding: 5px;">Note:</div> <div data-bbox="474 496 904 530" style="background-color: #e0f2e0; padding: 10px;">You can only resume paused tasks.</div>
	<p>Abort. Aborts the currently selected tasks.</p> <div data-bbox="474 677 551 709" style="background-color: #e0f2e0; padding: 5px;">Note:</div> <div data-bbox="474 756 891 789" style="background-color: #e0f2e0; padding: 10px;">You can only abort running tasks.</div>
	<p>Delete. Clears the currently selected tasks from the grid.</p> <div data-bbox="474 931 551 963" style="background-color: #e0f2e0; padding: 5px;">Note:</div> <div data-bbox="474 992 1359 1115" style="background-color: #e0f2e0; padding: 10px;"> <ul style="list-style-type: none"> • You can clear only completed tasks. • A task can be cleared only by the user that ran the task, or by a project administrator. </div>
	<p>Refresh All. Refreshes the grid so that it displays the most up-to-date task information.</p> <p>If Auto Refresh is enabled, this button is disabled.</p>
	<p>Set Auto Refresh On/Off. When enabled, automatically refreshes the grid every 5 seconds so that it displays the most up-to-date task information.</p>
	<p>Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort the tasks displayed in the grid. For more details, see ""Filter Dialog Box" on page 54.</p>
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For more details, see ""Select Columns/Select Fields Dialog Box" on page 85.</p>
Filter	Displays the filter currently applied to the grid. Located directly above the grid.
Start Time	The time the task started.
Created By	The name of the user who ran the task.

UI Element	Description
Type	The task type. For example, ImportBaseline .
Description	A description of the task.
Task Progress	The percentage of the task that is complete. When the task completes, displays the final result: Succeeded or Failed .
End Time	The time the task completed.
Task Details	Displays details of the selected task. Click the Show/Hide arrows  to display or hide this pane.
Task Id	A unique numeric ID for the task, assigned automatically by ALM.
Task State	<p>Includes the following options:</p> <ul style="list-style-type: none">• Running. The task is in progress.• Paused. The task was paused by a user.• Finished. The task has completed. <p>Note: If a task is aborted by the user, the Task State value is Finished, and the Task Progress value is Failed.</p>

Send Error Details Dialog Box

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



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

User interface elements are described below:

UI Element	Description
To	Enter a valid email address.

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

Chapter 2: ALM Common Functionality

This chapter includes:

• ALM Common Functionality Overview	48
• How to Display ALM Data	48
• How to Modify Attachments	52
• How to Search and Replace ALM Data and to Update Multiple Records	52
• ALM Common Functionality User Interface	53

ALM Common Functionality Overview

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

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

For task details, see "[How to Display ALM Data](#)" below, "[How to Modify Attachments](#)" on page 52, and "[How to Search and Replace ALM Data and to Update Multiple Records](#)" on page 52.

How to Display ALM Data

This task describes how to manipulate ALM data.

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

Filter Records

- To filter ALM data to display only those records that meet your criteria, click the **Set Filter/Sort** button . The Filter dialog box opens. In the Filter tab, assign a single condition or multiple conditions. For user interface details, see "[Filter Dialog Box](#)" on page 54.

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

- To further drill down your data, define a cross filter. In the Filter dialog box, click the **Cross Filter** tab. For user interface details, see "[Filter Dialog Box](#)" on page 54.

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

any test set.

For a use-case scenario on building filters, see ["Work with Complex Filters - Use-Case Scenario" on the next page](#).

To watch a movie on how to build a filter, refer to this section in the ALM Online Help.

Sort Records

You set sorting priorities of records displayed in the ALM trees and grids. By default, records appear in ALM according to the order in which they were added. In the Filter dialog box, click the **View Order** tab. For user interface details, see ["Filter Dialog Box" on page 54](#).

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

Group Records

You separate grid data into groups according to specified criteria. In the Filter dialog box, click the **Group** tab. For user interface details, see ["Filter Dialog Box" on page 54](#).

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

Arrange and Resize Columns

Arrange and Select Columns: You determine which columns are displayed in ALM and the order in which they appear. Select **View > Select Columns**. The Select Columns dialog box opens. For user interface details, see ["Select Columns>Select Fields Dialog Box" on page 85](#).

Resize Columns: You resize columns by double-clicking on the right edge of a column heading. Alternatively, you can click on the right edge of a column heading and drag to adjust the width.

Display ALM History

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

Click the **History** tab or button. For user interface details, see "[History Tab](#)" on page 75.

Work with Complex Filters - Use-Case Scenario

This use-case scenario describes how to build and distribute complex filters.

Note: For a task related to this scenario, see "[How to Display ALM Data](#)" on page 48.

This scenario includes the following steps:

- "Create a basic filter" below
- "Add criteria with wildcards" on the next page
- "Drill-down using cross filters and Boolean operators" on the next page
- "Group and sort the test instances" on the next page
- "Distribute the filter to others" on the next page

1. Create a basic filter

The following is an example of filtering the **Execution Grid** of test instances in the Test Lab module. To access the **Execution Grid**, see "[Execution Grid Tab](#)" on page 595.

The screenshot shows the ALM interface with the Execution Grid tab selected. The grid displays a list of test instances with columns for Name, Test: Test Name, Type, Status, Responsible..., Exec Date, and Duration. A filter has been applied to show only failed test instances. Below the grid is a 'Last Run Report' section showing the details of the most recent run, including Step Name, Status, Exec Date, Exec Time, and Steps Details (Description, Expected, Actual).

Name	Test: Test Name	Type	Status	Responsible...	Exec Date	Duration
[1]CancelFlights	CancelFlights	MANUAL	Passed	roberto	25/07/2012	10:18:3
[1]ConfirmFlights	ConfirmFlights	MANUAL	Failed	roberto	25/07/2012	10:18:5
[1]GroupFlights	GroupFlights	MANUAL	Not Completed	roberto	25/07/2012	10:19:4
[1]Login	Login	MANUAL	Failed	roberto	25/07/2012	10:20:4
[1]Logout	Logout	MANUAL	Passed	roberto	25/07/2012	10:21:0
[1]ReserveFlights	ReserveFlights	MANUAL	Passed	roberto	25/07/2012	10:21:3
[1]SearchFlights	SearchFlights	MANUAL	Passed	roberto	25/07/2012	10:21:5
[1]FlightEndEndE...	FlightEndEndE...	BUSINESS-PROCESS	No Run	sa		
[1]ConfirmFlights...	ConfirmFlightsAuto	QUICKTEST_TEST	No Run	sa		
[1]GroupFlightsA...	GroupFlightsAuto	QUICKTEST_TEST	No Run	sa		
[1]ReserveFlights...	ReserveFlightsAuto	QUICKTEST_TEST	No Run	sa		
[1]SearchFlightsA...	SearchFlightsAuto	QUICKTEST_TEST	No Run	sa		
[1]CancelFlightsA...	CancelFlightsAuto	QUICKTEST_TEST	No Run	sa		

Step Name	Status	Exec Date	Exec Time	Steps Details
Step 1	Passed	25/07/2012	10:18:30	Description: Expected: Actual:
Step 2	Passed	25/07/2012	10:18:30	
Step 3	Passed	25/07/2012	10:18:30	
Step 4	Passed	25/07/2012	10:18:30	
Step 5	Passed	25/07/2012	10:18:30	
Step 6	Passed	25/07/2012	10:18:30	
Step 7	Passed	25/07/2012	10:18:30	
Step 8	Passed	25/07/2012	10:18:30	

You would like to view manual test instances that failed. These failed test instances must be addressed immediately because the developers for correcting those areas are available.

- In the Filter Test Instances dialog box, specify **Manual** in the **Type** field.
- In the **Status** field's Select Filter Condition dialog box, select the status **Failed**.

The filter settings, displayed at the top of the Fitler Test Instances dialog box, appear as follows:

Filter: Type[MANUAL];Status[Failed]

2. Add criteria with wildcards

You begin to see a pattern. Many of the failed test instances are related to logging in to or out of the flight reservation system. You want to filter out test instances that do not relate to logging in and logging out.

In the **Test: Test Name** field's Select Filter Condition dialog box, enter the string ***log***. Any test instance based on a test whose name does not contain the string **log** is filtered out.

The filter settings appear as follows:

```
Filter: Type[MANUAL];Status[Failed];Test: Test Name["*log*"]
```

3. Drill-down using cross filters and Boolean operators

At this point, it is confirmed that work needs to be done on the login and logout procedures. To prioritize that work, you want to see the failed test instances that are covered by requirements with high priority.

Because priorities are stored in a different module, you define a cross filter.

- In the Filter Test Instances dialog box, click the **Cross Filter** tab.
- In the Requirements section, select the radio button next to **<no filter defined>**.
- Click the Browse button, and set the **Priority** field value. You want any requirement with your two highest priorities, **4-Very High** or **5-Urgent**, to be included in the filter, so you insert the **Or** operator between them.

The filter settings appear as follows:

```
Filter: Status[Failed];Test: Test Name["*log*"];Type[MANUAL];
Cross Filter: <Cross Filter Test Instance-Requirement>Priority["4-Very High" Or 5-Urgent]
```

4. Group and sort the test instances

In the Filter Test Instances dialog box, click the Sort Order and Group tabs to define the order in which you want the remaining test instances to be displayed in the execution grid.

For example, if you want the test instances to be grouped by each test designer, and sorted by test instance name, the filter settings would appear as follows:

```
Filter: Status[Failed];Test: Test Name["*log*"];Type[MANUAL];
Cross Filter: <Cross Filter Test Instance-Requirement>Priority["4-Very High" Or 5-Urgent];
Sort By: Name[Ascending]; Group By: Test: Designer
```

5. Distribute the filter to others

After creating a complex filter, you decide to save it and provide it to others.

In the Filter Test Instances dialog box, click the **Copy Filter Settings**  button. The filter settings are copied, as text, into your clipboard. You can paste the contents of your clipboard into an email, and send.

Recipients can then open the Filter Test Instances dialog box in their own ALM client, and click the **Paste Filter Settings**  button to use the same complex filter.

How to Modify Attachments

This task describes how to modify an ALM attachment.

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

To modify an attachment:

1. Navigate to the Attachments page for the selected ALM record. For user interface details, see "[Attachments Page](#)" on page 80.
2. Double-click the selected attachment. A local copy opens in the associated application.
3. Modify the attachment.
4. Save the changes in the application. This saves the local copy of your attachment.
5. Close the attachment.
6. In ALM, click the **Upload** button to upload the local copy to your ALM project.

How to Search and Replace ALM Data and to Update Multiple Records

The following steps describe how to search and replace ALM data, and to update multiple records.

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

Search Records

Using the Find dialog box, you can search records based on the value of a particular field in a tree or grid. You can also search a folder for a particular subfolder or record. For user interface details, see "[Find Dialog Box](#)" on page 68.

If available, you can search for keywords and variations of keywords using Text Search. Select **Edit > Text Search**. The Text Search pane opens in the lower part window. For user interface details, see "[Text Search Pane](#)" on page 72.

Replace or Update Records

You can replace a field value for a selected record, or for all records in the tree or grid using the Replace dialog box. For user interface details, see "[Replace Dialog Box](#)" on page 70.

You can also update a field value for multiple records in a grid or a tree using the Update Selected dialog box. For user interface details, see "[Update Selected Dialog Box](#)" on page 87.

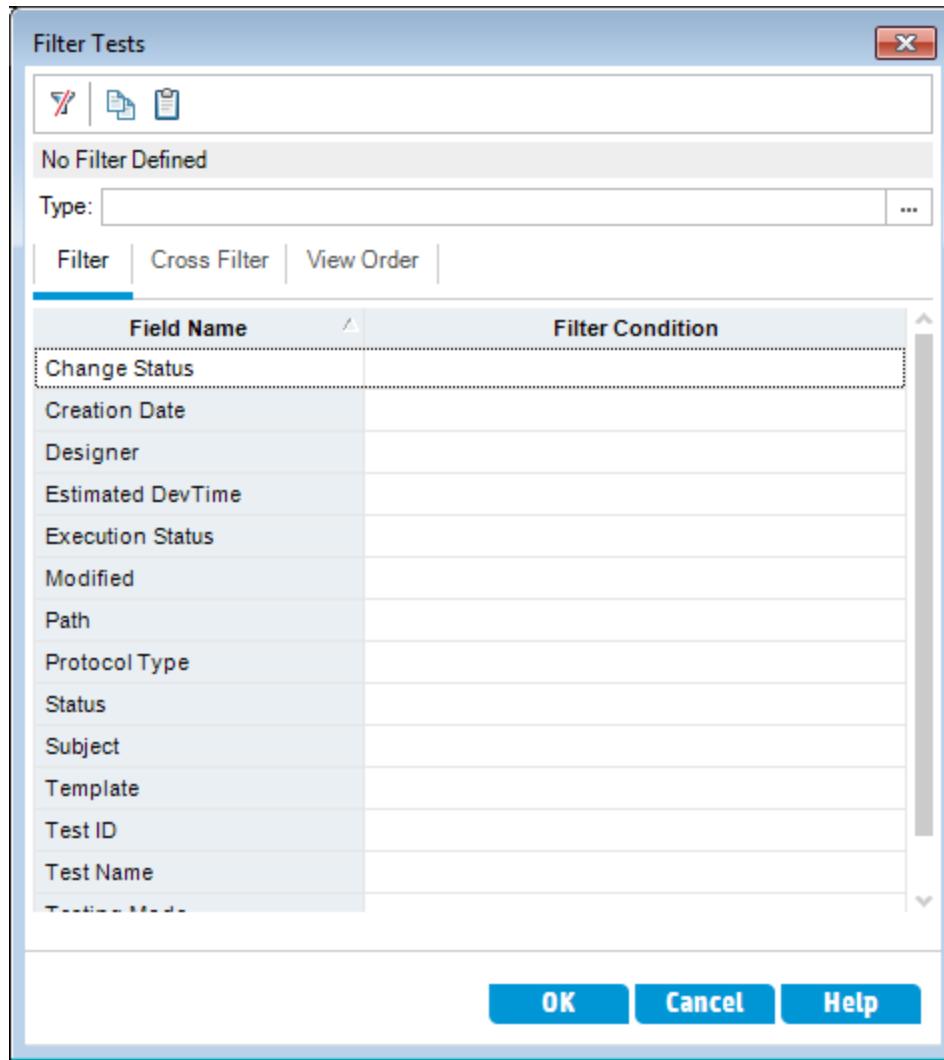
ALM Common Functionality User Interface

This section includes:

• Filter Dialog Box	54
• Select Filter Condition Dialog Box	65
• Users List Dialog Box	67
• Find Dialog Box	68
• Replace Dialog Box	70
• Text Search Pane	72
• History Tab	75
• Send E-mail Dialog Box	76
• Attachments Page	80
• Select Image Dialog Box	82
• Snapshot Dialog Box	84
• Select Columns>Select Fields Dialog Box	85
• Update Selected Dialog Box	87
• Set Default Values Dialog Box	88

Filter Dialog Box

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



To access	Click the appropriate Set Filter/Sort button .
Important information	Tip: You can save filtering and sorting settings as a favorite view and then load it as needed. To save as a favorite view, choose Favorites > Add to Favorites . The Add Favorite dialog box opens. For user interface details, see " Add Favorite Dialog Box " on page 102.

Relevant tasks	"How to Display ALM Data" on page 48
See also	"ALM Common Functionality Overview" on page 48 "Work with Complex Filters - Use-Case Scenario" on page 50

Filter Dialog Box Common Elements

Common user interface elements are described below:

UI Element	Description
	Clear Filter. Clears the filter, sort, and group by settings defined in the Filter dialog box.
	Copy Filter Settings. Copies the filter, sort, and group by settings to the Clipboard.
	Paste Filter Settings. Pastes the filter, sort, and group by settings from the Clipboard to another project. You can also share the settings with another user by pasting them to an email or a text file. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Tip: <ul style="list-style-type: none"> To paste to another project, log in to the project to which you want to paste the settings, display the appropriate module, and open the Filter dialog box. Click the Paste Filter Settings button. To paste to an email or a text file, click the paste button of the target application. </div>
Type	Defines the filter by a selected entity type.
Requirement Type (for requirements)	In the Type box, click the browse button. The Select Filter Condition dialog box opens. Select a type and click OK . The Filter Condition tab displays the relevant field names.
Subtype ID (for components)	<div style="background-color: #e0f2e0; padding: 5px;"> Note: Only available in certain modules. </div>

UI Element	Description
Hide <entity fields>	<p>Hides entity fields. Only fields for which no filter condition is set are hidden.</p> <p>Note: Only available in certain modules.</p> <p>Requirements module > Requirements. You can hide fields related to risk-based quality management.</p> <p>Test Lab module > Execution Grid > Test instances. You can hide Test fields and/or Test Configuration fields.</p>

Filter Tab

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

Important information	<ul style="list-style-type: none"> Requirements Tree: If you are filtering in the requirements tree, parents of filtered entities that do not correspond to the filter are displayed in the tree with the  icon. Test Plan Tree/Test Set Tree: If you are filtering in the test plan or test set tree, folders in the tree that do not correspond to the filter are not displayed in the tree. Empty folders will not be displayed after a filter is applied. Version Control: For details on filtering data based on version control fields, see "How to Filter by Version Control Fields" on page 114. Data-hiding: For additional details when filtering in the Project Customization Data-hiding tab, see the <i>HPE Application Lifecycle Management Administrator Guide</i>.
Relevant tasks	"How to Display ALM Data" on page 48
See also	"ALM Common Functionality Overview" on page 48

User interface elements are described below:

UI Element	Description
Field Name	<p>Lists the fields available for filtering.</p> <p>Tip: To search for a field in the Field Name column, click a box in the Field Name column and type the first character of the field name. ALM highlights the first occurrence.</p> <p>For more details on fields see:</p> <ul style="list-style-type: none">• "Requirements Module Fields" on page 263• HPE ALM Lab Management Guide• "AUT Environments Module Fields" on page 369• "Test Plan Module Fields" on page 406• "Test Resources Module Fields" on page 511• "Test Lab Module Fields" on page 576• "Timeslots Module Fields" on page 723• "Build Verification Module Fields" on page 686• "Defects Module Fields" on page 793• Business Process Testing:<ul style="list-style-type: none">• Business Component Module Fields in the HPE Business Process Testing User Guide.• Test Plan Module Fields for Business Process Testing in the HPE Business Process Testing User Guide.

UI Element	Description
Field Condition	<p>Defines a filter condition for a field.</p> <p>Click the corresponding Filter Condition box. Click the browse button. The Select Filter Condition dialog box opens. For more details, see "Select Filter Condition Dialog Box" on page 65.</p> <p>Alternatively, you can type directly into the Filter Condition box.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note:</p> <ul style="list-style-type: none"> If you enter an item with more than one word, it must be enclosed in quotes. For example, to search for the test Login Boundary, in the Condition box, type the following: "login boundary" If you want to enter only part of the item, use an asterisk (*). For example, to search for all tests with the word Login, in the Condition box, type the following: *login*. To search for all tests that begin with the words Insert New in the Condition box, type the following: "insert new*" To specify an empty field, type the following: "" To specify a non-empty field, type the following: not "" You can use Boolean operators (And, Or, Not) and relational operators in your filter conditions. If you want a logical operator or relational operator to be interpreted literally, you must enclose it in quotes. For example, to search for a test named <MyTest>, type the following: "<MyTest>". </div>

Cross Filter Tab

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

Important information	The existence of the Cross Filter tab and its user interface elements, may change, depending on the ALM module.
Relevant tasks	"How to Display ALM Data" on page 48
See also	"ALM Common Functionality Overview" on page 48

User interface elements are described below:

UI Element (A - Z)	Description
Alerts	<p>An alert can be one of the following:</p> <ul style="list-style-type: none"> • Show defects with alerts. Filters the defects by alerts that have been triggered. This option is only available in the Defects module. • Show models with alerts. Filters the business process model entities by alerts that have been triggered. This option is only available in the Business Models module. • Show requirements with alerts. Filters the requirements by alerts that have been triggered. This option is only available in the Requirements module. • Show test instances with alerts. Filters the test instances by alerts that have been triggered. This option is only available in the Execution Grid of the Test Lab module. • Show tests with alerts. Filters the tests by alerts that have been triggered. This option is only available in the Test Plan module.
Defects	<p>Performs one of the following:</p> <ul style="list-style-type: none"> • Filters the requirements by defects that have been directly or indirectly linked to the requirements. Available in the Requirements module. • Filters the business process model entities by linked defects. Available in the Business Models module. • Filters the tests by defects that have been directly or indirectly linked to the tests. Available in the Test Plan module. • Filters the test sets by defects that have been directly or indirectly linked to the tests. Available in the Test Set Tree of the Test Lab module. <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 56.</p>
Model Activities	<p>Filters models by activities that they include.</p> <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 56.</p>
Model Paths	<p>Filters models by paths that they include.</p> <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 56.</p>

UI Element (A - Z)	Description
Requirements	<p>Performs one of the following:</p> <ul style="list-style-type: none"> Filters the business process model entities by linked requirements. Available in the Business Models module. Filters the tests by covered requirements. Available in the Test Plan module. Filters the test instances by tests that cover selected requirements. Available in the Execution Grid of the Test Lab module. Filters the defects by linked requirements. Available in the Defects module. <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 56.</p> <p>Select Tests with no requirement coverage to filter tests that do not cover any requirements. For example, this can help you identify redundant tests or tests with missing requirement coverage links. This option is only available in the Test Plan module.</p>
Requirements: Trace from	<p>Filters the requirements by traced from requirements. Available in the Requirements module.</p> <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 56.</p>
Requirements: Trace to	<p>Filters the requirements by traced to requirements. Available in the Requirements module.</p> <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 56.</p>
Runs	<p>Performs one of the following:</p> <ul style="list-style-type: none"> Filters the tests by test runs. Available in the Test Plan module. Filters the test instances by test runs. Available in the Execution Grid of the Test Lab module. <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 56.</p>

UI Element (A - Z)	Description
Test Configurations	<p>Performs one of the following:</p> <ul style="list-style-type: none"> Filters the requirements by test configurations. Available in the Requirements module. Filters the tests by test configurations. Available in the Test Plan module. Filters the test sets by test configurations. Available in the Test Lab module. <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 56.</p>
Test Criteria	<p>Filters the requirements by test criteria. Available in the Requirements module.</p> <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 56.</p> <p>Business Process Testing: Functionality related to test criteria is available only for business process tests. For details, see the <i>HPE Business Process Testing User Guide</i>.</p>
Test Instances	<p>Filters the test sets by test instance details. Available in the Test Sets Tree of the Test Lab module.</p> <p>The filter applied to the Test Sets Tree can also be applied to the Execution Grid.</p> <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 56.</p>
Test Sets	<p>Performs one of the following:</p> <ul style="list-style-type: none"> Filters the tests by test sets that contain the tests. Available in the Test Plan module. Filters the test instances by test sets that contain the test instances. Available in the Execution Grid of the Test Lab module. <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 56.</p> <p>Select Tests not in any test set to filter tests that are not part of any test set. For example, this can help you identify tests that have not been run. This option is only available in the Test Plan module.</p>

UI Element (A - Z)	Description
Tests	<p>Performs one of the following:</p> <ul style="list-style-type: none"> Filters the requirements by covered tests. Available in the Requirements module. Filters the business process model entities by linked tests. Available in the Business Models module. Filters the test sets by contained tests. Available in the Test Set Tree of the Test Lab module. Filters the defects by linked tests. Available in the Defects module. <p>Select <no filter defined> to define a filter. The Filter dialog box opens. For more details, see "Filter Tab" on page 56.</p>

View Order Tab

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

Important information	<ul style="list-style-type: none"> The existence of the View Order tab, and its user interface elements, may change depending on the ALM module. The View Order tab considers records beginning with a space or character before considering those beginning with numbers. It then considers uppercase letters and, finally, lowercase letters.
Relevant tasks	"How to Display ALM Data" on page 48
See also	"ALM Common Functionality Overview" on page 48

User interface elements are described below:

UI Element	Description
Available Fields	Displays the names of all the fields you can display.
Sorted Fields	Displays the names of the fields currently assigned a sorting priority.

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

Group Tab

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

Important information	<ul style="list-style-type: none"> The existence of the Group tab, and its user interface elements, may change depending on the ALM module. The Group tab is only available in grid views. You cannot select a group header and perform ALM actions on an entire group. To perform actions on multiple records, use CTRL or SHIFT to select records. If you group records by a field containing multiple values, the information in each value is grouped as its entire value. This value is the category for grouping. For example, a value with English and French will be grouped once as English; French, and not as part of separate English and French categories. For more information on allowing multiple values, see the ALLOW_MULTIPLE_VALUES site configuration parameter. For details, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. The group by list displays only system and user-defined fields associated with a User List or Lookup List type field. For more information on field types, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.
Relevant tasks	"How to Display ALM Data" on page 48
See also	"ALM Common Functionality Overview" on page 48

User interface elements are described below:

UI Element	Description
Group items by	Groups records according to the selected field.
Then by	Groups records by additional fields. <p>Note: If you group records by more than one field, select fields in the hierarchical order that you want them to be displayed. You cannot select a field that has already been selected.</p>

UI Element	Description
	<p>Clears the grouping selection and changes it to none.</p> <p>Note: If you clear a grouping that has child groupings defined on it, the child groupings move up one level and the last group changes to none.</p>

Select Filter Condition Dialog Box

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

To access	<p>Use one of the following:</p> <ul style="list-style-type: none">Open the Filter dialog box. In the Filter tab, click a Filter Condition box. Click the drop-down arrow.In a grid view, click a grid filter box under a column name. Click the browse button.
Important information	<p>In the Requirements module, if you select the Req Parent field, the Select Filter Condition dialog box displays the requirements tree, sorted by requirement name. If you select a requirement from the requirements tree, its full path is displayed in the Condition box. Only requirements which are descendants of this requirement are displayed when you apply the filter.</p>
See also	<ul style="list-style-type: none">"Filter Dialog Box" on page 54"Users List Dialog Box" on page 67

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

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

UI Element	Description
<logical expression pane>	<p>Displays the Boolean and relational operators that are available for defining logical expressions.</p> <ul style="list-style-type: none"> • And. Retrieve all items containing all of the criteria this operator separates. • Or. Retrieve all items containing any of the criteria this operator separates. • Not. Retrieve all items that do not contain the criterion following this operator. • (and). Group criteria when combining Boolean phrases and to show the order in which relationships should be considered. • < Less than. Retrieve items less than the criterion following this operator. • > Greater than. Retrieve items greater than the criterion following this operator. • <= Less than or equal. Retrieve items less than or equal to the criterion following this operator. • >= Greater than or equal. Retrieve items greater than or equal to the criterion following this operator. • = Equal. Retrieve items equal to the criterion following this operator.

Users List Dialog Box

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

To access	In an ALM grid or tree, select a column with a user name value, and click the drop-down arrow. The Users List dialog box opens.
Important information	<ul style="list-style-type: none"> • To sort the Users List in ascending or descending order by user name or full name, click the Name or Full Name column heading. Click the column heading again to reverse the sort order. • When defining a condition for a user, you can specify the current user (select [CurrentUser]), or an entire user group (for example, [Developer]).
See also	"Select Filter Condition Dialog Box" on page 65

User interface elements are described below:

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

Find Dialog Box

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

To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • Select Edit > Find. • In the Execution Grid, select Tests > Find. • In the test sets tree, select Edit > Find Folder/Test Set. <p>Available from the following modules: Requirements, Business Components, Test Plan, Test Resources, Test Lab, and Defects.</p>
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Important information	<ul style="list-style-type: none"> If a filter is applied to a tree or grid, the search is restricted to the records currently displayed. <p>Tip: If available, Text Search  is a more powerful tool that enables you to search for keywords and variations of keywords. For more details, see "Text Search Pane" on page 72.</p>
Relevant tasks	"How to Search and Replace ALM Data and to Update Multiple Records" on page 52
See also	"Replace Dialog Box" on the next page

User interface elements are described below:

UI Element	Description
Find in Folder	<p>Displays the name of the folder selected in the tree.</p> <p>Available from: Component Tree, Test Plan Tree, Test Resource Tree, and Test Sets Tree.</p>
Find in Field	<p>Indicates the field for ALM to search in.</p> <p>Available from: Requirements module, all module grid views.</p>
Value to Find	The field value for which ALM searches. The search is not case sensitive.
Search for	<p>Instructs ALM to search for folders only, individual records only, or both folders and individual records.</p> <p>Available from: Component Tree, Test Plan Tree, Test Resource Tree, and Test Sets Tree.</p>
Exact Match	Finds records with values that exactly match the specified search string.
	<p>Note: Not enabled when the Find in Field element is set to a numeric field, for example Defect ID, or to a text field that contains rich text, for example Description.</p>

UI Element	Description
Use Wildcard	<p>Enables you to use asterisk (*) characters in your search string in order to type only part of the item.</p> <p>Note: Not enabled when the Find in Field element is set to a numeric field, for example Defect ID, or to a text field that contains rich text, for example Description.</p>
Case Sensitive	<p>Instructs ALM to distinguish between uppercase and lowercase characters.</p> <p>Note: Not enabled when the Find in Field element is set to a numeric field, for example Defect ID.</p>
Find	<p>Searches for the specified value in a tree view. If the search is successful, the Search Results dialog box opens and displays a list of possible matches. Select a result from the list and click Go To to highlight the record in the tree. If the search is unsuccessful, an information box opens.</p>
Find Next	<p>Searches for the next record in the grid that matches the specified value. If the search is successful, the matching record is highlighted in the grid. If the search is unsuccessful, an information box opens.</p>
Name to Find	<p>The value in the Name field for which ALM searches. The search is not case sensitive. Results include records where the search string matches the value, or part of the value, of the Name field.</p>

Replace Dialog Box

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

To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • In a grid view, select Edit > Replace. • In the Execution Grid, select Tests > Replace.
Important information	<p>If a filter is applied to a tree or grid, the search and replace is restricted to the records currently displayed.</p>
Relevant tasks	<p>"How to Search and Replace ALM Data and to Update Multiple Records" on page 52</p>

See also	<ul style="list-style-type: none"> • "Find Dialog Box" on page 68 • "Update Selected Dialog Box" on page 87
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User interface elements are described below:

UI Element	Description
Find in Field	<p>Indicates the field for ALM to search.</p> <p>Version Control: If the field is non-versioned (meaning, the field's data are not saved with each version), an asterisk (*) is displayed as a prefix to the field name in the Find in Field list. The checkout operation is bypassed when performing a Replace operation on non-versioned entities. For details on setting a field as a versioned/non-versioned, see the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p>
Value to Find	The field value for which ALM searches.
Replace with	Indicates the replacement field value.
Exact Match	<p>Finds records with values that exactly match the specified search string.</p> <p>Note: Not enabled when the Find in Field element is set to a numeric field, for example Defect ID, or to a text field that contains rich text, for example Description.</p>
Use Wildcard	<p>Enables you to use asterisk (*) characters in your search string in order to type only part of the item.</p> <p>Note: Not enabled when the Find in Field element is set to a numeric field, for example Defect ID, or to a text field that contains rich text, for example Description.</p>
Case Sensitive	Instructs ALM to distinguish between uppercase and lowercase characters.
	Note: Not enabled when the Find in Field element is set to a numeric field, for example Defect ID .
Replace	Replaces the specified field value for the selected record.

UI Element	Description
Find in Field	<p>Indicates the field for ALM to search.</p> <p>Version Control: If the field is non-versioned (meaning, the field's data are not saved with each version), an asterisk (*) is displayed as a prefix to the field name in the Find in Field list. The checkout operation is bypassed when performing a Replace operation on non-versioned entities. For details on setting a field as a versioned/non-versioned, see the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p>
Value to Find	The field value for which ALM searches.
Replace All	Searches for and replaces the specified field value in all records displayed in the grid.
Find Next	Searches for the next record in the grid that matches the specified value. If the search is successful, the matching record is highlighted in the grid. If the search is unsuccessful, an information box opens.

Text Search Pane

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

To access	<p>Select Edit > Text Search. The Text Search pane opens in the lower part window.</p> <p>Available from the following modules: Requirements, Business Components, Test Plan, and Defects.</p>
Important information	<ul style="list-style-type: none"> Text search is only available if it has been enabled for the project. Contact your ALM site administrator if the search option is unavailable. Searchable text fields are predefined in Project Customization. For more details, see the <i>HPE Application Lifecycle Management Administrator Guide</i>. Version Control: ALM searches only checked in versions.
Relevant tasks	"How to Search and Replace ALM Data and to Update Multiple Records" on page 52
See also	"Find Dialog Box" on page 68

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

UI Element	Description
Search for	<p>Indicates the keywords you want to find.</p> <p>Syntax exceptions:</p> <ul style="list-style-type: none"> Text search ignores the following: articles (a, an, the); coordinate conjunctions (and, but, for, nor, or); boolean operators (and, or, not, if, or, then). The search is not case sensitive. <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note:</p> <ul style="list-style-type: none"> When you enter a keyword, ALM searches the predefined fields for the keyword or variations of the keyword. For example, if you type log, the search will find fields containing log, logs, logging, and logged. The search will not find login or logical because these are not variations of the word. If you enter more than one keyword, the results will include all records that contain at least one of the keywords. </div>
In	<p>Enables searching for text in Tests or Design Steps.</p> <p>Available from: Test Plan module.</p>
Restrict to current filter	<p>Indicates whether to search all records in the module or restrict the search to the filtered records.</p>
Search	<p>Performs the text search on the predefined fields and displays the search results in order of relevance.</p>
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine column appearance and order. For more details, see "Select Columns/Select Fields Dialog Box" on page 85.</p>
	<p>Searchable Fields. Displays the list of predefined search fields set in Project Customization.</p>
	<p>Details. Opens the corresponding Details dialog box, enabling you to view and update details of the selected entity.</p>

UI Element	Description
	<p>Go to Entity. Select a record and click the button to display record details.</p> <p>Tip: Alternatively, select a record and click the <record ID> or <record Name> link.</p>
	<p>Load Selected Results. Loads the selected results to the grid or tree and clears the current filter.</p> <p>Tip: Press the CTRL key to select multiple results.</p>
<module fields>	<p>Requirements. For details on the fields available in the Requirements module, see "Requirements Module Fields" on page 263.</p> <p>Test Plan. For details on the fields available in the Test Plan module, see "Test Plan Module Fields" on page 406.</p> <p>Defects. For details on the fields available in the Defects module, see "Defects Module Fields" on page 793.</p> <p>Business Process Testing: For details on the fields available in the Business Components module, see Business Component Module Details Fields in the <i>HPE Business Process Testing User Guide</i>.</p>
Item	Number of the item selected in the search results and the total number of items found.

History Tab

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

The screenshot shows the History tab interface. At the top, there are tabs: Description, Comments, Rich Text, Attachments, and History (which is selected). Below these are sub-tabs: Versions, Baselines, and Audit Log (with Audit Log selected). A search field labeled 'Field:' with a dropdown menu showing '<All>' is followed by two buttons: 'Expand All' and 'Collapse All'. The main area is a table with columns: Field Name, Old Value, and New Value. It lists several changes, starting with Change #7 and going back to Change #1. Each row shows a field name like 'Direct Cover Status' changing from 'Blocked' to 'Failed'.

	Field Name	Old Value	New Value
▼	Change #7: Date: 9/17/2013 12:44:29 PM Changer: qaeng1		
	Direct Cover Status	Blocked	Failed
▶	Change #6: Date: 9/17/2013 12:43:51 PM Changer: qaeng1		
▶	Change #5: Date: 8/15/2012 12:00:00 AM Changer: alex_alm		
▶	Change #4: Date: 7/6/2012 12:00:00 AM Changer: UNKNOWN_USER		
▶	Change #3: Date: 2/6/2011 12:00:00 AM Changer: shelly_qc		
▶	Change #2: Date: 1/30/2011 12:00:00 AM Changer: alex_qc		
▶	Change #1: Date: 1/23/2011 12:00:00 AM Changer: alex_alm		

To access	Click the History tab or button.
Important information	For details on preserving the history of changes made to a field, see the <i>HPE Application Lifecycle Management Administrator Guide</i> .
Relevant tasks	"How to Display ALM Data" on page 48

Baselines Tab

This tab displays previous versions of entities stored in a particular baseline. For more details, see ["Baselines Tab" on page 219](#).

Versions Tab

Version Control: This tab is displayed when version control is enabled for a project. For details, see ["Versions Tab" on page 123](#).

Audit Log Tab

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

Note: In the Requirements module, the history of the **Target Release** and **Target Cycle**

fields for a requirement is not recorded.

User interface elements are described below:

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

Send E-mail Dialog Box

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

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

User interface elements are described below:

UI Element	Description
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.

UI Element	Description
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Custom. Opens the Select Fields dialog box, enabling you to determine which fields to display in the email. For more details, see " Select Columns>Select Fields Dialog Box " on page 85.
To/CC	Indicates a valid email address or user name. Alternatively, click the To button or CC button to select users. The Select Recipients dialog box opens. Select the users or user groups to which you want to send the email.
Subject	<p>The subject for the email.</p> <p>Default value: The domain, project, entity ID (if applicable), and entity name are displayed.</p>
Send me a copy	Enables you to send yourself a copy of the email.
Add to comments	Adds a comment to whom the entity was sent in the Comments field of the entity. Text added in the " Additional Comments " on the next page section is also included.
Item	The entity name.

UI Element	Description
Include	<p>Enables you to include the following:</p> <ul style="list-style-type: none"> • Activities. Only available from the Business Models module. • Attachments. • Design Steps. Only available from the Test Plan module. • History. • Linkage. Only available from the Business Models module. • Paths. Only available from the Business Models module. • Snapshot. Only available from the Business Components module. • Test Coverage. Only available from the Requirements module. • Traced Requirements. Only available from the Requirements module. • Run Steps. Only available from: <ul style="list-style-type: none"> • The Test Lab module. • If the run is linked to a defect, the Linked Entities tab in the Defects module. • Runs. Only available from: <ul style="list-style-type: none"> • The Test Lab module for test instances. • If the test instance is linked to a defect, the Linked Entities tab in the Defects module. <div style="background-color: #e0f2e0; padding: 10px; margin-top: 10px;"> <p>Note:</p> <ul style="list-style-type: none"> • As soon as one of the above items is selected for inclusion, Parameters are also included in the email, provided that parameters exist for the entity and the parameters have values. • The Include option is not available from the Test Resources module. </div>
Additional Comments	<p>Enables you to add comments about the email.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Send	<p>Sends the email to the specified distribution list.</p>

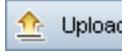
Attachments Page

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

The screenshot shows the ALM Attachments Page. At the top, there is a toolbar with various icons for attaching files, opening, uploading, saving, deleting, and refreshing. Below the toolbar is a table header with columns for Name, Size, and Modified. A single file, 'filelist.xml', is listed in the table. The file has a size of 1 KB and was modified on 10/7/2013 at 4:55:22 PM. Below the table is a 'Description:' field containing rich text editing tools (Bold, Italic, Underline, etc.) and a 'Tip' section with instructions for adding attachments by dragging and dropping.

To access	Use one of the following: <ul style="list-style-type: none">Click the Attachments button  in a toolbar.Click the Attachments button in a dialog box sidebar.Click the Attachments tab.
Important information	When you add an attachment, ALM adds the attachment icon  to the record. You can click the icon to see a list of attachments. Tip: Add an attachment by dragging and dropping the file from Windows Explorer onto the Attachments page.
Relevant tasks	"How to Modify Attachments" on page 52

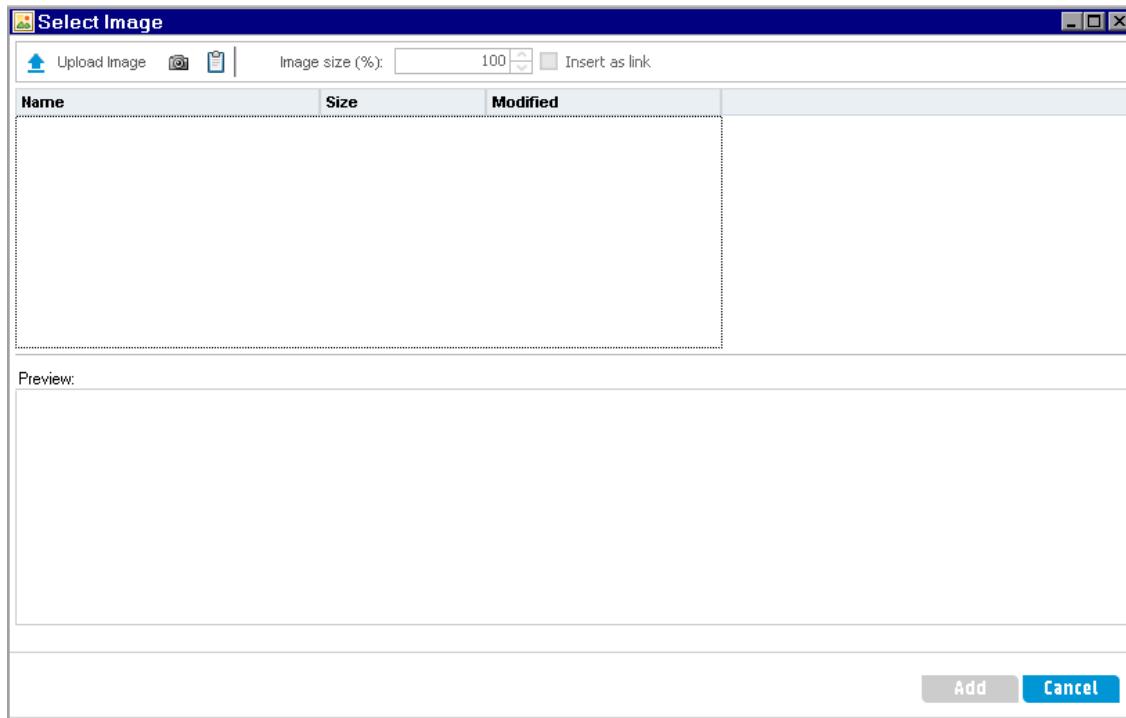
User interface elements are described below:

UI Element	Description
	<p>File. Opens the Open dialog box, enabling you to add a file attachment to an ALM record.</p> <p>Tip: To add an email as an attachment to a record, save the email on your desktop and then use the Open dialog box to add it.</p>
	<p>URL. Opens the Attach Uniform Resource Locator (URL) dialog box, enabling you to add a URL attachment to an ALM record. This can be any valid URL scheme such as HTTP, FTP, Gopher, News, Mailto, or File.</p>
	<p>Snapshot. Opens the Snapshot dialog box, enabling you to add an image of your application to an ALM record. For more details, see ""Snapshot Dialog Box" on page 84.</p> <p>Snapshot attachments are assigned a .jpg extension.</p>
	<p>System Info. Opens the System Information dialog box, enabling you to attach system information about your machine to an ALM record.</p> <p>System information attachments are assigned a .tsi extension.</p>
	<p>Clipboard. Attaches the Clipboard content to an ALM record.</p> <p>Copy a text string or an image to the Clipboard and click the Clipboard button. A text string is assigned a .txt extension. An image is assigned a .jpg extension.</p>
	<p>Download and Open. Opens the selected attachment by downloading it to a local directory on your client machine and opening it in the associated application. You can view or modify an open attachment.</p> <p>The attachment is saved on the client machine, under the following directory: %Temp%\TD_80\<ALM_PATH\<Project_id>\Attach\BUG\</p>
	<p>Upload Selected. Uploads the modified attachment to your ALM project. For more details, see ""How to Modify Attachments" on page 52.</p>
	<p>Save Attachment. Saves the copy of a selected attachment to your client machine.</p> <p>Note: Not available when adding attachments to a new entity.</p>

UI Element	Description
 Delete	Delete Selected. Deletes the selected attachment. To select more than one attachment, use the CTRL key.
	Refresh All. Refreshes the list of attachments on the page.
Name	The attachment name. An icon for the application associated with the attachment appears next to the name. To rename the attachment, right-click and select Rename .
Size	The size of the attachment.
Modified	The date that the attachment was last modified.
Description	Describes the attachment. Click in the text box to display a toolbar for formatting and spell checking the text.

Select Image Dialog Box

This dialog box enables you to add images to ALM records. You can attach an image, a snapshot of your application, or items from the Clipboard.



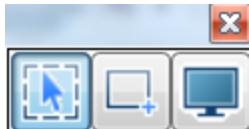
To access	Click the Attachments button  in a toolbar.
Important information	The Attachments button  is found in the toolbar for any memo field of an entity that support attachments, such as the Description and Comments sections of a defect.

User interface elements are described below:

UI Element	Description
 Upload Image	Uploads a selected image to your ALM record. Note: .ico and .tif image formats are not supported.
	Snapshot. Opens the Snapshot dialog box, enabling you to add an image to an ALM record. You can capture a selected area, a selected window, or the entire screen. Snapshot images are assigned a .png extension.
	Clipboard. Attaches the Clipboard content to your ALM record. Copy an image to the Clipboard and click the Clipboard button. An image is assigned a .png extension.
Image Size (%)	Increase or decrease the image size.
Insert as Link	Select this to make the image a link in your ALM record.
Name	The image name.
Size	The size of the image. Note: Your site administrator can limit the image size.
Modified	The date that the image was last modified.
Preview	Shows the image. If you select Insert as Link , the preview shows the link, not the image.

Snapshot Dialog Box

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



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

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

UI Element	Description
	Capture the current window.
	Capture an area that you define.
	Capture the entire screen.

After capturing the image, the annotation window opens. Use the annotation tools to edit the image or to capture a new image.



Select Columns/Select Fields Dialog Box

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

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

To access	<p>Select Columns dialog box:</p> <p>Use one of the following:</p> <ul style="list-style-type: none">• Select View > Select Columns.• In the Execution Grid, select Tests > Select Columns. <p>Select Fields dialog box:</p> <p>In the Send E-mail dialog box, click the Custom button.</p>
Relevant tasks	"How to Display ALM Data" on page 48

User interface elements are described below:

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

UI Element	Description
Type	<p>Displays the test fields related to a selected test type in the Available Columns list.</p> <p>Note: Available only in the Test Plan and Test Lab modules.</p>
Requirement Type	<p>Displays the requirement fields related to a selected requirement type in the Available Columns list.</p> <p>Note: Available only in the Requirements module.</p>
	<p>Sets the order in which column names appear in Visible Columns.</p> <p>Tip: You can also drag the column names up or down.</p>

Update Selected Dialog Box

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

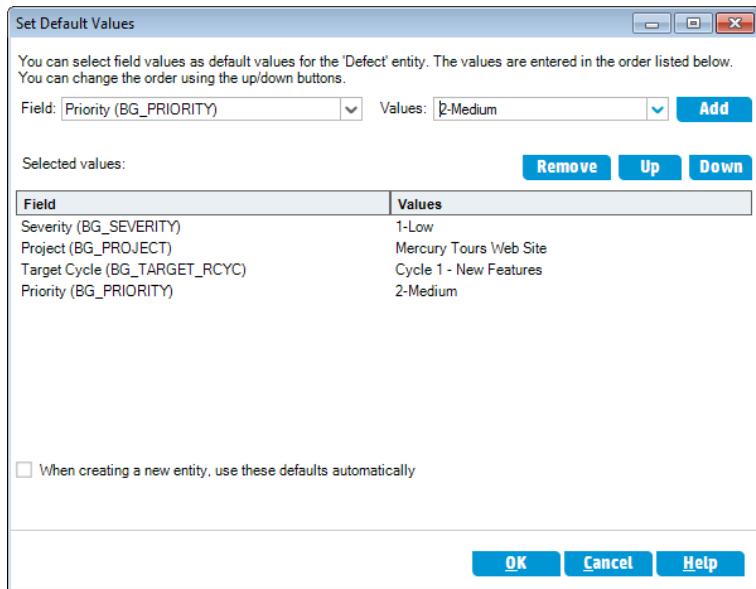
To access	<p>Right-click selected multiple records and select Update Selected.</p> <p>Available from the following modules: Requirements, Test Plan (Test Grid only), Test Lab (Execution Grid tab), Build Verification, and Defects.</p>
Relevant tasks	<p>"How to Search and Replace ALM Data and to Update Multiple Records" on page 52</p>
See also	<p>"Replace Dialog Box" on page 70</p>

User interface elements are described below:

UI Element	Description
Update Field	<p>Identifies the field to be updated.</p> <p>Version Control: If the field is non-versioned (meaning, the field's data are not saved with each version), an asterisk (*) is displayed as a prefix to the field name in the Update Field list. The checkout operation is bypassed when performing an Updated Selected operation on non-versioned entities. For details on setting a field as a versioned/non-versioned, see the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p>
Value	The replacement value for the selected field.
Update	Indicates the number of values that were updated, and the number of instances where the values were not updated.

Set Default Values Dialog Box

This dialog box enables you to set default values for certain fields when defining new tests, test configurations, and defects.



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

User interface elements are described below:

UI Element	Description
Field	<p>Identifies the field for which to set a default value.</p> <p>Click the down arrow to see a drop-down list of the fields for which you can specify a default value.</p> <div style="background-color: #e0f2f1; padding: 10px; border: 1px solid #d0e0e3;"> <p>Tip: ALM does not support the setting of default values for all fields. Additionally, workflow rules based on events (such as fieldChange or fieldCanChange) can be defined to set certain fields to read-only or invisible. Fields whose default values cannot be set, read-only fields, and invisible fields are not displayed in the drop-down list.</p> </div>

UI Element	Description
Value	<p>The default value for the selected field.</p> <p>For memo fields, date fields, and fields with user-defined lists, click the down arrow to open up a window that enables you to type text or select values from a list.</p>
Add	<p>Adds the Field and Value values to the grid.</p> <p>Tip: To modify the default value for a field that was already added to the list, add it again. You are prompted to override the original one.</p>
Remove	Removes the selected fields and their values from the grid.
Up / Down	<p>Moves the selected fields and their values up or down in the grid.</p> <p>Note: Reordering the fields in the list helps ensure that the list of possible default values displayed for each field are available and viable according to defined workflow rules.</p>
Selected values	<p>Grid listing fields whose default values are set.</p> <p>Reordering the fields in the grid helps ensure that the list of possible default values displayed for each field are available and viable according to defined workflow rules. For details, see "Important Information" on the previous page.</p>
When creating a new entity, use these defaults automatically	<p>If checked, indicates that when you create a new entity, the default values for that entity's fields are automatically filled in.</p> <p>If unchecked, default values are not filled in automatically. To use default values, click the Use Default Values button when creating the entity. For user interface details, see "New Test Dialog Box" on page 412, "New Test Configuration/Test Configuration Details Dialog Box" on page 482, or "New Defect Dialog Box" on page 796.</p>

Chapter 3: Alerts and Flags

This chapter includes:

• Alerts Overview	92
• Follow Up Flags Overview	93
• How to Use Alerts	94
• Alerts and Flags User Interface	95

Alerts Overview

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

- You can associate a test in the test plan tree with a requirement. This is accomplished by creating **requirements coverage** in the Test Plan module, or by creating **tests coverage** in the Requirements module. For more information, see "[Requirement and Test Coverage Overview](#)" on page 418.
- You can associate a test instance with a defect. This is performed by creating **Linked Defects** in the Test Plan module, or by adding a defect during a manual test run. For more information, see "[Defect Linkage](#)" on page 780.
- You can create **traceability links** between requirements in the Requirements module. For more information, see "[Requirements Traceability Overview](#)" on page 280.

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

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

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

Version Control: ALM alerts associated entities only when a new version is checked in. The alert states that the version status has changed to **Checked In**. It does not indicate which fields have been modified. You can then compare the new version with the previous version. For more information on comparing versions, see "[Versions Tab](#)" on page 123.

Note: While the entity is checked out, changes made to non-versioned fields continue to generate regular alerts, indicating which field was changed. For more information on non-versioned fields, see "[Non-versioned Fields](#)" on page 114.

Your ALM project administrator can activate four alert rules:

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

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

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

Follow Up Flags Overview

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

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

A follow up flag is specific to the user name with which you logged on. You can open the follow up flag at any time to view or modify the details.

For user interface details, see "[Flag For Follow Up Dialog Box](#)" on page 97.

How to Use Alerts

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

To learn more about alerts, see "[Alerts Overview](#)" on page 92.

This task includes the following steps:

- "Prerequisites" below
- "View alerts" below
- "Clear alerts" below

1. Prerequisites

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

2. View alerts

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

- **View Alerts for a Record.** In a tree or grid view, click the **Alert** flag  in the Alerts column. If this column is not visible, select **View > Indicator Columns**. For user interface details on the Alerts dialog box, see "[Alerts Dialog Box](#)" on page 96.
- **View Alerts for a Module.** To view a list of all alerts for a selected module, in the **Filter** dialog box > **Cross Filter** tab, select the **Show <entity> with alerts** option. For user interface details on the Filter dialog box, see "[Filter Dialog Box](#)" on page 54.

3. Clear alerts

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

- **Clear Alerts for a Record.** For a selected record, you can clear an individual alert or all alerts in the Alerts dialog box.
 - To clear a single alert, click **Clear Alert**  for the alert.
 - To clear all alerts for the record, click the **Clear All** button.For user interface details on the Alerts dialog box, see "[Alerts Dialog Box](#)" on page 96.
- **Clear Alerts for a Module.** You can clear all the alerts associated with all the records in an ALM module.
 - In the Requirement, Test Plan, or Defects module, select **Edit > Clear Alerts**.
 - In the Test Lab module, select **Tests > Clear Alerts**.

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

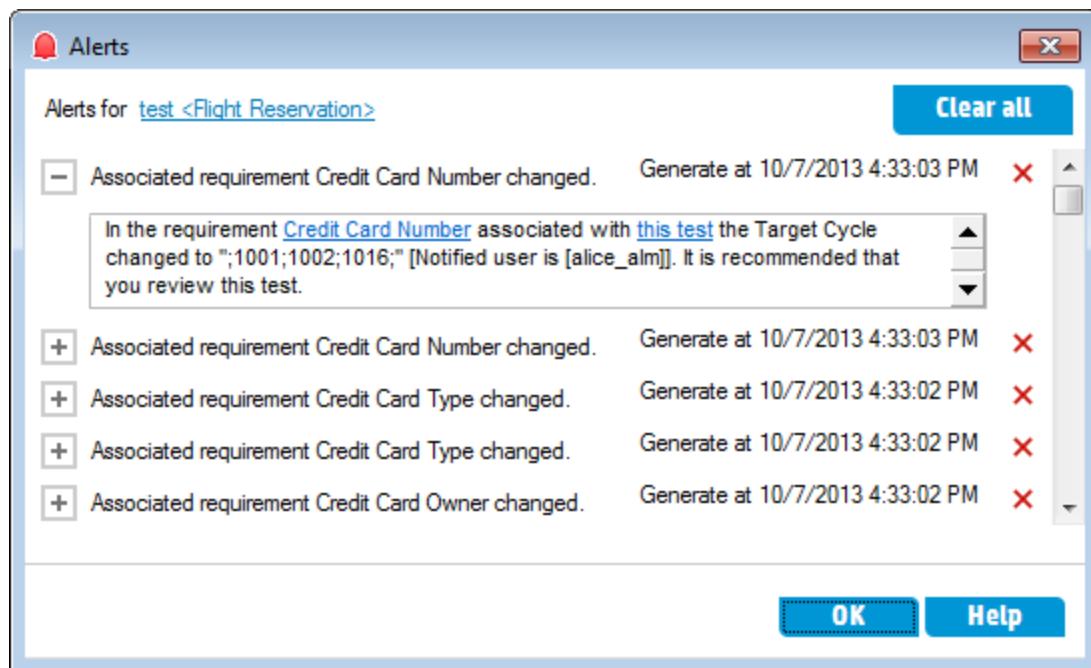
Alerts and Flags User Interface

This section includes:

- [Alerts Dialog Box](#) 96
- [Flag For Follow Up Dialog Box](#) 97

Alerts Dialog Box

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



To access	Use one of the following: <ul style="list-style-type: none"> In a tree or grid view, click the Alerts flag  in the Alerts column. If this column is not visible, select View > Indicator Columns. Right-click the entity and select Alerts. Available for: <ul style="list-style-type: none"> Requirements Tests in the Test Plan module Test instances in the Execution Grid Defects
Important information	You can only clear alerts that are assigned to you, or that are not assigned to any user. The user to which an alert is assigned is the user that is sent email notification when the alert is triggered. For more details, see "Alerts Overview" on page 92.
Relevant tasks	"How to Use Alerts" on page 94

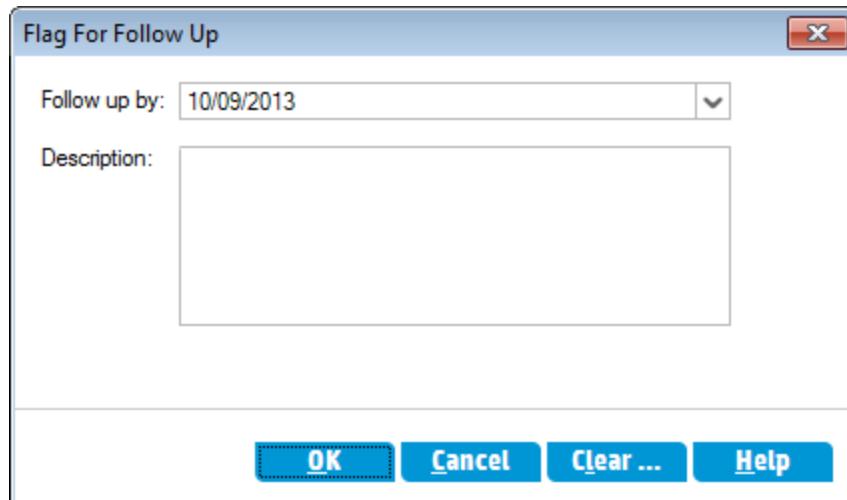
See also["Alerts Overview" on page 92](#)

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

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

Flag For Follow Up Dialog Box

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



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

User interface elements are described below:

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

Chapter 4: Favorite Views

This chapter includes:

- [Favorite Views Overview](#) 100
- [How to Use Favorite Views](#) 100
- [Favorite Views User Interface](#) 101

Favorite Views Overview

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

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

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

Consider the following when working with favorite views:

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

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

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

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

How to Use Favorite Views

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

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

To watch a movie on how to use favorite views, refer to this section in the ALM Online Help.

This task includes the following steps:

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

Add a Favorite View

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

1. Determine the way an ALM window looks by selecting certain settings for it. For example, this can include applying a filter, or sorting fields in a grid. For task details on displaying ALM data, see "[How to Display ALM Data](#)" on page 48.
2. Select **Favorites > Add to Favorites**. For user interface details on the Add Favorite dialog box, see "[Add Favorite Dialog Box](#)" on the next page.

Load a Favorite View

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

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

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

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

Update a Favorite View

You can update the settings of an existing favorite view.

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

Organize Favorite Views

Organize your favorite views in private or public folders, or delete views no longer in use. From the menu bar, select **Favorites > Organize Favorites**. For user interface details on the Organize Favorites dialog box, see "[Organize Favorites Dialog Box](#)" on page 103.

Favorite Views User Interface

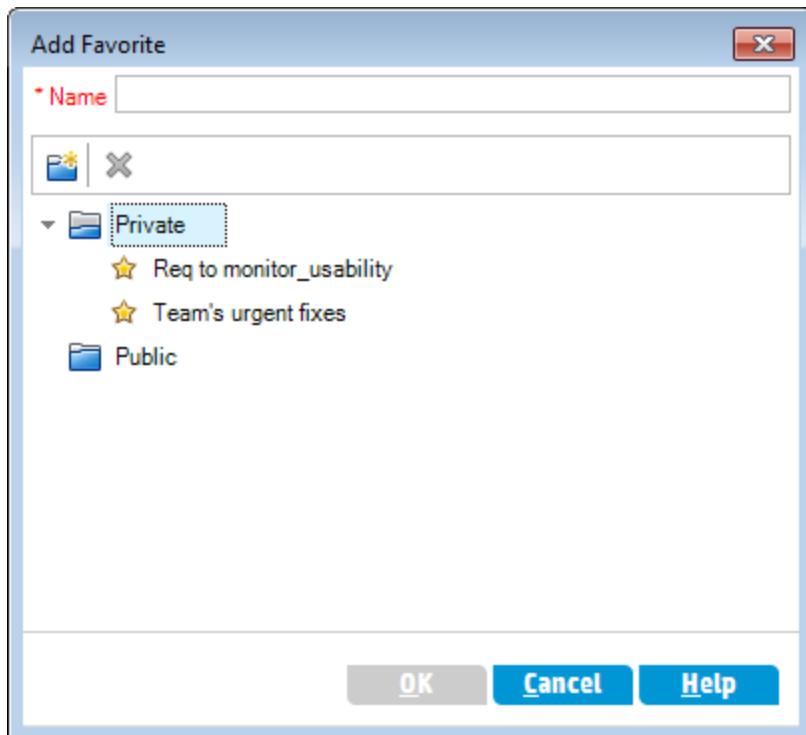
This section includes:

- [Add Favorite Dialog Box](#) 102

- Organize Favorites Dialog Box 103

Add Favorite Dialog Box

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



To access	From a menu bar, select Favorites > Add to Favorites . Available from the following modules: Requirements, Test Plan, Test Lab, and Defects
Relevant tasks	"How to Use Favorite Views" on page 100
See also	"Favorite Views Overview" on page 100

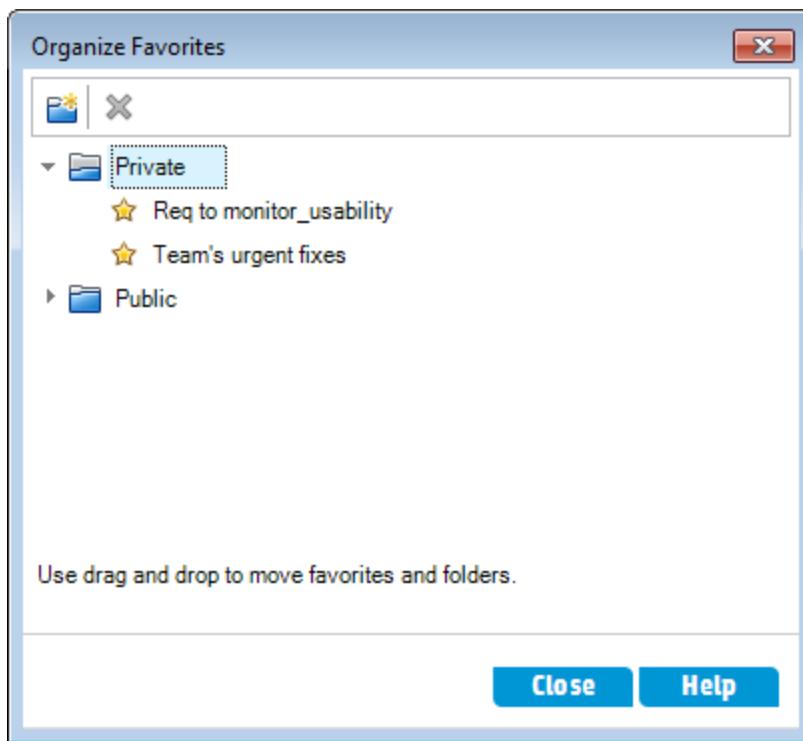
User interface elements are described below:

UI Element	Description
Name	The name of the favorite view.

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

Organize Favorites Dialog Box

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



To access

From a menu bar, select **Favorites > Organize Favorites**.

Available from the following modules: Requirements, Test Plan, Test Lab, and Defects

Important information	Drag and drop favorite views to move them between folders. Note: You cannot drag and drop favorite views between private and public folders.
Relevant tasks	"How to Use Favorite Views" on page 100
See also	"Favorite Views Overview" on page 100

User interface elements are described below:

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

Chapter 5: Pinned Items

This chapter includes:

- [Pinned Items Overview](#) 106
- [Pinned Items Panel](#) 106

Pinned Items Overview

You can pin a requirement, test plan, or defect to enable you to jump to that item quickly, no matter which module you are in.

Example: Assume you are a program manager and want to monitor the implementation of a specific requirement. By pinning it, you can quickly access it from any module in ALM, without having to open the Requirements Module and search for it.

ALM lets you pin up to 10 items for any project.

When an item has been pinned:

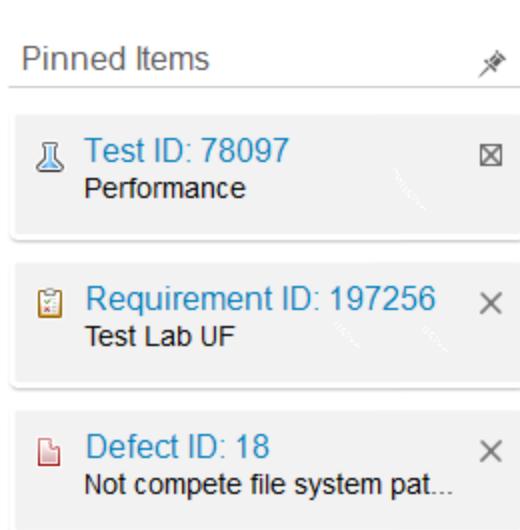
- It appears in the **Pinned Items** panel.
- The **Pin/Unpin** button  in the toolbar appears "pressed" when the item is selected in the grid or tree view.

Note: A pinned item is specific to the user name with which you logged on.

For user interface details, see "[Pinned Items Panel](#)" below.

Pinned Items Panel

This panel enables you to view pinned ALM items.



The screenshot shows the 'Pinned Items' panel with a vertical sidebar labeled 'Pinned Items'. The main area displays three pinned items in cards:

- Test ID: 78097** (Performance) - icon: flask
- Requirement ID: 197256** (Test Lab UF) - icon: clipboard
- Defect ID: 18** (Not compete file system pat...) - icon: folder

Each card has a close button (X) in the top right corner.

To access	Hover over Pinned Items on the right side of the ALM window.
Important information	The pinned items are visible, irrespective of the module you are in. For example, you can see defects, even when you are in the Tests module.
See also	"Pinned Items Overview" on the previous page

User interface elements are described below:

UI Element	Description
Pinned Items	Contains pinned items. You can jump to an item by clicking the link to it.
	Enables you to pin the panel.

Chapter 6: Version Control

This chapter includes:

• Version Control Overview	110
• How to Use Version Control	111
• How to Filter by Version Control Fields	114
• Non-versioned Fields	114
• Moving, Copying, and Deleting Checked-out Entities	115
• Version Control User Interface	116

Version Control Overview

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

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

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

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

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

Baselines provide a snapshot of a set of entities and the relationships between them. For more details, see "[Baselines Overview](#)" on page 194.

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

For details on ALM fields not stored under version control, see "[Non-versioned Fields](#)" on page 114.

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

Example: The following examples demonstrate when you can use version control.

- **Monitor changes and compare versions.**

Kelly, the product manager, finds that product development is being implemented differently than she had expected. She reviews the requirements for the product and

discovers that some have changed. She compares the current requirements with the versions of the requirements that were agreed upon at the start of the release.

- **Restore an earlier version.**

Michael, a QA tester, receives a new build of the banking application currently being developed. He starts to update the relevant tests to meet the needs of the new release. Then the development team sends out notification of a significant problem with the build. Development rolls back to the previous build. Michael decides to check out and revert back to the versions of tests that were used for the previous build and continue testing from there.

- **Lock entities for editing.**

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

How to Use Version Control

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

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

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

This task includes the following steps:

- "[Prerequisites](#)" below
- "[Check out an entity](#)" on the next page
- "[Undo a checkout - optional](#)" on the next page
- "[Check in an entity](#)" on the next page
- "[View all checked out entities - optional](#)" on the next page
- "[Access version history](#)" on page 113
- "[Copy, move, or delete checked-out entities](#)" on page 113

1. Prerequisites

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

2. Check out an entity

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

Use one of the following:

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

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

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

For user interface details on the Check Out dialog box, see "[Check Out Dialog Box](#)" on page 120.

3. Undo a checkout - optional

When an entity is checked out, you can undo the checkout to cancel your changes. Right-click the entity and select **Versions > Undo Check Out**. For more details on the Undo Check Out command, see "[Versions Menu and Buttons](#)" on page 117.

4. Check in an entity

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

Use one of the following:

- **Check in a single entity.** Right-click the entity and select **Versions > Check In**.
- **Check in multiple entities.** Select the entities. On the module toolbar, click the **Check In**  button.

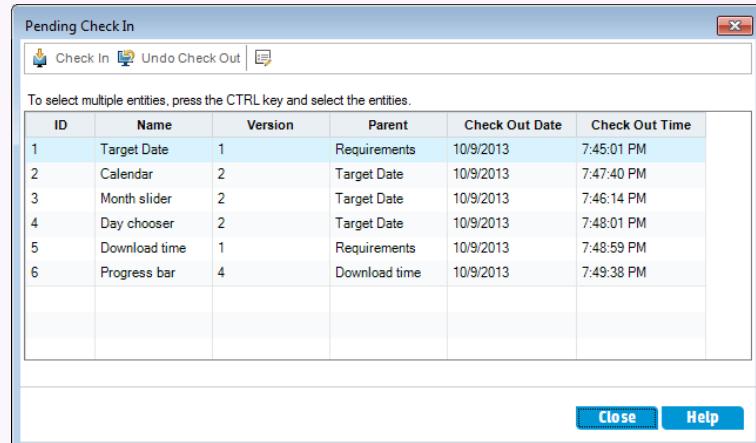
For user interface details on the Check In dialog box, see "[Check In Dialog Box](#)" on page 120.

5. View all checked out entities - optional

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

Click the **Check In** button  in the top right corner of the ALM window. For user interface details on the Pending Check In dialog box, see "[Pending Check In Dialog Box](#)" on page 121.

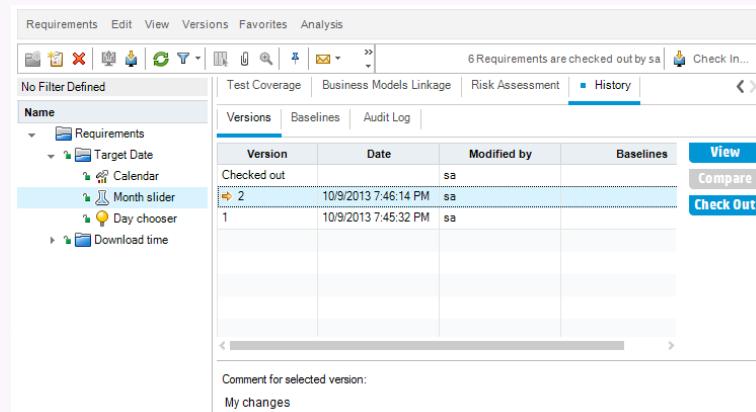
Example: Example



6. Access version history

To view, compare, and check out previous versions of an entity, select the entity and click the **History** tab > **Versions** tab. For user interface details, see "[Versions Tab](#)" on page 123.

Example: Example



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

Some restrictions apply when moving, copying, and deleting checked-out entities. For details, see "[Moving, Copying, and Deleting Checked-out Entities](#)" on page 115.

How to Filter by Version Control Fields

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

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

For details on defining filters, see "[Filter Dialog Box](#)" on page 54.

Non-versioned Fields

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

Entity	Fields
Requirements	<ul style="list-style-type: none">ReviewedDirect Cover StatusTarget ReleaseTarget CycleAll RBQM fields.
Tests	Execution Status

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

Action	Result
Undo a checkout	Any changes you made to non-versioned fields while the entity was checked out are not cancelled and the new values remain.

Action	Result
Checkout a previous version	The value of a non-versioned field is the value in the currently checked in version.
View and compare previous versions	Non-versioned fields are displayed with the value Non-versioned Field . When viewing and comparing previous versions, pages specific to data for which version control data is not stored, such as the Linked Entities page or the Requirement Traceability page, are not displayed.

Moving, Copying, and Deleting Checked-out Entities

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

For a single entity

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

For a folder that contains several entities

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

For several entities (multi-select)

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

Version Control User Interface

This section includes:

• Versions Menu and Buttons	117
• Version Control Fields	118
• Check In Dialog Box	120
• Check Out Dialog Box	120
• Pending Check In Dialog Box	121
• Versions Tab	123

Versions Menu and Buttons

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

To access	Available from the menu bar or toolbar of the following modules: Requirements, Business Models, Business Components, Test Plan, and Test Resources.
Relevant tasks	"How to Use Version Control" on page 111
See also	"Version Control Overview" on page 110

User interface elements are described below:

UI Element	Description
Check In 	Opens the Check In dialog box, enabling you to check in selected entities. For details, see "Check In Dialog Box" on page 120 .
Check Out 	Opens the Check Out dialog box, enabling you to check out selected entities. For details, see "Check Out Dialog Box" on page 120 .
Pending Check In	Opens the Pending Check In dialog box, enabling you to view a list of all entities in the current module that you have checked out. For details, see "Pending Check In Dialog Box" on page 121 .
Undo Check Out	Cancels the check out of selected entities and discards changes. To undo checkouts for entities checked out by other users, you must have the appropriate user permissions. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i> . When you undo a checkout, any changes you made to non-versioned fields while the entity was checked out are not canceled and the new values remain. For details, see "Non-versioned Fields" on page 114 .
Warn Before Check Out	Instructs ALM to display a confirmation message before automatically checking out an entity. For details, see "Check Out Dialog Box" on page 120 .

Version Control Fields

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

To access	On the ALM sidebar, select Requirements , Business Models , Business Components , Test Plan , or Test Resources .
Relevant tasks	"How to Use Version Control" on page 111
See also	"Version Control Overview" on page 110

Requirements Module

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

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

Business Models Module

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

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

Business Components Module

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

enabled:

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

Test Plan Module

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

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

Test Resources Module

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

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

Check In Dialog Box

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

To access	Right-click an entity and select Versions > Check In . Available from the following modules: Requirements, Business Models, Business Components, Test Plan, and Test Resources.
Important information	The version number assigned to a new entity is 1. When an entity is checked in, the version number is increased by one.
Relevant tasks	"How to Use Version Control" on page 111
See also	"Version Control Overview" on page 110

User interface elements are described below:

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

Check Out Dialog Box

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

To access	Use one of the following: <ul style="list-style-type: none">Select an entity and start to edit. The Check Out dialog box opens automatically.Right-click an entity and select Versions > Check Out.Select an entity and click the History tab > Versions tab. Select a version and click Check Out. Available from the following modules: Requirements, Business Models, Business Components, Test Plan, and Test Resources.
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Important information	Checked out entities are indicated by the following icons: <ul style="list-style-type: none">An entity checked out by the current user is displayed with an open green lock icon .An entity checked out by another user is displayed with a red lock icon .
Relevant tasks	"How to Use Version Control" on page 111
See also	"Version Control Overview" on page 110

User interface elements are described below:

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

Pending Check In Dialog Box

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

To access	Use one of the following: <ul style="list-style-type: none">Click the Check In button in the top right corner of the ALM window.From a module menu bar, select Versions > Pending Check In. Available from the following modules: Requirements, Business Models, Business Components, Test Plan, and Test Resources.
Relevant tasks	"How to Use Version Control" on page 111
See also	"Version Control Overview" on page 110

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

UI Element (A - Z)	Description
 Check In	Opens the Check In dialog box, enabling you to check in selected entities. For details, see " "Check In Dialog Box" on page 120 .
 Undo Check Out	Cancels the check out of selected entities and discards changes. When you undo a checkout, any changes you made to non-versioned fields while the entity was checked out are not cancelled and the new values remain. For details, see " "Non-versioned Fields" on page 114 .
	Details. Opens a Details dialog box, displaying details for the selected entity. Click a button on the sidebar to view additional details, such as Design Steps, Test Script and Attachments. The buttons available depend on the data available for the particular entity type.
<grid>	Displays a list of entities that you have checked out in the current module. You can perform the following actions on the grid: <ul style="list-style-type: none">• To select multiple entities, press the CTRL key and select the entities.• To select all entities, right-click and select Select All.• To rearrange columns, drag the column headers.
Check Out Date	The date the version was checked out.
Check Out Time	The time the version was checked out.
ID	The unique numeric ID for the entity, assigned automatically by ALM.
Name	The name of the checked out entity.
Parent	The name of the entity one hierarchical level above the selected entity in the tree structure.
Version	The version number of the checked out entity. The version number assigned to a new entity is 1. When an entity is checked in, the version number is increased by one.

Versions Tab

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

To access	Select an entity in the tree or grid, and click the History tab > Versions tab. Available from the following modules: Requirements, Business Models, Business Components, Test Plan, and Test Resources.
Important information	<ul style="list-style-type: none"> To maintain usability and data integrity, ALM stores previous versions of an entity without most data related to relationships between entities. The following data is not stored for previous versions: requirements and tests coverage, requirements traceability, and defect linkage. In addition, risk data is also not stored for previous versions of an entity. Changes to some fields are not stored under version control. For details, see "Non-versioned Fields" on page 114.
Relevant tasks	"How to Use Version Control" on page 111
See also	<ul style="list-style-type: none"> "Version Control Overview" on page 110 "Baselines Tab" on page 219

User interface elements are described below:

UI Element (A - Z)	Description
View	Opens a Details dialog box, displaying read-only details for the selected version. Click a button on the sidebar to view additional details for the version, such as the Design Steps, Test Script and Attachments. The buttons available depend on the data stored under version control for the particular entity type.
Compare	Opens the Compare Entities dialog box, enabling you to compare two selected versions. For details, see " Compare Entities Dialog Box" on page 216 . To compare two versions, press the CTRL key and select the versions. Then click the Compare button.
Check Out	Opens the Check Out dialog box, enabling you to check out the selected version. For details, see " Check Out Dialog Box" on page 120 .
Baseline	The baseline in which the version appears.

UI Element (A - Z)	Description
Comment for selected version	The comments typed by the user when checking in the version.
Date	The date the version was created.
Modified By	The user who created the version.
Version	The version number. If the entity is currently checked out, the Version column for the checked out version displays Checked out . If the entity is checked out by the current user, an arrow icon ➡ indicates the version that was checked out. The default version number for a new entity is 1.

Chapter 7: ALM Editions

HPE Application Lifecycle Management is also available in several editions which provide subsets of ALM functionality.

HP ALM Edition	Description
HPE ALM	A unified platform for managing and automating processes, activities, and assets for building, testing, delivering, and maintaining applications. It includes modules for requirements, test, defect, and development management, and overall release and project planning. HPE ALM helps organizations drive consistent processes, shared best-practices, and asset sharing across projects.
HP Quality Center Enterprise Edition	Quality Center resides on the same unified platform as HPE ALM. It delivers core functionality for quality management. It supports building a quality center of excellence through tight integrations with HPE Unified Functional Testing, HPE Business Process Testing, and HPE Sprinter.
HPE ALM Performance Center Edition	Functionality for the complete management, scheduling, running, and monitoring of performance test scripts. It resides on the same platform as HPE ALM and integrates directly with HPE ALM and HP LoadRunner.
HP Quality Center Express Edition	Provides a subset of HPE ALM product functionality, and is designed to introduce new customers to HPE ALM. It 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 a subset of HPE ALM product functionality, and is designed to introduce new customers to HPE ALM. It provides core functionality for test management and defect management. This license is free, and is limited to five named users. <div data-bbox="474 1474 1372 1676" style="background-color: #e0f2e0; padding: 10px;"><p>Note: Before using HP Quality Center Community Edition, you must assign named licenses to your users. Only then can the users successfully log in to ALM and see the appropriate modules. For more information on assigning named licenses, see the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p></div>

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

Functionality	HP ALM Edition	HP Quality Center Enterprise Edition	HPE ALM Performance Center Edition	HP Quality Center Express Edition	HP Quality Center Community Edition
"Licensing" on the next page	✓	✓	✓	✓	✓
"Release Management" on page 128	✓	✓	✓	✓	✓
"Project Planning and Tracking (PPT) Releases" on page 128	✓	✗	✗	✗	✗
"Multiple Requirement Types" on page 128	✓	✓	✓	✗	✗
"Requirement to Requirement Traceability" on page 128	✓	✓	✓	✗	✗
"Risk-Based Quality Management" on page 128	✓	✓	✓	✗	✗
"Business Models Module" on page 128	✓	✓	✗	✗	✗
"Test Authoring and Execution" on page 129	✓	✓	✓ (partial)	✓	✓ (partial)
"Test Resources" on page 129	✓	✓	✓	✓	✓
"Test Configurations" on page 129	✓	✓	✓	✓	✓
"HPE Sprinter" on page 129	✓	✓	✗	✓	✗

Functionality	HP ALM Edition	HP Quality Center Enterprise Edition	HPE ALM Performance Center Edition	HP Quality Center Express Edition	HP Quality Center Community Edition
"Lab Management" on page 129	✓	✗	✓	✗	✗
"Automatic Provisioning of Cloud Test Hosts" on page 129	✗	✗	✓	✗	✗
"Versioning" on page 129	✓	✓	✓	✗	✗
"Baselining" on page 130	✓	✓	✓	✗	✗
"Sharing Requirements and Tests" on page 130	✓	✗	✓	✗	✗
"Sharing Defects" on page 130	✓	✗	✗	✗	✗
"Cross Project Customization" on page 130	✓	✗	✓	✗	✗
"Cross Project Reporting" on page 130	✓	✗	✓	✗	✗
"Export Data to Excel" on page 131	✓	✓	✓	✓	✓
"Business Process Testing" on page 131	✓	✓	✗	✗	✗
"Extensions" on page 131	✓	✓ (partial)	✓ (partial)	✓ (partial)	✗
"Upgrading Editions" on page 131	--	✓	✓	✓	✓

Licensing

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

Release Management

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

For more details on the Releases module, see "[Releases and Cycles Overview](#)" on page 136.

Project Planning and Tracking (PPT) Releases

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

For more details on PPT releases, see "[PPT Releases Overview](#)" on page 160.

Multiple Requirement Types

You can assign each requirement in the Requirements module to a default ALM requirement type. In addition, you can customize the default types and create your own requirement types. The Requirements module is not available in Quality Center Community Edition or Quality Center Express Edition.

For more details on requirement types, see "[Requirements Module Fields](#)" on page 263.

Requirement to Requirement Traceability

Requirements traceability defines a relationship between two or more requirements, assisting you when analyzing the impact of a change proposed in a specific requirement. The Requirements module is not available in Quality Center Community Edition or Quality Center Express Edition.

For more details on requirements traceability, see "[Requirements Traceability](#)" on page 279.

Risk-Based Quality Management

The risk-based quality management feature enables you to calculate at which level to test each requirement, based on the nature of the requirement and the resources you have available. The Requirements module is not available in Quality Center Community Edition or Quality Center Express Edition.

For more details on risk-based quality management, see "[Risk-Based Quality Management](#)" on page 299.

Business Models Module

The Business Models module enables you to import business process models from standard modeling tools, and test their quality in ALM. The Business Models module is available in ALM Edition and Quality Center Enterprise Edition only.

For more details on the Business Models module, see ["Business Process Models" on page 313](#).

Test Authoring and Execution

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

For more details, see ["Test Plan Overview" on page 382](#) and ["Test Execution Overview" on page 546](#).

Test Resources

The Test Resources module enables you to manage resources used by your tests.

For more details, see ["Test Resources" on page 501](#).

Test Configurations

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

For more details, see ["Test Configuration Overview" on page 468](#).

HPE Sprinter

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

For more details on Sprinter, see ["HPE Sprinter Overview" on page 648](#).

Lab Management

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

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

Automatic Provisioning of Cloud Test Hosts

Cloud provisioning is currently available only for provisioning of load generators.

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

Versioning

Version control enables you to create and manage ALM entities while maintaining previous versions of those entities. Quality Center Community Edition and Quality Center Express Edition do not support single entity versioning of your ALM projects.

For more details on versioning, see ["Version Control" on page 109](#).

Baselining

You can create a baseline to store a snapshot of multiple entities in your project, at a specific point in time. ALM Essentials Edition, Quality Center Community Edition, and Quality Center Express Edition do not support baselining.

For more details, see "[Libraries and Baselines](#)" on page 193.

Sharing Requirements and Tests

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

Quality Center Enterprise Edition: You can use the Libraries module to create and compare baselines in a project. Quality Center Enterprise Edition does not include importing, synchronizing and comparing libraries across multiple projects. ALM Essentials Edition, Quality Center Community Edition, and Quality Center Express Edition do not support sharing requirements and tests.

For more details on the Libraries module, see "[Libraries Module Window](#)" on page 202.

Sharing Defects

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

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

Cross Project Customization

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

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

Cross Project Reporting

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

For more details on the ALM reports and graphs, see "[Analysis View Window](#)" on page 813.

Export Data to Excel

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

For more details, see "[Excel Reports](#)" on page 899.

Business Process Testing

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

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

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

Available in ALM 12.21: The BPT Packaged Apps Kit is also fully integrated with ALM. It is enabled only if your ALM is licensed for Business Process Testing and BPT Packaged Apps Kit is enabled. Like Business Process Testing, BPT Packaged Apps Kit is not available for the ALM Essentials Edition, Performance Center Edition, Quality Center Community Edition, or Quality Center Express Edition.

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

Extensions

ALM extensions provide added functionality to ALM. Various extensions are available, depending on the edition with which you are working. If you have a license for an ALM extension, you can utilize the added functionality by enabling the extension on a per project basis. For more details on enabling extensions, refer to the *HPE Application Lifecycle Management Administrator Guide*. Extensions are not available in Quality Center Community Edition.

To view the list of extensions available with ALM or to download documentation for the extensions, access the HP ALM Add-ins Page. You can access the Add-ins page in ALM from **Help > Add-ins**.

Upgrading Editions

You can upgrade your current edition to another edition. For example, you can upgrade from HP ALM Essentials Edition12.50 to HP ALM Edition12.50.

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

Part 2: Management

Example: ALM Editions:

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

For more information about ALM editions and their functionality, see "[ALM Editions](#)" on [page 125](#). To find out what edition of ALM you are using, ask your ALM Site Administrator.

Chapter 8: Releases and Cycles

This chapter includes:

- [Releases and Cycles Overview](#) 136
- [How to Use Releases and Cycles in ALM](#) 137
- [Releases and Cycles User Interface](#) 139

Releases and Cycles Overview

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

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

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

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

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

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

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

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

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

How to Use Releases and Cycles in ALM

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

You can also use Project Planning and Tracking (PPT) to track your application releases. PPT helps you make more informed release decisions using real-time key performance indicators (KPIs). For task details on working with PPT, see "[How to Work with PPT](#)" on page 160.

Note:

Higher-level task: This task is part of a higher-level task. For details, see "[Introducing ALM](#)" on page 22.

This task includes the following steps:

- "Define releases and cycles" below
- "Assign requirements" below
- "Assign and run test sets" on the next page
- "Assign defects" on the next page
- "Analyze releases and cycles" on the next page

1. Define releases and cycles

Define releases and cycles in a hierarchical releases tree.

- a. **Open the Releases module.** On the ALM sidebar, under **Management**, select **Releases**.
- b. **Create folders.** Right-click the **Releases** root folder and select **New Release Folder**. To create a sub-folder, right-click a folder and select **New Release Folder**.
- c. **Add releases to folders.** Right-click a folder or sub-folder and select **New Release**. Fill in fields in the New Release dialog box. For user interface details, see "[New Release/Release Details Dialog Box](#)" on page 147.
- d. **Add cycles to a release.** Right-click a release and select **New Cycle**. Fill in fields in the New Cycle dialog box. For user interface details, see "[New Cycle/Cycle Details Dialog Box](#)" on page 149.

2. Assign requirements

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

- **Assign to release.** Right-click a requirement and select **Assign to Release**. For user interface details on the Select Releases dialog box, see "[Select Releases Dialog Box](#)" on page 156.

- **Assign to cycle.** Right-click a requirement and select **Assign to Cycle**. For user interface details on the Select Cycles dialog box, see "[Select Cycles Dialog Box](#)" on page 155.

3. Assign and run test sets

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

- a. **Assign to cycles.** Right-click a test set folder and select **Assign to Cycle**. For user interface details on the Select Cycles dialog box, see "[Select Cycles Dialog Box](#)" on page 155.
- b. **Run tests.** For task details on running tests, see "[How to Run Tests in ALM](#)" on page 548.

4. Assign defects

Assign defects to a target release and a target cycle. For task details, see "[How to Track Defects in ALM](#)" on page 781.

5. Analyze releases and cycles

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

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

To view statistics on the requirements and test set folders assigned to your releases and cycles, in the Releases module, select a release or cycle and click the **Details** tab. In the **Statistics** area, view statistics on assigned requirements and test set folders. For user interface details on the Releases module window, see "[Releases Module Window](#)" on page 140.

- **View coverage progress.**

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

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

For user interface details, see "[Progress Tab](#)" on page 151.

- **View defects.**

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

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

For user interface details, see "[Quality Tab](#)" on page 152.

Releases and Cycles User Interface

This section includes:

• Releases Module Window	140
• Releases Module Menus and Buttons	141
• Releases Module Icons	145
• Releases Module Fields	146
• New Release/Release Details Dialog Box	147
• New Cycle/Cycle Details Dialog Box	149
• Progress Tab	151
• Quality Tab	152
• Configure Outstanding Defects Dialog Box	154
• Select Cycles Dialog Box	155
• Select Releases Dialog Box	156
• Reschedule Release/Cycle/Milestone Dialog Box	157

Releases Module Window

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

To access	On the ALM sidebar, under Management, select Releases .
Relevant tasks	"How to Use Releases and Cycles in ALM" on page 137
See also	"Releases and Cycles Overview" on page 136

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

UI Element	Description
<Releases module common UI elements>	<ul style="list-style-type: none">Release fields. For field definitions, see "Releases Module Fields" on page 146.Release menus and buttons. For command and button descriptions, see "Releases Module Menus and Buttons" on the next page.Release icons. For icon descriptions, see "Releases Module Icons" on page 145.ALM masthead, menus, and sidebar. For details, see "ALM Common Areas" on page 30.
<Releases tree>	A graphical representation of your releases.
Details tab	Displays details of the currently selected folder, release, or cycle. The Statistics area displays the requirements and test set folders associated with the release or cycle. For more details, see "Releases Module Fields" on page 146.
Release Scope tab	Shows the release scope items of the currently selected release. For more details, see "Release Scope Tab" on page 166. <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"><p>ALM Editions: This tab is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p></div>

UI Element	Description
Master Plan tab	<p>Shows the progress of a release in a Gantt chart. For more details, see "Master Plan Tab" on page 181.</p> <p>ALM Editions: This tab is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Scorecard tab	<p>Shows a KPI scorecard of the status of the currently selected release. For more details, see "Scorecard Tab" on page 184.</p> <p>ALM Editions: This tab is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Status tab	<p>Includes the following tabs:</p> <ul style="list-style-type: none">• Progress tab. Shows a high-level overview of the progress of the currently selected release or cycle. For more details, see "Progress Tab" on page 151.• Quality tab. Shows the number of defects opened over the course of the currently selected release or cycle. It also shows the number of outstanding defects. For more details, see "Quality Tab" on page 152.
Attachments tab	<p>Lists attachments that provide additional information about the currently selected folder, release, or cycle. For more details, see "Attachments Page" on page 80.</p>
Description tab	<p>Describes the currently selected folder, release, or cycle. Click in the text box to display a toolbar for formatting and spell checking the text.</p>

Releases Module Menus and Buttons

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

To access	On the ALM sidebar, under Management, select Releases .
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Important information	<p>Tip: You can access the menu bar from the Releases module by pressing the shortcut key ALT.</p>
Relevant tasks	"How to Use Releases and Cycles in ALM" on page 137
See also	<ul style="list-style-type: none"> "Releases Module Icons" on page 145 "Releases Module Window" on page 140 "Releases and Cycles Overview" on page 136

User interface elements are described below:

UI Element	Menu	Description
New Release 	Releases	Opens the New Release Folder dialog box, enabling you to add a folder under a selected folder.
New Release/ New Empty 	Releases	Opens the New Release dialog box, enabling you to add a release to a selected release folder. For more details, see "New Release/Release Details Dialog Box" on page 147.

Note: When working with a project that is linked to a template project, the **New Empty Release** option is available instead of the **New Release** option.

ALM Editions: **New Empty Release** is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.

UI Element	Menu	Description
New Milestone 	Releases	<p>Opens the New Milestone dialog box, enabling you to add a milestone to a selected release. For more details, see ""New Milestone Dialog Box" on page 170".</p> <p>ALM Editions: This feature is available for ALM Edition only. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p>
New Cycle 	Releases	<p>Opens the New Cycle dialog box, enabling you to add a cycle to a selected release. For more details, see ""New Cycle/Cycle Details Dialog Box" on page 149".</p>
Details 	Releases	<p>Opens the corresponding Details dialog box, enabling you to view and update details of the selected release, cycle, or milestone.</p> <p>For more details, see:</p> <ul style="list-style-type: none">• ""New Release/Release Details Dialog Box" on page 147• ""New Cycle/Cycle Details Dialog Box" on page 149• ""Milestone Details Dialog Box" on page 182 <p>ALM Editions: Milestones are available for ALM Edition only. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Reschedule 	Releases	<p>Opens the Reschedule dialog box, enabling you to reschedule the start and end date of a release, cycle, or milestone. For more details, see ""Reschedule Release/Cycle/Milestone Dialog Box" on page 157".</p> <p>ALM Editions: The capability to reschedule milestones is available for ALM Edition only. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p>

UI Element	Menu	Description
Cut/Paste  	Edit	<p>Moves a selected release folder or release to a different location in the releases tree.</p> <p>Note: Moving a release folder also moves its releases and cycles. Moving a release also moves its cycles. The root folder cannot be moved.</p> <p>Tip: You can also move a release folder or a release to a new location in the releases tree by dragging it.</p>
Duplicate Cycle 	Edit	<p>Creates a copy of the selected cycle within the same release.</p> <p>To duplicate more than one cycle, press the CTRL key and select the cycles you want to duplicate. You can select only cycles that belong to the same release.</p>
Duplicate Milestone 	Edit	<p>Creates a copy of the selected milestone within the same release.</p> <p>To duplicate more than one milestone, press the CTRL key and select the milestones you want to duplicate. You can select only milestones that belong to the same release.</p> <p>ALM Editions: This feature is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Delete 	Edit	<p>Deletes selected release folders, releases, or cycles. Deleting a folder also deletes its releases and cycles. Deleting a release also deletes its cycles.</p> <p>Note: Deleting a release folder, release, or cycle also unassigns the associated requirements, test set folders, and defects.</p>
Rename	Edit	<p>Renames a selected release folder, release, or cycle. You cannot rename the root folder.</p>

UI Element	Menu	Description
Expand All	View	Expands all branches in the releases tree.
Collapse	View	Collapses all branches in the releases tree.
Refresh All 	View	Refreshes the releases tree so that it displays the most up-to-date information.
New Release From Template 	Releases	Opens the New Release from Template dialog box, enabling you to create a release based on a release from a template project. For more details, see " "New Release From Template Dialog Box" on page 191 ".
		ALM Editions: This option is available for ALM Edition only. For more information about ALM editions and their functionality, see " "ALM Editions" on page 125 ". To find out what edition of ALM you are using, ask your ALM site administrator.
		Note: This option is available in a project that is linked and synchronized with a template project.
Show Requirements	<right-click menu>	Goes to the Requirements module and displays the requirements assigned to the selected release or cycle.
Show Test Set Folders	<right-click menu>	Goes to the Test Lab module and displays the test set folders assigned to the selected cycle.

Releases Module Icons

This section describes the icons available in the Releases module.

To access	On the ALM sidebar, under Management, select Releases .
Relevant tasks	"How to Use Releases and Cycles in ALM" on page 137
See also	<ul style="list-style-type: none">"Releases Module Menus and Buttons" on page 141"Releases Module Window" on page 140"Releases and Cycles Overview" on page 136

User interface elements are described below:

UI Element	Description
	<green asterisk>. The tab is populated.
	Milestone. A milestone of a release in the releases tree. ALM Editions: This icon is available for ALM Edition only. For more information about ALM editions and their functionality, see " "ALM Editions" on page 125 . To find out what edition of ALM you are using, ask your ALM site administrator.
	Release Folder. A folder for organizing releases.
	Release. A release in the releases tree.
	Cycle. A cycle of a release in the releases tree.

Releases Module Fields

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

To access	On the ALM sidebar, under Management, select Releases .
Important information	<ul style="list-style-type: none">The dates for the cycles must be contained within the dates for the releases.You can add user-defined fields and change the label of any of the fields in the Releases module. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.You can use the Script Editor to restrict and dynamically change the fields and values in the Releases module. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.For project planning and tracking (PPT) fields, see ""PPT Fields" on page 165.
Relevant tasks	"How to Use Releases and Cycles in ALM" on page 137
See also	<ul style="list-style-type: none">"Releases Module Window" on page 140"Releases and Cycles Overview" on page 136

The fields are described below:

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

New Release/Release Details Dialog Box

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

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

To access	<ul style="list-style-type: none">New Release dialog box: In the Releases module, right-click a release folder and select New Release.From a template based project: In the Releases module, right-click a release folder and select New Empty Release.Release Details dialog box: In the Releases module, right-click a release and select Details.
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Important information	<p>ALM Editions: The New Release dialog box is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
	<p>Note: The New Empty Release option is available in a project that is linked and synchronized with a template project. For more details on linking and synchronizing template projects, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p>
Relevant tasks	"How to Use Releases and Cycles in ALM" on page 137
See also	"Releases and Cycles Overview" on page 136

User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears the data. Available from: New Release dialog box
	Save. Saves the details.
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Name	Type a name for the new release.

UI Element	Description
Details	<p>Lists release fields. Required fields are displayed in red. For details on the available release fields, see "Releases Module Fields" on page 146.</p> <p>Tip: Clicking in the Description field on this page displays a toolbar for formatting and spell checking the text.</p>
Release Scope	<p>Shows the release scope items of the currently selected release. For more details, see "Release Scope Tab" on page 166.</p> <p>ALM Editions: This tab is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p> <p>Available from: Release Details dialog box</p>
Attachments	Enables you to add attachments that provide additional information about the new release. For more details, see " Attachments Page " on page 80.

New Cycle/Cycle Details Dialog Box

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

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

To access	<p>New Cycle dialog box: In the Releases module, right-click a release and select New Cycle.</p> <p>Cycle Details dialog box: In the Releases module, expand a release, right-click a cycle and select Details.</p>
Important information	<p>ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	<ul style="list-style-type: none">"How to Use Releases and Cycles in ALM" on page 137"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none">"Releases and Cycles Overview" on page 136"PPT Releases Overview" on page 160"Releases Module Window" on page 140

User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears the data. Available from: New Cycle dialog box
	Save. Saves the details.
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Name	The name of the cycle.
Details	Lists cycle fields. Required fields are displayed in red. For details on the available cycle fields, see " Releases Module Fields " on page 146. <div style="border-left: 3px solid #00AEEF; padding-left: 10px;">Tip: Clicking in the Description field on this page displays a toolbar for formatting and spell checking the text.</div>
Attachments	Enables you to add attachments that provide additional information about the cycle. For more details, see " Attachments Page " on page 80.

Progress Tab

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

To access	In the Releases module: <ul style="list-style-type: none">• For a release: Select a release in the releases tree, click the Status tab, and then click the Progress tab.• For a cycle: Expand a release, select a cycle and click the Progress tab.
Important information	Click the Refresh All button  in the Releases module toolbar to display the most up-to-date data.
Relevant tasks	"How to Use Releases and Cycles in ALM" on page 137
See also	<ul style="list-style-type: none"> • "Releases and Cycles Overview" on page 136 • "Releases Module Window" on page 140

User interface elements are described below:

UI Element	Description
Total days in release/cycle	The total number of days in a selected release or cycle (end date - start date).
Remaining days in release/cycle	The total number of days remaining in a selected release or cycle.
Total test instances for release/cycle	The total number of test instances included in the test set folders assigned to a selected release or cycle.
Remaining test instances to run	The total number of test instances included in the assigned test set folders of a selected release or cycle that have not yet run.
Required execution rate (test instances/day)	The average number of test runs required per day for the remaining days in a selected release or cycle.
Days (progress bar)	The percentage of days elapsed in a selected release or cycle.

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

Quality Tab

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

To access	<p>In the Releases module:</p> <ul style="list-style-type: none">• For a release: Select a release in the releases tree, click the Status tab, and then click the Quality tab.• For a cycle: Expand a release, select a cycle and click the Quality tab.
Important information	<p>Click the Refresh All button  in the Releases module toolbar to display the most up-to-date data.</p>

Relevant tasks	"How to Use Releases and Cycles in ALM" on page 137
See also	"Releases and Cycles Overview" on page 136 "Releases Module Window" on page 140

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

UI Element	Description
Defect Opening Rate graph	Displays the number of defects opened over the course of the selected release or cycle. The graph displays defects whose Detected in Release or Detected in Cycle value matches the selected release or cycle. The defects are grouped according to their level of Severity . The x-axis displays the number of defects according to their severity on the last day of each cycle.
<Defect severity level display options>	Determine which defects are displayed in the graph based on defect severity level. The severity levels ranges from Low-1 to Urgent-5 .
Outstanding Defects graph	Displays the number of outstanding defects for the selected release or cycle. The graph displays defects whose Target Release or Target Cycle value matches the selected release or cycle, or is empty. The defects are grouped according to their level of Severity . The x-axis displays the number of outstanding defects according to their severity on the last day of each cycle. By default, New , Open , and Reopened defects are considered outstanding.
Configure Outstanding Defects	Opens the Configure Outstanding Defects dialog box, enabling you to determine which defects are displayed in the graph by filtering them by their status. For user interface details, see "Configure Outstanding Defects Dialog Box" on the next page.

Configure Outstanding Defects Dialog Box

The Configure Outstanding Defects dialog box enables you to determine which defects are displayed in the Quality tab graph. This graph displays the number of defects submitted over the course of a release or cycle. Outstanding defects are configured by filtering them by their status.

To access	<ol style="list-style-type: none">1. In the Releases module, select a cycle.2. From the Quality tab, click the Configure Outstanding Defects link.
Relevant tasks	"How to Use Releases and Cycles in ALM" on page 137

User interface elements are described below:

UI Element	Description
Available Defect Status	Lists statuses that are not currently used for configuring outstanding defects.
	Moves selected statuses between Available Defect Status and Visible Defects Status . Tip: You can also drag the statuses between panes or double-click a status to move it across to the other pane.
	Moves all statuses between Available Defect Status and Visible Defects Status .
Visible Defects Status	Lists statuses that are currently used for configuring outstanding defects.
Only Targeted Defects	When selected, includes in the graph only the defects that match both of the following criteria: <ul style="list-style-type: none">Defects whose statuses are listed in the Visible Defects Status columnDefects that are targeted to be fixed in this cycle

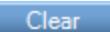
Select Cycles Dialog Box

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

To access	Right-click a requirement in the Requirements module, or a test set folder in the Test Lab module, and select Assign to Cycle .
Important information	<ul style="list-style-type: none"> When you assign a requirement to a cycle, the value is entered in the requirement's Target Cycle field. In addition, the cycle's release is entered in the Target Release field. When you assign a test set folder to a cycle, the test set's subfolders are automatically assigned to the same cycle.
Relevant tasks	<ul style="list-style-type: none"> "How to Use Requirements in ALM" on page 244 "How to Create Test Sets" on page 590 "How to Use Releases and Cycles in ALM" on page 137
See also	"Releases and Cycles Overview" on page 136

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

UI Element	Description
	Show Cycle Details. Opens the Details dialog box for the selected cycle in read-only mode.
	Refresh. Refreshes the releases tree so that it displays the most up-to-date information.
	Filter/Sort. Enables you to filter the data according to the criteria that you choose. For more details, see "Filter Dialog Box" on page 54 .
< Find box >	Enter the name of the cycle you want to search for and click the Find button.
	Find. Searches the releases tree for the value you specify in the Find box.
	Go to Entity by ID. Opens the Go to Cycle dialog box, enabling you to locate the cycle in the tree according to Cycle ID.
< Releases tree >	<p>Displays the releases tree in the Releases module.</p> <p>Expand the tree and select a cycle. You can assign requirements to more than one cycle.</p>

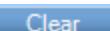
UI Element	Description
 Clear	Clears the assigned cycle from the requirement. Available from: Requirements module

Select Releases Dialog Box

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

To access	In the Requirements module, right-click a requirement and select Assign to Release .
Important information	When you assign a requirement to a release, the value is entered in the requirement's Target Release field.
Relevant tasks	"How to Use Releases and Cycles in ALM" on page 137
See also	"Releases and Cycles Overview" on page 136

User interface elements are described below:

UI Element	Description
	Show Release Details. Opens the Details dialog box for the selected release in read-only mode.
	Refresh. Refreshes the releases tree so that it displays the most up-to-date information.
	Filter/Sort. Enables you to filter the data according to the criteria that you choose. For more details, see "Filter Dialog Box" on page 54 .
< Find box >	Enter the name of the release you want to search for and click the Find button.
	Find. Searches the releases tree for the value you specify in the Find box.
	Go to Entity by ID. Opens the Go to Release dialog box, enabling you to locate the release in the tree according to Release ID.
< Releases tree >	Displays the releases tree in the Releases module. Expand the tree and select one or more releases.
 Clear	Clears the assigned release from the requirement.

Reschedule Release/Cycle/Milestone Dialog Box

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

To access	In the Releases module, right-click a release, cycle, or milestone. Select Reschedule .
Important information	<ul style="list-style-type: none">When rescheduling a release, the related cycles, milestones, and KPI thresholds are rescheduled accordingly.When rescheduling a milestone, the related KPI thresholds are rescheduled accordingly.
Relevant tasks	<ul style="list-style-type: none">"How to Use Releases and Cycles in ALM" on page 137"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none">"Releases and Cycles Overview" on page 136"PPT Releases Overview" on page 160

User interface elements are described below:

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

Chapter 9: Project Planning and Tracking (PPT) Releases

This chapter includes:

• PPT Releases Overview	160
• How to Work with PPT	160
• KPI Types	162
• Defect Content Included in PPT Release Scope Items	163
• PPT User Interface	164

PPT Releases Overview

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

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

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

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

ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see "[ALM Editions](#)" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.

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

How to Work with PPT

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

Note:

- **ALM Editions:** Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see "[ALM Editions](#)" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.
- **Product Feature Movie:** To view a movie that demonstrates PPT, choose **Help > Movies** in the ALM main window.

This task includes the following steps:

- "Define releases" below
- "Define release scope items" below
- "Define milestones" below
- "Analyze progress" below

1. Define releases

- a. **Open the Releases module.** On the ALM sidebar, under **Management**, select **Releases**. For user interface details on the Releases module, see "[Releases Module Window](#)" on [page 140](#).
- b. **Create folders.** Right-click the **Releases** root folder and select **New Release Folder**. To create a sub-folder, right-click a folder and select **New Release Folder**.
- c. **Add releases.** Right-click a release folder and select **New Release**. For user interface details, see "[New Release/Release Details Dialog Box](#)" on [page 147](#).
Alternatively, if you are working with a project that is linked to a template project, you can create a release by copying from the template project. Right-click a release folder and select **New Release from Template**. For user interface details, see "[New Release From Template Dialog Box](#)" on [page 191](#).

2. Define release scope items

In the releases tree, select a release. Click the **Release Scope** tab. Add release scope items and define the related requirements, tests, test sets, and defects. For user interface details, see "[Release Scope Tab](#)" on [page 166](#).

3. Define milestones

- a. **Add milestones.** In the releases tree, right-click a release and select **New Milestone**. The New Milestone dialog box opens. Define timelines for your milestone. For user interface details, see "[New Milestone Dialog Box](#)" on [page 170](#).
- b. **Associate release scope items.** In the releases tree, select a milestone. Click the **Milestone Scope** tab. Associate the milestone with release scope items. For user interface details, see "[Milestone Scope Tab](#)" on [page 172](#).
- c. **Associate KPIs.** Click the **KPIs** tab. Configure related KPIs and set boundaries for performance against those KPIs. For user interface details, see "[KPI Types](#)" on the next page.

4. Analyze progress

- **View scorecard.** In the releases tree, select a release. Click the **Scorecard** tab. View the status and progress of your defined milestones. For user interface details on the Scorecard tab, see "[Scorecard Tab](#)" on [page 184](#).
- **View Gantt chart.** In the releases tree, select a release. Click the **Master Plan** tab. For user interface details, see "[Master Plan Tab](#)" on [page 181](#).

- **Create PPT graphs.** For task details on how to generate graphs, see "[How to Generate a PPT Graph](#)" on page 868.

KPI Types

This section describes the system defined KPI types.

Important information	You can modify system defined KPIs and add additional user-defined KPIs to your project. For more details, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i> . ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see " ALM Editions " on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.
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KPI types are described below:

KPI Type (A - Z)	Description
Authored Tests	Calculates the number of tests whose planning status is set to Ready .
Automated Tests	Calculates the percentage of automated tests.
Covered Requirements	Calculates the percentage of requirements covered by at least one test.
Defects Fixed per Day	Calculates the number of defects fixed per day.
Passed Requirements	Calculates the percentage of requirements whose covered tests have an execution status of Passed .
Passed Tests	Calculates the percentage of tests whose last run has an execution status of Passed .
Rejected Defects	Calculates the percentage of rejected defects.
Reviewed Requirements	Calculates the percentage of business or functional requirements that have been reviewed.

KPI Type (A - Z)	Description
Severe Defects	Calculates the number of defects with the status of New , Open or Reopened assigned a severity level of 5-Urgent or 4-Very High .
Test Instances Executed	Calculates the percentage of executed test instances.
Tests Executed	Calculates the percentage of executed tests.

Defect Content Included in PPT Release Scope Items

When working with PPT releases, you can add requirements, tests, test sets, and defects to the content of release scope items. Based on this content, ALM calculates scorecards, which indicate the readiness of a PPT release. You add content to release scope items in the Releases module > Release Scope tab > content tab. For user interface details, see "[Release Scope Tab](#)" on page 166.

The tests and test sets that you include can affect the defect content available for inclusion.

This following table describes how ALM determines the associated entities to include with defect content for release scope items, based on the content selected for tests and test sets.

Test Selection Option	Test Set Selection Option	Defect content Included when Selecting the "Defects linked to selected requirements, tests, and test sets (and their associated entities)" Option
Tests in selected folders , with or without a filter	Test sets in selected folders , with or without a filter	Defects linked to selected requirements, tests, and test sets (and their associated test instances, runs, and run steps)
Tests in selected folders , with or without a filter	Test sets containing the selected tests	Defects linked to selected requirements Defects linked to selected tests, or defects linked to test sets that have test instances for those selected tests, or defects linked to those test instances' associated runs and run steps

Test Selection Option	Test Set Selection Option	Defect content Included when Selecting the "Defects linked to selected requirements, tests, and test sets (and their associated entities)" Option
Tests covering selected requirements	Test sets in selected folders , with or without a filter	Defects linked to selected requirements, or defects linked to tests covering those selected requirements Defects linked to selected test sets (and their associated test instances, runs, and run steps)
Tests covering selected requirements	Test sets containing the selected tests	Defects linked to selected requirements, or defects linked to tests covering those selected requirements Defects linked to test sets that have test instances for those selected requirements' linked tests or defects linked to those test instances' associated runs and run steps

PPT User Interface

This section includes:

- [PPT Fields](#) 165
- [Release Scope Tab](#) 166
- [New Scope Item/Scope Item Details Dialog Box](#) 169
- [New Milestone Dialog Box](#) 170
- [Milestone Scope Tab](#) 172
- [KPIs Tab](#) 173
- [New KPI/KPI Details Dialog Box](#) 176
- [Thresholds Page](#) 178
- [New Threshold Value Dialog Box](#) 180
- [Master Plan Tab](#) 181
- [Milestone Details Dialog Box](#) 182
- [Scorecard Tab](#) 184
- [KPI Drill Down Graph](#) 185
- [KPI Drill Down Results Dialog Box](#) 187
- [Breakdown Over Time Graph](#) 188
- [Scorecard Layout Dialog Box](#) 190
- [New Release From Template Dialog Box](#) 191

PPT Fields

This section describes the PPT fields in the Releases module.

Important information	<ul style="list-style-type: none"> You can add user-defined fields and change the label of any of the fields in the Releases module. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. You can use the Script Editor to restrict and dynamically change the fields and values in the Releases module. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. <p>Example: ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none"> "Release Scope Tab" on the next page "Master Plan Tab" on page 181 "Scorecard Tab" on page 184 "PPT Releases Overview" on page 160

The fields are described below:

UI Element (A - Z)	Description
Due Date	The date on which the milestone ends.
KPI Type	The type of KPI. For more details, see " KPI Types " on page 162.
Label	The release scope item name as it is displayed in the chart of the Master Plan tab.
Milestone ID	A unique numeric ID for the milestone, assigned automatically by ALM. The Milestone ID is read-only.
Modified	The date and time the release scope item or milestone was last changed. Default value: The database server date and time.

UI Element (A - Z)	Description
Name	The release scope item or milestone name.
Owner	The user name of the person who owns the release scope item.
Priority	The priority of the release scope item, ranging from low priority (level 1) to high priority (level 3).
Release End Date	The date on which the release ends.
Release ID	A unique numeric ID for the release, assigned automatically by ALM. The Release ID is read-only.
Release Start Date	The date on which the release starts.
Scope Item ID	A unique alphanumeric ID for the release scope item that is assigned automatically. This field cannot be modified.
Start Tracking Date	The date on which the milestone starts.

Release Scope Tab

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

To access	In the Releases module, select a release and click the Release Scope tab.
Important information	ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see " ALM Editions " on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none"> • "PPT Releases Overview" on page 160 • "Releases Module Window" on page 140

User interface elements are described below:

UI Element	Description
	New Scope Item. Opens the New Scope Item dialog box, enabling you to define a release scope item. For more details, see "New Scope Item/Scope Item Details Dialog Box" on page 169 .
	Delete. Deletes selected release scope item.
	Refresh. Refreshes the release scope grid so that it displays the most up-to-date information.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the release scope grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 85 .
	Filter/Sort. Enables you to filter the data according to the criteria that you choose. For more details, see "Filter Dialog Box" on page 54 .
	Scope Item Details. Opens the Scope Item Details dialog box, enabling you to display the details of the selected release scope item. For more details, see "New Scope Item/Scope Item Details Dialog Box" on page 169 .
	Show/Hide. Shows/hides the Description and content tabs.

UI Element	Description
content tab	<p>Enables you to select content to be included in the release scope item. It includes the following tabs:</p> <ul style="list-style-type: none"> • Requirements. Displays the requirements tree. Expand the tree and select the folders/requirements to include in the release scope item. • Tests. Displays the test plan tree. Expand the tree and select the folders/tests to include in the release scope item. To only include tests covered by the requirements selected in the Requirements tab, select Tests covering selected requirements. • Test Sets. Displays the test set tree. Expand the tree and select the test set folders to include in the release scope item. To only include test sets that contain tests selected in the Test tab, select Test sets containing the selected tests. • Defects. Do one of the following: <ul style="list-style-type: none"> • To define a filter to determine the defects to be included in the release scope item, select Defects selected by defined filter. • To include only defects that link to selected requirements, tests, and test sets, select Defects linked to selected requirements, tests, and test sets (and their associated entities). <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note: Links between defects and test sets also include indirect links to:</p> <ul style="list-style-type: none"> ○ Test instances ○ Runs ○ Steps </div> <div style="background-color: #e0f2e0; padding: 10px;"> <p>For information about how ALM determines which defects and associated entities to include, see "Defect Content Included in PPT Release Scope Items" on page 163.</p> </div>
Description tab	<p>Describes the release scope item. Click in the text box to display a toolbar for formatting and spell checking the text.</p>

New Scope Item/Scope Item Details Dialog Box

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

To access	Use one of the following: <ul style="list-style-type: none"> In the Release Scope tab, right-click the release scope grid and select New Scope Item. The New Scope Item dialog box opens. In the Release Scope tab, right-click a release scope item and select Scope Item Details. The Scope Item Details dialog box opens.
Important information	ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see " ALM Editions " on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 160 "Releases Module Window" on page 140

User interface elements are described below:

UI Element	Description
	Save. Saves the details.
	First/Previous/Next/Last Entity. Allows you to browse through the release scope items. Available from: Scope Item Details dialog box
	Clear All Fields. Clears all the fields in the dialog box. Available from: New Scope Item dialog box
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.

UI Element	Description
	<p>Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?".</p> <p>For example: a*b returns acb and adefb; a?b returns acb</p>
Name	The release scope item name.
Details	Displays details of a release scope item. For details on the available fields, see " PPT Fields " on page 165.
content	<p>Displays the content to be included in the release scope item. It includes the following tabs:</p> <ul style="list-style-type: none"> • Requirements. Displays the requirements tree. Expand the tree and select the folders/requirements to include in the release scope item. • Tests. Displays the test plan tree. Expand the tree and select the folders/tests to include in the release scope item. To only include tests covered by the requirements selected in the Requirements tab, select Tests covering selected requirements. • Test Sets. Displays the test set tree. Expand the tree and select the test set folders to include in the release scope item. To only include test sets that contain tests selected in the Test tab, select Test sets containing the selected tests. • Defects. Displays the defects grid. Define a filter to determine the defects to be included in the release scope item.
Description	<p>Describes the release scope item.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>

New Milestone Dialog Box

This dialog box enables you to define milestones.

To access

In the Releases module, right-click a release and choose **New Milestone**.

Important information	You can limit the number of milestones that can be defined per release using the MAX_MILESTONES_PER_RELEASE parameter in the Site Configuration tab in Site Administration. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>
	<p>ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 160 "Releases Module Window" on page 140

User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears all the fields in the dialog box. Available from: New Milestone dialog box
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
Name	The milestone name.
Details	Displays milestone details. For details on the available fields, see " PPT Fields " on page 165.
Description	The description of the milestone.

Milestone Scope Tab

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

To access	Select a milestone. Click the Milestone Scope tab.
Important information	<p>You can limit the number of scope items that can be defined per release using the MAX_SCOPE_ITEMS_PER_RELEASE parameter in the Site Configuration tab in Site Administration. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p> <p>ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 160 "Releases Module Window" on page 140

Milestone Scope Grid

User interface elements are described below:

UI Element	Description
 Select	Select Scope Items. Opens the Scope pane, enabling you to select release scope items.
 Remove Scope Items.	Removes selected scope items from the grid.
 Refresh.	Refreshes the milestone scope grid so that it displays the most up-to-date information.
 Select Columns.	Opens the Select Columns dialog box, enabling you to determine which fields to display in the milestone scope grid and their order. For more details, see " Select Columns>Select Fields Dialog Box " on page 85.
 Filter/Sort.	Enables you to filter data according to the criteria that you choose. For more details, see " Filter Dialog Box " on page 54.

Scope Pane

User interface elements are described below:

UI Element	Description
	<p>Add Scope Item. Adds selected release scope items to the milestone scope grid.</p> <p>Tip: You can also add release scope items by dragging them from the scope item grid to the milestone scope grid.</p>
	<p>Show Scope Item Details. Opens the Details dialog box for the selected scope item in read-only mode.</p>
	<p>Refresh All. Refreshes the scope item grid.</p>
	<p>Find. Searches for a specific release scope item in the scope item grid.</p> <p>Type the name (or part of the name) of the release scope item in the Find box and click Find. If the search is successful, the release scope item is highlighted in the scope item grid.</p>
	<p>Filter/Sort. Filters and sorts the release scope items in the scope item grid. For more details, see "Filter Dialog Box" on page 54.</p>
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine column appearance and order. For more details, see "Select Columns/Select Fields Dialog Box" on page 85.</p>
	<p>Go to Scope Item by ID. Opens the Go To Scope Item dialog box, enabling you to find a specific test by Scope Item ID.</p> <p>Note: You can only go to release scope items that are in the current filter.</p>

KPIs Tab

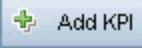
This tab enables you to define the KPIs for tracking the milestone scope, and setting the KPI thresholds.

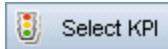
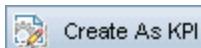
To access	Select a milestone. Click the KPIs tab.
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Important information	<ul style="list-style-type: none"> You can customize the default KPIs and create your own KPIs. For more details, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. You can limit the number of KPIs that can be defined per milestone using the MAX_KPIs_PER_MILESTONE parameter in the Site Configuration tab in Site Administration. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. You can limit the number of threshold values that can be defined per KPI using the MAX_THRESHOLD_VALUES_PER_KPI parameter in the Site Configuration tab in Site Administration. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. <p>ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 160 "Releases Module Window" on page 140

Main Area

User interface elements are described below:

UI Element	Description
 Add KPI	Opens the KPI pane, enabling you to select KPIs.
	Delete KPI. Removes the selected KPI from the new milestone grid.
	Show KPI Details. Opens the KPI Details dialog box, enabling you to update KPIs and thresholds. For more details, see " New KPI/KPI Details Dialog Box " on page 176.
	Refresh. Refreshes the grid so that it displays the most up-to-date information.

UI Element	Description
 Select KPI	Displays thresholds for a selected KPI column. This option is enabled by selecting a single cell.
 Enable	Includes the selected KPI in the defined milestone scope.
 Disable	Excludes the selected KPI from the defined milestone scope.
 Create As KPI	Opens the New KPI dialog box, enabling you to create a KPI based on a selected KPI. For more details, see "New KPI/KPI Details Dialog Box" on the next page .
 Show/Hide	Show/Hide. Shows/hides the Thresholds pane.
Thresholds pane	Enables you to manage threshold values for selected KPIs. For more details, see "Thresholds Page" on page 178 .

KPIs Pane

User interface elements are described below:

UI Element	Description
	Add KPI. Adds the selected KPI to the main area in the KPI tab.
	Show KPI Definition Details. Opens the KPI Definition Details dialog box for the selected KPI in read-only mode.
	Find. Searches for a specific KPI in the KPI grid. Type the name (or part of the name) of the KPI in the Find box and click Find . If the search is successful, the KPI is highlighted in the KPI grid.
	Filter/Sort. Filters and sorts the KPIs in the KPI grid. For more details, see "Filter Dialog Box" on page 54 .
	Select Columns. Opens the Select Columns dialog box, enabling you to determine column appearance and order. For more details, see "Select Columns/Select Fields Dialog Box" on page 85 .

New KPI/KPI Details Dialog Box

This dialog box enables you to define and update KPIs.

To access	<p>Use one of the following:</p> <ul style="list-style-type: none">• Select a milestone. Click the KPIs tab. Click Create As KPI. The New KPI dialog box opens.• Select a milestone. Click the KPIs tab. Click Show KPI Details . The KPI Details dialog box opens.
Important information	<ul style="list-style-type: none">• You can limit the number of KPIs that can be defined per milestone using the MAX_KPIs_PER_MILESTONE parameter in the Site Configuration tab in Site Administration. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.• You can limit the number of threshold values that can be defined per KPI using the MAX_THRESHOLD_VALUES_PER_KPI parameter in the Site Configuration tab in Site Administration. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.
	<p>ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none">• ""KPI Types" on page 162• ""PPT Releases Overview" on page 160• ""Releases Module Window" on page 140

Common Elements

User interface elements are described below:

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

Details View

User interface elements are described below:

UI Element	Description
KPI Type	The type of KPI. For details on the available KPI, see " KPI Types " on page 162 .
View KPI Type Details	Displays details on the selected KPI.
Description	A description of the selected KPI.

Optional Filter View

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

User interface elements are described below:

UI Element	Description
	Set Filter/Sort. Enables you to limit the KPI data according to your chosen criteria. For more details on filtering, see " "Filter Dialog Box" on page 54 .
	Clear Filter. Clears the defined filter.
View KPI Type Details	Displays details on the selected KPI.

Thresholds View

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

Thresholds Page

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

To access	Use one of the following: <ul style="list-style-type: none">Select a milestone. Click the KPIs tab. Click Create As KPI. The New KPI dialog box opens. Click Thresholds.Select a milestone. Click the KPIs tab. Click Show KPI Details  . The KPI Details dialog box opens. Click Thresholds.Select a milestone. Click the KPIs tab. The Thresholds pane is displayed on the bottom.
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Important information	<ul style="list-style-type: none"> You can modify the default threshold values of a KPI. For more details, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. You can limit the number of threshold values that can be defined per KPI using the MAX_THRESHOLD_VALUES_PER_KPI parameter in the Site Configuration tab in Site Administration. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. <p>ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 160 "Releases Module Window" on page 140

User interface elements are described below:

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

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

New Threshold Value Dialog Box

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

To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • Select a milestone. Click the KPIs tab. Click Create As KPI. The New KPI dialog box opens. Click Thresholds. Click Add Threshold Value. • Select a milestone. Click the KPIs tab. Click Show KPI Details  . The KPI Details dialog box opens. Click Thresholds. Click Add Threshold Value. • Select a milestone. Click the KPIs tab. The Thresholds pane is displayed on the bottom. Click Add Threshold Value.
Important information	<p>ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	<p>"How to Work with PPT" on page 160</p>

See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 160 "Releases Module Window" on page 140
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User interface elements are described below:

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

Master Plan Tab

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

To access	In the Releases module, select a release and click the Master Plan tab.
Important information	ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see " ALM Editions " on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 160 "Releases Module Window" on page 140

User interface elements are described below:

UI Element	Description
	<p>Show Details. Opens the appropriate Details dialog box, depending on the selected entity. You can select the following entities: cycles, milestones, and release scope items.</p> <p>For more details on cycle details, see "New Cycle/Cycle Details Dialog Box" on page 149.</p> <p>For more details on milestone details, see "Milestone Details Dialog Box" below.</p> <p>For more details on release scope item details, see "New Scope Item/Scope Item Details Dialog Box" on page 169.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p>Tip: You can also double-click an entity on the chart. The appropriate Details dialog box opens.</p> </div>
	<p>Refresh. Refreshes the chart.</p>
	<p>Reschedule. Reschedules the start and end date of a release, cycle or milestone. For more details, see "Reschedule Release/Cycle/Milestone Dialog Box" on page 157.</p>
	<p>Zoom In/Out. Changes the magnification of the chart.</p>
	<p>Display Entire Release. Restores the chart to its normal size. This button is enabled when the Zoom In and Zoom Out buttons are in use.</p>
	<p>Full Screen View. Opens the chart in a new window and maximizes its display.</p>

Milestone Details Dialog Box

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

To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • In the Releases module, select a release and click the Master Plan tab. Double-click a milestone on the chart. • In the Releases module, right-click a milestone and choose Details.
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Important information	ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see " ALM Editions " on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 160 "Releases Module Window" on page 140

User interface elements are described below:

UI Element	Description
	Save. Saves the details.
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Milestone ID	A unique numeric ID for the milestone, assigned automatically by ALM. The Milestone ID is read-only.
Name	The milestone name.
Details	Displays milestone details. For details on the available fields, see " PPT Fields " on page 165.
Milestone Scope	Enables you to view and update a release scope item. For more details, see " Milestone Scope Tab " on page 172.
KPIs	Enables you to define KPIs and set thresholds. For more details, see " KPIs Tab " on page 173.
Attachments	Enables you to add attachments that provide additional information about the new milestone. For more details, see " Attachments Page " on page 80.

UI Element	Description
History	Enables you to view the fields modified during the change. For more details, see " History Tab" on page 75.
Description	A description of the milestone.

Scorecard Tab

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

To access	In the Releases module, select a release and click the Scorecard tab.
Important information	<p>To view progress in the Scorecard tab, you must run calculations for your project. You can schedule to run calculations automatically or manually. For more details, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p> <p>ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 160 "Releases Module Window" on page 140 "View Tab - PPT Graphs" on page 872

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

UI Element	Description
 Generate	<p>Refreshes the scorecard table, so that it displays the most up-to-date information.</p> <p>For details on the scorecard table, see ""View Tab - PPT Graphs" on page 872.</p> <p>Note: KPIs are calculated at predefined hours on a daily basis. Milestones are calculated once they reach their due date.</p>

UI Element	Description
 Scorecard Layout	Scorecard Layout. Opens the Scorecard Layout dialog box enabling you to configure the scorecard table. For more details, see " Scorecard Layout Dialog Box " on page 190.
	Save Graph Image. Saves the scorecard table as an image.
	Full Screen. Displays the scorecard table in full-screen mode.
 Show KPI Analysis...	Opens the KPI analysis of the selected cell as defined in project customization. For more details, see " KPI Drill Down Graph " below.
 KPI Numerator  KPI Denominator	Opens the Drill Down Results dialog box which displays details of the entities that contributed to the KPI value. For more details see " KPI Drill Down Results Dialog Box " on page 187.
	<p>Example: If your release scope item contains 50 defects, of which 10 have been rejected, then the value for the Rejected Defects KPI will be 20%. To view details of the rejected defects only, click KPI Numerator. To view details of all the defects, click KPI Denominator.</p>
	<p>Note: KPI Denominator is only available for percentage KPI types.</p>
<KPI cell>	Hover over a KPI cell to view a tooltip containing the KPI's threshold values.

KPI Drill Down Graph

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

To access	<ol style="list-style-type: none"> In the Releases module, select a release and click the Scorecard tab. Select a KPI cell. On the Scorecard tab toolbar, click Show KPI Analysis.
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Important information	The graph page can contain up to two additional graphs. You can customize this page and determine whether or not to display these additional graphs. For more details, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i> .
	<p>ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 160 "Releases Module Window" on page 140

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

UI Element	Description
	Export to PDF. The Save As dialog box opens enabling you to save the graph as a PDF.
	Generate All Graphs in Page/Generate Graph. Refreshes all the graphs on the page, or the selected graph, so that they display the most up-to-date information.
	View Page in Full Screen. Displays the dashboard page in full-screen mode. View Graph in Full Screen. Displays the graph in full-screen mode.
Milestone	The name of the selected milestone.
Milestone Scope Item	The name of the selected milestone scope item.
Last KPI Date	Indicates when the KPI was last calculated.
<graph area>	Hover over a graph segment to view a tooltip containing additional information.
Breakdown Over Time link	Click to drill down to the graph's data and show specific points during a period of time. Opens a breakdown over time graph. For more details, see " "Breakdown Over Time Graph" on page 188 . Available from: graph area on the bottom of the page.

KPI Drill Down Results Dialog Box

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

To access	<ol style="list-style-type: none"> 1. In the Releases module, select a release and click the Scorecard tab. 2. Select a KPI cell and on the Scorecard toolbar and click either KPI Numerator or KPI Denominator (if the KPI is a percentage type).
Important information	<ul style="list-style-type: none"> The dialog box displays the most up to date information for each entity, even if it has changed since the original KPI calculation. Therefore it is possible that the information displayed may contradict the KPI value. Entities that have been deleted from the system are not displayed. <div style="background-color: #e0f2e0; padding: 10px;"> <p>ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p> </div>
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 160 "Releases Module Window" on page 140

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

UI Element (A - Z)	Description
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the data grid, and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 85.</p>
	<p>Export. Opens the Export Grid Data dialog box, enabling you to export the records as a text file, Microsoft Excel worksheet, Microsoft Word document, or HTML document.</p> <p>Select one of the following options:</p> <ul style="list-style-type: none"> • All. Exports all records in the grid. • Selected. Exports selected records in the grid.

UI Element (A - Z)	Description
<Segment parameters>	Located above the data grid, displays the drill down type and the number of records displayed.
<Data grid>	A list of the numerator or denominator records that are included in the selected KPI value. To open a particular record, double-click a record. The <Module> Details dialog box opens, enabling you to view or edit the record. Use the navigation buttons to browse through the drill down results.

Breakdown Over Time Graph

This graph displays specific points during a period of time.

To access	<p>From the Releases module:</p> <ol style="list-style-type: none">1. In the Releases module, select a release and click the Scorecard tab.2. Select a KPI cell.3. On the Scorecard tab toolbar, click Show KPI Analysis. The KPI Drill Down Graph opens.4. On the bottom of the KPI Drill Down Graph page, click the Breakdown Over Time link. <p>From the Dashboard module:</p> <ol style="list-style-type: none">1. Select Analysis View.2. Expand the analysis tree, and select one of the following graphs: KPI Breakdown or Release Scorecard.3. Click the View tab.4. For a KPI Breakdown graph, click the Breakdown Over Time link. For a Release Scorecard, click a KPI cell. On the bottom of the KPI graph page, click the Breakdown Over Time link.
Important information	<p>ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Work with PPT" on page 160

See also	<ul style="list-style-type: none"> • "PPT Releases Overview" on page 160 • "Releases Module Window" on page 140 • "KPI Drill Down Graph" on page 185
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User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
 Generate	Refreshes the graph so that it displays the most up-to-date information.
	Line Chart. Switches the chart format to a line chart.
	Data Grid. The grid creates a matrix of the graph's x-axis and Grouped By categories. A Total row is added that displays the total of each Grouped By category.
	Show/Hide Total Values. Shows/hides a <total> category to the graph, representing the sum of all the other Grouped By categories. <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> Tip: After showing the <total> category, click its label in the legend to hide the category. </div>
	Scroll to the Left/Right. Scrolls the graph to the left or right. These buttons are enabled when the Zoom In and Zoom Out buttons are in use.
	Show All. Restores the graph to its normal size. This button is enabled when the Zoom In and Zoom Out buttons are in use.
	Zoom In/Out. Changes the magnification of the graph.
	Save Graph Image. When viewing a graph as a bar, pie chart, or line chart, saves the graph image. You can select from a variety of graphic file formats. Save Graph Data. When viewing a data grid, saves the graph data. You can save the data as an Excel spreadsheet, a Word file, an HTML document, or a text file.
	Set Graph Appearance. Opens the Graph Appearance dialog box, enabling you to customize the graph title, graph color, and graph display. For more details, see "Graph Appearance Dialog Box" on page 865.

UI Element	Description
	<p>Copy Graph to Clipboard. Includes the following options:</p> <ul style="list-style-type: none"> • Copy Graph (Color). Copies the graph in color to the Clipboard. • Copy Graph (Monochrome). Copies the graph in monochrome to the Clipboard. • Copy Full Screen Graph (Color). Copies the graph in color to the Clipboard, enlarged to fit full screen. • Copy Full Screen Graph (Monochrome). Copies the graph in monochrome to the Clipboard, enlarged to fit full screen.
	<p>Print Graph. Includes the following options:</p> <ul style="list-style-type: none"> • Print Graph (Color). Prints the graph in color. This is the default button option. • Print Graph (Monochrome). Prints the graph in monochrome. • Print Graph and Details (Color). Prints the graph and its description in color. • Print Graph and Details (Monochrome). Prints the graph and its description in monochrome.
<graph area>	<p>Hover over a graph segment to view a tooltip containing additional information.</p>
<legend>	<p>Displays the chart categories and their corresponding color. Click a category to show or hide the category in the graph.</p>

Scorecard Layout Dialog Box

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

To access	In the Releases module, select a release and click the Scorecard tab. Click the Scorecard Layout button.
Important information	<p>ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none"> • "PPT Releases Overview" on page 160 • "Releases Module Window" on page 140

User interface elements are described below:

UI Element	Description
Rows	Lists rows that are currently displayed in the scorecard table.
	Sets the order in which row or column names appear in scorecard table.
	Moves selected names between Rows and Columns .
Columns	Lists columns that are currently displayed in the scorecard table.
Group Scope Items by Field	Groups according to a specified scope item field.
Display Planned KPI Target	<p>Displays the OK value of a KPI's threshold in the Planned column of the scorecard table.</p> <p>Note: The Planned column is displayed only when this option is enabled.</p>
	Enables you to narrow and sort the Milestone , Scope Item , or KPI data according to your chosen criteria. For more details on filtering, see " "Filter Dialog Box" on page 54 ".
	Clears the defined filter.
 Restore Default Filter Settings	Restores default filter definitions.

New Release From Template Dialog Box

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

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

Important information	<ul style="list-style-type: none"> The following release properties are copied from the template project: description, start/end dates, cycles, milestones, KPIs, KPI thresholds, attachments, and user-defined fields. The following release properties are not copied from the template project: release scope, milestone scope, and links to ALM entities in other modules. After creating the new release, you must update the copied dates. The New Release from Template option is available in a project that is linked and synchronized with a template project. For more details on linking and synchronizing template projects, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. <p>ALM Editions: Functionality related to PPT is available for ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Work with PPT" on page 160
See also	<ul style="list-style-type: none"> "PPT Releases Overview" on page 160 "Releases Module Window" on page 140

User interface elements are described below:

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

Chapter 10: Libraries and Baselines

This chapter includes:

- [Libraries Overview](#) 194
- [How to Use Libraries and Baselines in ALM](#) 198
- [Libraries and Baselines User Interface](#) 201

Libraries Overview

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

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

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

You can also import a library. Importing a library enables you to reuse and share an existing set of entities. As development continues, you can compare and synchronize libraries. For details, see ["Imported Libraries Overview" on page 224](#).

ALM Editions: Imported library functionality is available for ALM Edition and Performance Center Edition only. For more information about ALM editions and their functionality, see ["ALM Editions" on page 125](#). To find out what edition of ALM you are using, ask your ALM site administrator.

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

This section also includes:

- ["Baselines Overview" below](#)
- ["Pinned Test Sets" on page 196](#)

For task details, see ["How to Use Libraries and Baselines in ALM" on page 198](#).

Baselines Overview

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

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

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

- Compare baselines at all stages of the application development lifecycle. For example, you can compare two baselines in a library to assess the impact of changes made to requirements over time. You can then update the relevant tests in your project accordingly. You can also compare a baseline to the current entities in the library.
- Pin a test set to a baseline. This ensures that when you run the test set, the versions of the tests stored in a baseline you specify are run. For more details, see "[Pinned Test Sets](#)" on the next page.
- Use a baseline to share the entities in a library. This enables you to reuse the library's entities within your project, or in a different project. You share or reuse entities by importing a library. The library must contain a baseline. For details and limitations on importing libraries, see "[Imported Libraries Overview](#)" on page 224.

ALM Editions: Imported library functionality is available for ALM Edition and Performance Center Edition only. For more information about ALM editions and their functionality, see "[ALM Editions](#)" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.

Example: The following examples demonstrate how you can use baselines:

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

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

- **Monitor change**

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

- **Evaluate the impact of changes**

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

release. He identifies which changes affect tests he is working on, and updates the tests to reflect the changes.

Pinned Test Sets

Pinning a test set to a baseline associates the tests in that set with the versions stored in the baseline.

When you pin a test set to a baseline:

- Only the versions of the tests stored in the specified baseline are run
- Tests that are not a part of the baseline are removed from the pinned test set
- All test runs are deleted from the pinned test set
- Only tests that are included in the baseline can be selected when adding tests to the pinned test set

When you clear a pinned test set:

- The tests in the test set are then associated with the latest version of the tests in the Test Plan module
- All test runs in that test set are deleted

Why is this useful?

Pinning test sets to a baseline is useful in a testing environment where there is a time lag between the development of tests for a particular version, and the running of these tests. While one team is running tests on the current stable version, another team may already be updating the **Test Plan** module with tests for future versions. Pinning a test set to a baseline helps to ensure that the correct versions of the tests are run during test set execution.

The team running tests creates test sets in the **Test Lab** module by selecting and adding tests from the **Test Plan** tree. However, due to the time lag between the development and execution of tests, the **Test Plan** tree may already include tests that relate to future versions of the application - new tests or updated tests with new steps. If the latest versions of the tests are run, the tests will fail. By pinning a test set to a baseline associated with a particular version, testers can ensure that tests or test steps that are not part of the version being tested are removed from the test set.

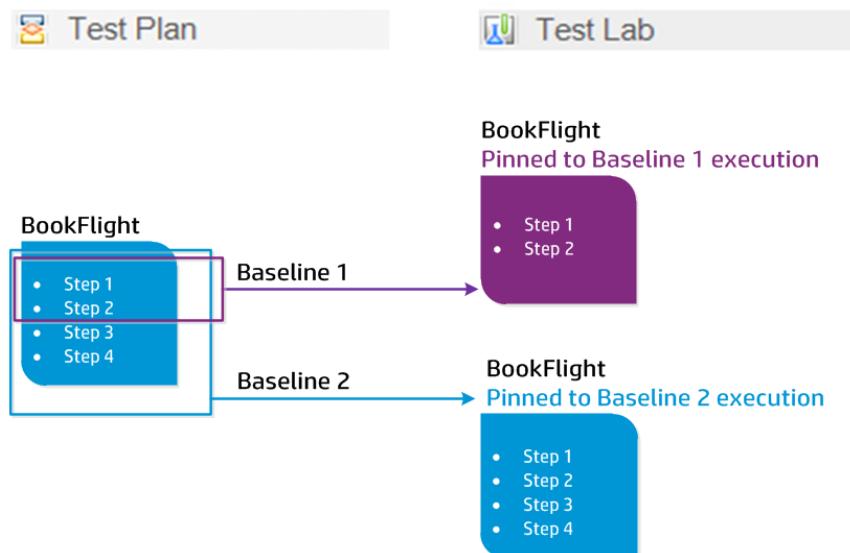
Pinning is particularly useful for automated functional testing, where function libraries are used. If a specific function library is included in many tests (for example Test 3 through to Test 100) but the function is still in development, running non-pinned versions of tests 3 through to 100 causes all these tests to fail.

Example: Jack, a test engineer, is designing tests to check the flight booking feature of the Mercury Tours website. In the **Test Plan** module, he creates the *BookFlight* test consisting

of two steps (step 1 and step 2).

As part of the next stage, the development team begins adding more functionality to the flight booking feature. To test this new functionality, Jack must update the *BookFlight* test with two more steps (step 3 and step 4.) Before updating the test, Jack creates a baseline (Baseline 1). In Baseline 1, *BookFlight* consists only of steps 1 and 2. Jack then proceeds to update the test with the two additional steps. The test with 4 steps will be saved in Baseline 2.

At the same time Alice, a QA tester, is testing the earlier version of the website that does not include the new functionality, as the development team is still working on this. The test set that she has created in the **Test Lab** module includes the *BookFlight* test that Jack has been updating. If she runs the latest *Bookflight* test with steps 3 and 4 included, the test will fail. To make sure that she runs the correct version of the test, Alice pins *Bookflight* to Baseline 1 before running the test. This removes steps 3 and 4 from the test.



For user interface details, see "["Select Baselines Dialog Box" on page 220](#)".

How to Use Libraries and Baselines in ALM

This task describes how to work with libraries and baselines.

To learn more about libraries and baselines, see "[Libraries Overview](#)" on page 194.

Note:

- **ALM Editions:** Quality Center Enterprise Edition does not include all Libraries module functionality. For more information about ALM editions and their functionality, see "["ALM Editions" on page 125](#)". To find out what edition of ALM you are using, ask your ALM site administrator.
- **Product Feature Movie:** To view a movie that demonstrates versioning and baselining capabilities, choose **Help > Movies** in the ALM main window.

This task includes the following steps:

- "[Create a library](#)" below
- "[Create a baseline](#)" on the next page
- "[Monitor library tasks - optional](#)" on the next page
- "[Compare baselines](#)" on the next page
- "[Pin a test set to a baseline](#)" on page 200
- "[View baseline history](#)" on page 201
- "[Share a library](#)" on page 201

1. Create a library

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

- a. **Open the Libraries module.** On the ALM sidebar, under **Management**, select **Libraries**.
- b. **Create folders.** Right-click the **Libraries** root folder and select **New Folder**. To create a sub-folder, right-click a folder and select **New Folder**.
- c. **Add libraries to folders.** Right-click a folder and select **Create Library**. In the New Library dialog box, fill in fields on the Details page. For user interface details, see "["New Library/Library Details Dialog Box" on page 208](#)".

On the **content** page, select entities to include in the library. For user interface details, see "["Content Tab" on page 209](#)".

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

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

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

2. Create a baseline

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

- a. In the Libraries module, right-click a library and select **Create Baseline**. For user interface details, see "[Create Baseline Wizard](#)" on page 211.
- b. Click the **View Log** button in the Details tab. The Log: Create Baseline dialog box opens and displays progress.

Note: When the process is complete, view the log before refreshing the display. If you refresh the display after the baseline is created, the **View Log** button is no longer displayed, and you cannot view the log.

For user interface details on the Libraries module window, see "[Libraries Module Window](#)" on page 202.

- c. Click the **Refresh** button on the module toolbar to refresh the display. The baseline details are displayed in the Details tab. For details on the available fields in the Details tab, see "[Libraries Module Fields](#)" on page 207.

3. Monitor library tasks - optional

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

On the ALM masthead, click  and select **Task Manager**. For user interface details, see "[Task Manager Dialog Box](#)" on page 41.

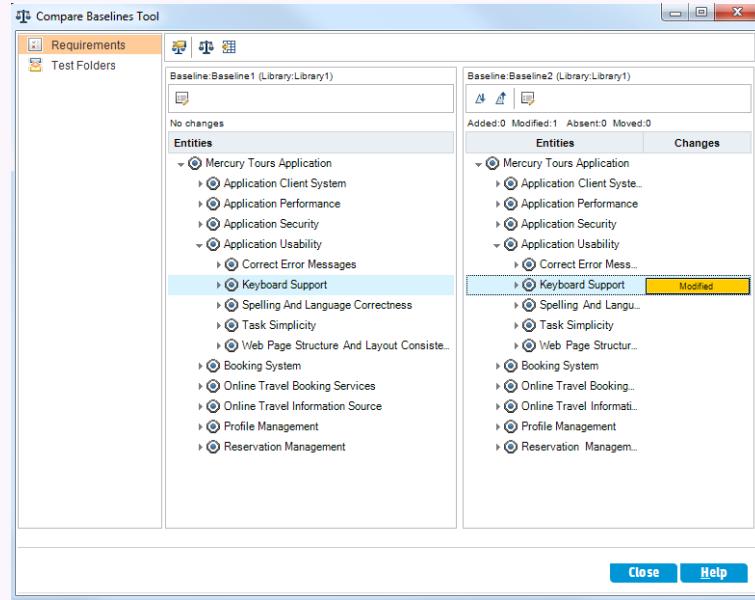
4. Compare baselines

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

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

For user interface details on the Compare Baselines Tool, see "[Compare Baselines Tool Dialog Box](#)" on page 213.
- b. To save the baseline comparison results in .csv file format, click the **Export Comparison Results** button . After saving, the file opens in the default application defined for opening .csv files on your computer, such as Microsoft Excel.

Example: Comparing two baselines that were created at different stages of development shows the following results:



5. Pin a test set to a baseline

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

- In the Test Lab module, right-click a test set and select **Pin to Baseline**. For user interface details on the Select Baseline dialog box, see "[Select Baselines Dialog Box](#)" on page 220.
- To clear a pinned baseline, right-click a test set and select **Clear Pinned Baseline**.

For concept details on pinned test sets, see "[Pinned Test Sets](#)" on page 196.

6. View baseline history

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

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

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

For user interface details on the Baselines tab, see "[Baselines Tab](#)" on page 219.

7. Share a library

Import a library to reuse an existing set of entities within a project or across multiple projects. As development continues, compare and synchronize libraries. For task details, see "[How to Share Libraries](#)" on page 227.

Libraries and Baselines User Interface

This section includes:

• Libraries Module Window	202
• Libraries Module Menus and Buttons	203
• Libraries Module Icons	206
• Libraries Module Fields	207
• New Library/Library Details Dialog Box	208
• Content Tab	209
• Create Baseline Wizard	211
• Compare Baselines Tool Dialog Box	213
• Compare Entities Dialog Box	216
• Comparison Settings Dialog Box	218
• Baselines Tab	219
• Select Baselines Dialog Box	220

Libraries Module Window

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

To access	On the ALM sidebar, under Management, select Libraries .
Important information	ALM Editions: Quality Center Enterprise Edition does not include all Libraries module functionality. For more information about ALM editions and their functionality, see " ALM Editions " on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.
Relevant tasks	<ul style="list-style-type: none"> • "How to Use Libraries and Baselines in ALM" on page 198 • "How to Share Libraries" on page 227
See also	"Libraries Overview" on page 194

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

UI Element	Description
<Libraries module common UI elements>	<ul style="list-style-type: none"> • Library fields. For field definitions, see "Libraries Module Fields" on page 207. • Library menus and buttons. For command and button descriptions, see "Libraries Module Menus and Buttons" on the next page. • Library icons. For icon descriptions, see "Libraries Module Icons" on page 206. • ALM masthead, menus, and sidebar. For details, see "ALM Common Areas" on page 30.
<Libraries tree>	A graphical representation of your libraries.
<Filter status bar>	Describes the filter currently applied to the tree. Located directly above the libraries tree.
Details tab	Describes the library folder, library, or baseline selected in the libraries tree.
content tab	Displays the entities included in the selected library. For details, see " Content Tab " on page 209.

UI Element	Description
Imported By tab	<p>Displays a list of projects that have imported the selected library. For more details, see "Imported By Tab" on page 234.</p> <p>ALM Editions: Available only for ALM Edition and Performance Center Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Imported From tab	<p>Displays details about the library from which the currently selected library was imported. This tab is visible only when the selected library is imported. For more details, see "Imported From Tab" on page 235.</p> <p>ALM Editions: Available only for ALM Edition and Performance Center Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Description tab	<p>A description of the currently selected library folder, library, or baseline.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>

Libraries Module Menus and Buttons

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

To access	On the ALM sidebar, under Management, select Libraries .
Important information	<p>Tip: You can access the menu bar from the Libraries module by pressing the shortcut key ALT.</p> <p>ALM Editions: Quality Center Enterprise Edition does not include all Libraries module functionality. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 198

See also	<ul style="list-style-type: none"> • "Libraries Module Icons" on page 206 • "Libraries Overview" on page 194
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User interface elements are described below:

UI Element	Menu	Description
New Folder 	Libraries	Opens the New Library Folder dialog box, enabling you to add a folder under a selected folder.
Create Library 	Libraries	Opens the Create Library dialog box, enabling you to add a library to a selected library folder. For more details, see " "New Library/Library Details Dialog Box" on page 208 ".
Import Library 	Libraries	Opens the Import Library Wizard, enabling you to import a library under a selected library folder. For more details, see " "Import Library Wizard" on page 231 ".
		<p>ALM Editions: Available only with ALM Edition and Performance Center Edition. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Create Baseline 	Libraries	Enables you to create a baseline for a selected library. For more details, see " "Create Baseline Wizard" on page 211 ".

UI Element	Menu	Description
Compare To 	Libraries	<p>Compares the currently selected library or baseline with other libraries or baselines. Includes the following options:</p> <p>For a selected library:</p> <ul style="list-style-type: none"> • Latest Baseline Created. Compares the selected library with the most recent baseline created in the other library. • Select Baseline. Opens the Select Baseline dialog box, enabling you to select a baseline in another library with which to compare. <p>For a selected baseline:</p> <ul style="list-style-type: none"> • Current Entities. Compares the selected baseline with the current entities in the library. • Select Baseline. Opens the Select Baseline dialog box, enabling you to select a baseline in the library with which to compare.
Library Details 	Libraries	<p>Opens the Library Details dialog box, enabling you to view and edit the details of the selected library. For details, see ""Libraries Module Window" on page 202.</p>
Cut/Paste 	Edit	<p>Moves a selected library folder or library to a different location in the libraries tree.</p> <div data-bbox="589 1205 1356 1320" style="background-color: #e0f2e0; padding: 10px;"> <p>Note: Moving a library folder also moves its libraries and baselines. Moving a library also moves its baselines. You cannot move a baseline or the root folder.</p> </div> <div data-bbox="589 1396 1307 1469" style="background-color: #e0f2e0; padding: 10px;"> <p>Tip: You can also move a library folder or a library to a new location in the libraries tree by dragging it.</p> </div>

UI Element	Menu	Description
Delete 	Edit	<p>Deletes selected library folders, libraries, or baselines.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note:</p> <ul style="list-style-type: none"> • You cannot delete a library folder that contains libraries, or delete a library that contains baselines. • Deleting a library or baseline does not delete the library's entities from your project. • If you delete a baseline, you can no longer compare between the baseline's library and another library that was imported from or synchronized with the baseline. • Deleting a baseline also deletes test sets pinned to the baseline. </div>
Rename	Edit	Renames a selected library folder, library, or baseline. You cannot rename the root folder.
Refresh 	View	Refreshes the libraries tree and tabs so that they display the most up-to-date information.
Filter 	View	Enables you to filter the libraries in the libraries tree. For more details, see " "Filter Dialog Box" on page 54 ".

Libraries Module Icons

This section describes the icons available in the Libraries module.

To access	On the ALM sidebar, under Management, select Libraries .
Important information	<p>ALM Editions: Quality Center Enterprise Edition does not include all Libraries module functionality. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p>
See also	<ul style="list-style-type: none"> • ""Libraries Module Menus and Buttons" on page 203 • ""Libraries Module Window" on page 202

User interface elements are described below:

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

Libraries Module Fields

This section describes the Libraries module fields.

To access	On the ALM sidebar, under Management, select Libraries .
Important information	<ul style="list-style-type: none"> You can add user-defined fields and change the label of any of the fields in the Details tab. You can also customize project lists. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. You can use the Script Editor to restrict and dynamically change the fields and values in the Libraries module. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. <p>ALM Editions: Quality Center Enterprise Edition does not include all Libraries module functionality. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 198
See also	"Libraries Overview" on page 194

The fields are described below:

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

New Library/Library Details Dialog Box

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

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

To access	New Library dialog box: In the Libraries module, right-click a library folder and select Create Library . Library Details dialog box: In the Libraries module, right-click a library and select Library Details .
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 198
See also	"Libraries Overview" on page 194

User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears the data. Available from: New Library dialog box

UI Element	Description
	Save. Saves the details.
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Name	The name you assign to the library. Syntax exceptions: A library name cannot include the following characters: \ / : * ? " < >
Details	Lists library fields. Required fields are displayed in red. For details on the available library fields, see " Libraries Module Fields " on page 207.
content	Enables you to select entities in your project to include in the library. For details, see " Content Tab " below.
Description	A description of the library. Clicking inside the Description field displays a toolbar for formatting and spell checking the text.
Library ID	A unique numeric ID for the library that ALM assigns automatically.

Content Tab

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

To access	Use one of the following: <ul style="list-style-type: none"> • In the Libraries module, select a library and click the content tab. • In the New Library dialog box or the Library Details dialog box, click content on the sidebar.
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Important information	When you select tests to include in a library, you do not need to select related entities that a test needs to run, such as its called tests and test resources. When you create a baseline for the library, ALM automatically includes those related entities in the baseline.
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 198
See also	"Libraries Overview" on page 194

User interface elements are described below:

UI Element	Description
Requirements	Requirements module content for the library.
Resources	Test Resources module content for the library.
Components	Business Components module content for the library.
Tests	<p>Test Plan module content for the library.</p> <p>Select an option for including tests in the library:</p> <ul style="list-style-type: none"> • Tests in selected folders. Enables you to select folders in the tree to include in the library. • Tests covering selected requirements. Includes only the tests that cover the requirements that are selected for the library. <div style="background-color: #e0f2e0; padding: 5px; margin-top: 10px;"> Note: Selecting this option clears any previous selection or filter defined in this tab. </div>
	Refresh. Refreshes the tab so that it displays the most up-to-date information.

UI Element	Description
	<p>Filter. Enables you to filter the entities in the tree.</p> <p>The filter determines the following:</p> <ul style="list-style-type: none"> the folders and records that are displayed and available for selection in the content tab the entities that are included when you create a baseline or import the library <p>Note: Creating a relative filter for a library, such as filtering by the Test Plan Path field, is not supported. If the library is then imported to create a new library, the baseline that is created automatically after import, which is the basis for future comparison and synchronization, is based on the relative filter and does not function properly within the imported library.</p>
<Filter status bar>	<p>Describes the filter currently applied to the tree. Located directly above the libraries tree.</p>
<Left pane>	<p>The entity tree for the selected module. Displays the folders that are available for selection.</p> <p>Select a folder to include it in the library. contents of the selected folder are displayed in the right pane.</p> <p>Note: In the Requirements tab, you can also select individual requirements.</p>
<Right pane>	<p>Displays the child entities of the selected folder. The contents displayed may change over time, according to changes made in the module.</p> <p>This pane is not displayed in the Requirements tab. All requirements are displayed in the tree in the left pane.</p>

Create Baseline Wizard

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

To access	In the Libraries module, right-click a library and select Create Baseline .
------------------	--

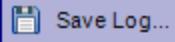
Wizard map	This wizard contains: "Baseline Verification Page" below > "New Baseline Page" on the next page
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 198
See also	"Baselines Overview" on page 194

Baseline Verification Page

This wizard page enables you to view and save results of the baseline verification process.

Important information	General information about this wizard is available here: "Create Baseline Wizard" on the previous page .
Wizard map	The "Create Baseline Wizard" on the previous page contains: "Baseline Verification Page" above > "New Baseline Page" on the next page
See also	"Baselines Overview" on page 194

User interface elements are described below:

UI Element	Description
 Save Log...	Saves the Baseline Verification log in a text file. Review the log and resolve any issues, if necessary, before continuing to create the baseline.
Verification results	Displays the results of the library size verification. The process checks that the size of the library does not exceed the limit defined in Site Administration. For more information, see the LIBRARY_FUSE parameter in the Site Configuration tab. See the <i>HPE Application Lifecycle Management Administrator Guide</i> for details.

New Baseline Page

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

Important information	<ul style="list-style-type: none">General information about this wizard is available here: "Create Baseline Wizard" on page 211.When you create a baseline for a library that includes tests, related entities that the tests need to run, such as their called tests and test resources, are also included in the baseline. These related entities do not need to be defined in the library.The baseline is created in a background process, and may take some time. You can continue working in ALM during baseline creation.
Wizard map	The " Create Baseline Wizard " on page 211 contains: "Baseline Verification Page" on the previous page > " New Baseline Page " above
See also	"Baselines Overview" on page 194

User interface elements are described below:

UI Element	Description
Baseline Name	The name you assign to the baseline.

Compare Baselines Tool Dialog Box

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

To access	In the Libraries module, right-click a baseline, click Compare To , and choose one of the following: <ul style="list-style-type: none">Select Baseline. Compares the baseline you selected with another baseline in the library. Opens the Select Baseline dialog box. Click the browse button to select a baseline from the list.Current Entities. Compares the baseline you selected with the current entities in the library.
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Important information	<ul style="list-style-type: none"> ALM does not consider changes made to Target Release and Target Cycle fields when determining whether an entity has been modified. If coverage or traceability between two entities was deleted and then added again, those entities are considered modified. Coverage of tests or requirements in the library by entities outside of the library is not considered when comparing baselines.
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 198
See also	"Baselines Overview" on page 194

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

UI Element	Description
<Sidebar>	Enables you to view comparison results for entities by module. For example, select Tests to view comparison results for the Test Plan module. The sidebar displays only the modules that are included in the library.
	Comparison Settings. Opens the Comparison Settings dialog box, enabling you to define settings for comparing baselines. For more details, see "Comparison Settings Dialog Box" on page 218 .
	Compare Entities. Opens a Compare Entities dialog box, enabling you to view details of the entity in each baseline. For details, see "Compare Entities Dialog Box" on page 216 .
	Export Comparison Results. Enables you to save the baseline comparison results in .csv file format. After saving, the file opens in the default application defined for opening .csv files on your computer, such as Microsoft Excel.
<Baseline identification bar>	Located at the top of each baseline pane, indicates the name of the baseline displayed in the pane below.
	Details. Opens a Details dialog box, enabling you to view details of the selected entity stored in the baseline. Select an entity and click the Details button. For example, select a requirement in one of the panes. The Requirement Details dialog box opens and displays details of the requirement in the baseline.

UI Element	Description
	Go to Next/Previous Change. Moves to the next/previous change for the selected module.
<Counter bar>	Located above each baseline pane, displays the number of entities that were added, modified, deleted, or moved, according to change status.
<Left pane>	Displays entities stored in the older baseline.
<Right pane>	Displays entities stored in the more recently created baseline or current entities.
Entities	Displays the library's entities in the same hierarchical structure as defined in the selected module.
Changes	<p>Indicates differences between the two baselines. Possible values include the following:</p> <ul style="list-style-type: none">• Added. The entity did not exist in the older baseline.• Modified. There is a difference in the entity between the baselines.• Absent. The entity does not exist in the newer baseline.• Moved. The entity is in a different location in the tree structure in the newer baseline.• Moved and Modified. The entity has changed and has been moved to a different location in the tree. <p>A deleted or moved entity is displayed in its original location in the tree, indicated by a placeholder. This maintains the hierarchical structure, enabling you to compare changes between baselines.</p>

Compare Entities Dialog Box

This page enables you to compare an entity between two baselines in a library, or between two libraries. In a version control enabled project, you can compare two versions of an entity.

To access	<p>Use one of the following:</p> <ul style="list-style-type: none">• In the Compare Baselines Tool or Compare Libraries Tool dialog box, select a modified entity and click the Compare Entities button.• In the History tab > Baselines tab, select two versions and click the Compare button.• Version Control: In the History tab > Versions tab, select two versions and click the Compare button. <p>Available from the following modules: Requirements, Business Components, Test Plan, Test Resources</p>
Important information	<ul style="list-style-type: none">• Changes made to Target Release and Target Cycle fields do not cause the fields to be marked as modified.• Version Control:<ul style="list-style-type: none">• Compare two versions of an entity in a version control enabled project.• Not all data and sidebar buttons are displayed. The data available depends on the information stored under version control. For more details, see "Version Control Overview" on page 110 and "Non-versioned Fields" on page 114.
Relevant tasks	<ul style="list-style-type: none">• "How to Use Libraries and Baselines in ALM" on page 198• "How to Use Version Control" on page 111
See also	"Baselines Overview" on page 194

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

UI Element	Description
View	Enables you to select a display option for results.
<Sidebar>	<p>Enables you to view additional comparison results. The buttons displayed depend on the type of entity you are comparing.</p> <p>Note: If you are comparing a UFT entity, the QTP Comparison button is displayed, enabling you to open the QuickTest Asset Comparison Tool. For more information on working with UFT, refer to the <i>HPE Unified Functional Testing User Guide</i>.</p>
Changes	<p>Indicates a modified field.</p> <p>Note:</p> <ul style="list-style-type: none"> • Version Control: Changes to some fields are not stored under version control. For more details, see "Non-versioned Fields" on page 114. • For traceability and coverage, if a linked entity is marked as both Deleted and Added, or is displayed as Missing on both sides, this can indicate that the link between the entities was deleted and then added.
<Results grid>	Displays fields and the field value stored in each version of the entity. Indicates each field whose value has changed.
Comments tab	Enables you to compare the contents of the Comments field stored in each version.
Rich Text tab	Enables you to compare rich text. Each pane in the Rich Text tab indicates if rich text has been added, deleted, or modified for the relevant entity version. You can open or save the rich text as a file to view and compare changes.
Attachments tab	Enables you to compare attachments stored in each version. The Changes column indicates if an attachment has been added, deleted, or modified. You can open or save an attachment to view and compare changes.

Comparison Settings Dialog Box

This page enables you to define settings for comparing libraries or baselines. You can select which fields ALM considers when determining whether an entity has been modified.

To access	In the Compare Baselines Tool or Compare Libraries Tool, click the Comparison Settings button  .
Important information	ALM does not consider changes made to Target Release and Target Cycle fields when determining whether an entity has been modified.
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 198
See also	<ul style="list-style-type: none"> • "Compare Baselines Tool Dialog Box" on page 213 • "Compare Libraries Tool Dialog Box" on page 236

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

UI Element	Description
<Module tabs>	Enable you to configure comparison settings per module. The Comparison Settings dialog box displays tabs for modules included in the library.
Ignored Fields	ALM does not display the entity as modified based on changes made to fields in this box.
	Moves selected fields between Ignored Fields and Considered Fields . Tip: You can also drag the field names between panes or double-click a field name to move it across to the other pane.
	Moves all fields between Ignored Fields and Considered Fields .
Considered fields	ALM displays the entity as modified based on changes made to fields in this box.

UI Element	Description
Additional considered fields	Instructs ALM to consider the entity as modified based on changes made to the selected fields. Note: To instruct ALM to ignore coverage, you must clear the Coverage check box in the Requirements tab.

Baselines Tab

This view displays baseline history for a selected entity. You can view and compare all versions of the entity that are stored in a baseline.

To access	Select an entity in the tree or grid, and click History tab > Baselines tab. Available from the following modules: Requirements, Business Components, Test Plan, Test Resources.
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 198
See also	"Baselines Overview" on page 194

User interface elements are described below:

UI Element	Description
Baseline	The name of the baseline in which the entity is stored.
Library	The library for which the baseline was created.
Date	The date the baseline was created.
Created By	The name of the user who created the baseline.
Version	The version number of the entity stored in the selected baseline. Available in version control enabled projects only.

UI Element	Description
View	<p>Opens a Details dialog box, displaying read-only details for the version of the entity stored in the selected baseline. Select an option on the sidebar to view additional information, such as Test Coverage and Attachments. The buttons displayed depend on the type of entity selected in the tree or grid.</p> <p>Note: If you are viewing information for a UFT GUI test, clicking the Test Script button opens the test in a UFT viewer, enabling you to view the test or open the test in UFT. For more information, refer to the <i>HPE Unified Functional Testing User Guide</i>.</p>
Compare	<p>Opens the Compare Entities dialog box, enabling you to compare two selected baseline versions. For details, see "Compare Entities Dialog Box" on page 216.</p> <p>To compare two baseline versions, press the CTRL key and select the versions. Then click the Compare button.</p>
Description for selected baseline	<p>The description typed by the user when creating the baseline.</p>

Select Baselines Dialog Box

This dialog box enables you to pin a test set to a baseline. This associates the tests in the test set with the tests stored in a baseline that you specify. When you run a test set that is pinned to a baseline, ALM runs the versions of the tests that are stored in the specified baseline.

To access	In the Test Lab module, right-click a test set and select Pin to Baseline .
Important information	<ul style="list-style-type: none"> A pinned test set can include only tests that are included in the baseline. When you pin a test set, ALM removes tests that are not included in the baseline from the test set. A pinned test set is displayed with the pinned test set icon  in the test set tree. When you pin a test set, ALM deletes all test runs from the test set.
Relevant tasks	"How to Use Libraries and Baselines in ALM" on page 198
See also	"Pinned Test Sets" on page 196

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

UI Element	Description
	Show Baseline Details. Opens the Baseline Details dialog box for the selected baseline in read-only mode.
	Refresh. Refreshes the libraries tree so that it displays the most up-to-date information.
	Filter/Sort. Enables you to filter the data according to the criteria that you choose. For more details, see " "Filter Dialog Box" on page 54 ".
<Find box>	Enter the name of the library you want to search for and click the Find button.
	Find. Searches the libraries tree for the value you specify in the Find box.
	Go to Baseline by ID. Opens the Go to Baseline dialog box, enabling you to locate the baseline in the tree according to Baseline ID.
<Libraries tree>	Enables you to select a baseline from the libraries tree.

Chapter 11: Imported Libraries

This chapter includes:

• Imported Libraries Overview	224
• How to Share Libraries	227
• Imported Libraries User Interface	230
• Troubleshooting and Limitations	240

Imported Libraries Overview

ALM Editions: Imported libraries functionality is available for ALM Edition and Performance Center Edition. For more information about ALM editions and their functionality, see "["ALM Editions" on page 125](#)". To find out what edition of ALM you are using, ask your ALM site administrator.

Importing a library enables you to share or reuse an existing set of entities in projects across your enterprise. You import a library by selecting a baseline in another library from which to import. You can import a library from the same project, or from a different project.

When you import a library, the library is added to your libraries tree, and the library's entities are copied to the corresponding modules in your project. If the library includes associated entities, such as requirements that have test coverage, this relationship is also copied. In addition, any related entities outside of the library that the tests in the library need in order to run are also imported, such as called tests and test resources.

Notes:

- You cannot import a library from a Unicode project to an ASCII project.
- **Business Process Testing:** After importing a library, do not change the content of either the existing source library from which a baseline is synchronized, or the target library to which a baseline is synchronized. This could result in a failure when synchronizing a baseline that includes Business Process Testing entities.

You can compare associated libraries at all stages of the application development lifecycle. For example, you can compare an imported library with the source library from which it was imported. When changes are made to entities in a library, you can synchronize libraries to update the entities in an associated library.

Importing and synchronizing libraries requires appropriate user permissions. For details, see "["How to Share Libraries" on page 227](#)".

Note: You can also share defects across multiple ALM projects. You share and synchronize defects using the HP ALM Synchronizer. For more information, see the *HP ALM Synchronizer User Guide*, available from the HPE Application Lifecycle Management Add-ins Page.

This section also includes:

- "["Library Synchronization Overview" on page 226](#)
- "["Library Verification" on page 227](#)

For related task details, see ["How to Share Libraries" on page 227](#).

Example: Imported Library Examples

The following examples demonstrate how you can use libraries.

- **Reuse requirements and tests for a new release.**

While developing a new application, you create a library that includes all the entities in your project that are relevant to the application. After work is complete, you release the new application. As you are about to begin work on the next version, you can import the library, and start making adjustments to requirements and tests to meet the needs of the new version.

- **Create a set of requirements, tests, and resources for use by multiple applications.**

Your project contains requirements in the Requirements module that are relevant to an application you are developing. The project also contains tests in the test plan module that you developed to test those requirements. In addition, you have created relationships between the requirements and tests, such as traceability and coverage. You can create a library that represents the application. Then import this library as a self-contained component of other applications.

- **Update imported libraries with changes made in the source library.**

A library in your project includes requirements and tests for a calculator application. Multiple other projects have imported the library, and are using the application's requirements and tests in other applications they are developing. The business analyst has revised some requirements for the calculator application. To update the imported libraries with these changes, you can synchronize the imported libraries with the source library.

- **Update a source library with developments in an imported library.**

A tester works with an imported library that contains a set of regression tests for the banking application currently in development. During testing, she develops new tests to test the added functionality in the new version of the banking application. When testing is complete, the tester wants to update the regression tests in the source library. The source library can be synchronized with the imported library to update the tests for future testing needs.

Library Synchronization Overview

You can synchronize two associated libraries to update one library with changes made in another library. You can update an imported library with changes made in the source library. You can also update a source library with changes made in the imported library.

Note: You cannot synchronize a library in a Unicode project with a library in an ASCII project.

During synchronization, data from the other library's baseline is copied to your library. The following table summarizes how the entities in your library are updated:

Event in Source Library	Event in Your Library
An entity was added	The entity is added.
An entity was modified	The entity is updated. If the entity was modified in both libraries, the entity in your library is overwritten. Version Control: A new version is created.
An entity was deleted	A new folder is created and the deleted entity is moved to the new folder. The new folder is named <code>SYNC_OBSOLETE_<library_id>_<current_date></code> and is located under the module's root folder.
An entity was moved	The entity and its children are moved.

Entities in a library must not be edited during synchronization. If entities in your library are being edited by another user during the synchronization process, synchronization cannot complete successfully.

Version Control: All entities in your library must be checked in before synchronization. If an entity in your library is checked out, synchronization cannot complete successfully.

After you synchronize libraries, a baseline is automatically created for the updated library. This baseline is the basis for comparing the libraries at any point in time and should not be deleted.

For related task details, see "[How to Share Libraries](#)" on the next page.

Library Verification

When you import a library, or synchronize libraries, the library is first verified. The verification process includes the following checks:

- **Requirement type check.** Checks that your project contains the necessary requirement types. If the source library contains customized requirement types, your project must contain the same requirement types. For more information on customized requirement types, see *HPE Application Lifecycle Management Administrator Guide*.
- **Entities compatibility check.** Checks that your project has the necessary extensions enabled. If the source project has an extension enabled, and the source library includes entities for that extension, your project must also have that extension enabled. For more information on extensions, see *HPE Application Lifecycle Management Administrator Guide*.
- **Library size check.** Checks that the number of entities in the library does not exceed the maximum defined by the **LIBRARY_FUSE** configuration parameter in Site Administration. For more information, see the *HPE Application Lifecycle Management Administrator Guide*.

How to Share Libraries

This task describes how to share libraries between projects or within a project.

To learn more about sharing libraries, see "[Imported Libraries Overview](#)" on page 224.

ALM Editions: Imported libraries functionality is available for ALM Edition and Performance Center Edition. For more information about ALM editions and their functionality, see "[ALM Editions](#)" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.

This task includes the following steps:

- "[Prerequisites](#)" below
- "[Import a library](#)" on the next page
- "[Compare libraries](#)" on the next page
- "[Synchronize libraries](#)" on page 229
- "[Monitor library tasks](#)" on page 230

1. Prerequisites

- To import and synchronize libraries, you must have the appropriate Library module user permissions, as well as **Create** and **Update** permissions for the entity types you are importing. In addition to these permissions, synchronizing libraries requires **Delete** permissions for the entity types in the library. For more information on Library module permissions, refer to the *HPE Application Lifecycle Management Administrator Guide*.

- Verify that a baseline has been created for the library you want to import. For task details, see "[How to Use Libraries and Baselines in ALM](#)" on page 198.
- **Business Process Testing:** Before importing a project with application areas to another project, make sure you have connected to the destination project at least one time from within Unified Functional Testing. For instructions, see the *HPE Unified Functional Testing User Guide*.

2. Import a library

Import an existing library to your libraries tree to reuse a set of entities in your project or from a different project.

Business Process Testing: After importing a library, do not change the content of either the existing source library from which a baseline is synchronized, or the target library to which a baseline is synchronized. This could result in a failure when synchronizing a baseline that includes Business Process Testing entities.

- a. In the Libraries module, right-click a library folder and select **Import Library**. For user interface details on the Import Library wizard, see "[Import Library Wizard](#)" on page 231.

Business Process Testing: When importing libraries, components in the **Obsolete** and **Component Requests** folders are not included in the process.

- b. Click the **View Log** button in the Details tab. The Log: Import Library dialog box opens and displays progress.

Note: When the process is complete, view the log before refreshing the display. If you refresh the display after the library is imported, the **View Log** button is no longer displayed, and you cannot view the log.

For user interface details on the Libraries module window, see "[Libraries Module Window](#)" on page 202.

- c. Click the **Refresh** button on the module toolbar to refresh the display. The library details are displayed in the Details tab. For details on the available fields in the Details tab, see "[Libraries Module Fields](#)" on page 207.

3. Compare libraries

Compare libraries to review changes made to entities in your projects over time.

- a. In the libraries tree, right-click a library and select **Compare To**. Select a library with which to compare, and choose one of the following:

- **Latest Baseline Created.** Compare the library with the most recent baseline created in the other library.
- **Select Baseline.** Select a baseline in the other library with which to compare. Opens the Select Baseline dialog box. Click the browse button to select a baseline from the list.

Available for: A source library or an imported library.

For user interface details on the Compare Libraries Tool, see "[Compare Libraries Tool Dialog Box](#)" on page 236.

- b. Click the **Export Comparison Results** button  to save the library comparison results in .csv file format. After saving, the file opens in the default application defined for opening .csv files on your computer, such as Microsoft Excel.

4. Synchronize libraries

Synchronize libraries to update your library with changes made in another associated library. You can update an imported library with changes made in the source library. You can also update a source library with changes made in the imported library.

- a. In the libraries tree, select the library that you want to update. Using the Compare Libraries Tool, compare the library by selecting a baseline in the other library with which to synchronize. For user interface details on the Compare Libraries Tool, see "[Compare Libraries Tool Dialog Box](#)" on page 236.

- b. In the Compare Libraries Tool, click the **Synchronize** button . The Library Verification dialog box opens, displaying the verification results.

For user interface details on the Library Verification dialog box, see "[Library Verification Dialog Box](#)" on page 239.

For concept details on library verification, see "[Library Verification](#)" on page 227.

- c. Click **Continue** to start the synchronization. The data is copied from the other library's baseline to your library.

If the baseline includes an entity type that it did not contain at the time of import, a parent folder is created in your project. For example, you imported a library containing only tests, and defined a target root folder for the Test Plan module only. Later, requirements were added to the source library. During synchronization, a new folder is created in the Requirements module in your project, under the Requirements root folder, to store the newly imported requirements.

- d. Close the Compare Libraries Tool dialog box. Synchronization continues in a background process, and may take some time. You can continue working in your project during the synchronization process.
- e. Click the **View Log** button in the Details tab. The Log: Synchronize Libraries dialog box opens and displays progress.

For user interface details on the Libraries module window, see "[Libraries Module Window](#)" on page 202.

- f. Click the **Refresh** button on the module toolbar to refresh the display. When the process completes, the **Last Synchronization** date is updated in the Imported By or Imported From tab.

5. Monitor library tasks

When you import or synchronize libraries, these tasks are performed in the background, enabling you to continue working in your project while the processes are running. You can view the status and progress of all asynchronous tasks for the project using the Task Manager.

On the ALM masthead, click  and select **Task Manager**. For user interface details, see "[Task Manager Dialog Box](#)" on page 41.

Imported Libraries User Interface

This section includes:

• Import Library Wizard	231
• Imported By Tab	234
• Imported From Tab	235
• Compare Libraries Tool Dialog Box	236
• Library Verification Dialog Box	239

Import Library Wizard

This wizard enables you to import a library to share and reuse an existing set of entities. You import a library by selecting a baseline in another library from which to import. You can import a library from the same project or from a different project.

To access	In the Libraries module, right-click a library folder and select Import Library .
Important information	<ul style="list-style-type: none">Importing libraries requires appropriate user permissions, including: Import library, Capture baseline, and Create and Update permissions for the entity types you are importing. For more information on user permissions, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.After you import a library, a baseline is automatically created for the new library in your project. This baseline is the basis for comparing the libraries at any point in time and should not be deleted. <div style="background-color: #e0f2e0; padding: 10px;"><p>ALM Editions: Imported libraries functionality is available for ALM Edition and Performance Center Edition. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p></div>
Relevant tasks	"How to Share Libraries" on page 227
Wizard map	This wizard contains: "Select a Baseline Page" below > "Library Verification Page" on the next page > "Select Target Root Folders Page" on page 233
See also	<ul style="list-style-type: none">"Imported Libraries Overview" on page 224"Libraries Overview" on page 194"Troubleshooting and Limitations" on page 240

Select a Baseline Page

This wizard page enables you to select a baseline in the library you are importing.

Important information	General information about this wizard is available here: " "Import Library Wizard" above ".
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Wizard map	The "Import Library Wizard" on the previous page contains: "Select a Baseline Page" on the previous page > "Library Verification Page" below > "Select Target Root Folders Page" on the next page
See also	"Baselines Overview" on page 194

User interface elements are described below:

UI Element (A - Z)	Description
Description	A description of the library you are importing.
Domain	The domain in which the library you are importing is located.
From Current Project	Enables you to import a library from the project in which you are working.
From Project	Enables you to select a domain and project from which to import a library. Note: ASCII projects can only import libraries from ASCII projects.
Project	The project in which the library you are importing is located.
Select a Baseline	Enables you to select a baseline from which to import the library. Click the browse button to display the libraries tree in the selected project. Only libraries that can be imported are displayed. You cannot import an imported library.

Library Verification Page

This wizard page enables you to view results of the library verification process.

Important information	<ul style="list-style-type: none"> General information about this wizard is available here: "Import Library Wizard" on the previous page. If any of the verification checks have the status Failed, you cannot proceed with the import process. Click Cancel.
Wizard map	The "Import Library Wizard" on the previous page contains: "Select a Baseline Page" on the previous page > "Library Verification Page" above > "Select Target Root Folders Page" on the next page
See also	"Library Verification" on page 227

User interface elements are described below:

UI Element	Description
Verification Results	Displays the verification results and the list of fields to be imported. The import process can continue if all verification checks have the status Passed .

Select Target Root Folders Page

This wizard page enables you to select a location in your project for each of the root folders you are importing.

Important information	<ul style="list-style-type: none"> General information about this wizard is available here: "Import Library Wizard" on page 231. You cannot import a library under the same previously imported library. For more details, see "Troubleshooting and Limitations" on page 240. The library is imported in a background process, and may take some time. You can continue working in your project during the import process.
Wizard map	<p>The "Import Library Wizard" on page 231 contains:</p> <p>"Select a Baseline Page" on page 231 > "Library Verification Page " on the previous page > "Select Target Root Folders Page" above</p>

User interface elements are described below:

UI Element (A - Z)	Description
Description	A description for the library. By default, if the source library and baseline contain descriptions, the descriptions are displayed.
Name	The name of the library. By default, the name of the library from which you are importing is displayed with the suffix _Imported .

UI Element (A - Z)	Description
Select Target Root Folders	<p>The location in your project for each of the imported folders. For example, in the Requirement Root Folder box, specify a location for the imported requirements. All of the requirement folders defined in the library are imported under the requirement folder you specify. Click the browse button to display the requirements tree in your project. Select a folder or create a new folder for the imported requirements.</p> <p>Note: If the library you are importing contains tests, the baseline automatically includes related entities that the tests need to run, such as test resources. In this case, the Resource Root Folder box is also displayed, enabling you to select a target folder for the imported test resources.</p>

Imported By Tab

This tab displays a list of projects that imported a selected library.

To access	Select a library in the libraries tree and click the Imported By tab.
Important information	<p>You can rearrange columns in the grid by dragging the column headers.</p> <p>ALM Editions: Imported libraries functionality is available for ALM Edition and Performance Center Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Share Libraries" on page 227

User interface elements are described below:

UI Element	Description
	Refresh. Refreshes the tab so that it displays the most up-to-date information.
	Send mail. Sends an email with details about the selected library. For more details, see " Send E-mail Dialog Box " on page 76.

UI Element	Description
	<p>Compare To. Compares the source library selected in the libraries tree with a library that imported the source library.</p> <p>Select an imported library in the grid and click Compare To. Select a baseline in the imported library with which to compare.</p>
Domain	The domain in which the imported library is located.
Project	The name of the project that imported the library.
Library Name	The name of the imported library.
Source Baseline Name	The initial value indicates the name of the baseline in the source project from which the selected library was imported. After synchronization, indicates the name of the baseline in the source project with which the selected library was synchronized.
Import Date	The date the library was imported.
Last Synchronization	The date of the most recent synchronization of the imported and source libraries.
Library Owner	The user name of the person who imported the library.

Imported From Tab

This tab displays details of the source library from which a selected library is imported.

To access	Select an imported library in the libraries tree and click the Imported From tab. This tab is visible only when the selected library is imported.
Important information	ALM Editions: Imported libraries functionality is available for ALM Edition and Performance Center Edition. For more information about ALM editions and their functionality, see " ALM Editions " on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.
Relevant tasks	"How to Share Libraries" on page 227

User interface elements are described below:

UI Element	Description
	Send Mail to Owner. Sends an email to the source library owner. For more details, see " Send E-mail Dialog Box " on page 76.
	Compare To Source. Compares the selected library with the library from which it was imported. Select a baseline in the source library with which to compare.
Domain	The domain in which the source project is located.
Project	The name of the source project.
Library Name	The name of the library in the source project.
Baseline Name	The name of the baseline in the source project from which the project was imported.
Last Synchronization	The date of the most recent synchronization of the imported and source libraries. When the library is first imported, the value of this field is N/A .
Source Library Owner	The user name of the person who created the library in the source project.

Compare Libraries Tool Dialog Box

This dialog box enables you to compare two associated libraries. You can compare an imported library with the source library from which it was imported.

To access	<p>In the libraries tree, right-click a library and select Compare To. Select a library with which to compare, and choose one of the following:</p> <ul style="list-style-type: none"> • Latest Baseline Created. Compare the library with the most recent baseline created in the other library. • Select Baseline. Select a baseline in the other library with which to compare. Opens the Select Baseline dialog box. Click the browse button to select a baseline from the list. <p>Available for: a source library or an imported library</p>
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Important information	<ul style="list-style-type: none"> Changes made to Target Release and Target Cycle fields are not considered when determining whether an entity has been modified. If coverage or traceability between two entities was deleted and then added again, those entities are considered modified. Coverage of tests or requirements in the library by entities outside of the library is not considered when comparing libraries. <p>ALM Editions: Imported libraries functionality is available for ALM Edition and Performance Center Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Share Libraries" on page 227
See also	"Library Synchronization Overview" on page 226

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

UI Element	Description
<Sidebar buttons>	Enable you to view comparison results for entities by module. For example, click the Tests button to view comparison results for the Test Plan module. The sidebar displays only the modules that are included in the library.
	Comparison Settings. Opens the Comparison Settings dialog box, enabling you to define settings for comparing libraries. For more details, see " Comparison Settings Dialog Box " on page 218.
	Compare Entities. Opens a Compare Entities dialog box, enabling you to view details of the entity in each library. For details, see " Compare Entities Dialog Box " on page 216.
	Synchronize. Updates your library, displayed in the left pane, with changes indicated in the baseline displayed in the right pane. For more details, see " Library Synchronization Overview " on page 226.
	Note: Synchronizing libraries requires the appropriate user permissions. For details, see " How to Share Libraries " on page 227.

UI Element	Description
<Sidebar buttons>	<p>Enable you to view comparison results for entities by module. For example, click the Tests button to view comparison results for the Test Plan module.</p> <p>The sidebar displays only the modules that are included in the library.</p>
	<p>Export Comparison Results. Enables you to save the library comparison results in .csv file format. After saving, the file opens in the default application defined for opening .csv files on your computer, such as Microsoft Excel.</p>
<Identification bar>	<p>Located at the top of each pane, indicates the name of the library or baseline displayed in the pane below.</p>
	<p>Go to Next/Previous Change. Moves to the next/previous change for the selected module.</p>
	<p>Details. Opens a Details dialog box, enabling you to view details of the selected entity.</p> <p>Select an entity and click the Details button.</p> <p>For example, select a requirement in one of the panes. The Requirement Details dialog box opens and displays details of the requirement in the selected library or baseline.</p>
<Counter bar>	<p>Located above each pane, displays the number of entities that were added, modified, deleted, or moved, according to change status.</p>
<Left pane>	<p>Displays the library you selected in the libraries tree.</p>
Entities	<p>Displays the library's entities in the same hierarchical structure as defined in the selected module.</p>

UI Element	Description
<Sidebar buttons>	<p>Enable you to view comparison results for entities by module. For example, click the Tests button to view comparison results for the Test Plan module.</p> <p>The sidebar displays only the modules that are included in the library.</p>
Changes	<p>Indicates differences between the two libraries. Possible values include the following:</p> <ul style="list-style-type: none"> • Added. The entity does not exist in the other library. • Modified. The entity has been modified in the library. • Absent. The entity does not exist in the library. • Moved. The entity is in a different location in the tree structure in the library. • Moved and Modified. The entity has changed and has been moved to a different location in the tree. <p>A deleted or moved entity is displayed in its original location in the tree, indicated by a placeholder. In addition, a placeholder is displayed in the tree where an entity was added in the other library. This maintains the hierarchical structure, enabling you to compare changes between the libraries.</p>
<Right pane>	Displays the baseline in the library with which you are comparing.

Library Verification Dialog Box

This dialog box enables you to view results of the library verification process when synchronizing libraries.

To access	In the Compare Libraries Tool dialog box, click the Synchronize button.
Important information	<p>If any of the verification checks have the status Failed, you cannot proceed with the synchronization. Click Cancel.</p> <p>ALM Editions: Imported libraries functionality is available for ALM Edition and Performance Center Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Share Libraries" on page 227
See also	"Library Verification" on page 227

User interface elements are described below:

UI Element	Description
Verification Results	Displays the verification results and the list of fields to be imported. The synchronization process can continue only if all verification checks have the status Passed .
Continue	Starts the synchronization process. The data is copied from the other library's baseline to your library. Synchronization continues in a background process, and may take some time. To continue working in your project during the synchronization process, close the Compare Libraries Tool dialog box.

Troubleshooting and Limitations

You cannot import a library under the same previously imported library. This applies in the requirements, test plan, or test resources tree.

For example, in the requirements tree, the Travel Application folder is an imported library. If you want to import the Travel Application library again, you cannot define the Travel Application folder or any of its child folders as the root folder for the requirements in the library.

Part 3: Requirements

Chapter 12: Introducing Requirements

This chapter includes:

- Requirements Overview 244
- How to Use Requirements in ALM 244

Requirements Overview

Requirements describe in detail what needs to be solved or achieved to meet the objectives of your application under development. Clearly and correctly defining requirements at the front end of a project provides the following advantages:

- Provides guidelines of what the priorities are to stakeholders
- Sets clear expectations among stakeholders
- Cuts waste and eliminates unnecessary expenditure

The Requirements module enables you to define, manage and track requirements at all stages of the application lifecycle management.

For task details, see "[How to Use Requirements in ALM](#)" below.

How to Use Requirements in ALM

This task describes how to create and manage requirements in ALM.

To learn more about requirements, see "[Requirements Overview](#)" above.

Note: This task is part of a higher-level task. For details, see "[Introducing ALM](#)" on page 22.

This task includes the following steps:

- "[Prerequisites](#)" below
- "[Create requirements](#)" on the next page
- "[Import business process models](#)" on the next page
- "[Trace requirements](#)" on the next page
- "[Calculate risk](#)" on the next page
- "[Create coverage](#)" on the next page
- "[Link to defects](#)" on page 246
- "[Assign to releases](#)" on page 246
- "[Analyze requirements](#)" on page 246
- "[Establish baseline](#)" on page 246

1. Prerequisites

Determine the requirements scope by gathering information such as functional and technical specifications, marketing and business requirements documents, and stakeholders goals.

Example: Some questions you may want to ask are:

- What is the main purpose and direction of the application?
- What are the critical constraints of the application?
- What are the major features of the application?
- What is the relative importance of each element in the application functionality?
- What are the critical or high-risk functions of the application?
- What are your business or testing priorities?
- Do your customers/end-users agree with your priorities?
- What are your overall quality goals?

2. Create requirements

Define a hierarchical framework for your requirements scope by creating a requirements tree.

Define different groups of requirements in the requirements tree. For each requirement group, you create a list of detailed requirements in the requirements tree. Each requirement in the tree can include any relevant attachments and rich text documents.

You then assign the requirement a priority level which can be taken into consideration when creating the test plan.

For task details, see "[How to Create Requirements](#)" on page 248.

3. Import business process models

If you work with business process models, you can create a framework of requirements by importing models created with standard modeling tools. The Business Models module enables you to analyze the quality of your business process models and business flows. For task details, see "[How to Work with Business Process Models](#)" on page 316.

4. Trace requirements

You can add traceability between the requirements. When analyzing the impact of a change proposed in a specific requirement, traceability shows the other requirements that the change might affect. For task details, see "[How to Trace Requirements](#)" on page 280.

To determine the completeness of the relationships between your requirements, you can generate a traceability matrix. For task details, see "[How to Use the Traceability Matrix](#)" on page 288.

5. Calculate risk

Use risk-based quality management to calculate at which level to test each requirement, based on the nature of the requirement and the resources you have available. For task details, see "[How to Assess Risk](#)" on page 300.

6. Create coverage

Create coverage between your requirements and tests to ensure that all requirements are implemented in the project. For task details, see "[How to Create Coverage](#)" on page [418](#).

You can also create coverage by converting requirements to tests in the test plan tree. Coverage is automatically created between the requirements and their corresponding tests. For task details, see "[How to Create Requirements](#)" on page [248](#).

7. Link to defects

You can link a requirement to specific defects. This is useful, for example, when coverage is created between requirements and tests. Linking defects can help you ensure compliance with your requirements and testing needs. If a requirement changes, you can immediately identify which tests and defects are affected, and who is responsible.

For user interface details, see "[Linked Defects/Entities Page](#)" on page [801](#).

8. Assign to releases

Assign requirements to releases or cycles defined in the releases tree in the Releases module.

- **Assign to release.** Right-click a requirement and select **Assign to Release**. For user interface details, see "[Select Releases Dialog Box](#)" on page [156](#).
- **Assign to cycle.** Right-click a requirement and select **Assign to Cycle**. For user interface details, see "[Select Cycles Dialog Box](#)" on page [155](#).

9. Analyze requirements

Review your requirements to ensure that they meet the defined requirements scope. After a requirement is approved, you change the status of a requirement from **Not Reviewed** to **Reviewed**.

To help review the requirements, you can generate reports and graphs. For task details, see "[How to Analyze Data in ALM](#)" on page [810](#).

10. Establish baseline

Create a baseline to sign off on or compare significant milestones in your application lifecycle. For task details, see "[How to Use Libraries and Baselines in ALM](#)" on page [198](#).

Chapter 13: Requirements Specification

This chapter includes:

- Requirements Specification Overview 248
- How to Create Requirements 248
- Requirements User Interface 249

Requirements Specification Overview

Requirements are recorded in the Requirements module by creating a requirements tree. The **requirements tree** is a graphical representation of your requirements specification, displaying the hierarchical relationship between different requirements. The tree includes different groups of requirements based either on requirement type or functional area.

For each requirement group, you create a list of detailed requirements in the requirements tree. Each requirement in the tree is described in detail and can include any relevant links and attachments.

After creating a requirements tree, the requirements can be used as a basis for defining tests in your test plan tree.

For task details, see "[How to Create Requirements](#)" below.

How to Create Requirements

This task describes how to define and update your requirements in the Requirements module. After you have created a requirements tree, you can use the requirements as a basis for defining the tests in your test plan tree.

To learn more about creating requirements, see "[Requirements Specification Overview](#)" above.

Note: Higher-level task: This task is part of a higher-level task. For details, see "[How to Use Requirements in ALM](#)" on page 244.

This task includes the following steps:

- "[Create requirements](#)" below
- "[Import requirements - optional](#)" on the next page
- "[Update requirements](#)" on the next page
- "[Convert requirements to tests - optional](#)" on the next page

1. Create requirements

- a. **Open the Requirements module.** On the ALM sidebar, under **Requirements**, select **Requirements**. In the **View** menu, select **Requirements Tree**.

For user interface details on the Requirements module, see "[Requirements Module Window](#)" on page 250.

- b. **Create folders.** Click the **Requirements** root folder and select **New Folder**. To create a sub-folder, click a folder and select **New Folder**. In the New Requirement Folder dialog box, type a folder name.

- c. **Add requirements.** Right-click a requirement folder and select **New Requirement**. To

create a sub-requirement, right-click a requirement and select **New Requirement**. For user interface details, see "[New Requirement Dialog Box](#)" on page 272.

2. Import requirements - optional

In addition to creating requirements directly in ALM, you can also import requirements to your ALM project from Microsoft Word or Microsoft Excel. To import requirements, you must first install the appropriate add-in. For more information, see "[Data Import from Microsoft Word and Microsoft Excel](#)" on page 24.

3. Update requirements

For each requirement, you can update its details, attachments, and rich text documents.

Right-click a requirement and select **Requirement Details**. The Requirement Details dialog box opens. For user interface details, see "[Requirement Details Page](#)" on page 270.

4. Convert requirements to tests - optional

To assist you in establishing a test plan tree in the Test Plan module, you can use your requirements as a basis for defining your tests. You can reuse your requirements and convert them to the following entities in your test plan tree: test subjects, tests, test steps, or step descriptions.

To convert requirements to test subjects, tests, test steps, or step descriptions, right click a requirement or folder and select **Convert to Tests**. The Convert to Tests wizard opens. For user interface details, see "[Convert to Tests Wizard](#)" on page 273.

Requirements User Interface

This section includes:

• Requirements Module Window	250
• Requirements Module Menus and Buttons	252
• Requirements Module Icons	261
• Requirements Module Fields	263
• Requirement Details Page	270
• New Requirement Dialog Box	272
• Convert to Tests Wizard	273

Requirements Module Window

This window enables you to define and maintain ALM requirements.

To access	On the ALM sidebar, under Requirements , select Requirements . Select a requirements view from the View menu.
Relevant tasks	"How to Create Requirements" on page 248
See also	"Requirements Specification Overview" on page 248

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

UI Element	Description
View	<ul style="list-style-type: none">Requirements Tree. Enables you to view your requirements hierarchically in a tree.Requirement Details. Enables you to create links between requirements and other entities. It also enables you to calculate and analyze requirement risks. For more details, see "Requirement Details Page" on page 270.Requirements Grid. Enables you to view requirements in a flat non-hierarchical view. Each line in the grid displays a separate requirement.Coverage Analysis. Enables you to analyze the breakdown of child requirements according to test coverage status. For more details, see "Coverage Analysis View" on page 421.Traceability Matrix. Enables you to view traceability relationships between requirements and other requirements or tests in a matrix. For more details, see "Traceability Matrix View" on page 290.
<Requirements module common UI elements>	<ul style="list-style-type: none">Requirement fields. For field definitions, see "Requirements Module Fields" on page 263.Requirement menus and buttons. For command and button descriptions, see "Requirements Module Menus and Buttons" on page 252.Requirement icons. For icon descriptions, see "Requirements Module Icons" on page 261.ALM masthead, menus, and sidebar. For details, see "ALM Common Areas" on page 30.

UI Element	Description
<Requirements tree>	<p>Located on the left side of the window, organizes and displays your requirements hierarchically.</p> <p>Available from: Requirements Tree, Requirement Details, and Coverage Analysis</p>
<Filter status bar>	<p>Describes the filter currently applied to the grid or tree. Located directly above the grid filter boxes or tree.</p> <p>In grid views:</p> <ul style="list-style-type: none"> • Showing <x> results. Indicates the number of records currently displayed out of the total records. • Retrieve all <x> results. Click to display all records.
Attachments tab	<p>Lists attachments that provide additional information about the currently selected requirement. For more details, see "Attachments Page" on page 80.</p>
Business Models Linkage tab	<p>Lists the business model entities linked to the currently selected requirement. For more details, see "Business Models Linkage Tab" on page 427.</p>
Comments tab	<p>Comments about the currently selected requirement.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Description tab	<p>Describes the currently selected requirement.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Details tab	<p>Details the currently selected requirement.</p>
History tab	<p>Lists changes made to the currently selected requirement. For more details, see "History Tab" on page 75.</p>
Linked Defects tab	<p>Lists the defects linked to the currently selected requirement. For more details, see "Linked Defects/Entities Page" on page 801.</p>
Represented Items	<p>Lists the business process model entities represented by the selected requirement.</p> <p>Available from: Business Model requirements</p>

UI Element	Description
Requirements Traceability tab	Lists the requirements linked to the currently selected requirement. For more details, see " Relationships Tab " on page 282 and " Impact Analysis Tab " on page 285.
Rich Text tab	<p>Enables you to add, view, and edit rich text using an HTML editor from within ALM.</p> <div data-bbox="523 551 1380 941" style="background-color: #e0f2e0; padding: 10px;"> <p>Note:</p> <ul style="list-style-type: none"> Changes you make to the rich text for a requirement are saved automatically when you move to a different requirement or a different module. If your project was upgraded from a previous version of Quality Center, rich text that existed before the upgrade is saved as an attachment to the requirement, accessible from the requirement's Attachments tab. </div> <p>For details on defining rich text templates, see the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p>
Risk Analysis/Risk Assessment tab	Calculates and analyzes risk for the currently selected requirement. For more details, see " Risk Assessment Tab " on page 303 and " Risk Analysis Tab " on page 307.
Test Coverage tab	Lists the tests associated with the currently selected requirement. For more details, see " Test Coverage Page " on page 430.

Requirements Module Menus and Buttons

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

To access	On the ALM sidebar, under Requirements , select Requirements .
Important information	<ul style="list-style-type: none"> Some menu commands and buttons are not available in all requirement views. You can access the menu bar from the Requirements module by pressing the shortcut key ALT. Version Control: Additional menu commands and buttons are available in a version control enabled project. For details, see "Versions Menu and Buttons" on page 117.

Relevant tasks	"How to Create Requirements" on page 248
See also	"Requirements Module Icons" on page 261 "Requirements Specification Overview" on page 248

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

UI Element (A - Z)	Menu	Description
<list of recently used favorite views>	Favorites	<p>Displays the four most recently used favorite views in the Requirements module.</p> <p>You can define the number of views displayed on the menu by setting the FAVORITES_DEPTH parameter in the Site Configuration tab in Site Administration. For details, see the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p>
Add to Favorites	Favorites	Opens the Add Favorite dialog box, enabling you to add a favorite view to your private or the public folder. For details, see "Add Favorite Dialog Box" on page 102.
Alerts	Edit	Opens the Alerts dialog box, enabling you to display alerts for the requirements. For details, see "Alerts Dialog Box" on page 96.
Assign to Cycle	Requirements	Opens the Select Cycles dialog box, enabling you to assign selected requirements to cycles. For more details, see "Select Cycles Dialog Box" on page 155.
Assign to Release	Requirements	Opens the Select Releases dialog box, enabling you to assign selected requirements to releases. For more details, see "Select Releases Dialog Box" on page 156.
Attachments 	<right-click menu>	Opens the Attachments page, enabling you to add attachments to the selected requirement. For details, see "Attachments Page" on page 80.
Clear Alerts	Edit	Clears displayed alerts for the module. For more details, see "How to Use Alerts" on page 94.
Clear Follow Up Flag	Edit	Clears a follow up flag of a selected requirement. For details on follow up flags, see "Follow Up Flags Overview" on page 93.

UI Element (A - Z)	Menu	Description
Collapse	View	Collapses all branches in the requirements tree.
Configure Traceability Matrix	Edit	<p>Opens the Configure Traceability Matrix wizard, enabling you to set the entities displayed the matrix. For more details, see "Configure Traceability Matrix Wizard" on page 294.</p> <p>Available from: Traceability Matrix</p>
Convert to Tests	Requirements	<p>Opens the Convert to Tests wizard, enabling you to convert selected requirements to tests in a specified subject in the test plan tree. For more details, see "Convert to Tests Wizard" on page 273.</p>
Copy URL/Paste	Edit	<p>Copies a selected requirement and pastes its URL as a link. The requirement itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the requirement. If you are not already logged in, ALM first prompts for login details.</p>
Copy/Paste	Edit	<p>Copies selected requirements within the same project or across projects. When you copy a requirement, any children of the requirement are also copied.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note:</p> <ul style="list-style-type: none"> • Test coverage, defect linkage, and risk-based quality management data for the requirement are not copied. • To copy a requirement with traceability, you must also copy its associated traced requirements. • The root folder cannot be copied within the same project. • If you paste a requirement that has the same name as an existing requirement, the suffix _Copy is added automatically to the end of the requirement's name. • Not available in all views. </div>

UI Element (A - Z)	Menu	Description
Coverage Analysis	View	Displays the Coverage Analysis view, enabling you to analyze the breakdown of child requirements according to test coverage status. For details, see " Coverage Analysis View " on page 421.
Cut/Paste	Edit	<p>Moves selected requirements to a different location in the requirements tree.</p> <p>Note: Moving a requirement to a different location in the requirements tree also moves its child requirements, tests coverage, requirement traceability links, and defects linkage. The root folder cannot be moved.</p> <p>Tip: You can also move a requirement to a new location by dragging it. In the requirements tree, click a requirement and drag it under a folder or a requirement.</p>
Delete 	Edit	<p>Deletes selected requirements. Deleting a requirement also deletes its child requirements, tests coverage, requirement traceability links, and defects linkage. You cannot delete the root folder.</p> <p>Version Control: Deleting a requirement deletes all previous versions of the requirement.</p>
Expand All	View	Expands all branches in the requirements tree.
Export	Requirements	<p>Opens the Export Coverage Analysis dialog box, enabling you to save the Coverage Analysis view to a Microsoft Word document. The document displays a bar graph for each parent requirement in the requirements tree.</p> <p>Available from: Coverage Analysis</p>

UI Element (A - Z)	Menu	Description
Export	<right-click menu>	<p>Opens the Export All Grid Data dialog box, enabling you to export the requirements in a grid as a text file, Microsoft Excel worksheet, Microsoft Word document, or HTML document.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • All. Exports all requirements in the grid. • Selected. Exports selected requirements in the grid. <p>Available from: Requirements Grid</p>
Export Traceability Matrix	Analysis	<p>Opens the Export Traceability Matrix dialog box, enabling you to save the Traceability Matrix view to a Microsoft Excel worksheet.</p> <p>Available from: Traceability Matrix</p>
Filter/Sort 	View	<p>Enables you to filter and sort the requirements in the requirements tree or grid. For more details, see ""Filter Dialog Box" on page 54.</p>
Find	Edit	<p>Searches for a requirement in the Requirements module. For more details, see ""Find Dialog Box" on page 68.</p>
Find Next	Edit	<p>Searches for the next item in the requirements grid that meets the previously defined search criteria.</p> <p>Available from: Requirements Grid</p>
Flag for Follow Up 	Edit	<p>Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for a selected requirement. For more details, see ""Flag For Follow Up Dialog Box" on page 97.</p>
Go to Requirement	Requirements	<p>Opens the Go To Requirement dialog box, enabling you to find a specific requirement by ReqID. To display the requirement in the requirements tree, click Show in Tree. To display the requirement in the Requirement Details dialog box, click Open Details. You can only go to requirements that are in the current filter.</p>

UI Element (A - Z)	Menu	Description		
Go To Requirement in Requirements Tree 	<right-click menu>	<p>Goes to the Requirements Tree view and highlights the selected requirement.</p> <p>Available from: Requirements Grid and Traceability Matrix</p>		
Graphs	Analysis	<p>Lists the graphs you can generate for requirements data. Select a predefined graph, or launch the graph wizard.</p> <p>For details on the predefined graph types, see "Entity Graph Types" on page 834.</p>		
Grid Filters  <table border="1" data-bbox="246 910 388 946"> <tr><td>Author</td></tr> <tr><td>David</td></tr> </table>	Author	David	View	<p>Displays a grid filter box under each column name, enabling you to define a filter condition for a column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For more details, see "Select Filter Condition Dialog Box" on page 65.</p> <p>Available from: Requirements Grid</p>
Author				
David				
Indicator Columns	View	<p>Displays the  columns on the left-side of the requirements window.</p> <p>For more details, see "Requirements Module Icons" on page 261.</p>		
Information Panel	View	<p>Displays information panel tabs on the bottom of the requirement view. For more details, see "Requirements Module Window" on page 250.</p> <p>Available from: Coverage Analysis, Requirements Grid, and Requirements Tree</p>		
Invert Selection	Edit	<p>Unselects all previously selected requirements in the grid and selects all previously unselected requirements.</p> <p>Available from: Requirements Grid</p>		
Most Recently used	Analysis	<p>Lists the most recently viewed reports and graphs in ALM. Displays up to ten items.</p>		

UI Element (A - Z)	Menu	Description
Move Down 		Enables you to move selected requirements in the requirements tree up or down to set their order.
Move Up 		<p>Note: The Move Up and Move Down buttons are not available if the requirements in the requirements tree are already sorted using the View Order tab in the Filter dialog box. For more details on the View Order tab, see "Filter Dialog Box" on page 54.</p> <p>Available from: Requirements Tree, Requirement Details, and Coverage Analysis</p>
New Folder 	Requirements	<p>Opens the Create New Requirement Folder dialog box, enabling you to add a folder under a selected folder.</p> <p>Available from: Requirements Tree, Requirement Details, and Coverage Analysis</p>
New Requirement 	Requirements	<p>Opens the New Requirement dialog box, enabling you to add a requirement under a selected requirement. For more details, see "New Requirement Dialog Box" on page 272.</p> <p>Available from: Requirements Tree, Requirement Details, and Coverage Analysis</p>
Organize Favorites	Favorites	Opens the Organize Favorites dialog box, enabling you to organize the list of favorite views by changing properties or deleting views. For details, see " Organize Favorites Dialog Box " on page 103.
Pin/Unpin 		<p>Pins or unpins the requirement.</p> <p>Available from: Requirements Tree, Requirement Details, and Requirements Grid.</p> <p>For details, see "Pinned Items Overview" on page 106.</p>
Private	Favorites	Lists the favorite views that are accessible only to the user who created them.

UI Element (A - Z)	Menu	Description
Project Report	Analysis	<p>Lists the predefined project reports you can produce on requirements data. For details on the report types, see "Predefined Project Reports" on page 882.</p> <p>Selecting a report from the list generates a preview of the report. The preview displays up to five entities per report section. To generate the full report, in the upper left corner of the preview, click the downward arrow adjacent to the Generate button and select the report format to generate.</p>
Public	Favorites	Lists the favorite views that are accessible to all users.
Refresh All 	View	Refreshes the requirements tree or grid so that it displays the most up-to-date requirements.
Rename	Edit	<p>Renames a selected requirement. You cannot rename the root folder.</p> <p>Syntax exceptions: A requirement name cannot include the following characters: \ ^ *</p>
Replace	Edit	Replaces a requirement field value in the tree or grid. For more details, see "Replace Dialog Box" on page 70 .
Requirement Details	View	Displays the Requirement Details view, enabling you to create links between requirements and other entities. It also enables you to calculate and analyze requirement risks. For more details, see "Requirement Details Page" on page 270 .
Requirement Details 	Requirements	Opens the Requirement Details dialog box, enabling you to display the details of the selected requirement. For more details, see "Requirement Details Page" on page 270 .
Requirements Grid	View	Displays the Requirements Grid view, enabling you to view requirements in a flat non-hierarchical view. Each line in the grid displays a separate requirement.
Requirements Tree	View	Displays the Requirements Tree view, enabling you to view your requirements hierarchically in a tree.
Select All	Edit	<p>Selects all requirements in the grid.</p> <p>Available from: Requirements Grid</p>

UI Element (A - Z)	Menu	Description
Select Columns 	View	Opens the Select Columns dialog box, enabling you to determine which fields to display in the requirements tree or grid and their order. For more details, see " Select Columns/Select Fields Dialog Box " on page 85.
Send by E-mail 	Requirements	Opens the Send E-mail dialog box, enabling you to send requirement email to recipients selected from a list or to the author of the requirement. For more details, see " Send E-mail Dialog Box " on page 76.
Show Full Path	View	Displays the path of the requirements in the requirements tree. Available from: Traceability Matrix
Test Coverage > Show Add Criteria to Coverage	View	Enables the Add Criterion Coverage dialog box. For more details, see " Add Criterion Coverage Dialog Box " on page 437. Available from: Requirements Tree, Requirement Details, and Coverage Analysis
Text Search 	Edit	Opens the text search pane in the lower part of the Requirements module window, enabling you to search for records in predefined fields. For more details, see " Text Search Pane " on page 72.
Traceability Matrix	View	Displays the Traceability Matrix view, enabling you to view traceability relationships between requirements and other requirements or tests in a matrix.
Update Selected	Edit	Opens the Update Selected dialog box, enabling you to update a field value for multiple selected requirements in the tree or grid. For more details, see " Update Selected Dialog Box " on page 87.

UI Element (A - Z)	Menu	Description
Zoom 	View	<p>Changes the level of detail in the requirements tree. Includes the following options:</p> <p>Zoom In. Displays the selected requirement and includes a heading with the hierarchical path of the requirement.</p> <p>Zoom Out One Level. Undoes the previous zoom in command.</p> <p>Zoom Out To Root. Enlarges to the highest hierarchical level and display the entire requirements tree.</p>
Global Search 	<toolbar>	<p>A 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://marketplace.saas.hpe.com/appdelivery/content/alm-global-search.</p>

Requirements Module Icons

This section describes the icons available in the Requirements module.

To access	On the ALM sidebar, under Requirements , select Requirements .
See also	<ul style="list-style-type: none"> • "Requirements Module Menus and Buttons" on page 252 • "Requirements Module Window" on page 250

The icons are described below:

UI Element	Description
	<green asterisk>. The applicable tab is populated.
 	<p>Alerts. Click to view alerts for the requirement.</p> <ul style="list-style-type: none"> • Red alert. The alert is new. • Gray alert. The alert has already been read. <p>For more details, see "Alerts Dialog Box" on page 96.</p>

UI Element	Description
	<p>Attachments. Click to view attachments for the specified requirement. Open an attachment by selecting it from the list. If there are more than ten attachments, click the more attachments link to view the list in the Attachments Page. For details, see "Attachments Page" on page 80.</p>
	<p>Business Model Requirement. A requirement representing a business process model entity.</p> <div data-bbox="442 656 518 686" style="background-color: #e0f2e0; padding: 5px;">Note:</div> <ul style="list-style-type: none"> Business model requirements are created automatically for each model entity added to the Business Models module. You cannot change the requirement type of business model requirements.
	<p>Business Requirement. A business process requirement.</p>
	<p>Child. A child requirement affected by a change to a selected requirement. For more details, see "Impact Analysis Tab" on page 285.</p>
	<p>Folder Requirement. A folder for organizing requirements.</p>
	<p>Follow Up Flags. Click to view follow up flags for the requirement.</p> <ul style="list-style-type: none"> Gray flag. The follow up flag is new. Red flag. The follow up date has arrived. <p>For more details, see "Flag For Follow Up Dialog Box" on page 97.</p>
	<p>Functional Requirement. A system behavioral requirement.</p>
	<p>Group Requirement. A collection of related requirements.</p>
	<p>Linked Defects. Click to view linked defects for the requirement. For more details, see "Linked Defects/Entities Page" on page 801.</p>
	<p>Parent. A parent requirement that affects a selected requirement. For more details, see "Impact Analysis Tab" on page 285.</p>
	<p>Recursive Relationship. The same requirement participates more than once in the relationship. For more details, see "Impact Analysis Tab" on page 285.</p>

UI Element	Description
	Testing Requirement. A testing type requirement.
	Trace From. A requirement that affects a selected requirement. For more details, see " Impact Analysis Tab " on page 285.
	Trace To. A requirement that is affected by a selected requirement. For more details, see " Impact Analysis Tab " on page 285.
	Undefined Requirement. A requirement with an undefined type.
	Version Control. The requirement is checked out. <ul style="list-style-type: none"> • Green lock. The requirement is checked out by the current user. • Red lock. The requirement is checked out by another user.

Requirements Module Fields

This section describes the Requirements module fields.

To access	On the ALM sidebar, under Requirements , select Requirements .
Important information	<ul style="list-style-type: none"> • You can add user-defined fields and change the label of any of the fields in the Requirements module. You can also customize project lists. For more details, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. • You can use the Script Editor to restrict and dynamically change the fields and values in the Requirements module. For more details, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. • When you select a requirement column with a user name value (including user-defined fields), ALM displays a list with the name and full name of each user. You can search for users, sort users, group users by user group, and select users from the users list or a group tree. For more details, see "Users List Dialog Box" on page 67. • Some fields are not available in all requirement views. • Version Control: Additional fields are available in a version control enabled project. For details, see "Version Control Fields" on page 118.
See also	"Requirements Module Window" on page 250

The fields are described below:

UI Element (A - Z)	Description
Author	<p>The user name of the person who created the requirement.</p> <p>Default value: Login user name.</p>
Comments	<p>Comments about the requirement.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Coverage Analysis	<p>Graphically displays the direct cover status of the requirement and its children. Requirements which do not match the current filter, or requirements with direct cover status "N/A" are not counted in the analysis.</p> <p>Note: If you set the coverage by cycle, ALM does not use the Direct Cover Status field in its calculations. Instead, it uses calculated direct cover status values based on the tests that have instances belonging to test set folders that are assigned to cycles included in the filter. In this case, requirements that do not have test coverage for any of the cycles in the filter are not counted in the analysis. For more details on setting coverage by cycle, see "Analysis Settings Dialog Box" on page 434.</p>
Created By	<p>The user name of the person who created the requirement link.</p> <p>Default value: The login user name.</p>
Creation Date	<p>The date on which the requirement or requirement link was created.</p> <p>Default value: Current database server date.</p>
Creation Time	<p>The time at which the requirement was created.</p> <p>Default value: Current database server time.</p>
Description	<p>A description of the requirement.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>

UI Element (A - Z)	Description
Direct Cover Status	<p>The current status of the requirement, determined according to the status of the tests associated with the requirement.</p> <p>A requirement status can be one of the following:</p> <ul style="list-style-type: none"> • Blocked. One or more tests covered by the requirement have an execution status of Blocked. • Not Covered. The requirement has not been linked to a test. • Failed. One or more tests covered by the requirement have an execution status of Failed, and none has an execution status of Blocked. • Not Completed. One or more tests covered by the requirement have an execution status of Not Completed, and none has an execution status of Blocked or Failed. Alternatively, tests covered by the requirement have execution statuses of Passed and No Run, Passed and N/A. • Passed. All the tests covered by the requirement have an execution status of Passed. • No Run. All the tests covered by the requirement have an execution status of No Run. • N/A. The current status of the requirement is not applicable. • -----. The requirement does not have a direct cover status as it belongs to a requirement type that does not support coverage. <p>Default value: The status is Not Covered.</p>
Modified	<p>The date and time on which the requirement or requirement link was modified.</p> <p>Default value: The current database server date and time.</p>
Name	<p>The requirement name.</p>
Old Type (obsolete) (formerly Type)	<p>The type of requirement (obsolete). In previous versions of ALM, the type could be any value configured in the project, with typical values Change, Functional, Guideline, Quality, Standard, and System.</p> <p>This field is only available for requirements of undefined type.</p>
Priority	<p>The priority of the requirement, ranging from low priority (level 1) to urgent priority (level 5).</p>
Product	<p>The component of the application on which the requirement is based.</p>

UI Element (A - Z)	Description
RBQM Business Impact	The calculated Business Criticality for the requirement. Possible values are A (High) , B (Medium) , and C (Low) . This field is only in use for assessment requirements.
RBQM Custom Business Impact	The user-defined custom Business Criticality for the requirement. Possible values are A (High) , B (Medium) , and C (Low) . This field is only in use for assessment requirements.
RBQM Custom Failure Probability	The user-defined custom Failure Probability for the requirement. Possible values are 1 (High) , 2 (Medium) , and 3 (Low) . This field is only in use for assessment requirements.
RBQM Custom Functional Complexity	The user-defined custom Functional Complexity for the requirement. Possible values are 1 (High) , 2 (Medium) , and 3 (Low) . This field is only in use for assessment requirements.
RBQM Custom Risk	The user-defined custom Risk for the requirement. Possible values are A (High) , B (Medium) , and C (Low) . This field is only in use for assessment requirements.
RBQM Custom Testing Hours	The user-defined effort required to test the requirement, measured in units defined in Project Customization. This field is only in use for assessment requirements.
RBQM Custom Testing Level	The user defined level at which to test the requirement. Possible values are 1-Full , 2-Partial , 3-Sanity , and 4-None . This field is only in use for assessment requirements.
RBQM Date of Last Analysis	The date a risk-based quality management analysis was last performed on the requirement. This field is only in use for analysis requirements.
RBQM Effective Business Impact	The effective Business Criticality for the requirement. Possible values are A (High) , B (Medium) , and C (Low) . This field is only in use for assessment requirements.

UI Element (A - Z)	Description
RBQM Effective Failure Probability	The effective Failure Probability for the requirement. Possible values are 1 (High) , 2 (Medium) , and 3 (Low) . This field is only in use for assessment requirements.
RBQM Effective Functional Complexity	The effective Functional Complexity for the requirement. Possible values are 1 (High) , 2 (Medium) , and 3 (Low) . This field is only in use for assessment requirements.
RBQM Effective Risk	The effective Risk for the requirement. Possible values are A (High) , B (Medium) , and C (Low) . This field is only in use for assessment requirements.
RBQM Estimated RnD Effort	The user-defined estimate of the effort required to develop the requirement. This field is only in use for assessment requirements.
RBQM Exclude from Analysis	Indicates whether to exclude the requirement from risk analysis. A requirement may be excluded from risk analysis if it belongs to a type for which risk assessments are not available, or if you specifically exclude it from analysis.
RBQM Failure Probability	The calculated Failure Probability for the requirement. Possible values are 1 (High) , 2 (Medium) , and 3 (Low) . This field is only in use for assessment requirements.
RBQM Functional Complexity	The calculated Functional Complexity for the requirement. Possible values are 1 (High) , 2 (Medium) , and 3 (Low) . This field is only in use for assessment requirements.
RBQM Risk	The calculated Risk for the requirement. Possible values are A (High) , B (Medium) , and C (Low) . This field is only in use for assessment requirements.
RBQM Testing Hours	The calculated effort required to test the requirement, measured in units defined in Project Customization. This field is only in use for assessment requirements.
RBQM Testing Level	The calculated level at which to test the requirement. Possible values are 1-Full , 2-Partial , 3-Sanity , and 4-None . This field is only in use for assessment requirements.

UI Element (A - Z)	Description
RBQM Use Custom Business Impact	Indicates whether to use the user-defined Business Criticality, instead of the Business Criticality calculated by ALM. This field is only in use for assessment requirements.
RBQM Use Custom Failure Probability	Indicates whether to use the user-defined Failure Probability, instead of the Failure Probability calculated by ALM. This field is only in use for assessment requirements.
RBQM Use Custom Functional Complexity	Indicates whether to use the user-defined Functional Complexity, instead of the Functional Complexity calculated by ALM. This field is only in use for assessment requirements.
RBQM Use Custom Results	Indicates whether to use the user-defined testing effort and testing level, instead of the values calculated by ALM. This field is only in use for assessment requirements.
RBQM Use Custom Risk	Indicates whether to use the user-defined Risk, instead of the Risk calculated by ALM. This field is only in use for assessment requirements.
Req ID	A unique alphanumeric ID for the requirement that is assigned automatically. The Req ID field cannot be modified.
Req Parent	The name of the parent requirement.
Requirement Trace ID	A unique alphanumeric ID for the requirement link that is assigned automatically.

UI Element (A - Z)	Description
Requirement Type	<p>The type of requirement.</p> <p>Default values:</p> <ul style="list-style-type: none"> •  Business. A business process requirement. By default, you cannot add coverage to this requirement. •  Folder. A folder for organizing requirements. By default, you cannot add coverage to this requirement. •  Functional. A system behavioral requirement. •  Group. A collection of related requirements. •  Testing. A system performance requirement. •  Business Model. A requirement representing a business process model entity. •  Undefined. An undefined requirement. <p>Note: You can customize the default types and create your own requirement types. For more details on customizing requirement types, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p>
Reviewed	<p>Indicates whether the requirement has been reviewed and approved by the person responsible.</p>
Target Cycle	<p>Indicates the cycle to which the requirement is assigned.</p>
Target Release	<p>Indicates the release to which the requirement is assigned.</p>
Trace Comment	<p>Displays comments about the requirement link.</p>

Requirement Details Page

This page enables you to update the details, attachments, tests coverage, requirement traceability links, risk-based quality management settings, and defect links for any requirement. You can also view a list of changes made to any requirement.

To access	Use one of the following: <ul style="list-style-type: none"> In the Requirements module, right-click a requirement and select Requirement Details. The Requirement Details dialog box opens. Select View > Requirement Details. The Requirement Details view opens.
Relevant tasks	"How to Create Requirements" on page 248
See also	"Requirements Specification Overview" on page 248

User interface elements are described below:

UI Element	Description
	Save. Saves the details.
	First/Previous/Next/Last Entity. Allows you to browse through the requirements. Available from: Requirement Details dialog box
	Flag for Follow Up. Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for the requirement. For details, see " "Flag For Follow Up Dialog Box" on page 97 ".
	Send by Email. Sends an email with the requirement details. For more details, see " "Send E-mail Dialog Box" on page 76 ".
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.

UI Element	Description
	<p>Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?".</p> <p>For example: a*b returns acb and adefb; a?b returns acb</p>
Details	<p>Details the currently selected requirement. For details on the available fields, see "Requirements Module Fields" on page 263.</p>
Rich Text	<p>Enables you to add, view, and edit rich text using an editor from within ALM.</p> <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p>Note: Changes you make to the rich text for a requirement are saved automatically when you move to a different requirement or a different module.</p> </div>
Attachments	<p>Lists attachments that provide additional information about the currently selected requirement. For more details, see "Attachments Page" on page 80.</p>
Linked Defects	<p>Lists the defects linked to the currently selected requirement. For more details, see "Linked Defects/Entities Page" on page 801.</p>
Requirements Traceability	<p>Lists the requirements linked to the currently selected requirement. For more details, see "Impact Analysis Tab" on page 285 and "Relationships Tab" on page 282.</p>
Test Coverage	<p>Lists the tests associated with the currently selected requirement. For more details, see "Test Coverage Page" on page 430.</p>
Business Models Linkage	<p>Lists the business model entities linked to the currently selected requirement. For more details, see "Business Models Linkage Tab" on page 427.</p>
Risk Analysis/Risk Assessment	<p>Calculates and analyzes risk for the currently selected requirement. For more details, see "Risk Assessment Tab" on page 303 and "Risk Analysis Tab" on page 307.</p>
History	<p>Displays a list of changes made to the currently selected requirement. For more details, see "History Tab" on page 75.</p> <p>In addition, this tab displays a history of baselines in which the requirement appears. For more details, see "History Tab" on page 75.</p>

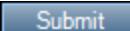
New Requirement Dialog Box

This dialog box enables you to add a new requirement to the Requirements module.

To access	In the Requirements module, right-click a requirement and select New Requirement . Available from: Requirements Tree, Requirement Details, and Coverage Analysis
Relevant tasks	"How to Create Requirements" on page 248
See also	"Requirements Specification Overview" on page 248

User interface elements are described below:

UI Element	Description
	Clears the data.
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Name	Type a name for the new requirement. Syntax exceptions: A requirement name cannot include the following characters: \ ^ *
Requirement Type	Select a requirement type. For more details on requirement types, see "Requirement Type" on page 269.
Details	Required fields are displayed in red. For details on the available requirement fields, see "Requirements Module Fields" on page 263.

UI Element	Description
Rich Text	<p>Enables you to add, view, and edit rich text using an HTML editor from within ALM.</p> <p>Note: Changes you make to the rich text for a requirement are saved automatically when you move to a different requirement or a different module.</p>
Attachments	<p>Enables you to add attachments for the currently selected requirement. For more details, see "Attachments Page" on page 80.</p>
 Submit	<p>Adds the new requirement to the requirements tree. The New Requirement page remains open.</p>
 Close	<p>Closes the New Requirement page.</p>

Convert to Tests Wizard

This wizard enables you to convert requirements to tests in a specified subject in the test plan tree. Coverage is automatically created between the requirements and their corresponding tests. You can convert selected requirements or all requirements in the requirements tree.

To access	<p>In the Requirements module, right-click a requirement in the requirements tree and select Convert to Tests. To convert all requirements, right-click the root requirement folder in the requirements tree and select Convert to Tests.</p>
Important information	<ul style="list-style-type: none"> You must have the necessary permissions to create tests. The following requirement types are set so that, by default, you cannot convert them to tests: Business, Folder, and Group. <p>To enable you to convert, you must enable test coverage for these requirement types. For more details, see the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p>
Wizard map	<p>This wizard contains:</p> <p>"Select Automatic Conversion Method Page" on the next page > "Manual Change Conversion Page" on page 275 > "Select Destination Path Page" on page 276</p>
Relevant tasks	<p>"How to Create Requirements" on page 248</p>
See also	<p>"Requirements Specification Overview" on page 248</p>

Select Automatic Conversion Method Page

This wizard page enables you to choose an automatic conversion method. You can convert requirements to design steps, tests, or subjects.

Important information	General information about this wizard is available here: " Convert to Tests Wizard on the previous page ".
Wizard map	The " Convert to Tests Wizard " on the previous page contains: "Select Automatic Conversion Method Page" above > " Manual Change Conversion Page " on the next page > " Select Destination Path Page " on page 276

User interface elements are described below:

UI Element	Description
Convert lowest child requirements to design steps	Converts all lowest level child requirements to design steps, the next level up to tests, and all levels above to subjects.
Convert lowest child requirements to tests	Converts all lowest level child requirements to tests and all levels above to subjects.
Convert all requirements to subjects	Converts all selected requirements to subjects in the Test Plan module.
Generate Single Test	Converts requirements to tests in specified subjects in the test plan tree.
Add Test to Test Set	This option is activated when Generate Single Test is selected. Adds the tests to specified test sets in the Test Lab module.
Keep current Requirements filter	This option is activated when the requirements are filtered. Keeps the current filter for the requirements. Only filtered requirements are converted.
Next	Starts the conversion process. The results are displayed in the " Manual Change Conversion Page " on the next page .
Cancel	If you are canceling before starting the conversion process, the wizard closes. If you are canceling after starting the conversion process, Click the Stop button in the progress bar.

Manual Change Conversion Page

This wizard page enables you to manually set requirements to subjects in the test plan tree, tests, test steps, or step descriptions. You can also choose to exclude requirements from the conversion process.

Important information	<ul style="list-style-type: none"> General information about this wizard is available here: "Convert to Tests Wizard" on page 273. If you are converting a single requirement, the wizard skips this page.
Wizard map	<p>The "Convert to Tests Wizard" on page 273 contains:</p> <p>"Select Automatic Conversion Method Page" on the previous page > "Manual Change Conversion Page" above > ""Select Destination Path Page" on the next page</p>

User interface elements are described below:

UI Element	Description
Auto Complete Children	Changes the level of the children of the selected parent. For example, if you change the level of a parent from a subject to a test, the wizard changes the level of all the children from tests to test steps.
Legend	Provides a legend for this wizard page.
	Convert to Subject. Changes the selected item to a subject in the test plan tree. Children can then be either subjects or tests. Subject names must be unique.
	Convert to Test. Changes the selected item to a test in the test plan tree. Children are then converted to steps. Test names must be unique.
	Convert to Step. Changes the selected item to a step in the test plan tree. Children are then converted to step descriptions.
	Convert to Description. Changes the selected item to a step description in the test plan tree. Children are then converted to indented description text.
	Exclude from Conversion. Excludes the selected item from the test plan tree. Children are also excluded.
	Verify Children. Changes the type of the child node according to the type of the parent node. For example, if the parent is a test, the children are converted to steps.

UI Element	Description
Cancel	<p>If you are canceling before starting the conversion process, the wizard closes.</p> <p>If you are canceling after starting the conversion process, Click the Stop button in the progress bar.</p>

Select Destination Path Page

This wizard page enables you to define the destination subject path in the test plan tree.

Important information	<ul style="list-style-type: none"> General information about this wizard is available here: "Convert to Tests Wizard" on page 273. If you are converting a single requirement, the wizard skips this page.
Wizard map	<p>The "Convert to Tests Wizard" on page 273 contains:</p> <p>"Select Automatic Conversion Method Page" on page 274 > "Manual Change Conversion Page" on the previous page > ""Select Destination Path Page" above</p>

User interface elements are described below:

UI Element	Description
Destination Subject Path	<p>Sets the destination subject path in the Test Plan module.</p> <p>Default value: The subject folder and tests are placed in the Subject folder of the Test Plan module.</p>
Test Status	<p>This field is visible when Generate Single Test is selected in the "Select Automatic Conversion Method Page" on page 274. Sets the test status for the generated test.</p> <p>Default value: Design</p>
Add to Test Set	<p>This field is visible when Add Test to Test Set is selected in the "Select Automatic Conversion Method Page" on page 274. Adds the test to a test set in the Test Lab module.</p> <p>Test Set. Select the test set in the Test Lab module.</p>

UI Element	Description
Finish	<p>Starts the conversion process. When the conversion process ends, click OK. The page displays errors generated while converting the requirements.</p> <p>Note: If you stop the conversion process, any requirements already converted are not deleted from the test plan tree. You must delete them manually.</p>

Chapter 14: Requirements Traceability

This chapter includes:

- Requirements Traceability Overview 280
- How to Trace Requirements 280
- Requirements Traceability User Interface 281

Requirements Traceability Overview

Requirements traceability defines a relationship between two or more requirements. When analyzing the impact of a change proposed in a specific requirement, the traceability links indicate the other requirements that the change might affect.

You can add traceability links to and from a selected requirement.

- **Trace from** links indicate requirements that affect a selected requirement.
- **Trace to** links indicate requirements that are affected by a selected requirement.

When a requirement changes, HPE Application Lifecycle Management (ALM) can alert the affected requirements. For more details on alerts, see "[Alerts Overview](#)" on page 92.

For task details, see "[How to Trace Requirements](#)" below.

How to Trace Requirements

This task describes how to define traceability links between requirements, and how to view the associations and dependencies that exist between the requirements.

To learn more about tracing requirements, see "[Requirements Traceability Overview](#)" above.

This task includes the following steps:

- "[Define traceability links](#)" below
- "[View traceability impact](#)" below
- "[Generate a traceability matrix - Optional](#)" below

1. Define traceability links

- a. In the Requirements module, select the **Requirement Details** view. Click the **Requirements Traceability** tab.
- b. To define a traceability link, select a requirement from the requirements tree.
- c. In the **Relationships** tab, click the **Add Requirement Traceability** button to display the requirements tree in the right pane. Add traceability links. For user interface details, see "[Relationships Tab](#)" on page 282.

2. View traceability impact

Click the **Impact Analysis** tab. Review the associations and dependencies that exist between the requirements. For user interface details, see "[Impact Analysis Tab](#)" on page 285.

3. Generate a traceability matrix - Optional

You can generate a traceability matrix to determine the completeness of the relationships between your requirements.

In the Requirements module, select **View > Traceability Matrix**. Configure the traceability matrix. For task details, see "[How to Use the Traceability Matrix](#)" on page 288.

Requirements Traceability User Interface

This section includes:

- Relationships Tab 282
- Impact Analysis Tab 285

Relationships Tab

This tab enables you to define relationships between requirements. It helps you understand associations and dependencies that exist between the requirements by displaying them in a grid structure.

To access	In the Requirements module, select View > Requirement Details . Click the Requirements Traceability tab.
Important information	The Relationships tab shows the affected requirements excluding their child requirements.
Relevant tasks	"How to Trace Requirements" on page 280
See also	"Requirements Traceability Overview" on page 280 "Impact Analysis Tab" on page 285

Trace From/Trace To Grid

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

UI Element	Description
Add Requirement Traceability ▾	<p>Defines traceability relationships between the requirements.</p> <p>Includes the following options:</p> <ul style="list-style-type: none"> • Add Requirement Traceability or From Requirements Tree. Displays the requirements tree in the right pane, enabling you to add traceability links from the requirements tree to the selected requirement. For more details, see below. • By ID (Trace From). Opens the Trace Existing Requirement dialog box, enabling you to add a traceability link to the Trace From grid by typing a requirement ID. • By ID (Trace To). Opens the Trace Existing Requirement dialog box, enabling you to add a traceability link to the Trace To grid by typing a requirement ID.

UI Element	Description
	<p>Remove from Traceability. Removes a traceability relationship link from the Trace From or Trace To grid.</p> <p>Tip: Press the CTRL key to select multiple links.</p>
	<p>Refresh All. Refreshes the grids.</p>
	<p>Select Columns. Sets column appearance and order. Includes the following options:</p> <ul style="list-style-type: none"> • Select Column (Trace From). Opens the Select Columns dialog box, enabling you to determine which fields to display in the Trace From grid and their order. • Select Column (Trace To). Opens the Select Columns dialog box, enabling you to determine which fields to display in the Trace To grid and their order. <p>For more details, see "Select Columns>Select Fields Dialog Box" on page 85.</p>
	<p>Go To Requirement. Displays a traced requirement in the requirements tree.</p>
	<p>Requirement Details. Opens the Requirement Details dialog box, enabling you to display the details of the selected requirement. For more details, see "Requirement Details Page" on page 270.</p>
Trace From pane	Displays requirements that affect a selected requirement.
<requirement fields>	For details on the requirement fields available from the grids, see " Requirements Module Fields " on page 263.
	<p>Show/Hide. Shows/hides the Trace From or the Trace To pane.</p>
Trace To pane	Displays requirements that are affected by a selected requirement.

Requirements Tree Pane

This pane enables you to add traceability links from the requirements tree to the selected requirement.

To access	In the Requirements module, select the Requirement Details view. Click the Requirements Traceability tab. Click the Add Requirement Traceability button.
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User interface elements are described below:

UI Element	Description
	Add to Traceability. Adds traceability links from the requirements tree. Includes the following options: <ul style="list-style-type: none">• Add to Traceability (Trace From). Adds selected requirements to the Trace From grid.• Add to Traceability (Trace To). Adds selected requirements to the Trace To grid. <div style="background-color: #e0f2f1; padding: 5px;">Tip: You can also add traceability links by dragging a requirement in the tree to the appropriate grid.</div>
	Show Requirement Details. Opens the Details dialog box for the selected requirement in read-only mode.
	Go to Requirement in Requirements Tree. Navigates to the selected requirements location in the tree in the Requirements module, and highlights the requirement.
	Refresh All. Refreshes the requirements tree.
	Find. Searches for a specific requirement in the tree. Type the name (or part of the name) of the requirement in the Find box and click Find . If the search is successful, the requirement is highlighted in the tree.
	Set Filter/Sort. Filters and sorts the requirements in the requirements tree. For more details, see " Filter Dialog Box " on page 54.

UI Element	Description
	<p>Go to Requirement by ID. Opens the Go To Requirement dialog box, enabling you to find a specific requirement by ReqID.</p> <p>Note: You can only go to requirements that are in the current filter.</p>
	<p>Close. Hides the requirements tree in the right pane.</p>

Impact Analysis Tab

This tab enables you to analyze the impact of requirement changes by reviewing the relationships. It helps you understand associations and dependencies that exist between the requirements by displaying them in a hierarchical tree structure.

To access	In the Requirements module, select View > Requirement Details . Click the Requirements Traceability tab and then the Impact Analysis tab.
Important information	The Impact Analysis tab shows the affected parent and child requirements.
Relevant tasks	"How to Trace Requirements" on page 280
See also	"Requirements Traceability Overview" on page 280 "Relationships Tab" on page 282

User interface elements are described below:

UI Element	Description
	<p>Refresh All. Refreshes the tree.</p>
	<p>Go To Requirement. Displays a traced requirement in the requirements tree.</p>
	<p>Requirement Details. Opens the Requirement Details dialog box, enabling you to display the details of the selected requirement. For more details, see "Requirement Details Page" on page 270.</p>

UI Element	Description
Legend	Describes the relationships between the requirements. For more details on the traceability icons, see " Requirements Module Icons " on page 261.
Trace From pane	Displays requirements that affect a selected requirement.
 Show/Hide.	Shows/hides the Trace From or the Trace To pane.
Trace To pane	Displays requirements that are affected by a selected requirement.

Chapter 15: Traceability Matrix

This chapter includes:

- [Traceability Matrix Overview](#) 288
- [How to Use the Traceability Matrix](#) 288
- [Traceability Matrix User Interface](#) 289

Traceability Matrix Overview

The traceability matrix enables you to determine the extent of relationships between requirements and other requirements and between requirements and tests. It helps you verify that all requirements are met and identify changes to the scope of your requirements when they occur.

The traceability matrix lists source requirements and their associated requirements and tests. The total number of relationships is listed for each source requirement. A low value may imply that the source requirement is not associated with enough requirements or tests. A high value may imply that the source requirement is too complex and can perhaps be simplified. A zero value indicates that no relationship exists.

For task details, see "[How to Use the Traceability Matrix](#)" below.

How to Use the Traceability Matrix

This task describes how to configure and display the traceability matrix.

To learn more about the traceability matrix, see "[Traceability Matrix Overview](#)" above.

Product Feature Movie: To view a movie that demonstrates how to create a traceability matrix, choose **Help > Movies** in the ALM main window.

This task includes the following steps:

- "[Prerequisites](#)" below
- "[Configure the traceability matrix](#)" below
- "[View the traceability matrix](#)" on the next page

1. Prerequisites

- a. **Define requirement traceability links.** In the Requirements module, select **View > Requirement Details**. Click the **Requirements Traceability** tab. Define traceability links between requirements. For task details on how to trace requirements, see "[How to Trace Requirements](#)" on page 280.
- b. **Define requirement and test coverage.** Create coverage by linking requirements to tests. You can create coverage from the Requirements or the Test Plan module. For task details, see "[How to Create Coverage](#)" on page 418.

2. Configure the traceability matrix

- a. In the Requirements module, select **View > Traceability Matrix**.
- b. Click the **Configure Traceability Matrix** button. The Configure Traceability Matrix wizard

opens. Define the matrix. For user interface details, see "Configure Traceability Matrix Wizard" on page 294.

3. View the traceability matrix

In the Traceability Matrix view, analyze and review the traceability links between requirements, and the links between requirements and tests. For user interface details, see "Traceability Matrix View" on the next page.

Traceability Matrix User Interface

This section includes:

- Traceability Matrix View 290
- Configure Traceability Matrix Wizard 294

Traceability Matrix View

This view enables you to analyze the traceability matrix.

To access	In the Requirements module, select View > Traceability Matrix .
Important information	The data displayed in the traceability matrix grid is not editable.
Relevant tasks	"How to Use the Traceability Matrix" on page 288
See also	"Traceability Matrix Overview" on page 288 "Configure Traceability Matrix Wizard" on page 294

Traceability Matrix Grid

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

UI Element (A - Z)	Description
 Configure Traceability Matrix	Opens the Configure Traceability Matrix wizard, enabling you to define the matrix. For more details, see "Configure Traceability Matrix Wizard" on page 294.
	Refresh All. Refreshes the matrix so that it displays the most up-to-date data.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the matrix and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 85.
	Requirement Details. Opens the Requirement Details dialog box, enabling you to display the details of the selected requirement. For more details, see "Requirement Details Page" on page 270.
	Go To Requirement in Requirements Tree. Goes to the Requirements Tree view and highlights the selected requirement.

UI Element (A - Z)	Description
	Send E-mail. Opens the Send E-mail dialog box, enabling you to send requirement email to recipients selected from a list or to the author of the requirement. For more details, see " Send E-mail Dialog Box " on page 76.
 Generate Traceability Matrix	Opens the Generate Traceability Matrix dialog box, enabling you to save the Traceability Matrix view to a Microsoft Excel worksheet.
▲ ▼	Show/Hide. Shows/hides the lower pane of the Traceability Matrix view.
<grid fields>	For details on the requirement fields available from the grid, see " Requirements Module Fields " on page 263.
Name	The requirement name.
Number of linked tests	The number of tests associated with a selected requirement.
Number of traced from requirements	The number of requirements that affect a selected requirement.
Number of traced to requirements	The number of requirements that are affected by a selected requirement.
Show Full Path	Displays the path of the requirements in the requirements tree.

Traced From Requirements Tab

This tab displays requirements that affect a selected requirement.

Important information	This tab is available when the following options are set in the Filter By Linked Requirements page of the Configure Traceability Matrix wizard: Include source requirements affected by or Include source requirements not affected by . For more details on the Filter By Linked Requirements page, see " Configure Traceability Matrix Wizard " on page 294.
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User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A - Z)	Description
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the matrix and their order. For more details, see " Select Columns>Select Fields Dialog Box " on page 85.
	Requirement Details. Opens the Requirement Details dialog box, enabling you to display the details of the selected requirement. For more details, see " Requirement Details Page " on page 270.
<grid fields>	For details on the requirement fields available from the grid, see " Requirements Module Fields " on page 263.
Show Full Path	Displays the path of the requirements in the requirements tree.

Traced To Requirements Tab

This tab displays requirements that are affected by a selected requirement.

Important information	This tab is available when the following options are set in the Filter By Linked Requirements page of the Configure Traceability Matrix wizard: Include source requirements affecting or Include source requirements not affecting . For more details on the Filter By Linked Requirements page, see " Configure Traceability Matrix Wizard " on page 294.
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User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A - Z)	Description
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the matrix and their order. For more details, see " Select Columns>Select Fields Dialog Box " on page 85.
	Requirement Details. Opens the Requirement Details dialog box, enabling you to display the details of the selected requirement. For more details, see " Requirement Details Page " on page 270.

UI Element (A - Z)	Description
<grid fields>	For details on the requirement fields available from the grid, see " Requirements Module Fields " on page 263.
Show Full Path	Displays the path of the requirements in the requirements tree.

Linked Tests Tab

This tab displays tests that are linked to a selected requirement.

Important information	This tab is available when the following options are set in the Filter By Linked Tests page of the Configure Traceability Matrix wizard: Include source requirements linked to or Include source requirements not linked to . For more details on the Filter By Linked Tests page, see " Configure Traceability Matrix Wizard " on the next page.
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User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A - Z)	Description
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the matrix and their order. For more details, see " Select Columns>Select Fields Dialog Box " on page 85.
	Test Details. Opens the Test Details dialog box, enabling you to display the details of the selected test. For more details, see " Test Details Dialog Box " on page 410.
<grid fields>	For details on the test fields available from the grid, see " Test Plan Module Fields " on page 406.
Show Full Path	Displays the path of the tests in the test plan tree.

Configure Traceability Matrix Wizard

This wizard enables you to configure the traceability matrix.

To access	In the Requirements module, select View > Traceability Matrix . Click the Configure Traceability Matrix button or the create a configuration link, if no configuration has been created.
Wizard map	The wizard contains: "Define Source Requirements Page" below > "Filter By Linked Requirements Page" on the next page > "Filter By Linked Tests Page" on page 296
Relevant tasks	"How to Use the Traceability Matrix" on page 288
See also	"Traceability Matrix Overview" on page 288 "Traceability Matrix View" on page 290

Define Source Requirements Page

This wizard page enables you to define the source requirements.

Important information	General information about this wizard is available here: " Configure Traceability Matrix Wizard " above.
Wizard map	The "Configure Traceability Matrix Wizard" above contains: "Define Source Requirements Page" above > "Filter By Linked Requirements Page" on the next page > "Filter By Linked Tests Page" on page 296

User interface elements are described below:

UI Element	Description
 Clear Configuration	Clears the defined configuration.
	<p>Set Filter/Sort. Filters and sorts the source requirements in the Requirements module. For more details on filtering, see "Filter Dialog Box" on page 54.</p> <p>Note: Filter settings are not applied to child requirements.</p>

UI Element	Description
	Clear Filter. Clears the defined filter.

Filter By Linked Requirements Page

This wizard page enables you to define the requirements linked to and from the source requirements.

Important information	General information about this wizard is available here: " Configure Traceability Matrix Wizard " on the previous page.
Wizard map	The " Configure Traceability Matrix Wizard " on the previous page contains: "Define Source Requirements Page" on the previous page > " "Filter By Linked Requirements Page" above > " "Filter By Linked Tests Page" on the next page

User interface elements are described below:

UI Element	Description
 Clear Configuration	Clears the defined configuration.
	Set Filter/Sort. Filters and sorts the linked requirements. For more details on filtering, see " Filter Dialog Box " on page 54.
	Clear Filter. Clears the defined filter.
Filter by linked requirements	Filters the source requirements by linked requirements.
Include source requirements affected by traced from requirements	Shows the source requirements that are impacted by the selected requirements.
Include source requirements not affected by traced from requirements	Shows the source requirements that are not impacted by the selected requirements.
Include source requirements affecting direct children and traced to requirements	Shows the source requirements that impact their child requirements and their traced to requirements.

UI Element	Description
Include source requirements affecting direct children	Shows the source requirements that impact their child requirements.
Include source requirements affecting traced to requirements	Shows the source requirements that impact their traced to requirements.
Include source requirements not affecting direct children and traced to requirements	Shows the source requirements that do not impact their child requirements and their traced to requirements.
Include source requirements not affecting direct children	Shows the source requirements that do not impact their child requirements.
Include source requirements not affecting traced to requirements	Shows the source requirements that do not impact their traced to requirements.
Show source requirements linked to more than <number> of the requirements specified above	Shows the source requirements that are linked to more than the specified number of requirements. Note: This option is available when one of the following options is selected: Include source requirements affected by or Include source requirements affecting .
Show source requirements linked to less than <number> of the requirements specified above	Shows the source requirements that are linked to less than the specified number of requirements. Note: This option is available when one of the following options is selected: Include source requirements affected by or Include source requirements affecting .

Filter By Linked Tests Page

This wizard page enables you to define the associated tests.

Important information General information about this wizard is available here: "[Configure Traceability Matrix Wizard](#)" on page 294.

Wizard map	The "Configure Traceability Matrix Wizard" on page 294 contains: "Define Source Requirements Page" on page 294 > "Filter By Linked Requirements Page" on page 295 > "Filter By Linked Tests Page" on the previous page
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User interface elements are described below:

UI Element	Description
 Clear Configuration	Clears the defined configuration.
	Set Filter/Sort. Filters and sorts the linked tests. For more details on filtering, see "Filter Dialog Box" on page 54.
	Clear Filter. Clears the defined filter.
Filter by linked tests	Filters the source requirements by linked tests.
Include source requirements linked to the following tests	Shows the source requirements that are linked to the specified tests.
Include source requirements not linked to the following tests	Shows the source requirements that are not linked to the specified tests.
Show source requirements linked to less than <number> of the tests specified above	Shows the source requirements that are linked to less than the specified number of tests. Note: This option is available when the Include source requirements linked to the following tests is selected.
Show source requirements linked to more than <number> of the tests specified above	Shows the source requirements that are linked to more than the specified number of tests. Note: This option is available when the Include source requirements linked to the following tests is selected.

Chapter 16: Risk-Based Quality Management

This chapter includes:

- Risk-Based Quality Management Overview 300
- How to Assess Risk 300
- Risk-Based Quality Management User Interface 302

Risk-Based Quality Management Overview

When planning how to test your requirements, you generally do not have unlimited resources available, and are not able to fully test every requirement. You must make compromises and only partially test requirements that have low criticality to the business, or those that have only a minor risk associated with their implementation. The risk-based quality management feature enables you to calculate at which level to test each requirement, based on the nature of the requirement and the resources you have available. You can then plan your testing process based on these recommendations.

Each requirement type with risk-based quality management enabled can support either risk analysis that is referred to as an **analysis requirement**, or an individual risk assessment that is referred to as an **assessment requirement**.

- An **analysis requirement** is a requirement belonging to a type that represents higher levels in the requirements tree hierarchy, such as the **Folder** type. You perform risk analysis on an analysis requirement based on the assessment requirements under it in the requirements tree. The risk results of multiple assessment requirements are aggregated to give an overall risk analysis which can then be used to determine testing effort and test strategy.
- An **assessment requirement** is a requirement belonging to a type that represents requirements that are children of analysis requirements and at a lower level in the requirements tree hierarchy. Assessment requirements under a particular analysis requirement form the basis for risk analysis on that analysis requirement.

For each assessment requirement under the analysis requirement, you can assign or calculate the **Risk** and **Functional Complexity**.

Risk is composed of its **Business Criticality** and **Failure Probability**. Business Criticality measures how crucial a requirement is for the business. Failure Probability indicates how likely a test based on the requirement is to fail.

Functional Complexity indicates the complexity of the requirement's implementation.

You can enable each requirement type for risk-based quality management. For more information, see the *HPE Application Lifecycle Management Administrator Guide*.

You can customize default settings for risk-based quality management. For more information, see the *HPE Application Lifecycle Management Administrator Guide*.

For task details, see "[How to Assess Risk](#)" below.

How to Assess Risk

This task describes how to assess risk in ALM.

To learn more about assessing risk, see "[Risk-Based Quality Management Overview](#)" above.

This task includes the following steps:

- "Assess requirements" below
- "Define testing policy settings" below
- "Finalize the testing policy" below
- "Analyze the testing strategy" on the next page

1. Assess requirements

- a. **Display the Risk Assessment tab.** In the Requirements module, choose **View > Requirement Details**. In the requirements tree, under an analysis requirement, select an assessment requirement. Click the **Risk Assessment** tab. For user interface details, see "[Risk Assessment Tab](#)" on page 303.
- b. **Determine Risk and Functional Complexity.** Click the **Assessment Questions** tab. The following sub-tabs are displayed: **Business Criticality**, **Failure Probability**, and **Functional Complexity**. In each sub-tab, assign values to the set of criteria. For user interface details on the Assessment Questions tab, see "[Risk Assessment Tab](#)" on page 303.
Instead of assigning values to each set of criteria in the Assessment Questions tab, you can assign custom values directly to each category in the **Assessment Results** tab. For user interface details on the Assessment Results tab, see "[Risk Assessment Tab](#)" on page 303.
- c. For each assessment requirement under the analysis requirement, assign or calculate the Risk and Functional Complexity.

2. Define testing policy settings

- a. In the requirements tree, select the analysis requirement. Click the **Risk Analysis** tab. For user interface details, see "[Risk Analysis Tab](#)" on page 307.
- b. Under **Analysis Constants**, define the initial settings for testing the analysis requirement and the assessment requirements under it. These settings include how much time to assign to a requirement of a specific Functional Complexity were you to test it fully and how long it would take you to perform partial or basic testing on a requirement. You also decide which level of testing you want to perform on requirements for each Risk and Functional Complexity.

For user interface details on the Analysis Constants pane, see "[Risk Analysis Tab](#)" on page 307.

3. Finalize the testing policy

- a. **Calculate the Testing Policy.** In the Risk Analysis tab, click the **Analyze** button to calculate the Testing Level and Testing Time for each assessment requirement under the analysis requirement. The **Total required test time**, **Total allocated testing time**, and **Total required development time** are updated.

For user interface details on the Risk Analysis tab, see "[Risk Analysis Tab](#)" on page 307.

- b. **Adjust the Testing Policy.** Under **Analysis Constants**, you can make adjustments to the testing policy to ensure that you have enough time to perform all the testing, and that no resources are wasted.

For user interface details on the Analysis Constants pane, see "[Risk Analysis Tab](#)" on [page 307](#).

- c. **Apply results for each assessment requirement.** Click the **Analysis and Apply to Children** button. The analysis is applied to all assessment requirements under the analysis requirement that match the current filter.

4. Analyze the testing strategy

- To generate a report detailing the testing strategy of the analysis requirement, in the Risk Analysis tab, click the **Report** button. The Generate Report dialog box opens. For user interface details, see "[Generate Report Dialog Box](#)" on [page 312](#).
- To analyze the testing strategy for an assessment requirement, select an assessment requirement from the requirements tree and click the **Risk Assessment** tab. The results are displayed in the Assessment Results sub-tab. For user interface details, see "[Risk Assessment Tab](#)" on [the next page](#).

Risk-Based Quality Management User Interface

This section includes:

• Risk Assessment Tab	303
• Risk Analysis Tab	307
• Generate Report Dialog Box	312

Risk Assessment Tab

This tab enables you to determine the Business Criticality, Failure Probability, and Functional Complexity of a requirement by assigning them values directly or by assigning values to a set of criteria.

To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> In the Requirements module, select the Requirement Details view. Select an assessment requirement and click the Risk Assessment tab. In the Requirements module, right-click an assessment requirement and select Requirement Details. The Requirement Details dialog box opens. Click the Risk Assessment button.
Important information	<ul style="list-style-type: none"> If you do not determine the Business Criticality, Failure Probability, and Functional Complexity for a requirement, ALM does not include the requirement in the risk analysis. You can customize the criteria, their possible values, and how these values determine the Business Criticality, Failure Probability, and Functional Complexity. You can also customize how the Business Criticality and Failure Probability are used to calculate the Risk. For more information, see the <i>HPE Application Lifecycle Management Administrator Guide</i>.
Relevant tasks	"How to Assess Risk" on page 300
See also	"Risk Analysis Tab" on page 307 "Risk-Based Quality Management Overview" on page 300

Risk Assessment Tab Common Elements

Common user interface elements are described below:

UI Element	Description
Assessment Status	The current status of the assessment requirement. An assessment status can be one of the following: Not Started , In Progress , and Completed .
Exclude from Analysis	Ignores the selected assessment requirement when performing risk analysis.

Assessment Results Tab - Assessments Summary Area

This area displays the assigned or calculated values of the Risk and Functional Complexity of an assessment requirement.

Important information	The Assessments Summary area shows the Risk and Functional Complexity values calculated in the Assessment Questions tab. You can ignore these values and use instead custom values.
Relevant tasks	"How to Assess Risk" on page 300
See also	"Assessment Questions Tab" on page 306

User interface elements are described below:

UI Element	Description
Risk	Calculates the risk based on the Business Criticality and Failure Probability for the requirement. Select Use custom to ignore the calculated value and use instead a custom value. Possible values are A - High , B - Medium , and C - Low .
Business Criticality	Measures how important the requirement is to your business. Select Use custom to ignore the calculated value and use instead a custom value. Possible values are A - Critical , B - Important , and C - Nice to Have . Example: A requirement affecting a minor feature that is likely to be used rarely might be assigned a Nice to Have Business Criticality, whereas a requirement that is essential to your application's functionality would probably be assigned a Critical Business Criticality.

UI Element	Description
Failure Probability	<p>Measures how likely a test on the requirement is to fail.</p> <p>Select Use custom to ignore the calculated value and use instead a custom value. Possible values are 1 - High, 2 - Medium, and 3 - Low.</p> <p>Example: A requirement whose implementation involves making significant changes across most areas of your application would probably be assigned a High Failure Probability. In contrast, a requirement that involves changing an icon in your application would probably not have many associated risks, and so is likely to be assigned a Low Failure Probability.</p>
Functional Complexity	<p>Indicates the complexity of the requirement's implementation.</p> <p>Select Use custom to ignore the calculated value and use instead a custom value. Possible values are 1 - High, 2 - Medium, and 3 - Low.</p> <p>Example: A requirement whose implementation involves making significant changes to your application to enable it to communicate with other systems probably has a high complexity and would be assigned a High Functional Complexity. In contrast, a requirement that involves no significant changes to enable your application to communicate with other systems would probably not have many associated risks, and so is likely to be assigned a Low Functional Complexity.</p>

Assessment Results Tab - Testing Policy Area

This area displays the conclusions of the last analysis you performed on an analysis requirement that is the parent of the assessment requirement.

Important information	To view and edit the testing policy of an assessment requirement in the Testing Policy area, you must first perform analysis on relevant analysis requirements (parent requirements) and apply results to all assessment requirements (children requirements) in the Risk Analysis tab.
Relevant tasks	"How to Assess Risk" on page 300
See also	"Risk Analysis Tab" on page 307

User interface elements are described below:

UI Element (A - Z)	Description
Based on analysis requirement	Displays the analysis requirement on which the last analysis that included the current requirement was performed. You can click the analysis requirement's name to go to the analysis requirement in the requirements tree.
Calculated Testing Level	The level at which to test the requirement, as calculated in the last analysis that included the current requirement.
Calculated Testing Time	The time allocated to test the requirement, as calculated in the last analysis that included the current requirement.
Estimated development time (optional)	The estimated time needed to develop the requirement. ALM can then calculate the total estimated development time for an analysis requirement and its children as the sum of the estimated development times of the children. Assigning the estimated development time is optional, and does not affect the risk analysis.
Last analyzed on date	The date on which the last analysis that included the current requirement was performed.
Use these for the next calculation	Overrides the calculated values in the next calculation, and instead uses custom values. In the Testing Level box, select the Testing Level to use for the next calculation. In the Testing Time box, type the Testing Effort to use for the next calculation. When you next perform an analysis that includes the current requirement, these values are used instead of the calculated values.

Assessment Questions Tab

This tab displays lists of criteria used to determine Business Criticality, Failure Probability, and Functional Complexity.

Relevant tasks	"How to Assess Risk" on page 300
See also	"Risk Analysis Tab" on the next page

User interface elements are described below:

UI Element	Description
Business Criticality/Failure Probability/Functional Complexity tab	Each tab lists criteria to consider when assessing each category.
criteria	Lists the criteria to use for assessing a selected category.
Value	Lists the possible values that can be assigned to each criterion.
Description of Criterion	Explains the selected criterion.
Calculated Business Criticality/ Calculated Failure Probability/Calculated Functional Complexity	<p>Updates according to the values you assigned to the criteria of the selected category.</p> <p>Note: You can ignore the value calculated on the basis of the values for the criteria, and use instead a custom value when performing risk analysis. In the Assessment Summary area of the Assessment Results tab, select Use custom.</p>

Risk Analysis Tab

This tab enables you to define the testing policy settings and to determine the total estimated testing time for the analysis requirement and the assessment requirements under it.

To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • In the Requirements module, select the Requirement Details view. Select an analysis requirement and click the Risk Analysis tab. • In the Requirements module, right-click an analysis requirement and select Requirement Details. The Requirement Details dialog box opens. Click the Risk Analysis button.
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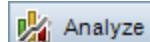
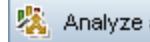
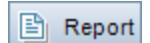
Important information	<ul style="list-style-type: none"> Make sure that you have determined the Risk and Functional Complexity categories of all assessment requirements that are located under the analysis requirement for which you want to finalize the testing policy, and that you want to include in the risk analysis. For more details, see "Risk Assessment Tab" on page 303. You can filter the requirements tree to include only the assessment requirements you want to include in the risk analysis. For more details on filtering, see "Filter Dialog Box" on page 54. You can customize each requirement type for risk-based quality management. For more information, see the <i>HPE Application Lifecycle Management Administrator Guide</i>. You can customize the testing policy used by default. For more details, see the <i>HPE Application Lifecycle Management Administrator Guide</i>.
Relevant tasks	"How to Assess Risk" on page 300
See also	"Risk Assessment Tab" on page 303 "Risk-Based Quality Management Overview" on page 300

Risk Analysis - main area

This tab enables you to calculate the total estimated testing time for the analysis requirement and the assessment requirements under it. The calculation is based on the testing policy defined in the Analysis Constants pane.

Important information	<ul style="list-style-type: none"> If you do not want to use the default Testing Effort and Testing Level values when calculating the testing policy in this main area, make sure that you have defined custom values in the Analysis Constants pane. After calculating the testing policy in this main area, compare the total calculated testing time with the resources you have available. If the resources you have available are not sufficient to test the requirement according to the current settings, you can change the settings in the Analysis Constants pane, and perform the calculation again.
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User interface elements are described below:

UI Element	Description
 Analyze	<p>Calculates the Testing Level and Testing Time for each assessment requirement under the analysis requirement that matches the current filter.</p> <p>This calculation is based on the assessment requirements' Risk Category, Testing Level, and Testing Time values you defined for the analysis requirement.</p>
 Analyze and Apply to Children	<p>Propagates the analysis results to all assessment requirements under the analysis requirement that match the current filter.</p>
 Report	<p>Opens the Generate Report dialog box. For more details, see "Generate Report Dialog Box" on page 312.</p>
Last analyzed on	<p>The date on which the risk analysis was last performed.</p>
Filter	<p>Determines which requirements were included in the risk analysis. For more details on filtering, see "Filter Dialog Box" on page 54.</p>
Scope	<p>The number of requirements included in the risk analysis. Also provides a breakdown of which requirements were assessed, which were missing assessment, and which were not assessable.</p> <p>To display a list of requirements not included in the analysis, click the missing assessment or not assessable links. The Drill Down Results dialog box opens and displays a grid with a list of requirements in the category. For more details, see "Drill Down Results Dialog Box" on page 865.</p> <div data-bbox="682 1459 1383 1769" style="background-color: #e0f2e0; padding: 10px;"> <p>Tip: The missing assessment link displays the requirements for which you did not determine a category or which you excluded explicitly from the analysis. Verify that there are no requirements that should be assigned a category. If you do not want to include a requirement in the analysis, then exclude it from the analysis explicitly.</p> </div>

UI Element	Description
Total required testing time	Displays the total calculated time required to test all the assessment requirements under the analysis requirement matching the current filter and included in the risk analysis.
Total allocated testing time	The total time allocated to test the requirements included in the risk analysis.
Total required development time	Displays the total time required to develop all the assessment requirements under the analysis requirement, based on the required development time you optionally estimated for each assessment requirement.
No. of Requirements	<p>Displays the number of sub-requirements of the analysis requirement of each Risk Category.</p> <p>To display a list of requirements included in the analysis, click a segment in the graph. The Drill Down Results dialog box opens and displays a grid with a list of requirements in the category. For more details, see "Drill Down Results Dialog Box" on page 865.</p>
Total Testing Time	<p>Displays the total calculated testing time required to test all the requirements of each Risk Category.</p> <p>To display a list of requirements included in the analysis, click a segment in the graph. The Drill Down Results dialog box opens and displays a grid with a list of requirements in the category. For more details, see "Drill Down Results Dialog Box" on page 865.</p>
Functional Complexity	A legend of the Functional Complexity values displayed in the graphs.

Analysis Constants Pane

User interface elements are described below:

UI Element	Description
	Show/Hide. Shows/hides the Analysis Constants pane.
 Show Defaults	Opens the Risk-Based Quality Management Constants Defaults dialog box, enabling you to view the default constants in use.

UI Element	Description
 Restore Defaults	Assigns default values to the constants used for the current requirement.
Testing Time (full) per Functional Complexity	<p>The time needed to fully test a requirement with that Functional Complexity. For each Functional Complexity value, type the estimated testing time.</p> <p>Example: A requirement with a high Functional Complexity generally requires more testing time as it is more likely that the requirement's implementation contains defects.</p>
Testing Level (Full = 100%, None = 0%)	<p>Defines how much Testing Time is required for a requirement as a percentage of full testing.</p> <p>In the Partial and Basic boxes, type the default Testing Time required for partial testing and basic testing of a requirement. Express this as a percentage of the effort required for full testing.</p> <p>A requirement whose Testing Level is set to None is not tested at all, and the testing effort is zero.</p> <p>Example: If 20 hours are required to perform full testing on a requirement and partial testing is defined as 75% of full testing, ALM calculates that 15 hours are required to perform partial testing on the requirement.</p>
Testing Policy (in Hours) grid	<p>Defines the level at which to test a requirement of each Risk and Functional Complexity category.</p> <p>To define these levels, click the arrow next to the cell in the grid. Select a Testing Level from the available Testing Levels. The available Testing Levels are Full, Partial, Basic, and None. Next to each Testing Level, you can see the estimated time needed to test a requirement at that level, based on the Testing Efforts and Testing Levels you defined.</p>

Generate Report Dialog Box

This dialog box enables you to generate a report for analyzing the testing strategy for the analysis requirement and for the assessment requirements under it.

To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • In the Requirements module, select the Requirement Details view. Select an analysis requirement and click the Risk Analysis tab. Click the Report button. • In the Requirements module, right-click an analysis requirement and select Requirement Details. The Requirement Details dialog box opens. Click the Risk Analysis button. Click the Report button.
Important information	<ul style="list-style-type: none"> • To generate a report, you must first save the analysis and apply it to all assessment requirements under the analysis requirement. For more details, see "Risk Analysis Tab" on page 307. • To generate a report, Microsoft Word must be installed on your machine. • The analysis results are only valid for the requirements at the time the analysis was last performed. If you subsequently modify the Risk or Functional Complexity Categories of the requirements, or the testing policy, you should re-perform the analysis.
Relevant tasks	"How to Assess Risk" on page 300
See also	"Risk Analysis Tab" on page 307 "Risk-Based Quality Management Overview" on page 300

User interface elements are described below:

UI Element	Description
Default location	The location and name of the Microsoft Word file to which you want the data to be exported. You can click the browse button to select a location from the Save As dialog box.
Add report as an attachment	Adds the report as an attachment to the analysis requirement.
Include list of requirements in the report	Includes a list of the requirements in the report.
Generate	Generates the report as a Microsoft Word document.

Chapter 17: Business Process Models

This chapter includes:

- [Business Process Models Overview](#) 314
- [How to Work with Business Process Models](#) 316
- [Business Models Module User Interface](#) 320

Business Process Models Overview

ALM Editions: The ALM Business Models module is available for ALM Edition and Quality Center Enterprise Edition. For more information about ALM editions and their functionality, see "["ALM Editions" on page 125](#)". To find out what edition of ALM you are using, ask your ALM site administrator.

The HPE Application Lifecycle Management (ALM) Business Models module addresses the need for a stronger connection between business process modeling, quality assurance management, and requirement definitions. The module integrates business process models into the application lifecycle.

This integration fosters collaboration between the various roles involved in the business process modeling and testing lifecycles, thereby facilitating communication between business users and people in more technical departments. This collaboration facilitates better business outcomes by identifying high level activities, thus guiding the QA manager in determining the high level test requirements.

Integrating business process models into ALM involves importing business process models into ALM, and linking requirements and tests to models, activities, and end-to-end business flows. After executing tests, you can display quality status views on the business process model level.

To work with business process models in ALM, you must first design models with standard modeling tools, and import the models to ALM. For more details, see "["Business Process Models File Import" below](#)".

In addition to the standard business process model entities, ALM enables you to perform quality testing on end-to-end business flows ("**paths**"). For more details, see "["Business Process Model Paths" on the next page](#)".

For details on working with business process models, see "["How to Work with Business Process Models" on page 316](#)".

Business Process Models File Import

To work with business process models in ALM, you must first create models in standard BPMN or EPC modeling tools, and export them to files.

ALM supports the following model and file formats:

- **BPMN 1.1** models exported to **XPDL 2.0/2.1** files
- **BPMN 2.0** models exported to **XPDL 2.2** files
- **EPC 7.1** models exported to **AML** files (.xml extension)

During the import process, you can map model and activity attributes to ALM memo or string fields. This enables you to edit attribute values in ALM.

For each model that you import to ALM, business process model entities are created under the selected folder: an entity for the model as a whole, and an entity for each of the model's activities.

Note:

- As **XPDL2.2** focuses on process modeling, it does not include all elements of the **BPMN 2.0** specification. Choreography and conversation diagrams are not defined in **XPDL 2.2**, and collaboration diagrams are covered only to the extent required to support modeling message flow between pools. Exporting models with these elements into **XPDL 2.2** files will cause gaps in the model.
- If you use Metastorm ProVision, you should export models using the **Independent Sub-Process** option.

In addition, **representative requirements** are created automatically for the model and for each of its activities in the Requirements module.

- Representative requirements for models are created under the **Business Models** requirement folder.
- Representative requirements for activities are created under the **Activities** sub-folder. If the same activity is included in several models, the same requirement is used to represent the activity.

Representative requirements are assigned the **Business Model** requirement type.

Re-importing models

If changes are made to a model in the model authoring tool, you can apply the changes to the model in ALM by re-importing the model. ALM automatically updates the model entities, as follows:

- Activities added or deleted in the re-imported model are added or deleted in the model in ALM.

Note: Activities are identified by the GUID assigned to them by the authoring tool. A re-imported activity with a different GUID than the original activity is re-imported as a separate activity.

- Paths are automatically updated in ALM, provided that alternative paths are found. If alternative paths cannot be found, you must assign a new path to the path entity, or delete the path entity.

Business Process Model Paths

The quality of a business process model is determined not only by its activities, but also by the business flows within the model, or paths. A **path** is an end-to-end sequence of transitions between activities in a model.

A business process model that you create with standard modeling tools does not include path definitions. As paths are important for verifying the quality of a business process, ALM enables you to define paths in your imported models.

ALM automatically analyzes all possible end-to-end paths in a model, and allows you to select those paths that are important to test.

Note: Recursive paths that repeat the same activity are not supported.

For each path you create, a representative requirement is created automatically under the **Paths** group requirement, a child of the model representative requirement.

How to Work with Business Process Models

This task describes how to specify business process models in ALM.

To learn more about business process modeling in ALM, see "[Business Process Models Overview](#)" on page 314.

Product Feature Movie: To view a movie that demonstrates how to integrate business process models into the application lifecycle, choose **Help > Movies** in the ALM main window.

This task includes the following steps:

- "Prerequisites" below
- "Import or re-import business process models" on the next page
- "Create paths" on the next page
- "Develop requirements and tests" on the next page
- "Link requirements and tests to model entities" on page 318
- "Analyze the quality of business process models" on page 318
- "Generate a report of business process models" on page 318

1. Prerequisites

- With standard modeling tools, create business process models, and export the business process models to files.
 - **BPMN 1.1** models exported to **XPDL 2.0/2.1** files
 - **BPMN 2.0** models exported to **XPDL 2.2** files
 - **EPC 7.1** models exported to **AML** files (**.xml** extension)
- To enable mapping of model and activity attributes to ALM entities, add string or memo fields to the following entities:

- **Business Process Models**
- **Business Process Model Elements**

For more details on adding user-defined fields, refer to the *HPE Application Lifecycle Management Administrator Guide*.

2. Import or re-import business process models

For concept details, see "[Business Process Models File Import](#)" on page 314.

- a. **Open the Business Models module.** On the ALM sidebar, under **Requirements**, select **Business Models**. In the **View** menu, select **Model Tree**.
- b. **Create a folder.** Right-click the **Models** root folder and select **New Folder**. To create a sub-folder, right-click a folder and select **New Folder**.
- c. **Open the Import Models dialog box.** Right-click a folder and select **Import Model**. For user interface details, see "[Import Models Dialog Box](#)" on page 337.
- d. **Select a file and models.** In the Import Models dialog box, select a file to import. After the file is analyzed, select the models you want to import from the file.
- e. **Map model and activity attributes to ALM fields.** In the Import Models dialog box, click **Import Attributes**. For user interface details, see "[Map Imported Attributes to User Fields Dialog Box](#)" on page 339.
- f. **Track import status.** Track the import status in the Import Models dialog box. When import is complete, click **OK** to close the Importing Models dialog box.

3. Create paths

For concept details, see "[Business Process Model Paths](#)" on page 315.

- a. In the Business Models module, select **View > Model Tree**.
- b. **Open the New Path dialog box.** Right-click a business process model and select **New Path**. For user interface details, see "[New Model Path/Model Path Details Dialog Box](#)" on page 342.
- c. **Select a path.** In the Path drop-down list, select a path that is important to test. The activities along the path are highlighted in the model diagram, and a description of the path is displayed in the Path Description tab.

4. Develop requirements and tests

To determine the quality of business process models in ALM, you must develop requirements and tests that cover all the critical aspects of the model.

To assist you in this, ALM automatically creates a structure of business model requirements that represent the models and activities that you import, and the paths that you create.

- a. Use one of the following:
 - Use the representative requirements as a basis for developing a detailed requirements tree and adding test coverage.

- If you have existing requirements, not related to the representative requirements, you can continue developing them. Later, link them manually to the relevant model entities.
- b. Depending on your testing strategy, create test coverage for the requirements.

For task details, see "[How to Use Requirements in ALM](#)" on page 244.

5. Link requirements and tests to model entities

For requirements and tests to be included in the quality analysis, you must link them to their respective model entities. For task details, see "[Link Requirements and Tests to Model Entities](#)" below.

6. Analyze the quality of business process models

After you run tests on your model entities, generate graphs that analyze the quality of a model entity.

- a. **Open the Model Analysis view.** In the Business Models module, select **View > Model Analysis**. For user interface details, see "[Model Analysis View](#)" on page 324.
- b. **Select a model entity for the root of the analysis.** Use one of the following:
 - In the Models Map tab, select a model. The corresponding model node is highlighted in the business models tree.
 - In the business models tree, select a model entity.
- c. Click the **Quality Analysis** tab.
- d. In the **Depth** drop-down list, select the number of levels to include in the analysis.
- e. Depending on your requirements strategy, choose whether to include representative or child requirements in the analysis.
- f. Click on graph bars to drill down to records represented by the bars. For task details, see "[How to Generate a Graph](#)" on page 830.

7. Generate a report of business process models

Include business process model entities in project reports. For task details, see "[How to Create Project Reports](#)" on page 878.

Link Requirements and Tests to Model Entities

The following steps describe how to link requirements and tests to their respective model entities.

Note: This task is part of a higher-level task. For details, see "[How to Work with Business Process Models](#)" on page 316.

This task includes the following steps:

- "Prerequisites" below
- "Link requirements and tests directly to model entities" below
- "Link model entities to tests" below
- "Link model entities to requirements" below

Prerequisites

When creating model linkage, consider the following:

- If you developed your requirements under the representative requirements, the requirements and their covering tests are automatically linked to their respective model entities.
- If your requirements are not related to the representative requirements, you must link the requirements manually to their respective model entities.
- Tests that cover linked requirements are automatically linked to the same model entities. You can also manually link other tests directly to model entities.
- You cannot manually link representative requirements to model entities.

Link requirements and tests directly to model entities

1. In the Business Models module, select **View > Model Tree**.
2. Select a model entity, and click the **Linkage** tab. For user interface details, see "[Linkage Tab on page 344](#)".
3. Click either the **Requirements** or **Tests** tab.
4. Click **Select Requirements** or **Select Tests**, respectively.
5. In the **Requirements Tree/Test Plan Tree** pane, right-click requirements or tests and select **Add to Linkage**. For user interface details, see "[Requirements Tree and Test Plan Tree Pane on page 347](#)".
6. Alternatively, create linkage to any model entity by dragging requirements and tests to entities in the model diagram.

Link model entities to tests

1. In **Test Plan > Test Plan Tree** view, select a test and click the **Business Models Linkage** tab.
2. Click **Add to Linkage**  to display the business models tree in the right pane.
3. Link model entities to tests. For user interface details, see "[Business Models Linkage Tab on page 427](#)".

Link model entities to requirements

1. In **Requirements > Requirement Details** view, select a requirement and click the **Business Models Linkage** tab.

2. Click **Add to Linkage**  to display the business models tree in the right pane.
3. Link model entities to requirements. For user interface details, see "[Business Models Linkage Tab](#)" on page [427](#).

Business Models Module User Interface

This section includes:

• Business Models Module Window	321
• Model Analysis View	324
• Business Models Module Menus and Buttons	329
• Business Models Module Icons	334
• Business Models Module Fields	335
• Import Models Dialog Box	337
• Map Imported Attributes to User Fields Dialog Box	339
• Model Details/Model Activity Details Dialog Box	340
• New Model Path/Model Path Details Dialog Box	342
• Linkage Tab	344
• Requirements Tree and Test Plan Tree Pane	347
• Represented Items Tab	348

Business Models Module Window

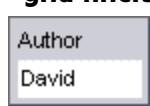
This window enables you to define and maintain business process models in ALM.

To access	On the ALM sidebar, under Requirements , select Business Models .
Important information	<p>The Business Models module includes the following views:</p> <ul style="list-style-type: none"> • Model Tree. Displays business process models and their elements in a hierarchical tree. • Model Grid. Displays a flat list of models, activities or paths. • Model Analysis. Displays an analysis of a model's testing coverage and quality. For user interface details, see "Model Analysis View" on page 324.
Relevant tasks	"How to Work with Business Process Models" on page 316
Learn more	"Business Process Models Overview" on page 314 "Business Models Module Fields" on page 335

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

UI Element	Description
<Business Models module common UI elements>	<ul style="list-style-type: none"> • Business Model fields. For field definitions, see "Business Models Module Fields" on page 335. • Business Model menus and buttons. For command and button descriptions, see "Business Models Module Menus and Buttons" on page 329. • Business Model icons. For icon descriptions, see "Business Models Module Icons" on page 334. • ALM masthead, menus, and sidebar. For details, see "ALM Common Areas" on page 30.
	Hides or shows the model diagram and diagram overview. Available from: Model Tree view

UI Element	Description
<b <u>usiness</u> m<u>odels</u> tree>	<p>A hierarchical representation of business process models, activities, and paths. Activities and paths are displayed as children of their respective models.</p> <p>Note: The position of business process models in the tree does not necessarily reflect connections between models. Connections between models are displayed in the Model Analysis view. For user interface details, see "Model Analysis View" on page 324.</p>
<b <u>usiness</u> p<u>rocess</u> m<u>odel</u> d<u>iagram</u> p<u>ane</u> >	<p>Located in the upper-right side of the window, a diagram of the currently selected business process model. An activity or a path that you select in the business models tree is highlighted in the diagram.</p> <p>Tip:</p> <ul style="list-style-type: none"> • Hold down the CTRL key and use the mouse wheel to zoom in and out. Or, hold down the CTRL key and use the + and - keys to zoom in and out. • Select an activity in the diagram to view its details in the main window. • Double-click an activity to view its details in a separate window.
<b <u>usiness</u> p<u>rocess</u> m<u>odel</u> o<u>verview</u> >	<p>Located in the lower-left side of the window, a reduced diagram of the currently selected business process model. The framed area of the model in the overview is magnified in the diagram pane.</p> <p>Tip:</p> <ul style="list-style-type: none"> • Select an area in the overview to focus on the selected area in the diagram pane. • Drag or resize the frame to change the focus of the model in the diagram pane.
<filter status bar>	<p>Describes the filter currently applied to the grid or tree. Located directly above the grid filter boxes or tree.</p>

UI Element	Description
<grid filters> 	<p>Displays a grid filter box under each column name, enabling you to define a filter condition for a column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For user interface details, see "Select Filter Condition Dialog Box" on page 65.</p> <p>Available from: Model Grid view</p>
Activities	<p>Displays a list of activities across multiple business process models.</p> <p>Tip: To group activities by business process model, select Group By Owner Model.</p> <p>Available from: Model Grid view</p>
Attachments	<p>Lists attachments that provide additional information about the currently selected business process model, activity or path. For more details, see "Attachments Page" on page 80.</p>
Comments	<p>Comments about the currently selected model entity.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Description	<p>Describes the currently selected model entity.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Details	<p>Details the currently selected model entity.</p>
Group By Owner Model	<p>If selected in combination with Activities or Paths, groups the activities or paths according to the model in which they are defined.</p> <p>If this option is not selected, the activities or paths are displayed in a flat list.</p> <p>Available from: Model Grid view</p>
History	<p>Lists changes made to the currently selected business process model. For more details, see "History Tab" on page 75.</p>

UI Element	Description
Imported Attributes	<p>Lists field labels and values relevant to the business process model or activity, as defined in the model authoring tool.</p> <p>Note: This tab is read-only.</p>
Linkage	<p>Contains the Requirements and Tests tabs that list entities linked to the business process model, activity, or path. For more details, see "Linkage Tab" on page 344.</p>
Models	<p>Displays a list of business process models.</p> <p>Available from: Model Grid view</p>
Paths	<p>Displays a list of paths across multiple business process models.</p> <p>Tip: To group activities by business process model, select Group By Owner Model.</p> <p>Available from: Model Grid view</p>
Text	<p>Text displayed in an activity entity. The field is read-only.</p> <p>Available from: Model activities</p>

Model Analysis View

This view enables you to analyze the quality of business process models, activities, and paths.

To access	<ol style="list-style-type: none"> In the Business Models module, select View > Model Analysis. Use one of the following: <ul style="list-style-type: none"> In the Models Map tab, select a model. The corresponding model entity is highlighted in the business models tree. In the business models tree, select a model entity. Click the Quality Analysis tab.
Important information	<p>The Model Analysis view includes the following tabs:</p> <ul style="list-style-type: none"> Models Map. Displays relationships between business process models imported into ALM. Quality Analysis. Analyzes the quality of a business process model entity.

Relevant tasks	"How to Work with Business Process Models" on page 316
Learn more	"Business Process Models Overview" on page 314

Models Map Tab

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

UI Element	Description
	A business process model. Tip: Double-click a model to view model details in a separate window. For user interface details, see "Model Details/Model Activity Details Dialog Box" on page 340.
→	Indicates that the model at the tip of the arrow is a sub-process of the model at the tail of the arrow.
----	A bi-directional link, indicating that the model at one end of the line is a continuation of the model at the other end of the line.
<map area>	Displays all the business process models imported to ALM, and the hierarchical connections between the models. Select a model in the map area that you want to analyze, and then click the Quality Analysis tab. Tip: Hold down the CTRL key and use the mouse wheel to zoom in and out of the map image.

Quality Analysis Tab Toolbar

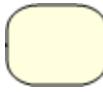
User interface elements are described below:

UI Element	Description
Depth	<p>Defines the number of hierarchical levels, from the root entity down, displayed in the entities pane. Entities displayed in the entities pane are analyzed in the analysis graphs.</p> <p>Standalone Entity. Displays the root entity alone.</p> <p>One Nested Level. Displays the root entity, and entities one level down from the current entity.</p> <p>All Nested Levels. Displays and analyzes the root entity, and all entities leading off from the root entity on all levels.</p>
Include requirement children	Instructs ALM to include in the analysis all child requirements of the requirements linked to the model entities in the entities pane.
Include representative requirements	Instructs ALM to include in the analysis the representative requirements linked to the model entities in the entities pane.
 Generate	<p>Refreshes the analysis graphs to include the most up-to-date information.</p> <p>Tip: Use this option if representative requirements are linked to tests.</p>

Quality Analysis Tab Entities Pane

This pane displays the business process model entities that are analyzed in the graphs pane.

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

UI Element	Description
<entities pane>	<p>Displays business process models, activities, and paths that are analyzed in the graphs pane, and hierarchical connections between them.</p> <p>Note:</p> <ul style="list-style-type: none">The number of hierarchical levels displayed is determined by the value in the Depth field.An activity that is included in more than one model or path is displayed in the entities pane once. <p>Tip:</p> <ul style="list-style-type: none">To change the root entity displayed in the entities pane, select a model in the Models Map tab, or select an entity in the business models tree.Hold down the CTRL key and use the mouse wheel to zoom in and out.Double-click an entity to display entity details.
	A business process model entity.
	A path entity.
	An activity entity.

Quality Analysis Tab Graphs Pane

This pane displays graphs that analyze the quality of the entities displayed in the entities pane.

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

UI Element	Description
<graph title>	Click a graph title to change the graph's titles and appearance. For user interface details, see " Graph Appearance Dialog Box " on page 865.
Requirements graph	<p>Displays the coverage status of requirements linked to the model entities displayed in the entities pane.</p> <p>Note: The scope of requirements included in the graph is determined by the Include requirement children and Include representative requirements options.</p>
Tests graph	<p>Displays the execution status of tests linked to the model entities displayed in the entities pane.</p> <p>Note: The tests graph includes tests that are linked to the requirements included in the Requirements graph, and tests that are linked directly to the entities displayed in the entities pane.</p>
<legend>	<p>Displays the graph categories and their corresponding color.</p> <p>Tip: Right-click a category to change its color.</p>
Defects graph	<p>Displays the severity of defects linked to the model entities displayed in the entities pane.</p> <p>Note: The defects graph includes defects linked to the requirements in the Requirements graph, and to the tests in the Tests graph.</p>
Last Generated	The date and time that the graph data was last refreshed. Click Generate to refresh the data.
	<p>View Graph in Full Screen. Opens the graph in a new window and maximizes its display. In the new window you can customize the graph view and save the graph data. For user interface details, see "View Tab - Graphs/Graph Window" on page 846.</p>

UI Element	Description
<graph area>	<p>You can perform the following actions in the graph area:</p> <ul style="list-style-type: none"> • Drill down to the graph's data by clicking on a segment in the graph. For task details, see "How to Generate a Graph" on page 830. • Right-click an area in the graph to change its color. • Hover over a bar to view a tooltip containing the area's category, x-axis, and y-axis values.

Business Models Module Menus and Buttons

This section describes the menus and buttons available in the Business Models module.

To access	On the ALM sidebar, under Requirements , select Business Models .
Important information	<ul style="list-style-type: none"> • Some menu commands and buttons are not available in all model views. • You can access the menu bar from the Business Models module by pressing the shortcut key ALT. • Version Control: Additional menu commands and buttons are available in a version control enabled project. For details, see "Versions Menu and Buttons" on page 117.
Relevant tasks	"How to Work with Business Process Models" on page 316
Learn more	"Business Models Module Icons" on page 334

User interface elements are described below:

UI Element	Menu	Description
Copy URL/Paste	Edit	<p>Copies a model entity or folder and pastes its URL as a link. The item itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the item. If you are not already logged in, ALM first prompts for login details.</p>

UI Element	Menu	Description
Cut/Paste  	Edit	<p>Moves a business process model or folder to a different location in the tree. Activities and paths are moved together with their model.</p> <p>Tip: You can also move a business process model or folder by dragging it to a new location in the tree.</p>
Delete 	Edit	<p>Deletes selected model entities or folders. You cannot delete the root folder.</p> <p>Note: Deleting a folder deletes all the items included in it.</p>
Details	Models	<p>Opens the Details dialog box for the selected model entity. For more details, see "Model Details/Model Activity Details Dialog Box" on page 340.</p>
Expand All/Collapse	View	<p>Expands/collapses all the nodes under the selected folder.</p>
Filter/Sort 	View	<p>Enables you to filter and sort the models in the business models tree or grid. Any currently applied filters or sorting orders are displayed below the toolbar. For more details, see "Filter Dialog Box" on page 54.</p>
Find	Edit	<p>Opens the Find dialog box, enabling you to search for a model entity under the selected folder. For more details, see "Find Dialog Box" on page 68.</p>
Fit Overview to Window	right-click menu	<p>Adjusts the zoom level of the diagram overview so that the entire model is visible in the overview pane.</p>
Fit to Window	right-click menu	<p>Adjusts the zoom level of the model diagram so that the entire model is visible in the diagram pane.</p>
Flag for Follow Up 	Edit	<p>Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for a selected model entity. For more details, see "Flag For Follow Up Dialog Box" on page 97.</p>

UI Element	Menu	Description
Go to Model	Models	Opens the Go To Model dialog box, enabling you to find a specific model by Model ID. You can only go to models that are in the current filter.
Go to Representative Requirement	Models	Opens the requirements tree in the Requirements module, and highlights the representative requirement of the selected model entity.
Go to Requirement in Requirements Tree	right-click menu	Opens the requirements tree in the Requirements module, and highlights the selected requirement. Available from: Linkage tab > Requirements tab
Go To Sub-Model	right-click menu	Navigates to the sub-model in the business models tree that is represented by the selected activity.
Go to Test in Test Set	right-click menu	Enables you to view instances of a test in test sets in the Test Lab module. If there is only one instance of the selected test, the Test Lab module opens with the instance highlighted. If there is more than one instance of the selected test, the Select Test Set dialog box opens, and you select a test set and instance. Available from: Linkage tab > Tests tab
Go to Test in Test Tree	right-click menu	Opens the test plan tree in the Test Plan module, and highlights the selected test. Available from: Linkage tab > Tests tab
Import Model 	Models	Opens the Import Models dialog box, enabling you to import or re-import business process models from a source file. For more details, see " Import Models Dialog Box " on page 337. Available from: Model Tree view
Indicator Columns	View	Displays indicators on the left-side of the business process model window. For more details, see " Business Models Module Icons " on page 334.

UI Element	Menu	Description
Model Analysis	View	Displays the Model Analysis view, enabling you to analyze the quality of selected business process models. For more details, see " Model Analysis View " on page 324.
Model Grid	View	Displays the Model Grid view, enabling you to view business process models, activities, or paths in a flat, non-hierarchical view.
Model Tree	View	Displays the Model Tree view, enabling you to view your business process models and elements hierarchically in a tree, and to view a diagram of the selected model.
New Folder 	Models	<p>Opens the New Folder dialog box, enabling you to add a folder under a selected folder in the business models tree.</p> <p>Syntax exceptions: The folder name cannot include the following characters: \ ^ *</p> <p>Available from: Model Tree view</p>
New Path 	Models	<p>Opens the New Business Model Path dialog box, enabling you to define a sequence of transitions between activities in a model. For more details, see "New Model Path/Model Path Details Dialog Box" on page 342.</p> <p>Available from: Model Tree view</p>
Refresh 	View	Refreshes the business process model view so that it displays the most up-to-date information.
Remove From Linkage	right-click menu	<p>Removes the selected requirement or test from the linkage grid.</p> <p>Available from: Linkage tab > Tests and Requirements tabs</p>
Rename	Edit	<p>Enables you to rename the selected business process model folder.</p> <p>Available from: Model Tree view</p>
Select All	Edit	<p>Selects all records displayed in grid.</p> <p>Available from: Model Grid view and Linkage tab > Tests and Requirements tabs</p>

UI Element	Menu	Description
Select Columns 		<p>Opens the Select Columns dialog box, enabling you to determine which fields are displayed in the business models grid and their order. For more details, see "Select Columns>Select Fields Dialog Box" on page 85.</p> <p>Available from: Model Grid view</p>
Select Requirements/Select Tests	right-click menu	<p>Opens a panel displaying the following tabs:</p> <ul style="list-style-type: none"> • Requirements Tree • Test Plan Tree <p>The panel enables you to link requirements and tests to model entities.</p>
Send by E-mail 	Models	<p>Opens the Send E-mail dialog box, enabling you to send business process models by email to recipients selected from a list. For more details, see "Send E-mail Dialog Box" on page 76.</p>
Show Full Path	right-click menu	<p>Displays the full path of linked requirements or tests. The path is displayed in the Name column of linked requirements, and in the Test Name column of linked tests.</p> <p>Available from: Linkage tab > Tests and Requirements tabs</p>
Text Search 	Edit	<p>Opens the text search pane in the lower part of the Business Model module window, enabling you to search for records in predefined fields. For more details, see "Text Search Pane" on page 72.</p> <p>Available from: Model entities</p>
Zoom In	right-click menu	<p>Increases the zoom level of the model diagram.</p>
Zoom Overview In	right-click menu	<p>Increases the zoom level of the diagram overview.</p>
Zoom Out	right-click menu	<p>Decreases the zoom level of the model diagram.</p>

UI Element	Menu	Description
Zoom Overview Out	right-click menu	Decreases the zoom level of the diagram overview.

Business Models Module Icons

This section describes the icons available in the Business Models module.

To access	On the ALM sidebar, under Requirements , select Business Models .
Relevant tasks	"How to Work with Business Process Models" on page 316
Learn more	"Business Models Module Menus and Buttons" on page 329 "Business Models Module Window" on page 321

The icons are described below:

UI Element	Description
	<green asterisk>. The applicable tab is populated.
	Activity that expands to a sub-model
	Alerts. Click to view alerts for the model entity. <ul style="list-style-type: none"> Red alert. The alert is new. Gray alert. The alert has already been read. For more details, see "Alerts Dialog Box" on page 96.
	Attachments. Click to view attachments for the specified model entity. Open an attachment by selecting it from the list. If there are more than ten attachments, click the more attachments link to view the list in the Attachments Page . For details, see "Attachments Page" on page 80.
	Business process model
	Business process model activity
	Business process model folder

UI Element	Description
	Business process model path
	<p>Follow Up Flags. Click to view follow up flags for the model entity.</p> <ul style="list-style-type: none"> • Gray flag. The follow up flag is new. • Red flag. The follow up date has arrived. <p>For more details, see "Flag For Follow Up Dialog Box" on page 97.</p>
	<p>Re-imported business process model</p> <p>Available from: Import Models dialog box</p>
	Unresolved path
	<p>Version Control. The model entity is checked out.</p> <ul style="list-style-type: none"> • Green lock. The model entity is checked out by the current user. • Red lock. The model entity is checked out by another user.

Business Models Module Fields

This section describes the Business Models module fields.

To access	On the ALM sidebar, under Requirements , select Business Models .
Important information	<ul style="list-style-type: none"> • You can add user-defined fields and change the label of any of the fields in the Business Models module. You can also customize project lists. For more details, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i> • You can use the Script Editor to restrict and dynamically change the fields and values in the Business Models module. For more details, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. • When you select a business process model column with a user name value (including user-defined fields), ALM displays a list with the name and full name of each user. You can search for users, sort users, group users by user group, and select users from the users list or a group tree. For more details, see "Users List Dialog Box" on page 67. • Version Control: Additional fields are available in a version control enabled project. For details, see "Version Control Fields" on page 118. • Some fields are not available in all business process model views.

Relevant tasks	"How to Work with Business Process Models" on page 316
Learn more	"Business Models Module Window" on page 321

User interface elements are described below:

UI Element (A - Z)	Description
Activity ID/Folder ID/Path ID/Model ID	A unique numeric ID for the entity that is assigned automatically. The ID field cannot be modified.
Comments	Comments on the entity. Click in the text box to display a toolbar for formatting and spell checking the text.
Created By	Models/Activities: The user who first imported the entity. Paths: The user who created the path.
Creation Date	Models/Activities: The date and time on which the entity was first imported. Paths: The date and time on which the path was created.
Description	A description of the entity. Click in the text box to display a toolbar for formatting and spell checking the text.
Guid	A unique code identifying the model. The code helps identify the model in case of re-import.
Guid of referenced element	If an activity references a business process model, the unique code identifying the model.
Import Date	The date and time on which the entity was last imported.
Imported By	The user who last imported the entity.
Imported File Name	The name of the source file from which the model was last imported.
Lane	The location of an activity within a model.
Model Author	The user who created the model in the model authoring tool.
Name	The entity name.

UI Element (A - Z)	Description
Notation	The notation that is used to implement the model in the source file. Possible values are EPC or BPMN .
Notation Version	The version of the notation (EPC or BPMN) that is used to implement the model in the source file.
Path Description	Lists the activities included in the path.
Pool	The location of an activity within a model.
Priority	The priority of the entity.
Prototype	Possible values are As-Is or To-Be .
Status	The status of the entity.
Text	Text displayed in the activity diagram, as defined in the modeling tool.
Type	The activity type.
Vendor	The modeling tool used to create the business process model.

Import Models Dialog Box

This dialog box enables you to import business process models from a source file.

To access	In the Business Models module, in the Model Tree view, right-click a folder, and select Import Model .
Important information	Characters in names of imported models and activities that are illegal in ALM (for example, \ ^ *), are replaced with underscores.
Relevant tasks	"How to Work with Business Process Models" on page 316
Learn more	"Business Models Module Window" on page 321

User interface elements are described below:

UI Element	Description
From file	<p>The source file from which business process models are imported.</p> <p>Tip: Click the browse button to locate a file in a folder.</p>
Analyze	<p>Scans the source file for business process models. The models in the file are displayed in the file content area.</p>
Map Attribute	<p>Opens the Map Imported Attributes to User Fields dialog box. For user interface details, see "Map Imported Attributes to User Fields Dialog Box on the next page".</p>
Select models to import	<p>Displays the business process models contained in the source file. If you selected a file with ARIS notation, structured models are displayed hierarchically.</p>
Destination	<p>The folder in the business models tree under which the imported model will be added.</p> <p>Note:</p> <ul style="list-style-type: none"> • You cannot import models under the root Models folder. • Re-imported models remain in the original folder. <p>Tip: Click the drop-down button to select a folder in the business models tree.</p>
Details >>	<p>Shows/hides options for defining representative requirements.</p>
Import	<p>Imports the models selected in the Select models to import pane. The Importing Models dialog box opens, displaying the progress and status of the file import.</p>

UI Element	Description
Rename requirements	<p>Instructs ALM to rename representative requirements of re-imported models. The requirements are renamed according to the new names given to the business process model and its activities.</p> <p>Available if the Details pane is expanded.</p>
Requirement Destination	<p>The folder in the requirements tree under which representative requirements of the imported business process model are added.</p> <p>Note:</p> <ul style="list-style-type: none">• You cannot select the Requirements root folder.• Representative requirements of re-imported models remain in the original folder. <p>Tip: Click the drop-down button to select a folder in the requirements tree.</p> <p>Available if the Details pane is expanded.</p>

Map Imported Attributes to User Fields Dialog Box

This dialog box enables you to map model and activity attributes to ALM fields.

To access	In the Import Models dialog box, select a file to import, and click Map Attributes .
Important information	<ul style="list-style-type: none">• To enable attribute mapping, you must add string or memo fields to the Business Process Models and Business Process Model Elements entities. For more details on adding user-defined fields, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.• If user fields are not defined, imported attributes are not displayed in the appropriate grid.• If the selected models include attributes that were previously mapped, the existing mappings are displayed.
Relevant tasks	"How to Work with Business Process Models" on page 316
Learn more	"Business Models Module Window" on page 321

User interface elements are described below:

UI Element	Description
Model attribute mappings	<p>Displays the imported model attributes, and the ALM fields to which they are mapped.</p> <p>Note: Toggle the Show non-mapped attributes only option to show or hide mapped attributes.</p>
Activity attribute mappings	<p>Displays the imported activity attributes, and the ALM fields to which they are mapped.</p> <p>Note: Toggle the Show non-mapped attributes only option to show or hide mapped attributes.</p>
Imported Attribute	<p>Lists the model or activity attributes imported from the source file.</p>
User Field	<p>Lists the user-defined fields that are mapped to the corresponding attributes.</p> <p>Note:</p> <ul style="list-style-type: none"> The drop-down list includes only user fields that are not already mapped to attributes in the selected models. If user fields are mapped to attributes in imported models, you can reassign them to other attributes in the selected models. This will override the previous mapping.
Show non-mapped attributes only	<p>Enables you to hide attributes that are already mapped to ALM fields.</p>

Model Details/Model Activity Details Dialog Box

The Model Details dialog box enables you to view and update details of a business process model.

The Model Activity Details dialog box enables you to view and update details of a business process model activity.

To access	In the Business Model module, right-click a business process model or activity, and select Details .
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Relevant tasks	"How to Work with Business Process Models" on page 316
Learn more	"Business Process Models Overview" on page 314

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

UI Element	Description
	Save. Saves the details.
	Send by E-mail. Opens the Send E-mail dialog box, enabling you to send a business process model by email to recipients selected from a list. For more details, see "Send E-mail Dialog Box" on page 76. Available from: Business Process Model Details dialog box
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
<Business Models module fields>	For details on the fields available in the Business Models module, see "Business Models Module Fields" on page 335.
Details	Lists the relevant fields for the selected business entity. For details, see "Business Models Module Fields" on page 335.

UI Element	Description
Model Diagram	<p>Business Process Model Details dialog box: Displays a diagram of the current business process model.</p> <p>Model Activity Details dialog box: Displays a diagram of the business process model in which the current activity is embedded. The current activity is highlighted in the model diagram.</p> <p>Tip: Right-click an area in the diagram, and select one of the zoom options.</p>
Imported Attributes	Lists field labels and values relevant to the business entity, as defined in the modeling tool.
Attachments	Lists attachments that provide additional information about the currently selected model entity. For more details, see " Attachments Page " on page 80.
Linkage	Contains the Requirements and Tests tabs that list entities linked to the business entity. For more details, see " Linkage Tab " on page 344.
History	Lists changes made to the currently selected business process model. For more details, see " History Tab " on page 75.

New Model Path/Model Path Details Dialog Box

The New Model Path dialog box enables you to define a path of transitions between activities in a business process model.

The Model Path Details dialog box enables you to view and update details of a business process model path.

To access	<p>New Model Path dialog box:</p> <ol style="list-style-type: none">1. In the Business Models module, select the Model Tree view.2. Right-click a business process model and select New Path. <p>Model Path Details dialog box:</p> <p>In the Business Models module, right-click a path and select Details.</p>
Important information	<ul style="list-style-type: none">Paths are created in the business models tree as a sub-entities of the business process model.Recursive paths that repeat the same activity are not supported.

Relevant tasks	"How to Work with Business Process Models" on page 316
Learn more	"Business Process Model Paths" on page 315

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

UI Element	Description
	Save. Saves the details.
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
<Business Models module fields>	For details on the fields available in the Business Models module, see "Business Models Module Fields" on page 335 .
Details	Lists the relevant fields for the selected path. For details, see "Business Models Module Fields" on page 335 .
Attachments	Lists attachments that provide additional information about the currently selected path. For more details, see "Attachments Page" on page 80 .
Linkage	Contains the Requirements and Tests tabs that list entities linked to the path. Available from: Model Path Details dialog box

UI Element	Description
Path	<p>New Business Model Path dialog box: A drop-down list of possible end-to-end paths in the business process model. Select a path that is important to test.</p> <p>Business Model Path Details dialog box: A notation of the current end-to-end path. The activities in the path are represented by numbers.</p> <p>Note: If the path is unresolved, select a new path from the drop-down list.</p> <p>Tip: Click the Path Description tab to view a full description of the path, including the full names of the activities in the path.</p>
<model diagram>	A diagram of the business process model. When you select paths in the Paths drop-down list, the activities and nodes along the path are highlighted.
Description	Describes the currently selected path. Click in the text box to display a toolbar for formatting and spell checking the text.
Comments	Comments about the currently selected path. Click in the text box to display a toolbar for formatting and spell checking the text.
Path Description	A full description of the path, including the full names of the activities in the path.

Linkage Tab

This tab enables you to link requirements and tests to a model entity.

To access	Select a business process model entity, and click the Linkage tab or button.
Important information	Requirement linkage is created automatically when you convert a representative requirement to a test. Therefore, even if you have not yet added requirements linkage, it may already exist.
Relevant tasks	"How to Work with Business Process Models" on page 316

Requirements Tab

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

UI Element	Description
 Select Requirements	<p>Opens a panel displaying the following tabs:</p> <ul style="list-style-type: none"> • Requirements Tree • Test Plan Tree <p>The panel enables you to link requirements and tests to model entities.</p> <p>For more details, see "Requirements Tree and Test Plan Tree Pane" on page 347.</p>
	<p>Remove From Linkage. Removes selected requirements from the linkage grid.</p>
	<p>Refresh All. Refreshes the linkage grid.</p>
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the linkage grid and their order. For more details, see "Select Columns>Select Fields Dialog Box" on page 85.</p>
	<p>Copy/Paste. Copies linked requirements to another model entity. To paste the copied requirements, select a model entity, click the Linkage > Requirements tab, and click Paste.</p>
<linkage grid>	<p>For field definitions, see "Requirements Module Fields" on page 263.</p>

Tests Tab

User interface elements are described below:

UI Element	Description
 Select Tests	<p>Opens a panel displaying the following tabs:</p> <ul style="list-style-type: none"> • Requirements Tree • Test Plan Tree <p>The panel enables you to link requirements and tests to model entities.</p> <p>For more details, see "Requirements Tree and Test Plan Tree Pane" on the next page.</p>
	<p>Remove From Linkage. Removes selected tests from the linkage grid.</p> <p>Note: You cannot remove tests covering linked requirements.</p>
	<p>Refresh All. Refreshes the linkage grid.</p>
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the linkage grid and their order. For more details, see "Select Columns>Select Fields Dialog Box" on page 85.</p>
	<p>Copy/Paste. Copies linked tests to another model entity. To paste the copied tests, select a model entity, click the Linkage > Tests tab, and click Paste.</p>
	<p>Set Filter/Sort. Includes the following options:</p> <ul style="list-style-type: none"> • Set Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort tests. • Clear Filter/Sort. Clears any filters or sorting that you have applied. <p>For more details, see "Filter Dialog Box" on page 54.</p>

UI Element	Description
 Coverage ▾	<p>Select the type of linked tests displayed in the grid.</p> <ul style="list-style-type: none"> Direct Coverage. Displays tests linked directly to the model entity, or to the representative requirement. This option is always selected. Linked Requirement Coverage. Displays tests linked to requirements that are linked to the model entity. Children Requirement Coverage. Displays tests that are linked to child requirements of requirements that are linked to the model entity.
 Generate Test Set	<p>Enables you to create a test set containing the tests in the linkage grid.</p> <p>In the Select Test Set Folder dialog box, select the folder in the test sets tree under which the test set is created.</p>
<linkage grid>	<p>For field definitions, see "Test Plan Module Fields" on page 406.</p>

Requirements Tree and Test Plan Tree Pane

This pane enables you to link requirements and tests to a business process model entity.

To access	<ol style="list-style-type: none"> 1. Select a business process model, activity, or path, and click the Linkage tab or button. 2. Click the Requirements or Tests tab. 3. Click the Select Requirements or Select Tests button.
Important information	<p>In the Business Models module window, you can create linkage by dragging and dropping requirements and tests to any entity in the model diagram.</p>
Relevant tasks	"How to Work with Business Process Models" on page 316

User interface elements are described below:

UI Element	Description
	<p>Add to Linkage. Adds a selected requirement, test or folder to the linkage grid.</p> <p>Tip: Alternatively, create linkage to any model entity by dragging requirements and tests directly to entities in the model diagram.</p>

UI Element	Description
	Show Entity Details. Opens the Details dialog box for the selected entity in read-only mode.
	Go to Entity in Module Tree. Navigates to the selected entity's location in that entity's module, and highlights the entity.
	Refresh. Refreshes the tree to display the most up-to-date information.
	Find. Searches for a specific requirement or test in the tree. Type the name (or part of the name) of the requirement or test in the Find box and click Find . If the search is successful, the requirement or test is highlighted in the tree.
	Filter/Sort. Includes the following options: <ul style="list-style-type: none"> • Set Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort tests. • Clear Filter/Sort. Clears any filters or sorting that you have applied. For more details, see " "Filter Dialog Box" on page 54 ".
	Go to Requirement by ID. Opens the Go To Requirement dialog box, enabling you to find a specific requirement by ReqID . Go to Test by ID. Opens the Go To Test dialog box, enabling you to find a specific test by Test ID . <div data-bbox="425 1269 1372 1332" style="background-color: #e0f2e0; padding: 5px;"> Note: You can only go to requirements and tests that are in the current filter. </div>
	Hides the Requirement Tree and Test Plan tree pane.

Represented Items Tab

This tab lists business process model entities represented by the selected requirement.

To access	In the Requirements module, open the Requirement Details view, select a Business Model requirement, and click the Represented Items tab.
Relevant tasks	"How to Create Requirements" on page 248 "How to Work with Business Process Models" on page 316

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

UI Element	Description
	Refresh. Refreshes the grid to display the most up-to-date information.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the requirements tree or grid and their order. For more details, see " "Select Columns/Select Fields Dialog Box" on page 85 ".
<business model entities grid>	Click a link in the grid to go to the represented business process model entity in the business models tree. For field definitions, see " "Business Models Module Fields" on page 335 ".

Part 4: Cloud Settings

ALM allows you to provision cloud hosts for use in performance testing. This involves adding your cloud accounts to ALM, creating host templates, and provisioning hosts.

This section contains only a brief overview of Cloud Settings. For more information, see the *HPE ALM Lab Management Guide*.

Cloud Settings contains the following modules:

- **Cloud Accounts**

Allows you to add cloud accounts to ALM. You must have an existing account with a cloud provider before you can add it to ALM. For more information, see the *HPE ALM Lab Management Guide*.

- **Host Templates**

Allows you to create templates that are used to provision cloud hosts. For more information, see the *HPE ALM Lab Management Guide*.

Part 5: Lab Resources

Chapter 18: Introducing Lab Resources

This chapter includes:

- [Lab Resources Overview](#) 356
- [How to Use Lab Resources in ALM](#) 356

Lab Resources Overview

HP ALM Lab Management allows you to manage resources used for server-side Functional and Performance testing. The Lab Resources modules in ALM are used to view and manage testing resources and to automate deployment schemas.

ALM Editions: The Lab Resources modules are available only for ALM Edition. For more information about ALM editions and their functionality, see "["ALM Editions" on page 125](#)". To find out what edition of ALM you are using, ask your ALM site administrator.

For task details, see "[How to Use Lab Resources in ALM](#)" below.

Many of the administrative tasks you use to manage lab resources are only available from within Lab Management. From within the ALM project, you can view and manage only the resources that are allocated to your project.

To learn more about Lab Management and Lab Resources, see the *HPE ALM Lab Management Guide*.

How to Use Lab Resources in ALM

In ALM, you can view and use the lab resources allocated to your project.

- Using the Testing Hosts module, you can view and modify testing hosts. For task details, refer to the *HPE ALM Lab Management Guide*. For information about Testing Hosts, see "[Testing Hosts Overview" on page 358](#).
- Using the AUT Environments module, you can view and modify the environment parameters used by AUT hosts. If you are using an environment connected to CDA servers (HP Continuous Delivery Automation), you can also link your environment configurations to CDA to automate your deployment schemas. For details, see "[How to Work with AUT Environments" on page 361](#).

ALM Editions: The Lab Resources modules are available only for ALM Edition. For more information about ALM editions and their functionality, see "["ALM Editions" on page 125](#)". To find out what edition of ALM you are using, ask your ALM site administrator.

For details about Lab Resource management, refer to the *HPE ALM Lab Management Guide*.

To learn more about Lab Resources in ALM, see "[Lab Resources Overview" above](#).

Chapter 19: Testing Hosts

This chapter includes:

- [Testing Hosts Overview](#) 358

Testing Hosts Overview

The Testing Hosts module in ALM enables you to view and modify the properties of testing hosts. The testing hosts from the host pool of your project are displayed in the Testing Hosts module grid.

ALM Editions: The Testing Hosts module is available only for ALM Edition. For more information about ALM editions and their functionality, see "["ALM Editions" on page 125](#)". To find out what edition of ALM you are using, ask your ALM site administrator.

You can use testing hosts for server-side functional and performance testing. Instead of launching a test from your computer's console, tests can be controlled by the ALM server. Server-side execution is available for both functional and performance test sets.

Each testing host is assigned a location, purpose, and attributes. Testing hosts can be located in your testing lab or can be provisioned on the cloud on an as-needed basis.

You can create public testing hosts only in Lab Management. Each testing host can be placed in a host pool and assigned to a project. You can also create private testing hosts for your project from within ALM. The private hosts you create in ALM are automatically added to your project's host pool in Lab Management.

To add a testing host to ALM, you must first create the host in the Testing Hosts module, and then register it using HP ALM Lab Service. For an overview about HP ALM Lab Service, see the *HPE ALM Lab Management Guide*.

For details about testing hosts, see the *HPE ALM Lab Management Guide*.

For details on creating and managing hosts and host pools, see the *HPE ALM Lab Management Guide*.

For details about provisioning cloud hosts for performance testing, see the *HPE ALM Lab Management Guide*.

For details about how to use remote testing hosts for running functional test sets in ALM, see "["How to Run Functional Tests" on page 632](#)".

Chapter 20: AUT Environments

This chapter includes:

- [AUT Environments Overview](#) 360
- [How to Work with AUT Environments](#) 361
- [AUT Environments User Interface](#) 364

AUT Environments Overview

AUT Environments allows users to make Lab Management test execution more dynamic by parameterizing the environment data used for testing.

An AUT environment is a container for a set of AUT environment parameters. You can provide a default value for each AUT environment parameter.

Within an AUT environment, you create a set of AUT environment configurations. Each AUT environment configuration contains a set of the AUT environment parameters, which can all be overridden. Instead of defining and running several different tests that use the same logic but need different AUT environment parameters, you can simply provide a specific AUT environment configuration that ALM inserts into your test at run-time. ALM then uses the parameter values you defined in the AUT environment configuration when deploying the environment and executing the test.

Example: ALM Editions: The AUT Environments module only available in ALM Edition. For more information about ALM editions and their functionality, see "[ALM Editions](#)" on [page 125](#). To find out what edition of ALM you are using, ask your ALM site administrator.

To make your environment parameter value definitions dynamic, you can link your AUT environment configurations to CDA. For more information, see "[Link AUT Environments to CDA](#)" below.

AUT environment configurations are a key component in ALM's Continuous Delivery solution. They facilitate an automated, end-to-end deployment and testing framework that makes application development more efficient, reliable, and quick. For more information about how AUT environment configurations can be used as part of this process, see "[Deploying and Testing your Application in ALM](#)" on [page 550](#).

Note: Implementation of AUT environment configurations is currently available only for Performance Center Tests, Service Test, UFT GUI and API testing, and VAPI-XP.

For task details, see "[How to Work with AUT Environments](#)" on the next page.

Link AUT Environments to CDA

Linking your project to HP Continuous Delivery Automation (CDA) enables you to dynamically provision and deploy your testing environments. You use Lab Management to configure CDA servers in ALM.

Note: For information about setting up CDA Servers in Lab Management, see the *HPE ALM Lab Management Guide*.

ALM Editions: The AUT Environments module is available only for ALM Edition. For more information about ALM editions and their functionality, see "[ALM Editions](#)" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.

To take advantage of dynamic provisioning and deployment, you first link your AUT environment configuration to CDA. Then, when you run a test set or build verification suite, instead of supplying specific environment parameters, you implement the linked AUT environment configuration. CDA then automatically allocates an available set of the required resources from the cloud. When using an AUT environment configuration linked to CDA, you do not need to keep track of the values of multiple environment parameters, and you do not have to check the availability of environment resources before running a test.

For task information, see "[How to Work with AUT Environments](#)" below.

How to Work with AUT Environments

This task describes how to work with AUT Environments.

ALM Editions: The AUT Environments module is available only for ALM Edition. For more information about ALM editions and their functionality, see "[ALM Editions](#)" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.

- "[Prerequisites](#) " below
- "[Create AUT environments](#) " on the next page
- "[Link AUT environment configurations to CDA \(optional\)](#) " on the next page
- "[Run tests using AUT environments](#) " on page 363
- "[Select a deployment and provisioning option \(CDA only\)](#)" on page 363

1. Prerequisites

- Which AUT environments do you need to configure?
- What are the applications you intend to test?
- How many different environments will you have for each application?
- What details do you need for each environment? For example, do you have specific URLs, user names, and passwords for each environment?

2. Create AUT environments

- a. **Open the AUT Environments module.** On the ALM sidebar, under **Lab Resources**, select **AUT Environments**.
- b. **Create folders.** Select the root AUT Environments folder or a sub-folder, and click the **New AUT Environment Folder** button.
- c. **Add AUT Environments to folders.** Select a folder and click the **New AUT Environment** button. Add an AUT environment for each of the applications you need to test.
For user interface details, see "[New AUT Environment Dialog Box](#)" on page 372.
- d. **Add AUT Parameters.** Select an AUT environment and click the **New AUT Parameter** button in the right pane. Add a parameter for each environment parameter you need for the application you are testing. Enter the parameter name and a value in the New AUT Parameter dialog box. The value you enter in the AUT parameter dialog box will be the default value for that parameter in the selected AUT environment.
For user interface details, see "[New AUT Parameter Dialog Box](#)" on page 374.
- e. **Add AUT Environment Configurations.** Select an AUT environment and click the **New AUT Environment Configuration** button. Add an AUT environment configuration for each environment you might use while testing the selected application.
For user interface details, see "[New AUT Environment Configuration Dialog Box](#)" on page 373.
- f. **Modify AUT Environment Configurations.** Select an AUT environment configuration and override any of the default parameter values you need to adjust for this specific AUT environment configuration. You can modify the values in the right pane.
For user interface details, see "[AUT Environments Module Window](#)" on page 365.

3. Link AUT environment configurations to CDA (optional)

You can link your AUT environment configurations to HP Continuous Delivery Automation (CDA) to arrange for your tests to be provisioned and deployed dynamically. For more information, see "[Link AUT Environments to CDA](#)" on page 360.

Note: To use CDA, you must configure a CDA server in Lab Management. For more details, see the *HPE ALM Lab Management Guide*.

To link an AUT environment configuration to CDA, do the following:

- a. In the **AUT Environments** module, select an AUT environment configuration.
- b. Click the **Link to CDA**  button.
- c. In the Link to CDA dialog box, use the drop-downs to select a CDA topology. For user interface details, see "[Link to CDA Dialog Box](#)" on page 376.

- d. In the **AUT Environments** module, in the right pane, select a parameter in the **Values** tab.
Select the CDA parameter to link to the selected AUT environment parameter.

4. Run tests using AUT environments

When running a functional or performance test, you can provide an AUT environment configuration to execute your test using specific environment parameters.

Note: AUT Environments are available only for Performance Center Tests, Service Test, API testing in UFT, and VAPI-XP tests.

Use one of the following methods to execute your test using an AUT environment configuration:

- **Schedule a timeslot.**

In the **Timeslots** module, create a new timeslot. Select a test set to run and then select an AUT environment configuration. For user interface details, see "[Timeslot Reservation Dialog Box](#)" on page 727.

- **As part of a functional test set or performance test execution.**

In the Test Lab module, go to the **Execution Grid** tab. Select a functional test set and click **Run Test Set**, or select a performance test set, then a performance test, and click **Run Test**. In the Run <Entity> dialog box, select an AUT environment configuration. For user interface details, see "[Run <Entity> Dialog Box](#)" on page 635.

- **In a build verification suite.**

In the **Build Verification** module, select a build verification suite and click **Run**. In the Run Build Verification Suite dialog box, select an AUT environment configuration. For user interface details, see "[Run <Entity> Dialog Box](#)" on page 635.

5. Select a deployment and provisioning option (CDA only)

Deployment: When your system is integrated with CDA, you can select deployment and provisioning actions for the application under test. ALM provides the following options in the Timeslot Reservation dialog box and the Run <Entity> dialog box for this purpose:

- **Provision and deploy.** Allocates machines on which to deploy an environment for the application under test, and prepares the required image so that the application can be installed. That is, the operating system, database server and all required software are installed based on CDA parameters. Following provisioning, the application under test itself is installed.
- **Redeploy.** Deploys and runs the application under test environment on machines that have already been provisioned.
- **Use deployed.** Uses an existing installation to run the test.

Note:

- When deciding which option to select, bear in mind that the provisioning and deployment actions can be very time consuming. For routine testing, it is advisable to select **Use Deployed**.
- You can arrange for an environment to be deployed and available for your run. Schedule a build verification suite or test set to run for the entire day, and select the environment you want to use.

Available for: All options are available for Build Verification Suite timeslots. For Functional test set timeslots, **Use Deployed** is selected by default. You cannot change this selection.

Provisioning: ALM also allows you to select the action to be taken after an environment has been deployed. ALM provides the following options:

- **Leave environment deployed.** Leaves the AUT environment deployed indefinitely. The deployed environment can be used for future tests.
- **Deprovision at end.** After the tests have completed running, the environment is undeployed and the machines are deprovisioned, freeing them up for other use.

Available for: Build Verification and Functional test set timeslots.

For user interface details, see "[Timeslot Reservation Dialog Box](#)" on page 727 and the "[Run <Entity> Dialog Box](#)" on page 635.

AUT Environments User Interface

This section includes:

• AUT Environments Module Window	365
• AUT Environments Module Menus and Buttons	366
• AUT Environments Module Fields	369
• AUT Environments Module Icons	370
• AUT Environment Details Dialog Box	371
• New AUT Environment Dialog Box	372
• AUT Environment Configuration Details Dialog Box	372
• New AUT Environment Configuration Dialog Box	373
• New AUT Parameter Dialog Box	374
• AUT Parameter Details Dialog Box	375
• Link to CDA Dialog Box	376

AUT Environments Module Window

To access	On the ALM sidebar, under Lab Resources , select AUT Environments .
Important information	ALM Editions: The AUT Environments module is available only in ALM Edition. For more information about ALM editions and their functionality, see " ALM Editions " on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.
Relevant tasks	"How to Work with AUT Environments" on page 361
See also	"AUT Environments Module Fields" on page 369

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

UI Element	Description
<AUT Environments module common UI elements>	<ul style="list-style-type: none">AUT Environments fields. For field definitions, see ""AUT Environments Module Fields" on page 369".AUT Environments menus and buttons. For command and button descriptions, see ""AUT Environments Module Menus and Buttons" on the next page".AUT Environments icons. For icon descriptions, see ""AUT Environments Module Icons" on page 370".ALM masthead, menus, and sidebar. For details, see ""ALM Common Areas" on page 30".
<filter status bar>	Describes the filter currently applied to the tree. Located directly above the tree.
<AUT Environments tree>	Located on the left side of the window, organizes and displays your AUT environments hierarchically. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"><p>Note: You cannot move AUT environments within a folder. When you refresh the tree view, AUT Environments in a folder are alphabetized.</p></div>
Details tab	Located on the right side of the window. Lists the AUT environment fields. For details on the fields, see " "Test Plan Module Fields" on page 406 ".

UI Element	Description
Parameters tab	<p>Located on the right side of the window. Contains a grid of the parameters and default values for the selected AUT Environment object.</p> <p>If you do not override the AUT environment parameter in an AUT environment configuration then the default value is used during execution.</p> <p>Note: Only visible when an AUT environment object is selected.</p>
Values tab	<p>Located on the right side of the window. Contains a grid of parameters and values for the selected AUT environment configuration object.</p> <p>You can select a parameter in the values tab and override the default value derived from the AUT environment level. If you do not override a parameter value, the default value is used during execution.</p> <p>Note: You cannot modify the parameters in the automatically generated Default AUT environment configuration.</p> <p>If the AUT environment configuration is linked to CDA, you can select a dynamic value from a drop-down list in the CDA parameter list.</p> <p>For more information on CDA, see "Link AUT Environments to CDA" on page 360.</p> <p>Note: Only visible when an AUT environment configuration object is selected.</p>

AUT Environments Module Menus and Buttons

This section describes the menus and buttons available in the AUT Environments module.

To access	On the ALM sidebar, under Lab Resources , select AUT Environments .
Relevant tasks	"How to Work with AUT Environments" on page 361
See also	<ul style="list-style-type: none">• "AUT Environments Overview" on page 360• "AUT Environments Module Fields" on page 369• "AUT Environments Module Window" on the previous page

User interface elements are described below:

UI Element (A - Z)	Menu	Description
AUT Environment Configuration 	AUT Environments	Opens the AUT Environment Configuration Details dialog box, enabling you to view and update details of the selected AUT Environment Configuration. For details, see " "AUT Environment Configuration Details Dialog Box" on page 372 .
AUT Environment Details 	AUT Environments	Opens the AUT Environment Details dialog box, enabling you to view and update details of the selected AUT Environment. For details, see " "AUT Environment Details Dialog Box" on page 371 .
Collapse	View	Collapses all branches in the tree.
Copy URL/Paste	AUT Environments	Copies a selected AUT environment, AUT environment folder, or AUT environment configuration and pastes its URL as a link. The AUT environment or AUT environment configuration itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking on the link opens ALM and takes you to the AUT Environment or AUT environment configuration . If you are not already logged in, ALM first prompts for login details.
Cut/Paste	Edit	Cuts selected AUT environments and configurations within the same project or across projects.
Delete 	Edit	From the toolbar, deletes a selected AUT environment, AUT environment folder, or AUT environment configuration. You cannot delete the root AUT Environments folder. From the Parameters tab toolbar, deletes the selected parameter folder or parameter.
Expand All	View	Expands all folders in the AUT Environments tree below the selected folder.

UI Element (A - Z)	Menu	Description
Go to AUT Environment	AUT Environments	Opens the Go to AUT Environment dialog box, enabling you to type an AUT environment ID to find a specific AUT environment in the AUT Environments tree.
Link AUT Environment Configuration to CDA 		Opens the Link to CDA tab, enabling you to link the selected AUT environment configuration to a CDA topology.
New AUT Environment 	AUT Environments	Opens the New AUT Environment dialog box, enabling you to add an AUT environment to a selected folder. For details, see " New AUT Environment Dialog Box " on page 372.
New AUT Environment Configuration 	AUT Environments	Opens the New AUT Environment Configuration dialog box, enabling you to add an AUT environment configuration to a selected folder. For details, see " New AUT Environment Configuration Dialog Box " on page 373.
New AUT Environment Folder 	AUT Environments	Opens the New AUT Environment Folder dialog box, enabling you to add a folder under a selected folder. Syntax exceptions: An AUT environment folder name cannot include the following characters: \ ^ *
New AUT Parameter 		Opens the New AUT Parameter dialog box, enabling you to add an AUT parameter and parameter value to an AUT environment. Located in the Parameters tab toolbar. For details, see " New AUT Parameter Dialog Box " on page 374.
Open Applications Page in CDA 		Opens the CDA applications page. For details, see the documentation for CDA.

UI Element (A - Z)	Menu	Description
Refresh All 	View	Refreshes the view to display the most up-to-date information.
Rename	Edit	Enables you to rename an AUT environment, an AUT environment folder, or an AUT environment configuration. You cannot rename the root AUT Environment folder.
Restore Default Parameter Value 		Restores the value of the selected AUT environment configuration parameter to the default AUT environment value.
Set Filter/Sort 	View	<p>Enables you to set filter and sort options for the AUT Environments tree.</p> <p>Includes the following options:</p> <ul style="list-style-type: none">• Set Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort AUT Environments.• Clear Filter/Sort. Clears any filters or sorting that you have applied. <p>For more details, see "Filter Dialog Box" on page 54.</p>
Update Selected	Edit	Opens the Update Selected dialog box, enabling you to update a field value for multiple selected environments, configurations, and folders in the tree. For more details, see "Update Selected Dialog Box" on page 87 .

AUT Environments Module Fields

This section describes the AUT Environments module fields.

To access	On the ALM sidebar, in Lab Resources , select AUT Environments .
Important information	The AUT Environments module displays the environment configuration data fields for functional testing in ALM.
Relevant tasks	"How to Work with AUT Environments" on page 361

See also	<ul style="list-style-type: none">• "AUT Environments Overview" on page 360• "AUT Environments Module Menus and Buttons" on page 366• "AUT Environments Module Window" on page 365
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User interface elements are described below:

UI Element (A - Z)	Description
AUT Environments ID	The ID of the AUT environment to which the selected AUT environment configuration belongs.
AUT Environments Folder ID	The ID of the folder of the AUT environment.
Default Value	The default value of the selected AUT parameter for the selected AUT environment.
Name	The name of the AUT environment, AUT environment configuration, AUT environment folder, or AUT parameter.
Value	The value of the selected AUT parameter. The value can be default or overridden in an AUT environment configuration.

AUT Environments Module Icons

This section describes the icons available in the AUT Environments module.

To access	On the ALM sidebar, select AUT Environments .
Relevant tasks	"How to Work with AUT Environments" on page 361
See also	<ul style="list-style-type: none">• "AUT Environments Module Window" on page 365• "AUT Environments Module Fields" on the previous page

The icons are described below:

UI Element	Description
	AUT environment folder
	AUT environment
	AUT environment configuration
	AUT environment parameter

AUT Environment Details Dialog Box

To access	On the ALM sidebar, under Lab Resources , select AUT Environments . Select an AUT environment and click  .
Relevant tasks	"How to Work with AUT Environments" on page 361
See also	"AUT Environments Module Fields" on page 369

User interface elements are described below:

UI Element	Description
	Save. Saves the details.
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Name	The name associated with the selected AUT environment.
Details	Lists the AUT environment fields. For details on AUT environment fields, see "AUT Environments Module Fields" on page 369 .
Parameters	Lists parameters associated with the currently selected AUT environment. You can add AUT parameters or modify the default value of AUT parameters associated with the selected AUT environment. For user interface details, see "New AUT Parameter Dialog Box" on page 374 and "AUT Parameter Details Dialog Box" on page 375 .

New AUT Environment Dialog Box

To access	On the ALM sidebar, under Lab Resources , select AUT Environments . Click  .
Relevant tasks	"How to Work with AUT Environments" on page 361
See also	<ul style="list-style-type: none">"AUT Environments Module Fields" on page 369"AUT Environments Overview" on page 360

User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears the data.
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Name	The name associated with the new AUT environment.
Details	Lists the AUT environment fields. For details on AUT environment fields, see "AUT Environments Module Fields" on page 369.

AUT Environment Configuration Details Dialog Box

To access	On the ALM sidebar, under Lab Resources , select AUT Environments . Select an AUT environment configuration and click  .
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Relevant tasks	"How to Work with AUT Environments" on page 361
See also	<ul style="list-style-type: none">• "AUT Environments Module Fields" on page 369• "AUT Environments Overview" on page 360

User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears the data.
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Details	Lists the AUT environment fields. For details on AUT environment fields, see "AUT Environments Module Fields" on page 369.
Link to CDA	Enables you to link the selected AUT environment configuration to CDA. For more information, see "Link to CDA Dialog Box" on page 376.

New AUT Environment Configuration Dialog Box

To access	On the ALM sidebar, under Lab Resources , select AUT Environments . Select an AUT environment, and click  .
Relevant tasks	"How to Work with AUT Environments" on page 361
See also	<ul style="list-style-type: none">• "AUT Environments Module Fields" on page 369• "AUT Environments Overview" on page 360

User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears the data.
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Name	The name associated with the new AUT environment configuration.
Details	Lists the AUT environment configuration fields. For details on AUT environments fields, see " AUT Environments Module Fields " on page 369.
Link to CDA	Enables you to link the selected AUT environment configuration to CDA. For more information, see " Link to CDA Dialog Box " on page 376.

New AUT Parameter Dialog Box

To access	On the ALM sidebar, under Lab Resources , select AUT Environments . Select an AUT environment, and click  on the right pane.
Relevant tasks	"How to Work with AUT Environments" on page 361
See also	<ul style="list-style-type: none">• "AUT Environments Module Fields" on page 369• "AUT Environments Overview" on page 360

User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears the data.
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Name	The name associated with the new AUT parameter.
Details	Lists the AUT parameter fields. For details on AUT environment fields, see " "AUT Environments Module Fields" on page 369 ".

AUT Parameter Details Dialog Box

To access	On the ALM sidebar, under Lab Resources , select AUT Environments . Select an AUT environment and then select an AUT parameter on the right pane.
Relevant tasks	"How to Work with AUT Environments" on page 361
See also	<ul style="list-style-type: none">"AUT Environments Module Fields" on page 369"AUT Environments Overview" on page 360

User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears the data.
	Save. Saves the details.

UI Element	Description
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Name	The name of the selected AUT parameter.
Details	Lists the AUT environment fields. For details on AUT environment fields, see " AUT Environments Module Fields " on page 369.

Link to CDA Dialog Box

To access	Select an AUT Environment Configuration from the AUT Environments module. Then do one of the following: <ul style="list-style-type: none"><li data-bbox="376 1163 829 1227">• Click the Link to CDA  button.<li data-bbox="376 1248 1356 1353">• Click the AUT Environment Configuration Details  button. On the AUT Environment Configuration Details dialog box sidebar, select Link to CDA.
Relevant tasks	"How to Work with AUT Environments" on page 361
See also	<ul style="list-style-type: none"><li data-bbox="376 1484 992 1526">• "AUT Environments Module Fields" on page 369<li data-bbox="376 1537 943 1579">• "AUT Environments Overview" on page 360

User interface elements are described below:

UI Element	Description
	Check Spelling. Checks the spelling for the selected word or text box.

UI Element	Description
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Name	The name of the selected AUT environment configuration.
Clear Link to CDA 	Removes the linkage between the selected AUT environment configuration and the CDA topology.
Reload CDA entities from the server 	Reloads the list of available CDA entities. Any changes that occurred on the CDA server side will be updated in the lists in the dialog box. <div style="background-color: #fce4ec; padding: 10px; border-left: 2px solid #e08080;">Caution: Reloading the list of CDA entities will remove all your linkages.</div>
Open <Page> in CDA 	Opens a CDA page. If you have not yet selected a Deployment Topology, the Applications Page in CDA opens. If you have selected a Deployment Topology, the Linked Topology Page in CDA opens.

UI Element	Description
<CDA topology link section>	<p>Enables you to configure the linkage between the selected AUT environment configuration and a CDA topology.</p> <p>If your project is defined to work with CDA domain A, but you selected an application linked to a platform in CDA domain B, you will be able to see stored configurations from domain B even though domain B is not linked to the project.</p> <p>By default, there is no linkage between CDA and the AUT environment configuration. To link, click none and select a CDA parameter.</p> <p>Select the following CDA topology levels:</p> <ul style="list-style-type: none">• Application• Application Version• Application Model• Deployment Topology• Topology Stored Parameters• Platform Stored Parameters• Software Package Definition <p>Note: If you do not complete all of the selections, you are not able to link your AUT environment configuration to a CDA topology.</p>

Part 6: Test Plan

Chapter 21: Introducing Test Planning

This chapter includes:

- [Test Plan Overview](#) 382
- [How to Plan Tests in ALM](#) 382

Test Plan Overview

Developing a clear and concise test plan is fundamental to successful application testing. A good test plan enables you to assess the quality of your application at any point in the application management process.

Outline a strategy for achieving your requirements, as defined in the Requirements module. Ask yourself two basic questions:

How should you test your application?

- Which testing techniques will you use (stress tests, security tests, performance and load tests, etc.)?
- How will you handle defects (severity classification, authorization to open and close defects, etc.)?

What resources do you require?

- What resources do you require to test (personnel, hardware, etc.)?
- When will the various tasks be completed?

Example:

Consider a flight reservation application that lets you manage flight scheduling, passenger bookings, and ticket sales. Testing will require designing both manual and automated tests. You could assign testing personnel with programming experience the task of designing automated tests, while non-programmers could design manual tests.

How to Plan Tests in ALM

This task describes how to work with tests in HPE Application Lifecycle Management (ALM).

Note: This task is part of a higher-level task. For details, see "[Introducing ALM](#)" on page 22.

This task includes the following steps:

- "[Prerequisites](#)" on the next page
- "[Create a test plan tree](#)" on the next page
- "[Create dependencies with test resources – optional](#)" on the next page
- "[Define test parameters](#)" on the next page
- "[Define test configurations](#)" on the next page

- "Create test steps" below
- "Automate tests" on the next page
- "Create requirements coverage" on the next page
- "Link a test to a defect" on the next page
- "Analyze test plan data" on the next page
- "Establish a baseline" on the next page

1. Prerequisites

A set of requirements is defined in the Requirements tree.

For task details, see "[How to Use Requirements in ALM](#)" on page 244.

Tip: You can automatically create tests based directly on your requirements in the Requirements module. For more details, see the step for converting requirements to tests in the "[How to Create Requirements](#)" on page 248 task.

2. Create a test plan tree

Create a test plan tree of test subject folders and tests. For task details, see "[How to Create Tests](#)" on page 386.

3. Create dependencies with test resources – optional

You can associate tests with a set of resources that you upload to the ALM repository.

You can then view these dependencies and determine the resources that are in use. For task details, see "[How to Use Test Resources](#)" on page 503.

Business Process Testing: You can associate component design steps with application area resources that you upload.

4. Define test parameters

To make tests more flexible, you can include parameters in test steps. This enables you to run the same test repeatedly and assign different values to the parameters. For task details, see "[How to Use Test Parameters](#)" on page 440.

5. Define test configurations

To run tests for different use-cases, you can define test configurations. This enables you to run the same test under different scenarios. For task details, see "[How to Work with Test Configurations](#)" on page 470.

6. Create test steps

Create test steps describing the operations to perform and their expected results. After you define the test steps, decide whether to perform the test manually or to automate it. For task

details, see "[How to Design Test Steps](#)" on page 453.

7. Automate tests

After designing test steps, decide which tests to automate. Factors influencing test automation include frequency of execution, volume of data input, length of execution time, and complexity. For task details, see "[How to Design Test Steps](#)" on page 453.

System Tests. You can also create automated system tests that provide system information for a machine, capture a desktop image, or restart a machine. For task details, see "[How to Create System Tests](#)" on page 498.

8. Create requirements coverage

Link each test in the test plan tree with a requirement or requirements in the requirements tree. By defining requirements coverage for a test, you keep track of the relationship between the tests in your test plan and your original requirements. For task details, see "[How to Create Coverage](#)" on page 418.

9. Link a test to a defect

Link a test to specific defects. This is useful, for example, when a new test is created specifically for a known defect. By creating a link, you can determine if the test should be run based on the status of the defect. For user interface details, see "[Linked Defects/Entities Page](#)" on page 801.

10. Analyze test plan data

Analyze the test plan by generating reports and graphs.

Use one of the following:

- **View dynamic graphs of test subjects.** In the test plan tree, select a test subject, and click the **Live Analysis** tab. For task details on generating live analysis graphs, see "[How to Generate Live Analysis Graphs](#)" on page 940.
- **View test plan data in a graph.** On the Test Plan module menu, select **Analysis > Graphs**. For task details on generating graphs, see "[How to Generate a Graph](#)" on page 830.
- **Create a report of test plan data.** On the Test Plan module menu, select **Analysis > Project Report**. For task details on creating reports, see "[How to Create Project Reports](#)" on page 878.

For details on additional analysis tools in ALM, see "[How to Analyze Data in ALM](#)" on page 810.

11. Establish a baseline

After your test plan has been reviewed and approved, you can create a baseline. A baseline provides you with a snapshot of your test plan at a specific point in time. Use a baseline to mark any significant milestone in the application lifecycle. The baseline then serves as a point of reference against which changes can be compared. For task details, see "[How to Use Libraries and Baselines in ALM](#)" on page 198.

Chapter 22: Test Plan Specification

This chapter includes:

• Test Plan Specification Overview	386
• How to Create Tests	386
• Test Types	390
• Test Plan User Interface	391

Test Plan Specification Overview

The typical application is too large to test as a whole. The Test Plan module enables you to divide your application according to functionality. You divide your application into units, or **subjects**, by creating folders in a test plan tree. This is a graphical representation of your test plan, displaying your tests according to the hierarchical relationship of their functions.

After you define subjects in the tree, you decide which tests to create for each subject and add them to the tree. At this stage, you define basic information about the test, such as its name, status, and the designer. You can also attach a file, URL, application snapshot or system information to illustrate a test. Afterwards, you define the test steps. **Test steps** contain detailed instructions on how to execute a test and evaluate the results.

ALM enables you to use the same test to test different use-cases, each with its own **test configuration**. Each test configuration uses a different set of data. You define the data by adding **test parameter** values for each test configuration. A test parameter is a variable that can be assigned a value.

During the application management process, you may need to modify your test plan. You can update the test plan tree at any time.

There are a number of methods for organizing your test plan by subject. For example, you could define subjects according to:

- Application functionality—such as editing, file operations, and reporting
- Type of testing—such as functional, user interface, performance, and load

Note: Developing and editing a test plan tree requires appropriate user permissions. For more information, refer to the *HPE Application Lifecycle Management Administrator Guide*.

For details on specifying tests, see "[How to Create Tests](#)" below.

How to Create Tests

This task describes how to create folders of test subjects in the test plan tree, and add tests to the test subjects.

Note: This task is part of a higher-level task. For details, see "[How to Plan Tests in ALM](#)" on [page 382](#).

To learn more about test specification, see "[Test Plan Specification Overview](#)" above.

This task includes the following steps:

- "Create test subjects" below
- "Create tests in the test plan tree" below
- "Create tests from a testing tool – optional" on the next page
- "Import tests – optional" on page 389
- "Create a manual template test – optional" on page 389
- "Create a UFT template GUI test – optional" on page 389
- "Add steps to tests" on page 389

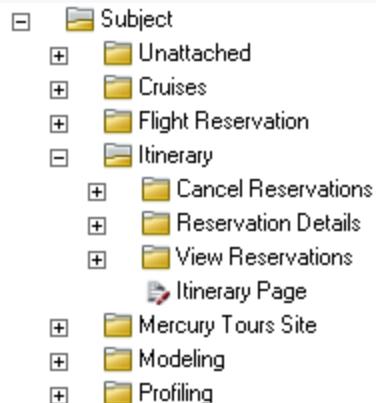
1. Create test subjects

Create folders in the test plan tree. Each folder represents a **test subject** – a testing area in your application.

To create a test subject:

- a. On the ALM sidebar, under **Testing**, select **Test Plan**.
- b. Select **View > Test Plan Tree**.
- c. Select the **Subject** root folder or an existing test subject, and click **New Folder** .

Example: To test a flight reservation application that lets you manage flight scheduling, passenger bookings, and ticket sales, you might define the following subjects for the test plan tree:



Notice how the **Itinerary** subject contains additional subject folders. These folders further categorize the tests in the test plan tree by creating additional levels of subjects. For the complete example, refer to the **ALM_Demo** project.

2. Create tests in the test plan tree

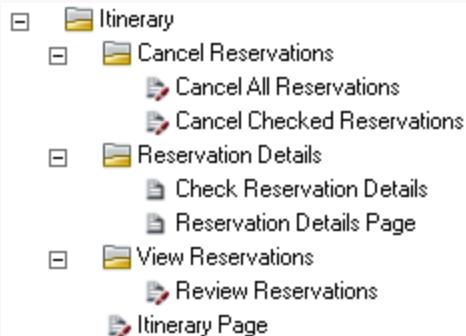
Create tests under test subject folders.

To create tests:

- a. In the Test Plan tree, right-click the folder, and select **New Test**.
- b. Fill in the fields in the New Test dialog box. For user interface details, see "[New Test Dialog Box](#)" on page 412.

Each test should have a distinct objective, such as verifying a specific function or system requirement. The tests you define should be based on the goals you set at the beginning of the application management process.

Example: In the test plan tree shown in the previous step, you might assign tests to the **Itinerary** subject folders as follows:



Tip: For test types that support test configurations, a test configuration is automatically created when you create the test. For details, see "[How to Work with Test Configurations](#)" on page 470.

Note: To create and edit Unified Functional Testing tests from within ALM, you must install the UFT add-in from the Add-ins page. You can access the Add-ins page in ALM from **Help > Add-ins**.

3. Create tests from a testing tool – optional

You can add tests to the ALM Test Plan tree from supported testing software such as Unified Functional Testing. For more information, see the user guide for the appropriate testing tool.

Note: UFT tests can be added to ALM from within UFT without needing to install the UFT add-in. These tests can then be run normally from ALM.

4. Import tests – optional

In addition to creating a test plan tree in the ALM Test Plan module, you can also import test plan data from Microsoft Word or Microsoft Excel to your ALM project. To import test plan data, you must first install the appropriate add-in. For more information, see "[Data Import from Microsoft Word and Microsoft Excel](#)" on page 24.

5. Create a manual template test – optional

If there are common instructions that will be repeated in several tests, for example Log in to the application, you can create a manual template test of common instructions, that is then called by other manual tests.

Note: It is not essential to mark a test as a template test to be able to call it.

To create a manual template test:

- a. Create a manual test, as described in the step above for creating tests in the test plan tree.
- b. Right-click the new test in the test plan tree, and select **Mark as Template Test**. The test icon changes from gray to white, indicating that it is now a template test.

6. Create a UFT template GUI test – optional

HPE Unified Functional Testing (UFT) comprises the product formerly known as HPE QuickTest Professional and the product known as HPE Service Test.

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

The template test defines which UFT add-ins ALM associates with a new UFT GUI test. For details, see the Unified Functional Testing documentation and the relevant Unified Functional Testing add-in documentation.

In addition to the default UFT template GUI test that is provided with the ALM client, you can create other UFT template tests.

To create a UFT template test:

- a. Create a UFT GUI test, as described above in the step for creating tests in the test plan tree.
- b. Right-click the new test in the test plan tree, and select **Mark as Template Test**. The test icon changes from gray to white, indicating that it is now a template test.

7. Add steps to tests

Add steps to tests, describing the actions a tester should perform to complete the tests.

For task details, see "[How to Design Test Steps](#)" on page 453.

Test Types

The following test types are available in the Test Plan module.

ALM Editions: Not all test types are available with each edition. For more information about ALM editions and their functionality, see "[ALM Editions](#)" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.

Test Icon	Test Type	Description
	BUSINESS-PROCESS	A business process test. For details, refer to the <i>HPE Business Process Testing User Guide</i> .
	EXTERNAL-TEST	A test entity that references a test saved in an external repository. For more details, see " Integrating External Tests Overview " on page 668.
	FLOW	A test comprising a collection of business components in a fixed sequence that performs a specific task. For more details, refer to the <i>HPE Business Process Testing User Guide</i> .
	LR-SCENARIO	A scenario that is executed by LoadRunner, the HP load testing tool.
	MANUAL	A test that is run manually.
	PERFORMANCE-TEST	A performance test. For details, refer to the <i>HPE ALM Performance Center Guide</i> .
	QAinspect-TEST	A test that is executed by QAInspect, the HP security testing tool.
	QUICKTEST-TEST	A GUI test that is executed by Unified Functional Testing, the HP functional enterprise testing tool. This test type is only available if you have installed the appropriate add-in from the HPE Application Lifecycle Management Add-ins page. You can access the Add-ins page in ALM from Help > Add-ins .

Test Icon	Test Type	Description
	SERVICE-TEST	<p>An API test, created in Unified Functional Testing or HPE Service Test, HP's tool for creating tests for GUI-less applications such as Web and REST services. For details on API tests, see the <i>HPE Service Test User Guide</i> or the information about API testing in the <i>HPE Unified Functional Testing User Guide</i>.</p> <p>This test type is only available if you have installed the appropriate add-in from the HPE Application Lifecycle Management Add-ins page. For details on installing add-ins, refer to the <i>HPE Application Lifecycle Management Installation and Upgrade Guide</i>.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note: API tests can be viewed in, and launched from, ALM. You can create API tests in Unified Functional Testing or HPE Service Test. Alternatively, you can create a business process test or flow that is automated as an API test.</p> </div>
	SYSTEM-TEST	A test that instructs ALM to provide system information, capture a desktop image, or restart a machine.
	VAPI-XP-TEST	A test that is created by Visual API-XP, the ALM open test architecture API testing tool. For more information on VAPI-XP tests, see " "VAPI-XP Tests" on page 519 ".
	VuGenScript	A VuGen script that is executed by LoadRunner, the HP load testing tool.

Test Plan User Interface

This section includes:

- [Test Plan Module Window](#) 392
- [Test Plan Module Menus and Buttons](#) 395
- [Test Plan Module Icons](#) 404
- [Test Plan Module Fields](#) 406
- [Test Details Dialog Box](#) 410
- [New Test Dialog Box](#) 412
- [Sort Folders in Test Plan Tree Dialog Box](#) 414
- [Paste Tests/Folders to Target Project Dialog Box](#) 415

Test Plan Module Window

The test plan window enables you to define and maintain ALM tests, either in a Test Plan Tree, or a Test Plan Grid.

To access	<ol style="list-style-type: none"> On the ALM sidebar, under Testing, select Test Plan. In the View menu, select Test Grid or Test Plan Tree.
Important information	<p>The Test Plan window includes the following views.</p> <ul style="list-style-type: none"> Test Plan Tree. Displays test subjects and tests hierarchically in a tree. Test Grid. Displays tests in a flat, non-hierarchical view. Each line in the grid displays a separate test. <p>Tip: To enable scrolling in the Test Grid view after editing a field, click the Escape key, then scroll using the mouse wheel or the up/down arrow keys.</p> <p>Business Process Testing: Different tabs are displayed in this module if you are working with a business process test. For details, refer to the <i>HPE Business Process Testing User Guide</i>.</p>
Relevant tasks	"How to Plan Tests in ALM" on page 382 "How to Create Tests" on page 386
See also	"Test Plan Module Fields" on page 406

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

UI Element	Description
<Test Plan module common UI elements>	<ul style="list-style-type: none"> Test Plan fields. For field definitions, see "Test Plan Module Fields" on page 406. Test Plan menus and buttons. For command and button descriptions, see "Test Plan Module Menus and Buttons" on page 395. Test Plan icons. For icon descriptions, see "Test Plan Module Icons" on page 404. ALM masthead, menus, and sidebar. For details, see "ALM Common Areas" on page 30.

UI Element	Description
<filter status bar>	<p>Describes the filter currently applied to the grid or tree. Located directly above the grid filter boxes or tree.</p> <p>In grid views:</p> <ul style="list-style-type: none"> • Showing <x> results. Indicates the number of records currently displayed out of the total records. • Retrieve all <x> results. Click to display all records.
<test plan tree>	<p>Located on the left side of the window, organizes and displays your tests hierarchically.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p>Note: You cannot move tests within a folder. When you refresh the tree view, tests in a folder are alphabetized.</p> </div>
<grid filters> 	<p>Displays a grid filter box under each column name, enabling you to define a filter condition for a column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For user interface details, see "Select Filter Condition Dialog Box" on page 65.</p> <p>Available from: Test Grid view</p>
Details tab	<p>Lists the test fields. For details on test fields, see "Test Plan Module Fields" on page 406.</p> <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p>Tip: Clicking in the Description or Comments field in this tab displays a toolbar for formatting and spell checking the text.</p> </div>
Test Script tab	<ul style="list-style-type: none"> • For automated tests: The test script that is run by the testing tool for the currently selected test. For user interface details, see "Test Script Tab" on page 462. • For business process tests and flows: The components and flows that are run for the currently selected test (or the components that are run for the currently selected flow). For user interface details, see the HPE Business Process Testing User Guide.
Design Steps tab	<p>Lists the instructions on how to execute the selected test. For more details, see "Design Steps Tab/Design Step Details Dialog Box" on page 457.</p>

UI Element	Description
Parameters tab	Lists parameters associated with the currently selected test. Parameters can be incorporated in the test's design steps. For more details, see " Parameters Tab/Parameters Dialog Box " on page 443.
Test Configurations tab	Displays the test configurations of the selected test. For more details, see " Test Configurations Tab " on page 480.
Attachments tab	Lists attachments that provide additional information about the currently selected test. For more details, see " Attachments Page " on page 80.
Req Coverage tab	Lists the requirements that are met by the currently selected test. For more details, see " Req Coverage Tab " on page 422.
Linked Defects tab	Lists the defects linked to the currently selected test. For more details, see " Linked Defects/Entities Page " on page 801.
Dependencies tab	Displays dependency relationships that exist between entities such as test resources and tests. For more information, see " Dependencies Tab " on page 514.
Business Models Linkage	Lists the business model entities linked to the currently selected test. For more details, see " Business Models Linkage Tab " on page 427.
Criteria tab	<p>Displays criteria of the selected business process test. For user interface details, see "Criteria Tab" on page 465.</p> <p>Business Process Testing: Functionality related to test criteria is available only for business process tests. For task details, see the <i>HPE Business Process Testing User Guide</i>.</p>
History tab	Lists changes made to the currently selected test. For more details, see " History Tab " on page 75.
Live Analysis tab	<p>Displays a graphical representation of test data related to the selected test subject folder. For more details, see "Live Analysis Tab" on page 942.</p> <p>Available from: Test Plan Tree view</p>
Test Design tab	Performance Center: Displays a detailed summary of the selected performance test. For more details, refer to the <i>HPE ALM Performance Center Guide</i> .

Test Plan Module Menus and Buttons

This section describes the menus and buttons available in the Test Plan module.

To access	On the ALM sidebar, under Testing , select Test Plan .
Important information	<ul style="list-style-type: none"> Some menu commands and buttons are not available in all test plan views. You can access the menu bar from the Test Plan module by pressing the shortcut key ALT. Version Control: Additional menu commands and buttons are available in a version control enabled project. For details, see "Versions Menu and Buttons" on page 117. Business Process Testing: Additional menu commands and buttons are available for Business Process Testing. For details, see the <i>HPE Business Process Testing User Guide</i>. Available in ALM 12.21: Additional menu commands and buttons are available for BPT Packaged Apps Kit. For details, see the <i>HPE Business Process Testing User Guide</i>.
Relevant tasks	"How to Create Tests" on page 386
See also	<ul style="list-style-type: none"> "Test Plan Module Window" on page 392 "Test Plan Module Icons" on page 404

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

UI Element (A - Z)	Menu	Description
<list of recently used favorite views>	Favorites	<p>Displays the four most recently used favorite views in the Test Plan module.</p> <p>You can define the number of views displayed on the menu by setting the FAVORITES_DEPTH parameter in the Site Configuration tab in Site Administration. For details, see the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p>
Add to Favorites	Favorites	Opens the Add Favorite dialog box, enabling you to add a favorite view to your private or the public folder. For details, see " Add Favorite Dialog Box" on page 102 .
Alerts	Edit	Opens the Alerts dialog box, enabling you to display alerts for the test. For details, see " Alerts Dialog Box" on page 96 .

UI Element (A - Z)	Menu	Description
Attachments 	<toolbar>	Opens the Attachments page, enabling you to add attachments to the selected test. For details, see " "Attachments Page" on page 80.
Clear Alerts	Edit	Clears displayed alerts for the module. For more details, see " "How to Use Alerts" on page 94.
Clear Default Values	Edit	Removes default values set using the Set Default Values dialog box. No defaults are available when creating new tests or test configurations.
Clear Follow Up Flag	Edit	Clears a follow up flag of a selected test. For more details, see " "Follow Up Flags Overview" on page 93. Available from: Test Grid
Collapse	View	Collapses all branches in the test plan tree.
Convert to Component 	Tests	Creates components from a test or a flow. For user interface details, refer to the <i>HPE Business Process Testing User Guide</i>
Copy URL/Paste	Edit	Copies a selected test and pastes its URL as a link. The test itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the test. If you are not already logged in, ALM first prompts for login details.

UI Element (A - Z)	Menu	Description
Copy/Paste	Edit	<p>Copies selected tests within the same project or across projects. When you copy a test subject, any subfolders and tests of the test subject are also copied.</p> <div data-bbox="654 487 1383 1009" style="background-color: #e0f2e0; padding: 10px;"> <p>Note:</p> <ul style="list-style-type: none"> When you copy a test from one project to another, if the test contains calls to other tests, or if the tests are dependent on test resources or other entities, you can instruct ALM to copy them using one of three methods. For more details, see "Paste Tests/Folders to Target Project Dialog Box" on page 415. To copy tests across projects, both projects must use the same ALM version and patch level. The Paste option is only available from the Test Plan Tree. </div>
Cut/Paste	Edit	<p>Moves selected tests to a different location in the test plan tree.</p> <div data-bbox="654 1100 1383 1431" style="background-color: #e0f2e0; padding: 10px;"> <p>Note:</p> <ul style="list-style-type: none"> When moving a test subject, any subfolders and tests of the test subject are moved with it. The root folder cannot be moved. The Paste option is only available from the Test Plan Tree. </div> <div data-bbox="654 1474 1383 1558" style="background-color: #d1f2eb; padding: 10px;"> <p>Tip: You can also move a test or test subject to a new location in the test plan tree by dragging it.</p> </div>

UI Element (A - Z)	Menu	Description
Delete 	Edit	<p>Deletes the selected test or folder in the test plan tree.</p> <p>When deleting a folder, select one of the following options:</p> <ul style="list-style-type: none"> • Delete folders only. Deletes folders and moves all related tests to the Unattached folder. • Delete folder and tests. Deletes folders, tests, and test scripts. <p>Version Control: Deleting a test deletes all previous versions of the test.</p> <p>When deleting a test, if dependencies are defined for the test, the Delete Test dialog box opens. To view the Used By entities, click Details.</p> <div style="background-color: #fce4ec; padding: 10px; border-left: 2px solid #e67e22; margin-left: 20px;"> <p>Caution:</p> <ul style="list-style-type: none"> • You cannot delete the root Subject folder. • If you choose to delete a folder and tests, all subfolders and tests under the selected folder are deleted permanently. • If you delete a test, the test and test script are deleted permanently. In addition, all test runs associated with the deleted test are deleted. • If dependencies are defined for a test, deleting the test may impact the dependent entities. To view the dependencies before you delete, click the Dependencies tab. For more details on related entities, see "Dependencies Tab" on page 514. • Performance Testing: Deleting a performance test that is linked to a timeslot will affect the timeslot. </div>
Description Page	<right-click menu>	<p>Opens the Description tab.</p> <p>Available from: Test Grid</p>
Edit Test 	Tests	<p>Performance Center: Opens the Performance Test Designer, enabling you to design a performance test. For details, refer to the <i>HPE ALM Performance Center Guide</i></p>

UI Element (A - Z)	Menu	Description
Expand All	View	Expands all branches in the test plan tree.
Export	<right-click menu>	<p>Opens the Export Grid Data dialog box, enabling you to export the tests in a grid as a text file, Microsoft Excel worksheet, Microsoft Word document, or HTML document.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • All. Exports all tests in the grid. • Selected. Exports selected tests in the grid. <p>Available from: Test Grid</p>
Filter/Sort 	View	<p>Enables you to filter and sort the tests in the test tree or grid. Any currently applied filters or sorting orders are displayed below the toolbar. For more details, see "Filter Dialog Box" on page 54.</p> <p>Note: A filter that is defined in one test plan view does not apply to the other view.</p>
Find	Edit	Opens the Find dialog box, enabling you to search for a test in the Test Plan module. For more details, see " Find Dialog Box " on page 68.
Find Next	Edit	Searches for the next item in the test grid that meets the previously defined search criteria.
Flag for Follow Up 	Edit	Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for a selected test. For more details, see " Flag For Follow Up Dialog Box " on page 97.
Generate from Test Report	Tests	Opens the Generate Tests from External Test Results dialog box, enabling you to import your tests from an external file to your Test Plan Tree. For more details, see " Generate Tests from External Test Results Dialog Box " on page 675.
Global Search 	<toolbar>	A 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://marketplace.saas.hpe.com/appdelivery/content/alm-global-search .

UI Element (A - Z)	Menu	Description
Go to Test	Tests	Opens the Go To Test dialog box, enabling you to find a specific test by Test ID . You can only go to tests that are in the current filter.
Go to Entity in Module Tree 	<toolbar>	<p>Navigates to the location of the selected entity in that entity's module, and highlights the selected entity.</p> <p>Available from:</p> <ul style="list-style-type: none"> Select Components and Flows pane, for business process tests Business Models Linkage > Business Models Tree pane Req Coverage > Requirement Tree pane
Go to Test in Test Plan Tree 	<toolbar>	<p>Goes to the Test Plan Tree view and highlights the selected test.</p> <p>Available from: Test Grid</p>
Go to Test in Test Set 	Tests	<p>Enables you to view instances of a test in test sets in the Test Lab module.</p> <p>If there is only one instance of the selected test, the Test Lab module opens with the instance highlighted.</p> <p>If there is more than one instance of the selected test, the Select Test Set dialog box opens, and you select a test set and instance.</p>
Go to Test Configuration in Test Set 	Tests	<p>Goes to the test set associated with the selected test configuration in the Execution Grid tab in the Test Lab module.</p> <p>Available from: Test Configurations tab</p>
Graphs	Analysis	<p>Lists the graphs you can generate for test plan data. Select a predefined graph, or launch the graph wizard.</p> <p>For details on the predefined graph types, see "Entity Graph Types" on page 834.</p>
History Page	<right-click menu>	<p>Opens the History tab. For more details, see "History Tab" on page 75.</p> <p>Available from: Test Grid</p>

UI Element (A - Z)	Menu	Description
Indicator Columns	View	Displays indicators on the left-side of the test window. For more details, see " Test Plan Module Icons " on page 404.
Invert Selection	Edit	Unselects all previously selected tests in the grid and selects all previously unselected tests. Available from: Test Grid
Live Analysis	Analysis	Lists options for displaying graphs in the Live Analysis tab. Add or delete a graph, or configure its appearance. For details on live analysis, see " Live Analysis Graphs Overview " on page 940. Available from: Live Analysis tab
Mark as Template Test	Tests	For manual tests. Marks a test as a template test that you can then call from another test. After you mark a template test, the manual test icon changes from gray to white  . For GUI tests. Marks a test as a template test that you will then be able to use to create other UFT GUI tests.
Most Recently Used	Analysis	Lists the most recently viewed reports and graphs in ALM. Displays up to ten items.
New Folder 	Tests	Opens the New Test Folder dialog box, enabling you to add a test subject under a selected folder. Syntax exceptions: A folder name cannot include the following characters: \ ^ *
New Test 	Tests	Opens the Create New Test dialog box, enabling you to add a test under a selected folder. For more details, see " New Test Dialog Box " on page 412. Available from: Test Plan and Test Plan Tree
Organize Favorites	Favorites	Organizes your favorite views. For details, " Organize Favorites Dialog Box " on page 103.

UI Element (A - Z)	Menu	Description
Private	Favorites	Lists the favorite views that are accessible only to the user who created them.
Pin/Unpin 	<toolbar>	Pins or unpins the test plan. Available from: Test Grid and Test Plan Tree. For details, see " Pinned Items Overview " on page 106.
Project Reports	Analysis	Lists the predefined project reports you can produce on test plan data. For details on the report types, see " Predefined Project Reports " on page 882. Selecting a report from the list generates a preview of the report. The preview displays up to five entities per report section. To generate the full report, in the upper left corner of the preview, click the downward arrow adjacent to the Generate button and select the report format to generate.
Public	Favorites	Lists the favorite views that are accessible to all users.
Refresh All 	View	Refreshes the test plan tree or grid so that it displays the most up-to-date tests.
Rename	Edit	Renames a selected test or folder. You cannot rename the root folder. Syntax exceptions: A test name cannot include the following characters: \ / : " ? < > * % '
Replace	Edit	In the test grid, opens the Replace dialog box, enabling you to replace a test field value. For more details, see " Replace Dialog Box " on page 70.
Report Selected	<right-click menu>	Displays a report of the selected tests.
Req Coverage	View	Enables the Advanced Coverage dialog box. For more details, see " Add Advanced Coverage Dialog Box " on page 427.

UI Element (A - Z)	Menu	Description
Run Test 	Tests	Performance Center: Enables you to run the selected performance test from the Test Plan module. For more details on running performance tests, refer to the <i>HPE ALM Performance Center Guide</i> .
Select All	Edit	Selects all tests in the grid. Available from: Test Grid
Select Columns 	View	Opens the Select Columns dialog box, enabling you to determine which fields to display in the test grid and their order. For more details, see " Select Columns>Select Fields Dialog Box " on page 85.
Send by E-mail 	Tests	Opens the Send E-mail dialog box, enabling you to send a test by email to recipients selected from a list, or to the test designer. For more details, see " Send E-mail Dialog Box " on page 76.
Set Default Values	Edit	Opens the Set Default Values dialog box, enabling you to set default values for certain test fields. For user interface details, see " Set Default Values Dialog Box " on page 88.
Show Entity Details 	<toolbar>	Opens the Details dialog box for the selected entity in read-only mode. Available from: <ul style="list-style-type: none"> • Select Components and Flows pane, for business process tests • Business Models Linkage > Business Models Tree pane • Req Coverage > Requirement Tree pane
Show Details and History	<right-click menu>	Displays information panel tabs on the bottom of the test grid. Available from: Test Grid
Sort Folders 	View	Opens the Sort Folders in Test Plan Tree dialog box, enabling you to rearrange subfolders in a test subject folder. For more details, see " Sort Folders in Test Plan Tree Dialog Box " on page 414.

UI Element (A - Z)	Menu	Description
Test Details 	Tests	Opens the Test Details dialog box, displaying the details of the selected test. For user interface details, see " Test Plan Module Window " on page 392. For user interface details specific for Business Process Testing, refer to the <i>HPE Business Process Testing User Guide</i> .
Test Grid	View	Displays the Test Grid view, enabling you to view tests in a flat, non-hierarchical view. Each line in the grid displays a separate test.
Test Plan Tree	View	Displays the Test Plan Tree view, enabling you to view your tests and test subject hierarchically in a tree.
Text Search 	Edit	Opens the text search pane in the lower part of the Test Plan module window, enabling you to search for records in predefined fields. For more details, see " Text Search Pane " on page 72.
Update Selected	Edit	Opens the Update Selected dialog box, enabling you to update a field value for multiple selected tests in the grid. For more details, see " Update Selected Dialog Box " on page 87.
Upload Script 	Tests	Performance Center: Enables you to upload VuGen scripts to ALM. For more details, refer to the <i>HPE ALM Performance Center Guide</i> .

Test Plan Module Icons

This section describes the icons available in the Test Plan module.

To access	On the ALM sidebar, under Testing , select Test Plan .
Relevant tasks	"How to Create Tests" on page 386
See also	<ul style="list-style-type: none"> • "Test Plan Module Menus and Buttons" on page 395 • "Test Plan Module Window" on page 392

The icons are described below:

UI Element	Description
	<green asterisk>. The applicable tab is populated.
	<p>Alerts. Click to view alerts for the test.</p> <ul style="list-style-type: none"> • Red alert. The alert is new. • Gray alert. The alert has already been read. <p>For details, see "Alerts Dialog Box" on page 96.</p>
	<p>Attachments. Click to view attachments for the specified test.</p> <p>Open an attachment by selecting it from the list. If there are more than ten attachments, click the more attachments link to view the list in the Attachments Page. For details, see "Attachments Page" on page 80.</p>
	Business process test
	External test
	Flow of business components
	<p>Follow Up Flags. Click to view follow up flags for the test.</p> <ul style="list-style-type: none"> • Gray flag. The follow up flag is new. • Red flag. The follow up date has arrived. <p>For details, see "Flag For Follow Up Dialog Box" on page 97.</p>
	Linked Defects. Click to view linked defects for the test. For details, see " Linked Defects/Entities Page " on page 801.
	LoadRunner scenario
	Manual Template test
	Manual Template test that includes test steps
	Manual test
	Manual test that includes test steps
	QAInspect test

UI Element	Description
	Subject folder
	System test
	UFT GUI test
	UFT GUI test that includes test steps
	UFT Template GUI test that includes test steps
	UFT Template GUI test
	Version Control. The test is checked out. <ul style="list-style-type: none">• Green lock. The test is checked out by the current user.• Red lock. The test is checked out by another user.
	Visual API-XP test
	Vuser Script test

Test Plan Module Fields

This section describes the Test Plan module fields.

To access	On the ALM sidebar, under Testing , select Test Plan .
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Important information	<ul style="list-style-type: none"> You can add user-defined fields and change the label of any of the fields in the Test Plan module. You can also customize project lists. For more details, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. You can use the Script Editor to restrict and dynamically change the fields and values in the Test Plan module. For more details, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. When you select a test plan column with a user name value (including user-defined fields), ALM displays a list with the name and full name of each user. You can search for users, sort users, group users by user group, and select users from the users list or a group tree. For more details, see "Users List Dialog Box" on page 67. Some fields are not available in all test plan views. Additional fields are available for business process tests and flows. For details, see the <i>HPE Business Process Testing User Guide</i>. Version Control: Additional fields are available in a version control enabled project. For details, see "Version Control Fields" on page 118.
See also	"Test Plan Module Window" on page 392

Test Plan Fields

UI Element (A - Z)	Description
Class	<p>The name of the class.</p> <p>Available for: EXTERNAL-TEST test type</p>
Comments	<p>Displays comments about the test.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Creation Date	<p>The date on which the test was created. By default, the creation date is set to the current ALM server date. Click the down arrow to display a calendar and select a different creation date.</p>
Description	<p>Describes the test.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Designer	The user name of the person who designed the test.

UI Element (A - Z)	Description
Estimated Dev Time	The time estimated to design and develop the test.
Execution Status	<p>The execution status of the last run of an instance of the test. Execution status can be one of the following:</p> <ul style="list-style-type: none"> • Blocked. One or more steps cannot run. For example, the test is running on a remote machine but cannot continue due to some environmental failure, such as network problems or hardware failure. • Failed. One or more steps in the run failed, and none have the status Blocked. • N/A. The current status of the test is not applicable. • No Run. No steps have been run. • Not Completed. One or more steps were not completed or not run, and none have the status Blocked or Failed. • Passed. The run was successful.
Method	<p>The name of the method.</p> <p>Available for: EXTERNAL-TEST test type</p>
Modified	The date and time of the last change to the test.
Package	<p>The name of the package.</p> <p>Available for: EXTERNAL-TEST test type</p>
Path	The path of this test relative to the Tests directory in the project repository.
Status	The planning status of the test. The default status is Design.
Subject	The subject folder in the test plan tree in which the test resides.
Template	Indicates whether the manual test or UFT GUI test is a test template. The value in this column is Y if the test is a test template; N or empty otherwise. For task details, see " How to Create Tests " on page 386.
Test Effort	The amount of effort required to design and run the current test.
Test ID	A unique numeric ID for the test, assigned automatically by ALM. This is a read-only field.

UI Element (A - Z)	Description
Testing Framework	The testing framework type. Available for: EXTERNAL-TEST test type
Testing Tool	The testing tool type. Available for: EXTERNAL-TEST test type
Test Name	The name of the test. Note: By default, an EXTERNAL-TEST test name is created by the concatenation of the following fields: Package, Class, and Method.
Test Priority	The priority of the current test.
Type	The test type of the current test. For more details, see " Test Types " on page 390.

Test Parameter Fields

UI Element (A - Z)	Description
Default Value	A default value for the parameter. The default value helps users assign an actual value for test runs. Click in the text box to display a toolbar for formatting and spell checking the text.
Description	A description of the parameter. Click in the text box to display a toolbar for formatting and spell checking the text.
Modified	The date and time on which the test parameter was last modified.
Order	The position of the parameter in the set of parameters.
Parameter Name	The parameter name.
Used	Indicates whether the parameter is included in a design step.

Test Details Dialog Box

The Test Details dialog box enables you to view and update a single test.

To access	<ol style="list-style-type: none"> On the ALM sidebar, under Testing, select Test Plan. Right-click a test, and select Test Details.
Relevant tasks	"How to Plan Tests in ALM" on page 382 "How to Create Tests" on page 386
See also	"Test Plan Module Fields" on page 406

User interface elements are described below:

UI Element	Description
	Save. Saves the details.
	Pin/Unpin Test. Pins or unpins the test.
	Flag for Follow Up. Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for the test. For details, see "Flag For Follow Up Dialog Box" on page 97 .
	Send by Email. Sends an email with the test details. For more details, see "Send E-mail Dialog Box" on page 76 .
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb

UI Element	Description
Details	<p>Lists the test fields. For details on test fields, see "Test Plan Module Fields" on page 406.</p> <p>Tip: Clicking in the Description or Comments field in this tab displays a toolbar for formatting and spell checking the text.</p>
Design Steps	<p>Lists the instructions on how to execute the selected test. For more details, see "Design Steps Tab/Design Step Details Dialog Box" on page 457.</p> <p>Not available for: Business Process Testing</p>
Test Script	<p>For automated tests: The test script that is run by the testing tool for the currently selected test. For user interface details, see "Test Script Tab" on page 462.</p> <p>For business process tests and flows: The components and flows that are run for the currently selected business process test, or the components that are run for the currently selected flow. For user interface details, see the <i>HPE Business Process Testing User Guide</i>.</p>
Parameters	<p>Lists parameters associated with the currently selected test. Parameters can be incorporated in the test's design steps. For more details, see "Parameters Tab/Parameters Dialog Box" on page 443.</p>
Test Configurations	<p>Displays configurations of a selected test. For more details, "Test Configurations Tab" on page 480.</p>
Attachments	<p>Lists attachments that provide additional information about the currently selected test. For more details, see "Attachments Page" on page 80.</p>
Req Coverage	<p>Lists the requirements that are met by the currently selected test. For more details, see "Req Coverage Tab" on page 422.</p>
Linked Defects	<p>Lists the defects linked to the currently selected test. For more details, see "Linked Defects/Entities Page" on page 801.</p>
Dependencies	<p>Displays dependency relationships that exist between entities such as test resources and tests. For more information, see "Dependencies Tab" on page 514.</p>
Business Models Linkage	<p>Lists the business process model entities that are linked to the selected test. For more details, see "Business Models Linkage Tab" on page 427.</p>

UI Element	Description
Criteria	Display criteria of a selected business process test. For more details, see " Criteria Tab " on page 465.
History	Lists changes made to the currently selected test. For more details, see " History Tab " on page 75.

New Test Dialog Box

This dialog box enables you to add a new test to the test plan tree.

To access	Select a subject folder in the test plan tree, right-click and select New Test .
Important information	If you have installed the Unified Functional Testing Add-in on your machine, the New Test dialog box includes the Template box. Tip: You can set default values for certain test fields. For user interface details, see " Set Default Values Dialog Box " on page 88.
Relevant tasks	"How to Create Tests" on page 386

User interface elements are described below:

UI Element	Description
	Clear All Fields. Clears all data in the dialog box.
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
 Use default values	Use Default Values. Fills in certain fields with default values, as specified in the Set Default Values dialog box. For user interface details, see " Set Default Values Dialog Box " on page 88.

UI Element	Description
 Set Default Values	<p>Set Default Values. Enables you to specify default values for certain fields using the Set Default Values dialog box. For user interface details, see "Set Default Values Dialog Box" on page 88.</p>
	<p>Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?".</p> <p>For example: a*b returns acb and adefb; a?b returns acb</p>
Test Name	<p>Type a name for the new test.</p> <p>Syntax exceptions: A test name cannot include the following characters: \ / : " ? < > * % '</p>
Type	<p>Select a manual or automated test type. For considerations on whether or not to automate a test, see "Test Automation" on page 452.</p> <p>For details on test types, see "Test Types" on page 390.</p> <div data-bbox="584 946 659 975" style="background-color: #e0f2e0; padding: 5px;">Note:</div> <ul style="list-style-type: none"> • If you select the MANUAL test type, you can design the test manually and then convert the test to an automated test type later in the Design Steps tab. • If you select an automated test type, you can select a different automated testing tool later in the Design Steps tab, but you cannot convert it back to the MANUAL test type. • If you select the FLOW test type, you cannot convert it to a different test type.

UI Element	Description
Template	<p>Available if you selected QUICKTEST_TEST from the Test Type list.</p> <p>Select another GUI test as a template for the new test. The template test is copied to your new test, without the test results.</p> <p>To select a template test, click the browse button. The Select Tests dialog box opens. By default, only UFT template tests are displayed.</p> <p>Select the template test and click the Add Test button.</p> <div data-bbox="572 629 1372 889" style="background-color: #e0f2e0; padding: 10px;"> <p>Note: To set the UFT add-ins that ALM associates with a new GUI test, choose a template test that lists the appropriate add-ins. Alternatively, use the default template test provided on your ALM client. This test loads the Web and ActiveX add-ins by default. For more information, refer to the UFT documentation and the relevant UFT add-in documentation.</p> </div>
Details	<p>Lists test fields. Required fields are displayed in red. For details on the available test fields, see "Test Plan Module Fields" on page 406.</p> <div data-bbox="572 1036 1372 1142" style="background-color: #e0f2e0; padding: 10px;"> <p>Tip: Clicking in the Description or Comments field on this page displays a toolbar for formatting and spell checking the text.</p> </div>
Attachments	<p>Enables you to add attachments that provide additional information about the new test. For more details, see "Attachments Page" on page 80.</p>

Sort Folders in Test Plan Tree Dialog Box

This dialog box enables you to sort folders in the test plan tree and create a custom sort according to your needs.

To access	<ol style="list-style-type: none"> 1. In the Test Plan module, choose View > Test Plan Tree. 2. Select a folder, and click Sort Folders .
Important information	<ul style="list-style-type: none"> • You must have project administrator permissions to create a custom sort. For more information on assigning user group permissions, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. • To view the changes in the test plan tree, click Refresh.

User interface elements are described below:

UI Element	Description
Folder Name	Sorts the subfolders alphabetically in the selected test subject folder.
	Move Down Item/Move Up Item. Moves the selected subfolder up or down within the parent folder.
Custom Sort	Enables you to reorder the subfolders in a selected test subject folder. Select a test subject folder in the left pane, and rearrange the subfolders in the right pane by dragging or using the vertical arrows.

Paste Tests/Folders to Target Project Dialog Box

This dialog box enables you to choose how ALM copies a test or test subject across projects.

To access	<ol style="list-style-type: none"> In the test plan tree or grid, select a test or subject folder. Right-click and select Copy. Open another instance of ALM and log in to the project to which you want to paste the tests. Right-click and select Paste.
Important information	To copy tests across projects, both projects must use the same ALM version and patch level.

User interface elements are described below:

UI Element	Description
Copy tests/test folders and link to existing related entities	ALM copies the tests or subject folders and pastes them into the target project. The copied tests or subject folders are linked to existing test resources and called tests with the same name and path. If a related test resource or a test does not exist in the target project, ALM copies it to the target project.
Copy tests/test folders and related entities	ALM copies the tests or subject folders along with the related test resources and called tests, and pastes them into the target project. If a related test resource or a called test already exists in the target project, the copied related test resource or called test is renamed to resolve the duplicate name.

UI Element	Description
Copy tests/test folders without copying related entities	ALM copies the tests or subject folders without copying the related test resources or called tests, and pastes them into the target project. The copied items are not linked to any related entities.

Chapter 23: Requirement and Test Coverage

This chapter includes:

• Requirement and Test Coverage Overview	418
• How to Create Coverage	418
• Requirement and Test Coverage User Interface	420

Requirement and Test Coverage Overview

It is essential that the tests in your test plan meet your original requirements. To keep track of the relationship between your requirements and tests, you add links between them.

In the Test Plan module, you create requirement coverage by selecting requirements to link to a test. Requirement coverage assists you in assessing the impact of a change in the test or requirement. A test can cover more than one requirement.

Alternatively, in the Requirements module, you create test coverage by linking tests to a requirement. Test coverage assists you in assessing the impact of a change in the test or requirement. A requirement can be covered by more than one test.

Instead of covering each requirement only at the level of the test, you can cover a requirement by test configurations. A **test configuration** represents a specific use-case of a test. For example, a test configuration can specify a subset of data or a run-time environment that the test should use. Covering test configurations with requirements provides finer granularity for requirement coverage by enabling coverage by different use-cases of a test. For more details on test configurations, see "[Test Configuration Overview](#)" on page 468.

If you work with the **Business Models** module, you can link model entities to tests, either in the Test Plan module or in the Business Models module.

Business Process Testing: When creating coverage between requirements and business process tests, instead of covering each requirement only at the level of a test and/or its test configurations, you can also define coverage by a criterion. HPE Application Lifecycle Management (ALM) creates a criterion for each business component and flow. You decide whether to include the criterion for calculating coverage. For more details on criteria, see the *HPE Business Process Testing User Guide*.

Note: You can link requirements and tests to defects. This can help you ensure compliance with your testing needs throughout the application management process. If a requirement changes, you can immediately identify which tests and defects are affected, and who is responsible. For more details, see "[Defect Linkage](#)" on page 780.

For task details, see "[How to Create Coverage](#)" below.

How to Create Coverage

The following steps describe how to create coverage by linking requirements to tests. Instead of covering each requirement only at the level of the test, you can cover a requirement by test configurations.

You can create coverage from the Requirements or the Test Plan module. It also describes how to examine the status of your requirements by understanding the breakdown of child requirements

according to test coverage.

To learn more about creating coverage, see "[Requirement and Test Coverage Overview](#)" on the [previous page](#).

Note: This task is part of a higher-level task. For details, see "[How to Plan Tests in ALM](#)" on [page 382](#).

- "Link requirements to tests" below
- "Link tests to requirements" below
- "Analyze coverage" below

Link requirements to tests

1. In the Test Plan module, select the **Test Plan Tree** view.
2. Select a test and click the **Req Coverage** tab. Click the **Select Req** button to display the requirements tree in the right pane. Add coverage to your selected requirements. For user interface details, see "[Req Coverage Tab](#)" on [page 422](#).

To watch a movie on how to create requirement coverage, refer to this section in the ALM Online Help.

Link tests to requirements

1. In the Requirements module, select the **Requirement Details** view.
2. Select a requirement and click the **Test Coverage** tab. Click the **Select** button to display the test plan tree in the right pane. Add coverage to your selected tests. For user interface details, see "[Test Coverage Page](#)" on [page 430](#).

Tip:

To add coverage to multiple tests grouped in the same folder, select the folder and click **Add To Coverage**.

To associate multiple tests with a requirement when the tests are not grouped in the same folder, in the **Test Coverage** tab, filter the test cases (for example by **Test Name**). Add the matching tests by selecting the root folder of the filter, and clicking **Add To Coverage**.

To watch a movie on how to create test coverage, refer to this section in the ALM Online Help.

Analyze coverage

In the **Requirements** module, select **Coverage Analysis** from the **View** menu. Examine the status of your requirements and child requirements according to test coverage.

For user interface details, see "Coverage Analysis View" on the next page.

To watch a movie on how to analyze coverage, refer to this section in the ALM Online Help.

Requirement and Test Coverage User Interface

This section includes:

• Coverage Analysis View	421
• Req Coverage Tab	422
• Add Configuration Coverage Dialog Box	426
• Add Advanced Coverage Dialog Box	427
• Business Models Linkage Tab	427
• Test Coverage Page	430
• Analysis Settings Dialog Box	434
• Coverage Analysis Dialog Box	435
• Add Criterion Coverage Dialog Box	437

Coverage Analysis View

This view enables you to examine the status of your requirements by displaying the breakdown of child requirements according to test coverage. You can set the coverage analysis by cycle, enabling you to view in the analysis only the coverage of runs that are assigned to specific cycles.

To access	In the Requirements module, select Coverage Analysis from the View menu.
Important information	By default, coverage is available only for the following requirement types: Functional , Testing , and Undefined .
Relevant tasks	"How to Create Coverage" on page 418
See also	"Requirements Module Window" on page 250

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

UI Element	Description
<Coverage Analysis view common UI elements>	<ul style="list-style-type: none">Coverage Analysis fields. For field definitions, see "Requirements Module Fields" on page 263.Coverage Analysis view menus and buttons. For command and button descriptions, see "Requirements Module Menus and Buttons" on page 252.Coverage Analysis icons. For icon descriptions, see "Requirements Module Icons" on page 261.
 Settings ...	Opens the Analysis Settings dialog box, enabling you to define the coverage analysis settings. For more details, see "Analysis Settings Dialog Box" on page 434.

UI Element	Description
Legend	<p>Displays the color coding used to indicate the direct cover status of the requirements and their children.</p> <p>A requirement status can be one of the following:</p> <ul style="list-style-type: none"> • Blocked. One or more tests covered by the requirement have an execution status of Blocked. • Failed. One or more tests covered by the requirement have an execution status of Failed, and none has an execution status of Blocked. • No Run. All the tests covered by the requirement have an execution status of No Run. • Not Completed. One or more tests covered by the requirement have an execution status of Not Completed, and none has an execution status of Blocked or Failed. Alternatively, tests covered by the requirement have execution statuses of Passed and No Run. • Not Covered. The requirement has not been linked to a test. • Passed. All the tests covered by the requirement have an execution status of Passed.
	<p>Show. Displays information panel tabs on the bottom of the requirement view. For more details, see "Requirements Module Window" on page 250.</p>

Req Coverage Tab

This tab enables you to view the requirements that are covered by a selected test in the test plan tree.

To access	In the Test Plan module, select the Test Plan Tree view. Select a test and click the Req Coverage tab.
Important information	<ul style="list-style-type: none"> • Requirement coverage is created automatically when you convert a requirement to a test. Therefore, even if you have not yet added requirement coverage, it may already exist. For more details, see "Convert to Tests Wizard" on page 273. • The following requirement types are set so that, by default, you cannot add coverage to them: Business, Folder, and Group. <p>To enable you to add coverage, you must enable test coverage for these requirement types. For more details, see the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p>

Relevant tasks	"How to Create Coverage" on page 418 "How to Work with Test Configurations" on page 470
See also	"Requirement and Test Coverage Overview" on page 418 "Test Configuration Overview" on page 468

Requirement Coverage Grid

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

UI Element (A - Z)	Description
 Select Req	Displays the requirements tree in the right pane, enabling you to add requirement coverage to a test. For more details, see "Requirements Tree Pane" on the next page.
	Remove Selected. Removes selected requirements from the coverage grid.
	Refresh All. Refreshes the coverage grid.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the coverage grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 85.
<coverage grid>	For field definitions, see "Requirements Module Fields" on page 263.
Coverage Mode	Indicates whether an entity is covered by selected test configurations or all test configurations.
Coverage Type	The type of coverage.
Entity Name	The name of the requirement.
Go To Requirement in Requirements Tree	Right-click a requirement in the coverage grid to go to the requirements tree in the Requirements module and highlight the selected requirement.

UI Element (A - Z)	Description
Show Full Path	Right-click a requirement in the coverage grid to display the location of the selected requirement in the requirements tree.

Requirements Tree Pane

User interface elements are described below:

UI Element	Description
	<p>Add to Coverage. Adds requirement coverage to a specified test. Includes the following options:</p> <ul style="list-style-type: none"> • Add to Coverage (Without Children). Adds selected requirement without its child requirements to the coverage grid. Alternatively, you can double-click or drag the selected requirement to the coverage grid. When the specified test contains more than one test configuration, the Add Configuration Coverage dialog box opens. For more details, see "Add Configuration Coverage Dialog Box" on page 426. • Add to Coverage (Include Children). Adds selected requirements, including their child requirements. The associated test configurations are added to the Test Configuration Settings pane. <p>Note: Only child requirements that match the current filter and that belong to a type that supports test coverage are added to the coverage.</p> <p>Business Process Testing: When adding requirement coverage to a business process test, the Add Advanced Coverage dialog box opens. For more details, see "Add Advanced Coverage Dialog Box" on page 427.</p>
	<p>Refresh. Refreshes the requirements tree.</p>
	<p>Find. Searches for a specific requirement in the tree. Type the name (or part of the name) of the requirement in the Find box and click Find. If the search is successful, the requirement is highlighted in the tree.</p>
	<p>Set Filter. Filters and sorts the requirements in the requirements tree. For more details, see "Filter Dialog Box" on page 54.</p>

UI Element	Description
	<p>Go to Requirement by ID. Opens the Go To Requirement dialog box, enabling you to find a specific requirement by ReqID.</p> <p>Note: You can go only to requirements that are in the current filter.</p>
	<p>Close. Hides the requirements tree in the right pane.</p>

Test Configuration Settings Tab

This tab displays the test configurations associated with the requirement coverage. For more details, see "[Test Configuration Settings Tab](#)" on page 487.

Criterion Settings Tab

This tab enables you to add or remove criterion of a selected covered test.

Important information	<p>Business Process Testing: Functionality related to test criteria is available only for business process tests. For details, see the <i>HPE Business Process Testing User Guide</i>.</p>
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User interface elements are described below:

UI Element	Description
	<p>Add Criteria. Opens the Add Criteria dialog box enabling you to add criteria to the criterion settings grid. For more details, see "Add Criterion Coverage Dialog Box" on page 437.</p>
	<p>Remove Criteria. Removes selected criteria from the criterion settings grid.</p> <p>Note: If the last criterion is removed, coverage reverts to test-level.</p>
	<p>Refresh. Refreshes the criterion settings grid.</p>

Add Configuration Coverage Dialog Box

This dialog box enables you to add test configurations to coverage.

To access	<ol style="list-style-type: none"> In the Test Plan module, select a test that contains more than one test configuration from the test plan tree. Click the Req Coverage tab. Click Select Req to display the Requirement Tree pane. Select a requirement. Click Add to coverage (Without Children) . The Add Configuration Coverage dialog box opens.
Important information	<ul style="list-style-type: none"> This dialog box opens only if the selected test contains more than one test configuration. If the root folder is selected, the Add to coverage (Without Children) button is disabled. Business Process Testing: When adding requirement coverage to a business process test, the Add Advanced Coverage dialog box opens. For more details, see "Add Advanced Coverage Dialog Box" on the next page.
Relevant tasks	"How to Create Coverage" on page 418
See also	"Coverage Analysis View" on page 421

User interface elements are described below:

UI Element	Description
Name	The name of the test configuration.
Description	The description of the test configuration.
Don't show me this dialog again	<p>Hides this dialog box.</p> <p>To reveal this dialog box, select View > Req Coverage > Show Advanced Coverage dialog.</p>

Add Advanced Coverage Dialog Box

This dialog box enables you to add criteria and test configurations to coverage.

To access	<ol style="list-style-type: none"> In the Test Plan module, select a business process test from the test plan tree. Click the Req Coverage tab. Click Select Req to display the Requirement Tree pane. Select a requirement. Click Add to coverage . The Add Advanced Coverage dialog box opens.
Important information	<ul style="list-style-type: none"> Business Process Testing: This dialog box is available only for business process tests. If the root folder is selected, the Add to coverage button is disabled. This dialog box opens only if the selected business process test contains criteria and test configurations.
Relevant tasks	"How to Create Coverage" on page 418
See also	"Coverage Analysis View" on page 421

User interface elements are described below:

UI Element	Description
Criteria	<p>Enables you to select criteria.</p> <p>Business Process Testing: Functionality related to test criteria is available only for business process tests. For details, see the <i>HPE Business Process Testing User Guide</i>.</p>
Configurations	<p>Enables you to select test configurations. For details, see the "Test Configuration Overview" on page 468.</p>
Don't show me this dialog again	<p>Hides this dialog box.</p> <p>To reveal this dialog box, select View > Req Coverage > Show Advanced Coverage dialog.</p>

Business Models Linkage Tab

Requirements module: This tab enables you to view the business process model entities that are covered by a selected requirement in the requirements tree.

Test Plan module: This tab enables you to view the business process model entities that are covered by a selected test in the test plan tree.

To access	<p>In the Requirements module:</p> <p>Select the Requirement Details view, select a requirement, and click the Business Models Linkage tab.</p> <p>In the Test Plan module:</p> <p>Select the Test Plan Tree view, select a test (or a Business Process Testing flow), and click the Business Models Linkage tab.</p>
Important information	Business models can be linked to tests automatically by converting representative requirements of model entities to tests.
Relevant tasks	"Link Requirements and Tests to Model Entities" on page 318
See also	"Business Process Models Overview" on page 314

Business Models Linkage Grid

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

UI Element	Description
	Add to Linkage. Displays the business models tree in the right pane, enabling you to add business model entities to a test or requirement. For more details, see "Business Models Tree Pane" on the next page .
	Remove from Linkage. Removes selected model entities from the linkage grid.
	Refresh. Refreshes the linkage grid to display the most up-to-date information.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the linkage grid and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 85 .
Activities	Lists the business process model activities linked to the selected requirement or test.
Paths	Lists the business process model paths linked to the selected requirement or test.
Models	Lists the business process models linked to the selected requirement or test.

UI Element	Description
<linkage grid>	<p>Click a link in the grid to go to the model entity in the business models tree.</p> <p>For field definitions, see "Business Models Module Fields" on page 335.</p>

Business Models Tree Pane

User interface elements are described below:

UI Element	Description
	<p>Add to Linkage. Links the selected model entity to the current requirement or test.</p> <p>Tip: You can also link model entities by double-clicking a model entity, or by dragging it from the business models tree to the linkage grid.</p>
	<p>Show Entity Details. Opens the Details dialog box for the selected entity in read-only mode.</p>
	<p>Go to Entity in Module Tree. Navigates to the selected entity's location in that entity's module, and highlights the entity.</p>
	<p>Refresh. Refreshes the business models tree.</p>
	<p>Find. Searches for a specific model entity in the tree.</p> <p>Type the name (or part of the name) of the model entity in the Find box and click Find. If the search is successful, the entity is highlighted in the tree.</p>
	<p>Filter/Sort. Filters and sorts the entities in the business models tree. For more details, see "Filter Dialog Box" on page 54.</p>
	<p>Go to Model Folder by ID. Opens the Go To Model dialog box, enabling you to find a specific model by Model ID.</p> <p>Note: You can only go to models that are in the current filter.</p>
	<p>Close. Hides the business models tree in the right pane.</p>

Test Coverage Page

This page enables you to view the tests that are covering a selected requirement in the requirements tree.

To access	In the Requirements module, select the Requirement Details view. Select a requirement and click the Test Coverage tab.
Important information	<ul style="list-style-type: none"> Test coverage is created automatically when you generate a test from a requirement. Therefore, even if you have not yet added test coverage, it may already exist. For more details, see "Convert to Tests Wizard" on page 273 The following requirement types are set so that, by default, you cannot add coverage to them: Business, Folder, and Group. To enable you to add coverage, you must enable test coverage for these requirement types. For more details, see the <i>HPE Application Lifecycle Management Administrator Guide</i>.
Relevant tasks	"How to Create Coverage" on page 418
See also	"Requirement and Test Coverage Overview" on page 418

Test Coverage Grid

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

UI Element	Description
 Select	Select Tests. Displays the test plan tree in the right pane, enabling you to add test coverage to a requirement. For more details, see " Test Plan Tree Pane " on page 432.
	Remove From Coverage. Removes selected tests from the coverage grid. Caution: Deleting coverage in full coverage mode may also delete coverage from child requirements.
Status Filter	Filters the coverage grid by status type.
	Refresh All. Refreshes the coverage grid.

UI Element	Description
	Set Filter/Sort. Filters and sorts the tests in the coverage grid. For more details, see " "Filter Dialog Box" on page 54 ".
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the coverage grid and their order. For more details, see " "Select Columns/Select Fields Dialog Box" on page 85 ".
Full Coverage	Shows the test coverage of all the children of the selected requirement.
<coverage grid>	For field definitions, see " "Test Plan Module Fields" on page 406 ".
Coverage Type	The type of coverage.
Entity Name	The name of the test.
Coverage Status	The current execution status of the test.
Coverage Mode	Indicates whether the test coverage includes all the test configurations associated with a selected test, or specific test configurations. The value in this column can be Selected Configurations or All Configurations .
Go To Test in Test Lab	Right-click a test in the coverage grid to go to the Execution Grid in the Test Lab module and highlight the selected test.
Go To Test in Test Plan	Right-click a test in the coverage grid to go to the test plan tree in the Test Plan module and highlight the selected test.
	Show/Hide. Shows/hides the lower pane of the Test Coverage page.

Test Plan Tree Pane

This pane enables you to add tests to the requirement's test coverage. When adding tests, ALM also adds the associated test configurations displayed in the Test Configurations pane.

User interface elements are described below:

UI Element	Description
	<p>Add to Coverage. Adds selected test including its associated test configurations to the requirement's test coverage. Alternatively, you can double-click or drag the selected test to the test coverage grid.</p> <p>Note: If you select a folder, only tests that match your current filter are added to the test coverage.</p>
	<p>Business Process Testing: When adding a business process test, the Add Criterion Coverage dialog box opens. For more details, see "Add Criterion Coverage Dialog Box" on page 437.</p> <p>Tip: To add selected configurations of a test to the requirement's test coverage, add coverage from the Test Configurations pane.</p>
	<p>Show Test Details. Opens the Details dialog box for the selected test in read-only mode.</p>
	<p>Go to Test in Module Tree. Navigates to the selected test's location in the Test Plan module, and highlights the test.</p>
	<p>Refresh All. Refreshes the requirements tree.</p>
	<p>Set Filter/Sort. Filters and sorts the tests in the tree. For more details, see "Filter Dialog Box" on page 54.</p>
	<p>Find. Searches for a specific test in the tree.</p> <p>Type the name (or part of the name) of the test in the Find box and click Find. If the search is successful, the test is highlighted in the tree.</p>

UI Element	Description
	<p>Go to Test by ID. Opens the Go To Test dialog box, enabling you to find a specific test by Test ID.</p> <p>Note: You can only go to tests that are in the current filter.</p>
	<p>Close. Hides the Test Plan Tree pane.</p>
	<p>Show/Hide. Shows/hides the Test Configurations pane.</p>

Test Configurations Pane

This pane enables you to add selected test configurations to the requirement's test coverage. For more details, see "[Test Configurations Pane](#)" on page 488.

Coverage Chart tab

This tab displays a pie chart which graphically shows the run status of the tests in the coverage grid.

Test Configuration Status tab

This tab displays the status of the configurations associated with a covered test. For more details, see "[Test Configuration Status Tab](#)" on page 489.

Criterion Settings tab

This tab enables you to add or remove criterion of a selected covered test.

Important information	Functionality related to test criteria is available only for business process tests. For details, see the <i>HPE Business Process Testing User Guide</i> .
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User interface elements are described below:

UI Element	Description
	<p>Add Criteria. Opens the Add Criteria dialog box enabling you to add criteria to the criterion settings grid. For more details, see "Add Criterion Coverage Dialog Box" on page 437.</p>

UI Element	Description
	Remove Criteria. Removes selected criteria from the criterion settings grid.
	Refresh. Refreshes the criterion settings grid.

Analysis Settings Dialog Box

This dialog box displays the coverage status for a requirement and its children according to the current analysis settings.

To access	In the Coverage Analysis view, click the Settings button.
Relevant tasks	"How to Create Coverage" on page 418
See also	"Coverage Analysis View" on page 421

User interface elements are described below:

UI Elements	Description
Coverage Analysis	<p>Calculates the current coverage status of the requirements based on the Direct Cover Status field values. The status is graphically displayed under the Coverage Analysis field of the Coverage Analysis view.</p> <p>For more details on the Direct Cover Status field, see ""Direct Cover Status" on page 265.</p> <p>For more details on the Coverage Analysis field, see ""Coverage Analysis" on page 264.</p>

UI Elements	Description
	<p>Execution Analysis</p> <p>Calculates the coverage status of the requirements based on the runs of the covering tests that were run in the selected cycles. The Execution Analysis option does not use the Direct Cover Status field in its calculations.</p> <p>Tests that were not assigned to run in any of the selected cycles are assigned the status No Run. Requirements not covered by any tests are not counted in the analysis.</p> <p>In the Execution Analysis box, click the arrow button. The releases tree opens. Expand the tree and select the cycles for which you want to analyze coverage.</p> <p>The status is graphically displayed under the Coverage Analysis field of the Coverage Analysis view. For more details on the Coverage Analysis field, see "Coverage Analysis" on page 264.</p> <p>Note: When the Execution Analysis option is selected, the Direct Cover Status field is unavailable in the Coverage Analysis view.</p>

Coverage Analysis Dialog Box

This dialog box displays the coverage status for a requirement and its children according to the current filter.

To access	In the Coverage Analysis view, right-click a requirement and choose Coverage Analysis .
Relevant tasks	"How to Create Coverage" on page 418
See also	"Coverage Analysis View" on page 421

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

UI Element	Description
<graph area>	<p>Displays the coverage status for a selected requirement and its children.</p> <p>Click a section in the graph to display a list of child requirements with the selected status.</p> <p>From the list, you can select a requirement and click Go To to highlight it in the requirements tree.</p> <p>Example: Clicking the Failed area lists the requirements with the status of Failed.</p>
Copy to Clipboard	<p>Copies a snapshot of the Coverage Analysis dialog box to the Clipboard.</p>
Add Tests Coverage	<p>Extends the dialog box and displays the Test Coverage Chart. This pie chart graphically displays the full test coverage for the requirement, grouped according to test status.</p> <p>Click a section in the chart to view the list of tests with the selected status that cover the requirement and its children. The Tests Coverage dialog box opens with the Status Filter set to the status of the area you selected in the chart. For more details, see "Test Coverage Page" on page 430.</p> <p>Note: If a parent requirement has several children all of which cover the same test, that test is included only once in the parent requirement's Tests Coverage Chart.</p>

Add Criterion Coverage Dialog Box

This dialog box enables you to add criteria for a test.

To access	<ol style="list-style-type: none"> In the Requirements module's Requirement Details view, select a requirement from the requirements tree. Click the Test Coverage tab. Click  Select to display the Test Plan Tree pane on the right-side of the window. In the Test Plan Tree pane, select a business process test and click Add to coverage  . Alternatively, in the Test Configurations pane, select a test configuration of a business process test and click Add configurations to coverage  . The Add Criterion Coverage dialog box opens.
Important information	Business Process Testing: Functionality related to test criteria is available only for Business Process tests. For details, see the <i>HPE Business Process Testing User Guide</i> .
Relevant tasks	"How to Create Coverage" on page 418
See also	"Coverage Analysis View" on page 421

User interface elements are described below:

UI Element	Description
Name	The name of the criterion.
Description	The description of the criterion.
Don't show me this dialog again	<p>Hides this dialog box.</p> <p>To reveal this dialog box, select View > Test Coverage > Show Add Criterion Coverage.</p>

Chapter 24: Test Parameters

This chapter includes:

- [Test Parameters Overview](#) 440
- [How to Use Test Parameters](#) 440
- [Test Parameters User Interface](#) 442

Test Parameters Overview

You can add parameters to your tests. A **test parameter** is a variable that can be assigned a value outside the test from which it is defined. Using parameters can increase the flexibility of your tests by enabling you to run the same test repeatedly with different data each time.

When working with a manual test, you can add parameters to the design steps from within the test or you can add parameters by calling them from other tests. This is useful if you have common steps you often want to perform as part of other tests. For example, you can create a template test **Login_Template** that logs a user in when you start the application. You need to call this test at the beginning of each test. In some cases, you will want to log in as a regular user while in others, you will need to log in as the project administrator.

For this purpose, you can create two parameters, <<<user_name>>> and <<<password>>>, and change the values according to the type of test that is calling **Login_Template**. If the most common login is a regular user, you can set the default values for the parameters to a regular user name and password. For more information on calling manual tests, see "[How to Design Test Steps](#)" on page 453.

When working with an automated test, you can define parameters for a test script from within the test or you can load parameters from a shared test resource file. For more information on using test resources, see "[How to Use Test Resources](#)" on page 503.

For task details, see "[How to Use Test Parameters](#)" below

How to Use Test Parameters

This task describes how to work with test parameters.

To learn more about test parameters, see "[Test Parameters Overview](#)" above.

Business Process Testing/UFT: When working with a **business-process** or **GUI-Test** test type, different options are available for working with test parameters. For more details, see the *HPE Business Process Testing User Guide*, and the *HPE Unified Functional Testing User Guide*.

This task includes the following steps:

- "[Prerequisites](#)" below
- "[Define test parameters](#)" on the next page
- "[Add parameters to a design step](#)" on the next page
- "[Assign actual values to parameters](#)" on the next page

1. Prerequisites

A manual test is defined in the test plan tree. For more details, see "[How to Plan Tests in ALM](#)" on page 382.

2. Define test parameters

In the Parameters tab, plan and define the test parameters you will use in the test design steps. For user interface details, see "[New Test Parameter/Test Parameter Details Dialog Box](#)" on page 447.

3. Add parameters to a design step

While creating design steps, click **Insert Parameter**  to add a parameter to a design step.

The Parameters dialog box opens. For user interface details, see "[Parameters Tab/Parameters Dialog Box](#)" on page 443.

Alternatively, in the description or expected result of a design step, type a new or existing parameter name, using the syntax <<<parameter name>>>. If you typed a new parameter, it is automatically added to the test parameter grid.

If you apply formatting to a parameter name in a design step, you must apply the same formatting to the entire parameter name, including the <<< and >>> characters. For example, if you want to italicize the parameter <<<password>>>, you must italicize the entire string <<<password>>> and not just the word password.

4. Assign actual values to parameters

Before you run a test, ALM prompts you to assign actual values to the parameters included in the test. The **actual value** is the data that is used during the test run. You can take the parameter default values and use them as actual values.

ALM prompts you to assign actual values at three stages of designing your test. For user interface details, see "[Called Test Parameters/Parameters of Test Dialog Box](#)" on page 448.

According to your testing policy, you can assign actual values at any of these stages:

- **When you call a test with parameters.** If you assign actual values to parameters when you call a test, the values are automatically applied to each test instance that you create from the calling test.
- **When you create a test instance.** If you assign actual values to parameters when you create a test instance, the values are automatically applied to each run of the test instance. You can also assign actual values to test instances in the Execution Settings view of a test instance. see "[Test Instance Details - Execution Settings View](#)" on page 602.
- **When you run a test.** If you assign actual values to parameters for a test run, the values apply to that test run only. If you do not assign actual values at this stage, the test will run with null values.

At each of these stages, you can only assign values to parameters that have not already been assigned values.

Test Parameters User Interface

This section includes:

- [Parameters Tab/Parameters Dialog Box](#) 443
- [New Test Parameter/Test Parameter Details Dialog Box](#) 447
- [Called Test Parameters/Parameters of Test Dialog Box](#) 448

Parameters Tab/Parameters Dialog Box

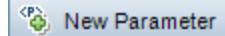
The Parameters tab enables you to create and view test parameters.

The Parameters dialog box enables you to insert test parameters in a test step.

To access	<p>Parameters tab: In the test plan tree, select a test, and click the Parameters tab.</p> <p>Parameters dialog box: In the test plan tree, select a test (other than a business process test or flow) and click the Design Steps tab. Double-click a design step and position the cursor in the Description or Expected Result field. Click Insert Parameter .</p>
Important information	After you select a parameter in the Parameters dialog box, the parameter is inserted at the cursor location in the design step, using the syntax <<parameter name>>.
Relevant tasks	<ul style="list-style-type: none"> "How to Use Test Parameters" on page 440 <i>HPE Business Process Testing User Guide</i>
See also	<ul style="list-style-type: none"> "Test Parameters Overview" on page 440 <i>HPE Business Process Testing User Guide</i>

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

UI Element	Description
	<p>Go To Resource. Goes to the test resources tree and highlights the selected resource.</p> <p>Available for: Automated test types</p>
	<p>Resource Preview. Displays the content of the selected test resource.</p> <p>Available for: Automated test types</p>

UI Element	Description
	<p>Map Parameters. Opens the Map Parameters dialog box, enabling you to map the parameter names to the column names in the selected test resource file.</p> <p>Under the Mapped Value column, type the test resource column name for each parameter name.</p> <p>Available for: Automated test types</p>
	<p>New Parameter. Opens the New Test Parameter dialog box, enabling you to define a new parameter. For more details, see ""New Test Parameter/Test Parameter Details Dialog Box" on page 447".</p>
	<p>Delete. Deletes the currently selected parameter. If you delete a parameter that is included in a design step, the parameter in the design step is replaced by regular text, using the syntax: <parameter_name>.</p>
	<p>Refresh. Refreshes the test parameter so that it displays the most up-to-date information.</p>
	<p>Set Filter/Sort. Opens the Filter Test Parameters dialog box, enabling you to filter and sort the test parameters in the test parameter grid. Any currently applied filters or sorting orders are displayed below the toolbar. For more details, see ""Filter Dialog Box" on page 54".</p>
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields are displayed and their order. For more details, see ""Select Columns/Select Fields Dialog Box" on page 85".</p>
	<p>Parameter Details. Opens the Test Parameter Details dialog box, displaying the details of the selected parameter. For more details, see ""New Test Parameter/Test Parameter Details Dialog Box" on page 447".</p>
	<p>Move Up. Moves the selected parameter up in the list.</p> <p>Tip: In other tabs and dialog boxes, such as the in Business Process Testing Iteration pages, parameters are displayed according to the order defined in the Parameters page.</p> <p>Available for: The BUSINESS-PROCESS, FLOW, MANUAL, QAinspect_TEST, QUICKTEST_TEST, SERVICE-TEST, SYSTEM-TEST, and VAPI-XP-TEST test types</p>

UI Element	Description
	<p>Move Down. Moves the selected parameter down in the list.</p> <p>Tip: In other tabs and dialog boxes, such as the in Business Process Testing Iteration pages, parameters are displayed according to the order defined in the Parameters page.</p> <p>Available for: The BUSINESS-PROCESS, FLOW, MANUAL, QAINSPECT-TEST, QUICKTEST_TEST, SERVICE-TEST, SYSTEM-TEST, and VAPI-XP-TEST test types</p>
Data Resource	<p>Specifies the name of an external Microsoft Excel file that contains sets of parameter values for each configuration of the test. Used only for configurations defined to access dynamic data. For task information, see "How to Associate Dynamic Data" on page 472</p> <p>Available from: Parameters tab from Test Plan module. This field is not available when selecting the Parameters tab from the Test Script tab in the Test Plan module.</p> <p>Available for: The BUSINESS-PROCESS, FLOW, MANUAL, QAINSPECT-TEST, QUICKTEST_TEST, SERVICE-TEST, SYSTEM-TEST, and VAPI-XP-TEST test types</p>
	<p>Go To Resource. For use with configurations that access dynamic data. Opens the resource in the Test Resources module.</p> <p>Available from: Parameters tab from Test Plan module. This field is not available when selecting the Parameters tab from the Test Script tab in the Test Plan module.</p> <p>Available for: The BUSINESS-PROCESS, FLOW, MANUAL, QAINSPECT-TEST, QUICKTEST_TEST, SERVICE-TEST, SYSTEM-TEST, and VAPI-XP-TEST test types</p>

UI Element	Description
	<p>Resource Preview. For use with configurations that access dynamic data. Enables you to preview the actual data that will be used with the configuration when the test runs. The external data table resource is specified in Data Resource in the Resource Preview dialog box.</p> <p>The Resource Preview dialog box is similar to the Resource Viewer tab in the Test Resources module. For user interface details, see the <i>HPE Application Lifecycle Management User Guide</i>.</p> <p>Available from: Parameters tab from Test Plan module. This field is not available when selecting the Parameters tab from the Test Script tab in the Test Plan module.</p> <p>Available for: The BUSINESS-PROCESS, FLOW, MANUAL, QAINSPECT_TEST, QUICKTEST_TEST, SERVICE-TEST, SYSTEM-TEST, and VAPI-XP-TEST test types</p>
	<p>Map Parameters. For use with configurations that access dynamic data. Enables you to specify sets of parameter values from an external Microsoft Excel file by mapping the parameter names in the Excel file to the parameter names in ALM. For task details, see "How to Associate Dynamic Data" on page 472.</p> <p>Available from: Parameters tab from Test Plan module. This button is not available when selecting the Parameters tab from the Test Script tab in the Test Plan module.</p> <p>Available for: The BUSINESS-PROCESS, FLOW, MANUAL, QAINSPECT_TEST, QUICKTEST_TEST, SERVICE-TEST, SYSTEM-TEST, and VAPI-XP-TEST test types</p>
Sort By	<p>Specifies the order in which the parameters are listed, as defined in the Set Filter dialog box. For user interface details, see "Filter Dialog Box" on page 54.</p>
<test parameter fields>	<p>For details on the fields available for test parameters, see "Test Plan Module Fields" on page 406.</p>

UI Element	Description
Data Resource	<p>Enables you to load a test resource file from the test resources tree. For more details on test resources, see "How to Use Test Resources" on page 503.</p> <div data-bbox="556 460 1383 523" style="background-color: #e0f2e0; padding: 5px;"> <p>Note: This option is available only for automated test types.</p> </div> <div data-bbox="556 566 1383 713" style="background-color: #ffe0e0; padding: 5px;"> <p>Caution: If a test resource was assigned to the parameter but subsequently deleted, the Data Resource field will be read-only and a broken relation image will be displayed.</p> </div>
Default Value	The default value of the parameter.
Description	The description of the parameter.
Used	Indicates whether the parameter is included in a design step.

New Test Parameter/Test Parameter Details Dialog Box

The New Test Parameter dialog box enables you to define a test parameter.

The Test Parameter Details dialog box enables you to view and modify test parameter details.

To access	<p>New Test Parameter: In the test plan tree, select a test and click the Parameters tab. Click the New Parameter button. The New Test Parameter dialog box opens.</p> <p>Test Parameter Details: In the test plan tree, select a test and click the Parameters tab. Select a parameter and click the Parameter Details  button.</p>
Important Information	<p>Business Process Testing: When working with a Business Process test type, different options are available for working with test parameters.</p>
Relevant tasks	<ul style="list-style-type: none"> • "How to Use Test Parameters" on page 440 • <i>HPE Business Process Testing User Guide</i>
See also	"Test Parameters Overview" on page 440

User interface elements are described below:

UI Element	Description
	<p>Save. Saves the details.</p> <p>Available from: Test Parameter Details dialog box</p>
	<p>First/Previous/Next/Last Entity. Allows you to browse through the test parameters.</p> <p>Available from: Test Parameter Details dialog box</p>
	<p>Spell Check. Checks the spelling for the selected word or text box.</p>
	<p>Thesaurus. Displays a synonym, antonym, or related word for the selected word.</p>
	<p>Spelling Options. Enables you to configure the way ALM checks spelling.</p>
	<p>Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?".</p> <p>For example: a*b returns acb and adefb; a?b returns acb</p>
Details tab	<p>For details on the fields available for test parameters, see "Test Plan Module Fields" on page 406.</p>
Default Value	<p>The default value of the parameter.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>
Description	<p>The description of the parameter.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>

Called Test Parameters/Parameters of Test Dialog Box

The Called Test Parameters dialog box enables you to view and assign actual values for parameters included in a called test.

The Parameters of Test dialog box enables you to assign actual values for parameters in test instances or test runs.

To access	Use one of the following: <ul style="list-style-type: none"> In the Test Plan module, select a test and click the Design Steps tab. Right-click a step and select Call to Test. Select a test. If the selected test includes parameters, the Called Test Parameters dialog box opens. In the Test Plan module, select a test and click the Design Steps tab. Right-click a step that contains a call to a test, and select Called Test Parameters. The Called Test Parameters dialog box opens. In the Test Lab module, run a test with parameters. The Parameters of Test dialog box prompts you to assign actual values to the parameters.
Important information	Only parameters for which you have not already assigned actual values are displayed.
Relevant tasks	"How to Use Test Parameters" on page 440
See also	"Test Parameters Overview" on page 440

User interface elements are described below:

UI Element	Description
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields are displayed in the dialog box and their order. For more details, see "Select Columns/Select Fields Dialog Box" on page 85 .
 Copy Default Values	Replaces the values in the Actual Value column with values in the Default Value column for the currently selected parameters.
Used	Indicates whether the parameter is included in a design step.
Parameter Name	The name of the parameter.
Default Value	The default value of the parameter.
Actual Value	The actual value that is used for the parameter during the test run. Type the actual value in the Actual Value column or tab.
Description	The description of the parameter.

Chapter 25: Test Design

This chapter includes:

• Test Design Overview	452
• Test Automation	452
• How to Design Test Steps	453
• Design Steps User Interface	456

Test Design Overview

After you add a test to the test plan tree, you build the test by defining design steps. For details, see "[How to Design Test Steps](#)" on the next page.

After you define the test steps, decide whether to perform the test manually or to automate it.

For manual tests you define steps, execute them on your application, and record the results of each step. Use manual tests in cases where the test requires a response by the tester, for usability tests, onetime tests, tests that need to be run immediately, tests requiring knowledge of the application, and tests without predictable results.

For example, in the flight reservation application, tests that check if a dialog box is user-friendly require user response. Therefore, you should make these tests manual.

For automated tests, the testing expert can use the design steps as the basis for creating the detailed test script. Automated tests require that you create automated test scripts using HP testing tools, or third-party testing tools. For details on automating tests, see "[Test Automation](#)" below.

As part of test design, you can include a call to another manual test. When you run the calling test, it includes the steps from the called test. This is useful if you have common steps you often want to perform as part of other tests.

For example, suppose you want to include a login step in a number of different tests. You can create a test **Login_Template** that logs in a user when you start your application. You can call this test at the beginning of each test.

Called tests can include test parameters. These are useful if you want to run the called test with different data according to the type of test that is calling it. For details on using parameters in manual tests, see "[Test Parameters Overview](#)" on page 440.

For task details, see "[How to Design Test Steps](#)" on the next page.

Test Automation

Test planning involves deciding which tests to automate. If you choose to automate a test, you can generate a test script and run the test using Unified Functional Testing, LoadRunner, or Visual API-XP.

Automating a test allows unattended execution of the test at high speed. It also makes the test reusable and repeatable. For example, you automate functional, benchmark, unit, stress and load tests, as well as tests requiring detailed information about applications.

Consider the following issues when deciding whether to automate a test.

Frequency of Execution

Tests that will run with each new version of your application are good candidates for automation. These include sanity tests that check basic functionality across an entire application. Each time there is a new version of the application, you run these tests to check the stability of the new version, before proceeding to more in-depth testing.

Tests that use multiple data values for the same operation (data-driven tests) are also good candidates for automation. Running the same test manually—each time with a different set of input data—can be tedious and ineffective. By creating an automated data-driven test, you can run a single test with multiple sets of data.

Stress/Load Testing

It is also recommended that you automate tests that are run many times (stress tests) and tests that check a multi-user client/server system (load tests). For example, suppose a test must be repeated a thousand times. Running the test manually would be extremely impractical. In this case, you can create a test that runs a thousand iterations.

When Not to Automate Tests

Generally, the more user involvement a test requires, the less appropriate it is to automate. The following describes test cases that should not be automated:

- Usability tests—tests providing usage models that check how easy the application is to use.
- Tests that you only have to run once.
- Tests that you need to run immediately.
- Tests based on user intuition and knowledge of the application.
- Tests with no predictable results.

How to Design Test Steps

After adding tests to the test plan tree, describe the detailed, step-by-step instructions the tester should perform to complete a test. Each test step includes a description of an action.

Note: This task is part of a higher-level task. For details, see "[How to Plan Tests in ALM](#)" on page 382.

To learn more about test design, see "[Test Design Overview](#)" on the previous page.

This task includes the following steps:

- "[Prerequisites](#)" on the next page
- "[Create test steps](#)" on the next page

- "Call a template test – optional" on the next page
- "Generate an automated test – optional" on the next page
- "Results" on page 456

1. Prerequisites

Tests, and basic test information, are defined in the test plan tree.

For task details on creating tests, see "[How to Create Tests](#)" on page 386.

2. Create test steps

Describe the steps a tester must perform to run a test. A test step includes the actions to perform on your application, the input to enter, and the expected results.

To create test steps:

- a. In the Test Plan module, select **View > Test Plan Tree**, and select a test.
- b. Click the **Design Steps** tab.
- c. If there are existing design steps, select the step below which you want to add a new step.
- d. Click **New Step**  . Fill in the fields in the Design Step Details dialog box. For user interface details, see "[Design Steps Tab/Design Step Details Dialog Box](#)" on page 457.
- e. To add a parameter to a design step, in the Design Step Details dialog box, click **Insert Parameter**  . For details on working with test parameters, see "[How to Use Test Parameters](#)" on page 440.

Example: To test the Flight Booking feature in the Mercury Tours application,

you might create design steps as follows:

Design Steps			
	Step Name	Description	Expected Result
	Step 1: Log in to Mercury Tours.	1. Enter URL. 2. Log in.	User is logged in to Mercury Tours.
	Step 2: Select a flight.	1. Click the Flights button. 2. Enter flight details and preference. 3. Click Continue.	Flight details and preference are entered.
	Step 3: Enter departure and return flight.	1. Select departure and return flights. 2. Click Continue.	The flights are selected.
	Step 4: Enter passenger details.	Enter first name, last name, and meal preference.	Passenger details are entered.
	Step 5: Enter credit card details.	1. Enter credit card type. 2. Enter credit card number. 3. Enter expiration date.	Credit card details are entered.
	Step 6: Enter addresses.	Enter billing and delivery addresses.	Addresses are entered.
	Step 7: Complete the purchase.	Click Secure Purchase.	Purchase completed.
	Step 8: Log out.	Click the Log Out button.	User logs out of Mercury Tours.

3. Call a template test – optional

To include commonly used instructions in your test, for example Log in to the application, you can call a template test from within your test that includes common instructions.

Note: For details on creating template tests, see "How to Create Tests" on page 386.

To call a template test:

- a. Select the test in which you want to include a template test.
- b. Click the **Design Steps** tab.
- c. If there are existing design steps, select the step below which you want to call a template test.
- d. Click **Call to Test** .
- e. In the Select Test dialog box, select the test that you want to call. For user interface details, see "Select Test Dialog Box" on page 463.

A call to the selected template test is inserted below the selected step. When you run the test, the template test's design steps are listed accordingly.

4. Generate an automated test – optional

After you have created steps for a manual test, you can generate a test script skeleton in which you can write scripts to run the test as an automated test.

Note:

- You can generate an automated test before designing test steps, or by selecting an automated test type when you create the test.
- For considerations on whether or not to automate a test, see "[Test Automation on page 452](#)".
- For a list of automated test types, see "[Test Types on page 390](#)".

To generate an automated test:

In the Design Steps tab, click **Generate Script**  and choose an automated test type to which to convert.

Any text that appeared in the steps of the manual test is listed as comments in the generated test script. If the manual test has parameters, they are also listed as comment text.

Example: In the flight reservation application, you can automate a test that checks whether the login mechanism works. After adding test steps, you create a test script. Then, using Unified Functional Testing GUI tests, you complete the automated test script.

5. Results

The design steps that you add appear in the Design Steps tab. The first time you add design steps to a test, a footprint  appears in the test plan tree next to the test icon, indicating that steps were defined for the test.

Design Steps User Interface

This section includes:

• Design Steps Tab/Design Step Details Dialog Box	457
• Test Script Tab	462
• Select Test Dialog Box	463
• Paste Design Steps to Target Project Dialog Box	464
• Criteria Tab	465

Design Steps Tab/Design Step Details Dialog Box

The Design Steps tab enables you to view and edit design steps for the selected test. The Design Step Details dialog box enables you to create and edit individual design steps.

To access	<p>Design Steps tab: In the Test Plan module, select a test in the test plan tree, and click the Design Steps tab.</p> <p>Design Step Details dialog box: In the Test Plan module, select a test in the test plan tree, and click the Design Steps tab. Then use one of the following:</p> <ul style="list-style-type: none">Right-click the design steps grid, or a design step, and select New Step.Right-click a design step and select Edit Step.
Important information	<ul style="list-style-type: none">If you apply formatting to a parameter name in a design step, you must apply the same formatting to the entire parameter name, including the <<< and >>> characters. For example, if you want to italicize the parameter password, you must italicize the entire string <<<password>>> and not just the word password.Specifying less than 2,500 characters in user-defined fields in this tab or dialog box can improve performance.
Relevant tasks	"How to Design Test Steps" on page 453
See also	"Test Design Overview" on page 452

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

UI Element (A - Z)	Description
	Save. Saves the details. Available from: Design Step Details dialog box
	Allows you to browse through design steps. Available from: Design Step Details dialog box
	Check Spelling. Checks the spelling for the selected word or text box. Available from: Design Step Details dialog box

UI Element (A - Z)	Description
	<p>Spelling Options. Enables you to configure the way ALM checks spelling.</p> <p>Available from: Design Step Details dialog box</p>
	<p>Thesaurus. Displays a synonym, antonym, or related word for the selected word.</p> <p>Available from: Design Step Details dialog box</p>
	<p>New Step. Creates a new design step in the Design Step Editor dialog box.</p> <p>The new step is added below the selected step.</p>
	<p>Edit Step. Opens the selected design step in the Design Step Editor dialog box.</p> <p>Available from: Design Steps tab</p>
	<p>Renumber Steps. Renumbers the design steps sequentially. Use this command after you rearrange steps.</p> <p>Available from: Design Steps tab</p>
	<p>Delete Selected. Deletes the selected design steps.</p>
	<p>Copy/Paste Steps. Copies the selected design steps and pastes them to another test in the same project or in another project. The copied design step is inserted above the selected step.</p> <p>When you paste design steps to another project, the Paste Design Steps to Target Project dialog box opens. For user interface details, see ""Paste Design Steps to Target Project Dialog Box" on page 464.</p> <p>Note: Parameters included in the design step are copied to the target test.</p> <p>Available from: Design Steps tab</p>

UI Element (A - Z)	Description
	<p>Attachments. Opens the Attachments page, enabling you to add attachments to the selected design step. For user interface details, see "Attachments Page" on page 80.</p> <p>After you add an attachment, the  icon displays in the Design Steps grid, next to the appropriate design step.</p> <p>Note: If you add an attachment to a design step, a copy of the attachment is made every time the test is run.</p>
	<p>Call to Test. Opens the Select Test dialog box, enabling you to call another manual test. For user interface details, see "Select Test Dialog Box" on page 463. The call to the test is inserted as a new design step below the selected step.</p> <p>Tip: To return to the calling test, click  in the upper left corner of the design step grid.</p> <p>Available from: Design Steps tab</p>
	<p>Generate Script. Enables you to convert the test to an automated test type that is run by the applicable automatic testing tool. For considerations on whether or not to automate a test, see "Test Automation" on page 452.</p> <p>For reference details, see "Test Types" on page 390.</p> <p>ALM generates a test script skeleton based on the current design steps. The test icon next to the test you automated is replaced with the automated test icon.</p> <p>Note:</p> <ul style="list-style-type: none">• After automating a test, you cannot convert it back to the MANUAL test type.• For automated test types other than FLOW, you can use this button to select a different testing tool. <p>Available from: Design Steps tab</p>

UI Element (A - Z)	Description
	Insert Parameter. Opens the Parameters dialog box, enabling you to insert a test parameter in the Description or Expected Result field. The parameter is inserted at the cursor position. For user interface details, see " Parameters Tab/Parameters Dialog Box " on page 443.
	Find Text. In the Design Steps tab, opens the Find dialog box, enabling you to find text in specific fields. For user interface details, see " Find Dialog Box " on page 68. Find/Replace Text. In the Design Step Details dialog box, opens the Find & Replace dialog box, enabling you to find or replace a specified string in the selected field.
	Select Columns. Opens the Select Columns dialog box, enabling you to define which columns appear in the grid, and the order in which they appear. For user interface details, see " Select Columns>Select Fields Dialog Box " on page 85. Available from: Design Steps tab
	Adjust Rows Height. Adjusts the row size of the steps in a test. This enables you to view all the text in the Description or Expected Result columns if the text is long. <div style="border-left: 3px solid #0070C0; padding-left: 10px;">Tip: To resize a single step, position the mouse in the gray sidebar on the gridline below the step. The cursor changes to a vertical arrow. Drag the gridline up or down.</div>
	Available from: Design Steps tab
	Save Steps. Saves the design steps in the project. If you are typing long text, use the Save Steps button to prevent data loss.
	Move Down/Move Up. Moves the selected design step up or down in the design steps grid. <div style="border-left: 3px solid #0070C0; padding-left: 10px;">Tip: Alternatively, select a design step and drag it to a new position.</div>

UI Element (A - Z)	Description
	<p>Back. Returns to the test that called the currently-open template test. For task details on inserting calls to template tests, see ""Call a template test – optional" on page 455".</p> <p>Available from: Design Steps tab</p>
<design steps grid>	<p>Displays design steps that are included in the selected test.</p> <p>Available from: Design Steps tab</p>
Attachments	<p>Enables you to add attachments that provide additional information about the design step. For user interface details, see ""Attachments Page" on page 80".</p> <p>Available from: Design Step Details dialog box</p>
Description	<p>Instructions for the tester to perform.</p> <p>Note:</p> <ul style="list-style-type: none">Test parameters included in the Description field are surrounded by <<< >>> brackets.Design Steps Tab: If a step is a call to another test, the Description field displays a link to the called test, and actual values of the parameters included in the called test. To edit actual values of the called test parameters, right-click the link, and choose Called Test Parameters. <p>Tip:</p> <ul style="list-style-type: none">Clicking in this field displays a toolbar for formatting and spell checking the text.Specifying less than 2,500 characters in this field can improve performance.
Details	<p>Design step details. Required fields are displayed in red.</p> <p>Available from: Design Step Details dialog box</p>

UI Element (A - Z)	Description
Expected Result	<p>The expected state after the step instructions are performed.</p> <p>Tip:</p> <ul style="list-style-type: none">Clicking in this field displays a toolbar for formatting and spell checking the text.Test parameters included in the Expected Result field are surrounded by <<< >>> brackets.Specifying less than 2,500 characters in this field can improve performance.
Step Name	<p>The name of the step.</p> <p>Default value: The sequential number of the design step. For example, Step 1 if you are adding a step to a test for the first time.</p> <p>Note: If a step is a call to another test, the Step Name field displays a link to the called test, and actual values of the parameters included in the called test. To edit actual values of the called test parameters, right-click the link, and choose Called Test Parameters.</p>

Test Script Tab

This tab contains the script run by the testing tool designated for the selected test.

To access	In the test plan tree, select a test, and click the Test Script tab.
	Available from: Automated test types

Important information	<ul style="list-style-type: none">For details on the user interface for system tests, see "Test Script Tab - System Tests" on page 500.For details on the user interface for business process tests and flows, see the <i>HPE Business Process Testing User Guide</i>.The Test Script tab is populated with elements designed by the applicable testing tool, such as UFT. (When you first create an automated test, only the Launch button is displayed.) For details, see the documentation for the testing tool.You can view API tests only if you have installed the appropriate add-in from the HPE Application Lifecycle Management Add-ins page. For more details on installing add-ins, refer to the <i>HPE Application Lifecycle Management Installation and Upgrade Guide</i>.
Relevant tasks	"How to Design Test Steps" on page 453
See also	"Test Automation" on page 452

User interface elements are described below:

UI Element	Description
Launch	Displays the testing script in the applicable testing tool.

Select Test Dialog Box

This dialog box enables you to select a manual test that is called by a design step.

To access	<ol style="list-style-type: none">In the Test Plan module, select a test in the test plan tree, and click the Design Steps tab.Right-click the design step below which you want to add a call to a manual test, and select Call to Test.
Important information	If the called test contains parameters, the Called Test Parameters dialog box opens, enabling you to set actual parameter values. The actual values are used by default in test instances created from the current test. For user interface details, see " Called Test Parameters/Parameters of Test Dialog Box " on page 448.
Relevant tasks	"How to Design Test Steps" on page 453
See also	"Test Design Overview" on page 452

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

UI Element	Description
	Show Entity Details. Opens the Details dialog box for the selected entity in read-only mode.
	Refresh. Refreshes the test tree so that it displays the most up-to-date tests.
	Filter/Sort. Opens the Filter Tests dialog box, enabling you to filter and sort the tests in the test plan tree. For details, see " "Filter Dialog Box" on page 54 ".
	Find. Searches for a specific test in the test plan tree. Type the name of the test in the Find box and click the Find button. If the search is successful, the test is highlighted in the tree. Click the Find button again to highlight the next match.
	Go To Test By ID. Opens the Go To Test dialog box, enabling you to select a test by its ID.
<test plan tree>	Displays folders in the test plan tree that contain manual tests. If the Show only Template Tests check box is selected, only folders that contain template tests are displayed. Expand the tree to locate the test that you want to call.
Show Only Template Tests	Instructs ALM to display only template tests. To choose a test that is not a template test, clear the check box.

Paste Design Steps to Target Project Dialog Box

This dialog box enables you to select the way in which design steps are copied from a test in one project to a test in another project.

To access	1. In the source project, right-click a design step and select Copy . 2. Open the target project in a separate browser window. 3. In the target project, right-click a design step below which you want to insert the copied step, and select Paste .
Important information	The source and target projects must use the same ALM version and patch level.

User interface elements are described below:

UI Element	Description
Copy design steps and link to existing related entities	ALM copies the design steps and pastes them into the target project. The copied design steps are linked to existing tests with the same name. If a called test does not exist in the target project, ALM copies it to the target project.
Copy design steps and related entities	ALM copies the design steps and called tests and pastes them into the target project. If a called test name already exists in the target project, the copied called test is renamed to resolve the duplicate test name.
Copy design steps without copying related entities	ALM copies the design steps without copying the called tests, and pastes them into the target project. The copied design steps are not linked to any called tests.

Criteria Tab

This tab enables you to view the criteria of the selected business process test.

To access	In the test plan tree, select a business process test, and click the Criteria tab.
Important information	Business Process Testing: Functionality related to test criteria is only available for business process tests. For details, see the <i>HPE Business Process Testing User Guide</i> .
See also	"Requirement and Test Coverage Overview" on page 418

User interface elements are described below:

UI Element	Description
	Refresh. Refreshes the criteria grid.
 Go To Component	Goes to the Test Script tab and highlights the selected component.
Name	The name of the criterion.
Execution Status	The current execution status of the criterion. Execution status can be one of the following: Failed, N/A, No Run, Not Completed, Passed.
Created by	The user name of the person who created the criterion.

UI Element	Description
Creation date	The date on which the criterion was created. By default, the creation date is set to the server date on which the criterion was created.
Description	The description of the criterion.

Chapter 26: Test Configurations

This chapter includes:

• Test Configuration Overview	468
• How to Work with Test Configurations	470
• Test Configuration User Interface	479

Test Configuration Overview

HPE Application Lifecycle Management (ALM) provides data awareness capabilities that enable you to determine which datasets to use when running your test. One of these data awareness capabilities is the ability to define test configurations.

Test configurations:

- "Facilitate Test Reuse" below
- "Improve Requirement Coverage" below

Facilitate Test Reuse

Test configurations essentially unbind the data from the test, making the test generic and facilitating the test's reuse. Using test configurations, you can:

- Share common data sources across different tests.
- Test various use-cases, each time with a different set of data.

Example: A test configuration can specify a subset of data or a run-time environment that the test should use.

You may want to check the same test in a Windows environment and again in a UNIX environment. In this case, you can define one test with two test configurations. The parameter values for the Windows configuration would contain Windows-specific values (for example, backslashes in a path name) while the UNIX configuration would contain UNIX-specific values (for example, forward slashes in a path name).

For conceptual information about the ways you can associate data with a test configuration, see "[Data for Test Configurations](#)" on the next page.

Improve Requirement Coverage

Test configurations provide finer granularity for requirement coverage. Instead of covering each requirement only at the level of the test, you can link a requirement to a specific test configuration.

Example: You can use a single test to cover multiple requirements by associating different test configurations in the same test with each requirement.



This topic also includes: ["Data for Test Configurations" below](#).

For task details, see ["How to Work with Test Configurations" on the next page](#).

Data for Test Configurations

HPE Application Lifecycle Management (ALM) enables you to determine which data to use when running test configurations. You can associate data with test configurations in several ways:

- ["Static" below](#)
- ["Dynamic" below](#)

Static

Static data are supplied for the test configuration by entering the data in a grid directly from within ALM.

Use static data when the amount of data you intend to associate is small.

For task details on associating static data with test configurations, see ["How to Associate Static Data" on page 472](#).

Dynamic

Dynamic data are supplied for the test configuration by creating an external Microsoft Excel file, uploading it as a test resource into ALM, and associating it with the test configuration.

Use dynamic data to specify large amounts of data that are easier to maintain in an external file.

Tip: You can specify a default dynamic data set for all test configurations of a test. You can also override the default for a specific test configuration.

You can supply ALM with dynamic data resources:

- **At the test level.** You can supply a Microsoft Excel file that contains all parameter values at the test level. The Microsoft Excel file is uploaded as a data table in the Test Resources module, and associated with the test configuration in the Parameters tab of the Test Plan module.
- **At the configuration level (overriding any test-level data resources).** You can supply an alternate Microsoft Excel file, overriding the default test-level data resources file that is associated with the test as a whole. The Microsoft Excel file is uploaded as a data table in the Test Resources module, and associated with a specific configuration of the in the Test Configurations tab of the Test Plan module.

For task details on associating dynamic data with test configurations, see ["How to Associate Dynamic Data" on page 472](#).

Test Types and Test Configuration Data Association

Different test types support different methods of test configuration data association.

Test Type	Static	Dynamic
BUSINESS-PROCESS	✓	✓
FLOW	✗	✗
LR-SCENARIO	✗	✗
MANUAL	✓	✗
PERFORMANCE-TEST	✗	✗
QAinspect_Test*	✓	✓
QuickTest_Test	✗	✓
Service-Test	✗	✓
System-Test*	✓	✓
VAPI-XP-Test*	✓	✓
VugenScript	✗	✗

* You can associate test configuration data for this test type within ALM. However, to execute this type of test using its associated configuration data, run the test in other tools, such as the OTA API.

How to Work with Test Configurations

This task describes how to work with test configurations.

Note: To view a movie that demonstrates how to work with test configurations, choose **Help > Movies** in the ALM main window.

This task includes the following steps:

- "Prerequisites" on the next page
- "Define test configurations" on the next page
- "Associate data with each test configuration" on the next page
- "Create coverage - optional" on the next page
- "Define test sets" on the next page
- "View test results" on page 472

1. Prerequisites

- If using test configurations for finer granularity of test coverage, define requirements in the Requirements module. For task details, see "[How to Create Requirements](#)" on page 248.
- Define tests in the Test Plan module. When you create a test in the Test Plan module, a test configuration with the same name as the test is created automatically.
For task details on creating tests, see "[How to Create Tests](#)" on page 386.
For task details on test parameters, see "[How to Use Test Parameters](#)" on page 440.

2. Define test configurations

- a. In the test plan tree, select a test, and click the **Test Configurations** tab. For user interface details, see "[Test Configurations Tab](#)" on page 480.
- b. Create configurations for the test. Click the **New Test Configuration**  button and enter your test configuration details. For user interface details, see the "[New Test Configuration/Test Configuration Details Dialog Box](#)" on page 482.
- c. Select a test configuration and click the **Test Configuration Details**  button.
- d. In the **Test Configuration Details** dialog box, click the **Data** tab. The fields displayed in the Data tab vary depending on the test type.

3. Associate data with each test configuration

Depending on the test type, you can associate static data, dynamic data, or both for your test configuration. The Data tab accurately reflects your available options. For details, see "[Test Types and Test Configuration Data Association](#)" on page 469.

For task details on associating static data (data entered directly into a grid in ALM), see "[How to Associate Static Data](#)" on the next page.

For task details on associating dynamic data (data saved externally in data table resources), see "[How to Associate Dynamic Data](#)" on the next page.

4. Create coverage - optional

Link requirements to the test or to specific test configurations. For task details, see "[How to Create Coverage](#)" on page 418.

5. Define test sets

You define a test set in the Test Lab module. A test set can include any or all of the test configurations defined for a test, or it can include test configurations based on requirement coverage. When you run a test set, the parameter values are retrieved from the data set according to the settings defined for each test configuration.

For task details, see "[How to Create Test Sets](#)" on page 590.

6. View test results

View the test set run results. For task details, see "[How to View Test Runs](#)" on page 753.

How to Associate Static Data

This task describes how to work with static test configurations in ALM.

Defining static data enables you to specify sets of parameter values for the test directly from within ALM.

You can create configurations that access static data from the Test Plan module, and modify the data from the Test Plan and Test Lab modules.

Note: This task is part of a higher-level task. For details, see "[How to Work with Test Configurations](#)" on page 470.

This task includes the following steps:

- "[Select a static configuration](#)" below
- "[Create iterations \(Business Process Testing\)](#)" below
- "[Modify parameter values](#)" below

1. Select a static configuration

In the Test Plan module > Test Configurations tab, click the **Data** tab. Then, if the test type supports both static and dynamic data, select **Static**.

For user interface details on the Data tab for static configurations, see "[Data Tab: Static View](#)" on page 483.

2. Create iterations (Business Process Testing)

Business Process Testing: Existing iterations and the test parameter default values are displayed in a grid. Add /remove iterations as necessary.

For user interface details on iterations, see the *HPE Business Process Testing User Guide*.

3. Modify parameter values

Existing iterations and the test parameter default values are displayed in a grid. Modify parameter values as necessary.

To modify the value of a static parameter, select a parameter, click the **Actual Value** field, and enter the desired value of the parameter.

How to Associate Dynamic Data

This task describes how to work with test configurations in ALM that access dynamic data.

Defining dynamic data enables you to specify sets of parameter values for the test from an external Microsoft Excel file.

Tip: The same Microsoft Excel file can be used as a data resource for different tests.

Note:

This task is part of a higher-level task. For details, see "[How to Work with Test Configurations](#)" on page 470.

This task includes the following steps:

- "Prerequisites" below
- "Create a data table in Microsoft Excel" below
- "Create ALM test resources by uploading the Excel file" on page 476
- "Associate the data table test resource with the test and/or configuration" on page 477
- "Map test parameters to resource parameters" on page 477
- "Filter the data by selecting iteration ranges—optional" on page 478
- "Associate an alternate data table with the test configuration—optional" on page 478

1. Prerequisites

To work with dynamic data for UFT automated tests, make sure that the Unified Functional Testing Add-in for Business Process Testing is installed on the client computer. The Unified Functional Testing Add-in for Business Process Testing available from the HPE Application Lifecycle Management Add-ins page ([Help > Add-ins](#)).

2. Create a data table in Microsoft Excel

This data table contains rows of values which become parameter values for each iteration of your test configuration.

a. Create a spreadsheet:

- In Microsoft Excel.
 - If working with business process tests, in Unified Functional Testing, you can export configuration values to a Microsoft Excel file, and use this file for your data table. See the information about exporting test iteration values into an Excel document in the *Unified Functional Testing User Guide*.
- b. Put test-level parameters in the first sheet. The entire test runs once for each row listed in the first sheet.

Example:

	A	B	C
1	Name	Phone	Amount
2	Orville	Bramson	10000
3	Bernadette	Washington	4500
4	Kim	Wang	5000
5	Tom	Smith	43000
6	Barbara	Wilson	15000

- c. Business Process Testing users can use subsequent sheets in the Excel file to override the business component iterations defined in business process tests and flows, according to the following guidelines:
- The next sheets (meaning, all sheets but the first) represent components and their parameters.

Note: If a component does not contain parameters, the Excel does not contain a sheet for that component.

- In each sheet, the column headings (first row) containing the parameter names must be in one of the following formats:
 - <COMPONENT NAME>.<COMPONENT PARAMETER NAME>
This format is the general, default format.
 - <COMPONENT INSTANCE NAME>.<COMPONENT PARAMETER NAME>
This format is useful for keeping sheet names short.
 - <COMPONENT PARAMETER NAME>
This format is useful if the name of the sheet is the same as the name of the component, and you need to keep the sheet names short.

Notes

- If the same component has been added to the same test multiple times, the numerical instance of the component in the test is listed between the component name and the parameter name. The component instances are listed according to their order in the test script, not necessarily in the order of the original numerical instance of the component when inserted.
- The sheet name cannot be more than 32 characters long and cannot

contain special characters. (This is a Microsoft Excel limitation.)

When specifying column headings, it is helpful to use one of the last two formats listed above for parameter names in order to avoid this limitation.

- Specify values for each parameter under the parameter names, each on a different row. Each row represents an iteration. Add iterations as necessary.

Example: The first sheet, that corresponds to the **OrderingBooks** business process test. The test will run once, because it is designed to run only for one store, **BooksOnline**.

A	Store
1	BooksOnline
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

The second sheet corresponds to the **Login** business component. This business component will iterate only once, because only one user is listed as logging in.

A	login [1].UserName
1	Joe
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

The third sheet corresponds to the **OrderBooks** business component. This business component currently iterates only once, because only book is listed.

A	B	C	D	E
1	orderbooks [1].BookName	orderbooks [1].BookAuthor	orderbooks [1].Price	
2	Little Women	Louisa May Alcott	10	
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

If we want to iterate the component multiple times, we could modify the third sheet (that corresponds to the **OrderBooks** business component) so that it more rows are added. This business component will iterate for every book listed—in this case, six times.

A	B	C
1	orderbooks [1].BookName	orderbooks [1].BookAuthor
2	Little Women	Louisa May Alcott
3	Harry Potter and the Sorcerer's Stone	J. K. Rowling
4	The Iliad	Homer
5	Great Expectations	Charles Dickens
6	To Kill a Mockingbird	Harper Lee
7	Pride and Prejudice	Jane Austen
8		
9		
10		
11		
12		
13		
14		
15		

d. Save the file.

Caution:

- When editing the spreadsheet in Excel, if no values / iterations are specified for a particular parameter defined in the component, test, or flow, an exception will occur at run-time.
- If a component, group, or flow has input parameters that reference the output parameters of a different business component or flow, differences between the number of iterations can result in an error. The parameter name in the Iterations dialog box is displayed in red, indicating an iteration range mismatch.

3. Create ALM test resources by uploading the Excel file

In ALM, upload the Microsoft Excel data table as a test resource. For task details, see "[How to Use Test Resources](#)" on page 503.

- a. Select the **Test Resources** module.
- b. Either create or select a test resource folder.
- c. Click **New Resource**  to create a new test resource. The New Resource dialog box opens.
- d. Enter **Data Table** as the resource type and click **OK**.
- e. Click the **Resource Viewer** tab.
- f. Click the **Upload File** button.
- g. Navigate and select the Microsoft Excel file you created and click **Open**.
- h. Click **OK** when prompted that the upload completed successfully. The Resource Viewer lists the default Microsoft Excel sheets. The data is now available in ALM.

You can double-click the spreadsheet to view the data you created.

Note: The data in the Microsoft Excel file starts with row number 2. It is assumed that the first row in the Microsoft Excel file contains the names for the data columns, which are mapped to parameter names in ALM.

4. Associate the data table test resource with the test and/or configuration

Do one of the following:

Associate the data table with a test:

You can associate the data table with a test. All test configurations for the test will run using the data in this table (unless overridden in **Test Configurations > Data**).

To associate the data table with an entire test:

- a. In the Test Plan module Parameters tab for a test, click the down arrow next to the **Data Resource** field in the toolbar.
- b. Navigate to, and select, the data resource and click **OK**. The Microsoft Excel file is now the default external data file for the test.

Associate the data table with configurations:

You can associate the data table with a test configuration. Each test configurations in the test run using the data table specified for the individual configuration, overriding the data table specified in the Test Plan module Parameters tab.

To associate the data table, see "[Associate an alternate data table with the test configuration—optional](#)" on the next page.

5. Map test parameters to resource parameters

The test parameter names in the Excel data table do not have to match the parameter names defined in the test. They can be mapped.

- a. In the Parameters tab for the test, click **Map Parameters** . The Map Parameters dialog box is displayed. For user interface details on the Map Parameters dialog box, see "[Map Parameters Dialog Box](#)" on page 491.
- b. Do one of the following:
 - For each test parameter, click in the cell for its corresponding resource parameter. Type or select the corresponding resource parameter and click **OK**.
 - **Business Process Testing:** Click **Automap** . ALM maps each test parameter to the corresponding resource parameter based on the column headings in the first row of the data table.

Tip: The mapping of resource parameters to test parameters facilitates reuse of the same resource file by different tests.

6. Filter the data by selecting iteration ranges—optional

To filter the data so that the test runs only on a subset of the parameter values, either by row or by value, click **Data Resource Settings**. The Data Resource Settings dialog box opens. For user interface details on the Data Resource Settings dialog box, see "[Data Resource Settings Dialog Box](#)" on page 493.

7. Associate an alternate data table with the test configuration—optional

You can create configurations that process alternate dynamic data resource files instead of the dynamic data resource file associated with the business process test.

Tip: The same file can be used as a data resource for different tests.

- a. In the **Data** tab, select **Dynamic**.
- b. Select **Override test data resource** and specify an alternate data resource.
- c. Click **Data Resource Settings** to map the test parameter names to the resource parameter names in the Data Resource Settings dialog box. For user interface details on the Data Resource Settings dialog box, see "[Data Resource Settings Dialog Box](#)" on page 493.

Tip: You can have one business process test run the same component a different numbers of times. Do this by defining different numbers of iterations in each sheet of the data table for that component.

Test Configuration User Interface

This section includes:

• Test Configurations Tab	480
• New Test Configuration/Test Configuration Details Dialog Box	482
• Data Tab: Static View	483
• Data Tab: Dynamic View	485
• Test Configuration Settings Tab	487
• Test Configurations Pane	488
• Test Configuration Status Tab	489
• Generate Test Configuration Dialog Box	490
• Map Parameters Dialog Box	491
• Data Resource Settings Dialog Box	493

Test Configurations Tab

This dialog box enables you to define and update test configurations.

To access	In the test plan tree, select a test and click the Test Configurations tab.
Important information	<p>For a list of test types for which you can define test configurations that access external data table resources, see "Data for Test Configurations" on page 469.</p> <p>For additional details on working with QUICKTEST_TEST (UFT GUI Tests) test configurations that access external data table resources, see the section on working with ALM in the <i>HPE Unified Functional Testing User Guide</i>.</p>
Relevant tasks	"How to Work with Test Configurations" on page 470
See also	"Test Configuration Overview" on page 468

User interface elements are described below:

UI Element	Description
	New Test Configuration. Opens the New Test Configuration dialog box, enabling you to define a test configuration. For details, see " New Test Configuration/Test Configuration Details Dialog Box " on page 482.
	Delete Test Configuration. Deletes selected test configuration from the test configurations grid.
	Refresh. Refreshes the test configurations grid so that it displays the most up-to-date information.
	Test Configuration Details. Opens the Test Configuration Details dialog box, enabling you to display details of the selected test configuration. For details, see " New Test Configuration/Test Configuration Details Dialog Box " on page 482.
	Attachments. Opens the Attachments page in the Test Configuration Details dialog box, enabling you to view attachments of the currently selected test configuration. For details, see " Attachments Page " on page 80.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields are displayed and their order. For details, see " Select Columns>Select Fields Dialog Box " on page 85.

UI Element	Description
	Set Filter. Enables you to filter and sort the test configurations in the test configurations grid. For details, see " Filter Dialog Box " on page 54.
Name	The name of the test configuration.
Created By	The user name of the person who created the test configuration.
Creation Date	The date on which the test configuration was created. By default, the creation date is set to the current ALM server date.
Execution Status	The execution status of the last run of a test configuration. By default, the execution status can be one of the following: Blocked, Failed, N/A, No Run, Not Completed, Passed .
Description	Describes the test configuration.
Data tab	The data associated with the currently selected test configuration. For details, see " Data Tab: Static View " on page 483 and " Data Tab: Dynamic View " on page 485.
Attachments tab	Lists attachments that provide additional information about the currently selected test configuration. For details, see " Attachments Page " on page 80.
History tab	Lists changes made to the currently selected requirement. For details, see " History Tab " on page 75.
ID	A unique numeric ID for the test configuration, assigned automatically by ALM.
Modified	The date and time of the last change to the test configuration.
Test ID	A unique numeric ID for the test, assigned automatically by ALM.
Test Name	The name of the test.

New Test Configuration/Test Configuration Details Dialog Box

This dialog box enables you to define and update test configurations.

To access	<ol style="list-style-type: none"> In the test plan tree, select a test and click the Test Configurations tab. Click the New Test Configuration button . The New Test Configuration dialog box opens
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Relevant tasks	"How to Work with Test Configurations" on page 470
See also	"Test Configuration Overview" on page 468

User interface elements are described below:

UI Element	Description
	Save. Saves the details. Available from: Test Configuration Details dialog box
	First/Previous/Next/Last Entity. Allows you to browse through the test configurations. Available from: Test Configuration Details dialog box
	Clear All Fields. Clears all fields. Available from: New Test Configuration dialog box
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
 Use default values	Use Default Values. Fills in certain fields with default values, as specified in the Set Default Values dialog box. For user interface details, see "Set Default Values Dialog Box" on page 88.
 Set Default Values	Set Default Values. Enables you to specify default values for certain fields using the Set Default Values dialog box. For user interface details, see "Set Default Values Dialog Box" on page 88.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Name	Displays the name for the new test configuration.
Details tab	Details the currently selected test configuration. For details on the available fields, see "Test Configurations Tab" on page 480.

UI Element	Description
Data tab	<p>The data associated with the currently selected test configuration. For details, see "Data Tab: Static View" below.</p> <p>Available from: Test Configuration Details dialog box</p>
Attachments tab	<p>Lists attachments that provide additional information about the currently selected test configuration. For details, see "Attachments Page" on page 80.</p>
History tab	<p>Displays the date and time of the change and the name of the user who made the change to the test configuration. For details, see "History Tab" on page 75.</p> <p>Available from: Test Configuration Details dialog box</p>
Description tab	<p>Describes the currently selected test configuration.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p>

Data Tab: Static View

This dialog box shows the data defined for a selected test configuration directly within ALM.

To access	In the Test Plan module > Test Configurations tab, click the Data tab and if available, select Static .
Important information	Different options and fields are available in the Data tab depending on the test type. For details, see " Data for Test Configurations " on page 469.
Relevant tasks	"How to Work with Test Configurations" on page 470
See also	"Test Configuration Overview" on page 468

User interface elements are described below:

UI Element (A-Z)	Description
Static	<p>Changes the test configuration so it accesses static data defined within ALM.</p> <p>Available for: Certain test types. For details, see "Data for Test Configurations" on page 469.</p>

UI Element (A-Z)	Description
Dynamic	<p>Changes the test configuration so that it access an external Microsoft Excel data resource file. For user interface details, see "Data Tab: Dynamic View" on the next page.</p> <p>Available for: Certain test types. For details, see "Data for Test Configurations" on page 469.</p>
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields are displayed and their order. For more details, see "Select Columns>Select Fields Dialog Box" on page 85.</p>
 Copy Default Values	<p>Replaces actual values with default values for the currently selected parameters.</p>
 Update Selected Parameters ▾	<p>Enables you to update the actual value of all or selected parameters across all test instances associated with the selected test configurations in the Test Lab module.</p>
Used	<p>Indicates whether the parameter is included in a design step.</p>
Parameter Name	<p>The name of the parameter.</p>
Default Value	<p>The default value of the parameter as defined in the test level.</p>
Actual Value	<p>The actual value that is used for the parameter during the test run.</p>
Source Test	<p>Test in which the parameter was created.</p> <p>Available for:</p> <ul style="list-style-type: none"> • MANUAL • QAinspect-TEST • SYSTEM-TEST • VAPI-XP-TEST
<Iteration page> common elements	<p>Business Process Testing: Enables you to add iterations, delete iterations, modify each iteration's parameter values, and select iteration ranges to run in a business process test. Also enables you to import and export parameter values. For user interface details, see the <i>HPE Business Process Testing User Guide</i>.</p> <p>Available for: Business process tests</p>

Data Tab: Dynamic View

This tab enables you to modify test configurations so that they access dynamic data (data that resides outside of ALM in an external data resource).

To access	Do one of the following:
	<ul style="list-style-type: none"> In the Test Plan module > Test Configurations tab, click the Data tab and if available, select Dynamic. In the Test Lab module > Test Instance Details dialog box > Execution Settings view for business process test configurations and UFT test configurations that access dynamic data, click the Data tab.
Important information	<ul style="list-style-type: none"> Different options and fields are available in the Data tab depending on the test type. By default, the data resource used is the one specified in the Parameters tab for the test. This can be overridden by specifying a different data resource in this Data tab. When accessed from the Test Instance Details dialog box Execution Settings View, the information in this tab is read-only.
Relevant tasks	"How to Work with Test Configurations" on page 470
See also	"Test Configuration Overview" on page 468 "Test Instance Details - Execution Settings View" on page 602

User interface elements are described below:

UI Element	Description
Static	<p>Changes the test configuration so it accesses static data defined within ALM. For user interface details, see "Data Tab: Static View" on page 483.</p> <p>Available for: Certain test types. For details, see "Data for Test Configurations" on page 469.</p>
Dynamic	<p>Changes the test configuration so that it access an external Microsoft Excel data resource file.</p> <p>Available for: Certain test types. For details, see "Data for Test Configurations" on page 469.</p>

UI Element	Description
Override test data resource	<p>Indicates that you want to override the dynamic data resource specified at the test level with a data resource at the configuration level.</p> <p>Available from: Test Configurations tab</p>
Data Resource	<p>Enables you to enter the name of a data resource that will override the data resource specified at the test level.</p> <p>Available from: Test Configurations tab when Override test data resource is selected</p>
	<p>Go to data resource. Opens the data resource in the Test Resources module.</p> <p>Available when: An alternate data resource is specified in the Data Resource field.</p>
	<p>Resource Preview. Opens the asset viewer's Test Configuration Resource Preview for the test resource. This enables you to see the data defined in the external data resource (meaning, all data available to the test configuration).</p> <p>Available when: An alternate data resource is specified in the Data Resource field.</p>
	<p>Filtered Resource Preview. Opens the Data Viewer for the test resource. This enables you to see the dynamic data in the external data resource that match filter criteria (meaning, the data that will be used when the test configuration runs).</p> <p>Filter. Name of the filter.</p> <p>Row Filter: The rows as defined in Data Resource Settings dialog box (all rows or selected rows). For user interface details, see ""Data Resource Settings Dialog Box" on page 493.</p> <p>Show mapped columns only. If selected, only data that is mapped to test parameters are displayed.</p> <p><headings>. Column headings for the grid that also display the parameter mappings.</p> <p><grid>. Rows of data that match the filter criteria.</p> <p>Available from: Test Configurations tab when an alternate data resource is specified in the Data Resource field.</p>

UI Element	Description
Data Resource Settings	<p>Opens the data resource settings dialog box, which enables you to set iteration ranges when running the test configuration. For user interface details, see "Data Resource Settings Dialog Box" on page 493.</p> <p>Available when: An alternate data resource is specified in the Data Resource field.</p>

Test Configuration Settings Tab

This tab displays the test configurations associated with the requirement coverage.

To access	<ol style="list-style-type: none">1. In the Test Plan module, select the Test Plan Tree view.2. Select a test and click the Req Coverage tab.3. Click Select Req button.4. In the Requirements Tree pane, click Add to Coverage to add requirement coverage to a specified test. Requirement coverage is added to the requirement coverage grid. The Test Configuration Settings tab is displayed on the bottom of the Req Coverage tab.
Important information	This tab is displayed only when coverage has been created.
Relevant tasks	<ul style="list-style-type: none">• "How to Create Coverage" on page 418• "How to Work with Test Configurations" on page 470
See also	<ul style="list-style-type: none">• "Req Coverage Tab" on page 422• "Test Configuration Overview" on page 468

User interface elements are described below:

UI Element	Description
	Add Configuration. Opens the Add Configuration Coverage dialog box, enabling you to add configurations to the list of test configurations covering the selected requirement.
	Remove Configuration. Removes the selected configurations from the list of test configurations covering the selected requirement.
	Refresh. Refreshes the test configuration grid.

UI Element	Description
Name	The name of the test configuration.
Description	The description of the test configuration.

Test Configurations Pane

This pane lists the test configurations of a selected test.

To access	<p>From the Requirements module:</p> <ol style="list-style-type: none">Select View > Requirement Details. Select a requirement and click the Test Coverage tab.Click the Select button. The Test Plan Tree and the Test Configurations panes are displayed. <p>From the Test Lab module:</p> <ol style="list-style-type: none">Select a test set and click the Execution Grid tab or the Execution Flow tab.Click the Select Tests button. The Test Plan Tree tab and the Test Configurations pane are displayed.
Relevant tasks	<ul style="list-style-type: none">"How to Create Coverage" on page 418"How to Work with Test Configurations" on page 470
See also	<ul style="list-style-type: none">"Test Coverage Page" on page 430"Test Configuration Overview" on page 468

User interface elements are described below:

UI Element	Description
	<p>Add Test Configuration to Coverage. Adds a test instance that uses the selected test configuration to the requirement's test coverage.</p> <p>Add Test Configuration to Test Set. Adds a test instance that uses the selected test configuration to the test set.</p> <p>Business Process Testing: When including a test configuration of a business process test, the Add Criterion Coverage dialog box opens. For more details, see "Add Criterion Coverage Dialog Box" on page 437.</p>
	Refresh All. Refreshes the test configurations grid.

UI Element	Description
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the test configurations grid and their order. For more details, see " Select Columns>Select Fields Dialog Box " on page 85.
	Set Filter/Sort. Filters and sorts the test configurations in the grid. For more details, see " Filter Dialog Box " on page 54.
Description	A description of the test configuration.
ID	A unique numeric ID for the test configuration, assigned automatically by ALM.
Test ID	A unique numeric ID for the test, assigned automatically by ALM.
Modified	The date and time of the last change to the test configuration.
Creation Date	The date on which the test was created. By default, the creation date is set to the current ALM server date.
Execution Status	The execution status of the last run of a test configuration. By default, the execution status can be one of the following: Blocked, Failed, N/A, No Run, Not Completed, Passed .
Name	The test configuration name.
Test Name	The test name.
Created By	The user name of the person who created the test configuration.

Test Configuration Status Tab

This tab displays the status of the test configurations associated with a covered requirement.

To access	<ol style="list-style-type: none"> In the Requirements module, select the Requirement Details view. Select a requirement and click the Test Coverage tab. Click the Select button. The Test Plan Tree and the Test Configurations panes display on the right-side of the Test Coverage tab. Click Add to Coverage to add test coverage. Test coverage is added to the test coverage grid. The Test Configuration Status tab is displayed on the bottom of the Test Coverage tab.
Relevant tasks	<ul style="list-style-type: none"> "How to Create Coverage" on page 418 "How to Work with Test Configurations" on page 470

See also

- "[Test Coverage Page](#)" on page 430
- "[Test Configuration Overview](#)" on page 468
- "[Requirement and Test Coverage Overview](#)" on page 418

User interface elements are described below:

UI Element	Description
	Remove Configuration. Removes selected configuration from the list of configurations used to cover the selected requirement.
	Refresh All. Refreshes the configuration status grid.
Name	The test configuration name.
Description	The description of the test configuration.
Status	The current test run status of the test configuration. By default, the status can be one of the following: Blocked , Failed , N/A , No Run , Not Completed , Passed . Business Process Testing: To view the criteria status of a test configuration, click its status value. The Criteria Status dialog box opens.

Generate Test Configuration Dialog Box

After upgrading from a previous version of ALM, this dialog box enables you to create a test configuration from an existing test instance.

To access

1. In the Test Lab module, select a test set and click the **Execution Grid** tab.
2. In the grid, right-click a test instance and choose **Generate Test Configuration**.

Important information	<p>ALM users generate test configurations once, after an upgrade from a previous version of Quality Center.</p> <p>Caution: Only use this option for migrating tests. Do not use this option for new tests or tests that have already been migrated.</p> <ul style="list-style-type: none"> • ALM: When generating a test configuration from a test instance, ALM performs the following actions: <ul style="list-style-type: none"> • Associates the test instance with the generated test configuration. • Associates the test instance's runs with the generated test configuration. • Associates the test instance's links (for example, tests, requirements) with the generated test configuration. • Sets the generated test configuration status to be the same as the status of the test instance. • Copies the parameter values of the test instance to the generated test configuration. • Business Process Testing: The Generate Test Configuration option is enabled only for business process test configuration instances that have been modified and no longer match the original configurations. (This option is not available for configurations that access dynamic data.)
Relevant tasks	<ul style="list-style-type: none"> • "How to Create Coverage" on page 418 • "How to Work with Test Configurations" on page 470
See also	<ul style="list-style-type: none"> • "Test Coverage Page" on page 430 • "Test Configuration Overview" on page 468

User interface elements are described below:

UI Element	Description
New Test Configuration Name	The name of the generated test configuration.

Map Parameters Dialog Box

This dialog box enables you to associate data from an external data resource to the parameters for the test configuration in the test.

To access	In the Test Plan module > Parameters tab for the test, click Map  Parameters .
------------------	---

Important information	You map test parameters to external data manually. Business Process Testing: You can also map parameters to external data automatically.
Relevant tasks	"How to Associate Dynamic Data" on page 472
See also	"Test Configuration Overview" on page 468

User interface elements are described below:

UI Element	Description
	<p>Business Process Testing: Automatically maps each non-mapped test parameter to a parameter (column heading with the same name) in the external data table resource.</p> <p>For automatic mapping, the column heading in the external data table resource must match the test parameter name.</p> <p>The mapping is not case-sensitive.</p> <p>The order of the parameters in the external data table resource does not have to match the order of the parameters in the test.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note: If a parameter has already been mapped, the automap operation does not reset the mapping.</p> </div>
Test Parameter Name	Name of the test parameter as defined in the test.
Resource Parameter Name	<p>Name of the column heading as defined in the external data table resource.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Tip: For business process tests, you can select the column headings from a drop-down list. To clear the resource parameter name, select the blank row in the drop-down list.</p> </div>
Mapping Status	<p>Business Process Testing: Status indicating if the test parameter is mapped to a parameter (column) in the external data table resource.</p> <ul style="list-style-type: none"> • Not Assigned. The test parameter is not associated with an external data table resource parameter. • Assigned. The test parameter is associated with an external data table resource parameter.

Data Resource Settings Dialog Box

This dialog box enables you to:

- Define a subset of the parameter values (an iteration range) to use for running the test when working with configurations that access dynamic data.
- Map test parameter names to alternate data resource parameter names when overriding the default data resource associated with the test.

To access	From the Test Configurations tab in the Test Plan module, select the dynamic configuration whose data you want to filter. Click the Data tab near the bottom of the window, and then click Data Resource Settings .
Important information	<ul style="list-style-type: none"> • You can filter the parameter values by specifying filter conditions and specific rows. Only values that match both the filter condition and the specified rows are processed. • When mapping test parameter names to alternate data resource parameter names, for each parameter listed in the Test Parameter Name column, click the cell in the Resource Parameter Name column and type the name of the corresponding resource parameter from the Microsoft Excel file.
Relevant tasks	"How to Associate Dynamic Data" on page 472
See also	"Test Configuration Overview" on page 468

User interface elements are described below:

UI Element	Description
	<p>Business Process Testing: Automatically maps each non-mapped test parameter to a parameter (column heading with the same name) in the external data table resource.</p> <p>For automatic mapping, the column heading in the external data table resource must match the test parameter name.</p> <p>The mapping is not case-sensitive.</p> <p>The order of the parameters in the external data table resource does not have to match the order of the parameters in the test.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note: If a parameter has already been mapped, the automap operation does not reset the mapping.</p> </div>

UI Element	Description
	<p>Business Process Testing:</p> <p>Filtered Resource Preview. Opens the Data Viewer for the test resource. This enables you to see the dynamic data in the external data resource that match filter criteria (meaning, the data that will be used when the test configuration runs).</p> <p>Filter. Name of the filter.</p> <p>Row Filter. All rows or selected rows.</p> <p>Show mapped columns only. If selected, only data that is mapped to test parameters are displayed.</p> <p><headings>. Column headings for the grid that also display the parameter mappings.</p> <p><grid>. Rows of data that match the filter criteria.</p>
Test Parameter Name	Name of the test parameter as defined in the test.
Resource Parameter Name	Name of the test parameter as defined in the data resource.
Mapping Status	<p>Business Process Testing: Status indicating if the test parameter is mapped to a parameter (column) in the external data table resource.</p> <ul style="list-style-type: none"> • Not Assigned. The test parameter is not associated with an external data table resource parameter. • Assigned. The test parameter is associated with an external data table resource parameter.
Filter Condition	<p>Condition for filtering out rows of data in the data resource. The test will not run on the filtered out rows of data.</p> <p>Specify a filter according to the following guidelines:</p> <ul style="list-style-type: none"> • Only strings can be specified. • Do not specify quotation marks or operators. • Only one value can be specified. • The filter is case-sensitive.

UI Element	Description
All Rows	To process all rows that meet the specified filter condition, if one exists, in the data resource file, select All Rows .
Rows	To indicate a subset of rows, select Rows and enter the row numbers, separated by commas. A range of rows can be specified with a hyphen (for example, 3-5 means rows 3, 4, and 5 are processed).

Chapter 27: System Tests

This chapter includes:

• System Tests Overview	498
• How to Create System Tests	498
• System Test User Interface	499

System Tests Overview

You can run a system test to retrieve a machine's system information, view a captured desktop image of a test run on a machine, or restart a machine. For example, you can run a system cleanup test that will restart the machine on which an automated test failed. You can also create a system test to retrieve information about a machine's resource usage before or after a test run.

You create a system test by adding a system test to a test subject folder, defining the test, and adding the test to a test set.

Note: To run a system test, you must install the following tool add-ins on the machine where the test is to be run:

- HPE ALM System Test Remote Agent Add-in
- HPE ALM Connectivity Add-in

For more information on HPE Application Lifecycle Management (ALM) add-ins, refer to the *HPE Application Lifecycle Management Installation and Upgrade Guide*.

When running a system test, the following steps can be created:

- **SysInfo.** Collection of system information
- **Snapshot.** Capture of desktop image
- **Reboot Start** and **Reboot Finish.** Machine restart

You can view details for each of these steps after your system test has finished running. You can also view the system information that has been retrieved—such as CPU, memory, and processes running on the machine—and an image of the machine executing the system test.

For task details, see "[How to Create System Tests](#)" below.

How to Create System Tests

This task describes how to create and run a system test that instructs ALM to provide system information for a machine, capture a desktop image, or restart a machine.

Note: This task is part of a higher-level task. For details, see "[How to Plan Tests in ALM](#)" on [page 382](#).

This task includes the following steps:

- "[Prerequisites](#)" on the next page
- "[Create a system test](#)" on the next page

- "Configure a system test" below
- "Run system tests" below

1. Prerequisites

Test subjects are defined in the test plan tree.

For task details on creating test subjects, see the step on creating test subjects in the "[How to Create Tests](#)" on page 386 task.

2. Create a system test

Create a system test in a subject folder.

- In the Test Plan Tree view, right-click a test subject, and select **New Test**.
- In the New Test dialog box, select **SYSTEM-TEST** in the **Type** field.
- Fill in other fields in the New Test dialog box. For user interface details, see "[New Test Dialog Box](#)" on page 412.

A new test with the system test icon  is added to the test plan tree under the subject folder you selected.

3. Configure a system test

Select the operations a system test should perform.

- Select a system test in the test plan tree.
- Click the **Test Script** tab to configure the system test settings. For user interface details, see "[Test Script Tab - System Tests](#)" on the next page.

4. Run system tests

Run system tests in the Test Lab module. For details on running tests, see "[How to Run Tests in ALM](#)" on page 548.

System Test User Interface

This section includes:

- [Test Script Tab - System Tests](#) 500

Test Script Tab - System Tests

This tab enables you to define settings for the system test.

To access	In the test plan tree, select a system test, and click the Test Script tab.
Relevant tasks	"How to Create System Tests" on page 498
See also	"System Tests Overview" on page 498

User interface elements are described below:

UI Element	Description
	Saves the system test settings.
Collect system information	Instructs ALM to collect information such as CPU, memory, and processes running on the machine when the test is run.
Capture desktop image	Instructs ALM to add an attachment displaying a snapshot of the machine's desktop when the test is run.
Restart the computer	Instructs ALM to restart the machine when the test is run. <div style="background-color: #e0f2e0; padding: 5px;">Note:<ul style="list-style-type: none">To use the Restart the computer option, you must enable auto login on your machine. Choose Start > Programs > HPE ALM System Test Agent > System Test Agent (configuration). The Auto Restart Settings dialog box opens. By default, User Name and Domain are read-only. Type your password.To select a different user name, reopen the Auto Restart Settings dialog box. User Name and Domain are no longer read-only. Modify the values.</div>

Chapter 28: Test Resources

This chapter includes:

• Test Resources Overview	502
• How to Use Test Resources	503
• Test Resources User Interface	504

Test Resources Overview

The Test Resources module enables you to manage resources used by your tests. You can organize your resources by defining a hierarchical **test resource tree** containing resource folders and resources. For each resource in the tree, you select and upload a set of resource files to the HPE Application Lifecycle Management (ALM) repository. These files can be used by one or more tests.

You can then define dependencies between resources and tests. For more details on dependencies, see "[Entity Dependencies Overview](#)" below.

For task details, see "[How to Use Test Resources](#)" on the next page.

Example: Michael, a QA tester, works with an external testing tool that stores its tests in ALM. Each test uses a shared configuration file that is common to a number of tests. He therefore wants a single point of maintenance for the configuration file, rather than saving separate copies of the file for each test.

Michael uses his testing tool to define the configuration file as a resource and define each test that uses the file as dependent on that resource. As only one copy of the resource exists in ALM, replacing the configuration file would replace it for all tests that depend on it.

After Michael defines dependencies, if he attempts to delete the resource, ALM will warn him that this may affect tests that depend on it. In addition, if he copies one of the tests that depend on the resource between projects, ALM will enable him to choose to copy the resource as well as the test.

Entity Dependencies Overview

Dependencies define relationships between entities such as tests, components, and test resources. When analyzing the impact of a change proposed to a specific entity, the dependencies indicate the other entities that the change might affect. For example, you may want to view dependencies before deleting or copying an entity.

Dependency relationships are displayed in the Dependencies tab. This tab is available from the Test Plan, Business Components, and Test Resources modules. You can view the entities used by a selected entity, and the entities that are using a selected entity.

You can define dependencies between entities using other HP testing tools, for example, Unified Functional Testing. For details, refer to the *HPE Unified Functional Testing User Guide*.

You can also define dependencies between entities by writing your own application. For more information, refer to the *ALM Open Test Architecture API Reference*.

How to Use Test Resources

This task describes how to manage test resources in the Test Resources module. Create a test resource tree, upload and download resources, and define dependencies between resources and other entities, such as tests.

Note: This task is part of a higher-level task. For details, see "[How to Plan Tests in ALM](#)" on [page 382](#).

This task includes the following steps:

- "Prerequisites" below
- "Create resources" below
- "Upload resource files" below
- "Download resource files" on the next page
- "Define dependencies" on the next page
- "View dependencies" on the next page

1. Prerequisites

For details on working with UFT resources, see the section on working with ALM in the *HPE Unified Functional Testing User Guide*.

2. Create resources

- a. **Open the Test Resources module.** On the ALM sidebar, under **Testing**, select **Test Resources**.
- b. **Create folders.** Right-click the **Resources** root folder and select **New Resource Folder**. To create a sub-folder, right-click a folder and select **New Resource Folder**.
- c. **Add resources to folders.** Right-click a folder or sub-folder and select **New Resource**. Fill in the fields in the New Resource dialog box. For user interface details, see "[New Resource/Resource Details Dialog Box](#)" on [page 516](#).

3. Upload resource files

You can upload files for each resource in the test resource tree to the ALM repository.

Select a resource in the test resource tree and click the **Resource Viewer** tab. For user interface details, see "[Resource Viewer Tab](#)" on [page 513](#).

Business Process Testing: When working with application areas, launch the testing tool in the **Application Area Viewer** tab to work with the resource. For user interface details, see "[Application Area Viewer Tab](#)" on [page 514](#).

4. Download resource files

To view and edit your test resources, you can download them to a local directory.

Select a resource in the test resource tree and click the **Resource Viewer** tab. For user interface details, see "[Resource Viewer Tab](#)" on page 513.

5. Define dependencies

You define dependencies between entities from your testing tool, for example, UFT. For more information, refer to the *HPE Unified Functional Testing User Guide*.

You can also define dependencies between entities by writing your own application. For more information, refer to the *HPE ALM Open Test Architecture API Reference*.

6. View dependencies

View the relationships between entities such as tests, components, and test resources. You can view the entities that depend on a selected entity, and the entities on which a selected entity depends.

Select a resource (Test Resources module), test (Test Plan module) or component (Business Components module) and click the **Dependencies** tab. For user interface details, see "[Dependencies Tab](#)" on page 514.

Test Resources User Interface

This section includes:

• Test Resources Module Window	505
• Test Resources Module Menus and Buttons	506
• Test Resources Module Icons	509
• Test Resources Module Fields	511
• Resource Viewer Tab	513
• Application Area Viewer Tab	514
• Dependencies Tab	514
• New Resource/Resource Details Dialog Box	516
• Paste Resources To Target Project Dialog Box	517

Test Resources Module Window

This window enables you to manage resources used by your tests.

To access	On the ALM sidebar, under Testing , select Test Resources .
Important information	<ul style="list-style-type: none"> UFT: For more details on working with UFT resources, see the section on working with ALM in the <i>HPE Unified Functional Testing User Guide</i>. Business Process Testing: When an ALM project with Business Process Testing is connected to UFT, a BPT Resources folder is created automatically in the tree. The BPT Resources folder contains all the UFT resources available for business components in the project. For details about Business Process Testing application areas, see the <i>HPE Business Process Testing User Guide</i>. Performance Center: For more details on working with Performance Center resources, see the <i>HPE ALM Performance Center Guide</i>.
Relevant tasks	"How to Use Test Resources" on page 503
See also	"Test Resources Overview" on page 502

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

UI Element	Description
<Test Resources module common UI elements>	<ul style="list-style-type: none"> Test Resource fields. For field definitions, see "Test Resources Module Fields" on page 511. Test Resource menus and buttons. For command and button descriptions, see "Test Resources Module Menus and Buttons" on the next page. Test Resource icons. For icon descriptions, see "Test Resources Module Icons" on page 509. ALM masthead, menus, and sidebar. For details, see "ALM Common Areas" on page 30.

UI Element	Description
<test resource tree>	<p>A graphical representation of your test resources.</p> <p>Note: When Sprinter is used for manual testing in your project, a Sprinter folder is added to the Resources folder. This folder contains a subfolder for each Sprinter user and is used to store user information.</p> <p>Caution: The Sprinter folder is managed by Sprinter only. You must not make any changes to the folder or subfolders. For more details, see the HPE Sprinter User Guide.</p>
Details tab	<p>Displays details of the currently selected resource folder or resource. For more details, see "Test Resources Module Fields" on page 511.</p>
Resource Viewer tab	<p>Enables you to upload and download test resource files from the ALM repository. For more information, see "Resource Viewer Tab" on page 513.</p> <p>Note: Some resources have different viewer tabs, such as the application area resource. For details on its viewer tab, see "Application Area Viewer Tab" on page 514.</p>
Dependencies tab	<p>Displays dependency relationships that exist between entities such as test resources, components, and tests. For more information, see "Dependencies Tab" on page 514.</p>
History tab	<p>Displays a history of baselines in which the test resource appears. You can also compare two baseline versions.</p> <p>Version Control: You can view all previous versions of a test resource.</p> <p>For more details, see "History Tab" on page 75.</p>
Monitors Configuration tab	<p>Performance Center: Enables you to configure Performance Center monitor profiles. For details, see the <i>HPE ALM Performance Center Guide</i>.</p>

Test Resources Module Menus and Buttons

This section describes the menus and buttons available in the Test Resources module.

To access	On the ALM sidebar, under Testing , select Test Resources .
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Important information	You can access the menu bar from the Test Resources module by pressing the shortcut key ALT.
Relevant tasks	"How to Use Test Resources" on page 503
See also	<ul style="list-style-type: none"> "Test Resources Module Window " on page 505 "Test Resources Module Icons" on page 509 "Test Resources Overview" on page 502

User interface elements are described below:

UI Element	Menu	Description
Collapse	View	Collapses all branches in the test resource tree.
Copy URL/Paste	Edit	Copies a selected resource and pastes its URL as a link. The resource itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the resource file or folder. If you are not already logged in, ALM first prompts for login details.
Copy/Paste	Edit	Copies selected resources or folders within the same project or across projects. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Note: <ul style="list-style-type: none"> When you copy a resource from one project to another, if the resource is dependent on other test resources, you can instruct ALM to copy using one of three methods. For more details, see "Paste Resources To Target Project Dialog Box" on page 517. To copy resources across projects, both projects must use the same ALM version and patch level. </div>

UI Element	Menu	Description
 Delete	Edit	<p>Deletes selected resources and folders from the test resource tree. If other entities depend on the resource, the Delete Resource dialog box opens. The related entities are displayed.</p> <p>Caution: If other entities depend on the resource, deleting the resource may impact these related entities. You can view related entities in the Dependencies tab. For more information, see "Dependencies Tab" on page 514.</p> <p>Version Control: Deleting a resource deletes all previous versions of the resource.</p>
 Filter	View	Enables you to filter the resources in the test resource tree. For more details, see " Filter Dialog Box " on page 54.
Expand All	View	Expands all branches in the test resource tree.
Cut/Paste	Edit	<p>Moves selected resources to a different location in the test resource tree.</p> <p>Note: The root folder cannot be moved.</p> <p>Tip: You can also move a resource to a new location in the test resource tree by dragging it.</p>
Find	Edit	Opens the Find dialog box, enabling you to search for a resource in the test resource tree. For more details, see " Find Dialog Box " on page 68.
New Resource 	Resources	Opens the New Resource dialog box, enabling you to add a resource to a selected folder. For more details, see " New Resource/Resource Details Dialog Box " on page 516.
New Resource Folder 	Resources	Opens the New Resource Folder dialog box, enabling you to add a folder under a selected folder.

UI Element	Menu	Description
Send by E-mail 	Resources	Opens the Send E-mail dialog box, enabling you to send a resource by email to recipients selected from a list. For more details, see " Send E-mail Dialog Box " on page 76.
Refresh All 	View	Refreshes the test resource tree so that it displays the most up-to-date information.
Rename	Edit	Renames a selected resource or folder.

Test Resources Module Icons

This section describes the icons available in the Test Resources module.

To access	On the ALM sidebar, under Testing , select Test Resources .
Important information	<p>Example: ALM Editions: Not all resource types are available with each edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to Use Test Resources" on page 503
See also	<ul style="list-style-type: none"> "Test Resources Module Window" on page 505 "Test Resources Module Menus and Buttons" on page 506 "Test Resources Overview" on page 502

User interface elements are described below:

UI Element	Description
	<p>Analysis Template. Contains templates for performance test analysis reports.</p> <p>For details about analysis templates, see the <i>HPE ALM Performance Center Guide</i>.</p>

UI Element	Description
	<p>Application area. Provides all settings and resources required to create the content of:</p> <ul style="list-style-type: none"> • UFT GUI tests • Business process tests or flows that contain business components with automated GUI facets <p>For details about application areas, see the <i>HPE Business Process Testing User Guide</i>.</p>
	<p>Data Table. Contains data to be used for driving run steps for:</p> <ul style="list-style-type: none"> • Test configurations • UFT GUI tests and API tests <p>For details about data tables for UFT, see the <i>HPE Unified Functional Testing User Guide</i>.</p> <p>For task details about using data tables for test configurations, see "How to Work with Test Configurations" on page 470.</p>
	<p>Environment Variables. Contains variables and corresponding values that can be accessed from:</p> <ul style="list-style-type: none"> • UFT GUI tests • Business process tests or flows that contain business components with automated GUI facets <p>For details about environment variables, see the <i>HPE Unified Functional Testing User Guide</i>.</p>
	<p>Function Library. Contains Visual Basic script functions, subroutines, and modules for use with:</p> <ul style="list-style-type: none"> • UFT GUI tests • Business process tests or flows that contain business components with automated GUI facets <p>For details about function libraries, see the <i>HPE Unified Functional Testing User Guide</i>.</p>
	<p>Recovery Scenario. Contains scenarios which include definitions of unexpected events and the operations necessary to recover UFT run sessions. For details about recovery scenarios, see the <i>HPE Unified Functional Testing User Guide</i>.</p>

UI Element	Description
	<p>API Test Shared Resources. Contains imported services for use in ALM with:</p> <ul style="list-style-type: none"> • API tests, which are created in HPE Service Test and UFT • Business process tests or flows that contain business components that are automated for API testing <p>For details about sharing services, see the information about activity sharing in the <i>HPE Service Test User Guide</i> or the information about API testing in the <i>HPE Unified Functional Testing User Guide</i>.</p>
	<p>Shared Object Repository. Contains information that enables UFT to identify the objects in your application. UFT enables you to maintain the reusability of your tests by storing all the information regarding your test objects in shared object repositories. For details about shared object repositories, see the <i>HPE Unified Functional Testing User Guide</i>.</p>
	<p>Test Resource. A generic test resource type for use by all test types.</p>
	<p>Monitor Over Firewall. Contains Performance Center monitor settings for servers that are located over a firewall. For details about monitor over firewall, see the <i>HP Performance Center Guide</i>.</p>
	<p>Monitor Profile. Contains Performance Center monitor settings that can be saved as a monitor profile to be used by any load test in your project. For details about monitor profiles, see the <i>HP Performance Center Guide</i>.</p>

Test Resources Module Fields

This section describes the Test Resources module fields.

To access	On the ALM sidebar, under Testing , select Test Resources .
Important information	<ul style="list-style-type: none"> • You can add user-defined fields and change the label of any of the fields in the Test Resources module. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. • You can use the Script Editor to restrict and dynamically change the fields and values in the Test Resources module. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.
Relevant tasks	"How to Use Test Resources" on page 503

See also	<ul style="list-style-type: none"> • "Test Resources Module Window" on page 505 • "Test Resources Overview" on page 502
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The fields are described below:

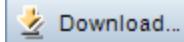
UI Element (A-Z)	Description
Comments	Displays comments about the resource. To add a new comment, click the Add Comment button. A new section is added to the Comments box, displaying your user name and the database's current date.
Created By	The user who created the resource.
Creation Date	The date on which the resource was created. Default value: The current database server date.
Description	Describes the folder or resource. Click in the text box to display a toolbar for formatting and spell checking the text.
File Name	The file name.
Folder ID	A unique numeric ID for the folder that is assigned by ALM. This field cannot be modified.
Modified	The date the resource was modified.
Name	The folder or resource name.
Resource ID	A unique numeric ID for the file that is assigned by ALM. This field cannot be modified.
Type	Indicates the type of resource. For details, see "Test Resources Module Icons" on page 509.
Version number	Version Control: The version number of the resource. If version control is enabled for your project, this field is displayed.

Resource Viewer Tab

This tab enables you to upload files for each resource in the test resource tree to the ALM repository. You can also download files to a local directory.

To access	In the Test Resources module, select a resource in the test resource tree and click the Resource Viewer tab.
Important information	<ul style="list-style-type: none"> To view the resource content, you must install the relevant add-in or extension. For more information on the Unified Functional Testing add-in, refer to the <i>HPE Unified Functional Testing User Guide</i>. Some resources have different viewer tabs, such as the application area resource. For details on its viewer tab, see "Application Area Viewer Tab" on the next page.
Relevant tasks	"How to Use Test Resources" on page 503
See also	"Test Resources Overview" on page 502

User interface elements are described below:

UI Element	Description
 Upload File...	<p>Upload File. Uploads the file or folder to the ALM repository. Includes the following options:</p> <ul style="list-style-type: none"> Upload File. Opens the Upload File dialog box, enabling you to select a file. Upload Folder. Opens the Browse for Folder dialog box, enabling you to select a folder. <p>To replace an uploaded file, upload again.</p>
 Download...	Download. Opens the Browse for Folder dialog box, enabling you to download a selected folder.
	Refresh. Refreshes the tab.
File name	Resource file name.

Application Area Viewer Tab

This tab enables you to launch the testing tool for the application area resource.

To access	Business Process Testing: In the Test Resources module, select an application area resource in the test resource tree and click the Application Area Viewer tab.
Important information	<ul style="list-style-type: none"> To view the resource content, you must install the relevant testing tool, add-in, or extension. For more information on the UFT add-in, refer to the <i>HPE Unified Functional Testing User Guide</i>. Launching an ALM application area resource in QuickTest Professional version 10.00 and 11.00 is not supported. Instead, open the application area directly in QuickTest Professional.
Relevant tasks	"How to Use Test Resources" on page 503
See also	"Test Resources Overview" on page 502

User interface elements are described below:

UI Element	Description
Launch <testing tool>	<p>Launches the relevant testing tool.</p> <p>Version Control: The Launch button is disabled when attempting to open an application area from an older version or baseline. Instead, open the application area directly in QuickTest Professional.</p>

Dependencies Tab

This tab displays the relationships between entities such as tests, components, and test resources. You can view the entities that depend on a selected entity (**Used By** grid), and the entities that a selected entity depends on (**Using** grid).

To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> Test Resources module: Select a resource in the test resource tree and click the Dependencies tab. Test Plan module: Select a test in the test plan tree and click the Dependencies tab. Business Components module: Select a component in the component tree and click the Dependencies tab.
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Relevant tasks	"How to Use Test Resources" on page 503
See also	"Entity Dependencies Overview" on page 502

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

UI Element	Description
	Go To. Enables you to navigate to a selected entity.
	Show Broken Relation. Displays details of the broken relation for the selected relation in the Using grid. Select an entity in the Using grid that is marked as a broken relation and click the Show Broken Relation button.
	Refresh. Refreshes the tab.
	Show/Hide arrow. Displays or hides the Used By or Using grid.
	Broken Relation. The related entity no longer exists. Click the icon for details.
<Used by grid>	Displays entities that depend on a selected entity.
<Using grid>	Displays the related entities that a selected entity depends on.
ID	A unique numeric ID for the associated entity. The ID is assigned automatically by ALM.
Name	The name of the associated entity.
Type	The type of the associated entity.
Description	The description of the associated entity.
Owner name	The name of entity that owns the selected entity.
Owner type	The type of entity that owns the selected entity.

New Resource/Resource Details Dialog Box

This dialog box enables you to add and view resources.

To access	Use one of the following: <ul style="list-style-type: none"> In the Test Resources module, right-click a resource folder and select New Resource. The New Resource dialog box opens. In the Test Resources module, click the History tab. Click Baselines or Versions and Baselines. Click the View button. The Resource Details dialog box opens.
Important information	Version Control: The new resource is automatically checked out. For more information, see " Check Out Dialog Box " on page 120.
Relevant tasks	"How to Use Test Resources" on page 503
See also	"Test Resources Overview" on page 502

User interface elements are described below:

UI Element	Description
	Rest All Fields. Clears the content in the dialog box. Available from: New Resource dialog box
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
	Send by Email. Sends an email with the test resource details. For more details, see " Send E-mail Dialog Box " on page 76. Available from: Resource Details dialog box
Name	The name of the resource.

UI Element	Description
Type	Indicates the type of resource. For details, see " Test Resources Module Icons on page 509 ".
Details	Details of the currently selected test resource. For details on the available fields, see " Test Resources Module Fields on page 511 ".
Resource Viewer	Enables you to upload files for the currently selected test resource to the ALM repository. You can also download files to a local directory. For more details, see " Resource Viewer Tab on page 513 ".
Dependencies	Displays the relationships between the currently selected test resource and other entities. For more details, see " Dependencies Tab on page 514 ".

Paste Resources To Target Project Dialog Box

This dialog box enables you to choose how ALM copies test resources across projects.

To access	<ol style="list-style-type: none">In the Testing > Test Resources tree, select the resource or folder that you want to copy. To copy more than one item, use the CTRL key.Select Edit > Copy. Alternatively, right-click and choose Copy.Log in to the project to which you want to paste the resource or folders and navigate to the Testing > Test Resources tree.Select the folder to which you want to copy the resources or folders.Select Edit > Paste. Alternatively, right-click and choose Paste.
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User interface elements are described below:

UI Element	Description
Copy resources and link to existing related entities	ALM copies the test resources and pastes them into the target project. The copied test resources are linked to existing entities with the same name and path. If a related entity does not exist in the target project, ALM copies it to the target project.
Copy resources and related entities	ALM copies the test resources along with the related entities, and pastes them into the target project. If an entity already exists in the target project, the copied related entity is renamed to resolve the duplicate name.

UI Element	Description
Copy resources without copying related entities	ALM copies the test resources without copying the related entities, and pastes them into the target project. The copied items are not linked to any related entities.

Chapter 29: VAPI-XP Tests

This chapter includes:

• VAPI-XP Tests Overview	520
• How to Create VAPI-XP Test Scripts	520
• How to Edit VAPI-XP Test Scripts	528
• How to Use AUT Environments with VAPI-XP	532
• How to Use the VAPI-XP API	533
• How to Run VAPI-XP Tests in Debug Mode	537
• How to Run VAPI-XP Tests in Test Mode	537
• How to Debug VAPI-XP Tests Scripts Test Mode	538
• VAPI-XP User Interface	540

VAPI-XP Tests Overview

The VAPI-XP testing tool enables you to create new testing scripts using Microsoft VBScript, Microsoft JavaScript (JScript version), PerlScript, and PythonScript, and integrate these scripts into your application management process. Using VAPI-XP test scripts, you can test COM/DCOM servers, SOAP-based Web services, Java APIs (such as Java classes and EJBs), and console applications. You can also use VAPI-XP to create a LoadRunner virtual user.

In addition, VAPI-XP is fully integrated with HPE Application Lifecycle Management (ALM), enabling you to design your VAPI-XP test script to call any ALM test or test set, and execute it as part of your own script. This allows you to build a more advanced test set execution flow, in which you can filter tests in a test set during execution, based on the status or type of each test.

VAPI-XP is also fully integrated with the ALM Open Test Architecture API. All open test architecture API classes and methods can be referenced from the VAPI-XP user interface so that you can easily include them in your test script.

Note: The VAPI-XP testing tool is installed on a testing host by performing HPE ALM Client Registration. Instructions for performing client registration can be found in the HPE Application Lifecycle Management Installation and Upgrade Guide.

For task details, see:

- ["How to Create VAPI-XP Test Scripts" below](#)
- ["How to Edit VAPI-XP Test Scripts " on page 528](#)
- ["How to Use AUT Environments with VAPI-XP" on page 532](#)
- ["How to Use the VAPI-XP API" on page 533](#)
- ["How to Run VAPI-XP Tests in Debug Mode " on page 537](#)
- ["How to Run VAPI-XP Tests in Test Mode " on page 537](#)
- ["How to Debug VAPI-XP Tests Scripts Test Mode " on page 538](#)

How to Create VAPI-XP Test Scripts

You create a VAPI-XP test script from the test plan tree in the Test Plan module.

To learn more about VAPI-XP tests, see ["VAPI-XP Tests Overview" above](#).

Note: You can also convert a manual test to a VAPI-XP test. In the **Design Steps** tab, click the **Generate Script** button  and select **VAPI-XP-TEST**. ALM creates a VAPI-XP test script that includes code for the steps that you defined. It also includes code for called

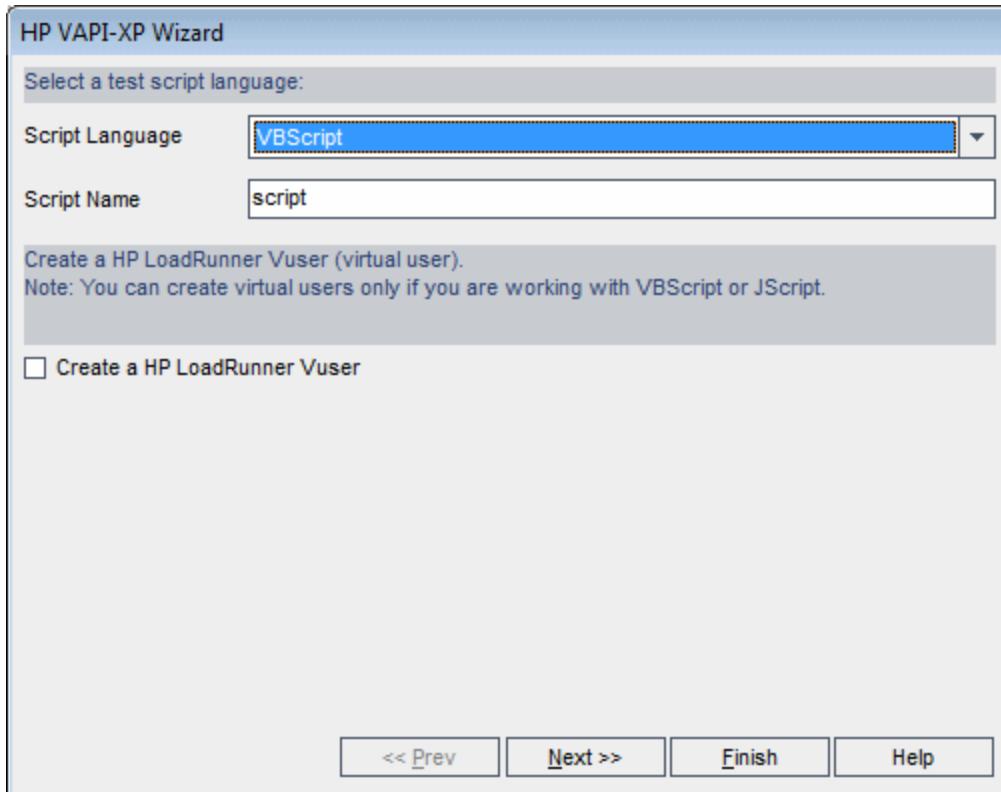
tests that were part of the original manual test. For more information on manual tests, see "Test Design" on page 451.

To create a VAPI-XP test script:

1. Choose a subject folder in the test plan tree.
2. Click the **New Test** button  or choose **Tests > New Test**. The New Test dialog box opens.
3. In the **Test Type** box, select **VAPI-XP-TEST**.
4. In the **Test Name** box, type a name for the test. Note that a test name cannot include the following characters: \ / : " ? < > | * % `
5. Add test details in the Details tab. Click **OK**.

Note: If required test fields were defined in the Project Customization window, the Required Test Fields dialog box opens. Select values for the required fields, and click **OK**.

The HP VAPI-XP Wizard opens.



6. In the **Script Language** box, select a script language.

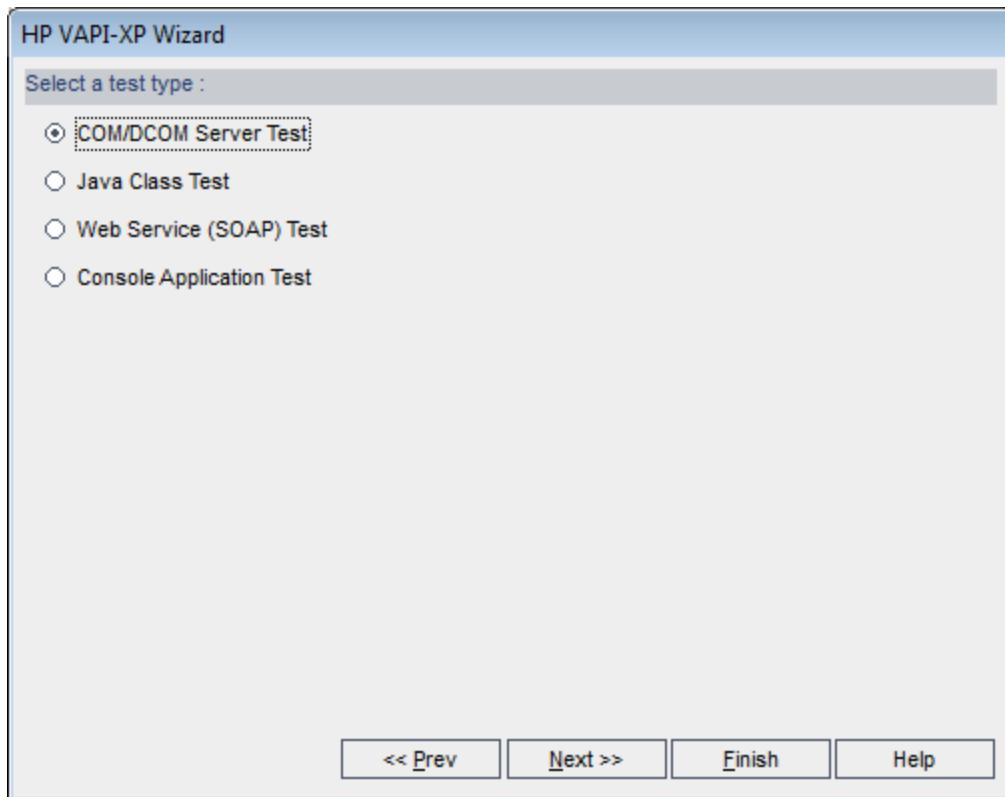
Note:

- To create a VAPI-XP test script using ActiveState's ActivePython or ActivePerl scripts, you must install the script language on your machine. From the **Help** menu in the Test Script tab, select **ActivePython Home Page** or **ActivePerl Home Page**, and follow the appropriate installation instructions.
- Microsoft's VBScript and JScript are usually installed with Internet Explorer. If they are not installed on your machine, select **VBScript Home Page** or **JScript Home Page** from the **Help** menu in the Test Script tab, and follow the appropriate installation instructions.

7. In the **Script Name** box, type a name for the VAPI-XP test script.
8. If you selected VBScript or JavaScript as your test scripting language, you can select **Create HP LoadRunner Vuser** to create a LoadRunner virtual user script that can be run in the LoadRunner Controller.

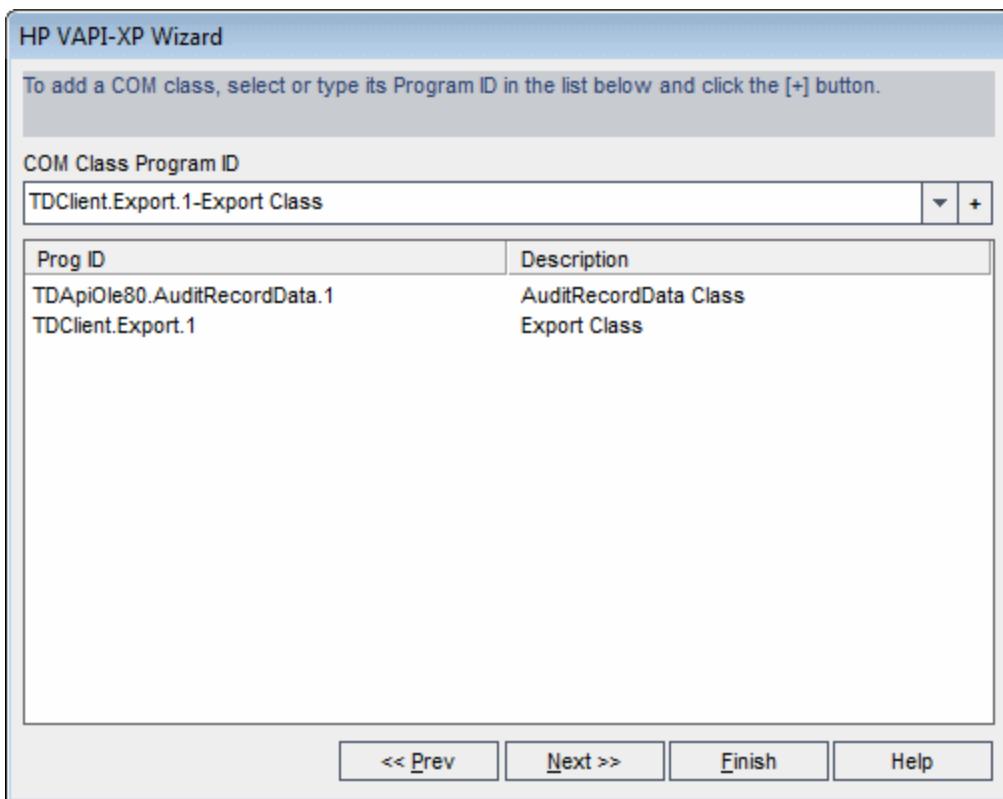
Note: To run this virtual user in the Controller, you must install the latest version of the HPE ALM Connectivity Add-in on your LoadRunner client machine. This add-in is available from the HPE Application Lifecycle Management Tools add-ins page. For more information, refer to the *HPE Application Lifecycle Management Installation and Upgrade Guide*.

9. Click **Next** to continue creating the test script using the HP VAPI-XP Wizard. The following dialog box opens.

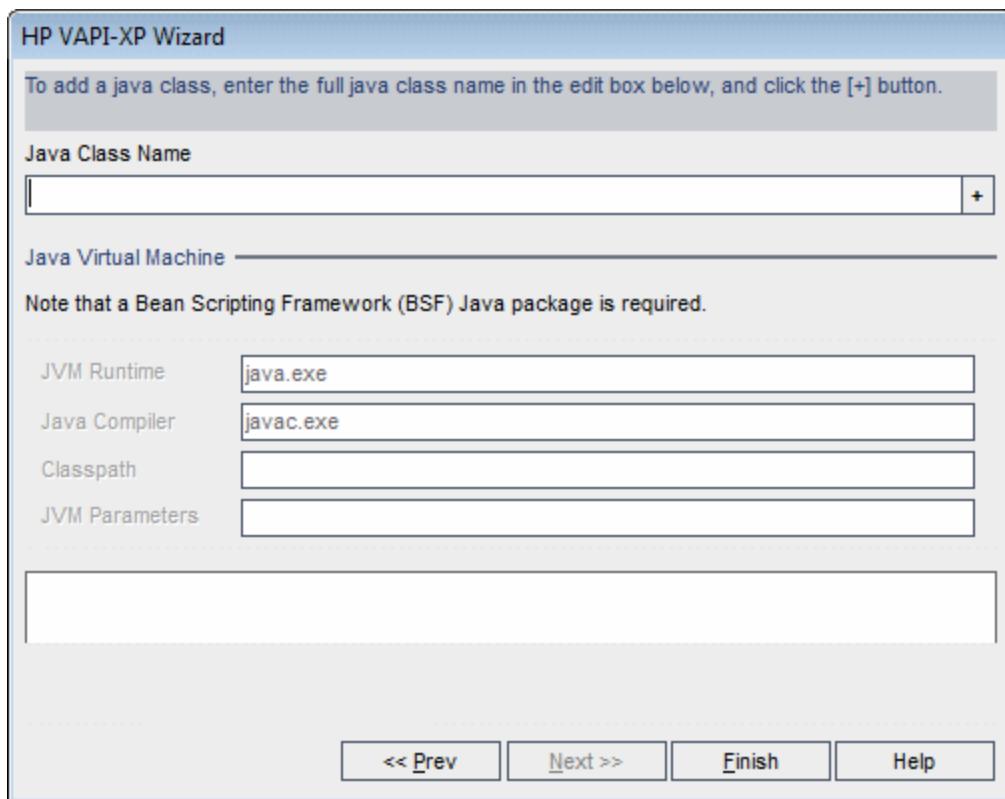


Note: In each dialog box, you can click **Finish** to close the Wizard and continue creating the test script in the Test Script tab.

10. Select the type of test you want to create.
11. Click **Next** to continue creating the test script using the HP VAPI-XP Wizard.
 - If you selected **COM/DCOM Server Test**, choose the Program IDs of the COM/DCOM objects in your machine's registry that you want to test, and click the **+** button. Each selected COM/DCOM object and its description is displayed in the box below.



- If you selected **Java Class Test**, type the full name of the Java class that you want to test in the **Java Class Name** box, and click the **+** button. The Java class name you typed appears in the text box below.



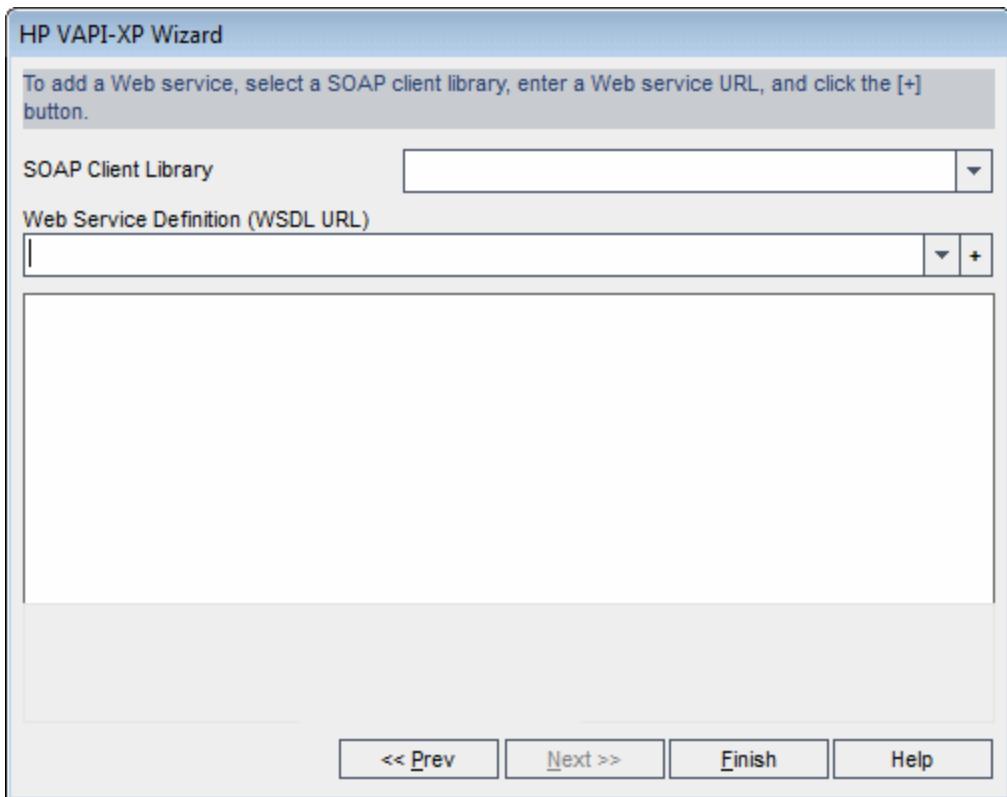
Note: You can only use a Java class that has a public constructor that does not take arguments.

Under **Java Virtual Machine**, specify the following:

- **JVM Runtime.** The Java virtual machine runtime executable file (usually **java.exe**).
- **Java Compiler.** The executable file that recompiles the bytecode at the execution platform (usually **javac.exe**).
- **Classpath.** A list of additional (non-standard) Java libraries, separated by semi-colons (;), required to run the specified Java application. Note that if you do not specify the Java classpath, ALM uses the environment variable **CLASSPATH**.
- **JVM Parameters.** The parameters for the Java virtual machine run-time executable file.

When working with Java virtual machines, add the location of the BSF DLLs to the system path, as follows: In the Control Panel, choose **System > System Properties**, and then click the **Advanced** tab. Click the **Environment Variables** button, and in the **System Variables** area, edit the **Path** parameter by adding the path of the following DLLs: **msvcp60.dll**, **bsfactivescriptengine.dll**, and **bsfactivescriptengine_g.dll**. Click **OK**.

- If you selected **Web Service (SOAP) Test**, choose the SOAP client library from the **SOAP Client Library** list, and type or select the URL you want to test in the **Web Service Definition** box. Click the **+** button. The URL you typed appears in the text box below.



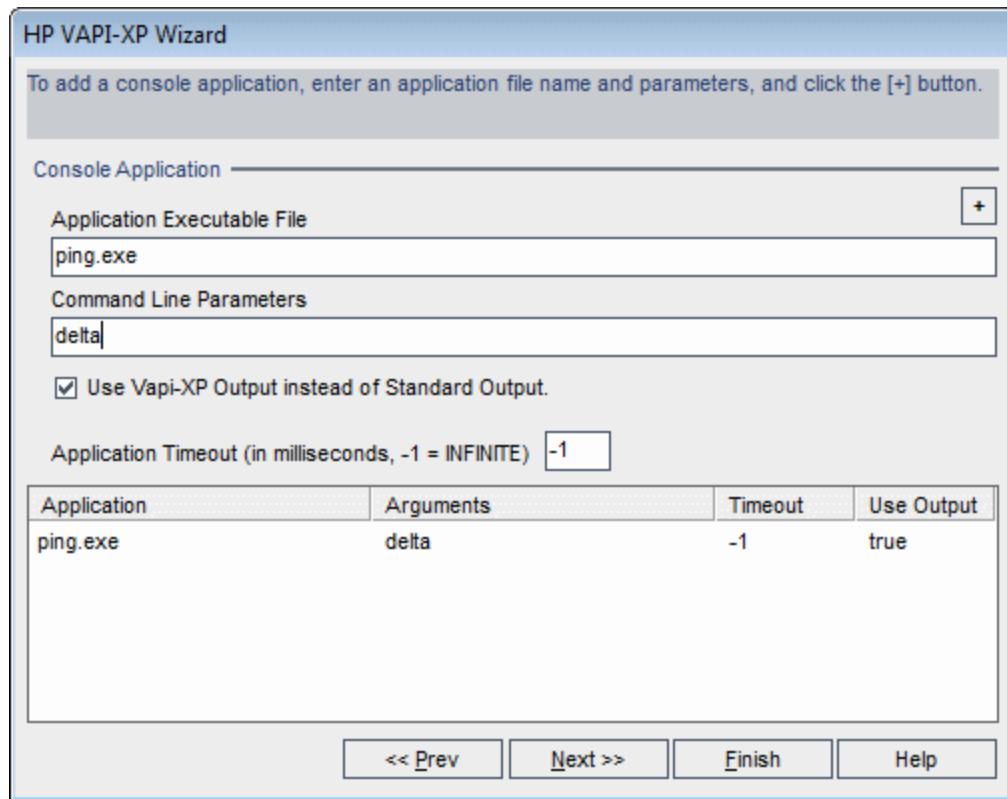
Note: Two SOAP client libraries are supported: Microsoft SOAP SDK and PocketSOAP. Note that even if you choose to work with PocketSOAP, you must install Microsoft SOAP SDK to parse Web services. If Microsoft SOAP SDK is not already installed on your machine, run the **SoapToolkit30.exe** file located in the **Redist** directory on your ALM installation DVD.

- If you selected **Console Application Test**, type the name of the application file you want to test in the **Application Executable File** box, and its parameters in the **Command Line Parameters** box.

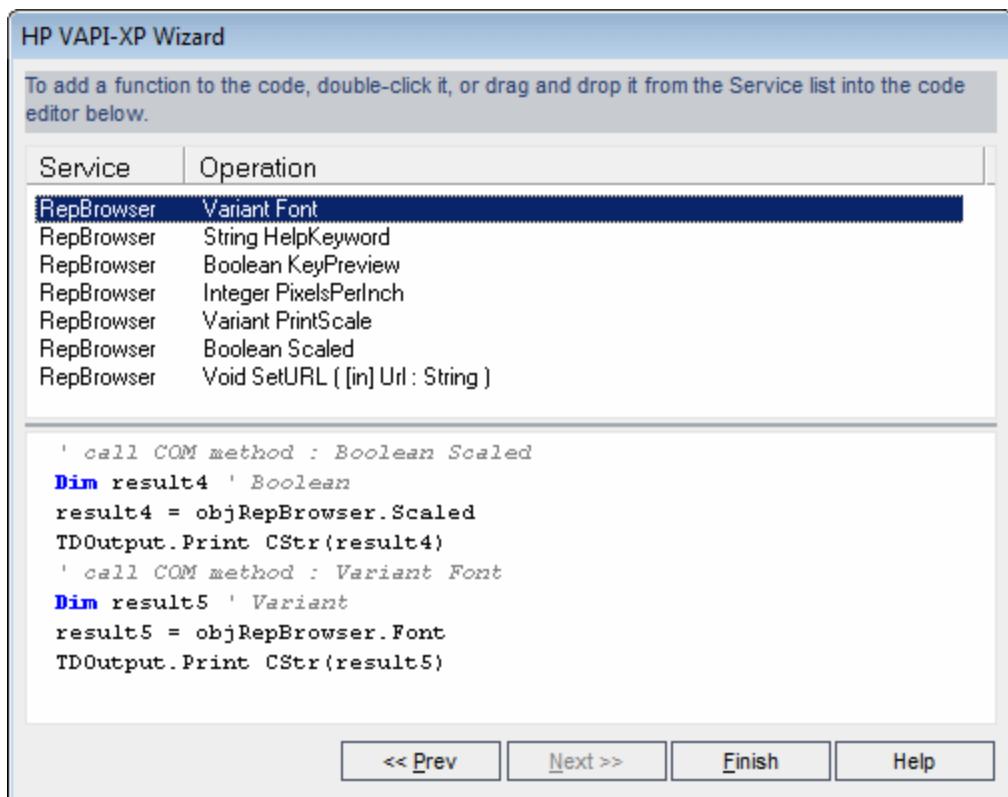
Clear the **Use VAPI-XP Output instead of Standard Output** box if you do not want to replace the standard output with the VAPI-XP output window.

In the **Application Timeout** box, type the time, in milliseconds, for ALM to wait for the application to finish running. Note that if the timeout is set to **-1**, ALM waits an infinite amount of time for the application to finish running.

Click the **+** button. The data you entered appears in the text box below.



12. Click **Next** to continue creating the test script using the HP VAPI-XP Wizard. The following dialog box opens.



13. In the **Service** list, select the functions you want to add to your test script. Double-click each function, or drag and drop it, to add it to your script code. The function is added to the box below the Service list.
14. If required, enter additional parameters or add extra code to the script in the lower pane.
15. Click **Finish**. The new test appears in the test plan tree under the subject folder you selected.

Note: You can choose to add details and attachments to the VAPI-XP test you created, or define requirements coverage. For information, see "[Test Plan Specification](#)" on [page 385](#).

How to Edit VAPI-XP Test Scripts

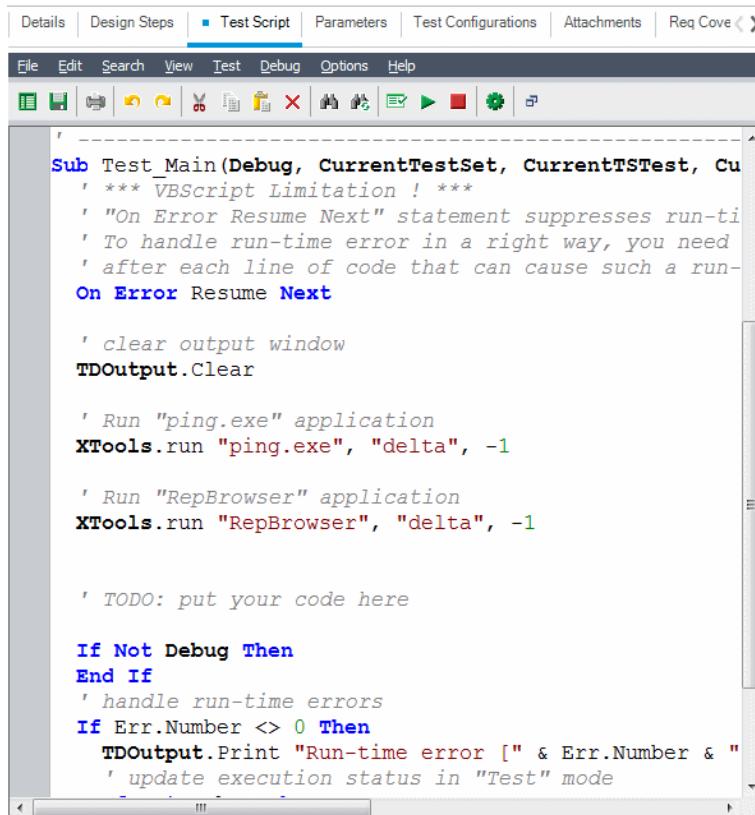
After you have created a VAPI-XP test script using the HP VAPI-XP Wizard, you can edit it in the Test Script tab.

To learn more about VAPI-XP tests, see "[VAPI-XP Tests Overview](#)" on [page 520](#).

Tip: You can display the Test Script tab in a separate window by selecting **View > Window Screen**, or clicking the **Window Screen** button .

To edit a VAPI-XP test script:

1. In the test plan tree, select a VAPI-XP test, and click the **Test Script** tab. The test script is displayed.



The screenshot shows the 'Test Script' tab selected in a software interface. The window title is 'Test Script'. The menu bar includes File, Edit, Search, View, Test, Debug, Options, Help. Below the menu is a toolbar with various icons. The main area contains a code editor with the following VBScript script:

```

Sub Test_Main(Debug, CurrentTestSet, CurrentTSTest, Cu
  ' *** VBScript Limitation ! ***
  ' "On Error Resume Next" statement suppresses run-ti
  ' To handle run-time error in a right way, you need
  ' after each line of code that can cause such a run-
  On Error Resume Next

  ' clear output window
  TDOutput.Clear

  ' Run "ping.exe" application
  XTools.run "ping.exe", "delta", -1

  ' Run "RepBrowser" application
  XTools.run "RepBrowser", "delta", -1

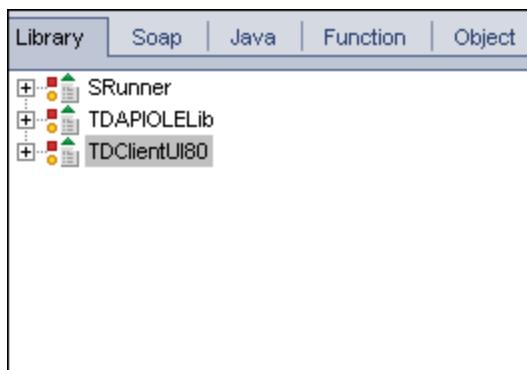
  ' TODO: put your code here

  If Not Debug Then
  End If
  ' handle run-time errors
  If Err.Number <> 0 Then
    TDOutput.Print "Run-time error [" & Err.Number & "
      ' update execution status in "Test" mode
  End If

```

Note: To view or edit the properties of the test script you created, choose **Test > Properties**.

2. To view a list of object definitions, methods, and properties that you can add to your script, select one of the following options:
 - **Test > References > COM Library References.** Opens the References dialog box in which you can choose the COM object definitions, methods, and properties you want to view.
 - **Test > References > SOAP Web Service References.** Opens the Add Web Service Reference dialog box in which you can type the Web service object definition or method you want to view.
 - **Test > References > Java Class References.** Opens the Add Java Class Reference dialog box in which you can type the Java class object definition or method you want to view.
3. Select **View > Browsers**, or click the **Show/Hide Browsers** button . The following tabs are displayed.



- **Library tab.** Displays a list of VAPI-XP (SRunner), ALM (TDAPIOLELib), and COM/DCOM object definitions, methods, and properties that you can add to your script. For an explanation of VAPI-XP object definitions, methods, and properties, see "[How to Use the VAPI-XP API](#)" on page 533. For an explanation of ALM object definitions, methods, and properties, refer to the *HPE ALM Open Test Architecture API Reference*.
- **Soap tab.** Displays a list of Web service object definitions and methods that you can add to your script.
- **Java tab.** Displays a list of Java class object definitions and methods that you can add to your script.
- **Function tab.** Displays a list of functions contained in your script.
- **Object tab.** Displays a list of objects with defined names that you can add to your script.

Note: For a description of each object definition, method, or property, select **View > Output**, and click the **Help** tab.

4. To add an object definition, method, or property to the current function in your script, place the cursor in the appropriate place in your code, and double-click the object definition, method, or property in the Library, Soap, or Java tabs.

```
' TODO: put your code here

' TDConnection of "TDApiOle80.TDConnection.1"
' TDConnection Class
Set objTDConnection = CreateObject("TDApiOle80.TDConnection.1")

TDOutput.Print "Hello"

' handle run-time errors
If Err.Number <> 0 Then
    TDOutput.Print "Run-time error [" & Err.Number & "] : " & Err.Descrip
```

5. To add an object with a defined name, select the object definition, method, or property in the Library, Soap, or Java tabs, and choose **Test > Add Object**. In the Add Object dialog box, type the name you want to assign to the object and click **OK**. The object is added to the Object tab.

Library	Soap	Java	Function	Object
Name	ProgID			
TDConnection	TDApiOle80.TDConnection			
TDHelper	SRunner.TDHelper			
TDInput	SRunner.TDInput			
TDOOutput	SRunner.TDOOutput			
ThisTest	TDApiOle80.Test			
XTools	SRunner.XTools			

To add the object to your script, double-click the object, or right-click it and select **Insert into Script**.

6. To check the syntax of your code, choose **Test > Check Syntax**, or click the **Syntax Check** button . Select **View > Output** to view the verification results in the **Output** tab.

Additional Editing Functions

You can perform the following editing functions in the Test Script tab:

- To undo a previous action, click the **Undo** button . To restore an action that was undone, click the **Redo** button .
- To remove a section of code from one part of your script, and place it in another part of the script, select the section and click the **Cut** and **Paste**   buttons.
- To copy a section of code from one part of your script, and place it in another part of the script, select the section and click the **Copy** and **Paste**   buttons.
- To delete a section of code, select it and click the **Delete** button .
- To locate specific text within your script, click the **Find in Script** button . In the Find Text dialog box, type the text for which you want to search. Select the options, direction, scope, and origin for your search, and click **OK**.
To find another occurrence of the text within the script, choose **Search > Find Next**.
- To locate specific text within your script and replace it with different text, click the **Replace**  button. In the Find Text dialog box, type the text you want to search for in the **Text to find** box. Type the text with which you want to replace this text in the **Replace with** box. Select the options, direction, scope, and origin for your search, and click **OK**. To replace all instances of

the text in the script, click the **Replace All** button.

- To locate a specific line number within your script, choose **Search > Go to Line Number**. In the Go to Line Number dialog box, type the line number you want to find, and click **OK**.
- To change the editor options, such as the margins, fonts, and screen/text colors, click the **Editor** button . Set the properties you want in the Editor, Display, and Colors tabs, and click **OK**.

After you have finished editing your script, click the **Save** button  to save the changes you made.

How to Use AUT Environments with VAPI-XP

ALM Editions: AUT Environments and Functional test sets are available only for ALM Edition. For more information about ALM editions and their functionality, see ["ALM Editions" on page 125](#). To find out what edition of ALM you are using, ask your ALM site administrator.

VAPI-XP tests can be run using server-side execution when they are part of a Functional test set. When using server-side execution, you can take advantage of AUT Environments. AUT Environments allows users to make test execution more dynamic by parameterizing the environment data used for testing. Instead of defining and running several different VAPI-XP tests that use the same logic but need different environment parameters, you can simply program your VAPI-XP test to use an already defined AUT environment configuration that ALM inserts into your test at run-time.

For more information about Functional test sets, see ["Test Set Specification Overview" on page 588](#).

For information about setting up AUT environment configurations and environment parameters, see ["How to Work with AUT Environments" on page 361](#).

To use your AUT environment configuration in a VAPI-XP script, you use the following functions:

Post

Invoke this function before calling functions that access AUT parameters.

`currentRun.post()`

getRunTimeParameterByName

Returns the environment parameter value based on parameter name.

`currentRun.getRunTimeParameterByName(Name)`

Name. Environment parameter name.

getRunTimeParameterByGuid

Returns the environment parameter value based on parameter Guid.

currentRun.getRunTimeParameterByGuid(Guid)

Guid. Environment parameter Guid.

isSSE

Returns TRUE if the test is being run as a server-side execution test in a Functional test set.

currentRun.isSSE

ReservationId

Returns the timeslot ID of the test if the test is being run as a server-side execution test in a Functional test set. Otherwise, returns NULL.

currentRun.ReservationID

How to Use the VAPI-XP API

The VAPI-XP tool contains a built-in library of VAPI-XP object definitions that you can reference as you are creating your test script.

To learn more about VAPI-XP tests, see "[VAPI-XP Tests Overview](#)" on page 520.

Using the TDHelper Object

The TDHelper object supplies the following functions that you can use to perform ALM-related tasks.

RunTestSet

Executes the selected test set and returns the accumulated test set execution status.

RunTestSet([Name = "default"], [Filter = ""], [Locally = FALSE], [Host = ""], [HostGroup = ""])

Name. Test set name. Optional. Default = "default"

Filter. Test filter. Defines tests to run. If empty, instructs ALM to run all the tests in a specified test set. Optional. Default = ""

Locally. If set to TRUE, instructs ALM to run test set locally. Optional. Default = FALSE

Host. Host on which test set will be run. Optional. Default = ""

HostGroup. Host group in which test set will be run. Optional. Default = ""

RunTest

Executes the selected test and returns the test execution status.

RunTest(Name, Instance, TestSet, [Locally = FALSE], [Host = ""], [HostGroup = ""])

Name. Test name.

Instance. Test instance.

TestSet. Test set name.

Locally. If set to TRUE, instructs ALM to run test set locally. Optional. Default = FALSE

Host. Host on which test set will be run. Optional. Default = ""

HostGroup. Host group in which test set will be run. Optional. Default = ""

AddDefect

Adds a new defect to the current test, if the test is being run in debug mode. If the test is being run in test mode, a new defect is added to the current run of the test instance in the current test set. Returns a created defect object.

AddDefect([Fields], [stepKey])

Fields. Two-dimensional array—the first dimension is for the field name, and the second for the field value. Optional.

stepKey. step ID for step related to new defect. Optional.

AddDefectUI

Adds a new defect to the current test (in debug mode) or the current run (in test mode), using the ALM New Defect dialog box.

AddDefectUI([stepKey])

stepKey. step ID for step related to new defect. Optional.

AddStepToRun

Adds a new step to the current run. Returns a created step object.

AddStepToRun(Name, [Desc], [Expected], [Actual], [Status])

Name. Step name.

Desc. Step description. Optional.

Expected. Expected step result. Optional.

Actual. Actual step result. Optional.

Status. Step status. Optional.

DownLoadAttachment

Downloads the attachment associated with a test object. Returns the local path to which the download was performed.

DownLoadAttachment(Name, item)

Name. The attachment name.

item. Reference to the object with the attachment.

UpLoadAttachment

Uploads an attachment and associates it with a test object.

UpLoadAttachment(path, item)

path. The local path (fully specified file name) of the item to upload.

item. Reference to the object to which to associate the attachment.

Using the TDInput Object

The TDInput object supplies the following function that you can use to obtain an input value from an end user.

GetInput

Displays the Input dialog box, enabling you to obtain an input value from an end user.

GetInput([Caption],[Name])

Caption. Dialog box caption. Optional.

Name. Name of the input value. Optional.

Using the TDOutput Object

The TDOutput object supplies the following functions that you can use to control the VAPI-XP Output tab.

Clear Method

Clears the Output tab.

Clear

Print Method

Prints the text message to a new line in the Output tab.

Print(Msg)

HookDebug Property

Sets or removes the hook for the OutputDebugString tab API function.

HookDebug

Text Property

Gets or sets the Output tab text.

String Text

Using the XTools Object

The XTools object supplies the following functions that you can use to perform general tasks.

run

Runs command line with passed attributes.

run(Command, [Args = ""], [Timeout = -1], [UseOutput = TRUE])

Command. Application executable file.

Args. Application arguments. Optional. Default = ""

Timeout. Timeout in milliseconds. If this is -1, ALM waits an infinite amount of time for the application to finish running.

UseOutput. If TRUE, ALM replaces the standard output with the VAPI-XP output window.

WrapArray

Creates an array of variants from an array of objects. For example, if a called object returns as a method result an array of strings, none of the supported script engines is able to read the array. Calling the WrapArray function and passing the returned array as a function parameter creates an array of variants that can be understood by the scripting engine.

WrapArray (array)

array. Array to wrap.

Sleep

Suspends script execution for a specified amount of time.

Sleep(interval)

interval. Time (in milliseconds) for script execution suspension

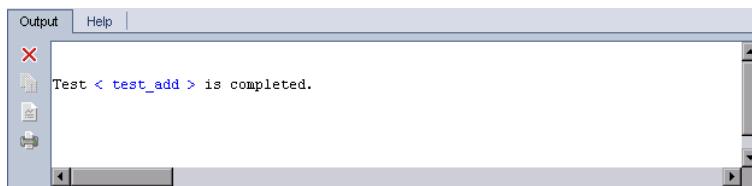
How to Run VAPI-XP Tests in Debug Mode

After you have created and edited your VAPI-XP test script, you can run it in debug mode or test mode. Running a VAPI-XP test in debug mode enables you to execute the test without including it in a test set and without creating test run data in the ALM project. It is generally recommended that you use the debug mode while you are developing your test, and the test mode once you have completed creating your test.

To learn more about VAPI-XP tests, see "[VAPI-XP Tests Overview](#)" on page 520.

To run a VAPI-XP test in debug mode:

1. In the Test Plan module, select a VAPI-XP test from the test plan tree, and click the **Test Script** tab.
2. Select **Test > Execute (Debug Mode)**, or click the **Execute Script** button  . ALM begins executing the test script you selected.
3. Select **View > Output** to view the output generated by the test script.



- To clear the Output tab, click the **Clear Output** button .
 - To copy the output text to the clipboard, select it and click the **Copy Selected Text to Clipboard** button .
 - To view the test script output in a Web browser, click the **Open Output Text in Web Browser** button .
 - To print the test script output, click the **Print Output** button .
4. To stop executing the VAPI-XP test before it finishes running, select **Test > Stop**, or click the **Stop** button .

How to Run VAPI-XP Tests in Test Mode

You can run your VAPI-XP test in test mode once you have added the test to a test set in the Test Lab module.

When you run a VAPI-XP test in test mode, test run data is created in the ALM project. You can run your VAPI-XP test in test mode from either the Test Plan or Test Lab module.

Note: To run VAPI-XP tests remotely, you must install the HPE ALM Client Registration Add-in and the HPE ALM Connectivity Add-in on the host machine on which the tests are executed. For more information on add-ins, refer to the *HPE Application Lifecycle Management Installation and Upgrade Guide*.

To learn more about VAPI-XP tests, see "[VAPI-XP Tests Overview](#)" on page 520.

To run a VAPI-XP test in test mode from the Test Plan module:

1. Select a VAPI-XP test from the test plan tree, and click the **Test Script** tab.
2. Select **Test > Execute (Test Mode)**. The Select Test Set dialog box opens.
3. In the **Test Set** box, select the test set containing the current VAPI-XP test.
4. In the **Instance** box, select the test instance that you want to run.
5. In the **Run Name** box, type the name you want to assign to the test run.
6. Click **OK**. ALM begins executing the test you selected.
7. To view the output generated by the test script, select **View > Output**. For an explanation of the Output tab, see "[How to Run VAPI-XP Tests in Debug Mode](#)" on the previous page.
8. To stop executing the VAPI-XP test before it finishes running, select **Test > Stop**, or click the  Stop button .

To run a VAPI-XP test in test mode from the Test Lab module:

1. From the **Test Sets** tab, select the test set containing the VAPI-XP test you want to run.
2. In the **Execution Grid**, select the test you want to run, and click the **Run** button. The Automatic Runner dialog box opens, displaying the selected test.
3. In the **Run on Host** column, select a host machine on which to run the VAPI-XP test, or choose **Run All Tests Locally** to run the test on your local machine.
4. Click the **Run** button. The VAPI-XP Test Script window opens as ALM begins executing the selected VAPI-XP test. When ALM finishes executing the test, the Automatic Runner dialog box displays the status of the test run.

How to Debug VAPI-XP Tests Scripts Test Mode

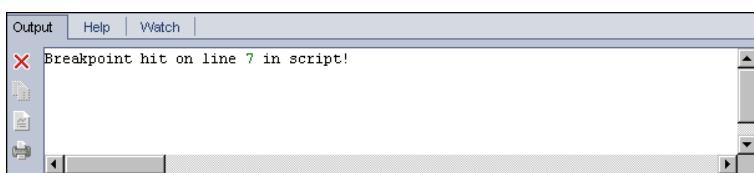
If your test run was not successfully completed, you can use VAPI-XP's Integrated Debugger to assist you in debugging your VAPI-XP test script.

Note: You cannot use the Integrated Debugger to debug PerlScript or PythonScript test scripts.

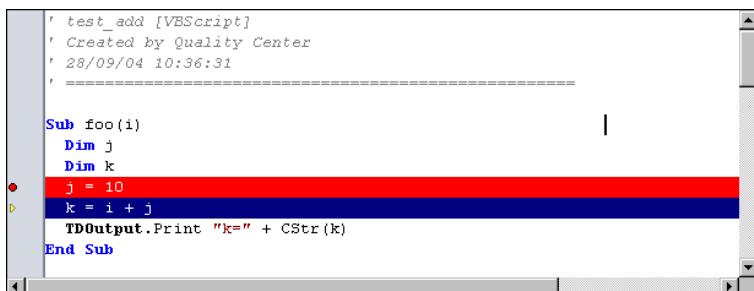
To learn more about VAPI-XP tests, see "[VAPI-XP Tests Overview](#)" on page 520.

To debug a VAPI-XP test script:

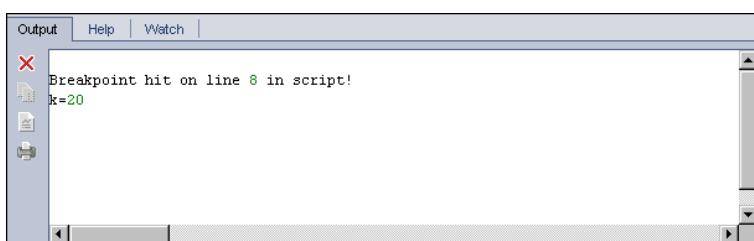
1. In the **Test Script** tab of the Test Plan module, select **Debug > Integrated Debugger**. Additional buttons controlling the debugging process are displayed on the toolbar.
2. To set a breakpoint in a script, select the line in the script where you want to set the breakpoint, and choose **Debug > Toggle Breakpoint** or click the **Toggle Breakpoint** button  . Alternatively, click the gray margin next to the line in the script. The line you selected is highlighted in red.
3. Click the **Execute Script** button  . ALM begins executing the script, stopping at the defined breakpoint. The Output tab displays the following message.



4. To instruct ALM to enter the script after the breakpoint, choose **Debug > step Into** or click the **step Into** button  . The line in the script that follows the breakpoint is highlighted in blue.



5. To instruct ALM to step over a line in the script, click the **step Over** button  or choose **Debug > step Over**.
6. To instruct ALM to execute the script, choose **Debug > step Out** or click the **step Out** button  . The output is displayed in the **Output** tab.



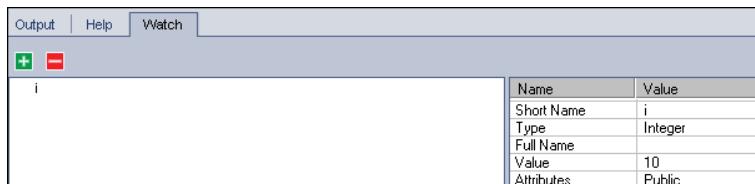
7. To view or edit the value of each variable in the script, choose **Debug > Variables** or click the **Show Variables** button  . The Variables dialog box opens, displaying the variables

available in the current script. Select a variable to view its properties.

To change a variable's value, type the new value you want to assign to it in the **Value** box and click **Update**. Click **OK** to save your changes and close the Variables dialog box.

8. To view information about a specific variable while debugging, choose **Debug > Watch** or click the **Show Watch Window** button  to display the Watch tab.

To add a variable to the Watch tab, click **+**, type a variable name in the **Prompt** box, and click **OK**. The variable and its values are displayed in the Watch tab.



Name	Value
Short Name	i
Type	Integer
Full Name	
Value	10
Attributes	Public

9. To instruct ALM to resume executing the script, choose **Debug > Resume Execution** or click the **Resume Execution** button .
10. Choose **Debug > Stop Debugging**, or click the **Stop Debugging** button  to stop the Integrated Debugger from debugging your script.

VAPI-XP User Interface

This section includes:

- [HP VAPI-XP Wizard](#) 541
- [Test Script Tab](#) 541

HP VAPI-XP Wizard

This wizard enables you to create VAPI-XP test scripts. For more details, see "[How to Create VAPI-XP Test Scripts](#)" on page 520.

Test Script Tab

This tab enables you to view and edit your VAPI-XP test scripts. For more details, see:

- "[How to Edit VAPI-XP Test Scripts](#)" on page 528
- "[How to Use the VAPI-XP API](#)" on page 533

Part 7: Test Lab

Chapter 30: Introducing Test Execution

This chapter includes:

• Test Execution Overview	546
• How to Run Tests in ALM	548
• How to Work with Draft Runs	550
• Deploying and Testing your Application in ALM	550
• The Test Lab Module User Interface	553

Test Execution Overview

You begin test execution by creating test sets and choosing tests to include in each set. A **test set** contains a subset of the tests in an HPE Application Lifecycle Management (ALM) project designed to achieve specific test goals. As your application changes, you can run the manual and automated tests in your project to locate defects and assess quality.

You can run ALM tests in different ways.

- "Run Tests Using Default Test Sets" on the next page
- "Run Tests Using Functional Test Sets" below

Run Tests Using Functional Test Sets

ALM Editions: Functional test sets are available only for users with ALM Edition. For more information about ALM editions and their functionality, see "["ALM Editions" on page 125](#)". To find out what edition of ALM you are using, ask your ALM site administrator.

Tests in Functional test sets are run using server-side execution. This means you do not have to be around to initiate and control the tests. Functional test sets are run via timeslots, so you can schedule a test set to be run immediately, or you can schedule it to be run at a future time. Once you schedule the test, ALM ensures that the necessary resources are reserved for the test set. The test set is launched without user intervention and run in sequence with the input you provide in advance.

- You can schedule the execution of Functional tests or Functional test sets in the Timeslots module. If there are currently available hosts for your test, you can also use the Execution Grid to arrange for tests to run immediately. For details, see "[How to Run Tests in ALM" on page 548](#).
- Functional tests run on testing hosts that are configured in Lab Resources in ALM or Lab Management. To run tests in a Functional test set, you must have testing hosts available to your project. For more information about testing hosts, see "[Testing Hosts Overview" on page 358](#).
- When you schedule a test, an appropriate testing host is reserved for your test and that host cannot be reserved for another test unless another appropriate host can be found for your test.
- ALM manages host allocation dynamically. If the testing host reserved for your test becomes unavailable before your test can be run, ALM is able to automatically reshuffle the remaining testing hosts and, if possible, reallocate another suitable testing host for your test. For more details, see "[Host Allocation" on page 703](#).

Functional test sets are a key component in ALM's Continuous Delivery solution. They facilitate an automated, end-to-end deployment and testing framework that makes application

development more efficient, reliable, and quick. For more information about how Functional test sets can be used as part of this process, see "[Deploying and Testing your Application in ALM](#)" on page 550.

Run Tests Using Default Test Sets

Tests in Default test sets are run using client-side execution. You control the test directly from your local computer. You can run Default test sets manually or automatically in ALM.

To run tests in Default test sets manually:

- Use **HPE Sprinter**. Provides enhanced functionality to assist you in the manual testing process.

ALM Editions: Sprinter functionality is not available with Performance Center Edition. For more information about ALM editions and their functionality, see "[ALM Editions](#)" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.

- Use **Manual Runner**. If you don't use Sprinter, you can run tests manually using Manual Runner.

When you run a test manually, you follow the test steps and perform operations on the application under test. You pass or fail each step, depending on whether the actual application results match the expected output.

To run tests in Default test sets automatically:

- You can run tests automatically from your local machine using **Automatic Runner**.
- When you run an automated test automatically, ALM opens the selected testing tool automatically, runs the test on your local machine or on remote hosts, and exports the results to ALM.
- You can also run manual tests automatically. When you run a manual test automatically and specify a remote host, ALM notifies a designated tester by email to run the test on the specified host.

For more details about running tests in ALM, see "[How to Run Tests in ALM](#)" on the next page.

Following test runs, you review and analyze test results. Your goal is to identify failed steps and determine whether a defect has been detected in your application, or if the expected results of your test need to be updated. You can validate test results regularly by viewing run data and by generating reports and graphs. For details, see "[Test Runs Overview](#)" on page 752.

You can also set a test as a draft run to instruct ALM to ignore the run results. For details, see "[Draft Runs](#)" on the next page.

For task details, see "[How to Run Tests in ALM](#)" on the next page.

Draft Runs

Setting a test as a draft run instructs ALM to ignore the run results. When you set a test instance as a draft run, the outcome of the run does not impact the execution status of the test, the status of the test instance, or the coverage status. ALM also ignores draft runs when calculating the remaining number of test instances to run, and when displaying results in coverage, progress, and live analysis graphs.

You can designate a test run as a draft before you perform the test. You can also mark a test run as a draft by modifying the **Draft Run** field at any time after the run. When you change the **Draft Run** value for a run, ALM recalculates all relevant statistics, and updates relevant status fields. Graphs display updated results.

Draft runs enable you to try tests while they are still in development, or after they have been modified. For example, you may want to test that each step description is formulated correctly, or try only a part of a large test script.

Setting a test run as a draft requires the appropriate user permissions. For more information, refer to the *HPE Application Lifecycle Management Administrator Guide*.

For task details, see "[How to Work with Draft Runs](#)" on page 550.

How to Run Tests in ALM

This task describes how to run tests in your project using the ALM Test Lab module.

Note: This task is part of a higher-level task. For details, see "[Introducing ALM](#)" on page 22.

This task includes the following steps:

- "[Create test sets](#)" below
- "[Run tests in a Functional test set](#)" on the next page
- "[Run tests in a Default test set](#)" on the next page
- "[Run Performance tests](#)" on the next page
- "[View and analyze test results](#)" on page 550
- "[Link to a defect](#)" on page 550

1. **Create test sets**

Create and define test sets in the Test Lab module. After you have created test sets, you can assign test set folders to cycles defined in the releases tree in the Releases module.

For task details, see "[How to Create Test Sets](#)" on page 590.

To learn more about the different types of test sets, see "[Test Set Specification Overview](#)" on page 588.

2. Run tests in a Functional test set

ALM Editions: Functional test sets are available only for ALM Edition. For more information about ALM editions and their functionality, see "["ALM Editions" on page 125](#)". To find out what edition of ALM you are using, ask your ALM site administrator.

The tests in Functional test sets run using server-side execution. You can reserve resources for running functional test sets to ensure that they are available for the duration of the run. To run tests in a Functional test set, do one of the following:

- To schedule a test set run for the future, reserve a timeslot in the **Timeslots** module. For more details, see "[How to Reserve Testing Timeslots in ALM" on page 709](#)".
- To arrange for a test to run in a timeslot immediately, use the **Execution Grid** tab in the **Test Lab** module. For more details, see "[How to Run Tests Automatically" on page 658](#)".

3. Run tests in a Default test set

The tests in Default test sets run using client-side execution. You control and run the tests from your machine by using the **Test Lab** module. To run tests in a Default test set, do one of the following:

- Run manual and automated tests manually, executing the test steps that you defined during test planning. For task details, see "[How to Run Tests Manually" on page 649](#)".
- Arrange for manual and automated tests in a test set to run automatically. For task details, see "[How to Run Tests Automatically" on page 658](#)".

4. Run Performance tests

Performance Center: You can run performance tests to create load on an application and test its performance. For details, refer to the *HPE ALM Performance Center Guide*.

You can reserve the resources required for running performance tests to ensure that they are available for the duration of the test run.

- To schedule a performance test run for the future, reserve a timeslot in the **Timeslots** module. For more details, see "[How to Reserve Testing Timeslots in ALM" on page 709](#)".
- To arrange for a test to run in an a timeslot immediately, use the **Execution Grid** tab in the **Test Lab** module. For more details, see "[How to Run Tests Automatically" on page 658](#)".

ALM Editions: Performance test execution is available only for ALM Edition and Performance Center Edition. For more information about ALM editions and their functionality, see "["ALM Editions" on page 125](#)". To find out what edition of ALM you are using, ask your ALM site administrator.

5. View and analyze test results

After you run tests, review results to determine if the actual results match the expected test results. For task details on viewing test results, see "[How to View Test Runs](#)" on page 753.

You can also analyze run data by creating graphs and reports. Do one of the following:

- **View dynamic graphs of test set folders.** In the test sets tree, select a test folder, and click the **Live Analysis** tab. For task details on generating live analysis graphs, see "[How to Generate Live Analysis Graphs](#)" on page 940.
- **View test set data in a graph.** On the Test Lab module menu, select **Analysis > Graphs**. For task details on generating graphs, see "[How to Generate a Graph](#)" on page 830.
- **Create a report of test set data.** On the Test Lab module menu, select **Analysis > Project Report**. For task details on creating reports, see "[How to Create Project Reports](#)" on page 878.

For details on additional analysis tools in ALM, see "[How to Analyze Data in ALM](#)" on page 810.

6. Link to a defect

If a defect has been detected, you can create a new defect and link it to the test set, test instance, test run, or run step, or you can link it to an already-existing defect.

For user interface details, see "[Linked Defects/Entities Page](#)" on page 801.

How to Work with Draft Runs

This task describes how to set test runs as draft runs. You can set a test run as a draft in the following ways:

- **Before a test run.** You can mark a test that you are running manually as a draft run before performing the test. In the Manual Runner: Run Details page, set the value of the **Draft Run** field to **Y**. For user interface details, see "[Manual Runner Wizard](#)" on page 652.
- **After a test run.** You can mark any test run as a draft by modifying the **Draft Run** field for the run. For details on accessing run details, see "[How to View Test Runs](#)" on page 753.

Deploying and Testing your Application in ALM

ALM Editions: Many of the tasks below include components available only for users with ALM Edition. For more information about ALM editions and their functionality, see "[ALM Editions](#)" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.

ALM enables you to completely automate the complicated process of taking a build of an application through deployment and testing. You can use ALM, in conjunction with the Lab

Management features, to schedule deployments and test sets to be run nightly or hourly. This deployment and testing is run without user intervention and can be scheduled to run immediately following the completion of your build. You can also arrange for your build to be deployed on a specific environment that you define, or even integrate with HP Continuous Delivery Automation (CDA) to be deployed dynamically on a private or public cloud.

ALM and Lab Management provide the testing components which allow your application team to achieve a state of Continuous Delivery, where software can be developed, packaged, deployed, and tested in an automated fashion, resulting in the ability to provide software reliably, efficiently, and with great speed.

This section describes the different components ALM provides to facilitate end-to-end deployment and testing.

- [Create Automated Tests](#)
- [Create Test Sets](#)
- [Create Build Verification Suites](#)
- [Define AUT Environment Configuration](#)
- [Schedule Timeslots for your Deployments and Tests](#)

1. Create Automated Tests

ALM provides several different types of automated tests for testing the functionality of your application under test (AUT).

The two main categories of test types are Functional and Performance:

- Functional tests are used to check that the application works as it should.
- Performance tests are used to check that the application can withstand load and demand.

You create tests in the **Testing > Test Plan** module. For task information, see "[How to Create Tests](#)" on page 386.

For more information about the test types ALM provides and supports, see "[Test Types](#)" on page 390.

To make sure you create a comprehensive set of tests, first see "[Test Plan Overview](#)" on page 382.

2. Create Test Sets

ALM provides a container for your tests, called a Test Set. ALM provides test set types for each type of automated test: Functional test sets and Performance test sets.

You can group your tests into test sets in different ways. You can group them in terms of features and aspects in the application. Alternatively, you can create groups of tests that check positive flow, and create groups of tests that check negative flow.

You create test sets in the **Testing > Test Lab** module. For task information, see "[How to Create Test Sets](#)" on page 590.

For more information about the test set types, see "[Test Set Specification Overview](#)" on [page 588](#).

3. Create Build Verification Suites

ALM provides a way to bundle several test sets together, regardless of their type, to create a Build Verification Suite. The build verification suite is used to check the overall status of your build. A build verification suite may contain both Functional test sets and a single Performance test set.

You can create multiple build verification suites to check the application at varying levels of comprehensiveness. One large build verification suite can be created and scheduled to run every night, and another build verification suite containing only the core test sets can be created and scheduled to run every hour, or manually every time a build is produced.

You create build verification suites in the **Testing > Build Verification** module. For task information, see "[How to Work with Build Verification Suites in ALM](#)" on [page 680](#).

For more information about build verification suites, see "[Build Verification Overview](#)" on [page 680](#).

4. Define AUT Environment Configuration

ALM provides a way to define a set of environment parameters that you can bundle with your build configuration suites and test sets, called an AUT Environment Configuration.

Instead of defining and running several different tests that use the same logic but need different environment parameters, you can simply bundle a set of environment parameters into an AUT environment configuration. When you run your build verification configuration suites or functional test sets, you can provide your AUT environment configuration, and ALM uses those parameters to run your tests.

If your application environment is dynamic and changing, you may want to use ALM and Lab Management to link your AUT environment configurations to CDA. Linking the environment parameters in your AUT environment configuration to CDA allows you to dynamically provision and deploy your application environment using a private or public cloud.

You create AUT environment configurations in the **Lab Resources > AUT Environments** module. For task information, see "[How to Work with AUT Environments](#)" on [page 361](#).

For more information about AUT Environments, see "[AUT Environments Overview](#)" on [page 360](#).

For more information about CDA servers, see the *HPE ALM Lab Management Guide*.

For task information about managing CDA servers in Lab Management, see the *HPE ALM Lab Management Guide*. For more information about linking AUT environment configurations and parameters to CDA in ALM, see "[Link AUT Environments to CDA](#)" on [page 360](#) and "[How to Work with AUT Environments](#)" on [page 361](#).

5. Schedule Timeslots for your Deployments and Tests

ALM allows you to schedule deployment and testing of your application for the future using

Timeslots. ALM ensures that the testing resources required for your timeslot are reserved ahead of time.

Instead of having to manually run a set of tests after producing a build, ALM allows you to automatically allocate resources and initiate provisioning, deployment, and testing of an application in an environment. You can use timeslots to reserve resources for a build verification suite or a test set run, and if you integrate CDA into your build verification suites, you can even arrange for scheduled dynamic provisioning and deployment.

There are a few ways to schedule a run. The simplest is to schedule a test and allocate resources in advance by creating a timeslot in the **Testing > Timeslots** module. Alternatively, if the testing resources are available, you can arrange for a run to be executed immediately.

For details about timeslot reservation, see "[How to Reserve Testing Timeslots in ALM](#)" on page 709.

For task information about executing tests and test sets, see "[How to Run Tests Automatically](#)" on page 658.

For task information about executing build verification suites, see "[How to Work with Build Verification Suites in ALM](#)" on page 680.

For more information about timeslots, see "[Reserving Timeslots Overview](#)" on page 698.

The Test Lab Module User Interface

This section includes:

• Test Lab Module Window	554
• Test Lab Module Menus and Buttons	556
• Test Lab Module Icons	575
• Test Lab Module Fields	576

Test Lab Module Window

This window enables you to create test sets and perform test runs.

To access	On the ALM sidebar, under Testing , select Test Lab .
Important information	The Test Lab module enables you to create and modify test sets in the test sets tree. ALM Editions: Functional and Performance test sets are available only for ALM Edition.
Relevant tasks	<ul style="list-style-type: none">• "How to Create Test Sets" on page 590• "How to Run Tests in ALM" on page 548
See also	"Test Execution Overview" on page 546

Test Lab Module Common Elements

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

UI Element	Description
<Test Lab module common UI elements>	<ul style="list-style-type: none">• Test Lab fields. For field definitions, see "Test Lab Module Fields" on page 576.• Test Lab menus and buttons. For command and button descriptions, see "Test Lab Module Menus and Buttons" on page 556.• Test Lab icons. For icon descriptions, see "Test Lab Module Icons" on page 575.• ALM masthead, menus, and sidebar. For details, see "ALM Common Areas" on page 30.

Test Sets Tab

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

UI Element	Description
<Filter status bar>	Describes the filter currently applied to the tree. Located directly above the test sets tree.
<Test sets tree>	<p>Located on the left side of the window, organizes and displays your test sets hierarchically. A test set contains a subset of the tests in your project.</p> <div data-bbox="491 530 1339 614" style="background-color: #e0f2e0; padding: 5px;"> <p>Note: You cannot move test sets within a folder. When you refresh the tree view, test sets in a folder are alphabetized.</p> </div>
Select Test Pane	<p>Displays the Test Plan Tree tab and the Requirements Tree tab, enabling you to select tests to add to the selected test set. For details, see "Select Tests Pane" on page 613.</p> <p>Available from: Execution Grid, Execution Flow. To display, click the Select Tests button.</p>
Details tab	<p>Displays details of the currently selected test set or folder.</p> <div data-bbox="491 994 1295 1079" style="background-color: #e0f2e0; padding: 5px;"> <p>Note: For a test set folder, click the Show button to view additional information.</p> </div>
Execution Grid tab	Displays test data in a grid. For details, see " Execution Grid Tab " on page 595.
Requested Hosts tab	<p>Displays the hosts requested for the currently selected test set.</p> <p>The Requested Hosts tab is only available for server-side execution Functional test sets.</p> <p>For details, see "Requested Hosts Tab" on page 607.</p>
Execution Flow tab	Displays test data in a diagram. Enables you to specify conditions for test execution. For details, see " Execution Flow " on page 624.
Automation tab	Displays email notification rules and On Failure instructions for the currently selected test set. For details, see " Automation Tab " on page 610.
Attachments tab	Lists attachments that provide additional information about the currently selected test set. For details, see " Attachments Page " on page 80.
Linked Defects tab	Lists the defects linked to the currently selected test set. For user interface details, see " Linked Defects/Entities Page " on page 801.

UI Element	Description
History tab	Lists changes made to the currently selected test set. For details, see " History Tab " on page 75.
Description tab	Describes the currently selected test set or test set folder. Click in the text box to display a toolbar for formatting and spell checking the text.
Live Analysis	A graphical representation of the test data related to the currently selected test set folder. For details, see " Live Analysis Tab " on page 942. Available from: Test set folder

Test Lab Module Menus and Buttons

This section describes the menus and buttons available in the Test Lab module.

To access	On the ALM sidebar, under Testing, select Test Lab .
Relevant tasks	"How to Run Tests in ALM" on page 548
See also	<ul style="list-style-type: none"> "Test Execution Overview" on page 546 "Test Lab Module Window" on page 554 "Test Lab Module Icons" on page 575

User interface elements are described below:

UI Element (A - Z)	Menu	Description
Add Time Dependency 		<p>Adds a time dependency icon to the diagram.</p> <p>To create a time dependency for a test, link the arrow from the icon to a test in the Execution Flow. The default time dependency is the ALM server's current date and time. For details, see " on page 624.</p> <p>Available from: Execution Flow</p>
Add to Favorites	Favorites	Opens the Add Favorite dialog box, enabling you to add a favorite view to your private or the public folder. For details, see "Add Favorite Dialog Box" on page 102 .

UI Element (A - Z)	Menu	Description
Alerts	Tests (Test Sets tab > Execution Grid)	<p>Opens the Alerts dialog box, enabling you to display alerts for the test instance. For details, see "Alerts Dialog Box" on page 96.</p> <p>Available from: Execution Grid</p>
Arrange Layout 	Tests	<p>Arranges the tests in the Execution Flow diagram in a hierarchical layout, enabling you to view relationships between different tests.</p> <p>Available from: Execution Flow</p>
Assign to Cycle 	Test Sets	<p>Enables you to assign a test set folder to a cycle. For more details, see "Select Cycles Dialog Box" on page 155.</p>
Attachments 	<right-click menu>	<p>Opens the Attachments page inside the Test Instance Details dialog box, enabling you to add an attachment to a test instance. For details, see "Attachments Page" on page 80.</p> <p>Available from: Execution Grid</p>
Clear Alerts	Tests	<p>Clears displayed alerts for the module. For details, see "How to Use Alerts" on page 94.</p> <p>Available from: Execution Grid</p>
Clear Assigned Cycle 	Test Sets	<p>Clears the assigned cycle from the test set folder.</p>
Clear Follow Up Flag	<ul style="list-style-type: none"> • Edit (In the Test Runs module) • Tests (Test Lab module > Execution Grid) 	<p>Clears the follow up flag for a selected test instance or test run. For details, see "Flag For Follow Up Dialog Box" on page 97.</p>

UI Element (A - Z)	Menu	Description
Clear Pinned Baseline	Test Sets	<p>Clears the baseline that is pinned to the test set.</p> <p>Note: Clearing a pinned test set deletes all test runs from the test set.</p>
Collapse	View	<p>Collapses the folders in the test sets tree below the selected folder.</p> <p>Available from: Test Sets tab</p>
Continue Manual Run	<ul style="list-style-type: none"> • Tests (Test Lab module > Execution Grid/Flow) • Test Runs (Test Runs module) 	<p>Continues running the selected tests with the same runner that was used the first time the test was run. For details, see "How to Run Tests Manually" on page 649.</p>
Copy to Clipboard	Tests	<p>Copies the Execution Flow diagram to the clipboard as a bitmap.</p>
Copy URL/Paste	Edit	<p>Copies a selected test set or test run and pastes its URL as a link. The test set or test run itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking on the link opens ALM and takes you to the test set or test run. If you are not already logged in, ALM first prompts for login details.</p>

UI Element (A - Z)	Menu	Description
Copy/Paste	Edit	<p>Copies selected test sets or test set folders and pastes them to another test set folder in the same project or in another project.</p> <p>When you paste test sets to another project, the Paste Test Set Folders To Target Project dialog box opens. For details, see "Paste Test Set Folders To Target Project Dialog Box" on page 619.</p>
		Note: <ul style="list-style-type: none"> When copying test sets or test set folders, test run information is not copied. To copy test sets or test set folders across projects, both projects must use the same ALM version and patch level.
Cut/Paste	Edit	<p>Moves a selected test set or test set folder to a different location in the test sets tree.</p>
 Data Processor Queue	<toolbar>	<p>Performance Center: If you analyze a test run, recalculate the SLA, or add the test run to a trend report, the action is added to a data processing queue, enabling you to see when the action will be performed.</p> <p>Available from: Test Runs module</p>

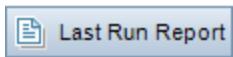
UI Element (A - Z)	Menu	Description
Delete 	Edit	<p>Deletes a selected test set, test set folder, or test run. You cannot delete the Root folder, the Unattached folder, or the default test set.</p> <p>When deleting a test set folder, opens the Confirm Delete Folder dialog box, enabling you to select one of the following delete options:</p> <ul style="list-style-type: none"> • Delete folders only. Deletes the folder and moves all test sets to the Unattached folder. The Unattached folder contains all test sets that are no longer associated with a folder. • Delete folders and test sets. Permanently deletes the folder and all its subfolders and test sets.
Details 		<p>Opens the corresponding Details dialog box, enabling you to view and update details of the selected test set, test instance, or test run.</p> <p>For details, see:</p> <ul style="list-style-type: none"> • "Test Set Details Dialog Box " on page 617 • "Test Instance Details Dialog Box" on page 598 • "Run Details Dialog Box" on page 767
Edit Test 		<p>Performance Center: Opens the Performance Test Designer, enabling you to design the selected performance test. For details, refer to the <i>HPE ALM Performance Center Guide</i>.</p>
Enable Manual Test Run Confirmation	Tests	<p>Instructs ALM to display the Manual Test Run dialog box each time you run manual tests. For details, see "Manual Test Run Dialog Box" on page 651.</p> <p>Available from: Execution Grid, Execution Flow</p>
Expand All	View	<p>Expands all folders in the test sets tree below the selected folder.</p>

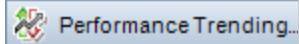
UI Element (A - Z)	Menu	Description
Export	<ul style="list-style-type: none"> • Test Sets (Test Lab module) • Edit (Test Runs module) 	Exports the data in the Test Runs tab as a text file, Microsoft Excel worksheet, Microsoft Word document, HTML document, or text document.
Filter	View	<p>Enables you to filter and sort the runs in the test runs grid. For more details, "Filter Dialog Box" on page 54.</p> <p>Available from: Test Runs module</p>
Find	<ul style="list-style-type: none"> • Tests (Test Lab module > Execution Grid) • Edit (Test Runs module) 	Opens the Find dialog box, enabling you to search for a test run in the test runs grid, or a test instance in the Execution Grid. For details, see "Find Dialog Box" on page 68 .
Find Folder/Test Set	Edit	<p>Opens the Find dialog box, enabling you to search for test sets and test set folders. For details, see "Find Dialog Box" on page 68.</p> <p>Note: If you have applied filters to the test sets tree, ALM restricts the search to the test sets currently displayed.</p>

UI Element (A - Z)	Menu	Description
Find Test in Flow 	<right-click menu>	<p>Opens the Find Test Instance dialog box, enabling you to search for a test in the Execution Flow diagram.</p> <p>A successful search opens the Find Results dialog box.</p> <p>Click the Keep on Top button  to display the Find Results dialog box on top of all open windows.</p> <p>To display a selected window on top of the Find Results dialog box, click the Not on Top button .</p> <p>Available from: Execution Flow</p>
Fit in Window 	<toolbar>	<p>Resizes the Execution Flow diagram to fit the window.</p> <p>Click the arrow to select a magnification option. Options include:</p> <ul style="list-style-type: none"> Magnification level: 25%, 50%, 150%, 200%. Normal. Displays the diagram at 100% magnification. Fit in Window. Displays the entire diagram in the window. Custom Zoom. Opens the Custom Zoom dialog box. Type a zoom level and click Zoom. <p>Available from: Execution Flow</p>
Flag for Follow Up 	<ul style="list-style-type: none"> Tests (Test Lab module > Execution Grid) Edit (Test Runs module) 	<p>Opens the Flag for Follow Up dialog box, enabling you to add or modify a follow up flag for a selected test instance or test run. For details, see "Flag For Follow Up Dialog Box" on page 97.</p>

UI Element (A - Z)	Menu	Description
Generate Test Configuration	<right-click menu>	<p>After upgrading from a previous version of Quality Center, this dialog box enables you to create a test configuration from an existing test instance.</p>
		<p>Caution: Only use this option for migrating tests. Do not use this option for new tests or tests that have already been migrated.</p>
		<p>For user interface details, see "Generate Test Configuration Dialog Box" on page 490.</p>
		<p>Available from: Execution Grid</p>
Global Search 	<toolbar>	<p>A 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://marketplace.saas.hpe.com/appdelivery/content/alm-global-search.</p>
Go to Configuration in Test Plan	Tests	<p>Opens the Test Plan module and highlights the selected test configuration in the Test Configurations tab.</p>
		<p>Available from: Execution Grid, Execution Flow</p>
Go to Test in Test Plan	Tests	<p>Opens the Test Plan module and highlights the selected test.</p>
		<p>Available from: Execution Grid, Execution Flow</p>
Go to Test Set	Test Sets	<p>Opens the Go to Test Set dialog box, enabling you to type a Test Set ID to find a specific test set in the test sets tree.</p>
		<p>To locate the Test Set ID for a test set, select the test set in the test sets tree and click the Details tab.</p>

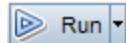
UI Element (A - Z)	Menu	Description
Go to Timeslot 	<right-click menu>	<p>Opens the Timeslots module, displaying the timeslot for the selected test run.</p> <p>Available from: Test Runs module</p> <p>ALM Editions: Timeslots are only available for HP ALM Edition. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Graphs	Analysis	<p>Lists the graphs you can generate for Test Lab data. Select a predefined graph, or launch the graph wizard.</p> <p>For details on the predefined graph types, see "Entity Graph Types" on page 834.</p>
Grid Filters	View	<p>Displays a grid filter box under each column name, enabling you to define a filter condition for a column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For details, see "Select Filter Condition Dialog Box" on page 65".</p>
Host Manager for Default Test Sets	Test Sets	<p>Opens the Host Manager dialog box, enabling you to define hosts for remote test execution within a Default test set. For details, see ""Host Manager Dialog Box (for Default test sets only)" on page 663".</p>
Host Manager for Functional Test Sets	Test Sets	<p>Opens the Testing Hosts module, enabling you to manage and define hosts for server-side Functional test set execution. For details, see ""Testing Hosts Overview" on page 358".</p>
Import External Test Results	Test Sets	<p>Opens the Import External Test Results dialog box, enabling you to import a results file generated from an external tool to ALM.</p> <p>For details, see ""Import External Test Results Dialog Box" on page 675".</p>

UI Element (A - Z)	Menu	Description
Indicator Columns	Tests	Displays the following columns on the left-side of the Execution Grid and test runs grid:  . For details, see "Test Lab Module Icons" on page 575.
Last Run Report	Tests	<p>Opens the Last Run Report pane, displaying results of the last test run for the selected test.</p> <p>You can also click the Show arrow to display the Last Run Report pane.</p> <p>Performance Center Edition: Opens the Last Run Results pane.</p> <p>Available from: Execution Grid</p>
Last Run Report 	<toolbar>	<p>ALM Edition: For functional test sets, opens the Execution Report page for the selected test set, displaying the last Execution Report belonging to this test set. For more details about the Execution report page, see "Execution Report Page - Desktop Client" on page 639.</p>
Live Analysis	Analysis	<p>Lists options for displaying graphs in the Live Analysis tab. Add or delete a graph, or configure its appearance. For details on live analysis, see "Analysis Overview" on page 810.</p>
Available from: Live Analysis Tab		
Most Recently Used	Analysis	Lists the most recently viewed reports and graphs in ALM. Displays up to ten items.
New Folder 	Test Sets	<p>Opens the New Test Set Folder dialog box, enabling you to add a folder under a selected folder.</p> <p>Syntax exceptions: A test set folder name cannot include the following characters: \ ^ *</p>
New Test Set 	Test Sets	Opens the New Test Set dialog box, enabling you to add a test set to a selected folder. For details, see "New Test Set Dialog Box" on page 612.

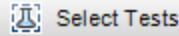
UI Element (A - Z)	Menu	Description
Order Test Instances 	Tests	<p>Opens the Order Test Instances dialog box, enabling you to change the execution order of the tests in the Execution Grid or Execution Flow. For more details, see "Order Test Instances Dialog Box" on page 665.</p> <p>Available from: Execution Grid, Execution Flow</p>
Organize Favorites	Favorites	<p>Opens the Organize Favorites dialog box, enabling you to organize the list of favorite views by changing properties or deleting views. For details, see "Organize Favorites Dialog Box" on page 103.</p> <p>Available from: Test Sets tab</p>
Performance Trending  Performance Trending...	<toolbar>	<p>Performance Center: Opens My Performance Center, displaying the Trend Reports feature. For details, refer to the <i>HPE ALM Performance Center Guide</i>.</p> <p>Available from: Test Runs Module</p>
Pin to Baseline	Test Sets	<p>Opens the Select Baseline dialog box, enabling you to pin the test set to a baseline. For more details, see "Select a Baseline Page" on page 231.</p>
Private	Favorites	<p>Lists the favorite views that are accessible only to the user who created them.</p>
Project Reports	Analysis	<p>Lists the predefined project reports that you can produce on test lab data. For details on the report types, see "Predefined Project Reports" on page 882.</p> <p>Selecting a report from the list generates a preview of the report. The preview displays up to five entities per report section. To generate the full report, in the upper left corner of the preview, click the downward arrow adjacent to the Generate button and select the report format to generate.</p>
Public	Favorites	<p>Lists the favorite views that are accessible to all users.</p>

UI Element (A - Z)	Menu	Description
Purge Runs	<ul style="list-style-type: none"> • Tests Sets (Test Lab module > Execution Grid) • Test Runs (Test Runs module) 	Opens the Purge Runs wizard, enabling you to delete old test run results in your project. For details, see "Purge Runs Wizard" on page 773 .
Refresh Flow 	Tests	<p>Refreshes the view to display the most up-to-date information.</p> <p>Available from: Execution Flow</p>
Refresh/Refresh All 	View	Refreshes the view to display the most up-to-date information.
Remove all Execution Conditions	Tests	<p>Enables you to delete all execution conditions and time dependencies in a selected test set.</p> <p>If your test set includes both execution conditions and time dependencies, opens the Remove All Execution Conditions dialog box.</p> <p>If your test set includes only execution conditions or time dependencies, a confirm dialog box opens.</p> <p>Available from: Execution Flow</p>
Remove Execution Condition	<right-click menu>	<p>Enables you to delete an execution condition for a selected condition arrow.</p> <p>Available from: Execution Flow</p>
Remove Test Instances from Test Set 	Tests	<p>Removes the selected test instances from the test set.</p> <p>Available from: Execution Grid, Execution Flow</p>

UI Element (A - Z)	Menu	Description
Remove Test's Execution Conditions	<right-click menu>	<p>Enables you to delete all execution conditions for a selected test instance.</p> <p>Available from: Execution Flow</p>
Remove Time Dependency	<right-click menu>	<p>Right-click a Time Dependency  icon connected to a test and choose Remove Time Dependency to remove the specified time dependency.</p> <p>Available from: Execution Flow</p>
Rename	Edit	<p>Enables you to rename a test set or a test set folder. You cannot rename the Root folder, the Unattached folder, or the default test set.</p>
Replace	<ul style="list-style-type: none"> • Tests (Test Lab module > Execution Grid) • Edit (Test Runs module) 	<p>Opens the Replace dialog box, enabling you to replace a field value in the grid. For details, see "Replace Dialog Box" on page 70.</p>
Reset Test Set	Test Sets	<p>Opens the Confirm Reset Test Set dialog box, enabling you to change the status of all the tests in the test set to No Run.</p> <p>You can also instruct ALM to delete all the test run results in the test set.</p>

UI Element (A - Z)	Menu	Description
 Run	Tests	<p>If you select a manual test: Opens one of the following to run the test:</p> <ul style="list-style-type: none"> • If Sprinter is installed on your local machine, Sprinter opens. For details, see "HPE Sprinter Overview" on page 648. <div style="background-color: #e0f2e0; padding: 10px;"> <p>ALM Editions: Sprinter functionality is not available with Performance Center Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p> </div> <ul style="list-style-type: none"> • If Sprinter is not installed, the Manual Runner dialog box opens. For details, see "Manual Runner Wizard" on page 652. <p>If you select two or more manual tests: Opens the Manual Test Run dialog box. For details, see "Manual Test Run Dialog Box" on page 651.</p> <p>If you select automated tests: Opens the Automatic Runner dialog box. For details, see "Automatic Runner Dialog Box" on page 661.</p> <p>Available from: Execution Grid, Execution Flow</p>
 Run	Test Sets	<p>Opens the Run <Entity> Dialog box, enabling you to run the selected functional test instance. For details, see "Run <Entity> Dialog Box" on page 635.</p> <p>Available from: Execution Grid</p>
 Run Screen	<right-click menu>	<p>Performance Center: Opens the Performance Test Run screen, enabling you to view and manage the test run. For more information, refer to the <i>HPE ALM Performance Center Guide</i>.</p> <p>Note: Only enabled when test run is in the Running state.</p> <p>Available from: Test Runs module</p>

UI Element (A - Z)	Menu	Description
Run Test Set 	Test Sets	<p>For Default test sets:</p> <ul style="list-style-type: none"> If the test set includes one or more automated tests, opens the Automatic Runner dialog box to run the currently selected test set. For details, see "Automatic Runner Dialog Box" on page 661. If the test set includes manual tests only, opens the Manual Test Run dialog box. For details, see "Manual Test Run Dialog Box" on page 651. <p>For Functional test sets: Opens the Run <Entity> Dialog box, enabling you to run the selected functional test set. For details, see "Run <Entity> Dialog Box" on page 635.</p>
Run Test 	<right-click menu>	<p>Performance Center: Enables you to run a selected performance test. For more details on running performance tests, refer to the <i>HPE ALM Performance Center Guide</i>.</p>
Run with Sprinter	Tests	<p>Opens Sprinter to run the selected tests. For details, see "HPE Sprinter Overview" on page 648.</p> <p>ALM Editions: Sprinter functionality is not available with Performance Center Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Run with Manual Runner	Tests	<p>Runs a manual or automated test manually from the Manual Runner dialog box. For details, see "Manual Runner Wizard" on page 652.</p> <p>Available from: Execution Grid, Execution Flow</p>

UI Element (A - Z)	Menu	Description
Select Columns 	<ul style="list-style-type: none"> • Tests (Test Lab module > Execution Grid) • View (Test Runs module) 	<p>Opens the Select Columns dialog box, enabling you to determine which columns to display and set the order in which the columns are displayed. For more details, see "Select Columns/Select Fields Dialog Box" on page 85.</p>
Select Tests 	Test Sets	<p>Enables you to select tests to add to the currently selected test set. Displays the following:</p> <ul style="list-style-type: none"> • Test Plan Tree tab. Add tests from the test plan tree to a test set. • Requirements Tree tab. Add tests covering requirements from the requirements tree to a test set. <p>For more details, see "Select Tests Pane" on page 613.</p> <p>Available from: Execution Grid, Execution Flow</p>
Send by Email 	Test Runs	<p>Opens the Send E-mail dialog box, enabling you to send a test run by email to recipients selected from a list, or to the tester. For more details, see "Send E-mail Dialog Box" on page 76.</p>
Set Filter/Sort 	<ul style="list-style-type: none"> • View • Tests (Execution Grid) 	<p>Enables you to set filter and sort options for the test sets tree or Execution Grid.</p> <p>Includes the following options:</p> <ul style="list-style-type: none"> • Set Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort tests. • Clear Filter/Sort. Clears any filters or sorting that you have applied. <p>For more details, see "Filter Dialog Box" on page 54.</p>

UI Element (A - Z)	Menu	Description
Show Full Test Names	Tests	Displays full test names in the Execution Flow diagram. By default, long names are truncated. Available from: Execution Flow
Stop Run 	<toolbar>	Stops execution of the selected run. Note: Only enabled when the selected run is in the Initializing , Running , or Stopping states.

UI Element (A - Z)	Menu	Description
Switch to Functional/Default 	<right-click menu>	<p>Switch to Functional/Default Test Set. Changes the mode of execution of the selected test set. Toggles the test set between Default and Functional.</p> <ul style="list-style-type: none"> When switching a test set from Default to Functional, each test instance in the test set is converted. If a test instance had no value for the Planned Host Name field, or the value does not match any of the hosts in the Testing Hosts module, then the Testing Host field is set to Automatch and the purpose is set according to the test instance type. If the value in the Planned Host name field matches one of the hosts in the Testing Hosts module, and that testing host has a purpose which matches the test instance type, then that testing host is allocated to the test instance. When switching a test set from Functional to Default, ALM will remove the test set from any build verification suite in which it appears. If the test had started out as part of a Default test set, then the Planned Host Name field is restored to its original value.

Note:

- Some test instance types cannot be converted. If you are changing from Default to Functional and your test set includes tests which are not supported, the conversion process is blocked and you receive a warning message. Supported test instances include business process, flow, Quick Test Professional, Service Test, System Test, and VAPI-XP.
- This button is disabled for users who do not have permission to change the type of a test set.

UI Element (A - Z)	Menu	Description
		<ul style="list-style-type: none"> You can select and change the type of multiple test sets at once, but only if you select test sets of a single type (either Functional or Default). If you select multiple test sets of different test set types you will be unable to switch the test set type of the entire selection.
Test Instance Details 	Tests	<p>Opens the Test Instance Details dialog box, enabling you to view and update details of the selected test instance. For details, see "Test Instance Details Dialog Box" on page 598.</p> <p>Available from: Execution Grid</p>
Test Set Details 	Test Sets	<p>Opens the Test Set Details dialog box, enabling you to view and update details of the selected test set. For details, see "Test Set Details Dialog Box" on page 617.</p>
Text Search	Edit	<p>Opens the text search pane in the lower part of the Test Lab module window, enabling you to search for records in predefined fields. For details, see "Text Search Pane" on page 72.</p> <p>Available from: Test Runs module</p>
Update Selected	<right-click menu>	<p>Opens the Update Selected dialog box, enabling you to update a field value for multiple selected tests in the grid. For more details, see "Update Selected Dialog Box" on page 87.</p> <p>Available from: Execution Grid tab</p>
View	Tests	<p>Lists options for selecting tests in the Execution Grid. Options include:</p> <ul style="list-style-type: none"> Select All Deselect All Invert Selection <p>Available from: Execution Grid tab</p>

UI Element (A - Z)	Menu	Description
Zoom 	Tests	<p>Changes the magnification level of the Execution Flow. Options include:</p> <p>Zoom In. Increases the magnification level so that you can view a section of the Execution Flow more closely.</p> <p>Zoom Out. Decreases the magnification level so that you can view more of the Execution Flow.</p> <p>Available from: Execution Flow</p>

Test Lab Module Icons

This section describes the icons displayed in the Test Lab module.

To access	On the ALM sidebar, under Testing , select Test Lab .
See also	<ul style="list-style-type: none"> • "Test Lab Module Menus and Buttons" on page 556 • "Test Lab Module Window" on page 554

User interface elements are described below:

UI Element	Description
	< green asterisk >. The applicable tab is populated.
 	<p>Alerts. Click to view alerts for the test instance or test run.</p> <ul style="list-style-type: none"> • Red alert. The alert is new. • Gray alert. The alert has already been read. <p>For more details, see "Alerts Dialog Box" on page 96.</p>
	Assigned Test Set Folder. A test set folder that is assigned to a cycle.
	<p>Attachments. Click to view attachments for the specified test instance or test run.</p> <p>Open an attachment by selecting it from the list. If there are more than ten attachments, click the more attachments link to view the list in the Attachments Page. For details, see "Attachments Page" on page 80.</p>

UI Element	Description
 	<p>Follow Up Flags. Click to view follow up flags for the test instance or test run.</p> <ul style="list-style-type: none"> • Gray flag. The follow up flag is new. • Red flag. The follow up date has arrived. <p>For more details, see "Flag For Follow Up Dialog Box" on page 97.</p>
	<p>Linked Defects. Click to view linked defects for the test instance or test run. For user interface details, see "Linked Defects/Entities Page" on page 801.</p>
	<p>Pinned Test Set. A test set that is pinned to a baseline. For concept details, see "Pinned Test Sets" on page 196.</p>
	<p>Test Set Folder. A folder for organizing test sets.</p>
	<p>Functional Test Set. A functional test set in the test sets tree.</p>
	<p>Performance Test Set. A performance test set in the test sets tree.</p>
	<p>Default Test Set. A default test set in the test sets tree.</p>
	<p>Time Dependency. Click to modify the time dependency conditions of a test instance. For more details, see "Time Dependency Page" on page 626.</p>

Test Lab Module Fields

This section describes the Test Lab module fields.

To access	On the ALM sidebar, under Testing, select Test Lab .
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Important information	<ul style="list-style-type: none"> The Test Lab module displays test planning, test configuration, and test execution fields. Names of test planning fields displayed in the Test Lab module have the prefix Test: added. For more details on test planning fields, see "Test Plan Module Fields" on page 406. Names of test configuration fields displayed in the Test Lab module have the prefix Configuration: added. For more details on test configuration fields, see "Test Configurations Tab" on page 480. You can add user-defined fields and change the label of any of the Test Lab module fields. You can also customize project lists. For more details, see to the <i>HPE Application Lifecycle Management Administrator Guide</i>. You can use the Script Editor to restrict and dynamically change the Test Lab module fields and values. For details, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. When you select a column with a user name value, ALM displays a list with the name and full name of each user. You can search for users, sort users, group users by user group, and select users from the users list or a group tree. For more information, see "Users List Dialog Box" on page 67. When the word "test" is used below, it might refer to a single test run, a test set run, or a build verification suite run.
See also	"Test Lab Module Window" on page 554

The fields are described below:

UI Element (A - Z)	Description
All Tests Passed	Indicates whether the run completed successfully. Y only if all test instance runs have a status of Passed .
Assigned to cycle	The cycle to which the selected test set folder is assigned.
Average Vusers	The average number of concurrently running Vusers during the test run. Note: Available for Performance Center.
Baseline	The baseline to which the test set is pinned.
Build verification suite name	The name of the build verification suite.
Close Date	The planned closing date for the test set.

UI Element (A - Z)	Description
Configuration: Name	The name of the test configuration allocated to the selected test run.
Consume VUDs	<p>The number of VUDs used in the test run.</p> <p>Note: Available for Performance Center.</p>
Controller	<p>The Controller involved in the test run.</p> <p>Note: Available for Performance Center.</p>
Cycle end date	The date on which the cycle to which the selected test set folder is assigned ends.
Cycle start date	The date on which the cycle to which the selected test set folder is assigned starts.
Domain/Project	The test instance's domain and project.
Draft Run	<p>Indicates whether the selected test run is a draft run. For more details, see "Draft Runs" on page 548.</p> <p>Default value: N</p>
Duration	<p>The test run time, in seconds.</p> <p>Note: You should not manually edit this field.</p>
End Date	<p>The end date of the run.</p> <p>Note: You should not manually edit this field.</p>
End Time	The end time of the run.
Environment	<p>The default environment on which the tests in the test set should run. Environments are a combination of operating systems, browsers, and so on, on which you test the application.</p> <p>Note: Environments are defined using the ALM Web Client. After they are defined, you can select them when editing a test set.</p>

UI Element (A - Z)	Description
Exec Date	The date on which the test was last executed.
Exec Time	The time the test was last executed.
Host	The name of the machine on which a test run was executed.
Involved Vusers	<p>The number of Vusers that were initialized at least once during the run.</p> <p>Note: Available for Performance Center.</p>
Iterations	<p>Business Process Testing: A description of the iterations defined for the business process test or flow instance.</p> <p>For business process tests:</p> <ul style="list-style-type: none"> • Configuration Based. The iterations are as defined in the corresponding test configuration. • Modified. A link indicating that the iterations have been manually edited and no longer correspond to the test configuration. Click the link to modify the iterations. <p>For flows:</p> <ul style="list-style-type: none"> • Undefined. A link indicating that no iterations are currently defined. Click the link to specify iterations. • <iterations>. A link indicating the total number of iterations defined for the flow instance, and if specified, the range of iterations selected for the run. Click the link to modify the iterations. <p>Example:</p> <p><u>2 Iterations</u></p> <p><u>4 Iterations (2-3 Selected)</u></p> <p>For user interface details on modifying iterations, see the <i>HPE Business Process Testing User Guide</i>.</p>
Load Generators	<p>The load generators involved in the test run.</p> <p>Note: Available for Performance Center.</p>

UI Element (A - Z)	Description
Max Vusers	<p>The maximum number of concurrently running Vusers during the run.</p> <p>Note: Available for Performance Center.</p>
Modified	The date and time of the last change to the test in the Execution Grid.
Open Date	<p>The planned opening date for the test set.</p> <p>Default: The current database server date when the test set is created.</p>
Operating System	<p>The operating system running on the host machine on which a test was executed.</p> <p>Default value: The operating system on your ALM client machine.</p>
OS Build Number	<p>The build number of the operating system running on the host machine on which a test was executed.</p> <p>Default value: The operating system build number on your ALM client machine.</p>
OS Service Pack	<p>The operating system service pack installed on the host machine on which a test was executed.</p> <p>Default value: The operating system service pack on your ALM client machine.</p>
Planned Exec Date	The date on which it was planned to execute the test.
Planned Exec Time	The time at which it was planned to execute the test.
Planned Host Name	The name or IP address of the machine to run the Default test.
Project ID	The test's project ID.

UI Element (A - Z)	Description
Purpose	<p>The purposes available from the selected testing host or the purposes required for a functional test. A single testing host can have either Functional or Performance purposes.</p> <p>The following Functional purposes are available:</p> <ul style="list-style-type: none"> • Automated Business Process Testing. A host on which Business Process Testing is run. • Unified Functional Testing (UFT). A host on which UFT is run. • QA Inspect. A host on which QA Inspect is run. • QTP. A host on which QuickTest Professional is run. • Service Test Runtime. A host on which Service Test Runtime is run. • Sprinter. A host on which Sprinter is run. • System Test. A host on which a system test is run. • VAPI XP. A host on which VAPI XP is run. <p>The following performance purposes are available:</p> <ul style="list-style-type: none"> • Controller. A host used to manage a performance test. During a test run, the Controller issues instructions to the load generators including which scripts to run, how many Vusers to run per script, and when to start and stop running them. There is only one Controller per test. • Load generator. A host on which Vusers run during a test. There can be any number of load generators for a given test. • Data processor. A host used for processing and publishing data gathered during a test run.
Remaining days in cycle	<p>The total number of days remaining in the cycle to which the selected test set folder is assigned.</p>
Remaining test instances to run	<p>The total number of test instances in the selected test set folder that have not yet run.</p>
Responsible Tester	<p>The user name of the person responsible for running the test.</p> <p>When you run a manual test automatically from the Automatic Runner dialog box, ALM notifies this user by email to run the test.</p>
Run Details	<p>Lists details about the test instance, test set, or build verification suite run.</p>

UI Element (A - Z)	Description
Run ID	<p>A unique numeric ID for the run, assigned automatically by ALM. This number is automatically generated by the system when the run starts executing.</p> <p>You can click on the Run ID field in the Execution Report grid to navigate to the test instance run in the Test Runs module.</p>
Run Name	<p>The name of the test run. Fast_run indicates that ALM created this run when a user changed the Status field of the test instance manually without running the test.</p> <p>The icon displayed indicates one of the following:</p> <ul style="list-style-type: none"> • The test type. For details, see "Test Types" on page 390. • A manual test run with Sprinter  . For details on Sprinter, see "HPE Sprinter Overview" on page 648.
Run Status	<p>In the Execution Report Page grid, indicates the status of a functional or performance test run or test set run.</p> <p>For a test set, indicates the status of the test set. Options include: Open, Closed.</p> <p>For a test instance or run, indicates the execution status of the run. Options include: Blocked, Failed, N/A, No Run, Not Completed, Passed, <User-defined>.</p> <p>Note: Available for ALM Edition.</p>
Start date	<p>The start date of the run.</p> <p>Note: You should not manually edit this field.</p>
Start time	<p>The start time of the run.</p> <p>Note: You should not manually edit this field.</p>

UI Element (A - Z)	Description
State	<p>Indicates progress of a load test run. The value of this field can be one of the following:</p> <ul style="list-style-type: none"> • Initializing. The load test is starting. • Running. The load test is running. • Stopping. The load test is in the process of stopping. • Run Failure. The load test has failed and has stopped. • Finished. The load test completed successfully. <p>This is a read-only field.</p>
Status (for a run step)	<p>Indicates execution status of a run step. Execution status can be one of the following:</p> <ul style="list-style-type: none"> • Blocked. The step cannot run. For example, the test is running on a remote machine but cannot continue due to some environmental failure, such as network problems or hardware failure. • Failed. The step failed. • N/A. The current status of the step is not applicable. • No Run. The step has not been run. • Not Completed. The step was not completed. • Passed. The step was successful. <p>Business Process Testing:</p> <ul style="list-style-type: none"> • Ignored. The business component or flow was ignored because it did not meet its defined run conditions. <p>The status of any steps related to this business component or flow is automatically set to No Run and the steps are skipped when you click Next.</p> <div data-bbox="612 1457 1297 1541" style="background-color: #e0f2e0; padding: 10px;"> <p>Note: This status cannot be chosen; it is set by Business Process Testing during the manual run.</p> </div> <div data-bbox="612 1584 1310 1619" style="background-color: #e0f2e0; padding: 10px;"> <p>Also, this status is only available when running manually.</p> </div>

UI Element (A - Z)	Description
Status (for a test instance, test set, or build verification suite run)	<p>Indicates execution status of a test instance, test set, or build verification suite run. Execution status can be one of the following:</p> <ul style="list-style-type: none"> • Blocked. One or more steps cannot run. For example, the test is running on a remote machine but cannot continue due to some environmental failure, such as network problems or hardware failure. • Failed. One or more steps in the run failed, and none have the status Blocked. • N/A. The current status is not applicable. No steps exist, or a step has an execution status of N/A. • No Run. No steps have been run. • Not Completed. One or more steps were not completed or not run, and none have the status Blocked or Failed. • Passed. The run was successful. All the steps have an execution status of Passed.
Target Cycle	The cycle to which the test is assigned.
Temp Results Directory Path	The path of the directory where the test results are temporarily stored.
Test	The name of the test in the Test Plan module associated with the selected test run.
Test Set	The name of the test set.
Test Set End Time	The end time of the test set run.
Test Set ID	A unique numeric ID for the test set, assigned automatically by ALM.
Test Set Start date	<p>The start date of the test set run.</p> <p>Note: You should not manually edit this field.</p>
Test Set Start time	<p>The start time of the test set run.</p> <p>Note: You should not manually edit this field.</p>
Test Set State	The state of the test set. If a test set is stuck in a particular state, you can change it.

UI Element (A - Z)	Description
Test Set: Name	The name of the test set associated with the selected test run.
Test: Test Name	The name of the test associated with the selected test run.
Tester	The username of the person who last executed the test.
Testing Host	<p>The testing host assigned to the selected Functional test set test instance. The testing host is taken from the project's host pool.</p> <p>In the Execution Grid tab, you can specify a host for a particular test instance by clicking the Testing Host field and using the Select Testing Host dialog box. For details, see "Select Testing Host Dialog Box" on page 597.</p> <p>In the Requested Hosts tab, you can specify a host by clicking the Add Automatch Host or Add Specific Host buttons. For details, see "Requested Hosts Tab" on page 607.</p>
Time	The time at which the test was last executed.
Timeslot ID	The ID of the test run timeslot.
Topology ID	The ID of the test run topology.
Topology Name	The name of the test run topology.
Total test instances	The total number of test instances in the selected test set folder.
Type	The test type of the test. For more details, see " Test Types " on page 390 . This is a read-only field.

Chapter 31: Test Set Specification

This chapter includes:

• Test Set Specification Overview	588
• How to Create Test Sets	590
• Test Sets User Interface	594

Test Set Specification Overview

After you design tests in the Test Plan module, you organize test execution by creating test sets in the Test Lab module. A test set contains a subset of the tests in your project designed to achieve specific test goals.

ALM supports different types of test sets. The following table describes each test set type:

Test Set Type	Description
Performance	<p>For running unattended remote performance tests. You can add only performance tests to this test set.</p> <p>You arrange for a performance test to be executed from the server by scheduling a timeslot. A timeslot contains a test set, the details of the remote hosts on which the test set will run, and a time and duration for running the test set. For more details about how to run a Performance test, see "How to Run Tests in ALM" on page 548.</p> <p>For more details on timeslots, see "Reserving Timeslots Overview" on page 698.</p> <div data-bbox="470 1030 1356 1262" style="border: 1px solid #ccc; padding: 10px;"><p>ALM Editions: Performance test execution is available only for ALM Edition and Performance Center Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p></div>
Default	<p>For running client-side, locally controlled and launched functional tests. You can add both manual and automated functional tests to this test set.</p> <p>You can arrange for default tests to be run in an ad hoc manner. For more details on how to run default test sets, see "How to Run Tests in ALM" on page 548.</p>

Test Set Type	Description
Functional	<p>For running server-side, unattended functional tests. You can add only automated functional tests to this test set.</p> <p>You arrange for a functional test set to be executed from the server by scheduling a timeslot. A timeslot contains a test set, the details of the testing hosts on which the test set runs, and a time and duration for running the test set. For more details about how to run a Functional test set, see "How to Run Tests in ALM" on page 548</p> <p>Build verification suites are a key component in ALM's Continuous Delivery solution. They facilitate an automated, end-to-end deployment and testing framework that makes application development more efficient, reliable, and quick. For more information about how build verification suites can be used as part of this process, see "Deploying and Testing your Application in ALM" on page 550.</p> <p>For more details on timeslots, see "Reserving Timeslots Overview" on page 698.</p> <div data-bbox="470 967 1356 1136" style="background-color: #e0f2e0; padding: 10px;"> <p>ALM Editions: Functional test sets available only for ALM Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p> </div>
External	<p>Contains external type tests (EXTERNAL-TEST ). External type test sets are read-only. You cannot create, modify, or run test sets directly from ALM. For more details on external testing, see "Integrating External Tests Overview" on page 668.</p>

When defining a test set, ALM adds instances of your selected tests to the test set. Each test instance contains a defined test configuration. A **test configuration** enables you to run the same test under different scenarios. For more details on test configurations, see "[Test Configuration Overview](#)" on page 468.

A **test sets tree** enables you to organize your application management process by grouping test sets in folders and organizing them in different hierarchical levels.

To decide which test sets to create, consider the goals you defined at the beginning of the application management process. Consider issues such as the current state of the application, and the addition or modification of new features.

Example: Following are examples of general categories of test sets you can create:

Test Set	Description
Sanity	Checks the entire application at a basic level—focusing on breadth, rather than depth—to verify that the application is functional and stable. This set includes fundamental tests that contain positive checks, validating that the application is functioning properly. For example, in the Mercury Tours application, you could test whether the application opens, and enables you to log in.
Regression	Tests the system in a more in-depth manner than a sanity set. This set can include both positive and negative checks. Negative tests attempt to fail an application to demonstrate that the application is not functioning properly.
Advanced	Tests both breadth and depth. This set covers the entire application, and also tests the application's advanced options. You can run this set when there is ample time for testing.
Function	Tests a subsystem of an application. This could be a single feature or a group of features. For example, in the Mercury Tours application, a function set could test all activities related to booking a flight.

After you have created test sets, you assign test set folders to cycles defined in the releases tree in the Releases module. A cycle represents a development and QA cycle based on the project timeline.

You assign remote hosts to functional or performance test instances in a test set. For details, see ["Testing Hosts Overview" on page 358](#).

For details on working with test sets, see ["How to Create Test Sets" below](#).

How to Create Test Sets

This task describes how to create and define test sets in the Test Lab module.

To learn more about test sets, see ["Test Set Specification Overview" on page 588](#).

Note: Higher-level task: This task is part of a higher-level task. For details, see ["How to Run Tests in ALM" on page 548](#).

This task includes the following steps:

- "Define test sets" below
- "Assign test set folders to cycles" on the next page
- "Add tests to test sets" on the next page
- "Configure execution settings for a test instance" on the next page
- "Specify host criteria for a test instance in a Functional test set" on page 593
- "Manage host requests for a Functional test set" on page 593
- "Set notification rules" on page 593
- "Set On Failure rules" on page 593
- "Request test result summary report" on page 593
- "Pin a test set to a baseline - optional" on page 594

1. Define test sets

Define a hierarchical framework for your test sets by creating a test sets tree that contains folders and subfolders.

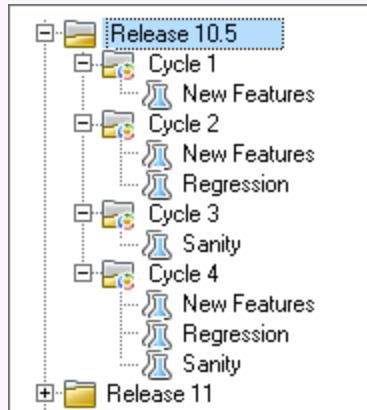
- a. **Open the Test Lab module.** On the ALM sidebar, under **Testing**, select **Test Lab**.
- b. **Create folders.** Right-click the **Root** folder and select **New Folder**. To create a sub-folder, right-click a folder and select **New Folder**.
- c. **Add test sets to folders.** Right-click a folder and select **New Test Set**. For user interface details, see "[New Test Set Dialog Box](#)" on page 612.

To learn more about the different types of test sets, see "[Test Set Specification Overview](#)" on page 588.

Example: Suppose you want to test new features added to Release 10.5 of the Mercury Tours application. Release 10.5 consists of four cycles, and you want to test the new features for the release in Cycle 1, Cycle 2, and Cycle 4. Because the tests you need to run to test the new features are the same for each of these cycles, you want to use the same test set as a basis for testing new features in each of the cycles.

In the test sets tree, you can create the folder, **Release 10.5**, for the release. Under this folder, you create the folder, **Cycle 1**, for the first cycle of the release. In the **Cycle 1** folder, you create a test set, **New Features**, containing the tests necessary to test new features for the release. After you create this test set and add its tests, you can copy and paste the **Cycle 1** folder and use it as a basis for the other cycles

that test new features.



2. Assign test set folders to cycles

Assign test set folders to cycles defined in the releases tree in the Releases module.

Right-click a test set folder and select **Assign to Cycle**. For user interface details on the Select Cycles dialog box, see "[Select Cycles Dialog Box](#)" on page 155.

3. Add tests to test sets

In the **Test Lab > Test Sets** tab, select a test set and click the **Execution Grid** tab or the **Execution Flow** tab. Then click the **Select Tests** button. Add tests from the following tabs in the Select Tests pane:

- **Test Plan Tree**. Add tests from the test plan tree to the test set.
- **Requirements Tree**. Add tests covering requirements from the requirements tree to the test set.

For user interface details on the Select Tests pane, see "[Select Tests Pane](#)" on page 613.

4. Configure execution settings for a test instance

Note: This option is not available for Performance test sets.

You can view or set the test parameter values for a manual or automated test instance. You can choose a remote host on which to run the manual or automatic test instance. You can also view and edit the On Failure rules for an automated test instance.

- a. In the Execution Grid or the Execution Flow, right-click a test and select **Test Instance Details**.
- b. In the **Test Instance Details** dialog box, click **Execution Settings** on the sidebar. For user

interface details on the Execution Settings view, see "[Test Instance Details - Execution Settings View](#)" on page 602.

5. Specify host criteria for a test instance in a Functional test set

Note: This option is not available for Default test sets.

You allocate a testing host for a test by specifying criteria in a host reservation. You can reserve a particular host from the project host pool. Alternatively, you can provide ALM with criteria from which to dynamically select hosts from the host pool allocated to your project. Host criteria include host purpose, location, and attributes.

- a. Select a test instance.
- b. In the **Test Instance Details** dialog box, choose a set of criteria from the options listed in the **Testing Host** field.

For user interface details, see "[Test Set Specification Overview](#)" on page 588.

For details about testing hosts in ALM, and managing testing hosts in Lab Management, refer to the *HPE ALM Lab Management Guide*.

6. Manage host requests for a Functional test set

Note: This option is not available for Default test sets.

To alter the types of hosts you requested for an entire test set, use the **Requested Hosts** tab. You can modify, add, or delete host requests for the entire test set.

Select a test set, and click the **Requested Hosts** tab. For user interface details, see "[Requested Hosts Tab](#)" on page 607.

7. Set notification rules

Set notification rules to instruct ALM to send email to a specified user if selected events occur for a test set.

You set notification rules in the **Automation** tab, **Notification** area. For user interface details, see "[Automation Tab](#)" on page 610.

8. Set On Failure rules

Set On Failure rules to define what action ALM takes in the event that an automated test in the test set fails.

You set notification rules in the **Automation** tab, in the **On Automated Test Failure** area. For user interface details, see "[Automation Tab](#)" on page 610.

9. Request test result summary report

You can request that a summary of test results is sent in an email to specified users when test

set execution completes.

Enter details in the **Automation** tab, in the **Execution Summary** area. For user interface details, see "[Automation Tab](#)" on page 610.

10. Pin a test set to a baseline - optional

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

- In the Test Lab module, right-click a test set and select **Pin to Baseline**. For user interface details on the Select Baseline dialog box, see "[Select Baselines Dialog Box](#)" on page 220.
- To clear a pinned baseline, right-click a test set and select **Clear Pinned Baseline**.

For concept details on pinned test sets, see "[Pinned Test Sets](#)" on page 196.

Test Sets User Interface

This section includes:

• Execution Grid Tab	595
• Select Testing Host Dialog Box	597
• Test Instance Details Dialog Box	598
• Test Instance Details - Runs View	599
• Test Instance Details - Execution Settings View	602
• Requested Hosts Tab	607
• Automation Tab	610
• New Test Set Dialog Box	612
• Select Tests Pane	613
• Test Set Details Dialog Box	617
• On Test Failure Dialog Box	618
• Paste Test Set Folders To Target Project Dialog Box	619

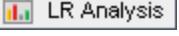
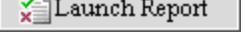
Execution Grid Tab

This tab displays test instance data in a grid. Each line in the grid displays a separate record. You can run and view tests in the Execution Grid.

To access	In the Test Lab > Test Sets tab, select a test set and click the Execution Grid tab.
Relevant tasks	<ul style="list-style-type: none"> • "How to Create Test Sets" on page 590 • "How to Run Tests in ALM" on page 548
See also	<ul style="list-style-type: none"> • "Test Set Specification Overview" on page 588 • "Test Execution Overview" on page 546 • "Test Lab Module Window" on page 554

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

UI Element	Description
<Test Lab module common UI elements>	<ul style="list-style-type: none"> • Test Lab fields. For field definitions, see "Test Lab Module Fields" on page 576. • Test Lab menus and buttons. For command and button descriptions, see "Test Lab Module Menus and Buttons" on page 556. • Test Lab icons. For icon descriptions, see "Test Lab Module Icons" on page 575. • ALM masthead, menus, and sidebar. For details, see "ALM Common Areas" on page 30.
<Indicator columns>	Indicates that the specified test instance has attachments, linked defects, alerts, and follow up flags. For more details, see "Test Lab Module Icons" on page 575 . To display these columns, select Tests > Indicator Columns .
<Filter status bar>	Describes the filter currently applied to the grid. Located directly above the grid.
<Select Tests pane>	Displays the Test Plan Tree tab and the Requirements Tree tab, enabling you to select tests to add to the selected test set. For details, see "Select Tests Pane" on page 613 .

UI Element	Description
Criterion Results	<p>Displays the statuses of the criteria for the last run of the selected business process test instance using a certain configuration.</p> <p>To display this tab, select Tests > Last Run Result or click the Show arrow.</p> <div style="border: 1px solid #ccc; padding: 10px; background-color: #f0f8ff;"> <p>Note: Functionality related to test criteria is available only for business process tests. For details, see the <i>HPE Business Process Testing User Guide</i>.</p> </div>
Last Run Report pane	<p>Displays the results of the last test run for the selected test instance. To display this pane, select Tests > Last Run Report or click the Show arrow.</p> <p>For a test run with Sprinter, also displays the Launch Sprinter Results Viewer button, which opens and displays the report in the Sprinter Results Viewer. For details, click the help button within the viewer.</p> <div style="border: 1px solid #ccc; padding: 10px; background-color: #f0f8ff;"> <p>ALM Editions: Sprinter functionality is not available with Performance Center Edition. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p> </div> <p>For automated test instances, also includes one of the following:</p> <ul style="list-style-type: none"> •  LR Analysis Opens and displays results in LoadRunner Analysis. Available for the LR-SCENARIO test type. •  Launch Report Opens and displays the report in Unified Functional Testing. Available for the QUICKTEST_TEST test type. <p>The Launch Report button is enabled only if you have installed the Unified Functional Testing Add-in from the HPE Application Lifecycle Management Add-ins page. For more details on installing add-ins, refer to the <i>HPE Application Lifecycle Management Installation and Upgrade Guide</i>.</p> <ul style="list-style-type: none"> • Collected System Info link. Opens the System Information dialog box. Displays the collected system information, such as CPU, memory, and processes running on the machine when the test is run. Available for the SYSTEM-TEST test type. • Captured Desktop Image. Opens the captured image of the machine executing the system test. Available for the SYSTEM-TEST test type.

Select Testing Host Dialog Box

This dialog box enables you to select a testing host to run a test in a Functional test set.

To access	In the Test Lab module > Test Sets tab, click the Execution Grid. Select a test set from the grid. From within the grid, or from within the Test Instance Details dialog box, click the adjacent down arrow of the Testing Host field.
Relevant tasks	"How to Run Tests in ALM" on page 548
See also	"Test Lab Module Fields" on page 576

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

UI Element	Description
Select Host Properties	Enables you to select a set of properties to determine the testing host requested for this test instance. ALM provides the following property categories: <ul style="list-style-type: none"> Purpose. Testing hosts can have one or multiple purposes, based on the testing tools installed on the host. For more information about available testing host purposes, see the <i>HPE ALM Lab Management Guide</i>. Attributes. Testing hosts can be defined with attributes relating to the host's hardware or software specifications. Custom attributes can also be added from within Lab Management. For details, see the <i>HPE ALM Lab Management Guide</i>. Location. Testing hosts are created with a location property.
Host match	Lists the number of available testing hosts that match the selected host properties.
<Host Selection>	Enables you to select a testing host based on your criteria. ALM provides the following ways to select a testing host: <ul style="list-style-type: none"> Automatch host. ALM will automatically allocate and reserve a host based on the criteria provided in the Purpose, Location, and Attributes fields. For details, see "Host Allocation" on page 703. Use host. You can reserve a specific host from the list of hosts that ALM found based on the criteria provided in the Purpose, Location, and Attributes fields.

Test Instance Details Dialog Box

This dialog box enables you to view run details and results for a test instance. You can also view and set test run configuration information.

To access	In the Execution Grid or the Execution Flow, right-click a test and select Test Instance Details .
Important information	<ul style="list-style-type: none"> If you edit the test information, the changes you make are reflected in the Execution Grid. You can change the label of any of the fields in the Details tab. You can also add user-defined fields to the Details tab. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.
Relevant tasks	"How to View Test Runs" on page 753
See also	<ul style="list-style-type: none"> "Test Lab Module Fields" on page 576 "Test Runs Overview" on page 752 "System Tests Overview" on page 498

User interface elements are described below:

UI Element	Description
	Save. Saves the details.
 	First/Previous Next/Last Entity. Allows you to browse through the test instances in the Execution Grid. Available from: This element is only available when you open the Test Instance Details dialog box from the Execution Grid.
	Alerts. Opens the Alerts dialog box, enabling you to display alerts for the test instance. For details, see "Alerts Dialog Box" on page 96 .
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.

UI Element	Description
	<p>Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?".</p> <p>For example: a*b returns acb and adefb; a?b returns acb</p>
	<p>Flag for Follow Up. Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for the test instance. For more details, see ""Flag For Follow Up Dialog Box" on page 97".</p>
Details	<p>Displays run details of a test instance. For details on the available fields, see ""Test Lab Module Fields" on page 576".</p>
Runs	<p>Displays the results of all runs for the test instance. For details, see ""Test Instance Details - Runs View" below".</p> <p>Select a run and click the Run Details  button to view detailed results for the run.</p>
Execution Settings	<p>Displays run configuration information for the test instance. For details, see ""Test Instance Details - Execution Settings View" on page 602".</p>
Attachments	<p>Lists attachments that provide additional information about the currently selected test instance. For more details, see ""Attachments Page" on page 80".</p>
Linked Defects	<p>Lists the defects linked to the currently selected test instance. You can view, add, and remove defect links. For more details, see ""Linked Defects/Entities Page" on page 801".</p>
History	<p>Lists changes made to the currently selected test instance. For more details, see ""History Tab" on page 75".</p>

Test Instance Details - Runs View

This view enables you to compare the results of a test run with the results of previous runs. You can view run details and step results for all the runs of a selected test instance.

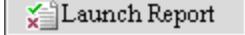
To access	In the Test Instance Details dialog box, click the Runs button on the sidebar.
Important information	<p>Default filter: By default, the grid is filtered to show test runs from the current calendar month only, in reverse chronological order (most recent first). To clear this filter, clear the value ThisMonth from the Exec Date field. For more details on filtering, see the ""Select Filter Condition Dialog Box" on page 65".</p>

Relevant tasks	"How to View Test Runs" on page 753
See also	"Test Instance Details Dialog Box" on page 598

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

UI Element	Description
	Delete. Deletes the selected runs from the grid.
	Details. Opens the Run Details dialog box, enabling you to view and edit additional details for the selected run. For more details, see "Run Details Dialog Box" on page 767.
	Refresh. Refreshes the grid so that it displays the most up-to-date runs based on the filters you have selected.
	Filter. Enables you to filter, sort, or group the run records. For more details, see "Filter Dialog Box" on page 54.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which columns to display and set the order in which the columns are displayed. For more details, see "Select Columns/Select Fields Dialog Box" on page 85.
	Send by Email. Opens the Send E-mail dialog box, enabling you to send a selected test run by email to recipients selected from a list, or to the tester. For more details, see "Send E-mail Dialog Box" on page 76.
	Text Search. Opens the text search pane in the lower part of the dialog box, enabling you to search for records in predefined fields. For more details, see "Text Search Pane" on page 72.
Continue Manual Run	Continue Manual Run. Resumes a manual test run. For more details, see "How to Run Tests Manually" on page 649.
<Filter status bar>	<p>Describes the filter currently applied to the grid. Located directly above the grid.</p> <p>Showing <x> results. Indicates the number of records currently displayed out of the total records.</p> <p>Retrieve all <x> results. Click to display all records.</p>

UI Element	Description
<Grid filter box>	<p>Located below the column names. Displays the filter that is currently applied to a column. If the filter box is empty, no filter is currently applied to the column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For more details, see "Select Filter Condition Dialog Box" on page 65.</p>
Comments	Comments about the currently selected run.
Criterion Results	<p>Displays the statuses of the criteria for the last run of the selected business process test instance using a certain configuration.</p> <p>Business Process Testing: Functionality related to test criteria is available only for business process tests. For details, see the <i>HPE Business Process Testing User Guide</i>.</p>
Legend	<p>Displays the color coding used to indicate the execution status of the test run instances.</p> <p>A status can be one of the following:</p> <ul style="list-style-type: none"> • Blocked. One or more steps in the test instance has an execution status of Blocked. • Failed. One or more steps in the test instance has an execution status of Failed, and none has an execution status of Blocked. • No Run. All the steps in the test instance have an execution status of No Run. • Not Completed. One or more steps in the test instance has an execution status of Not Completed, and none has an execution status of Blocked or Failed. Alternatively, steps in the test instance have execution statuses of Passed and No Run. • N/A. The test instance has no steps, or one of its steps has an execution status of N/A. • Passed. All the steps in the test instance have an execution status of Passed. • <User-defined>. All the steps in the test instance have the same customized, user-defined execution status.

UI Element	Description
Report	<p>Displays results and test step details of the selected run.</p> <p>For automated test instances, also includes one of the following:</p> <ul style="list-style-type: none"> •  LR Analysis Opens and displays the results in LoadRunner Analysis. Available for the LR-SCENARIO test type. •  Launch Report Opens and displays the report in UFT . Available for the GUI-TEST test type. <p>The Launch Report button is only enabled if you have installed the Unified Functional Testing Add-in from the HPE Application Lifecycle Management Add-ins page. For more details on installing add-ins, refer to the <i>HPE Application Lifecycle Management Installation and Upgrade Guide</i>.</p> <ul style="list-style-type: none"> • Collected System Info link. Opens the System Information dialog box. Displays the collected system information, such as CPU, memory, and processes running on the machine when the test is run. Available for the SYSTEM-TEST test type. • Captured Desktop Image. Opens the captured image of the machine executing the system test. Available for the SYSTEM-TEST test type.

Test Instance Details - Execution Settings View

This view enables you to view or set the test parameter values for a manual test instance or an automated test instance. You can also view and edit the On Failure rules for an automated test instance.

To access	In the Test Instance Details dialog box, click the Execution Settings button on the sidebar.
Relevant tasks	"How to View Test Runs" on page 753
See also	"Test Instance Details Dialog Box" on page 598

This section contains the following topics:

- ["Parameters Tab" on the next page](#)
- ["Automated Tab" on page 604](#)

- "Run Events Tab" on the next page
- "Test Iterations Tab" on page 605
- "Data Tab" on page 606

Parameters Tab

This tab enables you to view or set actual parameter values for manual test instances. The Parameters tab shows all the test parameters that are used in the test steps, including parameters of called tests that have not already been assigned actual values. Actual values that you assign for parameters in the test instance are used for all test runs of the test instance.

Business Process Testing: To view and edit additional parameters for business process test instances, see "[Test Iterations Tab](#)" on page 605.

For more information, see "[Test Parameters Overview](#)" on page 440

User interface elements are described below:

UI Element (A - Z)	Description
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which columns to display and set the order in which the columns are displayed. For more details, see " Select Columns>Select Fields Dialog Box " on page 85.
 Copy Default Values	Uses a parameter's default value as its actual value. Select a parameter and click the Copy Default Values button.
Actual Value	The value that is used for the parameter during the test run. To add or modify the actual value, type the value in the Actual Value column.
Default Value	The default value of the selected parameter.
Description	A description of the parameter.
Parameter Name	The parameter name.

Automated Tab

This tab enables you to set parameter values and other configuration options for automated test instances.

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

UI Element (A - Z)	Description
<Automated test configuration options>	You may be able to set additional configuration options, depending on the type of automated test you are running. For details, refer to the user guide for your automated test.
Parameter Value	Displays the value of each parameter. Under Value , you can edit parameter values. Your changes are implemented in the next test run.

Run Events Tab

This tab enables you to view and edit the On Failure rules for an automated test instance.

Important information	If you change the failure rules, your changes are implemented in the next test run.
See also	To set default On Failure rules for a test set, see " Automation Tab " on page 610.

User interface elements are described below:

UI Element (A - Z)	Description
Cleanup test before rerun	Specifies the cleanup test ALM runs before each rerun of the selected test.
Maximum test reruns	Specifies the number of times an automated test should be rerun upon failure.

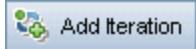
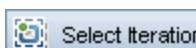
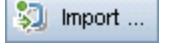
UI Element (A - Z)	Description
On failure	<p>Specifies the action for ALM to take when a test run fails. Options include:</p> <ul style="list-style-type: none"> • Do nothing. • Stop the test set. <p>This option is not available for Functional test sets.</p> <ul style="list-style-type: none"> • Rerun the test. Runs the test again up to the maximum number of times, as specified in the Maximum test reruns box.

Test Iterations Tab

This tab enables you to view and edit the run-time values for each parameter of each iteration of a business process test instance.

Important information	This tab is available for Business Process Testing only.
See also	For task details, see the <i>HPE Business Process Testing User Guide</i> .

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

UI Element (A - Z)	Description
 Add Iteration	Add Iteration. Adds an iteration for the entity (component, group, test, or flow).
 Delete Iteration	Delete Iteration. Deletes the selected iteration for the entity (component, group, test, or flow).
 Select Iterations ...	Select Iterations. Opens the Select Iterations dialog box, which enables you to select which of the defined iterations you want to run during the test run. You can specify one, all, or a range of iterations.
 Import ...	Import/Export. Enables you to import component parameter values for iterations from a .csv (comma separated value) file, and to save component parameter values to a .csv file.
 Export ...	

UI Element (A - Z)	Description
<values>	<p>Displays the actual value of the input parameter. You can modify the value by clicking the arrow in the relevant cell, which opens the Set Value dialog box.</p> <p>If no value is specified, the default value for that parameter is used. If no default value is specified, no value is displayed and the entity may not run correctly.</p> <p>Values are saved and compared as strings, but can be specified according to different value types.</p> <p>Test or flow parameters (parameters whose values are to be taken from the business process test or flow), are shown in {} brackets. This instructs ALM to treat the parameter as a parameter and not as a fixed value.</p>
<parameter columns>	Displays the names for each parameter in the displayed iteration.
Iteration # columns/rows	Displays the current run-time values for each parameter in each iteration.
Parameter Description	<p>Displays the description for the parameter and its original source entity (business component, test, or flow).</p> <p>Parameter descriptions are initially entered in the module in which they were created (the Business Components module or the Test Plan module), or in UFT for automated components.</p>
Value columns	Displays the run-time value for each parameter in the displayed iteration.

Data Tab

This tab enables you to view dynamic data settings for business process and UFT test configurations.

Important information	<p>This tab is available for test configurations that access dynamic data. For details, see "Data for Test Configurations" on page 469.</p> <p>When accessing this tab from the Execution Settings View, some of the information in this tab is read-only.</p>
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Requested Hosts Tab

This tab enables you to manage which hosts are requested for a Functional test set execution.

To access	<ul style="list-style-type: none">• In the Test Lab module > Test Sets tab, select a test set and click the Requested Hosts tab.• In the Build Verification module, select a build verification suite from the build verification suite's tree, and click the Requested Hosts tab.
Important Information	<p>ALM Editions: Functional test sets are available only in ALM Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p> <ul style="list-style-type: none">• This tab is available only for Functional test sets.• Even if more than one test instance in a test set requires a particular host or type of host, only one host request entry is created for each host or host type.• If you manually change the host requests, ALM places the selected test set or build verification suite into manual mode. If you add another test to the test set, ALM will only add a new testing host for the new test instance if the already existing host requests cannot cover the new test instance. To restore auto mode, click the Restore Default button. For more details, see "Functional Test Execution Overview" on page 630.
Relevant tasks	"How to Create Test Sets" on page 590
See also	<ul style="list-style-type: none">• "Test Set Specification Overview" on page 588• "Test Lab Module Window" on page 554• "Functional Test Execution Overview" on page 630

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

UI Element	Description
 Add Automatch Host	<p>Add Automatch Host. Opens the Select Automatch Host dialog box, enabling you to add a new host request based on criteria you specify. ALM will automatically allocate and reserve a testing host which fits the criteria.</p> <p>Note: You can block hosts from being included in the automatch selection. For details, see the <i>HPE ALM Lab Management Guide</i>.</p>
 Add Specific Host	<p>Add Specific Host. Opens the Select Specific Testing Host dialog box, enabling you to request a specific testing host. You can select from the remaining available hosts in the host pool of the project.</p> <p>Note: You can make specific hosts available only to specific users. For details, see the <i>HPE ALM Lab Management Guide</i>.</p>
 Edit Host Request	<p>Edit Host Request. Enables you to edit the selected host request.</p>
 Remove.	<p>Remove. Removes the selected host request.</p> <p>Caution: If you remove a host request that is required for a specific test instance, the test will not be able to run.</p>
 Restore Default	<p>Restore Default.</p> <ul style="list-style-type: none"> Resets the host requests to their default state. ALM will remove all current host requests and create a default set of requests. One host request will be created for each type of test in the test set. Restores the selected test set to auto mode. For more details, see "Functional Test Execution Overview" on page 630.
 Resolve Missing Hosts	<p>Resolve Missing Hosts. Enables you to automatically generate the remaining host requests if the current host requests are insufficient for executing the selected test set. The requested hosts will be determined based on the test instances in the Execution Grid.</p>

UI Element	Description
	<p>Go to Host. Opens the Testing Hosts module, displaying the selected host.</p> <p>Available for: Specific hosts only.</p>
	<p>Refresh All. Refreshes the grid so that it displays the most up-to-date host requests based on the filters you have selected.</p>
	<p>Set Filter/Sort. Enables you to filter, sort, or group the host requests. For more details, see "Filter Dialog Box" on page 54.</p>
<filter status bar>	<p>Describes the filter currently applied to the grid. Located directly above the grid filter boxes.</p>
Testing Host	<p>Displays the name of the host specified in the host request.</p> <p>If the value Automatch is displayed in this field, it indicates that no particular host was specified. ALM will automatically allocate and reserve a host based on the criteria in the Purposes, Location, Amount, and Attributes fields. For details about how ALM allocates and reserves testing hosts, see "Host Allocation" on page 703.</p>
Amount	<p>Displays the number of hosts specified in the host request.</p>
Purposes	<p>Lists the purposes specified in the host request. For more details, see "Test Lab Module Fields" on page 576.</p>
Location	<p>Displays the host location specified in the host request.</p>
Attributes	<p>Lists the host attributes specified in the host request.</p>
Messages	<p>Displays all messages related to host request validation.</p> <p>Example: If a test set cannot run because the requested hosts have not been reserved, ALM will inform you that the tests cannot be run and provide the reason.</p>

Automation Tab

This tab enables you to set test set notification rules and On Failure rules to define what action ALM takes when selected events occur during a test set run. For example, you can arrange for ALM to send email to specified users when a test fails, or to rerun a test upon failure.

To access	In the Test Lab module > Test Sets tab, select a test set and click the Automation tab.
Important Information	The screen has different options depending on if you run a Functional test set using server-side execution or a Default test set using the Automatic Runner.
Relevant tasks	"How to Create Test Sets" on page 590
See also	<ul style="list-style-type: none">• "Test Set Specification Overview" on page 588• "Test Lab Module Window" on page 554

On Automated Test Failure Area

You can set On Failure rules for a test set to instruct ALM in the event that an automated test in the test set fails.

User interface elements are described below:

UI Element	Description
Rerun test	Instructs ALM to rerun an automated test if it fails. If selected, the following options are available: <ul style="list-style-type: none">• Maximum test reruns. Specifies the number of times an automated test should be rerun upon failure.• Cleanup test before rerun. Runs a cleanup test before each test rerun. Click the down arrow to select a cleanup test.

UI Element	Description
On final failure	<p>Specifies the action for ALM to take on the final failure of any test in the test set. Includes the following options:</p> <ul style="list-style-type: none"> • Do nothing. • Stop the test set. • Rerun the test set. Runs the test set again up to the maximum number of times as specified in the Maximum test set reruns box. <p>Available for: Default test sets only.</p>
Maximum test set reruns	<p>The number of times a test set should be rerun on final failure of any test in the test set.</p>
Settings per test...	<p>Opens the On Test Failure dialog box, enabling you to change the default failure rules for a test in the test set. For details, see ""On Test Failure Dialog Box" on page 618.</p>

Notification Area

You can instruct ALM to send an email to a specified user if certain events occur.

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

UI Element	Description
<Message area>	<p>The text for the email ALM sends to the specified user.</p>
Send email	<p>Notifies a specified user if any of the selected events occur. Includes the following options:</p> <p>For Default test sets:</p> <ul style="list-style-type: none"> • Any test finishes with status "Failed". • Environmental failure (network problems, hardware failure, etc.). Environmental failure could include, for example, function calls not returning, access violations, version incompatibility between application components, a missing DLL, or inadequate permissions. • All tests in the Automatic Runner that were run have finished. <p>For Functional test sets:</p> <ul style="list-style-type: none"> • Send email in the event of any test with status "Failed".

UI Element	Description
	<p>The user who should receive the email.</p> <p>Enter a valid email address or user name. Alternatively, click the To button to select users. The Select Recipients dialog box opens. Select the users or user groups to which you want to send the email.</p> <p>Note: For Functional test sets, the default e-mail sender is the timeslot creator.</p>

Execution Summary Area

You can instruct ALM to send a summary of test results in an email to specified users when test set execution completes.

User interface elements are described below:

UI Element	Description
Send summary of results after test set execution	Sends a summary report of test results in an email to specified users after test set execution is complete.
	<p>Opens the Select Columns dialog box, enabling you to specify which test run fields are displayed in the execution summary.</p> <p>Available for: Default test sets only.</p>
	Enter a valid email address or user name. Alternatively, click the To button to select users.

New Test Set Dialog Box

This dialog box enables you to add a test set to a test set folder.

To access	In the Test Lab module > Test Sets tab, right-click a test set folder and select New Test Set .
Important information	You cannot add test sets directly to the Root folder. You must first add a folder to the Root folder.
Relevant tasks	"How to Create Test Sets" on page 590
See also	<ul style="list-style-type: none"> • "Test Set Specification Overview" on page 588 • "Test Lab Module Window" on page 554

User interface elements are described below:

UI Element	Description
Attachments	Enables you to add attachments that provide additional information about the test set. For more details, see " Attachments Page " on page 80.
Details	<p>Lists test set fields. Required fields are displayed in red. For details on the available fields, see "Test Lab Module Fields" on page 576.</p> <p>Tip: Clicking in the Description field on this page displays a toolbar for formatting and spell checking the text.</p>
Name	<p>The name you assign to the new test set.</p> <p>Syntax exceptions: A test set name cannot include the following characters: \^, " *</p>
Test Set Folder	Displays the preselected folder name.
Type	The test set type. Select the test set type that corresponds to the types of tests you are grouping together. For more details, see " Test Set Specification Overview " on page 588.

Select Tests Pane

This pane enables you to select tests for inclusion in a test set. ALM adds instances of the selected tests to the test set. Each instance contains a defined test configuration.

To access	In the Test Lab module > Test Sets tab, select a test set and click the Execution Grid tab or the Execution Flow tab. Then click the Select Tests button.
Important information	<ul style="list-style-type: none"> You can include instances of the same test in different test sets or add more than one instance to the same test set. You cannot add external tests (EXTERNAL-TEST test type ) to a test set. For more details on external tests, see "Integrating External Tests Overview" on page 668. If you are adding a folder to the test set, only tests that match the current filter in the Test Plan Tree tab or Requirements Tree tab are added. Performance Center: You can view and add performance tests to a Performance test set type only. For more details, see "New Test Set Dialog Box" on the previous page.

Relevant tasks	"How to Create Test Sets" on page 590
See also	<ul style="list-style-type: none"> • "Test Set Specification Overview" on page 588 • "Test Lab Module Window" on page 554 • "Test Configuration Overview" on page 468

Test Plan Tree Tab

Displays the test plan tree, enabling you to select tests to add to the test set.

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

UI Element	Description
	<p>Add Tests to Test Set. Adds an instance of the selected test to the test set, including any test configurations associated with the selected test.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note:</p> <ul style="list-style-type: none"> • If any of the tests you are adding are already in the test set, the Create Instance dialog box opens. It displays the test configurations that already exist in the test set and how many instances there are. Select the test configurations you still want to add to the test set and click Create. • If you are adding tests to a Functional test set, you cannot add Performance tests </div>
	<p>Show Test Details. Opens the Test Details dialog box for the selected test in read-only mode.</p>
	<p>Go to Entity in Module Tree. Navigates to the location of the selected entity in that entity's module, and highlights the entity.</p>

UI Element	Description
	Refresh All. Refreshes the tree to display the most up to date information.
	<p>Set Filter/Sort. Includes the following options:</p> <ul style="list-style-type: none"> • Set Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort tests. • Clear Filter/Sort. Clears any filters or sorting that you have applied. <p>For more details, see "Filter Dialog Box" on page 54.</p>
	Find. Searches for a specific test in the tree.
	Go to Test by ID. Opens the Go to Test dialog box, enabling you to locate the test in the tree according to Test ID.
	Show/Hide. Shows/hides the Test Configurations pane.
<Filter status bar>	Describes the filter currently applied to the tree. Located directly above the tree.
Test Configurations pane	Enables you to add selected test configurations to the test set. For more details, see " Test Configurations Pane " on page 488.

Requirements Tree Tab

Displays the requirements tree, enabling you to select tests covering requirements to add to the test set.

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

UI Element	Description
	<p>Includes the following options:</p> <ul style="list-style-type: none">• Add Tests Covering Requirement. Adds all tests that cover a selected requirement. The associated test configurations are added to the test set.• Add Tests Covering Requirement and Children. Adds all tests that cover a selected requirement and its children. The associated test configurations are added to the test set. <p>Note: If any of the tests you are adding are already in the test set, the Create Instance dialog box opens. It displays the test configurations that already exist in the test set and how many instances there are. Select the test configurations you still want to add to the test set and click Create.</p> <p>Tip:</p> <ul style="list-style-type: none">• You can also add tests by double-clicking or dragging a folder or requirement in the tree to the Execution Grid or Execution Flow.• To add selected tests that cover a selected requirement to the test set, select a test from the Test Coverage pane.
	<p>Show Requirement Details. Opens the Requirement Details dialog box for the selected requirement in read-only mode.</p>
	<p>Go to Entity in Module Tree. Navigates to the selected entity's location in that entity's module, and highlights the entity.</p>
	<p>Refresh All. Refreshes the tree to display the most up to date information.</p>

UI Element	Description
	<p>Set Filter/Sort. Includes the following options:</p> <ul style="list-style-type: none"> • Set Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort tests. • Clear Filter/Sort. Clears any filters or sorting that you have applied. <p>For more details, see "Filter Dialog Box" on page 54.</p>
	<p>Find. Searches for a specific test in the tree.</p>
	<p>Go to Requirement by ID. Opens the Go to Requirement dialog box, enabling you to locate the requirement in the tree according to Requirement ID.</p>
	<p>Show/Hide. Shows/hides the Test Coverage pane.</p>
<Filter status bar>	<p>Describes the filter currently applied to the tree. Located directly above the tree.</p>
Test Coverage pane	<p>Enables you to add selected tests that cover a selected requirement to the test set. Select a test and click Add Test . The associated test configurations are added to the test set.</p>

Test Set Details Dialog Box

This dialog box enables you to view and update details of a test set.

To access	In the Test Lab module > Test Sets tab , select a test set in the test sets tree and click the Test Set Details button  .
Relevant tasks	"How to Create Test Sets" on page 590
See also	"Test Lab Module Window" on page 554

User interface elements are described below:

UI Element (A - Z)	Description
	Save. Saves the details.
	Send by Email. Opens the Send E-mail dialog box, enabling you to send a test set by email to recipients selected from a list. For more details, see " Send E-mail Dialog Box " on page 76.
	Check Spelling. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Details	Displays details of the currently selected test set. Required fields are displayed in red. For details on available fields, see " Test Lab Module Fields " on page 576.
Attachments	Lists attachments that provide additional information about the currently selected test set. For details, see " Attachments Page " on page 80.
Linked Defects	Lists the defects linked to the currently selected test set. For details, see " Linked Defects/Entities Page " on page 801.
History	Lists changes made to the currently selected test set. For details, see " History Tab " on page 75.

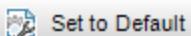
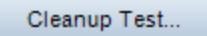
On Test Failure Dialog Box

This dialog box enables you to change the default failure rules for tests in a test set. These rules instruct ALM in the event that an automated test in the test set fails.

To access	In the Automation tab, click the Settings per test button.
Important information	This dialog box displays only automated tests in the test set.
Relevant tasks	"How to Create Test Sets" on page 590

See also	"Automation Tab" on page 610
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User interface elements are described below:

UI Element	Description
 Set to Default	Resets the default failure rules according to the settings of a selected test. The default failure rules are defined in the Automation tab.
 Clear	Clears the settings for a selected test.
	Copy/Paste Settings. Copies the settings from one test to another. Select a test and click the Copy Settings button. Select another test and click the Paste Settings button.
Reruns	Specifies the number of times an automated test should be rerun upon failure. Select one or more tests in the grid and select a number in the Reruns box on the toolbar. To specify the number of reruns for a specific test, you can also select the number from the Number of Reruns column.
 Cleanup Test...	Opens the Select Test dialog box, enabling you to select a cleanup test. ALM runs the cleanup test before each rerun of the selected test. Select one or more tests in the grid and click the Cleanup Test button. To select a cleanup test for a specific test in the test set, you can also click the down arrow in the Cleanup Test Before Rerun column.
Automated Test	The Automated Test column displays all automated tests in the selected test set.

Paste Test Set Folders To Target Project Dialog Box

This dialog box enables you to select the way in which test sets are copied from one project to another project.

To access	<ol style="list-style-type: none">In the source project, right-click a test set or a test set folder and select Copy.Open the target project in a separate browser window.In the target project, right-click a test set folder below which you want to insert the copied test set or test set folder, and select Paste.
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Important information	<ul style="list-style-type: none">Test run information is not copied.The source and target projects must use the same ALM version and patch level.
See also	"Test Lab Module Window" on page 554

User interface elements are described below:

UI Element	Description
Copy Test Set Folders and link to existing related entities	ALM copies the test sets or test set folders and pastes them into the target project. The copied test sets or test set folders are linked to existing test resources and called tests with the same name and path. If a related test resource or a test does not exist in the target project, ALM copies it to the target project.
Copy Test Set Folders and related entities	ALM copies the test sets or test set folders along with the related test resources and called tests, and pastes them into the target project. If a related test resource or a called test already exists in the target project, the copied related test resource or called test is renamed to resolve the duplicate name.
Copy Test Set Folders without copying related entities	ALM copies the test sets or test set folders without copying the related test resources or called tests, and pastes them into the target project. The copied items are not linked to any related entities.

Chapter 32: Test Run Schedules

This chapter includes:

- [Test Run Schedules Overview](#) 622
- [How to Schedule Test Runs](#) 622
- [Test Run Schedules User Interface](#) 623

Test Run Schedules Overview

You can control the execution of test instances in a test set. Using the Execution Flow tab of the Test Lab module, you can specify a date and time, and set conditions for executing a test instance. A **condition** is based on the results of another specified test instance in the Execution Flow. By setting conditions, you can instruct the Test Lab module to postpone execution of the current test instance until the other specified test instance has either finished running or passed. You can also set the sequence in which to execute the test instances.

For task details, see "[How to Schedule Test Runs](#)" below.

How to Schedule Test Runs

This task describes how to schedule test runs in the Execution Flow tab.

To learn more about scheduling test run, see "[Test Run Schedules Overview](#)" above.

Note: This task is part of a higher-level task. For details, see "[How to Run Tests in ALM](#)" on [page 548](#).

This task includes the following steps:

- "[Display a test set](#)" below
- "[Schedule a test run](#)" below
- "[View the execution flow diagram](#)" on the next page

1. Display a test set

In the Test Lab module, select a test set from the test lab tree. Click the **Execution Flow** tab. For user interface details, see ["on page 624](#).

2. Schedule a test run

- a. In the Execution Flow tab, right-click a test instance and choose **Test Run Schedule**. The Run Schedule dialog box opens.
- b. In the Execution Conditions tab, specify the execution conditions for the test instance. For user interface details, see "[Execution Condition Page](#)" on [page 625](#).
- c. In the Run Schedule dialog box, click the **Time Dependency** tab. Specify the date and time for running each test instance. For user interface details, see "[Time Dependency Page](#)" on [page 626](#).

Example: You can determine that **test_2** will run only if **test_1** passed, and **test_3** will run only if **test_2** passed. **test_1** is scheduled to run at 9:00 AM.

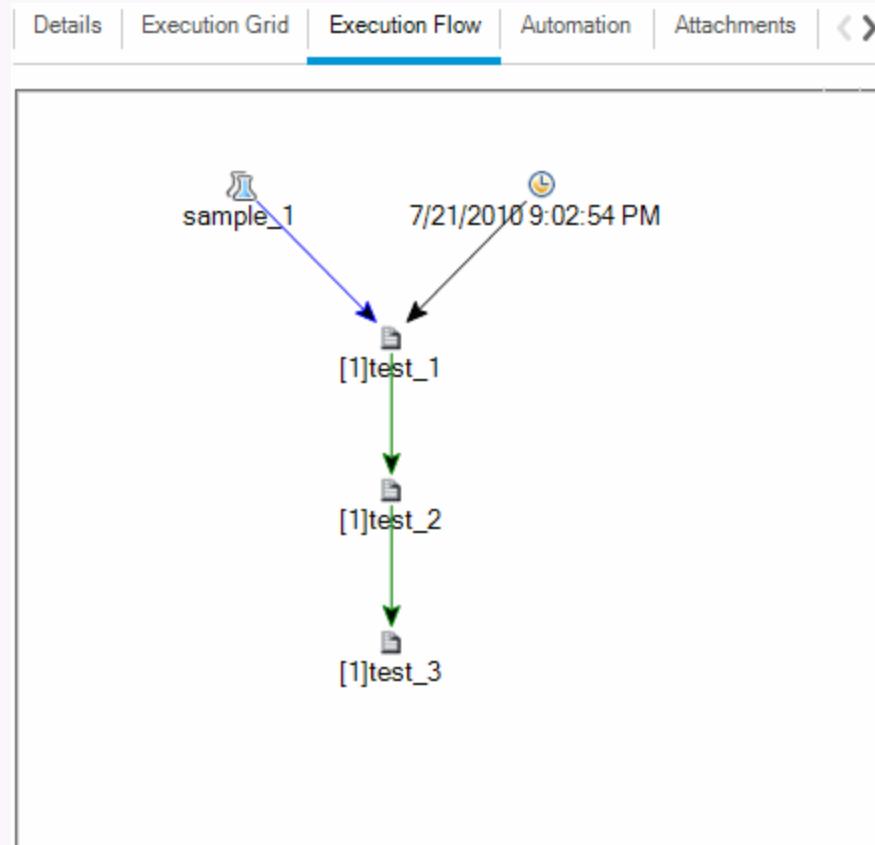
3. View the execution flow diagram

You can change the way the Execution Flow is displayed. This includes zooming in and out of the diagram, rearranging the tests in a hierarchical layout, refreshing the diagram, and displaying full test names in the diagram. You can also copy the diagram to the Clipboard.

For user interface details on the menus and buttons available in the Execution Flow tab, see "[Test Lab Module Menus and Buttons](#)" on page 556.

For user interface details on the various elements in the Execution Flow diagram, see ["on the next page](#).

Example: The scheduled test run is displayed in the Execution Flow tab.



Test Run Schedules User Interface

This section includes:

- [Test Run Schedules Overview](#) 624
- [Execution Condition Page](#) 625

- Time Dependency Page 626

Execution Flow Tab

This tab displays test data in a diagram. You use the Execution Flow to control the way your test instances are executed. You can specify when and under what conditions you want a test to be executed.

To access	In the Test Lab module > Test Sets tab, select a test set and click the Execution Flow tab.
Relevant tasks	<ul style="list-style-type: none"> • "How to Schedule Test Runs" on page 622 • "How to Run Tests in ALM" on page 548
See also	<ul style="list-style-type: none"> • "Test Run Schedules Overview" on page 622 • "Test Execution Overview" on page 546 • "Test Lab Module Window" on page 554

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

UI Element	Description
< Test Lab module menus and buttons >	For details on the menu options and toolbar buttons available in the Test Lab module, see "Test Lab Module Menus and Buttons" on page 556.
< Test Lab module icons >	For details on the icons available in the Test Lab module, see "Test Lab Module Icons" on page 575.
< Execution Flow diagram area >	<p>Displays the test instances with conditions in a diagram.</p> <ul style="list-style-type: none"> • A blue line → arrow indicates that the test instance is to be executed after the previous test instance, with no conditions. • A green line → arrow indicates that the test instance is to be executed only if the previous test instance has status Passed. • A black line → arrow indicates that the test instance is to be executed only if the previous test instance has finished running. • When a test instance is time-dependent, a Time Dependency  icon is added to the diagram.
< Select Tests pane >	Displays the Test Plan Tree tab and the Requirements Tree tab, enabling you to select tests to add to the selected test set. For details, see "Select Tests Pane" on page 613.

Execution Condition Page

This page enables you to specify under what conditions you want a test instance to be executed.

To access	Use one of the following in the Execution Flow tab: <ul style="list-style-type: none"> Right-click a test instance and choose Test Run Schedule. The Run Schedule dialog box opens and displays the Execution Conditions tab. Right-click a condition arrow and choose Execution Condition. The Execution Condition dialog box opens.
Important information	You can also add a condition directly in the Execution Flow. Click a test icon (not the test name) and drag the arrow to another test. By default, the condition is set to Finished . To change the condition, double-click the condition arrow and select Passed .
Relevant tasks	"How to Schedule Test Runs" on page 622
See also	<ul style="list-style-type: none"> "Time Dependency Page" on the next page "Test Run Schedules Overview" on page 622

User interface elements are described below:

UI Element	Description.
	New Execution Condition. Opens the New Execution Condition dialog box, enabling you to define a new execution condition. Available from: The Run Schedule dialog box > Execution Conditions tab.
	Edit Execution Condition. Opens the Execution Condition dialog box, enabling you to edit an execution condition. Available from: The Run Schedule dialog box > Execution Conditions tab.
	Delete Execution Condition. Deletes a selected execution condition. Available from: The Run Schedule dialog box > Execution Conditions tab.
Test runs only if	The execution conditions of the specified test instance.
Test	The test instance on which you want the current test to be dependent.

UI Element	Description.
is	<p>Specifies the execution condition. It includes the following options:</p> <p>Finished. Executes the current test instance only after the specified test instance has finished executing.</p> <p>Passed. Executes the current test instance only if the specified test instance has finished executing and has passed.</p>
Comments	<p>Comments regarding the condition.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p> <p>Available from: The Execution Condition dialog box.</p>

Time Dependency Page

This page enables you to specify when you want a test to be executed.

To access	<p>Use one of the following in the Execution Flow tab:</p> <ul style="list-style-type: none"> Right-click a test instance and choose Test Run Schedule. Click the Time Dependency tab. Right-click the Time Dependency  icon connected to a test instance. The Time Dependency dialog box opens.
Important information	<p>You can schedule the test run date and time by clicking the Add Time Dependency To Flow  button, and linking the arrow from the icon to a test instance. Double-click the icon to set the time in the Time Dependency dialog box.</p>
Relevant tasks	<p>"How to Schedule Test Runs" on page 622</p>
See also	<ul style="list-style-type: none"> "Execution Condition Page" on the previous page "Test Run Schedules Overview" on page 622

User interface elements are described below:

UI Element	Description.
Run at any time	The test runs at a non-specific time.

UI Element	Description.
Run at specified time	<p>The test runs at a specific time. You can specify the following:</p> <ul style="list-style-type: none">• Date. Indicates the date for running the test instance.• Time. Indicates the time for running the test instance.

Chapter 33: Functional Test Execution

This chapter includes:

- [Functional Test Execution Overview](#) 630
- [How to Run Functional Tests](#) 632
- [Functional Test Execution User Interface](#) 634

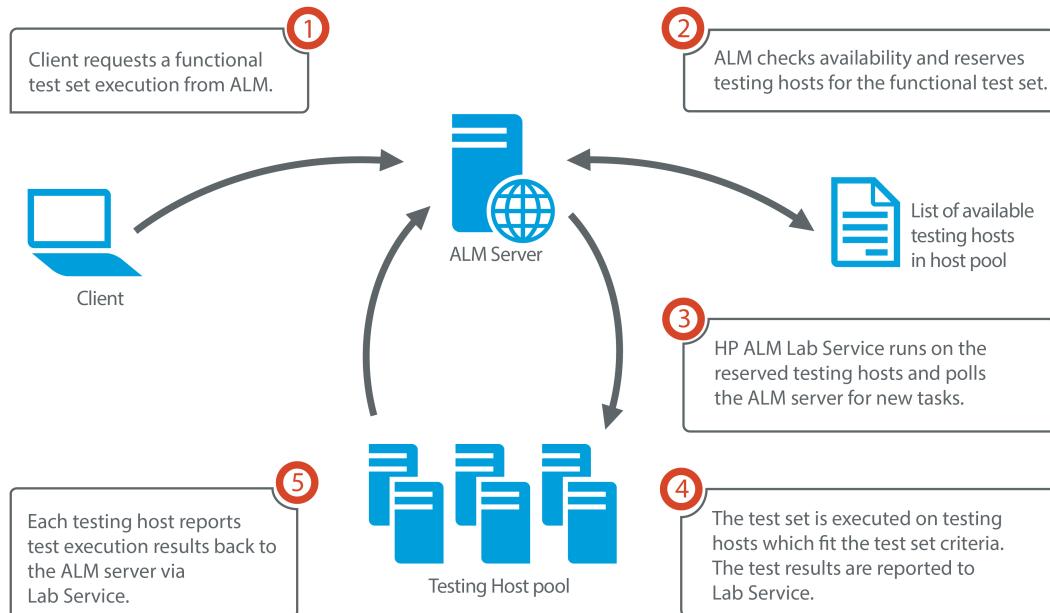
Functional Test Execution Overview

ALM Editions: Functional test execution is available only for users with ALM Edition. For more information about ALM editions and their functionality, see "["ALM Editions" on page 125](#). To find out what edition of ALM you are using, ask your ALM site administrator.

You can run server-side Functional and Performance tests from HPE Application Lifecycle Management (ALM). Server-side tests run on remote testing hosts. A **testing host** is any machine registered with Lab Management on which a testing tool has been installed.

The following workflow diagram illustrates how functional test set execution occurs in ALM:

Functional Test Execution in ALM



You can use ALM to run server-side tests immediately, or you can reserve resources for a test execution in the future.

For functional tests, you can run an entire test set, or run specific test instances from a test set.

Server-side tests are a key component in ALM's Continuous Delivery solution. They can be bundled into a build verification suite, making them part of an automated, end-to-end deployment and testing framework that makes application development more efficient, reliable, and quick. For more information about the build verification suites and the Continuous Delivery process, see "["Deploying and Testing your Application in ALM" on page 550](#).

Testing Host Properties

Test instances added to a functional test set have a **Testing Host** property field in the **Execution Grid**. You can use this field to require that the testing host used to execute the selected test instance has certain properties. ALM enables you to define the following properties: **Purpose**, **Attributes**, and **Location**. For more information, see "[Select Testing Host Dialog Box](#)" on page 597.

ALM adds the required hosts for the test instance to the grid of the **Requested Hosts** tab.

Requested Hosts

When ALM executes a server-side test or test set, it uses the testing hosts in the **Requested Hosts** tab (found in **Testing > Test Lab**). You can view, modify, add, or delete the testing hosts reserved for the selected test set in the **Requested Hosts** tab.

Caution: ALM adds host requests to the grid regardless of whether or not such a host exists in the testing host pool. If the grid includes a request for a host that is not in the testing pool, the test set becomes invalid.

ALM manages testing host requests in two different modes:

- **Auto mode.**

In ALM's default **auto mode**, each time you add a test instance to a test set, ALM checks if the host requested by this new test instance (whether it is a specific host or an automatch host) was already requested for the selected test set. If the new test instance contains a host request which does not already exist in the **Requested Hosts** grid, ALM automatically adds a new testing host to the test set. If the grid already contains the host being requested for the new test instance, no new hosts are added.

Example: For example, if the test set already contains a host request for a host in London with a VAPI-XP purpose, and you add a new test instance which requires an automatch host with a VAPI-XP purpose, ALM adds a new host request to the grid for the automatch host. Even though the London host request technically covers the new automatch host, they are not the same, so ALM adds a new automatch host request to the grid.

- **Custom mode.**

You may decide to manually edit the hosts being requested for a selected test set. For example, you may have only one testing host available in your pool and it can cover a few different test instances. In that case, you modify the hosts in the **Requested Hosts** tab and arrange for only a single host. Once you make a change in the grid, ALM puts the test set into **custom mode**.

In custom mode, ALM automatically adds new host requests for additional test instances only when it is necessary to maintain the validity of the test set. This is the case when the added test instance cannot possibly be satisfied by the already existing host requests for that test set.

Example: For example, if the test set already contains a host request for an automatch host with a VAPI-XP purpose, and you add a new test instance which requires a host in London with a VAPI-XP purpose, ALM adds a host request for the new test instance because the first automatch host request does not necessarily cover the London host request.

But if your test set already contains a host request for a host in London with a VAPI-XP purpose, and you add a new test instance which requires an automatch host with a VAPI-XP purpose, ALM does not add a new host request to the grid. The London host request suffices for the new test instance, therefore ALM does not add a new host request.

HP ALM Lab Service

When executing a server-side test, ALM with the HP ALM Lab Service agent installed on the assigned testing host and requests that the test be run. The Lab Service agent exports the test results back to ALM.

For more information about Lab Service, see the *HPE ALM Lab Management Guide*.

Execution Report

When you run a functional or performance test set, the **Execution Report** page opens, keeping you updated with the status of your test execution. You can also view the Execution Report page from the Test Runs module. For details, see "[Execution Report Page - Desktop Client](#)" on [page 639](#).

How to Run Functional Tests

ALM Editions: Functional test execution is available only for users with ALM Edition. For more information about ALM editions and their functionality, see "[ALM Editions](#)" on [page 125](#). To find out what edition of ALM you are using, ask your ALM site administrator.

This task describes how to run server-side functional tests and test sets. To learn more about running functional tests, see "[Functional Test Execution Overview](#)" on [page 630](#).

Note: This task is part of a higher-level task. For details, see "[Deploying and Testing your Application in ALM](#)" on [page 550](#).

This task includes the following steps:

- "Prerequisites" below
- "Run Functional tests immediately" below
- "Schedule Functional tests for the future" below
- "Results" below

1. Prerequisites

- **Set up testing hosts for server-side test execution.** Before running server-side tests, you must set up and register testing host machines for the remote execution of the tests included in your Functional test sets. For information on setting up testing hosts for server-side tests, see the *HPE ALM Lab Management Guide*.
- **Create automated tests and Functional test sets.** Use the Test Plan module to create automated tests and the Test Lab module to define and fill Functional test sets with your automated tests. For details, see "[How to Create Tests](#)" on page 386 and "[How to Create Test Sets](#)" on page 590.

2. Run Functional tests immediately

You can arrange for the tests in a Functional test set to run immediately on a remote testing host.

In the **Test Lab** module > **Test Sets** tab, do one of the following:

- To run selected Functional tests, select a test set in the Test Set tree. Click the **Execution Grid** tab, select one or more tests and click the **Run** button.
- To run all the tests in a Functional test set, select a Functional test set and click the **Run Test Set** button.

In addition, if your system is integrated with HP Continuous Delivery Automation (CDA), you can instruct ALM to provision machines and deploy your build packages on a dynamic environment. For more information on the integration between ALM and CDA, see "[How to Work with AUT Environments](#)" on page 361.

For user interface details, see "[Run <Entity> Dialog Box](#)" on page 635.

3. Schedule Functional tests for the future

You can arrange for the tests in a Functional test set to run in the future using timeslots. By scheduling a timeslot, you reserve the testing resources needed to run your test in advance.

For details, see "[How to Reserve Testing Timeslots in ALM](#)" on page 709.

For user interface details, see "[Timeslot Reservation Dialog Box](#)" on page 727.

4. Results

For Functional tests and test set runs, ALM generates an Execution Report. The Execution Report page provides general details about the run, overall information per test, as well as drilled-down run information for each individual test within the test set. For user interface

details, see "[Execution Report Page - Desktop Client](#)" on page 639.

After the test execution is complete, you can view a summary of test results in the Test Runs module. When you run a test set, the test set run is immediately displayed in the **Test Set Runs** tab. When a test instance completes, it is displayed in the **Test Runs** tab.

For more details on viewing test results, see "[How to View Test Runs](#)" on page 753.

Troubleshooting Functional Testing

- If the testing hosts being requested for a test set exceed the limits of the available testing hosts in the host pool of your project, the test set becomes invalid. A message will be displayed in the **Messages** panel (found in the **Requested Hosts** tab) indicating that the test set cannot be executed due to lack of testing resources.

Workaround: You can add more testing hosts to your host pool, or combine requested hosts in the **Requested Hosts** tab.

- In the **Requested Hosts** tab, if you remove a host request that is required for the test set, the test set becomes invalid. A message is displayed in the **Messages** panel indicating that the test set cannot be executed due to lack of testing resources.

Workaround:

- Click **Resolve Missing Hosts**. ALM automatically adds the required testing hosts to the grid in the **Requested Hosts** tab.
- Click **Restore Defaults**. ALM automatically resets the test set to **auto mode**, and adds the required testing hosts to the grid in the **Requested Hosts** tab.

Functional Test Execution User Interface

This section includes:

• Run <Entity> Dialog Box	635
• Suggested Duration Dialog Box	638
• Execution Report Page - Desktop Client	639
• Execution Report Page - Web Client	643

Run <Entity> Dialog Box

This dialog box enables you to run **Functional** and **Performance** tests, test sets, and build verification suites.

To access	<p>For test sets, go to the Test Lab module > Test Sets tab. Use one of the following methods:</p> <ul style="list-style-type: none">• To run all the tests in a functional test set, select a functional test set and click the Run Test Set button.• To run a specific functional or performance test, select a test set and click the Execution Grid tab or Execution Flow tab. Select a test and click the Run button. <p>For build verification suites, go to the Build Verification module. Select a build verification suite and click the Run Build Verification Suite button.</p>
Important information	<p>This dialog box is used to allocate ad-hoc timeslots for Functional/Performance tests, test sets, and build verification suites. Whenever the generic term "test" is used below, it refers to a Functional/Performance test, test set, or build verification suite.</p> <p>ALM Editions: Performance tests are available only in Performance Center Edition. Functional test sets are available only for ALM Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	<ul style="list-style-type: none">• "How to Run Tests in ALM" on page 548• "How to Run Functional Tests" on page 632
See also	<ul style="list-style-type: none">• "Test Execution Overview" on page 546• "Automatic Test Execution Overview" on page 658• "Test Lab Module Window" on page 554

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

UI Element	Description
Select timeslot	<p>Select New or Reserved.</p> <ul style="list-style-type: none"> • New. Allows you to create a new timeslot. If the current resources are insufficient for the selected test, you are unable to reserve a timeslot to run the test. • Reserved. Allows you to run a test in a reserved manual timeslot that has been assigned to your test or has not been assigned to any test. If there are no timeslots available, you are unable to schedule your test.
<Reserved Timeslots Grid>	<p>Displayed when you use a Reserved timeslot.</p> <p>This grid includes the details of manual non-autostart timeslots which are currently reserved by you or another user, but are not yet assigned to another test.</p> <p>The Status field in the grid can have the following values:</p> <ul style="list-style-type: none"> • Recommended. This timeslot is recommended because it was originally created by you and it is linked to the selected test entity. • OK. You can run your test in this timeslot. • Update needed. This timeslot is available, but it does not have sufficient resources for your run. If you choose to run your test in that timeslot, ALM automatically allocates the necessary resources. <p>Note: Even if you reserved a timeslot in the Timeslots module, it may not appear in the grid. Some possible reasons include:</p> <ul style="list-style-type: none"> • The timeslot is not open yet. • The timeslot is running (it was configured to start automatically instead of manually). • The timeslot does not have the required resources, and due to concurrent timeslots, it cannot be updated with more resources. • The timeslot was not configured with a duration long enough to run the selected test entity, and it cannot be prolonged. • The timeslot was linked to another test by mistake.

UI Element	Description
Timeslot Properties	<p>Duration. The amount of time, in hours and minutes, that you need the resources reserved. Click the Suggested Duration icon  to open the Suggested Duration dialog box. For details, see ""Suggested Duration Dialog Box" on the next page.</p>
	<p>Automatically Extend Timeslot. If enabled, the testing timeslot will be automatically extended if tests are still running when the timeslot is about to end. For the timeslot to extend successfully, the necessary testing resources must be available in the timeslot extension. For more information, see ""Extending Timeslot Reservations" on page 701.</p>
	<p>Requested Resources. The resources being requested for this test.</p>
	<p>Vusers. The number of Vusers being allocated.</p>
	<p>Note: Only for performance tests. For more details, see ""Timeslot Reservation Dialog Box" on page 727.</p>
	<p>VUDs. The number of requested VUDs Vusers for the test rather than regular Vusers.</p> <p>Note: Only for performance tests. For more details, see ""Timeslot Reservation Dialog Box" on page 727.</p>
	<p>Post Run. The action to be taken when the test run is complete.</p> <p>Note: Only for performance tests. For more details, see ""Timeslot Reservation Dialog Box" on page 727.</p>
	<p>AUT Env. Configuration. Select an AUT environment configuration to be used for the test. For more information, see ""How to Work with AUT Environments" on page 361.</p> <p>Deployment. If you select a CDA-linked AUT environment configuration, deployment details are displayed here. For more details about CDA deployment, see ""How to Work with AUT Environments" on page 361.</p> <p>Note: When running a Functional test set or a Performance test from the Run <Entity> dialog box, you can only use a deployed environment.</p>

UI Element	Description
 Calculate Availability	Calculate Availability. Calculates the availability of the resources required for running the test and checks whether a new timeslot can be created.
Availability results	Displays the results of the availability verification. If your timeslot cannot be reserved, the reason will be displayed.
 Run	Uses the hosts reserved by the selected timeslot and runs the test.

Suggested Duration Dialog Box

This dialog box enables you to use the recorded durations of previous server-side executions to get a suggested duration for your current run.

To access	<p>Click the Suggested Duration  icon in the following dialog boxes:</p> <ul style="list-style-type: none"> • Timeslot Reservation dialog box. For details, see "Timeslot Reservation Dialog Box" on page 727. • Run <Entity> dialog box. For details, see "Run <Entity> Dialog Box" on page 635.
Important information	<ul style="list-style-type: none"> • ALM uses data from previous server-side executions to suggest a duration for your run. ALM can only suggest a duration if you have at least one previous execution of the selected test set or build verification suite. • ALM suggests a duration based on a certain amount of previous durations. • Executions are recorded only if they reach a state of Finished. • This feature is available for all build verification suite runs functional test set runs. ALM provides no suggested duration for individual test instance runs.
Relevant tasks	<ul style="list-style-type: none"> • "How to Run Tests in ALM" on page 548 • "How to Run Functional Tests" on page 632
See also	<ul style="list-style-type: none"> • "Test Execution Overview" on page 546 • "Automatic Test Execution Overview" on page 658 • "Test Lab Module Window" on page 554

User interface elements are described below:

UI Element	Description
Longest previous duration	<p>Enables you to use the duration of the longest recorded execution of the selected run.</p> <p>Select this option if it is essential for the selected run to complete and there are not many other important tests in need of resources.</p>
Most frequent duration	<p>Enables you to use the duration used by the 90th percentile of recorded executions of the selected run. Only 10 percent of runs had longer durations.</p> <p>Select this option to maximize efficient usage of testing resources.</p>
Suggested Duration	<p>The duration ALM suggests based on the option you selected. Click OK to apply this duration to your run.</p>
Shortest Duration	<p>Displays the shortest duration possible for this run type.</p> <p>The shortest duration possible for each run type is as follows:</p> <ul style="list-style-type: none">• Maintenance timeslot: 5 minutes• Functional test set: 15 minutes• Build verification suite: 30 minutes• Performance test: 30 minutes

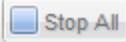
Execution Report Page - Desktop Client

This page enables you to view the current state of **Functional** tests, test sets, and build verification suite runs.

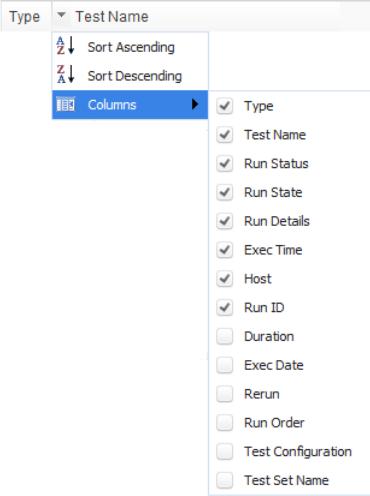
Note: If you have Internet Explorer 10 or later, the Execution Report appears in the ALM Web Client. For details, see "[Execution Report Page - Web Client](#)" on page 643.

To access	<p>The Execution Report automatically appears when you run a Functional test or test set, or a build verification suite.</p> <p>There are also several ways you can view the Execution Report after or during a run:</p> <ul style="list-style-type: none"> • You can view the Execution Report for a test set run or build verification suite run from the Test Runs module. Select test set or build verification suite run and click the Show Report button . • You can view the Execution Report for a test set run from the Execution Grid tab in the Test Lab module. Select a test and click the Last Run Report button. • You can view the Execution report for a build verification suite from the Build Verification module. Select a build verification suite and click the Last Run Report button.
Important information	<p>The Execution Report provides general details about the run, overall information per test set, as well as drilled-down run information for each individual test within the run.</p> <p>The Execution Report is available only for Functional test and test set runs, and build verification suite runs.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>ALM Editions: The Execution Report page is available only in ALM Edition. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p> </div>
Relevant tasks	<ul style="list-style-type: none"> • "How to Work with AUT Environments" on page 361 • "How to Run Tests in ALM" on page 548 • "How to Run Functional Tests" on page 632
See also	<ul style="list-style-type: none"> • "Test Lab Module Fields" on page 576 • "Test Lab Module Window" on page 554

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

UI Element	Description
 Stop All	Enables you to stop all tests in the run.
 Event Log	Opens the event log. For more information, see the <i>HPE ALM Lab Management Guide</i> .

UI Element	Description
 Every 15 sec ▾	AutoRefresh. Automatically refreshes the run data at the selected interval.
 Refresh	Refreshes the run data.
 Help	Opens the help topic for the Execution Report page.
<Run details section>	<p>Contains the details of the run. The details include the following:</p> <ul style="list-style-type: none"> The name of the run. The name of the user who executed the run. The time the run started and ended. The current state of the run. The ID of the run.
Environment Details	<p>Note: This section is visible only when an AUT environment configuration was used for the selected run.</p> <p>Displays the AUT Environment details and state. You can click AUT Details to see a drilldown view of the AUT Environment details and CDA topology. You can click Build information for further details about the selected build.</p> <p>For more information about Deployment details, see "How to Work with AUT Environments" on page 361.</p>
Execution Details	Details about the test sets or test instances included in the run.
	Stop Selected Run. Enables you to stop the selected run.
	<p>Run Screen. For Performance test runs, opens the Performance Test Run screen, enabling you to view and manage the test run. For more information, refer to the <i>HPE ALM Performance Center Guide</i>.</p> <p>Note: Only enabled when the test run is in the Running state.</p>

UI Element	Description
<Execution Report Grid>	<p>Displays a list of the tests or test sets contained in this run. For field definitions see "Test Lab Module Fields" on page 576.</p> <p>Sorting a column alphabetically</p> <p>To sort a column alphabetically, click the drop-down arrow that appears when you hover over the right corner of a column heading. You can also add or remove columns from the grid by checking and unchecking them here.</p>  <p>Filtering a column</p> <p>To filter a column, type a filter string into the text box, or click on the arrow below the column heading.</p> 
Run Details	Displays the Run Details field in a large space.

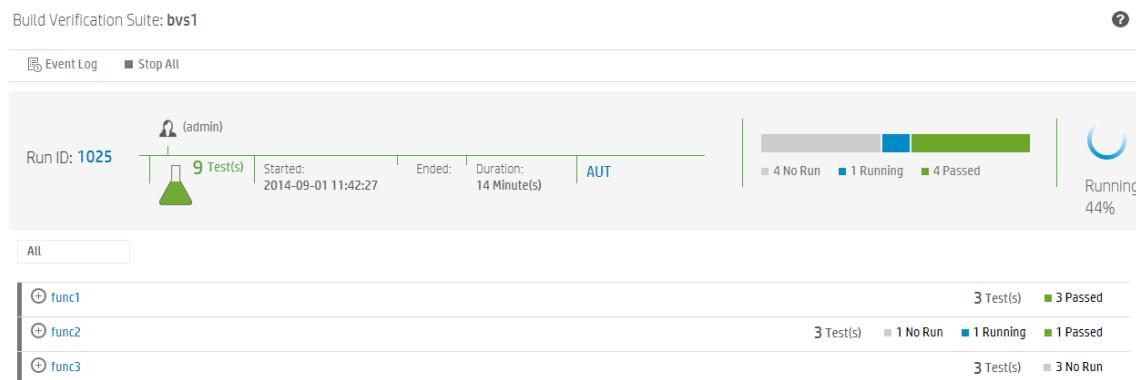
Execution Report Page - Web Client

The Execution Report automatically appears when you run a functional test or test set, or a build verification suite. You run these tests from the ALM Desktop Client, but the report appears in the ALM Web Client if you have Internet Explorer 10 or later.

Note: If you have Internet Explorer 9 or below, the Execution Report appears in the ALM Desktop Client. For details, see "[Execution Report Page - Desktop Client](#)" on page 639.

What are the parts of the Execution Report?

Here is an example of an Execution Report for a build verification suite:



The top of the report shows the overall status of the build verification suite. In this example, there are nine tests being run. The first four tests have passed, the fifth test is running, and the other four tests have not started.

The lower section of the report shows details about the individual tests that comprise the build verification suite. Each test set is shown, with the status of the tests in the test set.

What can I do using the Execution Report?

Using the Execution Report, you can:

- View the current state of the test runs:

Click one of the test sets to show its tests, then expand the specific test to see its details:

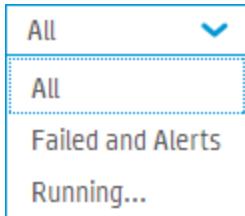
func1		3 Test(s) ■ 3 No Run	
⌚ vapi1		Host: lavit5	Started: 08/25/2014 10:23:57 Duration: < 1 Minute Passed
Run ID: 31	Configuration: vapi1		Ended: 08/25/2014 10:23:57
Passed	Less		
⌚ vapi2		Host: lavit5	Started: 08/25/2014 10:24:38 Duration: < 1 Minute Passed
vapi3		Host: lavit5	Started: 08/25/2014 10:24:47 Duration: < 1 Minute Passed
⌚ func2		3 Test(s) ■ 1 No Run ■ 1 Running ■ 1 Passed	
⌚ func3		3 Test(s) ■ 3 No Run	

- Stop specific tests, or stop all tests:

- To stop the currently running test, hover on the test and click **Stop Run**.
- To stop the currently running test and all tests that have not yet run, click **Stop All**.

- Filter the tests you want to view:

Click the arrow next to **All**, and select the tests you want to view.



- View specific information, such as AUT parameters, build details, and event logs:
 - If your test set includes AUT parameters, click **AUT** to view the parameters.
 - If your build verification suite links your environment configurations to CDA (HP Continuous Delivery Automation) servers to automate your deployment schemas, the lower section of the report includes an entry with the CDA details. Click **Build Information** to see the CDA build details. Click **Link to CDA server** to link to the CDA server.

- To view event logs, click **Event Log**.
- Link to the test runs in the ALM Desktop Client.
 - In the top of the report, click the **Run ID** to go to that run in the grid of the Build Verification Suite Runs tab in the **Testing > Test Runs** module (for a Build Verification Suite) or the Test Set Runs tab in the **Testing > Test Runs** module (for a Functional test).
 - When you expand a specific test, click the **Run ID** to go to that run in the grid of the Test Runs tab in the **Testing > Test Runs** module.

Chapter 34: Default Test Execution

This chapter includes:

• Default Test Execution Overview	646
• Manual Test Execution	646
• Automatic Test Execution	657

Default Test Execution Overview

You can run client-side automatic and manual tests and test sets from HPE Application Lifecycle Management (ALM) regardless of which version of ALM you have.

You can run manual tests from a Default test set in ALM using Sprinter or the Manual Runner. For more information about manual test execution in ALM, see "[Manual Test Execution](#)" below.

You can run automatic tests from a Default test set in ALM using the Automatic Runner. For more information about automatic test execution in ALM, see "[Automatic Test Execution](#)" on page 657.

Manual Test Execution

This section includes:

• Manual Test Execution Overview	647
• HPE Sprinter Overview	648
• How to Run Tests Manually	649
• Manual Test Execution User Interface	651

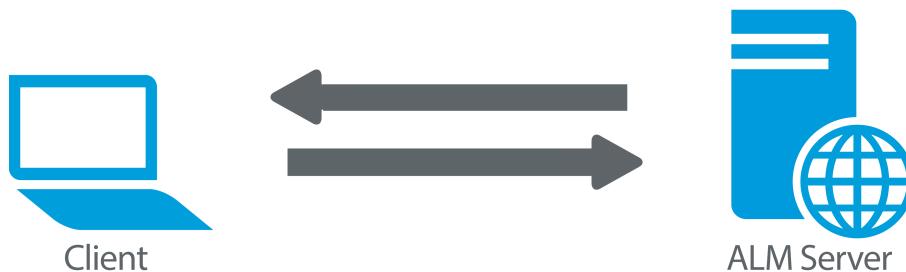
Manual Test Execution Overview

When you run tests in a Default test set manually, you follow the test steps and perform operations on the application under test. You pass or fail each step, depending on whether the actual application results match the expected output. You can run both manual and automated tests manually.

The following workflow diagram illustrates how functional test set execution occurs in ALM:

Manual Test Execution in ALM

- ① Client requests a manual test execution.
- ② ALM opens Manual Runner on the client.
- ③ Client begins the run and records the test results into Manual Runner. The results are sent back to the ALM server.



You can execute tests more than once in the same set. Each execution is considered a new test run. You can also resume a manual test run that was paused during execution.

If you decide to modify test steps during a test run, you can choose to save the modifications in the original test and in the test instance. Alternatively, you can save them for the current test run only.

After test execution is complete, you can view a summary of results for all test runs, and view more detailed results for each test instance.

You run tests manually in ALM using HPE Sprinter, HP's solution for manual testing. For details, see "[HPE Sprinter Overview](#)" on the next page.

If you are not working with Sprinter, you run tests manually using Manual Runner.

For task details, see "[How to Run Tests Manually](#)" on page 649.

HPE Sprinter Overview

You run tests manually from HPE Application Lifecycle Management (ALM) using HPE Sprinter. Sprinter provides advanced functionality and tools to assist you in the manual testing process. Sprinter is fully integrated with ALM, enabling you to get the maximum benefit from both solutions.

Note:

- **ALM Editions:** Sprinter functionality is not available with Performance Center Edition. For more information about ALM editions and their functionality, see "[ALM Editions](#) on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.
- If you are not working with Sprinter, you can run tests manually with the Manual Runner.

Manual testing often requires that you leave your testing application to accomplish tasks related to your test. For example, you may need to use graphic software to take a screen capture of your application, you may want to record a movie of the application during the test, and you need to switch to your defect tracking software to report defects.

Sprinter addresses these needs of the manual testing process, and enables you to accomplish these tasks without disrupting your test flow. With Sprinter, you can also perform many of the repetitive and tedious tasks of manual testing automatically. Sprinter includes many tools to help you detect and submit defects. These features ensure that you can perform all the tasks necessary for your manual test with minimum interruptions to your testing work.

With Sprinter you can:

- create and annotate screen captures
- capture movies of your run
- record and run macros on your test application
- automatically enter data into fields in your application
- automatically include the list of your steps or user actions in any defect you submit
- replicate your user actions on multiple machines with different configurations

For full details on installing and working with Sprinter, refer to the *HPE Sprinter Readme* and the *HPE Sprinter User Guide*, available on the HP Application Lifecycle Management Add-ins page.

You can access the Add-ins page in ALM from **Help > Add-ins**.

For details on customizing ALM default settings for Sprinter, see the *HPE Application Lifecycle Management Administrator Guide*.

To run tests manually in ALM using Sprinter, see "[How to Run Tests Manually](#)" on the next page.

How to Run Tests Manually

This task describes how to run tests manually.

To learn more about running tests manually, see "[Manual Test Execution Overview](#)" on page 647.

Note:

- This task is part of a higher-level task. For details, see "[How to Run Tests in ALM](#)" on page 548.
- **ALM Editions:** Sprinter functionality described in this section is not available with Performance Center Edition. For more information about ALM editions and their functionality, see "[ALM Editions](#)" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.

This task includes the following steps:

- "Prerequisites" below
- "Run tests with Sprinter" below
- "Run tests from the Manual Runner dialog box" on the next page
- "Edit test steps during a test run" on the next page
- "Resume a manual test run" on the next page
- "Results" on page 651

1. Prerequisites

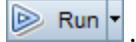
For enhanced functionality and a variety of tools to assist in the manual testing process, run tests with HPE Sprinter. To learn more about Sprinter, see "[HPE Sprinter Overview](#)" on the previous page.

To run tests with Sprinter, you must install Sprinter on your client machine. To download and install Sprinter, select **Help > Add-ins** to open the HP Application Lifecycle Management Add-ins page.

2. Run tests with Sprinter

If Sprinter is installed on your computer, you can run tests manually with Sprinter from the Test Lab module.

In the Test Lab module, select a test set and click the **Execution Grid** tab.

- To run a single manual test, select the test and click the **Run** button  .
- To run two or more manual tests, select the tests. Click the drop-down arrow  next to the **Run** button and select **Run with Sprinter**.

For details on working with Sprinter, refer to the *HPE Sprinter User Guide*, available on the HP Application Lifecycle Management Add-ins page.

3. Run tests from the Manual Runner dialog box

If you are not working with Sprinter, you can run tests manually from the Manual Runner dialog box.

- a. In the **Test Lab** module > **Test Sets** tab, select a test set and click the **Execution Grid** tab or **Execution Flow** tab. Select the tests, click the drop-down arrow  next to the **Run** button, and select **Run with Manual Runner**.

For user interface details on the Manual Runner wizard, see "[Manual Runner Wizard](#)" on [page 652](#).

For user interface details on the Manual Runner wizard for business process tests, see the *HPE Business Process Testing User Guide*.

- b. Open the application being tested and execute the test steps. Follow the instructions detailed in the test step descriptions.
- c. Compare the actual results with the expected results. When performing the steps, decide whether the application responds according to the expected results.
- d. Assign a pass or fail status to each step, depending on whether the expected results match the actual results.
- e. If a step fails, explain how the application actually responded. A test fails if one or more steps fail.

4. Edit test steps during a test run

While executing a test using the Manual Runner, you can add, delete, or modify test steps. After you finish executing the test, you can save your design steps with the changes you make.

Edit test steps during a manual run from the **Manual Runner: Step Details** page. For user interface details, see "[Manual Runner: Step Details Page](#)" on [page 655](#).

5. Resume a manual test run

If a manual test run was paused during execution, you can continue the run at a later stage. This continues the run using the same runner that was used the first time the test was run (Sprinter or the Manual Runner).

Use one of the following:

- In the Execution Grid tab or Execution Flow tab, select the test you want to resume running, and select **Tests > Continue Manual Run**. Alternatively, click the **Run** arrow and choose **Continue Manual Run**.

Note: This continues the last run of the selected test. If you want to resume running

a previous run, click the **Test Instance Details** button, click **Runs** on the sidebar, and select the test run you want to resume. Click the **Continue Manual Run** button.

- In the **Test Runs** module > **Test Runs** tab, select the test run you want to resume and click the **Continue Manual Run** button.

If you select multiple test instances in the Execution Grid, or multiple runs in the Test Runs tab, all selected runs continue. If, however, the last test selected in the grid was run with Sprinter, only that run continues.

6. Results

After test execution is complete, you can view a summary of test results in the following modules:

- **Test Lab.** The updated status for each test run is displayed in the Execution Grid. Results for each test step appear in the **Last Run Report** pane. You can view more detailed results in the Test Instance Details dialog box.
- **Test Runs.** The updated status for each test run in the project is displayed. You can generate reports based on test execution details.

For more details on viewing test results, see "[How to View Test Runs](#)" on page 753.

Manual Test Execution User Interface

This section includes:

• Manual Test Run Dialog Box	651
• Manual Runner Wizard	652

Manual Test Run Dialog Box

This dialog box enables you to select whether to run tests using Sprinter, the Manual Runner, or the Automatic Runner.

To access	In the Test Lab module > Test Sets tab, select a test set and use one of the following: <ul style="list-style-type: none">• To run an entire test set that contains only manual tests, click the Run Test Set button.• In the Execution Grid tab or Execution Flow tab, select two or more manual tests and click the Run button.
Relevant tasks	"How to Run Tests Manually" on page 649
See also	"Manual Test Execution Overview" on page 647

User interface elements are described below:

UI Element	Description
Sprinter	<p>Opens Sprinter and runs the selected tests manually according to the order displayed in the Execution Grid. For details on Sprinter, see the "HPE Sprinter Overview" on page 648.</p> <p>This option is displayed only if Sprinter is installed on your computer.</p> <div data-bbox="442 593 1356 777" style="background-color: #e0f2e0; padding: 10px;"> <p>ALM Editions: Sprinter functionality is not available with Performance Center Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p> </div>
Manual Runner	<p>Runs the selected tests manually from the Manual Runner dialog box according to the order displayed in the Execution Grid. For more details on the Manual Runner, see "Manual Runner Wizard" below.</p>
Automatic Runner	<p>Runs the selected tests automatically according to conditions defined in the Execution Flow. For more details on running tests automatically, see "Automatic Runner Dialog Box" on page 661.</p>
Don't show this message again	<p>Instructs ALM to run manual tests without first displaying this dialog box. To re-enable this dialog box, select Tests > Enable Manual Test Run Confirmation.</p>

Manual Runner Wizard

This wizard enables you to run tests manually. You can run both manual and automated tests manually.

To access	<p>In the Test Lab module > Test Sets tab, select a test set and click the Execution Grid tab or Execution Flow tab. Select one or more tests and select Tests > Run with Manual Runner.</p>
Relevant tasks	<p>"How to Run Tests in ALM" on page 548</p>
Wizard map	<p>This wizard contains:</p> <p>"Manual Runner: Run Details Page" on the next page > "Manual Runner: Step Details Page" on page 655</p>

See also

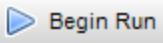
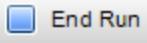
- ["Test Execution Overview" on page 546](#)
- ["Manual Test Execution Overview" on page 647](#)
- [HPE Business Process Testing User Guide](#)

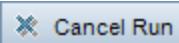
Manual Runner: Run Details Page

This wizard page enables you to review run details and run tests manually.

Important information	<ul style="list-style-type: none"> • General information about this wizard is available here: "Manual Runner Wizard" on the previous page. • You can run a test instance as a draft run using the Draft Run field. For more details, see "Draft Runs" on page 548. • If you are running a business process test or flow, see also the <i>HPE Business Process Testing User Guide</i>.
Wizard map	<p>The "Manual Runner Wizard" on the previous page contains:</p> <p>"Manual Runner: Run Details Page" above > "Manual Runner: Step Details Page" on page 655</p>
See also	"Manual Test Execution Overview" on page 647

User interface elements are described below:

UI Element	Description
 Begin Run	<p>Starts the test run.</p> <p>If the test you are running has parameters that have not been assigned actual values, the Parameters of Test dialog box opens. Assign actual values for the parameters. For details, see "Called Test Parameters/Parameters of Test Dialog Box" on page 448.</p> <p>Business Process Testing: Even if the business process test you are running has parameters that have not been assigned actual values, the Parameters of Test dialog box does not open. Instead, specify actual values in the Parameters pane of the Manual Runner: Step Details page.</p>
 End Run	Ends the test run. ALM saves the test run.

UI Element	Description
	<p>Cancels the test run.</p> <p>If this test is being run as part of a test set, a confirmation dialog box opens. You are prompted to choose if you want to cancel the run of the remaining tests. You can save or discard the current test run by selecting or clearing Save the current test run.</p>
	<p>Attach to Run. Opens the Attachment page, enabling you to view and add attachments to the test run. For details, see "Attachments Page" on page 80.</p>
	<p>New Defect. Opens the New Defect dialog box, enabling you to add a defect to the test run. For details, see "New Defect Dialog Box" on page 796. ALM automatically creates a link between the test run and the new defect. For details, see "Defect Linkage" on page 780.</p> <p>To view linked defects for a selected test run, click the New Defect arrow and select Linked Defects.</p>
	<p>Operating System Information. Opens the Operating System Information dialog box. You can edit the following:</p> <ul style="list-style-type: none"> • Operating System. The operating system on the machine where you perform your test steps. By default, the operating system on your ALM client machine is displayed. • OS Service Pack. The operating system service pack. • OS Build Number. The operating system build number.
Run Details	<p>Displays information about the test run. Required fields are displayed in red. For details on the available fields, see "Test Lab Module Fields" on page 576.</p>
Comments tab	<p>Comments for the current test run. Click Add Comment to add a comment.</p>
Test Details	<p>Opens the Test Details dialog box, enabling you to view details about the test. For more details, see "Test Plan Module Window" on page 392.</p>

Manual Runner: Step Details Page

This wizard page enables you to set the pass/fail status for each step, and add, delete, or modify steps during the run. After you finish executing the test, you can save your design steps with the changes you make.

Important information	<ul style="list-style-type: none"> General information about this wizard is available here: "Manual Runner Wizard" on page 652. If you modify test steps during a test run, you can choose to save the modifications in the original test in the Test Plan module and in the test instance in the Test Lab module. Alternatively, you can save them for the current test run only. The Test Lab module enables you to update changes made to called tests in the current test run only. The called tests are not affected. For more information on called tests, see "Design Steps Tab/Design Step Details Dialog Box" on page 457. If you are running a business process test, refer to the <i>HPE Business Process Testing User Guide</i>.
Wizard map	<p>The "Manual Runner Wizard" on page 652 contains:</p> <p>"Manual Runner: Run Details Page " on page 653 > ""Manual Runner: Step Details Page" above</p>
See also	<ul style="list-style-type: none"> "Manual Test Execution Overview" on page 647 <i>HPE Business Process Testing User Guide</i>

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

UI Element	Description
	<p>Add Step. A new step with a default step name is added to the test. You can type details about the new step in the Description box.</p> <p>Not available for: Business process tests and flows</p>
	<p>Delete Selected. Deletes the selected steps.</p> <p>Not available for: Business process tests and flows</p>
	<p>Pass Selected. Changes the status of selected test steps to Passed. To pass all test steps at once, click the Pass Selected arrow and select Pass All.</p>
	<p>Fail Selected. Changes the status of selected test steps to Failed. To fail all test steps at once, click the Fail Selected arrow and select Fail All.</p>

UI Element	Description
 <P>	<p>Show Parameters. Opens the Parameters of Test Run dialog box, enabling you to view the values of test parameters. For details, see "Parameters Tab/Parameters Dialog Box" on page 443.</p>
	<p>Attach to Step. Opens the Attachment page, enabling you to view and add attachments to the test step. For details, see "Attachments Page" on page 80.</p> <p>To add attachments to the entire test run, click the Attachments arrow and select Attach to Run.</p>
	<p>New Defect. Opens the New Defect dialog box, enabling you to add a defect to the step. ALM automatically creates a link between the test step and the new defect. For details, see "New Defect Dialog Box" on page 796 and "Defect Linkage" on page 780.</p> <p>To view linked defects for a selected test step, click the New Defect arrow and select Linked Defects.</p>
	<p>Keep on Top. Displays the Manual Runner: Step Details dialog box on top of all open windows.</p> <p>To display selected windows on top of the Manual Runner: Step Details dialog box, click the Not on Top button.</p>
	<p>Compact View. Opens the compact view display of this dialog box, enabling you to conveniently read each test step and record the results.</p> <p>To return to the steps grid, click the Back to Steps Grid button.</p>
<Filter by>	<p>Filters the steps in the test according to the Status column.</p> <p>Not available for: Business process tests and flows</p>
	<p>End Run. Ends the run.</p> <p>If you added, deleted, or modified test steps during the run, a confirmation box opens. Select one of the following:</p> <ul style="list-style-type: none"> • Yes. Saves your changes and updates the test in the Test Plan and Test Lab modules. • No. Saves your changes in the current test run only.
	<p>Previous Step. Jumps to the previous step.</p> <p>Available for: ALM manual tests in compact view, flows, and business process tests</p>

UI Element	Description
	<p>Next Step. Jumps to the next step.</p> <p>Available for: ALM manual tests in compact view, flows, and business process tests</p>
<Grid indicators>	<p>Indicates whether other objects are associated with the step.</p> <ul style="list-style-type: none"> •  An attachment is associated with the step. •  Business Process Testing: A snapshot is associated with the step.
<Grid fields>	<p>View or edit details about the test steps. For details on the available fields, see "Test Lab Module Fields" on page 576.</p> <p>Business Process Testing: When running a business process test or flow, components, flows, groups, and iterations are also displayed in the grid in a hierarchical, expandable tree.</p>
Description	A description of the selected test step.
Expected	The expected result of the selected test step.
Actual	The actual result of the selected test step.

Automatic Test Execution

This section includes:

- | | |
|---|-----|
| Automatic Test Execution Overview | 658 |
| How to Run Tests Automatically | 658 |
| How to Run Unified Functional Testing (UFT) GUI Tests | 660 |
| Automatic Test Execution User Interface | 661 |

Automatic Test Execution Overview

You can run tests in a Default test set automatically from HPE Application Lifecycle Management (ALM). You can choose to run tests on your machine or on remote testing hosts. A **testing host** is any machine connected to your network on which a testing tool has already been installed.

As opposed to Functional test sets, which use server-side execution and do not require user intervention during test execution, Default test sets use client-side execution, where the user must start and manage test execution.

You can choose to run all of the tests in a test set, or specific tests, including both automated and manual tests.

- When you run an automated test, ALM opens the selected testing tool automatically, runs the test on your local machine or on remote hosts, and exports the results to ALM.
- When you run a manual test from the Automatic Runner dialog box and specify a remote host, ALM notifies a designated tester by email to run the test on the specified host.

You can also run an automated system test to provide system information, capture a desktop image, or restart a machine. For details on system tests, see ["System Tests Overview" on page 498](#).

For task details, see ["How to Run Tests Automatically"](#) below.

How to Run Tests Automatically

This task describes how to run Default test sets automatically. To learn more about running tests automatically, see ["Automatic Test Execution Overview"](#) above.

Note: This task is part of a higher-level task. For details, see ["How to Run Tests in ALM"](#) on [page 548](#).

This task includes the following steps:

- ["Prerequisites"](#) below
- ["Schedule and order test execution"](#) on the next page
- ["Run Default test sets automatically"](#) on the next page
- ["Results"](#) on page 660

1. Prerequisites

- **Set up hosts for remote test execution.** Before running tests automatically, you must set up host computers for the remote execution of automated tests, and assign testers for the execution of manual tests.

Note: For important information about running UFT GUI tests, see ["How to Run](#)

"[Unified Functional Testing \(UFT\) GUI Tests](#)" on page 660.

- **Enable communication between ALM and the testing host.** When running default test sets on remote hosts, ALM communicates directly with the testing host to initiate the test. Refer to the documentation for your required testing tool for more information about what ports must be opened and what other security settings must be adjusted to enable this communication.
- **Designate testers for running manual tests.** When you run a manual test automatically and specify a remote host, ALM notifies a designated tester by email to run the test. This notification can be sent only if you have designated a tester for the test with a valid email address.

To designate a tester, locate the test in the Execution Grid tab, and select a user in the **Responsible Tester** column.

2. Schedule and order test execution

You can decide how and when tests are run using the following methods:

- **Scheduling.** You can specify the date and time, and set conditions for executing your tests. For task details on scheduling Default test sets, see "[How to Schedule Test Runs](#)" on page 622.
- **Ordering.** You can set the order in which you want your tests to be executed, using the Order Test Instances dialog box. Use one of the following:
 - In the Execution Flow, press the CTRL key and select two or more tests. Right-click a test and select **Order Test Instances**.
 - In the Execution Grid, select **Tests > Order Test Instances**.

For user interface details on the Order Test Instances dialog box, see "[Order Test Instances Dialog Box](#)" on page 665.

3. Run Default test sets automatically

Run manual and automated default tests automatically on your machine using the Automatic Runner.

In the **Test Lab** module > **Test Sets** tab, do one of the following:

- Select a Default test set that includes one or more automated tests and click the **Run Test Set** button.
- To run selected tests, select a Default test set and click the **Execution Grid** tab or **Execution Flow** tab. Select one or more automated tests and click the **Run** button.
- To run only manual tests, select the tests and click the **Run** button. In the Manual Test Run dialog box, select **Automatic Runner** and click **OK**.

To run the same test concurrently on multiple remote hosts, add multiple instances of the test to your test set. For user interface details on adding test instances to test sets, see "[Select Tests Pane](#)" on page 613.

For user interface details on the Automatic Runner, see "[Automatic Runner Dialog Box](#)" on the next page.

4. Results

For Default test sets, you can view details about the automatic test execution after execution is complete. In the Automatic Runner dialog box, select **Run > View Execution Log**. For user interface details, see "[Execution Log Dialog Box](#)" on page 665.

After the test execution is complete, you can view a summary of test results in the following modules:

- **Test Lab.** The updated status for each test run is displayed in the Execution Grid. Results for each test step appear in the Last Run Result pane. You can view more detailed results in the Test Instance Details dialog box.
- **Test Runs.** The updated status for each test run in the project is displayed. You can generate reports based on test execution details.

For more details on viewing test results, see "[How to View Test Runs](#)" on page 753.

How to Run Unified Functional Testing (UFT) GUI Tests

Note: HPE Unified Functional Testing (UFT) comprises the product formerly known as HPE QuickTest Professional and the product known as HPE Service Test.

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

When running UFT GUI tests, consider the following:

- To enable ALM to run GUI tests on a remote host, open the relevant application on the remote host and select the required option. For details, see the *HPE Unified Functional Testing User Guide*.
- Before running a GUI test, ALM loads the UFT add-ins that are associated with the selected GUI test. You must ensure that you run the GUI test on a machine on which the required UFT add-ins are installed. For details on working with add-ins and associated add-in lists in UFT, refer to the documentation and the relevant add-in documentation.
- When you run GUI tests from the Test Lab module, they are automatically run in **Fast** mode. They cannot be run in **Normal** mode.
- By default, ALM closes UFT at the end of a test set run. This ensures that the UFT license is released at that point and made available for other UFT users. To keep UFT open after a test set run, you can edit the **SUPPORT_TESTSET_END** parameter in the Site Configuration tab in

Site Administration. For details, see the *HPE Application Lifecycle Management Administrator Guide*.

Automatic Test Execution User Interface

This section includes:

• Automatic Runner Dialog Box	661
• Host Manager Dialog Box (for Default test sets only)	663
• Order Test Instances Dialog Box	665
• Execution Log Dialog Box	665

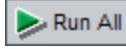
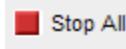
Automatic Runner Dialog Box

This dialog box enables you to run tests from a **Default** test set automatically. You can run an entire test set or specific tests, including both automated and manual tests.

To access	In the Test Lab module > Test Sets tab, use one of the following methods: <ul style="list-style-type: none"> Select a test set that includes one or more automated tests and click the Run Test Set button. To run selected tests, select a test set and click the Execution Grid tab or Execution Flow tab. Select one or more tests and click the Run button. To run only manual tests, select the tests and click the Run button. In the Manual Test Run dialog box, select Automatic Runner and click OK.
Important information	<ul style="list-style-type: none"> The Automatic Runner is used only for tests in Default test sets. For an automated test, ALM opens the selected testing tool automatically and runs the test. Test execution commences only when the selected host becomes available to run tests. For a manual test that you define to run on a remote host, ALM notifies a designated tester by email to run the test on the specified host. This notification can be sent only if you designate a tester for the test in the Responsible Tester field in the Execution Grid. To run several test sets concurrently on multiple remote hosts, open a new Automatic Runner dialog box instance for each test set. For additional considerations when running UFT tests, see "How to Run Unified Functional Testing (UFT) GUI Tests" on the previous page.
Relevant tasks	"How to Run Tests in ALM" on page 548

See also	<ul style="list-style-type: none"> • "Test Execution Overview" on page 546 • "Automatic Test Execution Overview" on page 658 • "Test Lab Module Window" on page 554
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User interface elements are described below:

UI Element	Description
Run Selected	<p>Runs selected tests in the Automatic Runner dialog box.</p> <p>Available from: Run menu</p>
Select All	<p>Selects all tests in the Automatic Runner dialog box.</p> <p>Available from: Run menu</p>
Deselect All	<p>Clears selection of all tests in the Automatic Runner dialog box.</p> <p>Available from: Run menu</p>
Invert Selection	<p>Selects or clears the selection of all tests in the Automatic Runner dialog box.</p> <p>Available from: Run menu</p>
 Run All Tests.	Runs all the tests in the Automatic Runner dialog box.
 Run Selected Tests.	Runs the selected tests.
 Stop the Run.	Terminates test execution before it completes.
 Stop All Runs.	Terminates all tests that are running in the Automatic Runner dialog box.
Run All Tests Locally	Executes all tests on your local machine.
Enable Log	<p>Creates an execution log file during the test run.</p> <p>To view the execution log after test execution, select Run > View Execution Log. For more details, see "Execution Log Dialog Box" on page 665.</p>
Test Name	The name of the test to be run.

UI Element	Description
Run on Host	<p>The host machine designated to remotely run the test.</p> <p>To execute tests remotely, select a host machine for each test. You must first clear the Run All Tests Locally check box.</p> <p>Click the Run on Host grid box, and click the browse button. The Select Host dialog box opens. Under <Any Host>, select a host or host group to run the test.</p> <p>If you select a host group, ALM runs the test on the first available host in the group, not on every host in the group.</p>
Status	Displays text execution progress.

Host Manager Dialog Box (for Default test sets only)

This dialog box enables you to create a list of available hosts for remote test execution within a **Default** test set. You can also organize hosts into groups to be used for a specific project.

To access	In the Test Lab module, Test Sets tab, select Test Sets > Host Manager .
Important information	<p>If you specify a host group for remote test execution, ALM runs the test on the first available host, and not on every host in the host group.</p> <p>The Host Manager dialog box is used to arrange remote hosts only for Default test sets.</p>
Relevant tasks	"How to Run Tests Automatically" on page 658
See also	"Automatic Test Execution Overview" on page 658

User interface elements are described below:

UI Element	Description
 New...	New Host. Opens the New Host dialog box, enabling you to add a host to the Hosts list.
 Delete	Delete Host. Deletes a selected host from the Hosts list.

UI Element	Description
 Add All on the Network	<p>Add All on the Network. Includes the following options:</p> <ul style="list-style-type: none"> • Add All on the Network. ALM scans the Network Neighborhood directory and inserts each host found into the Hosts list. • Synchronize Hosts in the Project with Hosts on Net. Synchronizes the hosts in the Hosts list with the hosts in the Network Neighborhood directory. ALM adds hosts found in the Network Neighborhood directory and deletes hosts that were not found in the Network Neighborhood directory.
Name	The name of the host.
Description	A description of the selected host or group.
 	<p>Adds hosts to a host group.</p> <p>Select a group from the Groups list. Then select a host from the Hosts list. To select multiple hosts, press the CTRL key and select the hosts. Click the Add Host to Host Group button.</p> <p>To add all hosts to a host group, select a group from the Groups list and click the Add All Hosts to Host Group button.</p>
 	<p>Removes a host from a host group.</p> <p>Select a group from the Groups list. Then select a host from the Hosts in Group list and click the Remove Host From Host Group button.</p> <p>To remove all hosts from a host group, select a group from the Groups list and click the Remove All Hosts to Host Group button.</p>
Groups	The host groups for the project.
 New...	<p>New Host Group. Opens the New Host Group dialog box, enabling you to create a new host group.</p>
 Delete	<p>Delete Host Group. Deletes a selected group from the Groups list.</p>
Hosts	The available hosts for the project.
Hosts in Group	The hosts included in the selected group.

Order Test Instances Dialog Box

This dialog box enables you to change the execution order of the tests in the Execution Grid or Execution Flow.

To access	In the Test Lab module, Test Sets tab, use one of the following: <ul style="list-style-type: none"> In the Execution Flow, press the CTRL key and select two or more tests. Right-click a test and select Order Test Instances. In the Execution Grid, select Tests > Order Test Instances.
Important information	<ul style="list-style-type: none"> When determining the order for running tests, ALM first checks the Execution Flow. The order you define in the Execution Grid is only used if there are no conditions set in the Execution Flow. In the Execution Grid, ALM runs the tests according to the specified order, grouped by host type. For example, if you have your tests ordered as test1, test2, and test3, ALM runs test1 and test3 first if they are set to run on the same host, followed by test2 on a different host.
Relevant tasks	"How to Run Tests Automatically" on page 658
See also	"Test Execution Overview" on page 546

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

UI Element	Description
	Move Selected Up/Down. Enables you to set the execution order by moving the selected test up or down in the list.
<Test pane>	In the Execution Grid, displays the tests in the selected test set. In the Execution Flow, displays the tests that you selected. Select a test from the list and click the up or down arrow to change the position of the test in the sequence. Alternatively, you can drag the tests up or down.

Execution Log Dialog Box

This dialog box enables you to view details about **Default** tests executed by the Automatic Runner.

To access	In the Automatic Runner dialog box, select Run > View Execution Log .
------------------	---

Important information	You can view the Execution Log only if you selected Enable Log in the Automatic Runner dialog box before you executed the test.
Relevant tasks	"How to Run Tests Automatically" on page 658
See also	"Automatic Runner Dialog Box" on page 661

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

UI Element	Description
 Refresh	Refreshes the details of a selected test.
<Test details pane>	Displays execution details of the test selected in the Test box, including name, date and time of run, and remote host.
<Results pane>	Displays a description of the run. May indicate cause of run failure.
Database	The project in which the executed tests are located.
Delete	Deletes the execution log. Available from: Log menu
Exit	Closes the Execution Log dialog box. Available from: Log menu
Host	Filters the tests displayed by the selected host. To filter, select a host and click the Refresh button.
Open	Enables you to select another execution log to display. Available from: Log menu
Test	The test for which execution details are displayed.
Test Set	The test set in which the executed tests are located.
User name	The user who ran the tests.

Chapter 35: Integrating External Tests

This chapter includes:

• Integrating External Tests Overview	668
• How to Integrate Tests from Jenkins	670
• How to Integrate Tests from an External Tool	671
• How to View External Results in ALM	672
• Integrating External Tests User Interface	674

Integrating External Tests Overview

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.

When synchronizing externally executed test results, ALM creates entities in the following modules:

Test Plan module	<p>ALM creates an external type test (EXTERNAL-TEST ) for each test case specified in the result file. The test details in ALM are created from the test case details defined in the result file.</p> <p>Notes:</p> <ul style="list-style-type: none">• Each external type test links to its counterpart test in the external repository.• External type tests cannot be added manually to the Test Plan Tree. <p>You can create requirements coverage by linking the tests to requirements in your project.</p>
Test Lab module	<p>ALM creates external type test sets for each test suite defined in the result file. Test instances are created for each test case defined in the test suite. The status of each test instance is updated according to the status in the result file.</p> <p>Note: External type test sets are read-only. You cannot create, modify, or run test sets directly from ALM.</p>
Test Runs module	<p>ALM creates run entities for each test case run specified in the result file. Errors and details specified in the result file, can be viewed from the Report tab.</p>

ALM provides two methods for synchronizing external results with your ALM project:

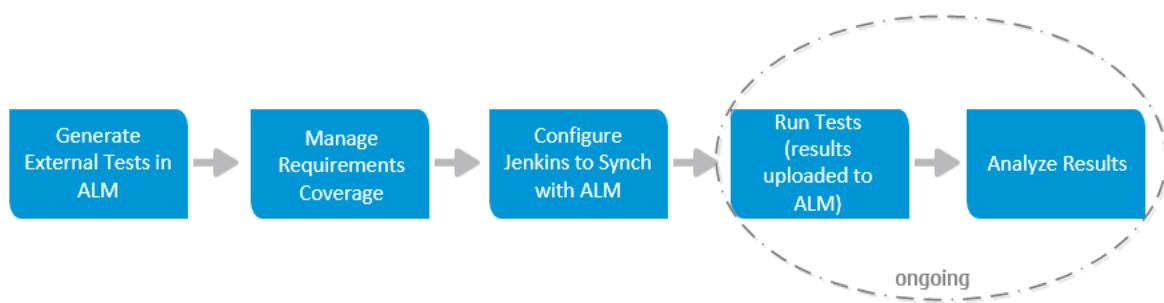
Synchronizing results from Jenkins	After you configure Jenkins to synch results with ALM, each time you run a job from Jenkins, the external results are synchronized automatically with ALM.
Synchronizing results by external testing tools	When working with external testing tools, you synchronize an external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

Workflow for Integrating Results with ALM

The section describes the flow for integrating external results with ALM.

Integrating Results from Jenkins:

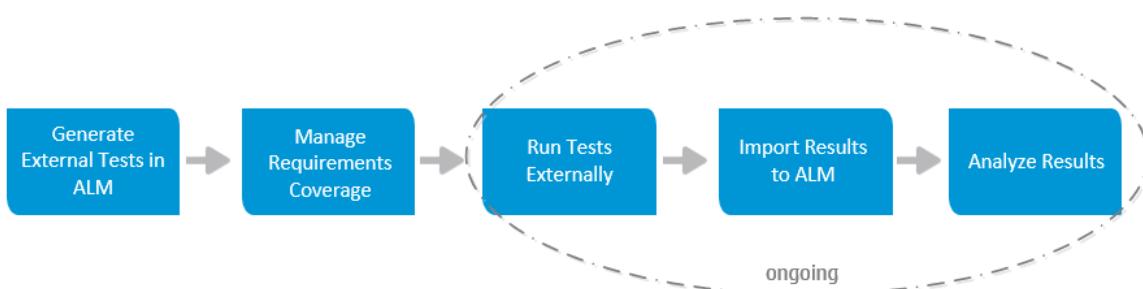
The following diagrams illustrates how to integrate Jenkins results with ALM:



Generate External Tests in ALM	Import tests from your external result file to ALM's Test Plan module. ALM generates tests (EXTERNAL-TEST test type) and adds them to your Test Plan Tree.
Manage Requirements Coverage	Create coverage by linking the external tests to requirements in your project.
Configure Jenkins to synch results with ALM	Configure Jenkins to automatically sync the external result with ALM.
Run Tests	Run a Jenkins job. When the job completes, it uploads the result file automatically to ALM. When running subsequent jobs, if the test entities already exist in ALM, then it will only upload the new run entities.
Analyze Results	Review and analyze test results from ALM. ALM displays the uploaded test sets, test runs, and tests. ALM also updates coverage created between the external tests and your requirements.

Integrating Results from Other Tools:

The following diagrams illustrates how to integrate external results with ALM:



Generate External Tests in ALM	Import tests from your external result file to ALM's Test Plan module. ALM generates tests (EXTERNAL-TEST test type) and adds them to your Test Plan Tree.
Manage Requirements Coverage	Create coverage by linking the external tests to requirements in your project.
Run Tests Externally	Run tests using your external tool.
Import Results to ALM	When the test run completes, you import the result file to ALM's Test Lab module. When importing subsequent result files, if the test entities already exist in ALM, then it will only import the new run entities.
Analyze Results	Review and analyze test results from ALM. ALM displays the uploaded test sets, test runs, and tests. ALM also updates coverage created between the external tests and your requirements.

For task details about integrating test results with ALM, see:

- ["How to Integrate Tests from Jenkins" below](#)
- ["How to Integrate Tests from an External Tool" on the next page](#)
- ["How to View External Results in ALM" on page 672](#)

How to Integrate Tests from Jenkins

This task describes how to integrate test results from Jenkins to ALM.

To learn more about integrating external test results with ALM, see ["Integrating External Tests Overview" on page 668](#).

1. **Import result file from Jenkins to the Test Plan module.**
 - a. On the ALM sidebar, under **Testing**, select **Test Plan**.
 - b. Right-click a folder in the Test Plan Tree and select **Generate Tests from External Test Results**. For user interface details, see "[Generate Tests from External Test Results Dialog Box](#)" on page 675

Note: ALM supports the following XML formats: JUnit/XUnit, Nunit, and TestNG.

- c. ALM adds the imported tests (EXTERNAL-TEST test type ) to your Test Plan Tree.
2. **Create coverage between your imported tests and the requirements in your project.**
You can create coverage from the Test Plan module or from the Requirements module. For task details, see "[How to Create Coverage](#)" on page 418.
3. **Configure Jenkins to work with ALM.**
For information on how to configure Jenkins to synch results with ALM, see [HP Software Self-solve knowledge base article KM01698877](#) (<http://h20230.www2.hp.com/selfsolve/document/KM01698877>).
4. **Run the Jenkins job.**
Run your job from Jenkins. When the job completes, the results are synchronized automatically with ALM.
5. **View external test results in ALM.**
For details, see "[How to View External Results in ALM](#)" on the next page.

How to Integrate Tests from an External Tool

This task describes how to integrate test results from an external tool to ALM.

Note: If you are working with Jenkins, see "[How to Integrate Tests from Jenkins](#)" on the previous page.

To learn more about integrating external test results with ALM, see "[Integrating External Tests Overview](#)" on page 668.

1. **Import result file from your external tool to the Test Plan module.**
 - a. On the ALM sidebar, under **Testing**, select **Test Plan**.
 - b. Right-click a folder in the Test Plan Tree and select **Generate Tests from External Test Results**. For user interface details, see "[Generate Tests from External Test Results Dialog](#)

Box" on page 675.

Note: ALM supports the following XML formats: JUnit/XUnit, Nunit, and TestNG.

- c. ALM adds the tests (EXTERNAL-TEST test type ) to your Test Plan Tree.
2. **Create coverage between your imported tests and the requirements in your project.**

You can create coverage from the Test Plan module or from the Requirements module. For task details, see "How to Create Coverage" on page 418.

3. **Run tests using your external tool.**
4. **Synchronize external results with ALM.**

When the test run completes, perform the following steps:

- a. On the ALM sidebar, under **Testing**, select **Test Lab**.
- b. Under the **Root** folder, select or create a folder.
- c. Right-click the folder and select **Import External Test Results**. For user interface details, see "Import External Test Results Dialog Box" on page 675.

Tip: Instead of synchronizing your results manually, you can use HP ALM REST API to automate this process. For information on how to configure Jenkins to sync results with ALM, see [HP Software Self-solve knowledge base article KM01698878](http://h20230.www2.hp.com/selfsolve/document/KM01698878) (<http://h20230.www2.hp.com/selfsolve/document/KM01698878>).

5. **View external test results in ALM.**

For task details, see "How to View External Results in ALM" below.

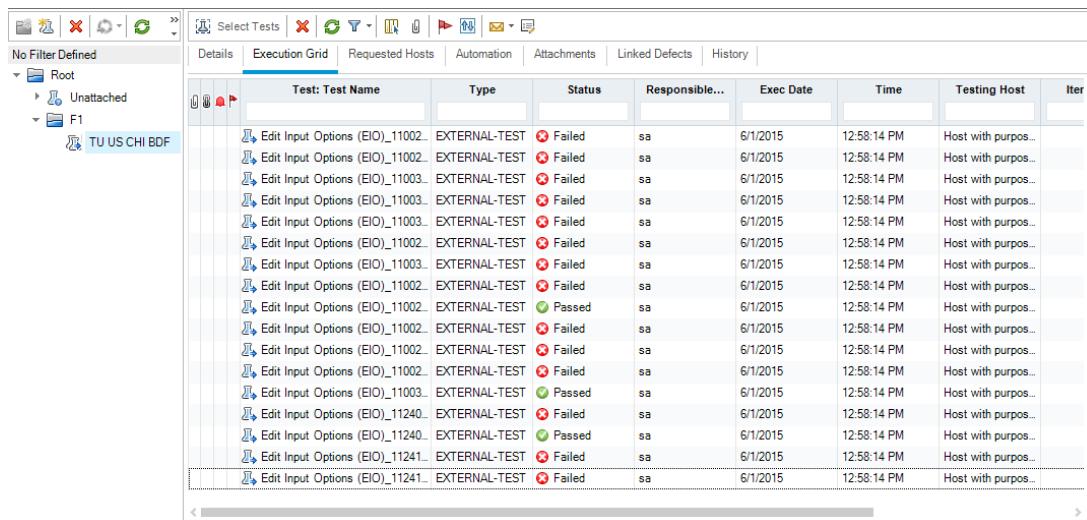
How to View External Results in ALM

This task describes how to view external test results in ALM.

To learn more about integrating external test results with ALM, see "Integrating External Tests Overview" on page 668.

- **View results in the Test Lab module.**
 - a. On the ALM sidebar, under **Testing**, select **Test Lab**. Select a test set and click the **Execution Grid** tab.
 - b. Select the relevant test set folder to displays the associated test instances in the grid. For

more details on the Execution Grid, see "[Execution Grid Tab](#)" on page 595.



The screenshot shows the Test Runs Module Window. On the left, there's a sidebar with a tree view showing 'Root' and 'Unattached' under 'No Filter Defined'. Below that is a folder named 'F1' containing a file named 'TU US CHI BDF'. The main area has tabs: 'Details', 'Execution Grid' (which is selected), 'Requested Hosts', 'Automation', 'Attachments', 'Linked Defects', and 'History'. The 'Execution Grid' tab displays a grid of test runs. The columns are: Test: Test Name, Type, Status, Responsible..., Exec Date, Time, Testing Host, and Iter. The data in the grid is as follows:

Test: Test Name	Type	Status	Responsible...	Exec Date	Time	Testing Host	Iter
Edit Input Options (EIO)_11002..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11002..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11003..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11003..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11002..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11003..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11002..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11002..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11002..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11002..	EXTERNAL-TEST	Passed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11002..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11002..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11002..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11003..	EXTERNAL-TEST	Passed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11240..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11240..	EXTERNAL-TEST	Passed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11241..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	
Edit Input Options (EIO)_11241..	EXTERNAL-TEST	Failed	sa	6/1/2015	12:58:14 PM	Host with purpos...	

- **View results in the Test Runs module.**

- On the ALM sidebar, under **Testing**, select **Test Runs**. For more details on the Test Runs module, see "[Test Runs Module Window](#)" on page 756.
- View the results of all the test runs in the Test Runs grid. The Report tab displays detailed messages of a selected run.

When working with Jenkins, you can click  [View Run Results on Jenkins](#) to view the run results from Jenkins.

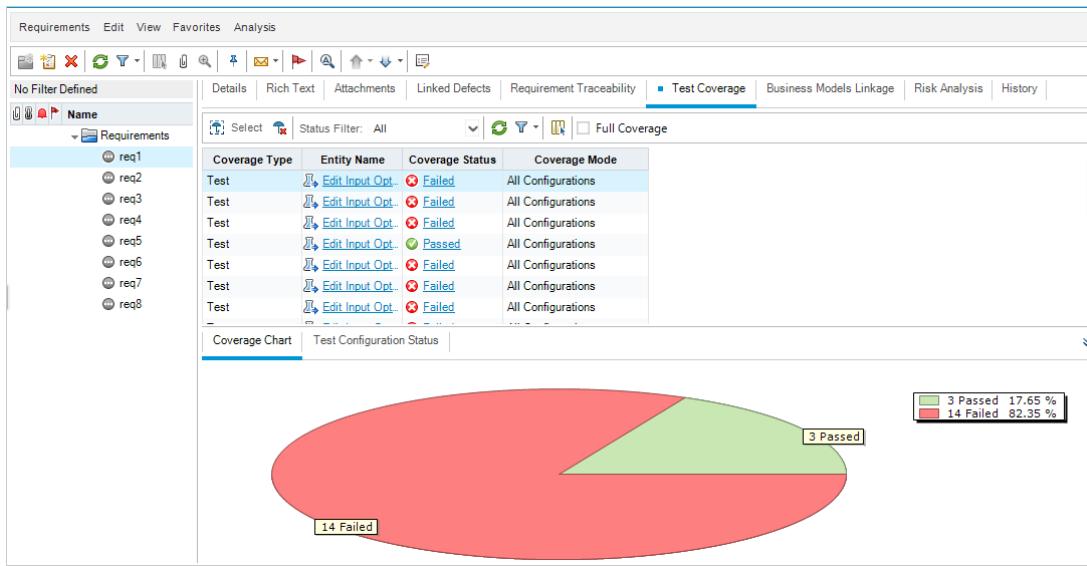
When working with tools other than Jenkins, you can click  [Open External Run Results Path](#)

to open the file system and display the run results and additional test data (for example, snapshots). This path is defined in the Importing External Test Results dialog box. For more details, see "[Import External Test Results Dialog Box](#)" on page 675.

- **View coverage of external test runs in the Requirements module.**

- In the **Requirements** module, select the **Requirement Details** view. Select a requirement and click the **Test Coverage** tab.
- View the external tests that are covering a selected requirement in the requirements tree. You can also view a graphical representation of the run status of the tests in the coverage

grid. For more details on test coverage, see "Test Coverage Page" on page 430.



Integrating External Tests User Interface

This section includes:

- Generate Tests from External Test Results Dialog Box 675
- Import External Test Results Dialog Box 675

Generate Tests from External Test Results Dialog Box

This dialog box enables you to import your tests from an external file to your Test Plan Tree.

To access	<ol style="list-style-type: none"> On the ALM sidebar, under Testing, select Test Plan. Right-click a folder in the Test Plan Tree and select Generate Tests from External Test Results.
Relevant tasks	<ul style="list-style-type: none"> "How to Integrate Tests from Jenkins" on page 670 "How to Integrate Tests from an External Tool" on page 671
See also	"Integrating External Tests Overview" on page 668

User interface elements are described below:

UI Element	Description
Upload Results File	Select a results file. <div style="background-color: #e0f2e0; padding: 5px;"> Note: ALM supports the following XML formats: XUnit, JUnit, NUnit, and TestNG. </div>
Define Test Plan Target	Specify a Test Plan folder for the imported tests.
Define Testing Environments	Testing Framework. Select the testing framework used for creating your tests. Testing Tool. Select the testing tool used for running your tests.

Import External Test Results Dialog Box

This dialog box enables you to import a results file generate from an external tool to ALM.

To access	<ol style="list-style-type: none"> On the ALM sidebar, under Testing, select Test Lab. Right-click a folder in the Test Set Tree and select Importing External Test Results.
Important information	If you are working with Jenkins, the results file is imported automatically to ALM. For details, see "How to Integrate Tests from Jenkins" on page 670 .

Relevant tasks	"How to Integrate Tests from an External Tool" on page 671
See also	"Integrating External Tests Overview" on page 668

User interface elements are described below:

UI Element	Description
Upload Results File	Select a results file. Note: ALM supports the following XML formats: JUnit/XUnit, Nunit, and TestNG.
Define ALM Targets	Test Lab. Specify a Test Lab folder for the imported test Test Plan. Specify a Test Plan folder for the imported tests.
Define Testing Environments	Testing Framework. Select the testing framework used for running your tests. Testing Tool. Select the testing tool used for running your tests.
Optional Settings	External Results Network Path. Specify a network path where additional test data is stored (for example, snapshots). External Build / Version Number. Specify a unique identifier for the imported test runs. For example, a build number of the application that was tested.

Part 8: Build Verification

Chapter 36: Build Verification Suites

This chapter includes:

• Build Verification Overview	680
• How to Work with Build Verification Suites in ALM	680
• Build Verification User Interface	681

Build Verification Overview

The Build Verification module enables you to define a suite of automated functional test sets bundled together with a single performance test (called a build verification suite). When run together, the build verification suite checks the overall status of your build.

When defining a build verification suite, you can select an AUT environment configuration which represents the build on which ALM checks the status. For more information about AUT environment configuration, see "[AUT Environments](#)" on page 359.

If your system is integrated with HP Continuous Delivery Automation (CDA), you can instruct ALM to provision machines and deploy the build on a dynamic environment. For more information on the integration between ALM and CDA, see "[How to Work with AUT Environments](#)" on page 361.

Build verification suites are a key component in ALM's Continuous Delivery solution. They facilitate an automated, end-to-end deployment and testing framework that makes application development more efficient, reliable, and quick. For more information about how build verification suites can be used as part of this process, see "[Deploying and Testing your Application in ALM](#)" on page 550.

For task details, see "[How to Work with Build Verification Suites in ALM](#)" below.

How to Work with Build Verification Suites in ALM

This task describes how to create a build verification suite, which enables you to test the status of a particular build of your application under test.

To learn more about build verification, see "[Build Verification Overview](#)" above.

This task includes the following steps:

- [Prerequisites](#)
- [Create a build verification suite](#)
- [Add Functional Test Sets and Performance Tests to the Suite](#)
- [Run the Suite](#)
- [View Test Results](#)

1. Prerequisites

In the Test Lab module, create the functional test sets that will be included in the build verification suite. For more information about creating test sets, see "[How to Create Test Sets](#)" on page 590.

Create the performance test to be added to the build verification suite. For information about creating performance tests, refer to the *HPE ALM Performance Center Guide*.

Note: You can include existing functional test sets and performance tests in the build verification suite. You do not need to create new ones specifically for this purpose.

2. Create a build verification suite

- a. On the ALM sidebar, under **Testing**, select **Build Verification**.
- b. Click the **Build Verification Suites** folder and on the toolbar click the **New Build Verification Suite Folder** button.
- c. Click the **New Build Verification Suite**  button and enter a name for your build verification suite. Click **OK**. The build verification suite is added to the tree.

3. Add Functional Test Sets and a Performance Test to the Suite

Add functional test sets to the suite from the Functional Test Sets tab. For user interface details, see "[Functional Test Sets Tab](#)" on page 687.

Add a performance test to the suite from the Performance Test tab. For user interface details, see "[Performance Test Tab](#)" on page 688.

4. Run the Suite

Use one of the following methods:

- **Run the suite immediately.** On the Build Verification Suites page toolbar, click **Run**. The Run Build Verification Suite dialog box opens, enabling you to select immediate timeslot for the suite. For user interface details, see "[Run <Entity> Dialog Box](#)" on page 635.
- **Run the suite at a specified time.** Reserve a future timeslot for the suite to enable you to run it at a later date. For more information, see "[Reserving Timeslots](#)" on page 697.

5. View Test Results

For each build verification suite that runs, ALM generates an Execution Report. The Execution Report provides general details about the suite, overall information per test set, as well as drilled-down run information for each individual test within the suite.

If you ran the suite from within the Build Verification module via an ad-hoc timeslot, you can view the Execution Report details in real time. Irrespective of which method you use to run the suite, you can access the report by clicking the **Last Run Report** button on the Build Verification Suites page toolbar.

For user interface details, see "[Execution Report Page - Desktop Client](#)" on page 639.

Build Verification User Interface

This section includes:

- [Build Verification Module Window](#) 682

• Build Verification Module Menus and Buttons	683
• Build Verification Module Icons	685
• Build Verification Module Fields	686
• Functional Test Sets Tab	687
• Performance Test Tab	688
• Build Verification Suite Details Dialog Box	690
• New Build Verification Suite Dialog Box	691
• Build Verification Suite Test Set Details Dialog Box	692
• Test Sets Tree Pane	693

Build Verification Module Window

This window enables you to create and manage build verification suites.

To access	On the ALM sidebar, under Testing , select Build Verification.
Relevant tasks	"How to Work with Build Verification Suites in ALM" on page 680
See also	"Build Verification Overview" on page 680

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

UI Element	Description
<Build Verification module common UI elements>	<ul style="list-style-type: none"> Build Verification fields. For field definitions, see "Build Verification Module Fields" on page 686. Build Verification menus and buttons. For command and button descriptions, see "Build Verification Module Menus and Buttons" on the next page ALM masthead, menus, and sidebar. For details, see "ALM Common Areas" on page 30.
<Build Verification Suites Tree>	Contains a tree which enables you to organize your build verification suites.
Details tab	Displays details of the selected build verification suite. For details, see "Build Verification Suite Details Dialog Box" on page 690.
Functional Test Sets tab	Enables you to add functional test sets to the suite. For details, see "Functional Test Sets Tab" on page 687.
Performance Test tab	Enables you to add a single instance of a performance test to the suite. For details, see "Performance Test Tab" on page 688.

UI Element	Description
Requested Hosts tab	Displays requested hosts for selected test sets and enables you to edit the host requests as required. For details, see " Requested Hosts Tab " on page 607.
History tab	Lists changes made to the currently selected build verification suite. For details, see " History Tab " on page 75.

Build Verification Module Menus and Buttons

This section describes the menus and buttons available in the Build Verification module.

To access	On the ALM sidebar, under Testing , select Build Verification
Relevant tasks	"How to Work with Build Verification Suites in ALM" on page 680
See also	"Build Verification Overview" on page 680

User interface elements are described below:

UI Elements (A - Z)	Menu	Description
Add to Favorites	Favorites	Opens the Add Favorite dialog box, enabling you to add a favorite view to your private or the public folder. For details, see " Add Favorite Dialog Box " on page 102.
Build Verification Suite Details 	Build Verification Suites	Opens the Build Verification Suite Details dialog box, enabling you to view and update details of the selected test set. For details, see " Build Verification Suite Details Dialog Box " on page 690.
Collapse	View	Collapses the folders in the tree below the selected folder.
Copy URL/Paste	Build Verification Suites/Edit	Copies a selected suite and pastes its URL as a link. The suite itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking on the link opens ALM and takes you to the suite. If you are not already logged in, ALM first prompts for login details.

UI Elements (A - Z)	Menu	Description
Cut/Paste	Edit	<p>Moves a selected suite or folder to a different location in the business verification suites tree.</p> <p>Tip: You can also drag a suite to a new location in the test sets tree.</p>
Delete 	Edit	<p>Deletes a selected suite or folder. You cannot delete the Root folder.</p>
Expand All	View	<p>Expands all folders in the tree below the selected folder.</p>
Filter/Sort	View	<p>Enables you to filter and sort the runs in the test runs grid. For more details, "Filter Dialog Box" on page 54.</p>
Go to Build Verification Suite 	<ul style="list-style-type: none"> • Build Verification Suites • <right-click menu> 	<p>Opens the Go To Build Verification Suite dialog box, enabling you to find a specific build verification suite by its ID.</p>
Last Run Report	<right-click menu>	<p>Opens the Last Run Report pane, displaying results of the last run for the selected build verification suite. You can also click the Show arrow to display the Last Run Report pane.</p>
New Build Verification Suite Folder 	Build Verification Suites	<p>Opens the New Build Verification Suite Folder dialog box, enabling you to add a folder to the build verification suites tree.</p> <p>Syntax exceptions: A test set folder name cannot include the following characters: \ ^ *</p>
New Build Verification Suite 	Build Verification Suites	<p>Opens the New Build Verification Suites dialog box, enabling you to suite to a selected folder. For details, see "New Build Verification Suite Dialog Box" on page 691.</p>
Organize Favorites	Favorites	<p>Opens the Organize Favorites dialog box, enabling you to organize the list of favorite views by changing properties or deleting views. For details, see "Organize Favorites Dialog Box" on page 103.</p>

UI Elements (A - Z)	Menu	Description
Refresh/Refresh 	View	Refreshes the view to display the most up-to-date information.
Rename	Edit	Enables you to rename a suite or folder. You cannot rename the Root folder.
Run 	<right-click menu>	Opens the Run <Entity> Dialog box, enabling you to run the selected build verification suite. For details, see " "Run <Entity> Dialog Box" on page 635 ".
Update Selected	Edit	Opens the Update Selected dialog box, enabling you to update a field value for multiple selected suites in the tree or grid. For more details, see " "Update Selected Dialog Box" on page 87 ".

Build Verification Module Icons

This section describes the icons displayed in the Test Lab module.

To access	On the ALM sidebar, under Testing, select Test Lab .
See also	<ul style="list-style-type: none">"Test Lab Module Menus and Buttons" on page 556"Test Lab Module Window" on page 554

User interface elements are described below:

UI Element	Description
	<green asterisk> . The applicable tab is populated.
	Alerts . Click to view alerts for the test instance or test run. <ul style="list-style-type: none">Red alert. The alert is new.Gray alert. The alert has already been read. For more details, see " "Alerts Dialog Box" on page 96 ".
	Assigned Test Set Folder . A test set folder that is assigned to a cycle.

UI Element	Description
	<p>Attachments. Click to view attachments for the specified test instance or test run. Open an attachment by selecting it from the list. If there are more than ten attachments, click the more attachments link to view the list in the Attachments Page. For details, see "Attachments Page" on page 80.</p>
	<p>Follow Up Flags. Click to view follow up flags for the test instance or test run.</p> <ul style="list-style-type: none"> • Gray flag. The follow up flag is new. • Red flag. The follow up date has arrived. <p>For more details, see "Flag For Follow Up Dialog Box" on page 97.</p>
	<p>Linked Defects. Click to view linked defects for the test instance or test run. For user interface details, see "Linked Defects/Entities Page" on page 801.</p>
	<p>Pinned Test Set. A test set that is pinned to a baseline. For concept details, see "Pinned Test Sets" on page 196.</p>
	<p>Test Set Folder. A folder for organizing test sets.</p>
	<p>Test Set. A test set in the test sets tree.</p>
	<p>Time Dependency. Click to modify the time dependency conditions of a test instance. For more details, see "Time Dependency Page" on page 626.</p>

Build Verification Module Fields

This section describes the Build Verification module fields.

To access	On the ALM sidebar, under Testing , select Build Verification .
See also	"Build Verification Module Window" on page 682

The fields are described below:

UI Element	Description
BVS ID	The ID of the build verification suite.

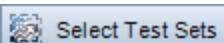
UI Element	Description
Build Verification Suite Test Set ID	The ID of the test set in the Build Verification module. Note: This is not the same ID as the Test Set ID in the Test Lab module.
Build Verification Suite Name	The name of the build verification suite.
Build Verification Suite Test Set Order	The place of the test set in the test set order.
Test Set Name	The test set's name.
Created by	The user who created the suite.
Creation date	The date the suite was created.
Modified	The date and time on which the suite was last modified.
Modified By	The user who last modified the suite.

Functional Test Sets Tab

This tab enables you to add functional test sets to a build verification suite.

To access	On the ALM sidebar, under Testing , select Build Verification . Select a build verification suite from the tree, and then select the Functional Test Sets tab.
Relevant tasks	"How to Work with Build Verification Suites in ALM" on page 680
See also	"Build Verification Overview" on page 680

User interface elements are described below:

UI Element	Description
 Select Test Sets	Opens the Test Sets Tree dialog box on the right, enabling you to add test sets to the build verification suite. Note: Only functional test sets are displayed in the tree.

UI Element	Description
	Build Verification Suite Test Set Details. Opens the Build Verification Suite Test Set Details dialog box, displaying details of the selected test set.
	Refresh. Refreshes the tab so that it displays the most up-to-date information.
	Set Filter/Sort: Enables you to filter the information displayed in the tab. For more details on filtering, see " "Filter Dialog Box" on page 54 ".
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the tab and their order. For details, see " "Select Columns/Select Fields Dialog Box" on page 85 ".
	Find. Searches the tab for values you specify in the Find box. For details, see " "Find Dialog Box" on page 68 ".
	Go to Test Set. Goes to the selected test set in the Execution Grid tab in the Test Lab module.
	Order Test Sets. Opens a dialog box which enables you to change the order the test sets appear in the grid. You can change the order by using the arrow buttons in the top right corner, or by dragging the test sets to the desired place in the order.
Test Set Name	Lists the test sets attached to the selected build verification suite.

Performance Test Tab

This dialog box enables you to add a performance test to a build verification suite.

To access	On the ALM sidebar, under Testing , select Build Verification. Select a build verification suite from the tree, then select the Performance Test tab.
Important information	You do not have to link a performance test to a build verification suite in order for the suite to be valid.
Relevant tasks	"How to Work with Build Verification Suites in ALM" on page 680
See also	"Build Verification Overview" on page 680

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

UI Elements	Description
Select a test instance	<p>Enables you to link a performance test to a build verification suite. By default, there is no linked test, and the selection appears as none. In order to link a performance test to a suite, an instance of the test must be included in a test set. To link the test, click none. A window displaying the Test Lab tree opens. Navigate to the performance test to link and click OK. When you link a test, the test name appears by the selection. To select a different test, click the test name and change the test as necessary.</p> <p>Note: If you make changes to the linked test (in the Performance Test Designer), the timeslot is updated automatically, and you do not need to relink the test manually. Bear in mind that changing a linked test might affect the validity of the timeslot.</p>
Vusers	<p>Displays the number of Vusers/VUDs that are defined in the linked test. To use VUDs instead of Vusers or vice versa, click Vusers/VUDs and change the selection. To add additional Vusers/VUDs, click Add More.</p> <p>Note: The sum of all Vusers/VUDs reserved for the requested timeslot and other timeslots must not exceed the limits specified in the project settings (Lab Settings > Project Settings), and must not exceed the number of Vusers/VUDs specified in the license.</p> <p>For more information about VUDs, refer to the <i>HPE ALM Lab Management Guide</i>.</p>

UI Elements	Description
Post Run	<p>Enables you to define the action to be taken when the performance test run is complete:</p> <ul style="list-style-type: none">• Do not collate results. Frees the machines immediately after the performance test ends. When the run has finished, the run results are left on the load generators. You can analyze the results at a later stage from the Results tab.• Collate. When the run has finished, the run results are collected from all the load generators. <p>Note: To prevent loss of or inaccessibility to run data, select this option so that the results are collected immediately upon completion of the test run.</p> <p>• Collate and Analyze. When the run has finished, the run results are collected and analyzed. Data analysis requires some time, depending on the size of the results file. If there is no timeslot available to include the data analysis, then select the Collate option instead, and run late Analysis when a data processor becomes available. You run late Analysis from the Results tab.</p> <p>Default value: Collate. Click Collate to change the selection.</p> <p>Available for: Performance Test timeslots only, and only when a performance test has been linked to the timeslot.</p>

Build Verification Suite Details Dialog Box

This dialog box enables you to view and update details for a build verification suite.

To access	In the Testing > Build Verification module, select a build verification suite and click the Build Verification Suite Details button  .
Relevant tasks	"How to Work with Build Verification Suites in ALM" on page 680
See also	"Build Verification Overview" on page 680

User interface elements are described below:

UI Elements	Description
Details	Displays the suite's details. Required fields are displayed in red. For details on available fields, see " Build Verification Module Fields " on page 686.
Functional Test Sets	Enables you to add functional test sets to a build verification suite. For details, see " Functional Test Sets Tab " on page 687.
Performance Test	Enables you to add a performance test to a build verification suite. For details, see " Performance Test Tab " on page 688.
Requested Hosts	Displays the hosts which have been requested for the tests in the suite, and enables you to edit the host requests as required. For details, see " Requested Hosts Tab " on page 607.
History	Lists changes made to the currently selected build verification suite. For details, see " History Tab " on page 75.

New Build Verification Suite Dialog Box

This dialog box enables you to create a build verification suite.

To access	On the ALM sidebar, Under Testing , select Build Verification . Then click New Build Verification Suite  .
Relevant tasks	"How to Work with Build Verification Suites in ALM" on page 680
See also	"Build Verification Overview" on page 680

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

UI Elements	Description
	Clear All Fields. Clears the data.
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.

UI Elements	Description
	Spelling Options. Enables you to configure how to check the spelling.
	<p>Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?".</p> <p>For example: a*b returns acb and adefb; a?b returns acb</p>
Build Verification Suite Name	<p>The name for the new suite.</p> <p>Tip: Give the suite a meaningful name. This can be derived from the purpose of the build you are checking. For example: ABC Application - Staging Build.</p>
Details	<p>Required fields are marked with an asterisk (*) and are displayed in red. For details on the available host fields, see "Build Verification Module Fields" on page 686.</p>

Build Verification Suite Test Set Details Dialog Box

This dialog box enables you to view the details of a build verification suite Functional test set.

To access	In the Testing > Build Verification module, select a build verification suite. In the Functional Test Sets tab, select a test set and click Build Verification Suite Test Set Details  .
Relevant tasks	"How to Work with Build Verification Suites in ALM" on page 680
See also	"Build Verification Overview" on page 680

User interface elements are described below:

UI Elements	Description
Details	Displays a read-only version of the test set's details. Required fields are displayed in red. For details on available fields, see " Build Verification Module Fields " on page 686.

Test Sets Tree Pane

This pane enables you to select functional test sets for inclusion in a build verification suite.

To access	In the Build Verification module, select a build verification suite. In the Functional Test Sets tab, click the Select Test Sets button.
Important information	<ul style="list-style-type: none"> You can include multiple functional test sets in the build verification suite. The test sets will run in the order in which you add them.
Relevant tasks	<ul style="list-style-type: none"> "How to Create Test Sets" on page 590 "How to Work with Build Verification Suites in ALM" on page 680
See also	<ul style="list-style-type: none"> "Test Set Specification Overview" on page 588 "Build Verification Overview" on page 680 "Functional Test Execution Overview" on page 630

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

UI Element	Description
	<p>Add Test set. Adds the selected test set to the build verification suite.</p> <p>Tip: You can also add test sets by double-clicking or dragging a folder or test set in the tree to the Functional Test Sets grid.</p>
	Show Test Set Details. Opens the Test Set Details dialog box for the selected test set in read-only mode.
	Go to Test Set in Module Tree. Navigates to the selected test set's location in the Test Lab module, and highlights the test set.
	Refresh All. Refreshes the tree to display the most up to date information.
	<p>Set Filter/Sort. Includes the following options:</p> <ul style="list-style-type: none"> Set Filter/Sort. Opens the Filter dialog box, enabling you to filter and sort test sets. Clear Filter/Sort. Clears any filters or sorting that you have applied. <p>For more details, see "Filter Dialog Box" on page 54.</p>

UI Element	Description
	Find. Searches for a specific test set in the tree.
	Go to Test set by ID. Opens the Go to Test dialog box, enabling you to locate the test set in the tree according to Test Set ID.
<Filter status bar>	Describes the filter currently applied to the tree. Located directly above the tree.
<Test Set Tree>	Enables you to select a test set and add it to the selected build verification suite. Select a test set and click Add Test Set  . The selected functional test set is added to the Functional Test Sets grid of the build verification suite.

Part 9: Timeslots

Chapter 37: Reserving Timeslots

This chapter includes:

- [Reserving Timeslots Overview](#) 698
- [How to Reserve Testing Timeslots in ALM](#) 709
- [Reserving Timeslots User Interface](#) 711

Reserving Timeslots Overview

When running tests, or performing maintenance on host machines (administrators only), the resources needed for these tasks must be available, and must fall within the project and license limits. ALM's timeslots feature enables you to reserve resources in advance to ensure that the required resources are available when you are ready to perform these tasks.

ALM reserves timeslots automatically:

- When working with Performance Center projects, ALM itself also reserves resources needed for data processing tasks.
- When certain host operations are executed, maintenance timeslots are automatically created.

Timeslots are a key component in ALM's Continuous Delivery solution. They facilitate an automated, end-to-end deployment and testing framework that makes application development more efficient, reliable, and quick. For more information about how timeslots can be used as part of this process, see ["Deploying and Testing your Application in ALM" on page 550](#).

This section includes:

• Types of Timeslot Reservations	699
• Automatic Timeslots	700
• Extending Timeslot Reservations	701
• Modifying Timeslot Reservations	702
• Understanding Timeslot Failure	703
• Host Allocation	703
• Example of Allocating and Reshuffling Hosts	705

Types of Timeslot Reservations

Timeslots can be reserved for immediate use or they can be reserved in advance for future use. This section describes these two types of timeslot reservations.

Immediate Timeslot Reservations

Scheduling an immediate timeslot reserves resources for a task at hand.

- **Administration:** If you want to perform administrative tasks on particular hosts, such as installing patches, when you start the task—and provided that the hosts are currently available—ALM automatically reserves the requested hosts in a maintenance timeslot so that the hosts cannot be used for any other purpose for the duration of your task.
- **Testing:** When you execute a test using server-side execution (such as from within a functional test set), before the test starts to run, you specify the time and resources you need for the test. ALM checks if the required resources are currently available for the required amount of time. If the resources are not available, you cannot run the test at that time and need to try again later.

Example: When running a performance test, ALM checks if the required number of hosts and Vusers exceeds the license/project limits. If the limits are exceeded, you will not be able to run the test.

When running a functional test set which includes a VAPI-XP test instance, ALM checks if there is a currently available testing host with the VAPI-XP purpose assigned. If there is no VAPI-XP testing host, you will not be able to run the test.

- **Data Processing:** When working with Performance Center projects, tasks such as test result analysis, SLA status publication, and trending are performed on a data processor host. ALM estimates how long a data processor host is needed for the task at hand. As soon as a data processor becomes available for this task, an immediate timeslot reservation is automatically made.

Advance Timeslot Reservations

If you know which testing resources you need for running a test, or you know the hosts on which you need to perform maintenance, you can reserve the resources for your test in advance for a specified amount of time.

When reserving resources for a testing timeslot, there are three types of timeslot reservations:

- **Functional Test Set.** Enables you to reserve the resources needed for running a single functional test set containing several automatic test instances. The tests are executed consecutively.
- **Performance Test.** Enables you to reserve the resources needed for running a single instance of

a performance test.

- **Build Verification Suite.** Enables you to reserve the resources needed for running several functional test sets together with a single instance of a performance test with the purpose of checking the overall status of your build. The tests in the test set are executed consecutively, followed by the single performance test. This type of timeslot reservation enables you to integrate your system with HP Continuous Delivery Automation (CDA) for provisioning, deployment, and so on. For more information, see "[Build Verification](#)" on page 677.

When reserving a testing timeslot, you can request either specific hosts or automatch hosts. That is, you can specify the exact hosts which will run your test or test set, and if those hosts are available, ALM reserves them for you. Alternatively, you can request automatch hosts, which allows ALM to allocate any available host with properties that match your selected criteria.

When you add a test instance to a test set in the Test Lab module, ALM automatically allocates automatch hosts to the test instance based on the test type. You can use the Test Lab module's Requested Hosts tab to change the testing host allocation before reserving the timeslot.

Alternatively, you can change the allocation as part of the timeslot reservation.

For performance test timeslots, you must select at least one Controller and one load generator. For more details, see the *HPE ALM Performance Center Guide*.

For functional test set and maintenance timeslots, you must select at least one host.

A timeslot can be reserved successfully only if all of the requested resources are available.

Tip: All users in your project can use the timeslot that you have reserved.

It is important to note that many conditions and changes in the system can affect host allocation, and can cause a shuffling around of the hosts. For more details about host allocation and examples of resource shuffling, see "[Host Allocation](#)" on page 703.

Automatic Timeslots

Some tests might require a lot of time and many resources. The **Timeslot** feature enables you to reserve these resources when resources are more readily available, and/or when you might not be available to run the test manually. This allows for maximum resource usage because your resources can then be used around the clock.

Example: Suppose a project has a total of eight hosts for allocation and the employees assigned to the project work a standard 09:00-17:00 day. The hours between 09:00 and 17:00 are peak hours for host usage, during which time all the hosts are usually reserved for testing, data processing, and maintenance tasks. Because of this, there may be periods during the day that employees cannot perform tasks because there are no available hosts. In contrast, the non-standard work hours pass with very little host resource usage.

To extend host resource usage, employees might come in early or stay late to run tests, but this only extends the peak usage by one or two hours at the beginning and end of the day.

Reserving timeslots during non-standard work hours and setting the tests to run during these timeslots allows for maximum resource usage.

Best Practices for Reserving Automatic Timeslots

This section describes some best practices to follow when reserving an automatic timeslot:

- Where possible, run the test manually first to get an indication as to how long it takes for the test to run. This information can assist you when selecting the timeslot duration.
- The following suggestions apply to running automatic Performance tests:

Note: When a performance test is added to a Build Verification Suite timeslot, the performance test runs only after all included functional tests have completed running.

- Always ensure that the Scheduler is set to stop as soon as all the Vusers have stopped running. This allows more time for post-run actions during the duration of the timeslot. For details on setting test options, refer to the *HPE ALM Performance Center Guide*.
- If you want to analyze the test results straight after the run, take into account that the analysis process can take a long time, so be sure to reserve enough time for this operation.
- If you want to perform auto-collate and analyze operations at the end of the run, you should take the time required for these operations into account when reserving the timeslot.

Note: To prevent loss of run data, it is recommended, whenever possible, to collate the results immediately after the run finishes. If your timeslot ends before result collation is completed, collation continues as it does not require reserved resources.

- 15 minutes before the end of a timeslot, ALM automatically stops the test run. Five minutes before the end of the timeslot, even if all the Vusers have not yet finished running, ALM aborts the run. To ensure that the test ends properly as designed, make sure that you reserve more time than defined in the test schedule.

Extending Timeslot Reservations

There may be times when you do not allocate enough time for a test set to finish. For example, when running a test set for the first time, you may be unsure how long the tests will take to complete. You can extend timeslots to allow your tests to finish running.

To extend a timeslot, all necessary testing resources must be available during the extension time. If any of the testing resources are reserved for a different timeslot immediately following yours, you cannot extend the timeslot and tests stop without completing properly.

There is one method for prolonging Functional and BVS tests and a different method for prolonging Performance tests.

Extending Functional Test and Build Verification Suite Timeslot Reservations

Functional test sets and build verification suites (BVS) are extended using the **Automatically Extend Timeslot (Auto-Extend)** option. If Auto-Extend is enabled, a functional test set or BVS that reaches the end of its timeslot before all tests complete will have its timeslot automatically extended so that the tests can finish.

Auto-Extend is enabled on a per-timeslot basis. You enable Auto-Extend either when reserving a timeslot from the Timeslot Reservation Dialog Box or when running a test set from the Run <Entity> Dialog Box. For more information, see "[Timeslot Reservation Dialog Box](#)" on page 727 and "[Run <Entity> Dialog Box](#)" on page 635.

Note:

- Timeslots are extended 5 minutes before the end of the timeslot.
- If a test set finishes early and a timeslot is split, the Auto-Extend setting for the initial timeslot is copied to the new, split timeslot.
- Auto-Extend attempts can be seen in the Execution Report Event Log for a test set.

You can configure both the number of minutes by which to extend timeslots and the maximum number of times a timeslot can be extended. These settings are controlled on a per-project basis. To configure Auto-Extend settings for a project: Open **Lab Management > Project Settings** module > **Details** tab for your desired project. See the *HPE ALM Lab Management Guide* for more information.

Extending Performance Test Timeslot Reservations

A performance test is extended manually while the test is running. If you see that a performance test will reach the end of its timeslot before it completes, you can enter a number of minutes to extend the timeslot. For more information, see the *HPE ALM Performance Center Guide*.

Note: For performance tests, if the Vusers are in the process of stopping gradually, the system will prolong the timeslot automatically for 15 minutes, provided the resources are still available.

Modifying Timeslot Reservations

When you modify an open timeslot, depending on the modification, the timeslot might split into two separate timeslots.

A timeslot splits when:

- You stop a run and select to keep the reserved resources for the remaining time (for performance test timeslots only).
- The run ends more than 30 minutes before the timeslot ends (for performance test timeslots that are not "NEW" ad-hoc timeslots).
- You modify an open timeslot that is not active, i.e., no tests are currently running.

Note: When a performance test is running, the timeslot can be modified from within the tests' Test Run Page only. Changes that can be made include: prolonging a timeslot, adding Vusers, and adding hosts. For more information, refer to the *HPE ALM Performance Center Guide*.

Understanding Timeslot Failure

Timeslots can be reserved successfully only when all the requested resources are available for the requested duration of time.

Many factors render a timeslot invalid. Such factors include:

- Changes to the ALM licenses (This does not affect maintenance timeslots)
- Resources become unavailable
- A test linked to a timeslot becomes invalid

In some cases, such as where there is a conflict between hosts, the system can perform a reshuffle of hosts to try to rectify the situation and revalidate the timeslot. For more information, see "[Host Allocation](#)" below. Other factors, such as test invalidation, can be corrected manually.

Tip: You can configure the system to alert you by email when a timeslot becomes invalid. The alert provides details about the cause of the failure. For details on configuring timeslot alerts, refer to the *HPE ALM Lab Management Guide*.

Host Allocation

When reserving a timeslot, the system calculates the availability of all the requested hosts and, in the case of a Performance Test timeslot, Vusers. A timeslot can be reserved successfully only if all of the requested hosts can be allocated, and in the case of a Performance Test timeslot, if all the requested Vusers are available.

Note: Performance Testing. You must request at least one Controller and one Load Generator. If you have linked a test to the timeslot, the hosts and Vusers defined in the test are automatically requested for the timeslot.

Hosts are allocated as follows:

- A **specific host** defined in the Testing Host grid can be allocated for testing as long as it is available and operational. A **specific host** can be allocated for maintenance even if it is non-operational.

Note: You can make specific hosts available only to specific users. For details, see the *HPE ALM Lab Management Guide*.

- An **Automatch** host is matched up with a specific host that has the requested properties. A host is allocated after the following criteria have been checked:
 - Lab Management and ALM create a list of all the hosts in the host pool of the project that are operational and available, and that match the requested properties of the automatch host.
 - From this list of candidate hosts, the system allocates the host that best fits the requested properties, taking into account the host priority, the number of pools the host belongs to, the purposes assigned to the host, and the host's attributes. The hosts are then allocated in such a way that other hosts with similar but also additional properties may still be available for allocation to other test executions.

Note: You can block hosts from being included in the automatch selection. For details, see the *HPE ALM Lab Management Guide*.

It is important to note that many conditions and changes in the system can occur that can affect host allocation. At such times, the system attempts to optimize the overall resource usage by reshuffling the hosts that are available among the timeslots.

It is not always possible to shuffle the hosts appropriately. When this happens, a timeslot might become **partially allocated**, and thus invalid. As soon as the requested host becomes available again or another host can be allocated instead, the timeslot becomes valid again.

Example:

- If an allocated host becomes non-operational, then the system will try to find another host to replace the non-operational host.
- In a version-enabled project, if a test is linked to an automatic timeslot and is checked out, modified, and checked in again before the timeslot starts, the timeslot recalculates the availability of the updated resources.

To view an example of how hosts are allocated, and how they are reshuffled when necessary, see "[Example of Allocating and Reshuffling Hosts](#)" on the next page.

Example of Allocating and Reshuffling Hosts

There are many factors that can affect the allocation of hosts among timeslots. Consider the following scenarios which illustrate how hosts are allocated among performance timeslots and how changes in the available testing hosts can affect the host allocation. You will see that Lab Management attempts to optimize the overall resource usage by reshuffling the hosts that are available among the timeslots.

Assume the following hosts belong to the host pool of the project:

Host	Properties
Host1	Controller
Host2	Controller + Load Generator
Host3	Load Generator with the following property: <ul style="list-style-type: none">• Priority = 1_Lowest
Host4	Load Generator with the following properties: <ul style="list-style-type: none">• Citrix. The host can run scripts based on Citrix protocols.• Priority = 9_Highest

At 07:00 am, John reserves the following timeslot:

Timeslot	Reserved at	Reserved for	Requested Resources, Properties
TS1	07:00	08:00am - 10:00am	1 Controller, Any 1 Load Generator, Any

John submits the request. The system allocates Host1 as the Controller, leaving Host2 available to serve as either load generator or Controller in other timeslots. Additionally, the system allocates Host4 as the load generator, since it has higher priority than both Host2 and Host3. The following hosts are allocated successfully:

Requested Hosts	Allocated Hosts
1 Controller, Any	Host1
1 Load Generator, Any	Host4



At 07:30 am, Sue submits the following timeslot reservation:

Timeslot	Reserved at	Reserved for	Requested Resources, Properties
TS2	07:30	09:00am - 11:00am Autostart	1 Controller, Any 1 Load Generator, Citrix

Because Host4 is the only Citrix load generator, the system checks if it can allocate a different load generator to John's timeslot so that Host4 can be allocated to Sue's timeslot instead.

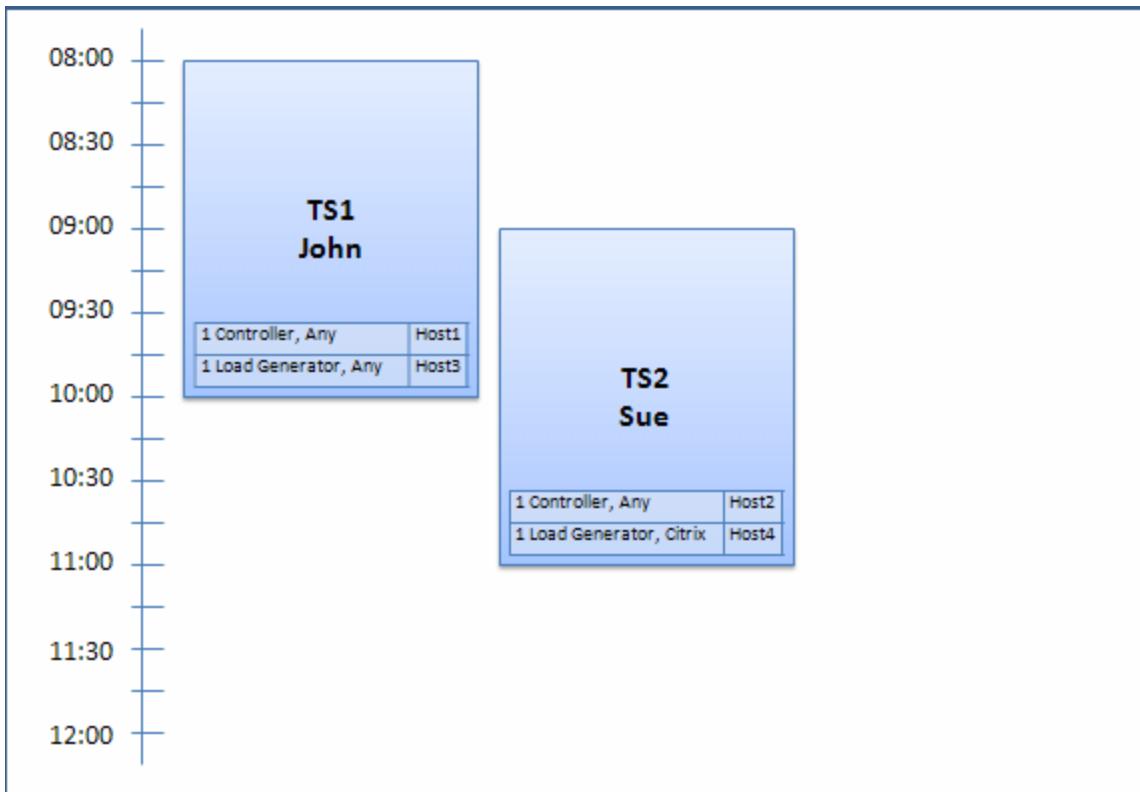
The necessary hosts are available, so the following reshuffle occurs:

- Host3 is allocated to John; Host4 is allocated to Sue
- John's Controller, Host1 remains allocated to John; Host2, also a Controller, (not yet allocated), is allocated to Sue

Sue successfully submits the request. The new host allocation looks as follows:

Timeslot	Requested Hosts	Allocated Hosts
TS1	1 Controller, Any 1 Load Generator, Any	Host1 Host3 (replaced Host4)

Timeslot	Requested Hosts	Allocated Hosts
TS2	1 Controller, Any 1 Load Generator, Citrix	Host2 Host4



Note: Host allocation works on a "first-come, first-served" basis. Since John reserved Host4 first, if there had been no other host to allocate to his timeslot, Host4 would have remained allocated to John, and Sue would not have been able to reserve her timeslot successfully.

At 07:45am, Peter reserves the following timeslot:

Timeslot	Reserved at	Reserved for	Requested Resources, Properties
TS3	07:45	10:00am - 12:00pm	1 Controller, Host2 1 Load Generator, Any

Peter is specifically requesting Host2 for his Controller, and any load generator. The system checks if the requested hosts can be allocated, taking into consideration requests and timing of the other timeslots:

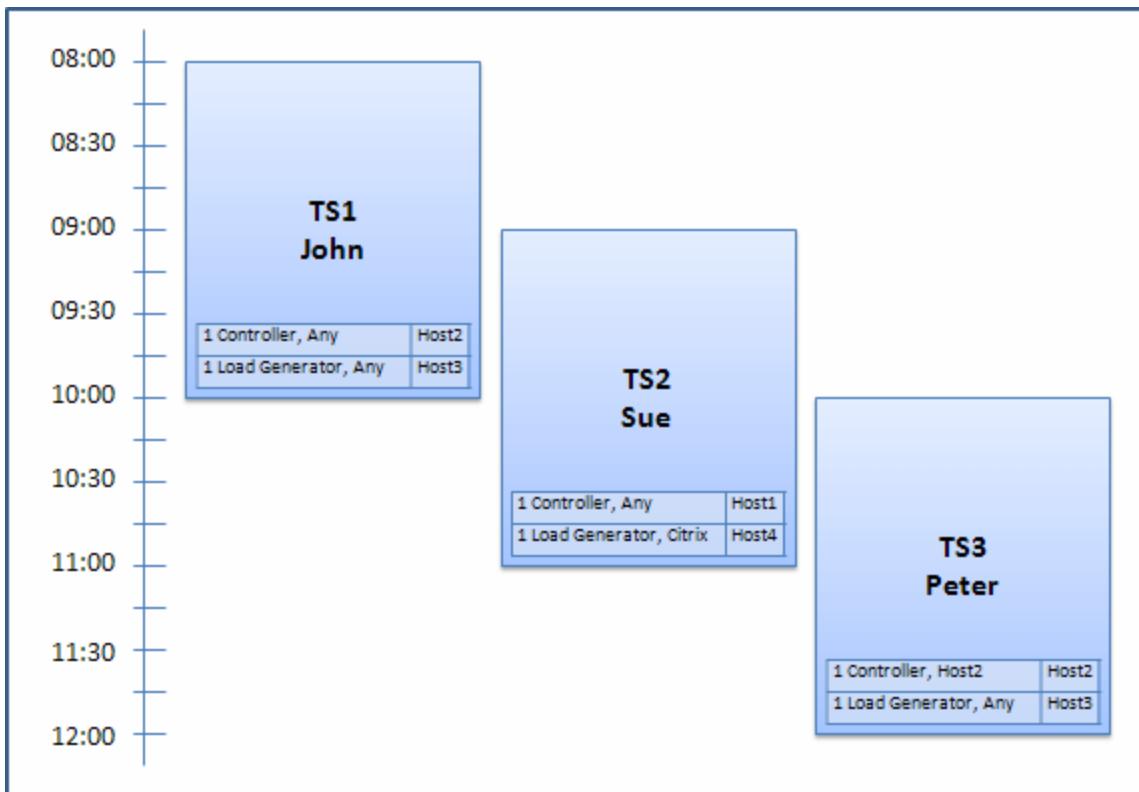
- To allocate Host2 to Peter's timeslot, it must be available by 10:00.
- Sue is willing to have any Controller.
- John's timeslot will end at 10:00 and free resources.

The following reshuffle occurs so that all the timeslots can be accommodated:

- Sue's timeslot gives up Host2, and is allocated Host1 instead; Host4 (Citrix) remains allocated to Sue's timeslot
- Host2 is allocated to John's timeslot; Host3 remains allocated to John's timeslot
- Host2 and Host3 can then be allocated to Peter's timeslot because John's timeslot will be finished by 10:00 when Peter's starts.

Peter successfully submits his request. The new host allocation looks as follows:

Timeslot	Requested Hosts	Allocated Hosts
TS1	1 Controller, Any	Host2
	1 Load Generator, Any	Host3
TS2	1 Controller, Any	Host1
	1 Load Generator, Citrix	Host4
TS3	1 Controller, Host2	Host2
	1 Load Generator, Any	Host3



Note: If John and Peter's timeslots had overlapped, Host2 would not have been available for part of Peter's timeslot. In this case, the reshuffle would not have been possible and Peter would not have been able to reserve his timeslot successfully.

Now let's say at 07:55 Host2 becomes non-operational. As a result, TS1 takes back Host1, and starts at 08:00. It follows from the information above, that TS2 and TS3 both become invalid as their resources have become partially allocated.

Then, at 09:05, Host2 becomes operational again. It is allocated to TS2, and TS2 starts, though five minutes late, but still during the specified retries period. (For details about configuring retries, refer to the *HPE ALM Lab Management Guide*.)

At 11:00, TS3 remains invalid (partially allocated) and is unable to start because Host2 is still being used by TS2.

How to Reserve Testing Timeslots in ALM

This task describes how to reserve resources for running tests.

Note:

- This task is part of higher-level tasks. For details, see "[Deploying and Testing your](#)

Application in ALM" on page 550.

- **Product Feature Movie.** To view a movie that demonstrates how to reserve timeslots, select **Help > Movies** in the ALM main window.

To learn more about timeslot reservations, see "[Reserving Timeslots Overview" on page 698](#).

1. Prerequisites

Ensure that there is a host pool defined and allocated to the project. For information about managing host pools in Lab Management, see the *HPE ALM Lab Management Guide*.

If you want to run a particular test during the timeslot, ensure that an instance of that test is included in a test set.

For Performance tests, make sure that at least one of the hosts in the host pool can be designated as a Controller, and that Host, Vuser, and Concurrent Run limits are defined in the project settings.

2. Create a timeslot

- a. On the ALM sidebar, under **Testing**, select **Timeslots**.
- b. On the Timeslots toolbar, click **New Timeslot** .
- c. Enter the details of the timeslot and select resources. For user interface details, see "[Timeslot Reservation Dialog Box" on page 727](#).

3. Verify availability of requested resources

Do one of the following:

- (Recommended) Click **Calculate Availability**. The system checks the availability of the requested resources. The results of this calculation are displayed in the Timeslot Status tab and graphically on the resource availability timeline.

The availability timeline displays all timeslots when the requested hosts can be reserved. Even if the requested hosts cannot be reserved for the selected timeslot, they may be available at other times.

If the timeslot cannot be reserved, consider the reasons displayed in the **Timeslot Status** tab when reselecting your resources. If the timeslot can be reserved, you can click **Submit** to save the timeslot.

- Click **Submit**. The system calculates the availability of the requested resources during the selected timeslot. If all of the resources are available, the Timeslot Reservation dialog box closes and the timeslot is reserved and displayed in the Timeslots module. If the timeslot cannot be reserved, the reasons are displayed in the Timeslot Status tab.

Reserving Timeslots User Interface

This section includes:

• Timeslots Module Window	712
• Timeslots Module Menus and Buttons	718
• Timeslots Module Fields	723
• Timeslots Module Icons	726
• Timeslot Reservation Dialog Box	727
• Select Specific Hosts Dialog Box	738
• Timeslot Reservation: Data Processing Dialog Box	740
• Select Controller Dialog Box	742
• Select Automatch Load Generators/Edit Hosts Dialog Box	743
• Select Specific Load Generators/Hosts Dialog Box	745
• Time Zone Options Dialog Box	746

Timeslots Module Window

This module enables you to reserve timeslots for running Functional and Performance test sets and tests or performing maintenance tasks.

The module contains the following views: Calendar View, Grid View.

You select a view from the **View** menu.

Calendar View

This view enables you to view the timeslots in a calendar view. The Calendar view is time-oriented. It allows you to view your timeslots scheduled for the same day, and to get a visual indication of overlapping timeslots.

Grid View

Enables you to view timeslots in a flat, non-hierarchical view. Each line in the grid displays a separate timeslot. This view is useful for filtering the timeslots and for viewing the details of multiple timeslots simultaneously.

To access	Use one of the following: <ul style="list-style-type: none">• Maintenance timeslots: On the Lab Management sidebar, under Lab Resources, select Timeslots.• Testing timeslots: On the ALM sidebar, under Testing, select Timeslots.
Important information	<ul style="list-style-type: none">• The Calendar and Grid views display different types of information about the timeslots. To view full details about a particular timeslot, open the timeslot in the Timeslot Reservation dialog box. For details, see:<ul style="list-style-type: none">• "Timeslot Reservation Dialog Box" on page 727• <i>HPE ALM Lab Management Guide</i>
Relevant tasks	"How to Reserve Testing Timeslots in ALM" on page 709
See also	"Reserving Timeslots Overview" on page 698

Main Timeslots Area

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

UI Elements (A-Z)	Description
<Timeslots module common UI elements>	<ul style="list-style-type: none"> Timeslot menus and buttons. For command and button descriptions, see "Timeslots Module Menus and Buttons" on page 718. Timeslot fields. For field definitions, see "Timeslots Module Fields" on page 723. Timeslot icons. For icon descriptions, see "Timeslots Module Icons" on page 726. ALM masthead, menus, and sidebar. For details, see "ALM Common Areas" on page 30.
<Calendar>	<p>Displays the reserved timeslots in your projects in calendar form.</p> <p>The timeslots in the calendar view are color-coded as follows:</p> <ul style="list-style-type: none"> Performance timeslots Functional timeslots Build Verification Suite timeslots Maintenance timeslots Testing timeslots reserved in other projects Data processing timeslots (Performance Center projects only) <p>Available from: Calendar view only</p>
<Date navigator>	<p>Enables you to select the day/week to display in the main calendar grid.</p>
<grid filters>	<p>Located under each column name. Displays the filter that is currently applied to a column. If the filter box is empty, no filter is currently applied to the column.</p> <p>Type directly into the box, or click the box to display the Browse button which opens the Select Filter Condition dialog box. For more details, see the "Select Filter Condition Dialog Box" on page 65.</p> <p>Available from: Grid view only</p>

UI Elements (A-Z)	Description
Description tab	<p>Describes the currently selected timeslot.</p> <p>Available from: Grid view only</p>
Event Log tab	<p>Displays a log of events related to the currently selected timeslot. For details, refer to the <i>HPE ALM Lab Management Guide</i>.</p> <p>Available from: Grid view only</p>
History tab	<p>Lists changes made to the currently selected timeslot. For more details, see ""History Tab" on page 75".</p> <p>Available from: Grid view only</p>
Host Allocation tab	<p>Displays the temporary allocation of the hosts for the selected timeslot. For more details, see the ""Host Allocation Tab" below" below.</p> <p>Note:</p> <ul style="list-style-type: none"> • Calendar view: Located on right of calendar, when a timeslot is selected in the calendar. • Grid view: Located in the information panel.
My Timeslots for Today	<p>Displays open and future timeslots that you reserved for the current day in the current project.</p> <p>Available from: Calendar view only</p>
Status tab	<p>Displays the status and validity of the selected timeslot.</p> <p>Available from: Grid view only</p>
Summary tab	<p>Displays a summary of the timeslot selected in the calendar. For more details, see the ""Summary Tab" on the next page" below.</p> <p>Available from: Calendar view only, when a timeslot is selected in the calendar.</p>
Timeslots grid	<p>Displays the timeslots in your projects in a grid.</p> <p>Available from: Grid view only</p>

Host Allocation Tab

This tab displays the allocation of hosts for the selected timeslot. For future timeslots, the host allocation is a temporary allocation.

Important information	If an allocated host becomes unavailable, the system attempts to replace the allocated host with another host with similar properties. If no host is available, the timeslot becomes partially allocated and is rendered invalid. <ul style="list-style-type: none">• Calendar view: Located on right of calendar, when a timeslot is selected in the calendar.• Grid view: Located in Information panel.
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User interface elements are described below:

UI Elements	Description
Requested	Displays the requested hosts, including the requested properties.
Actual	Displays the specific hosts allocated for the timeslot. May display the following in place of specific host names: <ul style="list-style-type: none">• Not Allocated. Requested host(s) could not be allocated.• Allocated (Deleted). The allocated host was deleted after the timeslot start time.• From another pool. The host belongs to a host pool in another project to which you do not have access.

Summary Tab

This tab displays a summary of the timeslot details.

User interface elements are described below in alphabetical order :

UI Elements (A – Z)	Description
AUT env. configuration	The set of environment parameters allocated to the timeslot, or Not Connected indication. Click the link to go to the AUT environment in the AUT Environments module.
Build Verification Suite	A link containing the name of the build verification suite associated with the timeslot, or Not Connected indication. Click the link to go to the build verification suite in the Build Verification module. Available for: Build Verification Suite timeslots only.

UI Elements (A – Z)	Description
Created by	The user who created the timeslot.
Description	Displays a description of the timeslot.
Duration	The duration of the timeslot (in minutes). Also displays the duration of the timeslot in HH:MM format in parentheses.
End time	The end time of the timeslot.
Hosts	The number of hosts requested for the timeslot.
Last modified by	The user who last modified the timeslot.
Maintenance state	The state of the maintenance timeslot. Available for: Maintenance timeslots only.
Name	The name of the timeslot.
Performance Test	The name of the performance test linked to the timeslot. Available for: Performance Test timeslots only.
Post-run action	The post-run action specified for the linked performance test. Available for: Performance Test timeslots only.
Priority modified	The date and time that the priority of the timeslot was modified.
Processing state	The state of the data processing timeslot. Available for: Data processing timeslots only.
Project	The project in which the timeslot was created.
Realized environment name	After linking to CDA, the name of the actual environment for the timeslot. Available for: Build Verification Suite timeslots only.

UI Elements (A – Z)	Description
Run ID	<p>Link containing the ID of the run associated with the timeslot.</p> <p>Click the link to go to the run in the Test Runs module > Build Verification Suite Runs tab.</p> <p>Available for: All testing timeslots, and when an entity is linked to the timeslot.</p>
Run state	<p>The run state of the entity linked to the timeslot.</p> <p>Available for: Testing timeslots only, and when an entity is linked to the timeslot.</p>
Start	<p>How the timeslot is started:</p> <p>Manually. The timeslot reservation reserves testing resources only.</p> <p>Automatically. The linked tests or test sets automatically start running at the start of the timeslot, without any manual intervention.</p>
Start time	The start time of the timeslot.
Test set	<p>The name of the test set associated with the timeslot.</p> <p>Available for: Testing timeslots only.</p>
Timeslot ID	The timeslot ID.
Topology action	<p>Topological deployment, provisioning and deprovisioning actions defined for the timeslot.</p> <p>Example: Example:</p> <p>Provision and deploy, deprovision at end</p> <p>Available for: Build Verification Suite timeslots only.</p>

UI Elements (A – Z)	Description
Validity	<p>The validity of the timeslot:</p> <ul style="list-style-type: none"> • Valid. The timeslot is valid. • Failed. The timeslot failed: <ul style="list-style-type: none"> • Because resources unexpectedly became unavailable • Because of a change in license definitions • Because of changes in project settings • In the case of a testing timeslot, due to changes such as the validity of a test, a test set, an AUT environment configuration, or a build verification suite
Vusers	<p>The number of Vusers requested for the timeslot.</p> <p>Available for: Performance Test timeslots only.</p>

Timeslots Module Menus and Buttons

The section describes the menus and buttons available in the Timeslots module.

To access	<p>Use one of the following:</p> <ul style="list-style-type: none"> • Maintenance timeslots: On the Lab Management sidebar, under Lab Resources, select Timeslots. • Testing timeslots: On the ALM sidebar, under Testing, select Timeslots.
Important information	<p>Some menu commands and buttons are not available in all timeslot views.</p>
Relevant tasks	"How to Reserve Testing Timeslots in ALM" on page 709
See also	"Reserving Timeslots Overview" on page 698

User interface elements are described below :

UI Elements (A-Z)	Menu	Description
Abort and Free resources 	Edit and <right-click menu>	<p>Aborts the current timeslot and frees the reserved resources.</p> <p>For testing timeslots, if a test, test set, or build verification suite is running, the run is aborted.</p> <p>Notes for aborting and freeing testing timeslots:</p> <ul style="list-style-type: none"> • You can perform this operation from Lab Management or from the project where the timeslot was reserved only. • If an entity (test, test set, build verification suite) is running, you must have Abort and Edit permissions to perform this operation. If there is no test running, then you need only have Edit permissions to perform this operation.
Add to Favorites	Favorites	<p>Opens the Add Favorite dialog box, enabling you to add a favorite view to your private or the public folder. For details, see the "Add Favorite Dialog Box" on page 102.</p> <p>Available from: Grid view only</p>
Calendar View	View	When selected, the timeslots are displayed in the Calendar view.
Canned Filters	None	<p>Enables you to filter the timeslots as follows:</p> <ul style="list-style-type: none"> • All accessible projects. Displays all timeslots from all of your projects. • Mine (This project). Displays all of the timeslots that you created in this project. • My Failed (This project). Displays all of the timeslots that you created in this project that have failed. • Mine (All projects). Displays all of the timeslots that you created in all of your projects. • My Failed (All projects). Displays all of the timeslots that you created in all of your projects that have failed.
Copy URL	Timeslots and <right-click menu>	Copies the selected timeslot. The timeslot itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the timeslot file or folder. If you are not already logged in, ALM first prompts for login details.

UI Elements (A-Z)	Menu	Description
Copy/Paste	Edit and <right-click menu>	Copies the selected timeslot within the same project.
Delete 	Edit and <right-click menu>	<p>Deletes the selected timeslot.</p> <p>Note: You can only delete future timeslot reservations in the current project.</p> <p>Note for Administrator: You can also delete future testing timeslots from Lab Management.</p>
Export	Timeslots & <right-click menu>	<p>Opens the Export Grid Data dialog box, enabling you to export the resources in the grid as a text file, Microsoft Excel worksheet, Microsoft Word document, or HTML document.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Export All. Exports all resources in the grid. • Export Selected. Exports selected resources in the grid. <p>Available from: Grid view only</p>
Find 	View	<p>Opens the Find dialog box, enabling you to search for a timeslot in the module. For details about search options, see the ""Find Dialog Box" on page 68.</p> <p>Available from: Grid view only</p>
Go To Timeslot 	Timeslots	Opens the Go To Timeslot dialog box, enabling you to find a specific timeslot by its ID.
Go To Timeslot in Calendar/Grid View 	Right-click menu	<ul style="list-style-type: none"> • Calendar view: Goes to the selected timeslot in the Grid view. • Grid view: Goes to the selected timeslot in the Calendar view. <p>Note: Toolbar button available in Calendar view only.</p>
Grid Filters	View and <right-click menu>	<p>Enables you filter the data according to an entry in the filter box. For details about filtering options, see the ""Select Filter Condition Dialog Box" on page 65.</p> <p>Available from: Grid view only</p>

UI Elements (A-Z)	Menu	Description
Grid View	View	When selected, the timeslots are displayed in the Grid view.
Information Panel	View and <right-click menu>	Shows/Hides the Information Panel in the lower area of the module. Available from: Grid view only
New Timeslot 	Timeslot and <right-click menu>	Enables you to reserve a new timeslot. Available from: Right-click menu in calendar view only.
Organize Favorites	Favorites	Organizes your favorite views. For details, see the " "Organize Favorites Dialog Box" on page 103 ". Available from: Grid view only
Private	Favorites	Lists the favorite views that are accessible only to the user who created them. Available from: Grid view only
Public	Favorites	Lists the favorite views that are accessible to all users. Available from: Grid view only
Refresh All 	View	Refreshes the grid so that it displays the most up-to-date information.
Select Columns 	View	Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For more details, see the " "Select Columns/Select Fields Dialog Box" on page 85 ". For details about the Timeslot module fields, see " "Timeslots Module Fields" on page 723 ". Available from: Grid view only
Send by E-mail 	Timeslots and <right-click menu>	Opens the Send E-mail dialog box, enabling you to send timeslot details to recipients selected from a list or to the user who reserved the timeslot. For more details, see the " "Send E-mail Dialog Box" on page 76 ".

UI Elements (A-Z)	Menu	Description
Set Filter/Sort 	View	<p>Enables you to filter and sort the timeslots. Any currently applied filters or sorting orders are displayed below the toolbar. For more details, see the ""Filter Dialog Box" on page 54.</p> <p>Note: In the Calendar view you can filter the timeslots only.</p>
Show Timeslot Details	View	<p>Displays the Summary and Host Allocation tabs (to the right of the calendar grid) which contain details about the selected timeslot.</p> <p>Available from: Calendar view only</p>
Time Zone Options	Tools	<p>Opens the Time Zone Options dialog box, enabling you to display an additional time zone in the Timeslots calendar view. For details, see ""Time Zone Options Dialog Box" on page 746".</p> <p>Available from: Calendar view only</p>
Timeslot Details 	Timeslot and <right-click menu>	<p>Opens the Timeslot Reservation dialog box, enabling you to view and modify details of the selected timeslot.</p> <p>For details, see:</p> <ul style="list-style-type: none"> • "Timeslot Reservation Dialog Box" on page 727 • <i>HPE ALM Lab Management Guide</i> <p>Note: In some cases, you can only view, and not modify, the timeslot. For example, you cannot modify past timeslots.</p>
Today		<p>Displays the current day only on the calendar.</p> <p>Available from: Calendar view only</p>
 Day		<p>Displays the date selected in the date selector.</p> <p>Available from: Calendar view only</p>
 Work Week		<p>Displays the 5-day work week around the date selected in the date selector.</p> <p>Available from: Calendar view only</p>
 Week		<p>Displays the full week around the date selected in the date selector.</p> <p>Available from: Calendar view only</p>

Timeslots Module Fields

This section describes the fields in the Timeslots module.

UI Elements	Description
Additional Requested Vusers	The number of Vusers requested for a Performance Test timeslot in addition to those defined in the linked performance test.
Auto-Extend	Indicates whether or not the timeslot will be automatically extended if the timeslot ends before tests are completed.
Autostart Enabled	Y indicates that the linked entity/entities will start running when the timeslot starts. You enable autostart by setting the timeslot to start automatically. Note: For maintenance timeslots, this field is empty.
Build Verification Suite ID	The ID of the build verification suite linked to the timeslot.
Build Verification Suite Name	The name of the build verification suite linked to the timeslot.
Consume VUDs	Y indicates that the timeslot will use/used Vusers from the VUDs license.
Created	The date and time the timeslot was reserved.
Created By	The user who reserved the timeslot.
Description	A description of the timeslot.
Duration in Minutes	The duration of the timeslot in minutes. Note: This field displays the duration in HH:MM format in parentheses.
End Time	The date and time the timeslot is due to end/ended.

UI Elements	Description
Is Active	<p>Y indicates an active operation currently occurring in the scope of the timeslot.</p> <p>Examples:</p> <ul style="list-style-type: none">• A performance test is running.• A host is rebooting. <p>Note: You cannot edit an active timeslot.</p>
Modified	The date and time on which the timeslot details were last modified.
Modified By	The user who last modified the timeslot details.
Name	The timeslot's name.
Post Run Action	The action taken after the test completes its run.
Project Name	The name of the project to which the timeslot belongs.
Requested Hosts	The number of hosts requested for the timeslot.
Run ID	The ID of the run created in the context of the timeslot.
Server End Time	The date and time that the timeslot is due to end/ended, in terms of the server's time zone.
Server Start Time	The date and time that the timeslot is due to start/started, in terms of the server's time zone.
Start Time	The date and time that the timeslot is due to start/started.
State	<p>The state of the timeslot.</p> <p>Testing timeslot states:</p> <ul style="list-style-type: none">• None. No entity is linked to the timeslot.• Not Started. An entity is linked to the timeslot but has not started running.• <Run states>. Run and post-run states. <p>Maintenance and data processing timeslot states:</p> <ul style="list-style-type: none">• Active. An operation is running during the timeslot.• Inactive. No operation is running during the timeslot.

UI Elements	Description
Test ID	The ID of the test linked to the timeslot.
Test Instance ID	The ID of the test instance linked to the timeslot.
Test Name	The name of the test linked to the timeslot. Note: If a test that is linked to a timeslot is deleted, this affects the timeslot.
Test Set ID	The ID of the test set linked to the timeslot.
Test Set Name	The name of the test set linked to the timeslot.
Test Validity	Indicates whether a linked test set is valid.
Test Validity	The validity of the test linked to the timeslot.
Timeslot ID	The ID of the timeslot.
Timeslot Type	The type of timeslot: performance testing, maintenance, or data processing.
Timeslot Validity	The validity of the timeslot based on allocation of resources. <ul style="list-style-type: none">• Y. Indicates that the timeslot is valid, and that all resources were allocated as requested.• N. Indicates that a valid timeslot became invalid, due to license, resource, or test validation issues. In this state, the timeslot is partially allocated. For more details, see "Understanding Timeslot Failure" on page 703.
Total Vusers	The total number of Vusers reserved for the timeslot.
Vusers from Test	The number of Vusers defined in the linked performance test.

Timeslots Module Icons

This section describes the icons available in the Timeslots module.

To access	Use one of the following: <ul style="list-style-type: none">• Maintenance timeslots: On the Lab Management sidebar, under Lab Resources, select Timeslots.• Testing timeslots: On the ALM sidebar, under Testing, select Timeslots.
See also	"Timeslots Module Window" on page 712

The icons are described below:

UI Elements	Description
	Indicates a valid timeslot.
	Indicates a partially allocated (invalid) timeslot.
	Indicates an active timeslot.

Timeslot Reservation Dialog Box

This dialog box enables you to reserve a testing timeslot and view details of a reserved testing timeslot.

To access	<ul style="list-style-type: none">• New Testing Timeslot Reservation: On the ALM sidebar, under Testing, select Timeslots. Then use one of the following:<ul style="list-style-type: none">• On the Timeslots toolbar, click the New Timeslot button.• Calendar view only: Double-click anywhere on the calendar, or right-click the target time and select New Timeslot.• Existing Timeslot Reservation: From Lab Management: On the sidebar, under Lab Resources, select Timeslots. From ALM: On the sidebar, under Testing, select Timeslots. Then use one of the following:<ul style="list-style-type: none">• Grid View: Right-click a testing timeslot and select Timeslot Details.• Calendar view only: Right-click a testing timeslot (blue, orange, or green) and select Timeslot Details.
Important information	<ul style="list-style-type: none">• Use this dialog box to reserve or view a testing timeslot.• For maintenance timeslots, see <i>HPE ALM Lab Management Guide</i>.• For data processing timeslots, see ""Timeslot Reservation: Data Processing Dialog Box" on page 740".
Relevant tasks	"How to Reserve Testing Timeslots in ALM" on page 709
See also	"Reserving Timeslots Overview" on page 698

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

UI Elements	Description
Run	<p>Choose the type of timeslot to reserve:</p> <ul style="list-style-type: none"> • Performance Test. Reserves resources for running a single instance of a performance test. • Functional Test Set. Reserves resources for running an entire functional test set. • Build Verification Suite. Reserves resources for running a collection of functional test sets as well as single performance tests, as defined in the Build Verification module. For more information, see "Build Verification" on page 677.
Start	<p>Choose the method for executing linked tests or test sets:</p> <ul style="list-style-type: none"> • Manually. The timeslot reservation reserves testing resources only. You manually execute the linked test or test sets from the Test Lab module. For more information on running tests manually, see "Test Execution Overview" on page 546. • Automatically. The linked tests or test sets automatically start running at the start of the timeslot, without any manual intervention. Setting the test to start automatically enables autostart for the timeslot. <div style="background-color: #e0f2e0; padding: 10px; border-radius: 10px;"> <p>Note: To set autostart retry settings, refer to "Timeslot Settings Page" in <i>HPE ALM Lab Management Guide</i>.</p> </div> <p>Version Control: The last checked-in version of a test always runs, even if you have the test checked out at the start of the timeslot. In version-enabled projects, if a test scheduled to autostart contains scripts that are checked out, the autostart fails.</p>
Name	A descriptive name for the timeslot.

UI Elements	Description
Select a test instance	<p>Enables you to link a performance test to the timeslot.</p> <p>By default, there is no linked test, and the selection appears as none.</p> <p>You do not have to link a test to the timeslot. However, linking a test gives you the option of running the test automatically without your manual intervention. For details, see "Automatic Timeslots" on page 700.</p> <p>In order to link a performance test to the timeslot, an instance of the test must be included in a test set. To link the test, click none. A window displaying the Test Lab tree opens. Navigate to the performance test to link and click OK.</p> <div data-bbox="589 762 1372 994" style="background-color: #e0f2e0; padding: 10px;"><p>Note: If you make changes to the linked test (in the Performance Test Designer), the timeslot is updated automatically, and you do not need to relink the test manually. Bear in mind that changing a linked test might affect the validity of the timeslot.</p></div> <p>Version Control: You cannot link a test that is checked out.</p> <p>Available for: Performance Test timeslots only.</p>

UI Elements	Description
Select a test set	<p>Enables you to link a functional test set to the timeslot.</p> <p>By default, there is no linked test set, and the selection appears as none.</p> <p>You do not have to link a test set to the timeslot. However, linking a test set gives you the option of running the test set automatically without your manual intervention. For details, see "Automatic Timeslots" on page 700.</p> <p>To select a test set, click none. A window displaying the Test Lab tree opens. Navigate to the functional test set to link to the timeslot and click OK.</p> <div data-bbox="589 762 1372 967" style="background-color: #e0f2e0; padding: 10px;"> <p>Note: If you make changes to the linked test set, the timeslot is updated automatically, and you do not need to relink the test set manually. Bear in mind that changing a linked test set might affect the validity of the timeslot.</p> </div> <p>Available for: Functional Test Set timeslots only.</p>
Select a build verification suite	<p>Enables you to link a build verification suite to the timeslot.</p> <p>By default, there is no linked suite, and the selection appears as none.</p> <p>You do not have to link a suite to the timeslot. However, linking a suite gives you the option of running the suite automatically without your manual intervention. For details, see "Automatic Timeslots" on page 700.</p> <p>To link a build verification suite, click none. A window displaying the Build Verification tree opens. Navigate to the build verification suite to link and click OK.</p> <div data-bbox="589 1495 1372 1679" style="background-color: #e0f2e0; padding: 10px;"> <p>Note: If you make changes to the build verification suite, the timeslot is updated automatically, and you do not need to relink the suite manually. Bear in mind that changing a build verification suite might affect the validity of the timeslot.</p> </div> <p>Version Control: You cannot link a build verification suite that contains tests that are checked out.</p> <p>Available for: Build Verification Suite timeslots only.</p>

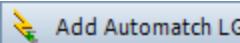
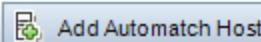
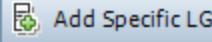
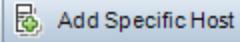
UI Elements	Description
Test	<p>Displays the name and status of a performance test that has been linked to the timeslot.</p> <p>To link a different test to the timeslot, click the test name. A window displaying the Test Lab tree opens. Navigate to the performance test to link and click OK. To unlink the test, click Clear.</p> <p>For more information regarding linking performance tests to timeslots, see Select a test instance above.</p> <p>Available for: Performance Test timeslots only, and only when a performance test has been linked to the timeslot.</p>
Vusers	<p>Displays the number of Vusers that are defined in the linked test.</p> <p>To add additional Vusers, click the number field.</p> <div data-bbox="589 846 1383 1100" style="background-color: #e0f2e0; padding: 10px;"> <p>Note: The sum of all Vusers reserved for the requested timeslot and other timeslots must not exceed the limits specified in the project settings (Lab Settings > Project Settings), and must not exceed the number of Vusers specified in the license.</p> </div> <p>Available for: Performance Test timeslots only, and only when a performance test has been linked to the timeslot.</p>
VUDs	<p>Displays the number of VUDs that are defined in the linked test.</p> <div data-bbox="589 1290 1383 1480" style="background-color: #e0f2e0; padding: 10px;"> <p>Note: The sum of all VUDs reserved for the requested timeslot and other timeslots must not exceed the limits specified in the project settings (Lab Settings > Project Settings), and must not exceed the number of VUDs specified in the license.</p> </div> <p>For more information about VUDs, refer to the <i>HPE ALM Lab Management Guide</i>.</p> <p>Available for: Performance Test timeslots only, and only when a performance test has been linked to the timeslot.</p>

UI Elements	Description
Post Run	<p>Enables you to define the action to be taken when the performance test run is complete:</p> <ul style="list-style-type: none"> • Collate. When the run has finished, the run results are collected from all the load generators. <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note: To prevent loss of or inaccessibility to run data, select this option so that the results are collected immediately upon completion of the test run.</p> </div> <ul style="list-style-type: none"> • Collate and Analyze. When the run has finished, the run results are collected and analyzed. Data analysis requires some time, depending on the size of the results file. If there is no timeslot available to include the data analysis, then select the Collate option instead, and run late Analysis when a data processor becomes available. You run late Analysis from the Results tab. • Do not collate results. Frees the machines immediately after the performance test ends. When the run has finished, the run results are left on the load generators. You can analyze the results at a later stage from the Results tab. <p>Default value: Collate. Click Collate to change the selection.</p> <p>Available for: Performance Test timeslots only, and only when a performance test has been linked to the timeslot.</p>
Test Set	<p>Displays the name and status of a functional test set that has been linked to the timeslot.</p> <p>To link a different test set to the timeslot, click the test set name. A window displaying the Test Lab tree opens. Navigate to the test set to link and click OK. To unlink the test set, click Clear.</p> <p>For more information regarding linking test sets to timeslots, see Select a test set above.</p> <p>Available for: Functional Test Set timeslots only</p>

UI Elements	Description
Build Verification Suite	<p>Displays the name and status of a build verification suite that has been linked to the timeslot.</p> <p>To link a different suite to the timeslot, click the suite's name. A window displaying the Build Verification Suite tree opens. Navigate to the suite to link and click OK. To unlink the suite, click Clear.</p> <p>For more information regarding linking suites to timeslots, see Select a build verification suite above.</p> <p>Available for: Build Verification Suite timeslots only, and only when a suite has been linked to the timeslot.</p>
AUT Env. Configuration	<p>Enables you to select an AUT environment configuration for the timeslot.</p> <p>By default, there is no configuration selected, and the selection appears as none.</p> <p>To link an AUT Environment Configuration, click the [none] link. A window displaying the AUT Environments tree opens. Navigate to the AUT environment configuration to add and click OK.</p> <p>For more information regarding AUT Environments, see "How to Work with AUT Environments" on page 361.</p> <p>Available for: All timeslots types, but only when an entity has been linked to the timeslot.</p>

UI Elements	Description
Deployment	<p>When your system is integrated with HP Continuous Delivery Automation (CDA), these options enable you to select deployment actions for the application under test. For more information on the integration between AUT environment configuration and CDA, see "How to Work with AUT Environments" on page 361.</p> <p>ALM provides the following options for deployment:</p> <ul style="list-style-type: none">• Provision and deploy. Allocates machines on which to deploy the application under test, and prepares the required image so that the application can be installed. That is, the operating system, database server and all required software are installed based on CDA parameters. Following provisioning, the application under test itself is installed.• Redeploy. Deploys and runs the application under test environment on machines that have already been provisioned.• Use deployed environment. Uses an existing installation to run the test. <p>When you select an option, the environment name appears in blue. Click the name to change the selection.</p> <div style="background-color: #e0f2e0; padding: 10px; border-left: 2px solid #80bfff; margin-left: 20px;"><p>Note:</p><ul style="list-style-type: none">• When deciding which option to select, bear in mind that the provisioning and deployment actions can be very time consuming. For routine testing, it is advisable to select Use Deployed.• You can arrange for an environment to be deployed and available for your run. Schedule a build verification suite or test set to run for the entire day, and select the environment you want to use.</div>

UI Elements	Description
Deprovisioning	<p>When your system is integrated with HP Continuous Delivery Automation (CDA), these options enable you to select the action to be taken after an environment has been deployed. For more information on the integration between AUT environment configuration and CDA, see "How to Work with AUT Environments" on page 361.</p> <p>ALM provides the following options for deprovisioning:</p> <ul style="list-style-type: none"> • Leave environment deployed. Leaves the AUT environment deployed indefinitely. The deployed environment can be used for future tests. • Deprovision at end. After the tests have completed running, the environment is undeployed and the machines are deprovisioned, freeing them up for other use.
Duration	<p>The duration of the timeslot, in hours and minutes.</p> <p>Click the Suggested Duration  icon to open the Suggested Duration dialog box. For details, see "Suggested Duration Dialog Box" on page 638.</p> <div style="background-color: #e0f2e0; padding: 10px; margin-top: 10px;"> <p>Note: A timeslot can be reserved for a minimum of 15 minutes and maximum of 480 hours (20 days).</p> </div>
Start Time	The date and time (in hours and minutes) that the timeslot starts.
End Time	The date and time (in hours and minutes) that the timeslot ends.
Automatically Extend Timeslot	<p>If enabled, the testing timeslot will be automatically extended if tests are still running when the timeslot is about to end. For the timeslot to extend successfully, the necessary testing resources must be available in the timeslot extension. For more information, see "Extending Timeslot Reservations" on page 701.</p> <p>Available for: Functional test sets and Build Verification Suites.</p>

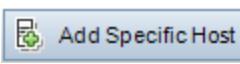
UI Elements	Description
 Add Automatch LG  Add Automatch Host	<p>Opens the Select Automatch Load Generators/Edit Hosts dialog box, enabling you to select automatch load generators/hosts with specific properties for the timeslot. For more details, see "Select Automatch Load Generators/Edit Hosts Dialog Box" on page 743.</p> <p>Note: Performance Test timeslots must include at least one load generator (automatch or specific), and Functional Test Set or Build Verification Suite timeslots must include at least one host (automatch or specific).</p> <p>Available for: For new, open, or future testing timeslots</p>
 Add Specific LG  Add Specific Host	<p>Opens the Select Specific Hosts dialog box or Select Specific Load Generator/Host dialog box, enabling you to select specific load generators/hosts for the timeslot. For more details, see "Select Specific Hosts Dialog Box" on page 738 and "Select Specific Load Generators/Hosts Dialog Box" on page 745.</p> <p>Note: Performance Test timeslots must include at least one load generator (automatch or specific), and Functional Test Set or Build Verification Suite timeslots must include at least one host (automatch or specific).</p> <p>Available for: new, open, or future testing timeslots</p>
 Edit	Enables you to edit the selected host request.
 Remove	<p>Remove. Removes selected load generators/hosts.</p> <p>Note: Performance Test timeslots: You can change the selected Controller, but you cannot delete it.</p>
	<p>Set Start Time as Now. Selects the current time in the resource availability chart.</p> <p>Note: A timeslot whose start time is set to the current time opens immediately upon submitting the reservation.</p>

UI Elements	Description
 Calculate Availability	<p>Calculates the availability of the requested resources for the selected timeslot. The results are displayed graphically on the resource availability chart, and a message is displayed in the Timeslot Status tab.</p> <p>The availability timeline displays all timeslots when the requested hosts can be reserved. Even if the requested hosts cannot be reserved for the selected timeslot, they may be available at other times.</p>
<Message bar>	<p>Located at the top of the dialog box. Displays messages and warnings about the timeslot.</p> <p>Available for: Existing timeslots only.</p>
<Resource availability timeline>	<p>Displays the availability of requested resources on a timeline:</p> <ul style="list-style-type: none"> • Availability not calculated. Displayed on the timeline before you calculate the availability of the requested resources for a new timeslot, or when modifying a timeslot. This is not displayed for Data Processing timeslots. •  Start Times. Indicates available start times for the timeslot, when the requested resources are available. •  Insufficient Resources. Indicates that not all the requested resources are available at the start times indicated on the timeline. •  Unknown. Displayed before calculating the availability of the requested resources for the timeslot. •  License/Project Limit. Indicates license or project limit issues at the start times indicated on the timeline. <p>Example. More hosts requested than available in the license limit.</p> <ul style="list-style-type: none"> •  Unavailable Resource. Indicates that a requested resource is not available at the start times indicated on the timeline.
ID	The ID of the timeslot.

UI Elements	Description
Requested Hosts grid	<p>Displays the resources requested for the timeslot.</p> <p>For Performance Test timeslots, an automatch Controller is selected by default. You can change this by browsing for a specific Controller.</p> <div style="border: 1px solid #ccc; padding: 10px; background-color: #e0f2e0;"> <p>Note: Resources that are defined as part of a linked entity's creation (such as resources that are requested for a functional test set in the Test Lab module's Required Hosts tab) are automatically displayed in the grid. These pre-selected resources are indicated by an asterisk.</p> </div>
Timeslot Status tab	<p>Displays the status of the timeslot reservation.</p> <p>For details about timeslot failure, see "Understanding Timeslot Failure" on page 703.</p>
Description tab	<p>Describes the currently selected timeslot.</p> <div style="border: 1px solid #ccc; padding: 10px; background-color: #e0f2e0;"> <p>Tip: Right-clicking in this area displays a toolbar for formatting and spell checking the text.</p> </div>
Additional Details tab	<p>Displays additional details related to the timeslot.</p> <p>Available for: Existing timeslots only.</p>
Event Log tab	<p>Displays a log of events related to the timeslot. For details, refer to the <i>HPE ALM Lab Management Guide</i>.</p> <p>Available for: Existing timeslots only.</p>

Select Specific Hosts Dialog Box

This dialog box enables you to reserve specific hosts for a timeslot.

To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Lab Resources, select Timeslots. 2. On the toolbar, click the New Timeslot  button. 3. Above the Requested Hosts grid, click .
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Relevant tasks	<i>HPE ALM Lab Management Guide</i>
See also	"Reserving Timeslots Overview" on page 698

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

UI Elements	Description
	Refresh All. Refreshes the grid so that it displays the most up-to-date list of hosts based on the filters you have selected.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For more details, see the " "Select Columns>Select Fields Dialog Box" on page 85 ". For details about the Host fields, refer to the <i>HPE ALM Lab Management Guide</i> .
	Filter/Sort. Enables you to filter and sort the hosts in the grid. Any currently applied filters or sorting orders are displayed below the toolbar. For details about filtering options, see the " "Filter Dialog Box" on page 54 ".
View menu	Enables you to: <ul style="list-style-type: none"> • Show/hide the grid filters • Show/hide the Summary panel which displays the selected hosts • Filter/sort and the grid • Refresh the grid • Select columns to view in the grid
<Hosts grid>	Displays the hosts available for the reservation. Tip: To select multiple hosts, hold down the CTRL button on your keyboard while selecting hosts in the list.
Selected pane	Displays the hosts selected in the grid.

Timeslot Reservation: Data Processing Dialog Box

This dialog box enables you to view the details of an open or past data processing timeslot.

To access	<p>From Lab Management: On the sidebar, under Lab Resources, select Timeslots.</p> <p>From ALM: On the sidebar, under Testing, select Timeslots.</p> <p>Then use one of the following:</p> <ul style="list-style-type: none"> Grid view: Right-click a timeslot of type Data Processing and select Timeslot Details. Calendar view only: Right-click a data processing (lilac) timeslot and select Timeslot Details.
Important information	<ul style="list-style-type: none"> Use this dialog box to view the details of a current or past data processing timeslot. For testing timeslots, see "Timeslot Reservation Dialog Box" on page 727. For maintenance timeslots, see <i>HPE ALM Lab Management Guide</i>. Data Processing timeslots are available only for Performance Tests.

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

UI Elements	Description
Run	Indicates that the timeslot is a data processing type. <div style="background-color: #e0f2e0; padding: 5px; border-left: 2px solid #80c080; margin-left: 10px;"> Note: This field is disabled and the selection cannot be changed. </div>
Start	Indicates that the data processing tasks are performed automatically. <div style="background-color: #e0f2e0; padding: 5px; border-left: 2px solid #80c080; margin-left: 10px;"> Note: This field is disabled and the selection cannot be changed. </div>
Name	A descriptive name for the timeslot. The name is given to the timeslot according to data processing task at hand.
Duration	The duration of the data processing timeslot, in hours and minutes. <div style="background-color: #e0f2e0; padding: 5px; border-left: 2px solid #80c080; margin-left: 10px;"> Note: A duration of a data processing timeslot is determined internally by the system, depending on the processing task at hand. </div>

UI Elements	Description
Start Time	The date and time (in hours and minutes) that the timeslot started.
End Time	The date and time (in hours and minutes) that the timeslot ended or is scheduled to end.
<Message bar>	Located at the top of the dialog box. Displays messages and warnings about the timeslot. Available for: Existing timeslots only.
<Resource availability timeline>	Displays the availability of requested resources on a timeline: <ul style="list-style-type: none">• Availability not calculated. Displayed on the timeline before you calculate the availability of the requested resources for a new timeslot, or when modifying a timeslot.•  Start Times. Indicates suggested start times for the timeslots, when the requested resources are available.•  Insufficient Resources. Indicates that not all the requested resources are available at the start times indicated on the timeline.•  License/Project Limit. Indicates license or project limit issues at the start times indicated on the timeline. For example, more hosts requested than available in the license limit.•  Unknown. Displayed before calculating the availability of the requested resources for the timeslot.•  Unavailable Resource. Indicates that a requested resource is not available at the start times indicated on the timeline.
Requested Hosts grid	Displays the data processor host reserved for the timeslot. <div style="background-color: #e0f2e0; padding: 5px; border-radius: 5px;">Note: The data-processor host is selected automatically by the system.</div>
Timeslot Status tab	Displays the status of the timeslot reservation. For details about timeslot failure, see " "Understanding Timeslot Failure" on page 703.

UI Elements	Description
Description tab	<p>Describes the currently selected timeslot.</p> <p>Tip: Right-clicking in this area displays a menu for formatting and spell checking the text.</p>
Additional Details tab	<p>Displays additional details related to the timeslot.</p> <p>Available for: Existing timeslots only.</p>
Event Log tab	<p>Displays a log of events related to the timeslot. For details, refer to the <i>HPE ALM Lab Management Guide</i>.</p> <p>Available for: Existing timeslots only.</p>

Select Controller Dialog Box

This dialog box enables you to select a Controller for a performance testing timeslot.

To access	<ol style="list-style-type: none"> On the ALM sidebar, under Testing, select Timeslots. On the toolbar, click New Timeslot * In the upper left corner of the dialog box, select Run > Performance Test. In the Requested Hosts grid, click the Controller's Properties column, and click the gray box that appears.
Important information	<p>If you select a Controller host that has multiple purposes (C+LG+DP), it is recommended to dedicate the host for Controller functionality, and not to select it for other functionality as well, to avoid performance issues during runtime.</p> <p>This dialog box is available for performance testing timeslots only.</p>
Relevant tasks	<p>"How to Reserve Testing Timeslots in ALM" on page 709</p>
See also	<p>"Reserving Timeslots Overview" on page 698</p>

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

UI Elements	Description
	<p>Refresh All. Refreshes the grid so that it displays the most up-to-date list of Controller hosts based on the filters you have selected.</p>

UI Elements	Description
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For more details, see the "Select Columns>Select Fields Dialog Box" on page 85.</p> <p>For details about the host fields, refer to the <i>HPE ALM Lab Management Guide</i>.</p>
	<p>Filter/Sort. Enables you to filter and sort the Controller hosts in the grid. Any currently applied filters or sorting orders are displayed below the toolbar. For details about filtering options, see the "Filter Dialog Box" on page 54.</p>
<Host grid>	<p>Lists all the specific Controller hosts.</p> <p>Note: Enabled when Specific is selected.</p>
Select a Controller for the timeslot	<ul style="list-style-type: none">Automatch. Enables the system to allocate an available Controller for the timeslot.Specific. Enables you to select a specific Controller for the timeslot.
Reserve as C + LG	<p>Allows the selected host to serve both as a Controller and as a load generator.</p> <p>Note: This option is not recommended. The Controller host should be dedicated for Controller functionality, and it is recommended not to run Vusers on this host.</p>

Select Automatch Load Generators/Edit Hosts Dialog Box

This dialog box enables you to select automatch load generators for a Performance Test timeslot, or automatch hosts for Functional test Set or Build Verification Suite timeslots.

To access	<ol style="list-style-type: none">On the ALM sidebar, under Lab Resources, select Timeslots.On the toolbar, click the New Timeslot button.In the Requested Hosts grid, click Add Automatch LG (for Performance Test timeslots), or Add Automatch Hosts (for Functional Test Set or Build Verification Suite timeslots).
Important information	Specific load generators/hosts matching the automatch load generators'/hosts' properties are allocated in place of the automatch load generators/hosts.

Relevant tasks	"How to Reserve Testing Timeslots in ALM" on page 709
See also	"Reserving Timeslots Overview" on page 698

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

UI Elements	Description
Reserve <xx> load generators/hosts...	<p>The number of automatch load generators/hosts to reserve for the timeslot.</p> <p>Note: Performance Testing timeslots: The total number of hosts (Controller + load generators) reserved for the timeslot may not exceed the Performance Center host and host pool limits of the project, as defined in the project's settings. For more details, refer to the <i>HPE ALM Lab Management Guide</i>.</p> <p>Tip: To select multiple automatch load generators/hosts with the same properties, you can do one of the following:</p> <ul style="list-style-type: none">• In the Reserve <xx> box, enter 1, and select the relevant properties. Repeat this for the other automatch load generators/hosts. If you do this five times, for example, then five identical automatch load generators/hosts are displayed in the Requested Hosts grid.• In the Reserve <xx> box enter the number of automatch load generators/hosts you want to select with the same properties. For example, enter 5. One entry is displayed in the Requested Hosts grid, representing all five automatch load generators/hosts.

UI Elements	Description
<Load Generator/Host Properties>	<p>Enables you to specify properties for the requested automatch load generators/hosts:</p> <ul style="list-style-type: none">• Purpose. The purpose of the host, depending on the type of tests that are linked to the timeslot.• Available from: Edit Hosts dialog box.• Location. The location of the load generators/hosts. To find a specific location, enter the value in the Find box, and click .• Host Attributes. Load generator/host attributes. The list of attributes can be customized. For details, refer to the <i>HPE ALM Performance Center Guide</i>. <p>Note: If no properties are specified, any available load generators/hosts are allocated.</p>

Select Specific Load Generators/Hosts Dialog Box

This dialog box enables you to reserve specific load generators/hosts for a testing timeslot.

To access	<ol style="list-style-type: none">1. On the ALM sidebar, under Lab Resources, select Timeslots.2. On the toolbar, click New Timeslot .3. In the Requested Hosts grid, click Add Specific LG (for Performance Test timeslots), or Add Specific Hosts (for Functional Test Set or Build Verification Suite timeslots).
Important information	<ul style="list-style-type: none">• To avoid a timeslot becoming partially allocated in the case that a specific load generator/host unexpectedly becomes unavailable, it is recommended to rather reserve automatch load generators/hosts. For details about selecting automatch load generators/hosts, see "Select Automatch Load Generators/Edit Hosts Dialog Box" on page 743.• This dialog box is available for testing timeslots only.
Relevant tasks	"How to Reserve Testing Timeslots in ALM" on page 709
See also	"Reserving Timeslots Overview" on page 698

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

UI Elements	Description
	Refresh All. Refreshes the grid so that it displays the most up-to-date list of load generators/hosts based on the filters you have selected.
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For more details, see "Select Columns>Select Fields Dialog Box" on page 85.</p> <p>For field details, refer to the <i>HPE ALM Lab Management Guide</i>.</p>
	<p>Filter/Sort. Enables you to filter and sort the load generators/hosts in the grid. Any currently applied filters or sorting orders are displayed below the toolbar. For details about filtering options, see "Filter Dialog Box" on page 54.</p>
View menu	<p>Enables you to:</p> <ul style="list-style-type: none"> • Show/hide the grid filters • Show/hide the Summary panel which displays the selected load generators • Filter/sort and the grid • Refresh the grid • Select columns to view in the grid
<Specific load generators grid>	<p>Displays the specific load generators/hosts available for the reservation.</p> <div data-bbox="458 1227 1258 1311" style="background-color: #e0f2e0; padding: 5px;"> <p>Tip: To select multiple hosts, hold down the CTRL button on your keyboard while selecting load generators in the list.</p> </div>
Selected pane	<p>Displays the load generators/hosts selected in the grid.</p>

Time Zone Options Dialog Box

This dialog box enables you to display an additional time zone in the Timeslots module calendar view.

To access	In the Timeslots module, in calendar view, select Tools > Time Zone Options . Available from: Calendar view only
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Important information	Displaying an additional time zone is useful if you are located in a different time zone to the ALM server or other users. The default time displayed on the calendar is based on the time of the local client machine.
See also	"Reserving Timeslots Overview" on page 698

User interface elements are described below:

UI Elements	Description
Show additional time zone	When selected, enables you to select an additional time zone to display in the calendar view.
Time zone label	The label by which to display the additional time zone in the calendar view. Available: When Show additional time zone is selected.

Part 10: Test Runs

Chapter 38: Viewing Test Runs

This chapter includes:

- [Test Runs Overview](#) 752
- [How to View Test Runs](#) 753
- [Test Runs User Interface](#) 755

Test Runs Overview

After running tests, you can view the results in the **Test Runs** module in HPE Application Lifecycle Management (ALM). The **Test Runs** module contains tabs which let you study the results of test instance runs, test set runs, and build verification suite runs.

ALM Editions: The **Test Set Runs** and **Build Verification Suite Runs** tabs are available only for ALM Edition. For more information about ALM editions and their functionality, see "["ALM Editions" on page 125](#)". To find out what edition of ALM you are using, ask your ALM site administrator.

In the **Test Runs** tab, you can view the results of test executions.

- Manual test results consist of the overall pass/fail status of a test and the pass/fail status of each step in a test run.
- The results available for automatic tests vary depending on the test type.

These results help you determine whether a defect was detected in your application. In some cases, you may decide that a step failed because the expected results are no longer valid and need to be updated.

Following the execution of manual and automated tests, you can view results and general information for a test run. You can view test run details, compare the results of the most recent test run with previous runs, manage attachments, view and edit test run configuration information, manage linked defects, and view a history of test run changes.

You can also view and compare the results of all runs in your project displayed in a grid. You can then filter the grid to display only those runs that meet the criteria that you define.

In the **Test Set Runs** and **Build Verification Suite Runs** tabs, you can view the results of functional test set and build verification suite executions. You can also stop a functional test set or build verification suite run, or go to a specific functional test set or build verification suite.

In addition, you can analyze the progress of a test set or of overall test execution in your project by periodically generating execution reports and graphs. For details, see "["How to Analyze Data in ALM" on page 810](#)".

For related task details, see "["How to View Test Runs" on the next page](#)".

How to View Test Runs

This task describes how to view test run results. To learn more about test results, see "[Test Runs Overview](#)" on the previous page.

Note: This task is part of a higher-level task. For details, see "[How to Run Tests in ALM](#)" on page 548.

This task includes the following steps:

- "View results for a test instance run" below
- "View results for a Functional test set run" below
- "View results for a build verification suite run" on the next page
- "Manage linked defects" on the next page
- "Purge test runs - optional" on page 755

View results for a test instance run

After running a test, you can analyze the execution results to determine which steps succeeded and which tests failed.

1. On the ALM sidebar, under **Testing**, select **Test Runs**. Go to the **Test Runs** tab. For user interface details on the Test Runs tab, see "[Test Runs Module Window](#)" on page 756.
Filter and sort the grid to display only those runs that meet your criteria. For example, you can define filters to display:
 - Tests that are currently running
 - Failed runs
 - Runs executed this monthFor user interface details on filtering data, see "[Filter Dialog Box](#)" on page 54.
2. Select a test run and click **Details** to view detailed run results. For user interface details on the **Run Details** dialog box, see "[Run Details Dialog Box](#)" on page 767.

View results for a Functional test set run

ALM Editions: The **Test Set Runs** tab is available only for ALM Edition. For more information about ALM editions and their functionality, see "[ALM Editions](#)" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.

After running a test set, you can analyze the test set results to determine which tests in a test set failed, and which steps caused the failure.

1. On the ALM sidebar, under **Testing**, select **Test Runs**. Go to the **Test Set Runs** tab. For user interface details on the Test Set Runs tab, see "[Test Runs Module Window](#)" on page 756.
2. To see the execution report of a test set run, select the run and click **Show Report**. To see a soft copy of an executed run, select the run and click **Export Run**. You can also see the execution report of a test set run by clicking the **Last Run Report** button in the **Execution Grid** tab in the **Test Lab** module.

For more information on the execution report, see "[Execution Report Page - Desktop Client](#)" on page 639.

For user interface details on the Test Runs tab, see "[Test Runs Module Window](#)" on page 756.

View results for a build verification suite run

ALM Editions: The **Build Verification Suite Runs** tab is available only for ALM Edition.

For more information about ALM editions and their functionality, see "[ALM Editions](#)" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.

After running a build verification suite, you can analyze the build verification suite results to determine which test runs in a build verification suite failed, and which steps caused the failure.

1. On the ALM sidebar, under **Testing**, select **Test Runs**. Go to the **Build Verification Suite Runs** tab. For user interface details on the Build Verification Suite Runs tab, see "[Test Runs Module Window](#)" on page 756.
2. To see the execution report of a build verification suite run, select the run and click **Show Report**. To see a soft copy of an executed run, select the run and click **Export Run**. You can also see the execution report of a build verification suite run by clicking the **Last Run Report** button in the **Build Verification** module.

For more information on the execution report, see "[Execution Report Page - Desktop Client](#)" on page 639.

For user interface details on the Test Runs Module, see "[Test Runs Module Window](#)" on page 756.

Manage linked defects

You can view, add, and remove defect links for test runs and test run steps. In the Test Details dialog box, the Run Details dialog box, or the Run Step Details dialog box, click the **Linked Defects** button on the sidebar.

- For user interface details on linking defects, see "[Linked Defects/Entities Page](#)" on page 801.
- For user interface details on the Test Details dialog box, see "[Test Instance Details Dialog Box](#)" on page 598.
- For user interface details on the Run Details dialog box, see "[Run Details Dialog Box](#)" on page 767.

- For user interface details on the Run Step Details dialog box, see "Run Step Details Dialog Box" on page 770.

Purge test runs - optional

You can delete old runs from your project.

Select a run and then click the **Delete**  button.

Note:

- You can only use purge runs for test runs, not test set or build verification suite runs.
- You cannot delete test runs which are part of a currently running test set run or build verification suite run.
- If you delete a test set run or build verification suite run, the underlying test runs will be deleted. Similarly, if you delete a build verification suite run, the underlying test set runs will be deleted.

Alternatively, the Purge Runs wizard enables you to select one or more runs to delete. Use one of the following:

- In the **Test Lab > Test Sets** tab, select **Test Sets > Purge Runs**.
- In the **Test Runs > Test Runs** tab, select **Test Runs > Purge Runs**.

For user interface details on the Purge Runs wizard, see "Purge Runs Wizard" on page 773.

Test Runs User Interface

This section includes:

• Test Runs Module Window	756
• Test Runs Module Menus and Buttons	759
• Test Runs Module Fields	763
• Run Details Dialog Box	767
• Run Step Details Dialog Box	770
• Test Set/BVS Run Details Dialog Box	772
• Purge Runs Wizard	773

Test Runs Module Window

This module enables you to view the results of test runs, test set runs, and build verification suite runs.

To access	On the ALM sidebar, under Testing , select Test Runs . Select one of the following tabs. <ul style="list-style-type: none">• Test Runs. Enables you to view your test runs.• Test Set Runs. Enables you to view your Functional test set runs.• Build Verification Suite Runs. Enables you to view your build verification suite runs.
Important information	<p>ALM Editions: For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p> <p>The Test Set Runs and Build Verification Suite Runs tabs are available only for ALM Edition.</p>
Relevant tasks	"How to View Test Runs" on page 753
See also	"Test Runs Overview" on page 752

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

UI Element	Description
Test Runs tab	Displays the test runs.
Test Set Runs tab	Displays the Functional test set runs. Test runs are also displayed as test set runs in the Test Set Runs tab.
Build Verification Suite Runs tab	Displays the build verification suite runs.

UI Element	Description
<Test Runs module common UI elements>	<ul style="list-style-type: none"> • Test Runs module fields. For field definitions, see "Test Runs Module Fields on page 763". • Test Runs module menus and buttons. For command and button descriptions, see "Test Runs Module Menus and Buttons on page 759". • ALM masthead, menus, and sidebar. For details, see "ALM Common Areas on page 30".
<Legend>	<p>Displays the test run status categories and their corresponding color.</p> <p>Available from: Test Runs tab.</p>
<Filter status bar>	<p>Describes the filter currently applied to the grid. Located directly above the grid.</p> <p>Showing <x> results. Indicates the number of records currently displayed out of the total records.</p> <p>Retrieve all <x> results. Click to display all records.</p>
<Grid filters>	<p>Displays a grid filter box under each column name, enabling you to define a filter condition for a column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For more details, see "Select Filter Condition Dialog Box on page 65".</p>
⌘ ⌂	<p>Show/Hide. Displays or hides additional tabs in the lower pane of the window.</p>
Comments	<p>Comments about the currently selected run.</p> <p>Click in the text box to display a toolbar for formatting and spell checking the text.</p> <p>Available from: Test Runs tab.</p>

UI Element	Description
Report (Test Runs tab)	<p>Displays results and details of the selected run.</p> <ul style="list-style-type: none"> For a test run with Sprinter, also displays the Launch Sprinter Results Viewer button, which opens and displays the report in the Sprinter Results Viewer. For details, click the help button within the viewer. <div style="background-color: #e0f2e0; padding: 10px;"> <p>ALM Editions: Sprinter functionality is not available with Performance Center Edition. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p> </div> <ul style="list-style-type: none"> For automated test instances, also includes one of the following: <ul style="list-style-type: none">  LR Analysis Opens and displays the results in LoadRunner Analysis. Available for the LR-SCENARIO test type.  Launch Report Opens and displays the report in UFT . Available for the GUI-TEST test type. The Launch Report button is only enabled if you have installed the Unified Functional Testing Add-in from the HPE Application Lifecycle Management Add-ins page. For more details on installing add-ins, refer to the <i>HPE Application Lifecycle Management Installation and Upgrade Guide</i>. Collected System Info link. Opens the System Information dialog box. Displays the collected system information, such as CPU, memory, and processes running on the machine when the test is run. Available for the SYSTEM-TEST test type. Captured Desktop Image. Opens the captured image of the machine executing the system test. Available for the SYSTEM-TEST test type. For external type tests (EXTERNAL-TEST), also displays the following links: <ul style="list-style-type: none">  View Run Results on Jenkins Opens Jenkins and displays the run results.  Open External Run Results Path Opens the file system and displays the run results and additional test data (for example, snapshots). This path is defined in the Importing External Test Results dialog box. For more details, see ""Import External Test Results Dialog Box" on page 675".

UI Element	Description
	For more details on external testing, see " Integrating External Tests Overview " on page 668.
Results	<p>Displays the results of the last test criteria run for the selected run.</p> <p>Business Process Testing: Functionality related to test criteria is available only for business process tests. For details, see the <i>HPE Business Process Testing User Guide</i>.</p> <p>Available from: Test Runs tab.</p>
History	<p>Lists changes made to the currently selected run. For details, see "History Tab" on page 75.</p> <p>Available from: Test Runs tab.</p>
Event Log	<p>Displays a list of the events that were logged during the selected run. For details, see the <i>HPE ALM Lab Management Guide</i>.</p> <p>Available from: Test Set Runs tab.</p>
Results	<p>Enables you to manage result files generated during the selected test run.</p> <p>Available from: Test Runs tab.</p>

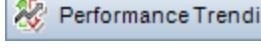
Test Runs Module Menus and Buttons

This section describes the menus and buttons available in the Test Runs module.

To access	On the ALM sidebar, under Testing , select Test Runs .
Important information	<p>ALM Editions: The Test Set Runs and Build Verification Suite Runs tab are available only in ALM Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	"How to View Test Runs" on page 753
See also	"Test Runs Overview" on page 752

Common menus and toolbars of the Test Runs module are described below:

UI Elements (A-Z)	Where	Description
Add to Favorites	Favorites	Opens the Add Favorite dialog box, enabling you to add a favorite view to your private or the public folder. For details, see the " Add Favorite Dialog Box " on page 102.
 Copy URL	Test Runs and <right-click menu>	Copies a selected run and pastes its URL as a link. The test run itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens up ALM and takes you to the run file or folder. If you are not already logged in, ALM first prompts for login details.
 Delete	Edit and <right-click menu>	Deletes the selected run or runs. Note: Only enabled when the selected run is not in one of the active states.
 Data Processor Queue	<toolbar> Test Runs tab only	If you analyze a test run after it has run, recalculate the SLA, or add the run to a trend report, the action is added to a data processing queue. Adding the action to the queue enables you to see when the action will be performed. Available for: Performance Center
Export	Edit (Test Runs tab) and <right-click menu>	Opens the Export All Grid Data dialog box, enabling you to export the runs in the grid as a text file, Microsoft Excel worksheet, Microsoft Word document, or HTML document. Select one of the following options: <ul style="list-style-type: none">• All. Exports all runs in the grid.• Selected. Exports selected runs in the grid.
 Export Report	<toolbar>	Creates a soft copy of the selected run report.
 Find	View	Opens the Find dialog box, enabling you to search runs in the module. For details about search options, see the " Find Dialog Box " on page 68.

UI Elements (A-Z)	Where	Description
 Goto Test Instance	<toolbar> Test Runs tab	Opens the Test Lab module, displaying the selected test instance in the Execution Grid .
 Go to Run	Runs	Opens the Go To Run dialog box, enabling you to find a specific run by its ID number. You can only go to runs that are in the current filter.
 Go to Timeslot	<right-click menu>	Opens the Timeslots module, displaying the timeslot for the selected run.
 Go to Test Set/Build Verification Suite	<toolbar> Test Set Runs tab and Build Verification Suite Runs tab	Opens the Test Lab module, displaying the test set or build verification suite for the selected run.
Grid Filters	View and <right-click menu>	Enables you to filter the data according to an entry in the filter box. For details about filtering options, see the "Select Filter Condition Dialog Box" on page 65 .
Information Panel	View and <right-click menu>	Shows/Hides the Information Panel in the lower area of the module window.
Organize Favorites	Favorites	Opens the Organize Favorites dialog box, enabling you to organize the list of favorite views by changing properties or deleting views. For details, see the "Organize Favorites Dialog Box" on page 103 .
 Performance Trending...	<toolbar> Test Runs tab only	Enables you to create trend reports in order to identify performance improvements and regressions. For more information about trending, see <i>HPE ALM Performance Center Guide</i> . Available for: Performance Center
Private	Favorites	Lists the favorite views that are accessible only to the user who created them.

UI Elements (A-Z)	Where	Description
Public	Favorites	Lists the favorite views that are accessible to all users.
 Refresh All	View	Refreshes the grid so that it displays the most up-to-date information.
 Run Details	Runs and <right-click menu>	Opens the Run Details dialog box, enabling you to view and edit details of the selected run.
 Run Screen	<right-click menu> Test Runs tab only	Opens the Performance Test Run screen, enabling you to view and manage the test run. For more information, refer to the <i>HPE ALM Performance Center Guide</i> .
		Note: Only enabled when the test run is in the Running state.
 Select Columns	View	Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For more details, see the " Select Columns>Select Fields Dialog Box " on page 85. For details about the test run fields, see " Test Lab Module Fields " on page 576.
 Set Filter/Sort	View	Enables you to filter and sort the runs in the grid. Any currently applied filters or sorting orders are displayed below the toolbar. For details, see " Filter Dialog Box " on page 54.
 Show Report	<toolbar> Test Set Runs and Build Verification Suite Runs tabs only	Shows an execution report of the selected run. For more information, see " Execution Report Page - Desktop Client " on page 639.

UI Elements (A-Z)	Where	Description
 Stop Run	<toolbar>	<p>Stops execution of the selected run.</p> <p>Note: Only enabled when the selected run is in the Initializing, Running, or Stopping states.</p>

Test Runs Module Fields

This section describes the Test Runs module fields.

To access	On the ALM sidebar, under Testing, select Test Runs .
Important information	The Test Runs tab is available in all editions, but the Test Set Runs and Build Verification Suite Runs tabs are available only for ALM Edition. Some of the fields below are available only in the Test Set Runs and Build Verification Suite Runs tabs.
See also	"Test Runs Module Window" on page 756

The fields are described below:

UI Element (A - Z)	Description
Build verification suite name	The name of the build verification suite.
Completed Successfully	Indicates whether the selected run completed with a status of Passed .
Configuration: Name	The name of the test configuration allocated to the selected test run.
Draft Run	Indicates whether the selected test run is a draft run. For more details, see "Draft Runs" on page 548 . Default value: N
Duration	<p>The test run time, in seconds.</p> <p>Note: You should not manually edit this field.</p>

UI Element (A - Z)	Description
End Date	<p>The end date of the run.</p> <p>Note: You should not manually edit this field.</p>
Environment	<p>The default environment on which the tests in the test set run. Environments are a combination of operating systems, browsers, and so on, on which you test the application.</p> <p>Note: Environments are defined using the ALM Web Client. After they are defined, you can select them in the Test Runs module.</p>
Exec Date	The date on which the test was last executed.
Exec Time	The time the test was last executed.
External Build / Version Number	<p>Indicates unique identifier for the imported test runs. For example, a build number of the application that was tested.</p> <p>Available for: EXTERNAL-TEST test type</p>
External Results Network Path	<p>Indicates the network path where additional test data is stored (for example, attachments).</p> <p>Available for: EXTERNAL-TEST test type</p>
Host	The name of the machine on which a test run was executed.

UI Element (A - Z)	Description
Iterations Status	<p>Business Process Testing:</p> <p>In the Manual Runner dialog box: A rich text field in which you can enter comments about the status of each iteration.</p> <p>In the Test Instance Details dialog box: The statuses of the test iterations in a bar format. The bar is divided into colors that represent the statuses of the runs and the number represents the number of iterations with each status.</p> <p>Legend:</p> <ul style="list-style-type: none"> • Passed. Green • Failed. Red • Blocked. White • Not Completed. Purple • No Run. Orange • N/A. Yellow <p>See also: "Legend " on page 601</p>
Jenkins Job Name	<p>The name of the Jenkins job uploaded that uploaded the run results to ALM.</p> <p>Available for: EXTERNAL-TEST test type</p>
Jenkins Run Results URL	<p>The URL for displaying the build from Jenkins.</p> <p>Available for: EXTERNAL-TEST test type</p>
Run ID	<p>A unique numeric ID for the run, assigned automatically by ALM. This number is automatically generated by the system when the run starts executing.</p> <p>You can click on the Run ID field in the Execution Report grid to navigate to the test instance run in the Test Runs tab.</p>

UI Element (A - Z)	Description
Run Name	<p>The name of the test run. Fast_run indicates that ALM created this run when a user changed the Status field of the test instance manually without running the test.</p> <p>The icon displayed indicates one of the following:</p> <ul style="list-style-type: none"> • The test type. For details, see "Test Types" on page 390. • A manual test run with Sprinter . For details on Sprinter, see "HPE Sprinter Overview" on page 648.
Start time	<p>The start time of the run.</p> <p>Note: You should not manually edit this field.</p>
State	<p>Indicates progress of a run. Possible values are: Initializing, Running, Stopping, Run Failure, Finished. This is a read-only field.</p>
Status (for a test instance, test set, or build verification suite run)	<p>Indicates execution status of a test instance, test set, or build verification suite run. Execution status can be one of the following:</p> <ul style="list-style-type: none"> • Blocked. One or more steps cannot run. For example, the test is running on a remote machine but cannot continue due to some environmental failure, such as network problems or hardware failure. • Failed. One or more steps in the run failed, and none have the status Blocked. • N/A. The current status is not applicable. No steps exist, or a step has an execution status of N/A. • No Run. No steps have been run. • Not Completed. One or more steps were not completed or not run, and none have the status Blocked or Failed. • Passed. The run was successful. All the steps have an execution status of Passed.
Test Set	<p>The name of the test set.</p>
Test Set: Name	<p>The name of the test set associated with the selected test run.</p>
Test: Test Name	<p>The name of the test associated with the selected test run.</p>
Tester	<p>The username of the person running the test.</p>

Run Details Dialog Box

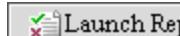
This dialog box displays test and step details for a test run.

To access	In Testing > Test Runs , click Test Runs . Select a run and click Run Details 
Important information	The buttons and options available may vary according to test type or runner.
Relevant tasks	"How to View Test Runs" on page 753
See also	<ul style="list-style-type: none"> "Test Lab Module Fields" on page 576 "Test Runs Overview" on page 752 "Run Step Details Dialog Box" on page 770

User interface elements are described below:

UI Element	Description
	Save. Saves the details.
 	First/Previous Next/Last Entity. Allows you to browse through the runs in the grid.
	Flag for Follow Up. Opens the Flag for Follow Up dialog box, enabling you to define a follow up flag for the run. For more details, see "Flag For Follow Up Dialog Box" on page 97 .
	Send by Email. Opens the Send E-mail dialog box, enabling you to send a run by email to recipients selected from a list. For more details, see "Send E-mail Dialog Box" on page 76 .
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.

UI Element	Description
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Details	Displays details of the run. For details on the available fields, see " Test Lab Module Fields " on page 576. Click in the Comments box to display a toolbar for formatting and spell checking the text.

UI Element	Description
Report	<p>Displays results and test step details of the run.</p> <ul style="list-style-type: none"> For automated test instances, also includes one of the following: <ul style="list-style-type: none">  LR Analysis Opens and displays the results in LoadRunner Analysis. Available for the LR-SCENARIO test type.  Launch Report Opens and displays the report in UFT . Available for the GUI-TEST test type. The Launch Report button is only enabled if you have installed the Unified Functional Testing Add-in from the HPE Application Lifecycle Management Add-ins page. For more details on installing add-ins, refer to the <i>HPE Application Lifecycle Management Installation and Upgrade Guide</i>. Collected System Info link. Opens the System Information dialog box. Displays the collected system information, such as CPU, memory, and processes running on the machine when the test is run. Available for the SYSTEM-TEST test type. Captured Desktop Image. Opens the captured image of the machine executing the system test. Available for the SYSTEM-TEST test type. For external type tests (EXTERNAL-TEST), also displays the following links: <ul style="list-style-type: none">  View Run Results on Jenkins Opens Jenkins and displays the run results.  Open External Run Results Path Opens the file system and displays the run results and additional test data (for example, snapshots). This path is defined in the Importing External Test Results dialog box. For more details, see "Import External Test Results Dialog Box" on page 675. <p>For more details on external testing, see "Integrating External Tests Overview" on page 668.</p>
Results	<p>Performance Center: Enables you to manage result files generated during the selected test run</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note: This tab is only available from the Test Runs tab.</p> </div>

UI Element	Description
Event Log	Displays a list of the events that were logged during the selected run. For details, see the <i>HPE ALM Lab Management Guide</i> .
Steps	<p>Displays test step details and results for the run. To view detailed results for the step, select a step from the grid and click the Details  button.</p> <p>For more details, see "Run Step Details Dialog Box" below.</p>
	<p>Note: Not available for runs of some test types and runners.</p>
Attachments	Lists attachments that provide additional information about the run. For details, see " Attachments Page " on page 80.
Parameters	Displays the manual test parameters that are used in the test steps. For details on the available fields, see " Test Lab Module Fields " on page 576 and " Test Plan Module Fields " on page 406.
Linked Defects	Lists the defects linked to the run. You can view, add, and remove defect links. For more details, see " Linked Defects/Entities Page " on page 801.
History	Displays a list of changes made to the run. For more details, see " History Tab " on page 75.
Criterion Results	<p>Displays the results of the last test criteria run for the selected business process test.</p> <p>Business Process Testing: Functionality related to test criteria is available only for business process tests. For details, see the <i>HPE Business Process Testing User Guide</i>.</p>
Iterations	<p>Displays the status of each iteration for the selected business process test.</p> <p>Business Process Testing: Functionality related to iterations is available only for business process tests. For details, see the <i>HPE Business Process Testing User Guide</i>.</p>

Run Step Details Dialog Box

This dialog box displays test step details for the run.

To access	In the Run Details dialog box—Steps view, select a step and click Details  .
Important information	This dialog box is not available for Sprinter runs.
Relevant tasks	"How to View Test Runs" on page 753
See also	<ul style="list-style-type: none"> "Test Lab Module Fields" on page 576 "Test Runs Overview" on page 752

User interface elements are described below:

UI Element	Description
   	First/Previous Next/Last Entity. Allows you to browse through the steps in the run.
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Details	Displays details of the step. For details on the available fields, see the "Test Lab Module Fields" on page 576 . Click in the Description box to display a toolbar for formatting and spell checking the text. Click the other tabs to view additional details of the step, such as expected results, actual results, and run conditions.
Attachments	Lists attachments that provide additional information about the step. For details, see "Attachments Page" on page 80 .
Linked Defects	Lists the defects linked to the step. You can view, add, and remove defect links. For more details, see "Linked Defects/Entities Page" on page 801 .

Test Set/BVS Run Details Dialog Box

This dialog box displays details for a test set run or build verification suite run.

To access	In Testing > Test Runs , click on Test Set Runs or Build Verification Suite Runs . Select a run and click  .
Relevant tasks	"How to View Test Runs" on page 753
See also	<ul style="list-style-type: none"> "Test Lab Module Fields" on page 576 "Test Runs Overview" on page 752

User interface elements are described below:

UI Element	Description
	Save. Saves the details.
	First/Previous Next/Last Entity. Allows you to browse through the runs in the grid.
	Send by Email. Opens the Send E-mail dialog box, enabling you to send a run by email to recipients selected from a list. For more details, see "Send E-mail Dialog Box" on page 76 .
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Details	Displays details of the test set run or build verification suite run. For details on the available fields, see "Test Lab Module Fields" on page 576 .
Event Log	Displays a list of the events that were logged during the selected run. For details, see the <i>HPE ALM Lab Management Guide</i> .

Purge Runs Wizard

This wizard enables you to delete old test run results in your project.

To access	Use one of the following: <ul style="list-style-type: none"> In the Test Lab > Test Sets tab, select Test Sets > Purge Runs. In the Test Runs > Test Runs tab, select Test Runs > Purge Runs.
Relevant tasks	"How to Create Test Sets" on page 590
Wizard map	This wizard contains: "Select Test Sets to Purge Page" below > "Choose Type of Purge Page" on the next page > "Confirm Purge Request Page" on page 775
See also	<ul style="list-style-type: none"> "Test Runs Overview" on page 752 "Test Lab Module Window" on page 554

Select Test Sets to Purge Page

This wizard page enables you to select test sets to purge.

Important information	General information about this wizard is available in "Purge Runs Wizard" above .
Wizard map	The "Purge Runs Wizard" above contains: "Select Test Sets to Purge Page" above > "Choose Type of Purge Page" on the next page > "Confirm Purge Request Page" on page 775
See also	"Test Runs Overview" on page 752

User interface elements are described below:

UI Element (A - Z)	Description
	Moves selected test sets between Available Test Sets and Selected Test Sets . Tip: You can also drag the test set names between panes or double-click a test sets name to move it across to the other pane.

UI Element (A - Z)	Description
	Moves all test sets between Available Test Sets and Selected Test Sets .
Available Test Sets	Lists all test sets in your project that are not currently selected to purge.
Selected Test Sets	Lists the test sets that you have selected to purge.

Choose Type of Purge Page

This wizard page enables you to select the purge type and define the purge conditions.

Important information	General information about this wizard is available in " Purge Runs Wizard " on the previous page.
Wizard map	The " Purge Runs Wizard " on the previous page contains: "Select Test Sets to Purge Page" on the previous page > " Choose Type of Purge Page " above > "Confirm Purge Request Page" on the next page
See also	"Test Runs Overview" on page 752

User interface elements are described below:

UI Element (A - Z)	Description
Delete	Includes the following options: Runs. Deletes test run results. Run Steps Only. Deletes run steps but keeps the overall run details.
From runs older than	The time before which you want to delete the data from the selected run.
Number of runs per test to keep	The number of test run results to keep for each test.
Purge draft runs only	Purges only runs marked as Draft Run . For details on draft runs, see " Draft Runs " on page 548.

Confirm Purge Request Page

This wizard page enables you to review a summary of your request and confirm the purge.

Important information	General information about this wizard is available in " Purge Runs Wizard " on page 773 .
Wizard map	The " Purge Runs Wizard " on page 773 contains: "Select Test Sets to Purge Page" on page 773 > "Choose Type of Purge Page" on the previous page > " Confirm Purge Request Page " above
See also	"Test Runs Overview" on page 752

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

UI Element	Description
<Request details area>	Summarizes the deletions you chose to make.
Finish	Deletes the test run results according to your selections.

Part 11: Defects

Chapter 39: Defect Tracking

This chapter includes:

• Defect Tracking Overview	780
• How to Track Defects in ALM	781
• How to Search for Defects	783
• How to Link Defects	784
• Defect User Interface	785

Defect Tracking Overview

Locating and repairing application defects efficiently is essential to the development process. Using the HPE Application Lifecycle Management (ALM) Defects module, you can report design flaws in your application and track data derived from defect records during all stages of the application management process.

You use the Defects module to:

- Create application defects for an ALM project.
- Track defects until application developers and testers determine that the defects are resolved.

Defect records inform members of the application development and quality assurance teams of new defects discovered by other members. As you monitor the progress of defect repair, you update the information in your project.

You can share defects across multiple ALM projects. You share and synchronize defects using the HPE ALM Synchronizer. For more information, see the *HPE ALM Synchronizer User Guide*, available from the Adds-ins Page.

ALM Editions: Sharing defects across multiple ALM projects is available for ALM Edition only. For more information about ALM editions and their functionality, see "[ALM Editions on page 125](#)". To find out what edition of ALM you are using, ask your ALM site administrator.

This section also includes "[Defect Linkage](#)" below.

For task details about working with defects, see "[How to Track Defects in ALM](#)" on the next page.

Defect Linkage

You can link a defect to the following ALM entities: requirements, tests, test sets, business process tests, flows, test instances, runs, run steps, and other defects.

Examples of when defect linkage is useful include:

- A new test is created specifically for a defect. By creating a link between the test and the defect, you can determine if the test should be run based on the status of the defect.
- During a manual test run, if you add a defect, ALM automatically creates a link between the test run and the new defect.

You can link defects directly to other defects or entities. When you add a defect link to an entity, ALM adds a direct link to the entity and indirect links to related entities.

Indirect linkage is a one-directional flow; ALM indirectly links higher-level related entities only.

The diagram below shows the indirect links that ALM creates if a defect is linked to a run step.



To learn more about defects, see ["Defect Tracking Overview" on the previous page](#).

For task details, see ["How to Link Defects" on page 784](#).

Example: If you link a defect to a run:

- The defect is indirectly linked to the run, the run's test instance, the test set, and the test.
- If the corresponding test is covered by a requirement, an indirect link is also added to the requirement.
- The defect is not indirectly linked to the run's steps, because the run steps are lower-level related entities.

Note: Only direct links to defects from an entity can be deleted.

How to Track Defects in ALM

This task describes how to track application defects during the development process.

To learn more about defects, see ["Defect Tracking Overview" on the previous page](#).

Note: Higher-level task: This task is part of a higher-level task. For details, see ["Introducing ALM" on page 22](#).

This task includes the following steps:

- ["Create defects" on the next page](#)
- ["Import defects - optional" on the next page](#)
- ["Link defects and other entities" on the next page](#)
- ["Search for defects" on the next page](#)

- "Assign, repair, and update defects" on the next page
- "Analyze defects" on the next page

1. Create defects

- a. On the ALM sidebar, select **Defects**.
- b. Click **New Defect** in the Defects grid toolbar to open the New Defect dialog box. For user interface details on the New Defect dialog box, see "[New Defect Dialog Box](#)" on page 796.

Tip: Creating a defect can be an ongoing process that may require switching between the New Defect dialog box, other ALM modules, and possibly the browser itself.

To switch to another module while creating a defect, click **Close** without submitting the defect. To return to the defect you are creating, click **New Defect** from the Defects module again. ALM retains the data so you can continue working on the same defect.

If you want to start work on a different defect, click the **Clear All Fields**  button to clear the retained data.

- c. In the New Defect dialog box, fill in the fields.

2. Import defects - optional

In addition to creating defects directly in ALM, you can also import defects to your ALM project from Microsoft Excel. To import defects, you must first install the appropriate add-in. For more information, see "[Data Import from Microsoft Word and Microsoft Excel](#)" on page 24.

3. Link defects and other entities

You can link defects to requirements, tests, test sets, test instances, runs, run steps, business process tests, flows, and other defects.

For task details on how to link defects, see "[How to Link Defects](#)" on page 784.

4. Search for defects

In the Defects module, you can search for defects from:

- The Defects grid, for example, to find defects related to a specific issue, or to modify a specific defect.
- The New Defect dialog box, for example, to avoid creating duplicate defects.

For task details on how to search for defects, see "[How to Search for Defects](#)" below.

5. Assign, repair, and update defects

Periodically review defects in the project, decide which ones to fix, and modify defect statuses, target releases, target cycles, and other fields accordingly.

In the Defects module, select a defect in the Defects grid and click the **Defect Details**  button. In the Defect Details dialog box, fill in the fields. For user interface details on the Defect Details dialog box, see the "[Defect Details Dialog Box](#)" on page 798.

Among other tasks, you can:

- Change the status of defects that are candidates to be fixed to **Open**, and assign the defects to members of the development team.
- In the **Target Release** and **Target Cycle** fields, assign the open defects to the releases and cycles in which they are targeted to be fixed.
- Fix the open defects. This involves identifying the cause of the defects, modifying and rebuilding the application, and rerunning your tests. For example, if a defect does not recur, you can assign to the defect the status **Closed**. If a defect is detected again, you can reassign to the defect the status **Open**. When a defect is repaired, you can assign it the status **Fixed**.

6. Analyze defects

Analyze defect data by generating reports and graphs.

Use one of the following:

- **View defect data in a graph.** On the Defects module menu, select **Analysis > Graphs**. For task details on generating graphs, see the "[How to Generate a Graph](#)" on page 830.
- **Create a report of defect data.** On the Defects module menu, select **Analysis > Project Report**. For task details on creating reports, see "[How to Create Project Reports](#)" on page 878.

For task details on additional analysis tools in ALM, see the "[How to Analyze Data in ALM](#)" on page 810.

How to Search for Defects

This task describes how to search for defects using the Similar Defects Dialog Box/Pane. You can search for defects at any time from the Defects grid, for example, to find defects related to a specific issue, or to modify a specific defect.

When creating a new defect, you can search for similar defects, for example, to avoid creating duplicate defects.

To watch a movie on how to check for duplicate defects, refer to this section in the ALM Online Help.

For user interface details on the Similar Defects Dialog Box/Pane, see "[Similar Defects Dialog Box/Pane](#)" on page 800.

1. Display the defect

Display the defect for which you want to find similar defects by doing one of the following:

- Select a defect from the Defects grid.
- While creating a new defect in the New Defect dialog box, enter descriptive information in the **Summary** and **Description** fields.

2. Start the search

Click the **Find Similar Defects**  button.

- Select **Find Similar Defects** to find defects similar to the current defect.
- Select **Find Similar Text** to find defects whose summary or description is similar to a specified text string.

How to Link Defects

The following steps describe how to link defects to ALM entities (requirements, tests, test sets, test instances, runs, run steps and other defects).

For user interface details on the Linked Defects/Entities page, see the "[Linked Defects/Entities Page](#)" on page 801.

1. Link the defect

From the module of the entity to which you want to link a defect, select the Linked Defects or Linked Entities page, and do one of the following:

- **Add new defect:** Create the defect to which to link.
- **Select existing defect:** Select an existing defect to which to link.

Tip: From the Defects module, you can link defects and requirements to defects.

2. View results

You can view the linked entity from the corresponding defect, and you can view the linked defect from the corresponding entity.

In grid views, when an entity is linked to a defect, ALM adds the **Linked Defects**  icon to the

entity.

	Name	Direct Cover Status	Author	Req ID
	Requirements	---		0
	Mercury Tours Application	---	alex_qc	133
	Online Travel Booking Services	---	alex_qc	134
	Products/Services On Sale	Not Covered	shelly_qc	135
	Flight Tickets	Failed	shelly_qc	136
	Flight Search	Failed	robert_qc	141
	Search Conditions	Not Covered	shelly_qc	142
	Origin And Destination	Failed	peter_qc	143
	One-Way Trip	Failed	robert_qc	149

Defect User Interface

This section includes:

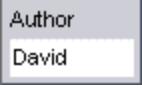
- [Defects Module Window](#) 786
- [Defects Module Menus and Buttons](#) 787
- [Defects Module Icons](#) 792
- [Defects Module Fields](#) 793
- [New Defect Dialog Box](#) 796
- [Defect Details Dialog Box](#) 798
- [Similar Defects Dialog Box/Pane](#) 800
- [Linked Defects/Entities Page](#) 801
- [Defects to Link Dialog Box](#) 804
- [Select Requirements Dialog Box](#) 805

Defects Module Window

This window enables you to define and maintain ALM defects. ALM organizes and displays defect data in the Defects grid.

To access	On the ALM sidebar, select Defects .
Relevant tasks	"How to Track Defects in ALM" on page 781
See also	"Defect Tracking Overview" on page 780

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

UI Element	Description
<Defects module common UI elements>	<ul style="list-style-type: none">Defect fields. For field definitions, see "Defects Module Fields" on page 793.Defect menus and buttons. For command and button descriptions, see "Defects Module Menus and Buttons" on the next page.Defect icons. For icon descriptions, see "Defects Module Icons" on page 792.ALM masthead, menus, and sidebar. For details, see "ALM Common Areas" on page 30.
<filter status bar>	Describes the filter currently applied to the grid. Located directly under the toolbar. <ul style="list-style-type: none">Showing <x> results. Indicates the number of records currently displayed out of the total records.Retrieve all <x> results. Click to display all records.
<grid filters> 	Displays a grid filter box under each column name, enabling you to define a filter condition for a column. Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For user interface details, see "Select Filter Condition Dialog Box" on page 65 .
<similar defects pane>	Enables you to check for similar defects from the Defects grid. For user interface details, see "Similar Defects Dialog Box/Pane" on page 800 . Available: After selecting the Find Similar Defects  button in the Defects grid.

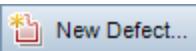
UI Element	Description
Description tab	Describes the currently selected defect. Click in the Description or Comments text boxes in this tab to display a toolbar for formatting and spell checking the text.
Attachments tab	Lists attachments that provide additional information about the currently selected defect. For user interface details, see " Attachments Page " on page 80.
Linked Entities tab	Lists the defects and other entities linked to the currently selected defect. For user interface details, see " Linked Defects/Entities Page " on page 801.
History tab	Lists changes made to the currently selected defect. For user interface details, see " History Tab " on page 75.

Defects Module Menus and Buttons

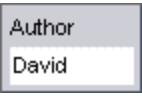
This section describes the menus and buttons available in the Defects module.

To access	On the ALM sidebar, select Defects .
Important information	You can access the Defects menu bar from the Defects module by pressing the shortcut key ALT.
Relevant tasks	"How to Track Defects in ALM" on page 781
See also	<ul style="list-style-type: none">"Defects Module Icons" on page 792"Defect Tracking Overview" on page 780

User interface elements are described below:

UI Element	Menu	Description
New Defect 	Defects	<p>Opens the Create New Defect dialog box, enabling you to add a defect, or continue editing a defect that you started to add. For user interface details, see ""New Defect Dialog Box" on page 796.</p>
		<p>Tip: Creating a defect can be an ongoing process that may require switching between the New Defect dialog box, other ALM modules, and possibly the browser itself.</p> <p>To switch to another module while creating a defect, click Close without submitting the defect. To return to the defect you are creating, click New Defect from the Defects module again. ALM retains the data so you can continue working on the same defect.</p> <p>If you want to start work on a different defect, click the  Clear All Fields button to clear the retained data.</p>
Go to Defect 	Defects	<p>Opens the Go To Defect dialog box, enabling you to find a specific defect by Defect ID.</p>
Send by E-mail 	Defects	<p>Opens the Send E-mail dialog box, enabling you to send a defect by email to recipients selected from a list. For user interface details, see ""Send E-mail Dialog Box" on page 76.</p>
Defect Details 	Defects	<p>Opens the Defect Details dialog box, displaying the details of the selected defect. For user interface details, see ""Defect Details Dialog Box" on page 798.</p>
Export	Defects	<p>Opens the Export Grid Data dialog box, enabling you to export the defects in a grid as a text file, Microsoft Excel worksheet, Microsoft Word document, or HTML document.</p> <p>Select one of the following options:</p> <ul style="list-style-type: none"> • All. Exports all defects in the grid. • Selected. Exports selected defects in the grid.

UI Element	Menu	Description
Copy/Paste	Edit	Copies selected defects within the same project or across projects. Note: To copy defects across projects, both projects must use the same ALM version and patch level. Copying defects works only when no groupings are applied.
Copy URL/Paste	Edit	Copies a selected defect and pastes its URL as a link. The defect itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the defect. If you are not already logged in, ALM first prompts for login details.
Delete 	Edit	Deletes the selected defect. When you delete a defect, ALM does not reuse the Defect ID.
Select All	Edit	Selects all defects in the grid.
Invert Selection	Edit	Unselects all previously selected defects in the grid and selects all previously unselected defects.
Find	Edit	Opens the Find dialog box, enabling you to search for a defect in the Defects module. For user interface details, see " Find Dialog Box " on page 68.
Find Next	Edit	Searches for the next item in the Defects grid that meets the previously-defined search criteria.
Replace	Edit	Opens the Replace dialog box, enabling you to replace a field value. For user interface details, see " Replace Dialog Box " on page 70.
Update Selected	Edit	Opens the Update Selected dialog box, enabling you to update a field value for multiple selected defects in the grid. For user interface details, see " Update Selected Dialog Box " on page 87.
Text Search 	Edit	Opens the text search pane in the lower part of the Defects module window, enabling you to search for records in predefined fields. For user interface details, see " Text Search Pane " on page 72.

UI Element	Menu	Description
Find Similar Defects 	Edit	Search keywords in the Summary and Description fields for defects similar to the selected defect. Similar defects are displayed according to the percentage of similarity in the pane at the bottom of the window. For user interface details, see the " Similar Defects Dialog Box/Pane " on page 800.
Find Similar Text	Edit	Search keywords in the Summary and Description fields for defects similar to a text string. For user interface details, see the " Similar Defects Dialog Box/Pane " on page 800.
Alerts	Edit	Opens the Alerts dialog box, enabling you to display alerts for the defect. For user interface details, see " Alerts Dialog Box " on page 96.
Clear Alerts	Edit	Clears displayed alerts for the module. For user interface details, see " How to Use Alerts " on page 94.
Flag for Follow Up 	Edit	Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for the selected defect. For user interface details, see " Flag For Follow Up Dialog Box " on page 97.
Pin/Unpin 	<toolbar>	<p>Pins or unpins the defect.</p> <p>Available from: Defect Grid, Defect Details.</p> <p>For details, see "Pinned Items Overview" on page 106.</p>
Clear Follow Up Flag	Edit	Clears a follow up flag of a selected defect. For concept details, see " Follow Up Flags Overview " on page 93.
Set Default Values	Edit	Opens the Set Default Values dialog box, enabling you to set default values for certain defect fields. For user interface details, see " Set Default Values Dialog Box " on page 88
Clear Default Values	Edit	Removes default values set using the Set Default Values dialog box. No defaults are available when creating new defects.
Grid Filters  Author David	View	<p>Displays a grid filter box under each column name, enabling you to define a filter condition for a column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For more details, see "Select Filter Condition Dialog Box" on page 65.</p>

UI Element	Menu	Description
Indicator Columns	View	Display indicators on the left-side of the Defects grid. For user interface details, see " Defects Module Icons " on the next page.
Information Panel	View	Displays information panel tabs on the bottom of the Defects grid. For more details, see " Defects Module Window " on page 786.
Filter/Sort 	View	Enables you to filter and sort the defects in the grid. Any currently applied filters or sorting orders are displayed below the toolbar. For user interface details, see " Filter Dialog Box " on page 54.
Refresh All 	View	Refreshes the Defects grid so that it displays the most up-to-date defects based on the filters you have selected.
Select Columns 	View	Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For user interface details, see " Select Columns>Select Fields Dialog Box " on page 85.
Attachments 	<toolbar>	Opens the Attachments page, enabling you to view attachments for, and add attachments to, the selected defect. For user interface details, see " Attachments Page " on page 80.
Add to Favorites	Favorites	Opens the Add Favorite dialog box, enabling you to add a favorite view to your private or the public folder. For user interface details, see " Add Favorite Dialog Box " on page 102.
Organize Favorites	Favorites	Organizes your favorite views. For user interface details, see " Organize Favorites Dialog Box " on page 103.
Private	Favorites	Lists the favorite views that are accessible only to the user who created them.
Public	Favorites	Lists the favorite views that are accessible to all users.

UI Element	Menu	Description
Project Reports	Analysis	<p>Lists the predefined project reports you can produce on defects data. For details on the report types, see "Predefined Project Reports" on page 882.</p> <p>Selecting a report from the list generates a preview of the report. The preview displays up to five entities per report section. To generate the full report, in the upper left corner of the preview, click the downward arrow adjacent to the Generate button and select the report format to generate.</p>
Graphs	Analysis	<p>Lists the graphs you can generate for defects data. Select a predefined graph, or launch the graph wizard.</p> <p>For details on the predefined graph types, see "Entity Graph Types" on page 834.</p>
Most Recently Used	Analysis	<p>Lists the most recently viewed reports and graphs in ALM. Displays up to ten items.</p>
Global Search 	<toolbar>	<p>A 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://marketplace.saas.hpe.com/appdelivery/content/alm-global-search.</p>

Defects Module Icons

This section describes the icons available in the Defects module.

To access	On the ALM sidebar, select Defects .
Relevant tasks	"How to Track Defects in ALM" on page 781
See also	<ul style="list-style-type: none">"Defect Tracking Overview" on page 780"Defects Module Menus and Buttons" on page 787"Defects Module Fields" on the next page

The icons are described below:

UI Element	Description
	<green asterisk>. The applicable tab is populated.
 	Alerts. Click to view alerts for the defect. <ul style="list-style-type: none">• Red alert. The alert is new.• Gray alert. The alert has already been read. For user interface details, see " "Alerts Dialog Box" on page 96 ".
	Attachments. Click to view attachments for the specified defect. Open an attachment by selecting it from the list. If there are more than ten attachments, click the more attachments link to view the list in the Attachments Page . For details, see " "Attachments Page" on page 80 ".
 	Follow Up Flags. Click to view follow up flags for the defect. <ul style="list-style-type: none">• Gray flag. The follow up flag is new.• Red flag. The follow up date has arrived. For user interface details, see " "Flag For Follow Up Dialog Box" on page 97 ".
	Linked Entities. Click to view linked entities for the defect in the Defect Details dialog box. For user interface details, see " "Linked Defects/Entities Page" on page 801 ".

Defects Module Fields

This section describes the Defects module fields.

To access	On the ALM sidebar, select Defects .
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Important information	<ul style="list-style-type: none"> You can add user-defined fields and change the label of any of the fields in the Defects module. You can also customize project lists. For details, see the <i>HPE Application Lifecycle Management Administrator Guide</i>. You can use the Script Editor to restrict and dynamically change the fields and values in the Defects module. For details, see the <i>HPE Application Lifecycle Management Administrator Guide</i>. When you select a defects column with a user name value (including user-defined fields), ALM displays a list with the name and full name of each user. You can search for users, sort users, group users by user group, and select users from the users list or a group tree. For user interface details, see "Users List Dialog Box" on page 67.
Relevant tasks	"How to Track Defects in ALM" on page 781
See also	<ul style="list-style-type: none"> "Defect Tracking Overview" on page 780 "Defects Module Menus and Buttons" on page 787 "Defects Module Window" on page 786

User interface elements are described below:

UI Element (A - Z)	Description
Actual Fix Time	The actual number of days needed to fix the defect. If this field is left blank, ALM automatically calculates the Actual Fix Time as Closing Date-Detected on Date .
Assigned To	The user name of the person who is assigned to fix the defect.
Closed in Version	The application version in which the defect was closed.
Closing Date	The date on which the defect was closed.
Comments	Comments about the defect. To add a new comment, click the Add Comment button. A new section is added to the Comments box, displaying your user name and the database's current date.
Defect ID	A unique numeric ID for the defect, assigned automatically by ALM. The Defect ID is read-only.
Description	Describes the defect in detail.
Detected By	The user name of the person who submitted the defect.

UI Element (A - Z)	Description
Detected in Cycle	<p>The cycle in which the defect was detected.</p> <p>When assigning a defect to a cycle in the Detected in Cycle field, ALM automatically assigns its release to the Detected in Release field.</p>
Detected in Release	<p>The release in which the defect was detected.</p>
Detected in Version	<p>The application version in which the defect was detected.</p>
Detected on Date	<p>The date on which the defect was detected.</p> <p>Default: The current database server date.</p>
Detected on Environment	<p>The environment on which the defect was detected. Environments are a combination of operating systems, browsers, and so on, on which you test the application.</p> <p>Note: Environments are defined using the ALM Web Client. After they are defined, you can select them when reporting a defect.</p>
Estimated Fix Time	<p>The estimated number of days required for fixing the defect.</p>
Modified	<p>The date and time when this defect was last changed.</p>
Planned Closing Version	<p>The version in which the defect is planned to be fixed.</p>
Priority	<p>The priority of the defect, ranging from low priority (level 1) to urgent priority (level 5).</p>
Project	<p>The name of the project where the defect occurs.</p>
Reproducible	<p>Whether the defect can be recreated under the same conditions by which it was detected.</p> <p>Default: Y</p>
Severity	<p>The severity of the defect, ranging from low (level 1) to urgent (level 5).</p>

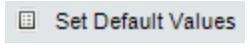
UI Element (A - Z)	Description
Status	The current status of the defect. Defect status can be one of the following: Closed, Fixed, New, Open, Rejected, Reopen. Default: New
Subject	The subject folder.
Summary	A brief summary of the defect.
Target Cycle	The cycle in which the defect is targeted to be fixed. When assigning a defect to a cycle in the Target Cycle field, ALM automatically assigns its release to the Target Release field.
Target Release	The release in which the defect is targeted to be closed.

New Defect Dialog Box

This dialog box enables you to create defects.

To access	Use one of the following: <ul style="list-style-type: none">From the Defects module, click  New Defect....From any module, on the masthead, click  and select New Defect.
Important information	You can set default values for certain defect fields. For user interface details, see " Set Default Values Dialog Box " on page 88.
Relevant tasks	"How to Track Defects in ALM" on page 781
See also	"Defect Tracking Overview" on page 780

User interface elements are described below:

UI Element	Description
	<p>Clear All Fields. Clears the data.</p> <p>Tip: Creating a defect can be an ongoing process that may require switching between the New Defect dialog box, other ALM modules, and possibly the browser itself.</p> <p>To switch to another module while creating a defect, click Close without submitting the defect. To return to the defect you are creating, click New Defect from the Defects module again. ALM retains the data so you can continue working on the same defect.</p> <p>If you want to start work on a different defect, click the Clear All Fields  button to clear the retained data.</p>
	<p>Find Similar Defect. Opens the Similar Defects dialog box, enabling you to find:</p> <ul style="list-style-type: none"> • Defects similar to the new defect. • Defects similar to a text string. <p>For user interface details, see "Similar Defects Dialog Box/Pane" on page 800.</p>
	<p>Check Spelling. Checks the spelling for the selected word or text box.</p>
	<p>Thesaurus. Displays a synonym, antonym, or related word for the selected word.</p>
	<p>Spelling Options. Enables you to configure the way ALM checks spelling.</p>
	<p>Use Default Values. Fills in certain fields with default values, as specified in the Set Default Values dialog box. For user interface details, see "Set Default Values Dialog Box" on page 88.</p>
	<p>Set Default Values. Enables you to specify default values for certain fields using the Set Default Values dialog box. For user interface details, see "Set Default Values Dialog Box" on page 88.</p>

UI Element	Description
	<p>Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?".</p> <p>For example: a*b returns acb and adefb; a?b returns acb</p>
Details	<p>Lists the defect fields. For details on defect fields, see "Defects Module Fields" on page 793.</p>
Attachments	<p>Enables you to add attachments that provide additional information about the new defect. For user interface details, see "Attachments Page" on page 80.</p>

Defect Details Dialog Box

This dialog box enables you to update defect details, add attachments, view defect history, and link to other defects. You can also view other entities that are linked to the defect.

To access	Right-click a defect in the Defects grid and select Defect Details .
Relevant tasks	"How to Track Defects in ALM" on page 781
See also	<ul style="list-style-type: none"> • "Defect Tracking Overview" on page 780 • "Defects Module Fields" on page 793

User interface elements are described below:

UI Element	Description
	<p>Save. Saves the details.</p>
	<p>First/Previous/Next/Last Entity. Allows you to browse through the defects.</p>
	<p>Go to Defect. Opens the Go To Defect dialog box, enabling you to find a specific defect by Defect ID. You can only go to defects that are in the current filter. After specifying the defect ID, click one of the following:</p> <ul style="list-style-type: none"> • Open Details. Opens the defect in the Defects Details dialog box. • Show in Grid. Highlights the defect in the Defects grid, after you close the Defects Details dialog box.

UI Element	Description
	Flag for Follow Up. Opens the Flag For Follow Up dialog box, enabling you to define a follow up flag for selected defects. For user interface details, see " Flag For Follow Up Dialog Box " on page 97.
	Alerts. Opens the Alerts dialog box, enabling you to display alerts for the defect. For user interface details, see " Alerts Dialog Box " on page 96. Available when: The selected defect has an alert associated with it.
	Standard Defect Report. Select one of the following reports: <ul style="list-style-type: none"> • Execution Report. Displays detailed information about the linked test run. Available: If the defect is linked to a test run. • Standard Defect Report. A standard defect report for the selected defect.
	Send by E-mail. Opens the Send E-mail dialog box, enabling you to send a defect by email to recipients selected from a list. For user interface details, see " Send E-mail Dialog Box " on page 76.
	Spell Check. Checks the spelling for the selected word or text box.
	Thesaurus. Displays a synonym, antonym, or related word for the selected word.
	Spelling Options. Enables you to configure the way ALM checks spelling.
	Field Search. Enables you to search for a specified field name. Supports wildcard search with asterisk "*" and question mark "?". For example: a*b returns acb and adefb; a?b returns acb
Details	Lists the defect fields. For details on defect fields, see " Defects Module Fields " on page 793.
Attachments	Lists attachments that provide additional information about the currently selected defect. For user interface details, see " Attachments Page " on page 80.
Linked Entities	Lists the entities linked to the currently selected defect. For user interface details, see " Linked Defects/Entities Page " on page 801.

UI Element	Description
History	Lists changes made to the currently selected defect. For user interface details, see " History Tab " on page 75.

Similar Defects Dialog Box/Pane

The Similar Defects dialog box enables you to check for similar defects before submitting a new defect. The Similar Defects pane enables you to check for similar defects at any time from the Defects grid.

To access	In the Defects grid or the New Defect dialog box, select a defect and click the Find Similar Defects  button. Select either Find Similar Defects or Find Similar Text .
Important information	<ul style="list-style-type: none"> Checking for similar defects is done by comparing a selected defect with other defects in your project or by comparing defects to a text string. When performing a Find Similar operation, results are displayed with the most likely candidates on top. If no similar defects are found, a message is displayed.
Relevant tasks	"How to Search for Defects" on page 783
See also	"Defect Tracking Overview" on page 780

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

UI Element	Description
Search for:	<p>Text string to find.</p> <p>Letter case does not affect the results.</p> <p>The following are ignored:</p> <ul style="list-style-type: none"> articles (a, an, the); coordinate conjunctions (and, but, for, nor, or); boolean operators (and, or, not, if, then); wildcards (? , * , [])

UI Element	Description
Proximity %	When searching for similar text, ALM limits the results of defects found to those with a minimum similarity according to this percentage. Default: ALM returns defects with a similarity of at least 25 percent.
Search	Start search.
	Select columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For user interface details, see "Select Columns>Select Fields Dialog Box" on page 85 .
	Searchable Fields. The fields used to find similar defects. The fields are read-only.
	Go To. Locates the selected defect in the Defects grid.
<defects>	List of similar defects. For details of the fields displayed for the similar defects, see "Defects Module Fields" on page 793 .
Item	The number of the current defect in relation to the total number of similar defects found. Example: Example: Item 2 of 10

Linked Defects/Entities Page

This page enables you to define and maintain links to defects from defects and other entities.

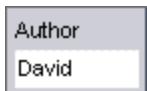
To access	Use one of the following: <ul style="list-style-type: none">From the Defects module: On the Defect Details dialog box sidebar, select Linked Entities. Click the Defects tab for linked defects or the Others tab for linked entities that are not defects.From other modules and dialog boxes: Click Linked Defects on the sidebar or the Linked Defects tab.
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Important information	<ul style="list-style-type: none"> You can link defects to the following ALM entities: requirements, business, tests, test sets, business process tests, flows, test instances, runs, run steps, and other defects. From within the Defects module, you can link to other defects. To link a defect to other ALM entities, go to the module or Details dialog box for that entity.
Relevant tasks	"How to Link Defects" on page 784
See also	"Defect Tracking Overview" on page 780

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

UI Element	Description
	First/Previous/Next/Last Entity. Allows you to browse through the entities. Available from: Linked Defects tab.
	Add and Link Defect. Opens the New Defect dialog box, enabling you to add a defect link by submitting a new defect. For user interface details, see "New Defect Dialog Box" on page 796 . Available from: All modules except the Defects module.
	Link Existing Defect. Enables you to add a link to an existing defect: <ul style="list-style-type: none"> By ID. In the Link Existing Defect dialog box, select a defect by typing the defect ID. Select. In the Defects to Link dialog box, select a defect from the grid. For user interface details, see "Defects to Link Dialog Box" on page 804.
	Link From Requirement. Enables you to add a link to an existing requirement: <ul style="list-style-type: none"> By ID. In the Link Existing Requirement dialog box, select a requirement by typing the requirement ID. Select. In the Select Requirements dialog box, select a requirement from the grid. For user interface details, see "Select Requirements Dialog Box" on page 805. Available from: This page's Others tab in the Defects module.

UI Element	Description
	Remove Link. Removes the selected link.
	Refresh All. Refreshes the list of linked defects or entities so that it displays the most up-to-date defects based on the filters you have selected.
	Filter/Sort. Enables you to filter and sort the list of linked defects and entities. Any currently applied filters or sorting orders are displayed below the toolbar. For user interface details, see " Filter Dialog Box " on page 54 .
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the grid and their order. For user interface details, see " Select Columns>Select Fields Dialog Box " on page 85 .
	Defect Details. Opens the Defect Details dialog box, displaying the details of the selected defect. For user interface details, see " Defect Details Dialog Box " on page 798 .
	<ul style="list-style-type: none"> • Go To Defect. Opens the Defects Details dialog box for the linked defect. • Go To 'Linked By' Entity. Opens the Details dialog box for the entity linked to the defect.
Type of Link	<p>Select an option:</p> <ul style="list-style-type: none"> • Direct links. Displays direct links only. • All links. Displays all links. <p>For information about direct and indirect links, see "Defect Tracking Overview" on page 780.</p> <p>Available from: All modules except the Defects module.</p>
Show Links for	<p>Determines which links to display:</p> <ul style="list-style-type: none"> • Current Req Links. Defect links added to the current requirement only. • Including Children's Links. Defect links added to the current requirement and its children. <p>Available from: Requirements module</p>
<filter status bar>	Describes the filters currently applied to the grid. Located directly above the grid filter boxes.

UI Element	Description
<Defects module fields>	For user interface details, see "Defects Module Fields" on page 793.
<grid filters> 	<p>Displays a grid filter box under each column name, enabling you to define a filter condition for a column.</p> <p>Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For user interface details, see "Select Filter Condition Dialog Box" on page 65.</p>
Created By	The user name of the person who created the link.
Creation Date	The date on which the link was created.
Link Comment	Enables you to add comments about the link.
Link ID	A unique numeric ID for the link, assigned automatically by ALM. The Link ID is read-only.
Link Type	A value of the Link Type customized list. For more information on lists, see the <i>HPE Application Lifecycle Management Administrator Guide</i> .
Linked By Status	The current status of the linked entity.
Linked Entity ID	A unique numeric ID for the linked entity, assigned automatically by ALM. The Linked Entity ID is read-only.
Linked Entity Name	The linked entity name. For example, the requirement name.
Linked Entity Type	The linked entity type (for example: step, test, test set).
Defects	A list of defects linked to the current defect.
Others	A list of other entities linked to the current defect.

Defects to Link Dialog Box

This dialog box enables you to link defects to other defects in the Defects module.

To access	Open the Defect Details dialog box for a defect, click the Linked Entities tab and then the Defects tab. Click Link Existing Defect  and then select Select .
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Relevant tasks	"How to Link Defects" on page 784
See also	"Defect Linkage" on page 780

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

UI Element	Description
	Refresh. Refreshes the list of defects.
	Filter/Sort. Enables you to filter the data according to the criteria that you choose. For more details, see "Filter Dialog Box" on page 54.
	Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the data grid, and their order. For user interface details, see "Select Columns/Select Fields Dialog Box" on page 85.
	Search. Opens the Similar Defects dialog box, enabling you to find defects similar to a text string. For user interface details, see "Similar Defects Dialog Box/Pane" on page 800.
<filter status bar>	Describes the filter currently applied to the grid. Located directly above the grid filter boxes.
<grid filters>	Displays a grid filter box under each column name, enabling you to define a filter condition for a column. Type directly into the box, or click the box to display the browse button, which opens the Select Filter Condition dialog box. For user interface details, see "Select Filter Condition Dialog Box" on page 65. Available from: Model Grid view
<defects>	Displays the defects in the Defects module in a data grid.
Description	Displays the summary, description and comments for the selected defect in the data grid.

Select Requirements Dialog Box

This dialog box enables you to link requirements to defects in the Defects module.

To access	Open the Defect Details dialog box for a defect, click the Linked Entities tab and then the Others tab. Click Link From Requirement  and then click Select .
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Relevant tasks	"How to Link Defects" on page 784
See also	"Defect Linkage" on page 780

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

UI Element	Description
	Show Requirement Details. Opens the Requirement Details dialog box for the requirement selected in the tree.
	Refresh. Refreshes the requirements tree so that it displays the most up-to-date information.
	Filter/Sort. Enables you to filter the data according to the criteria that you choose. For more details, see "Filter Dialog Box" on page 54.
<Find box>	Enter the name of the requirement you want to search for and click the Find button.
	Find. Searches the requirements tree for the value you specify in the Find box.
	Go to Entity by ID. Opens the Go to Requirement dialog box, enabling you to locate the requirement in the tree according to Requirement ID.
<requirements tree>	<p>Displays the requirements tree in the Requirements module.</p> <p>Expand the tree and select a requirement. You can assign more than one requirement to a defect.</p>
	Clears the assigned requirement from the defect.

Part 12: Analysis

Chapter 40: Introducing Analysis

This chapter includes:

• Analysis Overview	810
• How to Analyze Data in ALM	810
• Dashboard User Interface	812

Analysis Overview

HPE Application Lifecycle Management (ALM) provides you with analysis tools enabling you to analyze and display ALM data in various formats.

Dashboard Modules

In the Dashboard modules, you analyze ALM data by creating graphs, project reports, and Excel reports. You can also create dashboard pages that display multiple graphs side-by-side.

Dashboard contains the following modules:

- **Analysis View module.** Contains the analysis tree in which you organize all of your analysis items. Analysis items can be any of the following analysis types: graphs, project reports, and Excel reports.
Users with the required administrator permissions also have access to the Analysis Menus tab. This tab enables you to manage the analysis items that are generated from within the Analysis menu in specific modules, such as Requirements and Test Lab.
- **Dashboard View module.** Contains the dashboard tree in which you organize dashboard pages. In **dashboard pages** you arrange multiple graphs that you created in the analysis tree, and display them in a single view.

Additional Analysis Tools

- **Live Analysis graphs.** Enables you to create and display a dynamic graphic representation of data related to test plans and test sets. For more details, see "[Live Analysis Graphs](#)" on page 939.

For task details, see "[How to Analyze Data in ALM](#)" below.

Note: Run step information of runs executed in Sprinter are not included in any of the reporting tools.

How to Analyze Data in ALM

This task describes how to analyze data in ALM using various analysis tools.

To learn more about data analysis, see "[Analysis Overview](#)" above.

Note: This task is part of a higher-level task. For details, see "[Introducing ALM](#)" on page 22.

This task includes the following steps:

- "Generate a graph (including business view graphs)" below
- "Generate a dashboard page" below
- "Generate a project report" below
- "Generate an Excel report" below
- "Generate a Business View Excel report" below
- "Manage analysis items and dashboard pages" below
- "Generate a Live Analysis graph" on the next page

Generate a graph (including business view graphs)

- View selected data in a graph format. For task details, see "[How to Generate a Graph](#)" on [page 830](#).
- View selected Project Planning and Tracking data in a graph format. For task details, see "[How to Generate a PPT Graph](#)" on [page 868](#).

Generate a dashboard page

Group together selected graphs and view them in a single display.

For task details, see "[How to Generate a Dashboard Page](#)" on [page 833](#).

Generate a project report

Produce a project report of selected data.

For task details, see "[How to Create Project Reports](#)" on [page 878](#).

Generate an Excel report

Extract data from the project database with SQL queries, and format the data in Microsoft Excel.

For task details, see "[How to Generate an Excel Report](#)" on [page 902](#).

Generate a Business View Excel report

In Microsoft Excel, extract data from the project database with DQL queries and format the data.

For task details, see "[How to Generate a Business View Excel Report](#)" on [page 918](#).

Manage analysis items and dashboard pages

Organize analysis items and dashboard pages in the analysis and dashboard trees. Create folders, move, copy, rename, and delete items.

For user interface details, see "[Analysis View Menus and Buttons](#)" on [page 815](#).

Generate a Live Analysis graph

Live Analysis graphs enable you to create and display dynamic graphs related to test plan subjects and test sets.

For task details, see "How to Generate Live Analysis Graphs" on page 940.

Dashboard User Interface

This section includes:

• Analysis View Window	813
• Dashboard View Window	814
• Analysis View Menus and Buttons	815
• Dashboard View Menus and Buttons	820
• Dashboard Icons	822
• Details Tab	823
• Share Analysis Item Dialog Box	824

Analysis View Window

This window enables you to create, manage and view analysis items. Analysis items include graphs, project reports, and Excel reports.

To access	On the ALM sidebar, under Dashboard , select Analysis View .
Relevant tasks	"How to Analyze Data in ALM" on page 810
See also	"Analysis Overview" on page 810

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

UI Element	Description
Analysis View tab	<p>Contains a tree which enables you to organize your analysis items under private and public root folders.</p> <ul style="list-style-type: none">Analysis items that you create in a public folder are accessible to all users.Analysis items that you create in a private folder are accessible only to the user that created them. <div style="background-color: #e0f2e0; padding: 10px;"><p>Note:</p><ul style="list-style-type: none">Analysis items in public folders may show different results for different users, depending on the data hiding definitions for the user group. For more information on data permissions, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.You cannot move analysis items within a folder. When you refresh the tree view, folder items are alphabetized.</div>
Analysis Menus tab	<p>Enables you to view and manage the behavior of analysis items that are generated from within modules, such as Requirements and Test Plan.</p> <p>Analysis items are listed according to the modules in which they appear.</p> <p>Available for: Users with the required administrator permissions only.</p>
<Analysis View common UI elements>	<ul style="list-style-type: none">Analysis View menus and buttons. For command and button descriptions, see "Analysis View Menus and Buttons" on page 815.Dashboard icons. For icon descriptions, see "Dashboard Icons" on page 822.ALM masthead, menus, and sidebar. For details, see "ALM Common Areas" on page 30.

UI Element	Description
Details tab	Displays details of the selected analysis item or folder. For more details, see " Details Tab " on page 823.
Configuration tab	<p>Enables you to configure the selected analysis item. For user interface details, see:</p> <ul style="list-style-type: none"> • Graphs: "Configuration Tab/Window - Graphs" on page 839 • Project reports: "Configuration Tab - Project Reports" on page 887 • Excel reports: "Configuration Tab - Excel Reports" on page 905 • Business View Excel reports: "Configuration Tab - Business View Excel Reports" on page 922
View tab	<p>Displays the selected graph. For user interface details, see "View Tab - Graphs/Graph Window" on page 846.</p> <div data-bbox="507 868 1246 941" style="background-color: #e0f2e0; padding: 5px; margin-top: 10px;"> <p>Note: Project reports and Excel reports are viewed in external applications, such as Microsoft Excel and Word.</p> </div>

Dashboard View Window

This window enables you to create, manage, and view dashboard pages.

To access	On the ALM sidebar, under Dashboard , select Dashboard View .
Relevant tasks	"How to Generate a Dashboard Page" on page 833
See also	"Analysis Overview" on page 810

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

UI Element	Description
<Dashboard View common UI elements>	<ul style="list-style-type: none"> • Dashboard View menus and buttons. For command and button descriptions, see "Dashboard View Menus and Buttons" on page 820. • Dashboard icons. For icon descriptions, see "Dashboard Icons" on page 822. • ALM masthead, menus, and sidebar. For details, see "ALM Common Areas" on page 30.

UI Element	Description
<dashboard tree>	<p>Organizes dashboard pages under public and private root folders.</p> <ul style="list-style-type: none"> Dashboard pages that you create in a public folder are accessible to all users. Dashboard pages that you create in a private folder are accessible only to the user that created them. Public dashboard pages can include only public graphs. <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note:</p> <ul style="list-style-type: none"> Dashboard pages in public folders may show different results for different users, depending on the data hiding definitions for the user group. For more information on data permissions, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>. You cannot move dashboard pages within a folder. When you refresh the tree view, dashboard pages in a folder are alphabetized. </div>
Details tab	Displays details of the selected dashboard page or folder. For more details, see " "Details Tab" on page 823 ".
Configuration tab	Enables you to configure the selected dashboard page. For user interface details, see " "Configuration Tab - Dashboard Pages" on page 850 ".
View tab	Displays the selected dashboard page. For user interface details, see " "View Tab – Dashboard Pages" on page 852 ".

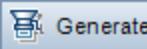
Analysis View Menus and Buttons

This section describes the menus and buttons available in the Analysis View module.

To access	On the ALM sidebar, under Dashboard , select Analysis View .
Important information	You can access the menu bar from the Analysis View module by pressing the shortcut key ALT.
Relevant tasks	"How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none"> "Dashboard Icons" on page 822 "Analysis View Window" on page 813

User interface elements are described below:

UI Element (A - Z)	Menu	Description
Copy URL/Paste	Edit	<p>Copies a selected analysis item or folder and pastes its URL as a link. The item itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the item. If you are not already logged in, ALM first prompts for login details.</p> <p>Note: Not available in the Analysis Menus tab.</p>
Copy/Paste  	Edit	<p>Copies selected analysis items or folders within the same project or across projects.</p> <p>Note: You can copy a project report to another project under the following conditions:</p> <ul style="list-style-type: none"> The name, type, and category of project templates used by the report are the same in both projects. The report is not based on a baseline. All entities covered in the report are defined in the target project.
Cut/Paste  	Edit	<p>Moves selected analysis items or folders to a different location in the tree.</p> <p>When you move an analysis item from a public folder to a private folder, it is removed from public dashboard pages in which it is included.</p> <p>Tip: You can also move an analysis item by dragging it to a new location in the tree.</p>

UI Element (A - Z)	Menu	Description
Delete 	Edit	<p>Deletes selected analysis items or folders. You cannot delete the root folders.</p> <p>Note:</p> <ul style="list-style-type: none"> • Deleting a folder deletes all the items included in it. • Deleting a graph removes it from dashboard pages that contain it. • When you delete graphs or project reports from the Analysis Menus tab, you must log out and then log in again in order for the graph/report to be removed.
Expand/Collapse	View	Expands/collapses all the nodes under the selected folder.
Export Excel Report Definition	Edit	<p>Enables you to export the selected Excel report definition to an XML file. You can then import the Excel report definition to another project.</p> <p>Note: Not available in the Analysis Menus tab.</p>
Global Search 	<toolbar>	<p>A 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://marketplace.saas.hpe.com/appdelivery/content/alm-global-search.</p>
 Generate	Analysis	<p>Generates the selected analysis item.</p> <p>Graphs: The results are displayed in the View tab. If the View tab is already selected, the analysis item is refreshed with the most up-to-date data.</p> <p>Project Reports and Excel Reports: The results are displayed in an external application.</p>
Graph Wizard	Analysis	Opens the graph wizard, enabling you to create and configure a graph. For more details, see "Graph Wizard" on page 853.

UI Element (A - Z)	Menu	Description
Import Excel Report Definition	Edit	<p>Enables you to import an Excel report definition that was previously exported to an XML file. The report definition is added to the selected analysis tree folder.</p> <p>Note: Not available in the Analysis Menus tab.</p>
New Business View Excel Report	Analysis	<p>Opens the New Business View Excel Report dialog box, enabling you to create a new business view Excel report in the analysis tree.</p>
New Business View Graph	Analysis	<p>Opens the New Business View Graph dialog box, enabling you to create a new business view graph in the analysis tree.</p>
New Excel Report	Analysis	<p>Opens the New Excel Report dialog box, enabling you to create a new Excel report in the analysis tree. For more details, see "New Excel Report Dialog Box" on page 913.</p> <p>Note: Not available in the Analysis Menus tab.</p>
New Folder 	Analysis	<p>Opens the New Folder dialog box, enabling you to add a folder under a selected folder in the analysis tree.</p> <p>Folders you create under the Private root folder are available to the owner only. Folders you create under the Public root folder are available to all users.</p> <p>Syntax exceptions: The folder name cannot exceed 255 characters, and cannot include the following characters: \ ^ *</p> <p>Note: Not available in the Analysis Menus tab.</p>
New Graph	Analysis	<p>Opens the New Graph dialog box, enabling you to create a new graph in the analysis tree. For more details, see "New Graph Dialog Box" on page 860.</p>

UI Element (A - Z)	Menu	Description
New Item 	Toolbar	<p>Enables you to launch the graph wizard, or add a new graph, business view graph, project report, Excel report, or business view Excel report, to the analysis tree.</p> <p>Note:</p> <ul style="list-style-type: none"> Excel reports are not available in the Analysis Menus tab. When adding a new graph or project report in the Analysis Menus tab, you must log out and then log in again in order to view the added graph/report.
New Project Report	Analysis	<p>Opens the New Project Report dialog box, enabling you to create a new project report in the analysis tree. For more details, see ""New Project Report Dialog Box" on page 896".</p>
New Release Analysis > Release Scorecard	Analysis	<p>Opens the New Graph dialog box, enabling you to create a new Release Scorecard graph in the analysis tree. For more details, see ""New Graph Dialog Box" on page 860".</p> <p>ALM Editions: Functionality related to PPT is available for ALM Edition. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p>
New Release Analysis > KPI Over Time Graph	Analysis	<p>Opens the New Graph dialog box, enabling you to create a new KPI Over Time graph in the analysis tree. For more details, see ""New Graph Dialog Box" on page 860".</p> <p>ALM Editions: Functionality related to PPT is available for ALM Edition. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p>

UI Element (A - Z)	Menu	Description
New Release Analysis > KPI Breakdown Graph	Analysis	<p>Opens the New Graph dialog box, enabling you to create a new KPI Breakdown graph in the analysis tree. For more details, see "New Graph Dialog Box" on page 860.</p> <p>ALM Editions: Functionality related to PPT is available for ALM Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
New Release Analysis > KPI Breakdown Over Time Graph	Analysis	<p>Opens the New Graph dialog box, enabling you to create a new KPI Breakdown Over Time graph in the analysis tree. For more details, see "New Graph Dialog Box" on page 860.</p> <p>ALM Editions: Functionality related to PPT is available for ALM Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Refresh 	View	<p>Refreshes the analysis tree so that it displays the most up-to-date information.</p>
Rename	Edit	<p>Enables you to rename the selected analysis item or folder.</p>
Share Analysis Item	Edit	<p>Enables others to view the selected graph or project report outside ALM. For more details, see "Share Analysis Item Dialog Box" on page 824.</p> <p>Available from: Graphs, Project Reports</p> <p>Note: Not available in the Analysis Menus tab.</p>

Dashboard View Menus and Buttons

This section describes the menus and buttons available in the Dashboard View module.

To access	On the ALM sidebar, under Dashboard , select Dashboard View .
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Important information	You can access the menu bar from the Dashboard View module by pressing the shortcut key ALT.
Relevant tasks	"How to Generate a Dashboard Page" on page 833
See also	<ul style="list-style-type: none"> • "Dashboard Icons" on the next page • "Dashboard View Window" on page 814

User interface elements are described below:

UI Element (A - Z)	Menu	Description
Copy URL/Paste	Edit	Copies a selected dashboard page or folder and pastes its URL as a link. The item itself is not copied. Instead, you can paste the address into another location, such as an email or a document. Clicking the link opens ALM and takes you to the item. If you are not already logged in, ALM first prompts for login details.
Copy/Paste  	Edit	Copies selected dashboard pages or folders within the same project or across projects. When you paste a dashboard page, you choose how ALM copies the graphs included in the dashboard page.
Cut/Paste  	Edit	Moves selected dashboard pages or folders to a different location in the tree. When you move a dashboard page from a private folder to a public folder, ALM removes any private graphs from the dashboard page. Tip: You can also move a dashboard page by dragging it to a new location in the tree.
Delete 	Edit	Deletes selected dashboard pages or folders. You cannot delete the root folders. Note: Deleting a folder deletes all the items included in it.
Expand/Collapse	View	Expands/collapses all the nodes under the selected folder.

UI Element (A - Z)	Menu	Description
Export	Dashboard	<p>Saves the selected dashboard page as a PDF file, enabling you to print the dashboard page.</p> <p>The following options are available:</p> <p>Dashboard Page Layout. The dashboard page is saved in its original format.</p> <p>One Item Per Page Layout. Each graph on the dashboard page is saved on a separate page.</p> <p>Available from: View tab</p>
 Generate	Dashboard	<p>Generates the selected dashboard page, and displays it in the View tab.</p> <p>If the View tab is already selected, the dashboard page is refreshed with the most up-to-date data.</p>
 New Folder	Dashboard	<p>Opens the New Folder dialog box, enabling you to add a folder under a selected folder in the dashboard tree.</p> <p>Folders you create under the Private root folder are available to the owner only. Folders you create under the Public root folder are available to all users.</p> <p>Syntax exceptions: The folder name cannot exceed 255 characters, and cannot include the following characters: \ ^ *</p>
 New Page	Dashboard	<p>Opens the New Dashboard Page dialog box, enabling you to create a new dashboard page. For more details, see ""New Dashboard Page Dialog Box" on page 862.</p>
 Refresh	View	<p>Refreshes the dashboard tree so that it displays the most up-to-date information.</p>
Rename	Edit	<p>Enables you to rename the selected dashboard page or folder.</p>

Dashboard Icons

This section describes the icons displayed in the Dashboard modules.

To access	On the ALM sidebar, under Dashboard , select Analysis View or Dashboard View .
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Relevant tasks	"How to Analyze Data in ALM" on page 810
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User interface elements are described below:

UI Element	Description
	Analysis Folder. A folder for organizing analysis items or dashboard pages.
	Dashboard Page. A dashboard page in the dashboard tree.
	Excel Report. An Excel report in the analysis tree.
	Business View Excel Report. A business view Excel report in the analysis tree.
	Graph. A graph in the analysis tree.
	Business View Graph. A business view graph in the analysis tree.
	KPI Breakdown Graph. A project planning and tracking (PPT) graph in the analysis tree.
	KPI Breakdown Progress Graph. A project planning and tracking (PPT) graph in the analysis tree.
	KPI Progress Graph. A project planning and tracking (PPT) graph in the analysis tree.
	Project Report. A project report in the analysis tree.
	Release Scorecard Graph. A project planning and tracking (PPT) graph in the analysis tree.

Details Tab

This tab displays details of the selected analysis item, dashboard page, or folder.

To access	On the ALM sidebar, under Dashboard , select Analysis View or Dashboard View , and select an item or folder.
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Important information	<ul style="list-style-type: none"> You can edit the Name and Title fields. Other fields in this dialog box are read-only. Clicking in the Description field in this tab displays a toolbar for formatting and spell checking the text.
Relevant tasks	"How to Analyze Data in ALM" on page 810
See also	"Analysis View Window" on page 813

User interface elements are described below:

UI Elements	Description
Entity	The data set sampled by the analysis item. Available from: Analysis items
Type	The analysis item type. Available from: Analysis items
Sub Type	The type of graph.
Name	The tree display name of the analysis item, dashboard page, or folder. In graphs, the default title displayed above the graph.
Last Modified	The date and time on which the analysis item or dashboard page was last modified.
Modified By	The user who last modified the analysis item or dashboard page.
Owner/Page Owner	The user that created the analysis item, dashboard page, or folder. Permissions to modify public items may be limited to the owner only.
Title	The title displayed in the header of the dashboard page. Available from: Dashboard pages

Share Analysis Item Dialog Box

This dialog box enables you to share a graph or a project report for viewing outside ALM client.

To access	In the analysis tree, right-click a graph or project report, and select Share Analysis Item .
------------------	--

Important information	<ul style="list-style-type: none">You can adjust the width and height of a graph by adding the &width=xx or &height=xx attributes to the end of the URL.This option is not available in the Analysis Menus tab.
Relevant tasks	<ul style="list-style-type: none">"How to Generate a Graph" on page 830"How to Create Project Reports" on page 878
See also	"Analysis View Window" on page 813

User interface elements are described below:

UI Element	Description
Copy Analysis Item URL (Authentication Required)	Copies a URL of the selected graph or report to the clipboard. You are required to enter an ALM user name and password to view the graph or report.
Copy Analysis Item Public URL	Copies a URL of the selected graph or report to the clipboard. No authentication is required.
Reset Analysis Item Public URL	If you previously selected Copy Analysis Item Public URL , selecting this option blocks access to the public read-only version of the selected graph or report.

Chapter 41: Graphs and Dashboard Pages

This chapter includes:

• Graphs and Dashboard Pages Overview	828
• How to Generate a Graph	830
• How to Generate a Dashboard Page	833
• Entity Graph Types	834
• Graphs and Dashboard Pages User Interface	838

Graphs and Dashboard Pages Overview

HPE Application Lifecycle Management (ALM) graphs help you analyze and view the relationships between different types of data.

You can create the following types of graphs in ALM:

- **Business View Graphs.** A graph based on a business view represents either a single entity or multiple entities, and reflects business value information only. For more information about business view graphs, see "[Business View Graphs Overview](#)" on the next page.
- **Entity Graphs.** Each graph is based on a single entity only, such as requirements or defects, and enables you to view any of the entity's attributes.

When creating an Entity graph, you can use several graph types. For more information on available types, see "[Entity Graph Types](#)" on page 834.

When viewing Entity graphs, you can drill down to the records represented by each bar or segment.

After you have created graphs in the Analysis View module, you can select and arrange multiple graphs, and view them side-by-side in a **dashboard page**.

You can create graphs that include data from multiple ALM projects.

Creating Graphs

The following table lists the various options for creating graphs:

Option	Description	Available From	Graph Types
Predefined	<p>Enable you to quickly analyze data related to a specific module. Predefined graphs display data from the existing module filter.</p> <p>You can save predefined graphs in the Analysis View module for future reference.</p>	<ul style="list-style-type: none">• Business Components module• Defects module• Requirements module• Test Lab module• Test Plan module	Entity

Option	Description	Available From	Graph Types
Analysis View module	Enables you to filter data, set various configurations, and organize the graphs in folders.	Analysis View module	<ul style="list-style-type: none"> Entity Business View
Graph Wizard	Guides you through the stages of creating and configuring a graph.	<ul style="list-style-type: none"> Analysis View module Business Components module Defects module Requirements module Test Lab module Test Plan module 	<ul style="list-style-type: none"> Entity Business View (from Analysis View module only)

ALM Editions: Cross-project graphs are not available for Quality Center Enterprise Edition or Performance Center Edition. For more information about ALM editions and their functionality, see ["ALM Editions" on page 125](#). To find out what edition of ALM you are using, ask your ALM site administrator.

For related tasks, see ["How to Generate a Graph" on the next page](#) and ["How to Generate a Dashboard Page" on page 833](#).

Business View Graphs Overview

A business view is a data layer that exists on top of the database and which reflects only those project entity fields that represent information that is useful from a business perspective.

Example: A business view based on the Baselines entity could contain the **Name**, **Description**, and **Baseline ID** fields. This is because these fields convey information that could be of importance to the graph consumer who needs to understand baseline information from a business perspective only. By the same logic, the same business view would not include the **Attachment** and **Auto complete type** fields, as they are of little

business significance.

Business views can be based on single entities, such as **Baselines** or **Defects**, while others can represent more complex relationships between entities, such as **Defects With Linked Requirements**.

The advantage of creating graphs based on business views is that it ensures a standardization across the graphs. Different graphs based on the same business view reflect a common frame of reference. This provides genuine business value to the graphs' consumer, thereby making them more meaningful.

In addition to the pre-defined business views, additional views can be created in Project Customization. For more information, refer to the *HPE Application Lifecycle Management Administrator Guide*.

Business View graphs are always the Summary graph type.

By default, Business View graphs display 100MB of data. You can change this setting by modifying the **MAX_GRAPH_RESULT_DATA_TABLE_VOLUME** parameter in the Site Configuration tab. For more information, refer to the *HPE Application Lifecycle Management Administrator Guide*.

How to Generate a Graph

This task describes how to analyze data in ALM using graphs.

To learn more about graphs, see "[Graphs and Dashboard Pages Overview](#)" on page 828.

This section contains:

- "[Create a graph](#)" below
- "[Configure a graph](#)" on the next page
- "[View a graph](#)" on the next page
- "[Edit graph categories](#)" on the next page
- "[Entity graphs: Drill down to graph data](#)" on page 832
- "[Share a graph outside ALM](#)" on page 832
- "[Create a dashboard page](#)" on page 833

1. **Create a graph**

Use one of the following:

- **Launch the Graph Wizard**

The Graph Wizard guides you through the steps involved in creating a Business View or an Entity graph and configuring its settings. You launch the graph wizard either from the Analysis View module, or while working in one of the other ALM modules.

In the Analysis View module. On the ALM sidebar, under **Dashboard**, select **Analysis View**, right-click a folder, and select **Graph Wizard**. You use this method to create Business View and Entity graphs.

In other modules. In the Requirements, Business Components, Test Plan, Test Lab, or Defects module, select **Analysis > Graphs > Graph Wizard**. This method creates Entity graphs only.

For user interface details, see "[Graph Wizard](#)" on page 853.

- **Entity graphs: Create a predefined graph**

While working in the Requirements, Business Components, Test Plan, Test Lab, or Defects module, generate an impromptu graph to analyze the module data.

In any of the above modules, select **Analysis > Graphs** and select one of the predefined graphs. For user interface details, see "[View Tab - Graphs/Graph Window](#)" on page 846.

- **Create a graph in the Analysis View module**

- i. **Open the Analysis View module.** On the ALM sidebar, under **Dashboard**, select **Analysis View**.
- ii. **Add a folder to the analysis tree.** Right-click a folder under the Private or Public root folder, and select **New Folder**.
- iii. **Create a new graph.** Right-click a folder, and select the graph type. For entity graphs, select **New Graph**, and for business view graphs select **New Business View Graph**. Fill in the fields in the New Graph dialog box or New Business View Graph dialog box respectively.

For New Graph dialog box user interface details, see "[New Graph Dialog Box](#)" on page 860.

2. Configure a graph

Configure graph settings, such as data filtering, grouping, and x-axis values.

Click the **Configuration** tab. For user interface details, see "[Configuration Tab/Window - Graphs](#)" on page 839.

Available from: Analysis View module

3. View a graph

Use one of the following:

- **In the Analysis View module.** Click the **View** tab.
- **In other modules.** From the module menu, select **Analysis > Most Recently Used** and select a recently used graph. The selected graph opens in the Analysis View module.

For user interface details, see "[View Tab - Graphs/Graph Window](#)" on page 846.

4. Edit graph categories

You can group together values in the grouped-by or x-axis field, and display the combined

data as a single category.

- a. In the View tab or graph window, click the **Edit Categories** arrow  , and select one of the available options.
- b. Create or change existing categories. For user interface details, see "[Edit <Type> Categories Dialog Box](#)" on page 863.

Example: Suppose the **Priority** field is selected in the graph **Grouped By** field, and the **Priority** field has five values: Low, Medium, High, Very High, and Urgent. You might combine the values Medium and High into a category Important, and the values Very High and Urgent into a category Critical. The graph would then display data divided into three categories: Low, Important, and Critical.

5. Entity graphs: Drill down to graph data

In bar and pie charts, you can drill down to the records represented by a selected bar or segment, and view details of individual records.

ALM Editions: Cross-project graphs are not supported in Quality Center Enterprise Edition. For more information about ALM editions and their functionality, see "[ALM Editions](#)" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.

- a. In the View tab or graph window, click a segment or bar in the graph.
- b. If the segment or bar represents records from multiple projects, the Project Selection dialog box opens. Select a project.
- c. If you selected to view data from another project, or if the segment or bar represents records from only another project, the project opens in a separate browser window. If applicable, you are prompted to log in. The records are displayed in the relevant ALM module.
- d. If the segment or bar represents records from only the current project, or if you selected to view data from the current project, the records are displayed in the Drill Down Results dialog box. For user interface details, see "[Drill Down Results Dialog Box](#)" on page 865.

6. Share a graph outside ALM

Allow ALM users or others to view read-only versions of graphs outside ALM.

- a. In the analysis tree, right-click a graph, and select **Share Analysis Item**.
- b. In the Share Analysis Item dialog box, select a share option. For details of the options, see "[Share Analysis Item Dialog Box](#)" on page 824.

A URL of the selected graph is copied to the clipboard.

- c. Paste the URL in a website or email.
- d. Click the URL to open a read-only version of the graph in a Web browser. Each time you access the graph, after set intervals, it displays the most up-to-date information.

Note: You can change the frequency at which graph data is updated by adding and configuring the **GRAPH_RESULT_LIFESPAN** site configuration parameter. For more details, refer to the *HPE Application Lifecycle Management Administrator Guide*.

Available from: Analysis View module

7. Create a dashboard page

View several graphs together in a dashboard page. For task details, see "[How to Generate a Dashboard Page](#)" below.

How to Generate a Dashboard Page

This task describes how to generate a dashboard page in which you can arrange multiple graphs in a single view.

To watch a movie on how to generate a dashboard page, refer to this section in the ALM Online Help.

This task includes the following steps:

- "[Prerequisites](#)" below
- "[Create a dashboard page](#)" below
- "[Configure a dashboard page](#)" on the next page
- "[View a dashboard page](#)" on the next page

1. Prerequisites

Graphs are defined in the Analysis View module. For task details on how to create graphs, see "[How to Generate a Graph](#)" on page 830.

2. Create a dashboard page

Add a dashboard page to a folder in the dashboard tree.

- a. **Open the Dashboard View module.** On the ALM sidebar, under **Dashboard**, select **Dashboard View**.
- b. **Add a folder to the dashboard tree.** Right-click a folder under the Private or Public root folder, and select **New Folder**.
- c. **Create a new dashboard page.** Right-click a folder, and select **New Page**. Type a name for the dashboard page. For user interface details, see "[New Dashboard Page Dialog Box](#)" on

[page 862.](#)

- d. Click the **Details** tab, and add a description of the dashboard page. For user interface details, see "[Details Tab" on page 823.](#)

3. **Configure a dashboard page**

Arrange the graphs you want to include on a dashboard page.

In the Dashboard View module, select a dashboard page, and click the **Configuration** tab. For user interface details, see "[Configuration Tab - Dashboard Pages" on page 850.](#)

4. **View a dashboard page**

Generate and view dashboard pages.

In the Dashboard View module, select a dashboard page, and click the **View** tab. For user interface details, see "[View Tab – Dashboard Pages" on page 852.](#)

Entity Graph Types

ALM enables you to generate graphs for requirements, tests, test instances, test runs, defects, and business components. For each entity, different graph types are available.

This section includes:

- "[Requirements Graphs " on the next page](#)
- "[Test Plan Graphs" on page 836](#)
- "[Test Lab Graphs" on page 836](#)
- "[Defects Graphs" on page 837](#)
- "[Business Component Module Graphs" on page 838](#)

Requirements Graphs

You can generate the following graphs for requirements:

Graph	Description
Requirements Coverage Graph	<p>Shows how many requirements are currently in an ALM project, according to their test coverage status.</p> <div data-bbox="491 551 1372 815" style="background-color: #e0f2e0; padding: 10px;"> <p>Note:</p> <ul style="list-style-type: none"> Available from the Requirements module only. The Coverage Graph is a specific type of the Requirements Summary Graph. If you select a different x-axis value, a regular Summary Graph is displayed. </div>
Requirements Progress Graph	<p>Shows how many requirements accumulated in an ALM project at specific points during a period of time.</p> <p>Specify the time interval displayed along the x-axis, and the requirement information by which ALM groups the data. Specify whether you want to view the number of requirements or the change in the number of requirements.</p>
Requirements Summary Graph	<p>Shows how many requirements are currently in an ALM project.</p> <p>Specify the type of data displayed along the x-axis, and the requirement information by which ALM groups the data.</p>
Requirements Trend Graph	<p>Shows the history of changes to specific requirement fields in an ALM project, for each time interval displayed.</p> <p>Specify the field for which you want to view the number of changes, and the time period for which you want to view data.</p> <p>Each status change is only recorded once for the purpose of this graph. For example, if a field was changed from Not Completed to Passed to Not Completed, the Not Completed status change will only be recorded once in this graph.</p>

Test Plan Graphs

You can generate the following graphs for tests:

Graph	Description
Test Plan Progress Graph	<p>Shows how many tests accumulated in an ALM project at specific points during a period of time.</p> <p>Specify the time interval displayed along the x-axis and the test plan information by which ALM groups the data. Specify whether you want to view the number of tests or the change in the number of tests.</p>
Test Plan Summary Graph	<p>Shows how many tests are currently in an ALM project.</p> <p>Specify the type of data displayed along the x-axis, and the test plan information by which ALM groups the data.</p>
Test Plan Trend Graph	<p>Shows the history of changes to specific Test Plan fields in an ALM project, for each time interval displayed.</p> <p>Specify the field for which you want to view the number of changes, and the time period for which you want to view data.</p> <p>Each status change is only recorded once for the purpose of this graph. For example, if a field was changed from Ready to Repair to Ready, the Ready status change will only be recorded once in this graph.</p>

Test Lab Graphs

You can generate the following graphs for test instances and runs:

Test Set Graphs

Graph	Description
Test Set Progress Graph	<p>Shows how many tests accumulated in test sets at specific points during a period of time.</p> <p>Specify the time interval displayed along the x-axis, and the test information by which ALM groups the data. Specify whether you want to view the number of tests or the change in the number of tests.</p> <p>Note: If you create the graph in the Test Lab module, you can choose whether to include only the current test set or all test sets.</p>

Graph	Description
Test Set Summary Graph	<p>Shows how many tests in an ALM project belong to test sets.</p> <p>Specify the type of data displayed along the x-axis, and the test plan and test in test set information by which ALM groups the data.</p> <p>Note: If you create the graph in the Test Lab module, you can choose whether to include only the current test set or all test sets.</p>

Test Run Graphs

Graph	Description
Test Run Summary Graph	Shows the status of runs in the project, grouped by Tester.

Defects Graphs

You can generate the following graphs for defects:

Graph	Description
Defects Age Graph	<p>Shows the lifetime of defects in an ALM project. The lifetime of a defect begins when it is reported, and ends when it is closed.</p> <p>Specify the defect information by which ALM groups the data, and the data displayed along the y-axis. Specify the time interval that you want to use to divide the data.</p> <p>The age of a Closed defect is the difference between the date on which it was reported and the date on which it was closed. After a defect is closed, its age remains static.</p>
Defects Progress Graph	<p>Shows the accumulation of defects in an ALM project, or the estimated/actual amount of time taken to fix these defects, at specific points during a period of time.</p> <p>Specify the time interval displayed along the x-axis, the defect information by which ALM groups the data, and the data displayed along the y-axis. Specify whether you want to view the number of defects or the change in the number of defects.</p>
Defects Summary Graph	<p>Shows a summary of the number of defects in an ALM project, or the estimated/actual amount of time taken to fix these defects.</p> <p>Specify the type of data displayed along the x-axis, the type of data displayed along the y-axis, and the defect information by which ALM groups the data.</p>

Graph	Description
Defects Trend Graph	<p>Shows the history of changes to specific defect fields in an ALM project, for each time interval displayed.</p> <p>Specify the field for which you want to view the number of changes, and the time period for which you want to view data. Each priority change is only recorded once for the purpose of this graph. For example, if a field was changed from Urgent to Very High to Urgent, the Urgent priority change will only be recorded once in this graph.</p>

Business Component Module Graphs

You can generate the following graphs for business components:

Graph	Description
Components Summary - Group by 'Status' Graph	<p>Shows how many components are currently in the ALM project. The number of components is displayed according to the criteria that you specify.</p> <p>Specify the type of data displayed along the x-axis, and the test plan information by which ALM groups the data. By default, the graph appears as a bar chart.</p>
Components Progress - Group by 'Status'	<p>Shows the history of changes to specific component fields in a ALM project, at each point during a period of time.</p> <p>Specify the field for which you want to view the number of changes, and the time period for which you want to view data. The graph can be viewed as a bar chart only.</p>
Components Trend - Group by 'Status'	<p>Shows the history of changes to specific component fields in a ALM project, at each point during a period of time.</p> <p>Specify the field for which you want to view the number of changes, and the time period for which you want to view data. The graph can be viewed as a bar chart only.</p>

Graphs and Dashboard Pages User Interface

This section includes:

- Configuration Tab/Window - Graphs 839
- View Tab - Graphs/Graph Window 846
- Configuration Tab - Dashboard Pages 850
- View Tab – Dashboard Pages 852

• Graph Wizard	853
• New Graph Dialog Box	860
• Select Business View Dialog Box	861
• New Dashboard Page Dialog Box	862
• Select Projects Dialog Box	862
• Edit <Type> Categories Dialog Box	863
• Graph Appearance Dialog Box	865
• Drill Down Results Dialog Box	865

Configuration Tab/Window - Graphs

The Configuration tab in the Analysis View module and the graph configuration window in the project reports' Configuration tab enable you to select data to be included in a graph.

ALM Editions: Cross-project graphs are not supported in Quality Center Enterprise Edition. For more information about ALM editions and their functionality, see "["ALM Editions" on page 125](#). To find out what edition of ALM you are using, ask your ALM site administrator.

To access	<p>Configuration tab:</p> <p>Use one of the following:</p> <ul style="list-style-type: none"> • In the Analysis View module, select a graph, and click the Configuration tab. • If you have the required administrator permissions, in the Analysis View module's Analysis Menus tab, select a graph and click the Configuration tab. <p>Configuration window:</p> <ol style="list-style-type: none"> 1. On the ALM sidebar, under Dashboard, select Analysis View. 2. Expand the analysis tree and select a project report. 3. In the project report, select a section node. 4. In the Graph Selection area, select a graph and click Configure.
Important information	The available configuration options depend on the graph type.
Relevant tasks	<ul style="list-style-type: none"> • "How to Generate a Graph" on page 830 • "How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none"> • "Graphs and Dashboard Pages Overview" on page 828 • "Analysis View Window" on page 813

User interface elements are described below:

UI Element	Graph Type	Description
Business View	Business View	Enables you to select a business view on which to base the graph. Click the browse button next to the box, and select the desired business view from the list and click OK .
Period	Entity (progress and trend graphs only)	<p>The time period covered by the graph. Select a time period from the drop-down list:</p> <ul style="list-style-type: none"> • Custom. A time period between any two dates. Set the start and end dates. • Week/Month/Quarter/Year. A fixed time period any time in the past. Use the arrows to jump to the next or previous period, or set the start or end date of the period in the drop-down calendars. • Last. A time period ending at the current date. Select a time unit (day, week, month, quarter, or year) and set the number of time units you want to cover in the graph. • All days. Includes all time periods from the beginning of the project until the current date.
Age Grouping	Entity (Defects only)	<p>You can group all defects older than a certain period (for example, older than six months) in one column, and all defects more recent than that period in a second column. Alternatively, you can group the defects by all available periods.</p> <ul style="list-style-type: none"> • Select a period to group the defects in two columns. • Select No grouping to view all of the available periods.
Resolution	Entity (progress and trend graphs only)	The time interval at which data is grouped on the x-axis.
Display Options	Entity (progress graphs only)	<ul style="list-style-type: none"> • Select Raw Data to view the number of requirements, tests, or defects over the period of time you selected. • Select Changes over Time to view the change in the number of requirements, tests, or defects over the period of time you selected. Each record begins at 0.

UI Element	Graph Type	Description
Y-Axis	<ul style="list-style-type: none"> Business View Entity (summary and age graphs only) 	<p>Select the data that displays on the y-axis.</p> <ul style="list-style-type: none"> Select Count to display the total number of items (for example, a count of open defects). Business View graphs. Select Count Distinct and choose a field to display distinct values for that field. Select Sum of and choose a numerical field. For example, in Defects graphs, choose Estimated Fix Time to display the estimated time required for fixing the defects. Choose Actual Fix Time to display the actual time spent on fixing the defects.
X-Axis	<ul style="list-style-type: none"> Business View Entity (summary graphs only) 	<p>The information displayed along the x-axis of the graph.</p> <p>Tip: In cross-project graphs, select QC Projects to display the data by project.</p>
Grouped By	<ul style="list-style-type: none"> Business View Entity 	<p>Select a field to determine the information by which ALM groups data in the graph. You can group the data only by string or list fields.</p> <p>Tip: For cross-project graphs, select QC Projects to group the data by project.</p> <p>Progress or Trends graphs: If you set a filter on the same field as the Group By field, groups in the graphs may include values that you filtered out. This is because in progress and trend graphs the filter operates on current values, while groupings operate on historical values. For example, say the Group By field in a Defects graph is set to Status, and the current filter includes all defects whose status is Open. When the graph is generated, all previous statuses of the open defects, such as Rejected, will appear in the graph even if Rejected was not included in the filter.</p>
Show 'Not Covered' parents	Entity (Requirements only)	Choose whether to include parent requirements with a Not Covered status.

UI Element	Graph Type	Description
Show full path	Entity (summary graphs only)	In summary graphs, if you select Subject , Plan: Subject , Test: Subject , or Test Set: Name in the X-Axis field, ALM displays the full path of the test subject folder.

UI Element	Graph Type	Description
Filter State		<p>Enables you to set dynamic filter conditions for graphs that are generated from within the Analysis menu in specific modules.</p> <ul style="list-style-type: none"> • Custom. Enables you to define a customized filter in the Analysis Menus tab. • Special filters. The following predefined filtering options are provided: <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p>Note: When adding a graph to an Analysis Menu of a different module type from the new graph, you must use the Custom filter type. Selecting a special filter results in the graph being generated with no filter at all. For example, if you add a Defects graph to the Requirements Analysis Menu, and select the Context filtering option, ALM ignores the selection and generates the graph with no filter at all.</p> </div> <ul style="list-style-type: none"> • Context. Filters information according to the filter that is currently selected in the module. • Selected. Includes information for the currently selected entity in the module only. <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p>Note: In the Test Lab module, the selected entity is the selected test run instance, and not the selected test set.</p> </div> <ul style="list-style-type: none"> • Selected with Children. For hierarchical entities, includes information for the selected parent entity as well as child entities. • Current Entity Based. Includes information for the currently focused item in the module. You use this option to generate a graph in the Test Lab module on the test set level. <p>Available from: Analysis Menus tab only. You must have the required administrator permissions to view this tab.</p>

UI Element	Graph Type	Description
	Entity	<p>Set Filter. Enables you to filter the data according to the criteria you choose. For details, see "Select Filter Condition Dialog Box" on page 65.</p> <p>The current filter is displayed in the filter box.</p> <div style="background-color: #e0f2e0; padding: 10px; margin-top: 10px;"> <p>Note: Setting the filter to the same field as the Grouped By field, may cause historical data to appear in the graph.</p> </div>
	<ul style="list-style-type: none"> • Business View • Entity 	<p>Clear Filter. Clears the current filter.</p>
	Business View	<p>Copy/Paste Filter Settings. Enables you to copy and paste filter settings from one Business View graph to another.</p> <p>This is useful for reproducing complex filters in several graphs.</p> <div style="background-color: #e0f2e0; padding: 10px; margin-top: 10px;"> <p>Note: You can perform this action only if the following conditions are met:</p> <ul style="list-style-type: none"> • The source and the target graphs must contain fields with the same technical names. • The target graph does not contain more fields than the source graph, though it may contain less. </div>

UI Element	Graph Type	Description
<field filter table>	Business View	<p>Enables you to filter data for Business View graphs.</p> <ul style="list-style-type: none"> • Field name. Lists the fields in the business view. • criteria. Enables you to define filter criteria for each field. • OR. An optional column that appears when you define a filter condition for a field. Enables you to define additional filters for that field. <div style="background-color: #e0f2e0; padding: 10px; margin-top: 10px;"> <p>Note: Filter criteria for dates and strings must be preceded by an equals sign.</p> </div>
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Select Projects</div>	<ul style="list-style-type: none"> • Business View • Entity 	<p>Opens the Select Projects dialog box, enabling you to change the list of projects in the Cross Project Selection grid. For details, see "Select Projects Dialog Box" on page 862.</p> <p>Available from: Configuration tab (not available in the Analysis Menus tab)</p>

UI Element	Graph Type	Description
Project Selection	<ul style="list-style-type: none"> • Business View • Entity 	<p>Projects included in the graph.</p> <p>To change the list of projects included in the graph, click the Select Projects button.</p> <div style="border-left: 2px solid #80B040; padding-left: 10px; margin-top: 10px;"> <p>Note:</p> <p>When working with Entity graphs, be aware of the following:</p> <ul style="list-style-type: none"> • Every time you add or remove projects in your graph, ALM updates the fields in the Filter dialog box and the drop-down lists of the following boxes: X-Axis, Y-Axis and Grouped By. The lists contain only fields that are identical in all the selected projects. Identical fields are fields that have the same field name, label and data type. For more information on customizing fields, see the <i>HPE Application Lifecycle Management Administrator Guide</i>. • If you defined a filter condition using a field that becomes unavailable, that condition is removed. • If you selected a field in the X-Axis, Y-Axis and Grouped By boxes that becomes unavailable, the first field in the drop-down list is selected. </div> <p>Available from: Configuration tab (not available in the Analysis Menus tab)</p>

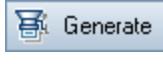
View Tab - Graphs/Graph Window

The View tab enables you to view saved graphs in the Analysis View module, and analyze the graph data.

The graph window in the Requirements, Business Components, Test Plan, Test Lab, and Defects modules enables you to view predefined graphs to analyze data during your work in those modules.

To access	<p>View tab:</p> <p>Use one of the following:</p> <ul style="list-style-type: none"> • In the Analysis View module, select a graph, and click the View tab. • If you have the required administrator permissions, in the Analysis View module's Analysis Menus tab, select a graph and click the View tab. • In the Requirements, Test Plan, Test Lab, Defects, or Business Components module, choose Analysis > Most Recently Used, and select a graph. <p>Graph window:</p> <p>Use one of the following:</p> <ul style="list-style-type: none"> • In the Requirements, Test Plan, Test Lab, Defects, or Business Components module, choose Analysis > Graphs, and select a graph type. • In the Analysis View module, select a project report in the analysis tree. In the project report, select a section node and in the Graph Selection area click View.
Relevant tasks	<ul style="list-style-type: none"> • "How to Generate a Graph" on page 830 • "How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none"> • "Graphs and Dashboard Pages Overview" on page 828 • "Analysis View Window" on page 813

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

UI Element	Description
 Generate	<p>Generate. Refreshes the graph so that it displays the most up-to-date information.</p>
	<p>Bar Chart. In summary, trend and age graphs, switches the chart format to a bar chart.</p>
	<p>Pie Chart. In summary graphs, switches the chart format to a pie chart.</p> <p>In pie charts, the x-axis categories are displayed as pie segments. The y-axis quantities are represented by the size of the segments.</p> <div style="background-color: #e0f2e0; padding: 5px; margin-top: 10px;"> <p>Note: Pie charts do not display the Grouped By field.</p> </div>
	<p>Line Chart. In progress graphs, switches the chart format to a line chart.</p>

UI Element	Description
	<p>Data Grid. The grid creates a matrix of the graph's x-axis and Grouped By categories. A Total row is added that displays the total of each Grouped By category. Available in all graph types.</p>
 	<p>Show/Hide Total Values. In progress graphs, shows/hides a <total> category to the graph, representing the sum of all the other Grouped By categories.</p> <p>Tip: After showing the <total> category, click its label in the legend to hide the category.</p>
	<p>Scroll to the Left/Right. Scrolls the graph to the left or right. These buttons are enabled when the Zoom In and Zoom Out buttons are in use.</p>
	<p>Show All. Restores the graph to its normal size. This button is enabled when the Zoom In and Zoom Out buttons are in use.</p>
	<p>Zoom In/Out. Changes the magnification of the graph.</p>
	<p>Save Graph Image. When viewing a graph as a bar, pie chart, or line chart, saves the graph image. You can select from a variety of graphic file formats.</p> <p>Save Graph Data. When viewing a data grid, saves the graph data. You can save the data as an Excel spreadsheet, a Word file, an HTML document, or a text file.</p>
	<p>Set Graph Appearance. Opens the Graph Appearance dialog box, enabling you to customize the graph title, graph color, and graph display. For more details, see "Graph Appearance Dialog Box" on page 865.</p>
	<p>Copy Graph to Clipboard. Includes the following options:</p> <ul style="list-style-type: none"> • Copy Graph (Color). Copies the graph in color to the Clipboard. • Copy Graph (Monochrome). Copies the graph in monochrome to the Clipboard. • Copy Full Screen Graph (Color). Copies the graph in color to the Clipboard, enlarged to fit full screen. • Copy Full Screen Graph (Monochrome). Copies the graph in monochrome to the Clipboard, enlarged to fit full screen.

UI Element	Description
	<p>Print Graph. Includes the following options:</p> <ul style="list-style-type: none"> • Print Graph (Color). Prints the graph in color. This is the default button option. • Print Graph (Monochrome). Prints the graph in monochrome. • Print Graph and Details (Color). Prints the graph and its description in color. • Print Graph and Details (Monochrome). Prints the graph and its description in monochrome.
	<p>Edit Categories. Enables you to combine X-Axis and Grouped By field values into categories. The following options are available:</p> <ul style="list-style-type: none"> • Edit X-Axis Categories. Opens the Edit X Axis Categories dialog box, enabling you to display combined x-axis values as a single category in the graph. This option is available only for summary graphs and Requirements Coverage graphs. This is the default button option. For details, see "Edit <Type> Categories Dialog Box" on page 863. • Reset X-Axis Categories. Removes combined categories of x-axis values, and resets the graph display. • Edit Group by Categories. Opens the Edit 'Group By' Categories dialog box, enabling you to display combined grouped-by values as a single category in the graph. For details, see "Edit <Type> Categories Dialog Box" on page 863. • Reset Group by Categories. Removes combined categories of grouped-by values, and resets the graph display. <p>For more details, see "Edit <Type> Categories Dialog Box" on page 863.</p>
	<p>Full Screen. Opens the graph in a new window and maximizes its display.</p> <div data-bbox="621 1564 1263 1600" style="background-color: #e0f2e0; padding: 5px;"> <p>Note: The toolbar remains visible in full-screen mode.</p> </div> <div data-bbox="621 1681 1352 1757" style="background-color: #e0f2e0; padding: 10px;"> <p>Tip: To return to the standard view, click the Close button in the top-right corner of the window.</p> </div> <p>Available from: View tab</p>

UI Element	Description
Add to Analysis Tree...	<p>In the graph window, opens the New Graph dialog box, enabling you to save the graph to a folder in the Analysis View module.</p> <p>Available from: Graph window</p>
<graph area>	<p>You can perform the following actions in the graph area:</p> <ul style="list-style-type: none"> • In bar or pie charts, to further analyze the data, drill down to the graph's data by clicking on a segment in the graph. • Right-click an area in the chart to change its color. • Hover over a bar or segment to view a tooltip containing the area's category, x-axis, and y-axis values.
<graph title>	<p>Click a graph title to change the graph's titles and appearance. For user interface details, see "Graph Appearance Dialog Box" on page 865.</p>
<legend>	<p>In line or bar charts, displays the chart categories and their corresponding color.</p> <p>You can perform the following actions in the legend box:</p> <ul style="list-style-type: none"> • In progress and trend graphs, click a category checkbox to show or hide the category in the graph. • Right-click a category to change its color.

Configuration Tab - Dashboard Pages

This tab enables you to design a dashboard page by selecting and arranging graphs on the page.

To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Dashboard, select Dashboard View. 2. Expand the dashboard tree, and select a dashboard page. 3. Click the Configuration tab.
Important information	<p>In public dashboard pages you can include only public graphs.</p>
Relevant tasks	<ul style="list-style-type: none"> • "How to Generate a Dashboard Page" on page 833 • "How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none"> • "Graphs and Dashboard Pages Overview" on page 828 • "Analysis View Window" on page 813

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

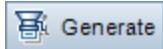
UI Element	Description
<configuration pane>	<p>Contains placeholders representing graphs selected for the current dashboard page.</p> <p>Rearrange the graphs on the page:</p> <ul style="list-style-type: none"> • Drag the placeholders to new positions. • Expand or reduce the placeholders. <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note: The maximum number of graphs that a dashboard page can display is limited by the DASHBOARD_PAGE_ITEM_LIMIT site parameter. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p> </div>
	<p>Expand. Maximizes the size of the graph to cover a whole row.</p> <p>Contract. Reduces the size of the graph to cover half a row.</p>
	<p>Remove. Removes the graph from the dashboard page.</p>
Graphs Tree pane	<p>This pane displays graphs in the analysis tree.</p> <p>Expand the tree and drag graphs to the configuration pane.</p>
	<p>Add Graph to Dashboard Page. Adds the selected graph to the configuration pane. A placeholder representing the graph is created in the next vacant row.</p>
	<p>Show Entity Details. Opens the Details dialog box for the selected entity in read-only mode.</p>
	<p>Go to Entity in Module Tree. Navigates to the selected entity's location in that entity's module, and highlights the entity.</p>
	<p>Refresh. Refreshes the graph tree so that it includes the most up-to-date information.</p>

View Tab – Dashboard Pages

This tab enables you to view a dashboard page, and drill down to the graph data.

To access	<ol style="list-style-type: none"> On the ALM sidebar, under Dashboard, select Dashboard View. Expand the dashboard tree, and select a dashboard page. Click the View tab.
Important information	The View tab displays two rows of the dashboard page. Use the vertical scroll bar to scroll up or down the dashboard page.
Relevant tasks	<ul style="list-style-type: none"> "How to Generate a Dashboard Page" on page 833 "How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none"> "Graphs and Dashboard Pages Overview" on page 828 "Analysis View Window" on page 813

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

UI Element	Description
	Export to PDF. Enables you to save the dashboard page as a PDF file.
	Generate All Graphs in Page/Generate Graph. Refreshes all the graphs on the page, or the selected graph, so that they display the most up-to-date information. ALM updates the Last Generated time and date.
	<p>View Page in Full Screen. Displays the dashboard page in full-screen mode.</p> <p>View Graph in Full Screen. Displays the graph in full-screen mode. You can use the toolbar buttons to adjust the graph's display, save or print the graph. The adjustments you make to the graph's display are reset when you regenerate the graph. For more details on viewing the graph, see "View Tab - Graphs/Graph Window" on page 846.</p> <p>Tip: To return to the standard view, click the Close button, located in the upper-right corner of the page.</p>
	Go To Graph in Analysis Tree. Navigates to the selected graph in the analysis tree, enabling you to configure the graph data, or change the graph viewing settings.

UI Element	Description
<chart area>	In bar or pie charts, drill down to the graph's data by clicking on a segment in the graph.
<legend>	In bar or pie charts, displays the chart categories and their corresponding color.

Graph Wizard

This wizard enables you to create and configure a new graph in the Analysis View module.

To access	Use one of the following: <ul style="list-style-type: none"> On the menu of the Requirements, Test Plan, Test Lab, or Defects module, select Analysis > Graphs > Graph Wizard. On the ALM sidebar, under Dashboard, select Analysis View, and select Analysis > Graph Wizard. On the ALM sidebar, under Dashboard, select Analysis View. Expand the analysis tree and select a project report. In the project report, select a section node and in the Graph Selection area click New.
Relevant tasks	<ul style="list-style-type: none"> "How to Generate a Graph" on page 830 "How to Analyze Data in ALM" on page 810
Wizard map	This wizard contains: "Select Graph Type Page" below > "Select Business View Page" on the next page > "Select Entity Type Page" on page 855 > "Select Projects Page" on page 856 > ("Select Test Set Option Page" on page 856) > "Select Filter Page" on page 857 > "Select Graph Attributes Page" on page 858 > ("Select Coverage Page" on page 860)
See also	<ul style="list-style-type: none"> "Graphs and Dashboard Pages Overview" on page 828 "Analysis View Window" on page 813

Select Graph Type Page

This wizard page enables you to select the type of graph to create.

Important information	General information about this wizard is available here: " Graph Wizard " above. Available from: Analysis View module.
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Wizard map	The "Graph Wizard" on the previous page contains: "Select Graph Type Page" on the previous page > "Select Business View Page" below > "Select Entity Type Page" on the next page > "Select Projects Page" on page 856 > "Select Test Set Option Page" on page 856 > "Select Filter Page" on page 857 > "Select Graph Attributes Page" on page 858 > "Select Coverage Page" on page 860
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User interface elements are described below:

UI Element	Description
Graph Type	The type of graph that you want to create: Business View Graph. Based on a business view, which is defined in project customization. For more information about business view graphs, see " "Graphs and Dashboard Pages Overview" on page 828 ". Entity Graph. Based on a specific entity. For the entity you select, different graph types are available.

Select Business View Page

This wizard page enables you to select the business view on which to base the graph.

Important information	<ul style="list-style-type: none"> General information about this wizard is available here: ""Graph Wizard" on the previous page. Available only if you selected Business View Graph in the ""Select Graph Type Page" on the previous page".
Wizard map	The "Graph Wizard" on the previous page contains: "Select Graph Type Page" on the previous page > Select Business View > " "Select Entity Type Page" on the next page " > " "Select Projects Page" on page 856 " > " "Select Test Set Option Page" on page 856 " > " "Select Filter Page" on page 857 " > " "Select Graph Attributes Page" on page 858 " > " "Select Coverage Page" on page 860 "

User interface elements are described below:

UI Element	Description
Business Views tree	Lists the business views available for selection.

Select Entity Type Page

This wizard page enables you to set the entity and type.

Important information	<ul style="list-style-type: none">General information about this wizard is available here: "Graph Wizard" on page 853.When the wizard is launched from the Analysis View module, this page is only available if you selected Entity Graph in the "Select Graph Type Page" on page 853.
Wizard map	The " Graph Wizard " on page 853 contains: "Select Graph Type Page" on page 853 > "Select Business View Page" on the previous page > "Select Entity Type Page" above > "Select Projects Page" on the next page > "Select Test Set Option Page" on the next page > "Select Filter Page" on page 857 > "Select Graph Attributes Page" on page 858 > "Select Coverage Page" on page 860

User interface elements are described below:

UI Element	Description
Entity	The ALM entity covered by the graph. Note: Applicable only if you launched the graph wizard from the Analysis View module.
Graph Type	The type of graph that you want to create. The available types of graph depend on the graph. For a description of the available graph types, see " Entity Graph Types " on page 834 .
Description	Describes the selected entity/graph type.

Select Projects Page

This wizard page enables you to select the projects that are included in the graph.

Important information	<p>General information about this wizard is available here: "Graph Wizard" on page 853.</p> <p>ALM Editions: Not available in Quality Center Enterprise Edition. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Wizard map	<p>The "Graph Wizard" on page 853 contains:</p> <p>"Select Graph Type Page" on page 853 > "Select Business View Page" on page 854 > "Select Entity Type Page" on the previous page > "Select Projects Page" above > "Select Test Set Option Page" below > "Select Filter Page" on the next page > "Select Graph Attributes Page" on page 858 > "Select Coverage Page" on page 860</p>

User interface elements are described below:

UI Element	Description
Use Current Project	Includes only the current project in the graph.
Use Selected Projects	Includes the projects listed in the project grid in the graph. To change the selection of the projects, click the Select button.
Select...	Opens the Select Projects dialog box, enabling you to change the projects in the projects grid. For details, see " Select Projects Dialog Box " on page 862 .

Select Test Set Option Page

This wizard page enables you to choose which test sets are included in the graph.

Important information	<p>General information about this wizard is available here: "Graph Wizard" on page 853.</p> <p>Available from: Test Lab module</p>
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Wizard map	The "Graph Wizard" on page 853 contains: "Select Graph Type Page" on page 853 > "Select Business View Page" on page 854 > "Select Entity Type Page" on page 855 > "Select Projects Page" on the previous page >"Select Test Set Option Page" on the previous page > "Select Filter Page" below > "Select Graph Attributes Page" on the next page > "Select Coverage Page" on page 860
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User interface elements are described below:

UI Element	Description
Show Current Test Set	Includes only the current test set in the graph.
Show all Test Sets	Includes all test sets in the graph.

Select Filter Page

This wizard page enables you to set the filter that is applied to the graph data.

Important information	<ul style="list-style-type: none">General information about this wizard is available here: "Graph Wizard" on page 853.If your graph includes multiple projects, you can filter using only fields that are in all the selected projects. <p>ALM Editions: Including multiple projects in graphs is not available for Quality Center Enterprise Edition. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p> <ul style="list-style-type: none">Progress or Trends graphs: If you set a filter on the same field as the Group By field, groups in the graphs may include values that you filtered out. This is because in progress and trend graphs the filter operates on current values, while groupings operate on historical values. For example, say the Group By field in a Defects graph is set to Status, and the current filter includes all defects whose status is Open. When the graph is generated, all previous statuses of the open defects, such as Rejected, will appear in the graph even if Rejected was not included in the filter.
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Wizard map	The "Graph Wizard" on page 853 contains: "Select Graph Type Page" on page 853 > "Select Business View Page" on page 854 > "Select Entity Type Page" on page 855 > "Select Projects Page" on page 856 > "Select Test Set Option Page" on page 856 > "Select Filter Page" on the previous page > "Select Graph Attributes Page" below > "Select Coverage Page" on page 860
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User interface elements are described below:

UI Element	Description
Use current filter	Available if you launched the graph wizard from the Requirements, Test Plan, Test Lab, or Defects modules. Uses the current filter applied to the data.
Do not use a filter	Includes all records of the selected entity.
Define a new filter	Enables you to define a new filter or cross-filter. Click the Filter button to open the Filter dialog box, and define the filter. For user interface details, see "Select Filter Condition Dialog Box" on page 65.

Select Graph Attributes Page

This wizard page enables you to set the **Group By** and **X-Axis** attributes in the graph.

Important information	General information about this wizard is available here: "Graph Wizard" on page 853.
Wizard map	The "Graph Wizard" on page 853 contains: "Select Graph Type Page" on page 853 > "Select Business View Page" on page 854 > "Select Entity Type Page" on page 855 > "Select Projects Page" on page 856 > "Select Test Set Option Page" on page 856 > "Select Filter Page" on the previous page > "Select Graph Attributes Page" above > "Select Coverage Page" on page 860

User interface elements are described below:

UI Element	Description
Group By field	<p>The field by which you want data to be grouped in the graph. For progress and trend graphs, you can only select a field for which history is enabled. For more information on enabling history for a field, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p> <p>If your graph includes multiple projects, you can only select from fields that are in all the selected projects. To group the data by project, select the QC Project value.</p> <p>Progress or Trends graphs: If you set a filter on the same field as the Group By field, groups in the graphs may include values that you filtered out. This is because in progress and trend graphs the filter operates on current values, while groupings operate on historical values. For example, say the Group By field in a Defects graph is set to Status, and the current filter includes all defects whose status is Open. When the graph is generated, all previous statuses of the open defects, such as Rejected, will appear in the graph even if Rejected was not included in the filter.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>ALM Editions: Including multiple projects in graphs is not available for Quality Center Enterprise Edition. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p> </div>
X-axis field	<p>If you are creating a summary graph, the field that you want to use for the x-axis.</p> <p>If your graph includes multiple projects, you can only select from fields that are in all the selected projects. To list the projects along the x-axis, select the QC Project value.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>ALM Editions: Including multiple projects in graphs is not available for Quality Center Enterprise Edition. For more information about ALM editions and their functionality, see ""ALM Editions" on page 125". To find out what edition of ALM you are using, ask your ALM site administrator.</p> </div>

Select Coverage Page

This wizard page enables you to choose whether to display requirements with no coverage.

Important information	<ul style="list-style-type: none"> General information about this wizard is available here: "Graph Wizard" on page 853. For details on requirements coverage, see "Requirement and Test Coverage Overview" on page 418. <p>Available from: Requirements graphs.</p>
Wizard map	<p>The "Graph Wizard" on page 853 contains:</p> <p>"Select Graph Type Page" on page 853 > "Select Business View Page" on page 854 > "Select Entity Type Page" on page 855 > "Select Projects Page" on page 856 > "Select Test Set Option Page" on page 856 > "Select Filter Page" on page 857 > "Select Graph Attributes Page" on page 858 > "Select Coverage Page" above</p>

User interface elements are described below:

UI Element	Description
Do not show 'Not Covered' Parents	Excludes parent requirements with a 'Not Covered' status from the graph.
Show 'Not Covered' Parents	Includes all requirements in the graph.

New Graph Dialog Box

This dialog box enables you to add a new Entity graph to the analysis tree.

To access	<ol style="list-style-type: none"> On the ALM sidebar, under Dashboard, select Analysis View. Right-click the folder under which you want to add a graph, and select New Graph.
Important information	<p>Graphs you create under private folders are available to the owner only. Graphs you create under public folders are available to all users.</p>
Relevant tasks	<ul style="list-style-type: none"> "How to Generate a Graph" on page 830 "How to Generate a PPT Graph" on page 868 "How to Analyze Data in ALM" on page 810

See also	<ul style="list-style-type: none"> • "Graphs and Dashboard Pages Overview" on page 828 • "PPT Graphs Overview" on page 868 • "Analysis View Window" on page 813
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User interface elements are described below:

UI Element	Description
Entity	<p>The ALM entity covered by the graph.</p> <p>Note: This field is not available for the project planning and tracking (PPT) graph type.</p>
Graph Type	<p>The type of graph you want to create. For details, see "Entity Graph Types" on page 834.</p> <p>Note: This field is not available for the project planning and tracking (PPT) graph type.</p>
Graph Name	<p>The graph's display name in the analysis tree. By default, the Graph Name is used as the graph's title.</p>

Select Business View Dialog Box

This dialog box enables you to select the business view on which to base the business view graph or the business view Excel report.

To access	<ol style="list-style-type: none"> 1. In the Analysis View module, select a business view graph, click the Configuration tab, and click the browse button next to the Business View box. 2. If the HP ALM Business Views Microsoft Excel add-in is installed, click Add or New Report in the HP ALM tab in Excel.
Important information	From ALM, you can only select one business view. In Excel, you can select multiple business views using the SHIFT or CTRL keys.
Relevant tasks	<ul style="list-style-type: none"> • "How to Generate a Graph" on page 830 • "How to Generate a PPT Graph" on page 868 • "How to Analyze Data in ALM" on page 810

See also	<ul style="list-style-type: none"> • "Graphs and Dashboard Pages Overview" on page 828 • "PPT Graphs Overview" on page 868 • "Analysis View Window" on page 813
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User interface elements are described below:

UI Element	Description
Filter	The filter for the business views. For example, typing Defect causes only defect-related business views to be displayed.
Description	The description of the select business view.

New Dashboard Page Dialog Box

This dialog box enables you to add a new dashboard page to the dashboard tree.

To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Dashboard, select Dashboard View. 2. Right-click the folder under which you want to add a page, and select New Page.
Important information	Dashboard pages you create under private folders are available to the owner only. Dashboard pages you create under public folders are available to all users.
Relevant tasks	"How to Generate a Dashboard Page" on page 833
See also	"Graphs and Dashboard Pages Overview" on page 828

User interface elements are described below:

UI Element	Description
Dashboard Page Name	<p>The dashboard page display name in the dashboard tree. By default, the Dashboard Page Name is displayed as the dashboard page's title.</p> <p>Syntax exceptions: A dashboard page name cannot exceed 255 characters, and cannot include the following characters: \ ^ *</p>

Select Projects Dialog Box

This dialog box enables you to select projects that are included in cross-project graphs.

Example: ALM Editions: This dialog box is not available for Quality Center Enterprise

Edition. For more information about ALM editions and their functionality, see ["ALM Editions" on page 125](#). To find out what edition of ALM you are using, ask your ALM site administrator.

To access	<ul style="list-style-type: none"> In the graph wizard: Proceed to the Select Projects dialog box, and click the Select button. In the graph Configuration tab: Click the Select Projects button.
Important information	<ul style="list-style-type: none"> You can select only projects in which you are listed as a user. You can change the maximum number of projects that ALM allows you to include in a graph, by setting the PROJECT_SELECTION_MAX_PROJECTS site parameter. For more information, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>
Relevant tasks	"How to Generate a Graph" on page 830

User interface elements are described below:

UI Element	Description
 Remove Project	Removes the selected project from the grid. Note: You cannot remove a project if it is the only project in the grid.
Domain/Project	A list of projects and their domains selected to be included in the graph.
Projects Tree	A list of domains and projects in which you are listed as a user.
	Add. Adds the selected project or domain to the grid. If you selected a domain, all the domain's projects are added to the grid. Tip: Drag or double-click a project or domain to add it to the grid.

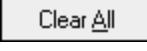
Edit <Type> Categories Dialog Box

The Edit Group By Categories dialog box enables you to group together values of the field selected in the **Grouped By** field, and display the combined data as one category.

The Edit X Axis Categories dialog box enables you to group together values of the field selected in the **X-axis** field, and display the combined data as one category.

To access	On the View tab or graph window toolbar, click Edit Categories  .
Important information	The Edit X Axis Categories dialog box is available only for summary graphs and Requirements Coverage graphs.
Relevant tasks	"How to Generate a Graph" on page 830

User interface elements are described below:

UI Element	Description
	<p>Opens the New Category dialog box, enabling you to create a new category.</p> <p>In the Category Name box, type a name for the category.</p> <p>To choose which field values are included in the category, select field values and click the arrow buttons (> and <) to move them between Available groups and Groups in new category. Click the double arrow buttons (>>) and (<<) to move all the field values from one list to the other. You can also drag field values between lists. You cannot include a field value in more than one category.</p>
	Opens the Edit Category dialog box, enabling you to edit the selected category.
	Deletes the selected category.
	Deletes all categories.
#	The number of the category.
Name	The name of the category.
Expression	The values included in the category.

Graph Appearance Dialog Box

This dialog box enables you to change a graph's titles and appearance. For a bar chart, you can specify the display parameters for the bars. For a line chart, you can specify the display parameters for the lines.

To access	On the View tab or graph window toolbar, click Set Graph Appearance  or click the graph title.
Relevant tasks	"How to Generate a Graph" on page 830 "How to Generate Live Analysis Graphs" on page 940

User interface elements are described below:

UI Element	Description
Titles tab	<p>Enables you to change the titles of the graph, the y-axis, or the x-axis.</p> <p>Font. Enables you to change a title's font or color.</p> <p>Reset Titles. Enables you to restore the original titles.</p> <div style="background-color: #e0f2e0; padding: 5px; margin-top: 10px;"> Note: For a pie chart, you can only change the title of the graph. </div>
Appearance tab	Enables you to set the default format of your graph, modify the orientation of the labels at the base of the graph (for a bar chart and a line chart only), determine the format in which dates are displayed on the x-axis, display the graph with a 3D effect, or change the colors of the various components in your graph.
Bar Parameters tab	In bar charts, enables you to specify whether you want the values for each bar to be displayed. You can also adjust the bar width. If you specify that the values of each bar are to be displayed, you can change the data that is displayed for each bar, or its position relative to the bar.
Line Parameters tab	In line charts, enables you to specify whether you want the line frame to be displayed.

Drill Down Results Dialog Box

This dialog box enables you to view the records that constitute a graph bar or segment.

To access	Click a bar or segment on the graph.
------------------	--------------------------------------

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

UI Element	Description
<Segment parameters>	Located above the data grid, displays parameters of the selected graph area, and the number of records displayed.
<Data grid>	<p>A list of the records that are included in the selected graph area.</p> <p>To open a particular record, double-click a record. The <Module> Details dialog box opens, enabling you to view or edit the record. Use the navigation buttons to browse through the drill down results.</p>
	<p>Export. Opens the Export Grid Data dialog box, enabling you to export the records as a text file, Microsoft Excel worksheet, Microsoft Word document, or HTML document.</p> <p>Select one of the following options:</p> <ul style="list-style-type: none">• All. Exports all records in the grid.• Selected. Exports selected records in the grid.
	<p>Select Columns. Opens the Select Columns dialog box, enabling you to determine which fields to display in the data grid, and their order. For more details, see ""Select Columns/Select Fields Dialog Box" on page 85.</p>

Chapter 42: Project Planning and Tracking (PPT) Graphs

This chapter includes:

- [PPT Graphs Overview](#) 868
- [How to Generate a PPT Graph](#) 868
- [PPT Graphs User Interface](#) 869

PPT Graphs Overview

When working with PPT, you can create and customize graphs in the Analysis View module, relating to KPI data in the Releases module. Creating graphs in the Analysis View module enables you to filter the data, set various configurations, and organize the graphs in folders.

When viewing graphs, you can drill down to the records represented by each bar or segment.

After you have created graphs in the Analysis View module, you can select and arrange multiple graphs, and view them side-by-side in a **dashboard page**.

ALM Editions: Functionality related to PPT is available with ALM Edition only. For more information about ALM editions and their functionality, see "["ALM Editions" on page 125](#)". To find out what edition of ALM you are using, ask your ALM site administrator.

For related tasks, see "[How to Generate a PPT Graph](#)" below and "[How to Generate a Dashboard Page](#)" on page 833.

How to Generate a PPT Graph

This task describes how to generate PPT data in ALM using graphs.

ALM Editions: Functionality related to PPT is available with ALM Edition only. For more information about ALM editions and their functionality, see "["ALM Editions" on page 125](#)". To find out what edition of ALM you are using, ask your ALM site administrator.

This task includes the following steps:

- "[Prerequisites](#)" below
- "[Create a graph in Analysis View](#)" below
- "[Configure a graph](#)" on the next page
- "[View a graph](#)" on the next page
- "[Share a graph outside ALM](#)" on the next page
- "[Create a dashboard page](#)" on the next page

1. Prerequisites

Under **Management**, select **Releases**. Define a release, release scope items, milestones, and KPIs. For task details, see "[How to Work with PPT](#)" on page 160.

2. Create a graph in Analysis View

Create a graph in the Analysis View module.

- a. **Open the Analysis View module.** On the ALM sidebar, under **Dashboard**, select **Analysis View**.
- b. **Add a folder to the analysis tree.** Right-click a folder under the Private or Public root folder, and select **New Folder**.
- c. **Create a new graph.** Right-click a folder. Select **New Release Analysis** and choose a PPT graph. The New Graph dialog box opens. Enter the graph name and click **OK**.

3. **Configure a graph**

In the Analysis View module, select a graph, and click the **Configuration** tab. For user interface details, see "[Configuration Tab - PPT Graphs](#)" on the next page.

4. **View a graph**

Select a graph in the analysis tree, and click the **View** tab. For user interface details, see "[View Tab - PPT Graphs](#)" on page 872.

5. **Share a graph outside ALM**

Allow ALM users or others to view read-only versions of graphs outside ALM. For task details, see "[How to Generate a Graph](#)" on page 830.

6. **Create a dashboard page**

View several graphs together in a dashboard page. For task details, see "[How to Generate a Dashboard Page](#)" on page 833.

PPT Graphs User Interface

This section includes:

• Configuration Tab - PPT Graphs	870
• View Tab - PPT Graphs	872

Configuration Tab - PPT Graphs

This tab enables you to select project planning and tracking (PPT) data to be included in a graph, and set graph display options.

To access	<ol style="list-style-type: none"> On the ALM sidebar, under Dashboard, select Analysis View. Expand the analysis tree, and select a PPT graph. Click the Configuration tab.
Important information	<ul style="list-style-type: none"> The available configuration options depend on the graph type. <p>ALM Editions: Functionality related to PPT is available with ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	<ul style="list-style-type: none"> "How to Generate a PPT Graph" on page 868 "How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none"> "PPT Graphs Overview" on page 868 "PPT Releases Overview" on page 160 "Analysis View Window" on page 813

Configuring KPI Graphs

Important information	Some fields are not available in all graphs.
------------------------------	--

User interface elements are described below:

UI Element (A - Z)	Description
Aggregation Function	The aggregation function used in grouping the data by time resolution. Possible values are last , average , max , and min .
Breakdown	Select a field to determine the information by which ALM groups data in the graph.
Data updated to	Displays data results based on selected date.

UI Element (A - Z)	Description
KPI	The KPI name.
Milestone	The milestone name.
Period	The time period for which you want to view data.
Release	The release name.
Resolution	The time resolution of the data. Possible values are day , week , month , year , auto select (the server determines the optimal time resolution).
Scope Item	The scope item name.
Show Last Result	Displays data results based on last run date.

Configuring Scorecard Graph

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

UI Element (A - Z)	Description
	Sets the order in which row or column names appear in scorecard table.
	Moves selects fields between Rows and Columns .
	Set Filter/Sort. Enables you to narrow and sort the Milestone , Scope Item , or KPI data according to your chosen criteria. For more details on filtering, see " Filter Dialog Box " on page 54.
	Clear Filter. Clears the defined filter.
Restore Default Filter Settings	Restores default filter definitions.
Columns	Lists columns that are currently displayed in the scorecard table.
Data Updated to	Displays data results based on selected date.

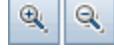
UI Element (A - Z)	Description
Display Planned KPI Target	<p>Displays the acceptable threshold value for each KPI in the Planned column of the scorecard table.</p> <p>Note: The Planned column is displayed only when this option is enabled.</p>
Group Scope Items by Field	Groups according to a specified scope item field.
Release	The release name.
Rows	Lists rows that are currently displayed in the scorecard table.
Show Last Results	Displays data results based on last run date.

View Tab - PPT Graphs

This tab enables you to view project planning and tracking (PPT) graphs.

To access	<ol style="list-style-type: none"> On the ALM sidebar, under Dashboard, select Analysis View. Expand the analysis tree, and select a PPT graph. Click the View tab.
Important information	<ul style="list-style-type: none"> The available view options depend on the graph type. <p>ALM Editions: Functionality related to PPT is available with ALM Edition only. For more information about ALM editions and their functionality, see "ALM Editions" on page 125. To find out what edition of ALM you are using, ask your ALM site administrator.</p>
Relevant tasks	<ul style="list-style-type: none"> "How to Generate a PPT Graph" on page 868 "How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none"> "PPT Graphs Overview" on page 868 "PPT Releases Overview" on page 160 "Analysis View Window" on page 813

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

UI Element (A - Z)	Description
 Generate	<p>Generate. Refreshes the graph so that it displays the most up-to-date information.</p>
	<p>Bar Chart. Switches the chart format to a bar chart.</p>
	<p>Pie Chart. Switches the chart format to a pie chart.</p> <p>In pie charts, the x-axis categories are displayed as pie segments. The y-axis quantities are represented by the size of the segments.</p> <div data-bbox="502 777 1135 811" style="background-color: #e0f2e0; padding: 5px;">Note: Pie charts do not display the Grouped By field.</div>
	<p>Line Chart. Switches the chart format to a line chart.</p>
	<p>Data Grid. The grid creates a matrix of the graph's x-axis and Grouped By categories. A Total row is added that displays the total of each Grouped By category.</p>
	<p>Show/Hide Total Values. Shows/hides a <total></total> category to the graph, representing the sum of all the other Grouped By categories.</p> <div data-bbox="502 1227 1348 1300" style="background-color: #e0f2e0; padding: 10px;">Tip: After showing the <total></total> category, click its label in the legend to hide the category.</div>
	<p>Scroll to the Left/Right. Scrolls the graph to the left or right. These buttons are enabled when the Zoom In and Zoom Out buttons are in use.</p>
	<p>Show All. Restores the graph to its normal size. This button is enabled when the Zoom In and Zoom Out buttons are in use.</p>
	<p>Zoom In/Out. Changes the magnification of the graph.</p>
	<p>Save Graph Image. Saves the graph image. You can select from a variety of graphic file formats.</p> <p>Save Graph Data. When viewing a data grid, saves the graph data. You can save the data as an Excel spreadsheet, a Word file, an HTML document, or a text file.</p>

UI Element (A - Z)	Description
	<p>Set Graph Appearance. Opens the Graph Appearance dialog box, enabling you to customize the graph title, graph color, and graph display. For more details, see "Graph Appearance Dialog Box" on page 865.</p>
	<p>Copy Graph to Clipboard. Includes the following options:</p> <ul style="list-style-type: none"> • Copy Graph (Color). Copies the graph in color to the Clipboard. • Copy Graph (Monochrome). Copies the graph in monochrome to the Clipboard. • Copy Full Screen Graph (Color). Copies the graph in color to the Clipboard, enlarged to fit full screen. • Copy Full Screen Graph (Monochrome). Copies the graph in monochrome to the Clipboard, enlarged to fit full screen.
	<p>Print Graph. Includes the following options:</p> <ul style="list-style-type: none"> • Print Graph (Color). Prints the graph in color. This is the default button option. • Print Graph (Monochrome). Prints the graph in monochrome. • Print Graph and Details (Color). Prints the graph and its description in color. • Print Graph and Details (Monochrome). Prints the graph and its description in monochrome.
	<p>Full Screen. Opens the graph in a new window and maximizes its display.</p> <p>Note: The toolbar remains visible in full-screen mode.</p> <p>Tip: To return to the standard view, click the Close button in the top-right corner of the window.</p>
<graph area>	<p>You can perform the following actions in the graph area:</p> <ul style="list-style-type: none"> • Hover over a graph segment to view a tooltip containing additional information. • Click the Break Over Time link to drill down to the graph's data and show specific points during a period of time. Opens a breakdown over time graph. For more details, see "Breakdown Over Time Graph" on page 188. <p>Available from: View tab - KPI Breakdown</p>

UI Element (A - Z)	Description
<KPI cell>	<p>You can perform the following actions in a KPI cell:</p> <ul style="list-style-type: none">• Click a KPI cell to display a graph representation of this cell. For more details, see "KPI Drill Down Graph" on page 185.• Hover over a KPI cell to view a tooltip containing the KPI's threshold values. <p>Available from: View tab - Release Scorecard</p>
<legend>	Displays the chart categories and their corresponding color. Click a category to show or hide the category in the graph.

Chapter 43: Project Reports

This chapter includes:

• Project Reports Overview	878
• How to Create Project Reports	878
• How to Create a Custom Report Template	881
• Predefined Project Reports	882
• Project Reports User Interface	886

Project Reports Overview

Project reports enable you to design and generate comprehensive reports containing information from your HPE Application Lifecycle Management (ALM) project.

In a project report, you define sections and sub-sections, each listing records of a specified ALM entity. You can choose to display data of a selected baseline.

To each report section, you assign a template that determines the fields and layout of the section. You also assign document and style templates that determine the overall report appearance.

Note: Report templates are managed in Project Customization. For more details, refer to the *HPE Application Lifecycle Management Administrator Guide*.

You can generate project reports in HTML, Microsoft Word, or PDF formats.

For details on creating project reports, see "[How to Create Project Reports](#)" below.

How to Create Project Reports

This task describes how to create project reports.

To learn more about project reports, see "[Project Reports Overview](#)" above.

This task includes the following steps:

- "[Create a project report](#)" below
- "[Define sections](#)" below
- "[Configure document-level settings](#)" on the next page
- "[Configure sections](#)" on page 880
- "[Preview a template report](#)" on page 880
- "[Generate a template report](#)" on page 880
- "[Share a report outside ALM](#)" on page 880

1. **Create a project report**

- a. **Open the Analysis View module.** On the ALM sidebar, under **Dashboard**, select **Analysis View**.
- b. **Add a folder to the analysis tree.** Right-click a folder under the Private or Public root folder, and select **New Folder**.
- c. **Create a new project report.** Right-click a folder, and select **New Project Report**. Fill in the New Project Report dialog box.

2. **Define sections**

- a. **Select a project report.** In the Analysis View module, select a project report, and click the **Configuration** tab.
- b. **Add a section.** Right-click the **Document** root node, and select **Add Report Section**. Select an ALM entity to include in the report.
- c. **Add a sub-section.** You can add a sub-section of related information. For example, add a sub-section of defects linked to requirements, or a sub-section of defect attachments.
Each section can have multiple sub-sections and, where applicable, you can add further sub-sections to sub-sections.
Right-click a section in the report tree, and select **Add Report Section**.

Note: You can add sub-sections only to sections that are assigned a full-page template. For more details on full-page templates, refer to the *HPE Application Lifecycle Management Administrator Guide*.

3. Configure document-level settings

At the **Document** root level, you assign templates and define settings that apply to the overall design and content of the project report.

- a. In the Configuration tab, select the **Document** root node. For user interface details, see "[Configuration Tab - Project Reports](#)" on page 887.
- b. Set the document output format.
- c. Assign document, style and history templates, or keep the default templates. For details on the template types, refer to the *HPE Application Lifecycle Management Administrator Guide*.
- d. Click **Edit Document Field Values**  to type values for custom fields in areas such as the title page, headers and footers, as defined in the document template.
- e. To create a baseline report, select **Select a Baseline**, and select a baseline.
To create a baseline report, all report sections must support baselines.
- f. Select **Embed Text and Image Attachments**, to embed text and image attachments in the report.
To display attachments, you must add attachment sub-sections to the report.

Note: If you do not select this option, links to text and image attachments are inserted in the report, that open the files in a separate window. ALM opens the most up-to-date version of the attachments and if they have changed since the report was first generated, the information displayed may contradict other information contained in the report.

- g. Select **Auto-Update Table of contents** to instruct ALM to update table of contents

entries in the report output.

To display a table of contents, the document template must include a **TOC** field.

4. Configure sections

- a. In the Configuration tab, select a section or sub-section in the report tree. For user interface details, see "[Configuration Tab - Project Reports](#)" on page 887.
- b. Optionally, rename the section title.
- c. Assign a project template, or keep the default template.

Note: Depending on your user group permissions, you can assign a custom template. For details on creating a custom template, see "[How to Create a Custom Report Template](#)" on the next page.

- d. Define a data filter, where applicable, to define the records that are included in the section.
- e. For top-level sections that include entities that are listed hierarchically (for example, requirements, tests), select whether records are ordered hierarchically in the report.
- f. Add existing graphs to the report, or create new graphs directly in the report.

5. Preview a template report

Click **Preview** to display a preview of your report.

A preview contains up to five records of each section in the report. The preview is displayed in the output format you selected for the **Document** root node.

6. Generate a template report

Click **Generate**. The report generation process begins.

When the report generation is complete, it is displayed in the output format you selected for the **Document** root node.

The report is saved on the client machine, under the following directory:

%Temp%\TD_80\<ALM_PATH>\<Project_id>\Reports

Where <Project_id> is a string representing your ALM project.

7. Share a report outside ALM

Allow ALM users or others to view read-only versions of reports outside ALM.

- a. In the analysis tree, right-click a report, and select **Share Analysis Item**.
 - b. In the Share Analysis Item dialog box, select a share option. For details of the options, see "[Share Analysis Item Dialog Box](#)" on page 824.
- A URL of the selected report is copied to the clipboard.
- c. Paste the URL in a website or email.

- d. Click the URL to open a read-only version of the report in a Web browser. Each time you access the report, after set intervals, it displays the most up-to-date information.

Note: You can change the frequency at which report data is updated by adding and configuring the **REPORT_RESULT_LIFESPAN** site configuration parameter. For more details, refer to the *HPE Application Lifecycle Management Administrator Guide*.

Available from: Analysis View module

How to Create a Custom Report Template

This task describes how to create a custom template for your personal use. Depending on your user group permissions, you can assign custom templates to report sections and sub-sections.

- "[Create a copy of an existing report template](#)" below
- "[Create a new custom report template](#)" below

Create a copy of an existing report template

1. In the report tree, select a report section, and click the **Download Template** button  next to the project or custom template that you want to modify. A copy of the template is saved on your computer file system, and opens in Microsoft Word.
2. Modify the template in Microsoft Word using commands in the Template Creator tab. For details on the Template Creator tab, refer to the *HPE Application Lifecycle Management Administrator Guide*.
3. Save and close the template file.
4. To assign the new custom template to a report section, select a report section. Then select **Custom Template** or click **Upload Custom Template** 

Create a new custom report template

1. In the report tree, select a report section for which you want to create a custom template.
2. Click **Template Creator**. Microsoft Word opens with the **Template Creator** tab. Design a new template file for the selected report section. For details on working with the Template Creator, refer to the *HPE Application Lifecycle Management Administrator Guide*.
3. Save and close the template file.
4. To assign the new custom template to a report section, select a report section. Then select **Custom Template** or click **Upload Custom Template** HPE ALM (12.50)

Predefined Project Reports

The following predefined reports are available in the Requirements, Test Plan, Test Lab, Defects, and Business Components modules.

Note:

- If you have the required administrator permissions, you can configure the predefined reports in the Analysis View module's Analysis Menus tab. You can also add reports or delete predefined reports.
- By default, predefined project reports do not display filter information. To include filter information, edit the current template to include the **Section Filter** field, or create a new template for the report where this field is included. For more information, refer to the *HPE Application Lifecycle Management Administrator Guide*.

This section includes:

- "[Requirements Module Reports](#)" below
- "[Test Plan Module Reports](#)" on the next page
- "[Test Lab Module Reports](#)" on page 884
- "[Defects Module Reports](#)" on page 885
- "[Business Component Module Reports](#)" on page 886

Requirements Module Reports

The following reports are available for the Requirements module:

Report	Description
Standard Requirement Report	Lists the requirements that appear in the current requirements view.
Tabular Report	Displays the requirements that appear in the current requirements view, in a grid format. <p>Note: The tabular report does not display the hierarchy and nesting of child requirements.</p>

Report	Description
Requirements with Coverage Tests	Lists the requirements that appear in the current requirements view, with their test coverage information.
Requirements with Coverage Tests and steps	Lists the requirements that appear in the current requirements view, with their test coverage information. It also displays the test steps for each tests coverage.
Requirements with Linked Defects	Lists the requirements that appear in the current requirements view, with their linked defects.
Requirements with Traceability	Lists the requirements that appear in the current requirements view, with their associated traced to and traced from requirements.
Report Selected	Lists the requirements currently selected in the requirements tree or grid.
Report Selected with Children	Lists the requirements currently selected in the requirements tree or grid, including child requirements.

Test Plan Module Reports

The following reports are available for the Test Plan module:

Report	Description
Standard Test Planning Report	Lists the tests in the current test plan view.
Subject Tree Report	Lists the tests in the current test plan view by subject.
Tests with Design Steps	Lists the tests that appear in the current test plan view, including their design steps.
Tests with Covered Requirements	Lists the tests that appear in the current test plan view, with their requirement coverage information.
Tests with Linked Defects	Lists the tests that appear in the current test plan view, with their linked defects.
Report Selected	Lists the tests currently selected in the test plan tree or grid.

Report	Description
Business Process Tests with Component Steps	<p>Lists the relevant parameter values for all the flows, groups, iterations, components, and manual steps in the selected business process test. This report can be used to:</p> <ul style="list-style-type: none"> Run business process tests manually from a printout. As a detailed report for auditing.
Business Process Tests with Component Steps and Component Details	<p>Lists the relevant parameter values for all the flows, groups, iterations, components, and manual steps in the selected business process test, including component details and snapshots. This report can be used to:</p> <ul style="list-style-type: none"> Run business process tests manually from a printout. As a detailed report for auditing.
Business Process Tests with Script	<p>Lists all the business process tests and flows currently in the ALM project, including some detail fields, the test or flow descriptions, and the components included in each test or flow. This report also includes information about groups, iterations, On Failure status, and contents of flows inside business process tests.</p>

Test Lab Module Reports

The following reports are available for the Test Lab module:

Test Set Reports

Report	Description
Current Test Set	Lists the tests that appear in the current test set.
Cross Test Set	Lists the test sets that appear in the Test Sets list, without listing their tests.
Test Set Hierarchy with Tests	Lists the test sets hierarchically, as well as the status of each of the test sets.
Cross Test Set with Tests	Lists the test sets that appear in the Test Sets list, including their tests.
Current Test Set with Failed Test Runs	Lists tests from the current test set, with "Failed" test run status.

Report	Description
Cross Test Set with Failed Test Runs	Lists tests from all test sets, with "Failed" test run status.
Execution Notification	Lists the tests that are displayed in the current test set with the results of their last test run.
Report Selected	Displays an execution report of the test instances currently selected in the execution grid.

Test Run Reports

Report	Description
Cross Run	Lists the runs matching the current filter in the Test Runs module.
Cross Run with Steps	Lists the runs matching the current filter in the Test Runs module with their run steps.
Runs by Test	Lists the runs in the Test Runs module under their tests.
Runs by Test Set	Lists the runs in the Test Runs module under their test sets and tests.
Report Selected	Displays a runs report of the test runs currently selected in the Test Runs module.

Defects Module Reports

The following reports are available for the Defects module:

Report	Description
Standard Defect Report	Lists the defects that appear in the defects grid.
Tabular Report	Displays the defects that appear in the defects grid, in a grid format. <div style="background-color: #e0f2e0; padding: 10px; border-radius: 10px;"> Note: The tabular report does not display the descriptions and comments for the defects. </div>
Defects with Linked Tests and Runs	Lists the defects with their linked tests and test run results.

Report	Description
Fixed or Rejected Defects	Lists defects with "fixed" or "rejected" status.
Fixed or Rejected Defects Detected by Current User	Lists defects with "fixed" or "rejected" status that were detected by the current user.
Opened Defects Assigned to Current User	List defects with "open" status that are assigned to the current user.
Report Selected	Lists defects currently selected in the defects grid.

Business Component Module Reports

The following reports are available for the Business Components module:

Report	Description
Standard Component Report	Lists all the components currently in the ALM project, including all detail fields, the component descriptions, history, and whether it includes a snapshot.
Component Hierarchy Report	Lists the components currently in the ALM project, including all detail fields and the component descriptions. Obsolete components and component requests are not shown in this report.
Components with Steps	Lists all the components currently in the ALM project, including some detail fields, the component descriptions, and each component's steps.
Components Used By	Lists all the components currently in the ALM project, including some detail fields, the component descriptions, and the business process tests and flows that use each component.
Components with Application Area	Lists all the components currently in the ALM project, including some detail fields, the component descriptions, and the application area (if any) used by each component.
Report Selected	Lists components currently selected in the tree.

Project Reports User Interface

This section includes:

- [Configuration Tab - Project Reports](#) 887

• New Project Report Dialog Box	896
• Add Report Section Dialog Box	896
• Edit Document Template Field Values Dialog Box	897

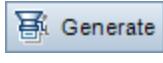
Configuration Tab - Project Reports

This tab enables you to define document-level settings, and configure report sections.

To access	Use one of the following: <ul style="list-style-type: none">• In the Analysis View module, select a project report, and click the Configuration tab.• If you have the required administrator permissions, in the Analysis View module's Analysis Menus tab, select a project report and click the Configuration tab.
Important information	The available configuration options depend on the selected section in the report tree.
Relevant tasks	<ul style="list-style-type: none">• "How to Create Project Reports" on page 878• "How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none">• "Project Reports Overview" on page 878• "Analysis View Window" on page 813

Configuration Tab Common Elements

User interface elements are described below. (Unlabeled elements are described in angle brackets)

UI Element	Description
	<p>Add Report Section. Opens the Add Report Section dialog box, enabling you to add a section to the report. For user interface details, see Add Report Section.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note:</p> <ul style="list-style-type: none"> • You can add a sub-section only to sections that are assigned full-page templates. • Where applicable, you can add additional layers of sub-sections to sub-sections. • At each level you can include multiple sub-sections. </div>
	<p>Delete Report Section. Deletes the selected section.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note: When you delete a section, all its sub-sections are deleted too.</p> </div>
	<p>Move Up/Move Down. Enables you to move the selected report section higher or lower in the project report.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note: The selected section moves in relation to sections on the same level.</p> </div>
	<p>Generates a preview of the report that includes the first five records of each of the report sections.</p> <p>The preview is generated in the selected report output format.</p>
	<p>Generates the report in the selected report output format.</p>

UI Element	Description
 Template Creator	<p>Opens Microsoft Word with the Template Creator tab, enabling you to design a custom template file.</p> <p>After creating a custom template, assign it to a report section in the Custom Template field.</p> <p>Note: To enable the Template Creator, you must first allow macros in Microsoft Word. In Word, click the Office Button, and then click Word Options. Select Trust Center > Trust Center Settings > Macro Settings. Select Enable all macros.</p>
 Download As Zip	<p>Enables you to download the report locally to your computer as a .zip file. The file includes all attachments contained in the report.</p> <p>Note: For reports in HTML format, you must extract all the files from the zipped folder before opening them.</p> <p>Tip: This format should be used for emailing reports to users who do not have access to ALM.</p>
<report section tree>	<p>Displays the sections and sub-sections included in the report. The Document root node contains settings that apply to the overall report design and content.</p>

Document Output Options Area

You can define the file format in which the report is generated.

Important information	<ul style="list-style-type: none">• Available from: Document root node.• In the Analysis Menus tab, this option is disabled and set to HTML.
------------------------------	---

User interface elements are described below:

UI Element	Description
HTML	Displays the report in a Web browser.

UI Element	Description
Docx	Displays the report in Microsoft Word 2007 or later.
Doc	Displays the report in Microsoft Word 2003.
PDF	Displays the report in PDF readers. Note: The PDF report cannot be displayed when working in Windows 8 or 8.1 with Adobe Reader 9.1 installed. In this configuration, install the xi version of the Adobe Reader to view the report.

Document Templates Area

Important information	Available from: Document root node.
------------------------------	--

You can define which template is assigned to the report.

User interface elements are described below:

UI Element	Description
Document Template	Defines fields on the title page, headers and footers, page orientation, and other document layout settings.
Style Template	Defines formatting (for example, tables, headings, and paragraph) applied to Microsoft Word styles. The Style template styles override those defined in the templates used in the report sections.
History Template	Defines the style in which history information is displayed in report sections.
No Template	Generates a report section without a template and renders its subsections immediately. This option is useful when you want to link a parent section to a sub-section. For example, if your report contains a Requirements and a Coverage Tests section, you can add a Requirement Coverage section in between them that uses the No Template option. When the report is generated, tests will appear immediately below the requirement that they are covering without any intermediate section.

UI Element	Description
	Edit Document Field Values. Opens the Edit Document Template Field Values dialog box, enabling you to type values for fields in areas such as the title page, headers and footers, as defined in the document template. For user interface details, see " Edit Document Template Field Values Dialog Box " on page 897.

Document Additional Options Area

Important information	Available from: Document root node.
------------------------------	--

User interface elements are described below:

UI Element	Description
Auto-Update Table of contents	<p>Instructs ALM to update table of contents entries in the report output.</p> <p>Note:</p> <ul style="list-style-type: none">To display a table of contents, the document template must include a TOC field.If this option is not selected, and if you selected the Doc or Docx output format, you can manually update the table of contents in Microsoft Word after the report is generated.

UI Element	Description
Embed Text and Image Attachments	<p>Embeds plain text and image attachments in the report. Other attachment types (for example, document or video files) are always displayed as links.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note:</p> <ul style="list-style-type: none"> To display attachments, you must add attachment sub-sections to the report. If this option is not selected, links to plain text and image attachments are inserted in the report, that open the files in a separate window. To access the links, you use the REST API. Using the REST API requires REST authentication, unless the report was generated using a public REST URL. ALM opens the most up-to-date version of the attachments and if they have changed since the report was first generated, the information displayed may contradict other information contained in the report. </div>
Select a Baseline	<p>Select this option to generate a report of a selected baseline data. Clear this option to include current data in your report.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Note:</p> <ul style="list-style-type: none"> You can create a baseline report only if all sections and sub-sections of the report support baselines. Selecting this option disables the ability to add graphs to the report. This option is disabled in the Analysis Menus tab. </div>

Report Section Details Area

Important information	Available from: Section nodes
------------------------------	--------------------------------------

User interface elements are described below:

UI Element	Description
Name	The name of the section title in the report.
Entity	The ALM entity that is included in the section.
Relationship Type	Describes the relationship between the entity in the selected section and the entity in the parent section.

Template Details Area

You can define which template is assigned to the currently selected section of the report. A template can be either in a full-page or tabular layout. You can only add sub-sections to sections that are assigned full-page templates. For more details on report templates, refer to *HPE Application Lifecycle Management Administrator Guide*.

Filter Area

Important information	Available from: Section nodes
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User interface elements are described below (unlabeled elements are shown in angle brackets):

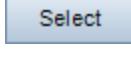
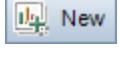
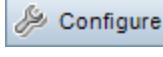
UI Element	Description
Filter State	<p>Enables you to set filter conditions for reports that are generated from within the Analysis menu in specific modules.</p> <ul style="list-style-type: none"> Custom. Enables you define a customized filter in the Analysis Menus tab. Special filters. The following predefined filtering options are provided:
	<p>Note: When adding sections to a report that lists a different entity type to the module from which the report is generated, you must use the Custom filter type. Selecting a special filter results in the section being excluded from the report. For example, if you add a Defects section to the Standard Requirement Report, and select the Context filtering option, the added section will not appear in the generated report.</p>
	<ul style="list-style-type: none"> Context. Filters information according to the filter that is currently selected in the module. Selected. Includes information for the currently selected entity in the module only. <p>Note: In the Test Lab module, the selected entity is the selected test run instance, and not the selected test set.</p> <ul style="list-style-type: none"> Selected with Children. For hierarchical entities, includes information for the selected parent entity as well as child entities. Current Entity Based. Includes information for the currently focused item in the module. You use this option to generate a report in the Test Lab module on the test set level. <p>Available from: Analysis Menus tab. You must have the required administrator permissions to view this tab.</p>
	<p>Set Filter/Sort. Enables you to filter and sort the data according to the criteria you choose. For details, see "Select Filter Condition Dialog Box" on page 65.</p>
	<p>Clear Filter. Clears all filters and sorting priorities.</p>
<filter box>	<p>Displays the current selection.</p>

Graph Selection Area

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

Important information	<ul style="list-style-type: none"> • Available from: Section nodes <div style="background-color: #e0f2e0; padding: 5px; margin-top: 10px;"> Note: You cannot add a graph to a sub-section of a report. </div> <ul style="list-style-type: none"> • If you selected the Select a Baseline option in the Document Additional Options area, this option is not available. • Permissions to create graphs are based on the public state of the report. If the report is private, you must have permission to manage private graphs. If the report is public, you must have permission to create, modify, and delete graphs.
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User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
 Select	Opens the Graphs Tree pane on the right side of the Graph Selection area. The pane displays graphs in the analysis tree. Expand the tree and drag graphs to the graph list.
 New	Opens the Graph Wizard, enabling you to create graphs directly in the report. For user interface details, see " "Graph Wizard" on page 853 ".
	Note: You cannot create KPI graphs using this method.
 Configure	Opens the graph configuration window, enabling you to define axis data and set filter options. For user interface details, see " "Configuration Tab/Window - Graphs" on page 839 ".
 View	Opens the View Graph window, enabling you to view the selected graph and to set graph display options. For user interface details, see " "View Tab - Graphs/Graph Window" on page 846 ".
	Move Up/Move Down. Enables you to move the selected graph higher or lower in the graph list.
<graph list>	Lists the graphs that are included in the report.

Special Properties Area

Important information	Available from: Top-level sections that contain entities that are listed hierarchically in ALM (for example, requirements, test folders).
------------------------------	--

User interface elements are described below:

UI Element	Description
Keep Hierarchical	Instructs ALM to list records in hierarchical order in the report.

New Project Report Dialog Box

This dialog box enables you to add a new project report to the analysis tree.

To access	<ol style="list-style-type: none">On the ALM sidebar, under Dashboard, select Analysis View.Right-click the folder under which you want to add a report, and select New Project Report.
Important information	Reports you create under private folders are available to the owner only. Reports you create under public folders are available to all users.
Relevant tasks	<ul style="list-style-type: none">"How to Create Project Reports" on page 878"How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none">"Project Reports Overview" on page 878"Analysis View Window" on page 813

User interface elements are described below:

UI Element	Description
Project Report Name	The report's display name in the analysis tree and in the report title. Syntax exceptions: The report name cannot exceed 255 characters, and cannot include the following characters: \ ^ *

Add Report Section Dialog Box

This dialog box enables you to add a new section to a project report.

To access	In a project report, right-click the root node or a section node, and select Add Report Section .
------------------	--

Important information	You can add a sub-section only to sections that are assigned a full-page template.
Relevant tasks	<ul style="list-style-type: none"> "How to Create Project Reports" on page 878 "How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none"> "Project Reports Overview" on page 878 "Analysis View Window" on page 813

User interface elements are described below:

UI Element	Description
Type	The entity that is included in the new section. For sub-sections, the available types depend on the entity in the parent section.
Relationship	Describes the relationship between the entity in the new section and the entity in the parent section. Available from: Section nodes
Name	The name of the new section. This field is used as the section title in the report.

Edit Document Template Field Values Dialog Box

This dialog box enables you to type actual values for custom merge fields as defined in the assigned document template.

To access	In a template report, select the Document root node, and click Edit Document Field Values  .
Relevant tasks	"How to Create Project Reports" on page 878
See also	<ul style="list-style-type: none"> "Project Reports Overview" on page 878 "Analysis View Window" on page 813

User interface elements are described below:

UI Element	Description
Field Names	A list of the custom merge fields defined in the assigned document template.
Field Value	The text that is displayed in the report in place of the selected field.

Chapter 44: Excel Reports

This chapter includes:

• Excel Reports Overview	900
• How to Generate an Excel Report	902
• Excel Reports User Interface	904

Excel Reports Overview

From ALM 12.00, you cannot create Excel reports. You can view and edit existing Excel reports from previous versions of ALM.

Note: You can enable the ability to create Excel Reports by configuring the **ENABLE_CREATE_LEGACY_EXCEL_REPORT** site configuration parameter. For more information, refer to the *HPE Application Lifecycle Management Administrator Guide*.

Performance Center Edition: Excel reports are not available for Performance Center entities.

You can export HPE Application Lifecycle Management (ALM) data to Microsoft Excel. This enables you to analyze your data using any of the capabilities available in Excel. An Excel report consists of a set of data defined by SQL queries on the project database. You can also run a Visual Basic script on the extracted data to process and analyze the data.

Example: Create a pivot table to summarize Defects module data, such as to display in tabular format the number of defects assigned to different users with different statuses.

Count of STATUS	STATUS ▼			
ASSIGNED_TO ▼	Closed	Open	Reopen	Grand Total
james_qc	3	6	1	10
mary_qc		13	1	14
peter_qc	5	9		14
Grand Total	8	28	2	38

You can also create a report with parameters. This enables you to create a more flexible report that you only need to create once but can be used in a number of different contexts.

Caution: Users who belong to groups that have data-hiding filters, are able to access the restricted data through Excel reports. To overcome this, you can exclude user groups from performing Excel report tasks. For more information on user groups and permissions, refer to the *HPE Application Lifecycle Management Administrator Guide*.

For task details, see "[How to Generate an Excel Report](#)" on page 902.

This section also includes:

- "[Protecting the Database](#)" below
- "[Parameters in SQL Queries](#)" below
- "[Guidelines for Creating a Post-Processing Script](#)" on the next page

For task details, see "[How to Generate an Excel Report](#)" on the next page.

Protecting the Database

To ensure the integrity of the database, you should run only queries that extract data from the project database. You should not run queries that alter the project database by adding, modifying, or deleting database records.

By default, to ensure that your queries are valid and do not alter the project database, ALM checks that the following conditions are fulfilled:

- The query starts with the command **SELECT**.
- The query contains only one SQL statement.
- The query does not contain any of the following commands (except in comments): **INSERT**, **DELETE**, **UPDATE**, **DROP**, **CREATE**, **COMMIT**, **ROLLBACK**, **ALTER**, **EXEC**, **EXECUTE**, **MERGE**, **GRANT**, **REVOKE**, **SET**, **INTO**, or **TRUNCATE**.

You can customize whether this verification is performed, and how it is performed, using the **SQL_QUERY_VALIDATION_ENABLED** and **SQL_QUERY_VALIDATION_BLACK_LIST** parameters in Site Administration.

You can also customize the maximum number of records that can be retrieved from the database and the maximum length of time that ALM waits for an SQL query for an Excel report to be executed, using the **REPORT_QUERY_RECORDS_LIMIT** and **REPORT_QUERY_TIMEOUT** parameters in Site Administration.

For more information on setting parameters, see the *HPE Application Lifecycle Management Administrator Guide*.

Parameters in SQL Queries

You can include parameters in the SQL queries for your Excel reports. For each query parameter, you can assign a default value. When you generate the report, you are prompted to enter the value of the parameter, or confirm the default value. Alternatively, you can choose to always use the default value, without being prompted by ALM each time you generate the report.

For example, suppose you want to create a report that displays a graph of the number of requirements added to your project over a period of time. You might want to run the report several times, each time for a different period of time. You can avoid the need to create multiple reports by creating a single report with query parameters for the start date and end date of the period. Each time you generate the report, you are prompted to enter the start and end dates for the period.

You first add query parameters to the parameters list. You can add global parameters that are accessible to all queries in a report, or you can add parameters that can only be used in particular queries. After you add parameters to the parameters list, you insert parameters into the query.

Caution:

- You cannot use parameters for SQL identifiers, such as a table name or a column name.
- Parameter values cannot include an SQL statement.

Guidelines for Creating a Post-Processing Script

When writing a post-processing script, consider the following guidelines:

- Your post-processing script must contain a sub-procedure named **QC_PostProcessing**. This procedure serves as the entry point to your script. This procedure cannot return a value and cannot take any arguments.
- Before you can work with the report data in Excel, you must first define the range containing the report data. You define this range in two steps:
 - You first define the worksheet containing the report data by creating a worksheet object containing the data. For example, if the worksheet is named Query1, you can use the statement `Set MainWorksheet = ActiveWorkbook.Worksheets("Query1")`.
 - After you define the worksheet containing the report data, you define the range containing the data by creating a range object containing the data. For example, if you defined the worksheet object with name `MainWorksheet`, you can use the statement `Set DataRange = MainWorksheet.UsedRange`.

After you define this range, you can manipulate the data contained in it using Visual Basic code.

- Before you run a post-processing script, you must configure your Microsoft Excel security settings so that Excel can run the script.

Office 2010: In Excel, click the Microsoft Office Button, and then click **Excel Options**. Select **Trust Center > Trust Center Settings > Macro Settings**. Select **Trust access to the VBA project object model**. Close Excel.

Caution: Enabling macros in Excel allows access to core Microsoft Visual Basic objects, methods and properties, and represents a potential security hazard.

How to Generate an Excel Report

This task describes how to analyze data in ALM using Excel reports.

Tip: The ALM Demo Project contains sample Excel reports. You can use the SQL queries

and post-processing scripts in those reports as a basis for developing your own queries and scripts.

To learn more about Excel reports, see ["Excel Reports Overview" on page 900](#).

This task includes the following steps:

- "Prerequisites" below
- "Add an Excel report to the analysis tree" below
- "Create an SQL query" below
- "Create a post-processing script" below
- "Generate an Excel report" on the next page

1. Prerequisites

To verify supported versions of Microsoft Excel, refer to the *HP Application Lifecycle Management Readme*.

2. Add an Excel report to the analysis tree

Add an Excel report to a folder in the analysis tree.

- a. **Open the Analysis View module.** On the ALM sidebar, under **Dashboard**, select **Analysis View**.
- b. **Add a folder to the analysis tree.** Right-click a folder under the Private or Public root folder, and select **New Folder**.
- c. **Create a new Excel report.** Right-click a folder, and select **New Excel Report**. Enter a name for the Excel report in the New Excel Report dialog box.

3. Create an SQL query

Define the project data that you want to include in the report. You define this data by creating SQL queries. You can create multiple queries in an Excel report. When you generate the report, the results of each query are displayed in separate Excel worksheets.

- a. **Open the Query Builder.** In the Configuration tab, click the **Query** tab, and click **Query Builder**. For user interface details, see ["Excel Report Query Builder Dialog Box" on page 907](#).
- b. **Write an SQL query.** Type a query in the SQL editor.
- c. **Add ALM entities to an SQL query.** Select ALM entities in the Entities pane.
- d. **Define parameters in an SQL query.** Use parameters in SQL queries to modify the results of an Excel report, based on parameter values that you enter. In the Query Builder dialog box, use the buttons in the Query Parameters tab.

4. Create a post-processing script

You can create a Visual Basic script to run after the data is exported to Excel. You use this script to manipulate the data in Excel.

For example, you can present requirements data in Excel as a pivot table, you could perform calculations on defects data to calculate the average time an open defect takes to be fixed, or you could create a graph based on exported data.

In the Configuration tab, click the **Post-processing** tab. Write a Visual Basic script. For user interface details, see "[Post-processing Tab](#)" on page 911.

5. Generate an Excel report

Generating an Excel report extracts the data you specified in the SQL queries from the project database, saves the data in an Excel workbook, and runs the post-processing script.

- a. In the Configuration tab, click the **Generation Settings** tab. Set options for running an Excel report. For user interface details, see "[Generation Settings Tab](#)" on page 912.
- b. Click **Generate**.

Excel Reports User Interface

This section includes:

• Configuration Tab - Excel Reports	905
• Query Tab	905
• Excel Report Query Builder Dialog Box	907
• Post-processing Tab	911
• Generation Settings Tab	912
• New Excel Report Dialog Box	913
• New Query Parameter/Edit Query Parameter Dialog Box	914

Configuration Tab - Excel Reports

This tab contains tabs that enable you to configure Excel reports.

To access	<ol style="list-style-type: none">1. On the ALM sidebar, under Dashboard, select Analysis View.2. Expand the analysis tree, and select an Excel report.3. Click the Configuration tab.
Relevant tasks	<ul style="list-style-type: none">• "How to Generate an Excel Report" on page 902• "How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none">• "Excel Reports Overview" on page 900• "Analysis View Window" on page 813

User interface elements are described below:

UI Element	Description
Query tab	Enables you to write an SQL query that defines the data that is exported to Excel. For more details, see " Query Tab " below.
Post-processing tab	Enables you to write a Visual Basic script that runs in Excel after the report data is exported to Excel. For more details, see " Post-processing Tab " on page 911.
Generation Settings tab	Enables you to set options for running the Excel report. For more details, see " Generation Settings Tab " on page 912.

Query Tab

This tab enables you to create an SQL script that defines the data that is exported to Excel.

To access	<ol style="list-style-type: none">1. On the ALM sidebar, under Dashboard, select Analysis View.2. Expand the analysis tree and select an Excel report.3. Under the Configuration tab, click the Query tab.
------------------	---

Important information	<ul style="list-style-type: none"> To ensure the integrity of the database, you should run only queries that extract data from the project database. For more details, see "Protecting the Database" on page 901. The query builder provides enhanced functionality for creating SQL queries. For more details, see "Excel Report Query Builder Dialog Box" on the next page.
Relevant tasks	<ul style="list-style-type: none"> "How to Generate an Excel Report" on page 902 "How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none"> "Excel Reports Overview" on page 900 "Analysis View Window" on page 813

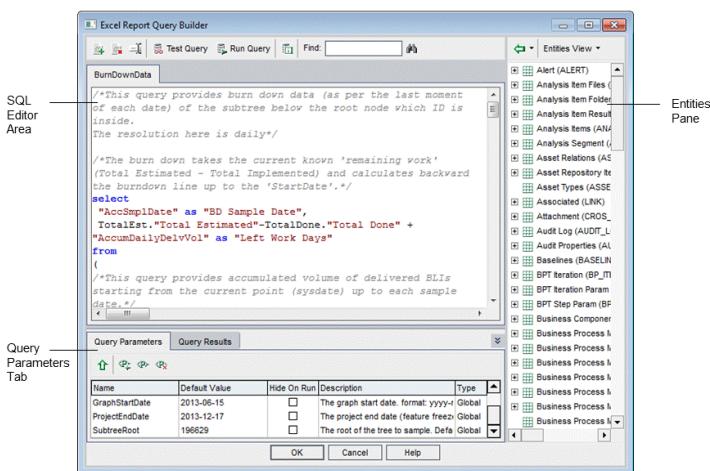
User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
 Generate	Generate. Generates the Excel report.
 Query Builder	Query Builder. Opens the Excel Report Query Builder dialog box, offering extended functionality for creating SQL queries, including testing the query and adding parameters to the query. For more details, see " Excel Report Query Builder Dialog Box " on the next page.
	Add Query. Enables you to create a new query. A new tab is added to the query builder with the default name Query<number> . When you generate the report, the results of each query are displayed in separate Excel worksheets.
	Delete. Deletes the selected query.
	Rename Query. Enables you to rename the current query. <div style="background-color: #e0f2e0; padding: 10px;"> Note: The Excel worksheet containing the data extracted by the query will have the same name as the query. </div>
	Database Type. Displays the type of database used for your project database. You must write the SQL query using the syntax used by the project database type.

UI Element	Description
	<p>Find. Searches the query for text that you entered in the find box.</p> <p>Tip: Click the Find button again to find the next occurrence of the text.</p>
<Query Parameters grid>	<p>Contains a list of parameters available for use in the queries.</p> <p>Note: To add and edit query parameters, work in the Excel Report Query Builder. For more details, see "Excel Report Query Builder Dialog Box" below.</p>
<SQL pane>	<p>Contains the SQL query that defines the data set that is extracted to the Excel report.</p> <p>Syntax exception: The @ and \ characters have a special meaning and are not read literally when running SQL queries on the project database. If you want these characters to be read literally, you should replace @ with \@ and \ with \\. For example, if you want the statement <code>SELECT * FROM BUG WHERE BUG.BG_SUMMARY = `@parameter@`</code> to be run literally on the ALM database, type <code>SELECT * FROM BUG WHERE BUG.BG_SUMMARY = `\\@parameter\\@`</code>.</p>

Excel Report Query Builder Dialog Box

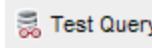
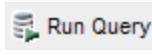
This dialog box enables you to create an SQL query.



To access	<ol style="list-style-type: none">1. On the ALM sidebar, under Dashboard, select Analysis View.2. Expand the analysis tree and select an Excel report.3. Under the Configuration tab, click the Query tab, and then click the Query Builder button.
Important information	<ul style="list-style-type: none">• To ensure the integrity of the database, you should run only queries that extract data from the project database. For more details, see "Protecting the Database" on page 901.• You can include parameters in SQL queries. For more details, see "Parameters in SQL Queries" on page 901.
Relevant tasks	"How to Generate an Excel Report" on page 902
See also	<ul style="list-style-type: none">• "Excel Reports Overview" on page 900• "Parameters in SQL Queries" on page 901

SQL Editor Area

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

UI Element	Description
	Add Query. Enables you to create a new query. A new tab is added to the query builder with the default name Query<number> . When you generate the report, the results of each query are displayed in separate Excel worksheets.
	Delete. Deletes the selected query.
	Rename Query. Enables you to rename the current query. Note: The Excel worksheet containing the data extracted by the query will have the same name as the query.
	Test Query. Displays the first ten results of the query in the Query Results tab. If your query contains parameters, ALM uses the default values for the parameters.
	Run Query. Displays results of the query in the Query Results tab. If your query contains parameters, ALM prompts you for values.

UI Element	Description
	<p>Database Type. Displays the type of database used for your project database. You must write the SQL query using the syntax used by the project database type.</p>
	<p>Find. Searches the query for text that you entered in the find box.</p> <p>Tip: Click the Find button again to find the next occurrence of the text.</p>
<SQL editor>	<p>Contains the SQL query that defines the data set that is extracted to the Excel report.</p> <p>Note: Separate project entities with commas.</p> <p>Syntax exception: The @ and \ characters have a special meaning and are not read literally when running SQL queries on the project database. If you want these characters to be read literally, you should replace @ by \@ and \ by \\. For example, if you want the statement</p> <pre>SELECT * FROM BUG WHERE BUG.BG_SUMMARY = `@parameter@`</pre> <p>to be run literally on the ALM database, type SELECT * FROM BUG WHERE BUG.BG_SUMMARY = `\\@parameter\\@`.</p> <p>Contains the SQL query that defines the data set that is used for the Excel report.</p>
Copy/Paste	<p>Copies selected text from one place in the SQL editor to another.</p> <p>Available from: Query editor right-click menu</p>
Cut/Paste	<p>Moves selected text from one place in the SQL editor to another.</p> <p>Available from: Query editor right-click menu</p>

Entities Pane

Contains a list of ALM database fields and entities that you can add to the query.

User interface elements are described below:

UI Element	Description
	<p>Add Entity to Query. Adds the selected project entity to the SQL query. The entity is inserted at the cursor position.</p> <p>To add a project entity with the column alias defined by the entity title, click the Add Entity to Query arrow and select Add Entity to Query with Entity Title as Alias.</p> <p>Available from: Entities pane</p>
	<p>Entities View. Enables you to view fields and entities in the Entities pane by their name, their database column name, or both.</p> <p>Available from: Entities pane</p>

Query Parameters Tab

Contains a list of parameters available for use in the queries.

User interface elements are described below:

UI Element	Description
	<p>Add Parameter to Query. Adds the selected parameter to the SQL query. The parameter is added at the cursor position.</p> <p>Note: For a parameter representing a text value, you must manually add single quotes (') around the parameter in the SQL pane. For example, if the SQL pane contains the phrase WHERE BUG.BG_DETECTED_BY = @name@, you must replace the text @name@ with '@name@'.</p> <p>Available from: Query Parameters tab</p>
	<p>New Query Parameter. Opens the New Query Parameter dialog box, enabling you to add a parameter to the parameters grid. For more details, see "New Query Parameter/Edit Query Parameter Dialog Box" on page 914.</p> <p>Available from: Query Parameters tab</p>

UI Element	Description
	<p>Edit Query Parameter. Opens the Edit Query Parameter dialog box, enabling you to edit the selected parameter. For more details, see "New Query Parameter/Edit Query Parameter Dialog Box" on page 914.</p> <p>Available from: Query Parameters tab</p>
	<p>Delete Query Parameter. Deletes the selected parameter from the parameters grid.</p> <div style="background-color: #fce4ec; padding: 10px; margin-top: 10px;"> <p>Caution: If you delete a parameter that is in use in a report query, queries containing the parameter will not be valid.</p> </div> <p>Available from: Query Parameters tab</p>

Query Results Tab

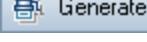
Displays preview results of an SQL query.

Post-processing Tab

This tab enables you to create a Visual Basic script that runs after the extracted data is exported to Excel.

To access	<ol style="list-style-type: none"> On the ALM sidebar, under Dashboard, select Analysis View. Expand the analysis tree and select an Excel report. Under the Configuration tab, click the Post-processing tab.
Important information	When writing a post-processing script, consider important guidelines. For more details, see " Guidelines for Creating a Post-Processing Script " on page 902.
Relevant tasks	<ul style="list-style-type: none"> "How to Generate an Excel Report" on page 902 "How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none"> "Excel Reports Overview" on page 900 "Analysis View Window" on page 813

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

UI Element	Description
	<p>Generate. Generates the Excel report</p>

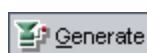
UI Element	Description
	<p>Find. Searches the post-processing script for text that you entered in the find box.</p> <p>Tip: Click the Find button again to find the next occurrence of the text.</p>
Run post-processing	<p>Instructs ALM to run the post-processing script after the data is exported to Excel. Clear this option if you do not want to run the script when you generate the report.</p>
<script editor box>	<p>Contains the Visual Basic script that runs in Excel after the report data is exported to Excel.</p> <p>Tip: Base the script on the template script already displayed in the Script Editor box.</p>

Generation Settings Tab

This tab enables you to define settings for generating the Excel report.

To access	<ol style="list-style-type: none"> On the ALM sidebar, under Dashboard, select Analysis View. Expand the analysis tree and select an Excel report. Under the Configuration tab, click the Generation Settings tab.
Relevant tasks	<ul style="list-style-type: none"> "How to Generate an Excel Report" on page 902 "How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none"> "Excel Reports Overview" on page 900 "Analysis View Window" on page 813

User interface elements are described below:

UI Element	Description
 Generate	<p>Generate. Generates the Excel report.</p> <p>If the status of the report is Not Ready, a warning displays.</p> <p>If the report query contains parameters, the Report Parameters dialog box opens. Type the parameter values in the Value column.</p> <p>The report is saved in the location you define. If you selected Launch report in Excel, Excel opens and displays the report. If not, a confirmation message displays.</p>
Launch report in Excel	Instructs ALM to open the report in Excel after the report is generated. If this option is not selected, you can load the saved report in Excel at a later stage.
Status	Informs other users whether the report is ready to be generated. The following options are available for the report status: <ul style="list-style-type: none">• Ready. Indicates that the report is ready to be generated.• Not Ready. Indicates that the report is not ready to be generated. If a user tries to generate a report with this status, a warning message displays.
Save report as	The location and name of the Excel file to which the data is exported. <p>Tip: Click the browse button to select a folder.</p>

New Excel Report Dialog Box

This dialog box enables you to add a new Excel report to the analysis tree.

To access	1. On the ALM sidebar, under Dashboard , select Analysis View . 2. Right-click the folder under which you want to add a report, and select New Excel Report .
Important information	Excel reports you create under private folders are available to the owner only. Excel reports you create under public folders are available to all users.
Relevant tasks	<ul style="list-style-type: none">• "How to Generate an Excel Report" on page 902• "How to Analyze Data in ALM" on page 810
See also	<ul style="list-style-type: none">• "Excel Reports Overview" on page 900• "Analysis View Window" on page 813

User interface elements are described below:

UI Element	Description
Excel Report Name	The report's display name in the analysis tree. Syntax exceptions: The report name cannot exceed 255 characters, and cannot include the following characters: \ ^ *

New Query Parameter/Edit Query Parameter Dialog Box

This dialog box enables you to edit or create a new query parameter.

To access	1. In an Excel report, under the Configuration tab, click the Query tab, and then click the Query Builder button. 2. In the Query Parameters tab, right-click and select New Parameter or Edit Parameter .
Relevant tasks	"How to Generate an Excel Report" on page 902
See also	"Parameters in SQL Queries" on page 901

User interface elements are described below:

UI Element	Description
Parameter Name	The parameter name. Note: If you rename a parameter, the change is automatically applied to the parameter wherever it is used in the SQL query. Syntax exception: A parameter name cannot include special characters, except the underscore character.
Default Value	The value that the parameter uses by default.
Hide On Run	Instructs ALM to use the default value every time you generate the report. Clear this option if you want to be prompted to keep or change the default value when you generate the report.
Global Parameter	Indicates that the parameter is available to all queries in the current Excel report.

UI Element	Description
Description	An extended description of the parameter.

Chapter 45: Business View Excel Reports

This chapter includes:

• Business View Excel Reports Overview	918
• How to Generate a Business View Excel Report	918
• Business Views Excel Reports User Interface	921

Business View Excel Reports Overview

A business view is a data layer that exists on top of the database and which reflects only those project entity fields that represent information that is useful from a business perspective.

For example, a business view based on the Baselines entity could contain the **Name**, **Description**, and **Baseline ID** fields. This is because these fields convey information that could be of importance to the consumer who needs to understand baseline information from a business perspective only. By the same logic, the same business view would not include the **Attachment** and **Auto complete type** fields, as they are of little business significance.

Business views can be based on single entities, such as **Baselines** or **Defects**, while others can represent more complex relationships between entities, such as **Defects With Linked Requirements**.

In addition to the pre-defined business views, additional views can be created in Project Customization. For more information, refer to the *HPE Application Lifecycle Management Administrator Guide*.

You can create and modify Business View Excel reports in Microsoft Excel. This enables you to analyze your data using any of the capabilities available in Excel, and then upload the report to ALM.

Business View Excel reports can be created using data from multiple projects.

For task details, see "[How to Generate a Business View Excel Report](#)" below.

How to Generate a Business View Excel Report

This task describes how to analyze data in ALM using Business View Excel reports.

To learn more about business view Excel reports, see "[Business View Excel Reports Overview](#)" above.

This task includes the following steps:

- "[Prerequisites](#)" on the next page
- "[Log in to ALM from Microsoft Excel](#)" on the next page
- "[Add a Business View Excel report to the analysis tree](#)" on the next page
- "[Create a Business View Excel report](#)" on page 920
- "[Configure the Business View Excel report](#)" on page 920
- "[Import the Business View Excel report to ALM](#)" on page 921
- "[Generate a Business View Excel report](#)" on page 921

1. Prerequisites

To verify supported versions of Microsoft Excel, refer to the *HP Application Lifecycle Management Readme*.

Note: In Microsoft Excel 2013, you can only open one Business View Excel report at a time.

Install the HPE ALM Business Views Microsoft Excel add-in from the HPE Application Lifecycle Management Add-ins page. You can access the Add-ins page in ALM from **Help > Add-ins**.

Note: If you do not install the HPE ALM Business Views Microsoft Excel add-in from the Add-ins page, you are prompted to install the add-in when creating a business view excel report in the Analysis module.

Installing via the Add-ins page allows you to install for only yourself or for all users on the machine. Installing from the Analysis module installs only for yourself.

To install for all users, you must have administrator permissions.

2. Log in to ALM from Microsoft Excel

If you access Microsoft Excel directly, and not through ALM, you must log in to ALM from Microsoft Excel.

- a. Open Microsoft Excel.
- b. Open the Login screen. In the HP ALM tab, click **Login**.
- c. Enter the login information. Select **Standard Authentication** or **External Authentication**.
 - i. For **Standard Authentication**, enter the ALM server URL, Login Name, and Password, and click **Authenticate**.
 - ii. For **External Authentication**, enter the web server URL and click **External Authentication**.
- d. Select the project. Enter the Domain and Project, and click **Login**.

3. Add a Business View Excel report to the analysis tree

Add a Business View Excel report to a folder in the analysis tree.

- a. **Open the Analysis View module.** On the ALM sidebar, under **Dashboard**, select **Analysis View**.
- b. **Add a folder to the analysis tree.** Right-click a folder under the Private or Public root folder, and select **New Folder**.

- c. **Create a new Excel report.** Right-click a folder, and select **New Business View Excel Report**. Enter a name for the Business View Excel report in the New Business View Excel Report dialog box.

Note: If there is a newer version of the HPE ALM Business Views Microsoft Excel add-in, a dialog box appears to update the add-in on your machine.

4. Create a Business View Excel report

Create the Business View Excel report in Excel.

- a. **Open Excel.** In ALM's Analysis module, in the Configuration tab, click **New Excel**. Excel opens with the HPE ALM tab on the ribbon. For user interface details, see "[HP ALM Tab - Microsoft Excel](#)" on page 922.
- b. **Open the Add Worksheet dialog box.** In the HP ALM tab, click **Add** to add business view Excel worksheets in the same Excel book, or click **New Report** to add business view Excel worksheets in a new Excel book.
- c. **Select the business views.** Select the business view and click **OK**. To select multiple business views, use the SHIFT or CTRL keys. The new business view Excel worksheets are added and the Worksheet Configuration pane becomes active.

5. Configure the Business View Excel report

Configure the Business View Excel report in Excel.

- a. **Select the fields to be included in the report.** In the Fields tab of the Worksheet Configuration pane, select the fields to be removed from the report. To select multiple fields, use the SHIFT or CTRL keys. For user interface details, see "[Worksheet Configuration Pane - Fields Tab](#)" on page 925.
- b. **Filter the data to be included in the report.** In the Filter tab of the Worksheet Configuration pane, select the fields to be filtered and enter the filter criteria. For user interface details, see "[Worksheet Configuration Pane - Filter Tab](#)" on page 927.

Note: You cannot filter based on memo (CLOB) fields.

- c. **Sort the report.** In the Sort tab of the Worksheet Configuration pane, select the fields by which the report is sorted and set the sorting criteria. For user interface details, see "[Worksheet Configuration Pane - Sorting Tab](#)" on page 929.

Note: You cannot sort on memo (CLOB) fields.

- d. **Select the projects to be included in the report.** In the Advanced tab of the Worksheet Configuration pane, select **Include domain and project name** and select the projects to include in the report. For user interface details, see "[Worksheet Configuration Pane -](#)

"Advanced Tab" on page 930.

- e. **Edit the query.** In the Advanced tab of the Worksheet Configuration pane, click **Edit Query** to configure the report by directly editing the DQL query. For user interface details, see "Edit Query Dialog Box" on page 933.

Note: If you edit the query, the other tabs of the Worksheet Configuration pane are disabled and all selection, sorting, and filtering of fields are done directly in the DQL query.

6. Import the Business View Excel report to ALM

You can upload the Business View Excel report directly to ALM from Excel. In Excel, click the arrow under the **Save** button and select **Save to ALM**. For details, see "Save Business View Excel Report Dialog Box" on page 936.

Alternatively, you can save the report as a file in Excel and upload it later to ALM. To upload the file in ALM:

- a. In Excel, click the arrow under the **Save** button and select **Save to file**. In the search window, navigate to the desired location, enter the desired file name, and click **Save**.
- b. In the Configuration tab in ALM's Analysis module, click .
- c. **Select the Business View Excel report.** In the search window, navigate to the desired file and click **Open**. The selected file name is shown in the **File name** field.

7. Generate a Business View Excel report

Generating a Business View Excel report refreshes all the data, saves the Excel file, and opens it in Excel.

- a. In the **Analysis** view in ALM, click .
- b. In the Configuration tab, click **Generate**.
- c. **Save the Business View Excel report.** In the search window, navigate to the desired location to save the report and click **Save**. The report is saved and opens in Excel.

Business Views Excel Reports User Interface

This section includes:

• Configuration Tab - Business View Excel Reports	922
• HP ALM Tab - Microsoft Excel	922
• Worksheet Configuration Pane - Fields Tab	925
• Worksheet Configuration Pane - Filter Tab	927
• Worksheet Configuration Pane - Sorting Tab	929
• Worksheet Configuration Pane - Advanced Tab	930

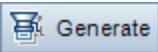
• Edit Query Dialog Box	933
• Select Projects Dialog Box	935
• Business View Options Dialog Box	936
• Save Business View Excel Report Dialog Box	936

Configuration Tab - Business View Excel Reports

This tab enables you to open Excel to configure and generate Business View Excel reports.

To access	<ol style="list-style-type: none"> On the ALM sidebar, under Dashboard, select Analysis View. Expand the analysis tree, and select a Business View Excel report. Click the Configuration tab.
Relevant tasks	"How to Generate a Business View Excel Report" on page 918
See also	"Business View Excel Reports Overview" on page 918

User interface elements are described below:

UI Element	Description
 Generate	Generates the selected Business View Excel report in Excel.
 New Excel	Opens Excel to create a new Business View Excel report.
 Install Addin ▾	<p>Installs or uninstalls the Business View Excel add-in in Excel.</p> <p>Note: This install only installs the add-in for the specific user, not for all users.</p>
Upload Excel Report File 	Enables you to upload a Business View Excel report to ALM.

HP ALM Tab - Microsoft Excel

This tab enables you to create and configure Business View Excel reports.



To access	<ol style="list-style-type: none"> 1. On the ALM sidebar, under Dashboard, select Analysis View. 2. Expand the analysis tree, and select a Business View Excel report. 3. Click the Configuration tab. 4. Click New Excel. Microsoft Excel opens. 5. Click the HP ALM tab.
Relevant tasks	"How to Generate a Business View Excel Report" on page 918

User interface elements are described below:

UI Element	Description
 Login	Login. Opens the login screen to log in to ALM.
 Logout	Logout. Logs out of ALM.
 Switch Project	Switch Project. Opens the login screen to switch to another project in the same ALM session.
 Add	Add. Opens the Add Worksheet dialog box to create a new worksheet for each selected business view.
 Show Configuration	Show Configuration. Toggles the Worksheet Configuration pane.
 Auto Refresh	Auto Refresh. Automatically refreshes the active worksheet each time its configuration is changed.
 Row Limit 30	Row Limit. Sets the maximum number of rows shown in each Business View worksheet. <div style="background-color: #e0f2e0; padding: 5px; margin-top: 10px;"> Note: Set the value to zero to retrieve all rows. </div>

UI Element	Description
 Refresh	Refresh. Refreshes the current worksheet.
 Refresh All	Refresh All. Refreshes all worksheets.
 New Report	New Report. Opens the Add Worksheet dialog box to create a new worksheet for each selected business view in a new Excel workbook.
 Open	Open. Opens a business view Excel workbook from a file or from the ALM Analysis View tree.
 Save	Save. Saves the current Business View Excel workbook to a file or to the ALM Analysis View tree.
 Options	Options. Opens the HP ALM Addin Options dialog box. See " Business View Options Dialog Box " on page 936 for details.
 Help	Help. Opens the HP Application Lifecycle Management Help for the add-in. <div style="background-color: #e0f2e0; padding: 5px; margin-top: 10px;"> Note: The help opens only when you are logged in to ALM. </div>

Worksheet Configuration Pane - Fields Tab

The worksheet configuration pane enables you to configure the Business View Excel report.

Worksheet Configuration

Fields | Filter | Sorting | Advanced

Select fields to be included in the current worksheet:

Defects Fields: Selected fields:

Defect ID
Summary
Description
Priority
Severity
Status
Estimated Fix Time
Actual Fix Time
Assigned To
Comments
Detected By
Detected in Version
Detected in Release Name
Detected in Release ID
Detected in Cycle Name
Detected in Cycle ID
Detected on Date
Has Change
Closed in Version
Closing Date
Planned Closing Version
Target Release Name
Target Release ID
Target Cycle Name
Target Cycle ID
Subject Name
Subject ID
Project
Reproducible?
Extended Reference
TestSet Reference
Modified

To change columns order, drag and drop the columns in Excel table.

To access

1. In the HP ALM tab in Excel, click **Add** or **New Report**.
2. Select the business view and click **OK**.

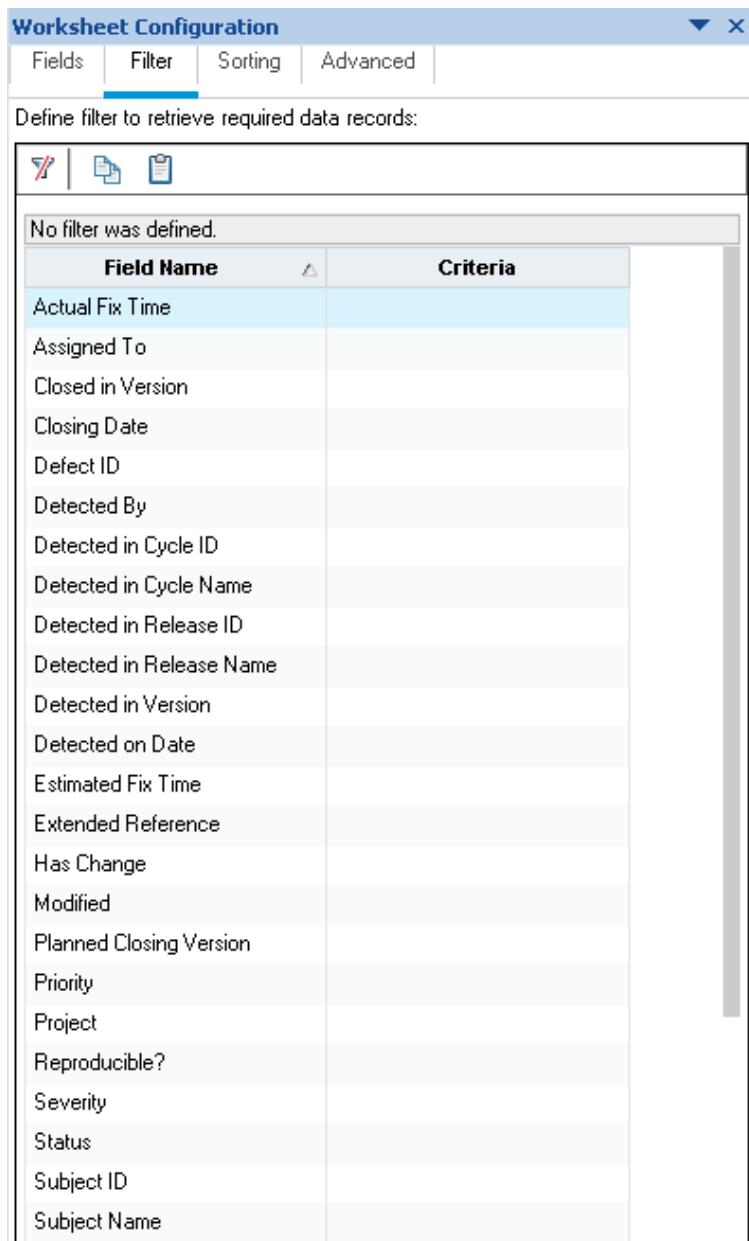
Important information	<ul style="list-style-type: none"> To hide the Worksheet Configuration pane, click the Show Configuration button. Clicking the button again reopens the Worksheet Configuration pane. If you click in the Excel worksheet outside the actual report, the Worksheet Configuration pane closes. Click in the report to reopen the pane. To change the order of the columns in the report, drag and drop the columns in the Excel table.
Relevant tasks	"How to Generate a Business View Excel Report" on page 918
See also	"HP ALM Tab - Microsoft Excel" on page 922

The **Fields** tab of the worksheet configuration pane enables you to select the fields to be included in the report. User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
>	Move Right. Moves the selected fields in the <Business View> fields column to the Selected fields column.
>>	Move All Right. Moves all fields in the <Business View> fields column to the Selected fields column.
<	Move Left. Moves the selected fields in the Selected fields column to the <Business View> fields column.
<<	Move All Left. Moves all fields in the Selected fields column to the <Business View> fields column.
<Business View> Fields	List of the Report Headings that are not included in the Selected fields column.
Selected fields	List of the Report Headings that are included in the report.

Worksheet Configuration Pane - Filter Tab

The worksheet configuration pane enables you to configure the Business View Excel report.

**To access**

1. In the HP ALM tab in Excel, click **Add or New Report**.
2. Select the business view and click **OK**.
3. Select the **Filter** tab.

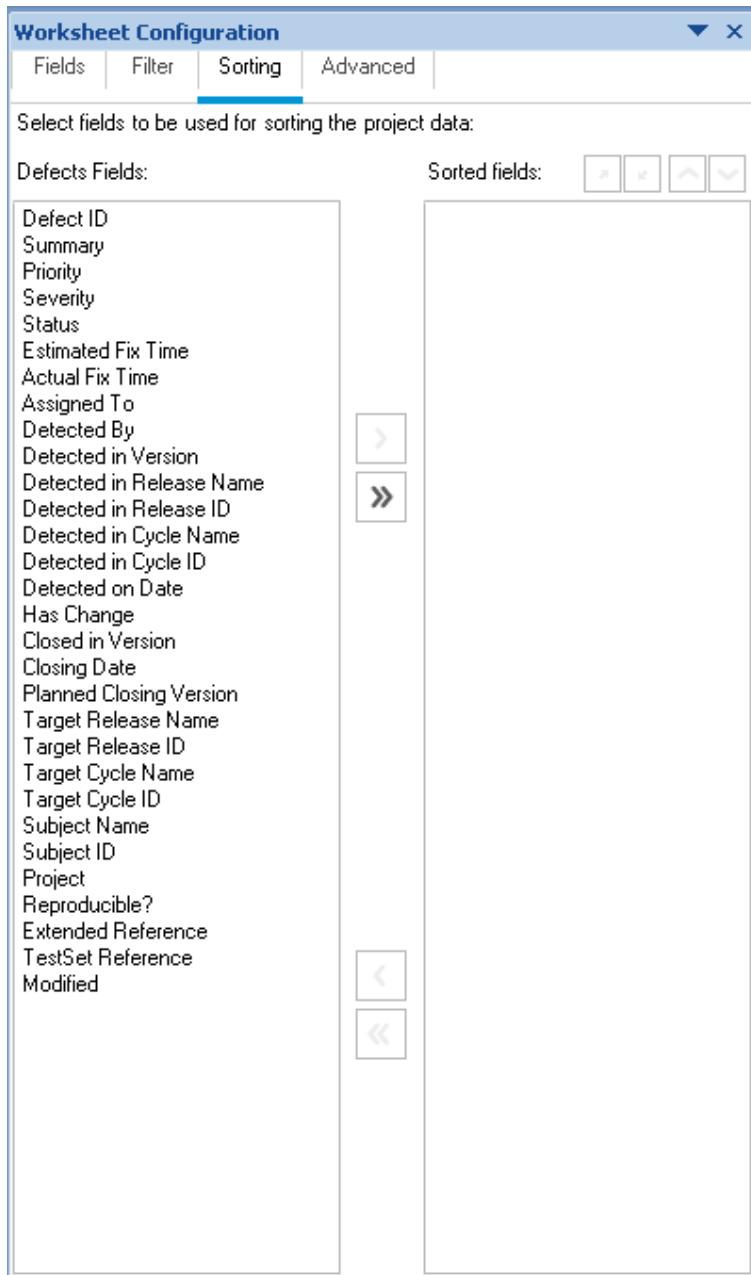
Important information	<ul style="list-style-type: none"> To hide the Worksheet Configuration pane, click the Show Configuration button. Clicking the button again reopens the Worksheet Configuration pane. If you click in the Excel worksheet outside the actual report, the Worksheet Configuration pane closes. Click in the report to reopen the pane.
Relevant tasks	"How to Generate a Business View Excel Report" on page 918
See also	"HP ALM Tab - Microsoft Excel" on page 922

The **Filter** tab of the worksheet configuration pane enables you to filter the data to be included in the report. User interface elements are described below:

UI Element	Description
	Clear Filter. Clears the filter settings defined in the Filter tab.
	Copy Filter Settings. Copies the filter settings to the Clipboard.
	Paste Filter Settings. Pastes the filter settings from the Clipboard.
Criteria	Click to set the filter criteria for the specific field. The Select Filter Condition dialog box opens.
Field Name	Alphabetical list of the Report Headings.

Worksheet Configuration Pane - Sorting Tab

The worksheet configuration pane enables you to configure the Business View Excel report.

**To access**

1. In the HP ALM tab in Excel, click **Add or New Report**.
2. Select the business view and click **OK**.
3. Select the **Sorting** tab.

Important information	<ul style="list-style-type: none"> To hide the Worksheet Configuration pane, click the Show Configuration button. Clicking the button again reopens the Worksheet Configuration pane. If you click in the Excel worksheet outside the actual report, the Worksheet Configuration pane closes. Click in the report to reopen the pane.
Relevant tasks	"How to Generate a Business View Excel Report" on page 918
See also	"HP ALM Tab - Microsoft Excel" on page 922

The **Sorting** tab of the worksheet configuration pane enables you to sort the report. User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
>	Move Right. Moves the selected fields in the <Business View> fields column to the Sorted fields column.
>>	Move All Right. Moves all fields in the <Business View> fields column to the Sorted fields column.
<	Move Left. Moves the selected fields in the Sorted fields column to the <Business View> fields column.
<<	Move All Left. Moves all fields in the Sorted fields column to the <Business View> fields column.
↗	Sort Ascending. Sorts the selected Report Headings in ascending order.
↘	Sort Descending. Sorts the selected Report Headings in descending order.
↑	Move Up. Moves the selected Report Headings higher in the list of sorted fields.
↓	Move Down. Moves the selected Report Headings lower in the list of sorted fields.
<Business View> Fields	List of the Report Headings that are not included in the Sorted fields column.
Sorted fields	List of the Report Headings that are included in the sort for the report.

Worksheet Configuration Pane - Advanced Tab

The worksheet configuration pane enables you to configure the Business Views Microsoft Excel

Report, and to select the projects to include in the report.

The screenshot shows the 'Worksheet Configuration' dialog box. The 'Advanced' tab is selected. In the 'Dataset Query' section, a large block of SQL code is displayed:

```
SELECT "id", "name", "description", "priority", "severity", "status", "estimated_fix_time", "actual_fix_time", "owner", "dev_comments", "detected_by", "detection_version", "detected_in_release", "detected_in_rel", "detected_in_cycle", "detected_in_rcyc", "creation_time", "has_change", "closing_version", "closing_date", "planned_closing_ver", "target_release", "target_rel", "target_cycle", "target_rcyc", "defect_subject", "subject", "project", "reproducible", "extended_reference", "cycle_reference", "last_modified" FROM Defects
```

Below the query editor, there is a note: **① After editing the Query directly in the 'Edit Query' dialog, the Fields, Filter and Sorting panels will be disabled.**

In the 'Worksheet Project Settings' section, there are two checkboxes:

- Use current project only
- Include domain and project name

Below these settings is a table titled 'Domain' and 'Project' with one row visible:

Domain	Project
DEFAULT	e

At the bottom of the dialog, there is a note: **② Result sorting is on a project by project basis**.

A blue button labeled 'Select Projects' is located at the bottom left of the dialog.

To access

1. In the HP ALM tab in Excel, click **Add or New Report**.
2. Select the business view and click **OK**.
3. Select the **Advanced** tab.

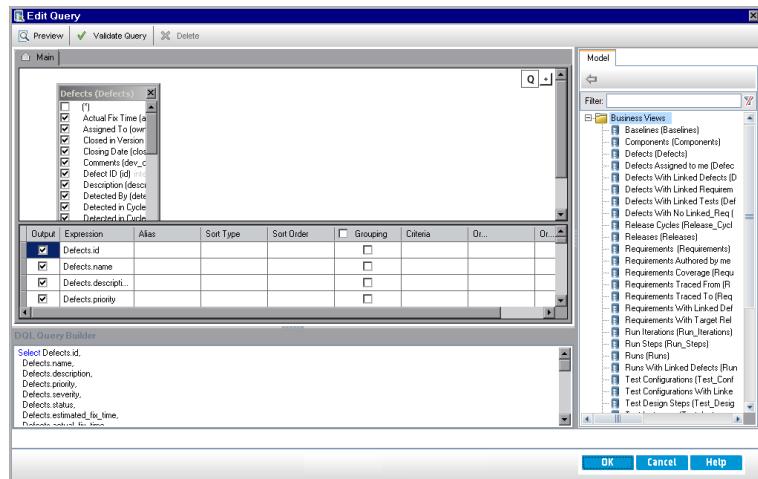
Important information	<ul style="list-style-type: none"> To hide the Worksheet Configuration pane, click the Show Configuration button. Clicking the button again reopens the Worksheet Configuration pane. If you click in the Excel worksheet outside the actual report, the Worksheet Configuration pane closes. Click in the report to reopen the pane.
Relevant tasks	"How to Generate a Business View Excel Report" on page 918
See also	"HP ALM Tab - Microsoft Excel" on page 922

The **Advanced** tab of the worksheet configuration pane enables you to configure the report by directly editing the DQL query, and to select the projects to include in the report. User interface elements are described below:

UI Element	Description
Dataset Query	The DQL query used to create the report.
Edit Query	Click to edit the DQL query. The Edit Query dialog box opens. For more information, see "Edit Query Dialog Box" on the next page .
Use current project only	Select if only the current project is to be included in the Business Views Microsoft Excel Report.
Include domain and project name	Select to show the domain and project name in the Business Views Microsoft Excel Report.
Domain	The domains included in the Business Views Microsoft Excel Report.
Project	The projects included in the Business Views Microsoft Excel Report.
Select Projects	Click to select projects to include in the Business Views Microsoft Excel Report. The Select Projects dialog box opens. For more information, see "Select Projects Dialog Box" on page 935 .

Edit Query Dialog Box

The Edit Query dialog box enables you to configure the Business View Excel report.



To access	<ol style="list-style-type: none"> In the HP ALM tab in Excel, click Add or New Report. Select the business view and click OK. In the Advanced tab of the the Worksheet Configuration pane, click Edit Query.
Relevant tasks	"How to Generate a Business View Excel Report" on page 918
See also	"Worksheet Configuration Pane - Advanced Tab" on page 930

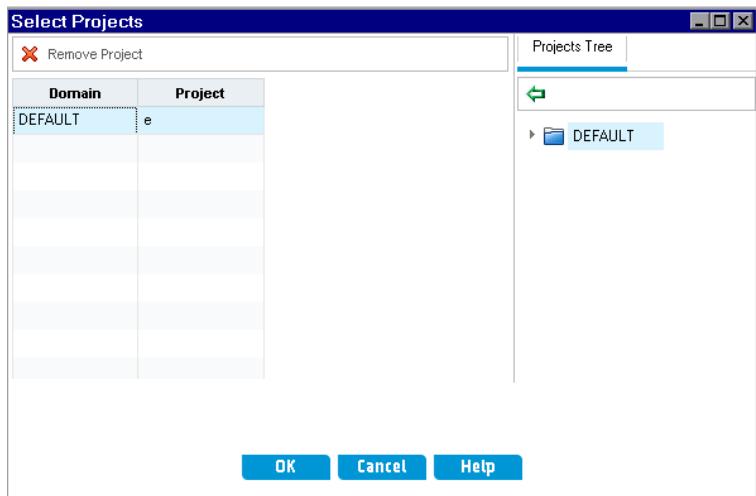
User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
Preview	Generates a preview of the data that is returned by the business view query.
Validate Query	Validates the query. The following checks are performed: <ul style="list-style-type: none"> That the DQL syntax is correct. That the query contains only fields from selected entities.
Delete	Deletes the selected business view from the query.

UI Element	Description
Main pane	Displays a <business view> dialog box for every business view that has been added to the query, as well as defined relationships between business views.
<business view> dialog box	<p>Appears in the Main pane after you add a business view to the query. The dialog box displays all available fields within the business view. Use the checkboxes to select fields to add to the view.</p> <p>Default: All fields are included in the query. The checkboxes appear unchecked.</p>
Model pane	<p>Displays available business views.</p> <p>To add a business view to the query, select it and click Add .</p> <p>Alternatively, you can add business views by dragging them to the Main pane.</p> <div style="background-color: #e0f2e0; padding: 10px; border-left: 2px solid #80c080; margin-left: 20px;"> <p>Note: Business views are listed alphabetically according to their Labels, with their technical names in brackets.</p> </div>
<selected fields grid>	<p>Enables you to define filter criteria for business view fields.</p> <p>To add a field to the grid, in the <business view> dialog box in the Main pane, use the checkboxes to select the desired fields.</p> <div style="background-color: #e0f2e0; padding: 10px; border-left: 2px solid #80c080; margin-left: 20px;"> <p>Tip: You can use the Alias column to change a field's label.</p> </div>
DQL Query Builder	<p>Displays the business view query.</p> <p>The query updates automatically as you add entities and define relationships.</p> <p>You can create and edit a view by entering the query directly in the DQL Query Builder.</p>
Query Results pane	<p>Appears when you click Preview. Displays the following information:</p> <ul style="list-style-type: none"> • Query Results. Valid views only. Displays a preview of the view. • Query Messages. Invalid views only. Displays messages detailing problems with the view. Place the cursor over the message text to view a tooltip displaying the full message.

Select Projects Dialog Box

The Select Projects dialog box enables you to select the projects to include in the Business Views Microsoft Excel Report.



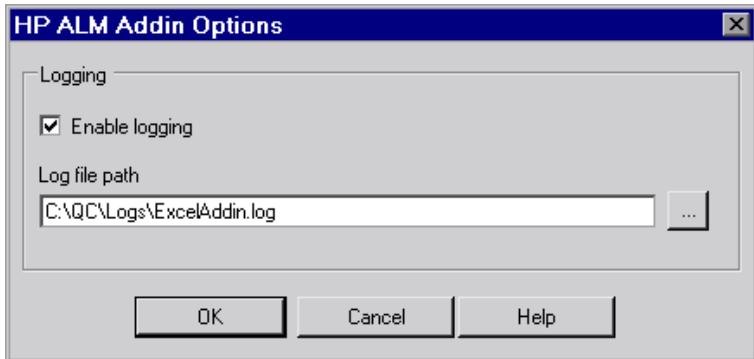
To access	<ol style="list-style-type: none"> 1. In the HP ALM tab in Excel, click Add or New Report. 2. Select the business view and click OK. 3. In the Advanced tab of the the Worksheet Configuration pane, unselect Use current project only and click Select Projects.
Relevant tasks	"How to Generate a Business View Excel Report" on page 918
See also	"Worksheet Configuration Pane - Advanced Tab" on page 930

User interface elements are described below:

UI Element	Description
Remove Project	Removes the selected project from the list of domains and projects in the Main pane.
Main pane	Displays a list of domains and projects to be included in the Business Views Microsoft Excel Report.
Projects Tree pane	Displays available projects. To add a project to the report, select it and click . Alternatively, you can add projects by dragging them to the Main pane.

Business View Options Dialog Box

This dialog box enables you to set the options for the Business View Excel report.



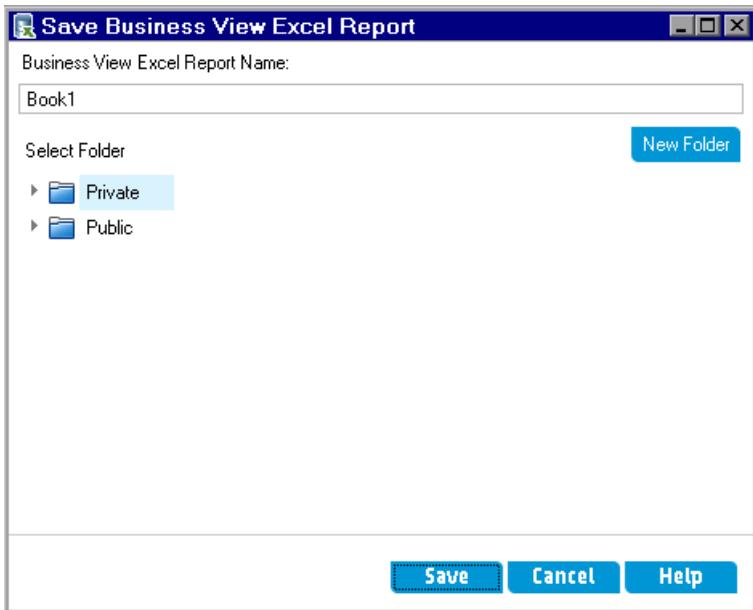
To access	In the HP ALM tab in Excel, click Options .
Relevant tasks	"How to Generate a Business View Excel Report" on page 918
See also	"HP ALM Tab - Microsoft Excel" on page 922

User interface elements are described below:

UI Element	Description
Enable logging	Click to create a log of all activity that occurs while creating the Excel report.
Log file path	The location of the log file. Click the browse button to select a path to the log file.

Save Business View Excel Report Dialog Box

This dialog box enables you to save the Business View Excel report to the ALM Analysis View tree.



To access	On the HP ALM tab in Excel, click the arrow under the Save button and select Save to ALM .
Relevant tasks	"How to Generate a Business View Excel Report" on page 918
See also	"HP ALM Tab - Microsoft Excel" on page 922

User interface elements are described below:

UI Element	Description
Business View Excel Report Name	The name for the new report.
New Folder	Creates a folder in the ALM Analysis View tree. The New Analysis Item Folder dialog box opens. Enter the folder name and click OK .
Select Folder	The folder in which the report is stored.

Chapter 46: Live Analysis Graphs

This chapter includes:

- [Live Analysis Graphs Overview](#) 940
- [How to Generate Live Analysis Graphs](#) 940
- [Live Analysis Graphs User Interface](#) 941

Live Analysis Graphs Overview

Live analysis enables you to create and display dynamic charts illustrating:

- Test subject data in the Test Plan module.
- Test set folder data in the Test Lab module.
- Business component subject folders in the Business Components module.

In each module you can create up to two live analysis graphs.

Live Analysis graphs differ from the graphs described in "[Graphs and Dashboard Pages](#)" on [page 827](#) in that you do not have to re-generate a graph to view data that has changed. In addition, the layout and settings of the graph are preserved for all the folders in the same module. This enables you to view the same graphical analysis of different folders without the need to redesign the graphs.

For task details, see "[How to Generate Live Analysis Graphs](#)" below.

How to Generate Live Analysis Graphs

This task describes how to create and view auto-generated graphs for test subjects, test sets, and business components.

To learn more about Excel reports, see "[Live Analysis Graphs Overview](#)" above.

To watch a movie on how to generate live analysis graphs, refer to this section in the ALM Online Help.

This task includes the following steps:

- "[Prerequisites](#)" below
- "[Create Live Analysis graphs](#)" below
- "[View Live Analysis graphs](#)" on the next page

1. Prerequisites

For test plan Live Analysis graphs, test subject folders are defined in the Test Plan module.

For test lab Live Analysis graphs, test set folders are defined in the Test Lab module.

For business component Live Analysis graphs, component subject folders are defined in the Business Components module.

2. Create Live Analysis graphs

- a. On the sidebar, under **Testing**, select **Test Plan**, **Test Lab**, or **Business Components**.
- b. Select a folder in the module tree.
- c. Click the **Live Analysis** tab.

- d. Click the **Add Graph** link in the pane in which you want to display a graph. Follow the wizard to design a live analysis graph. For user interface details, see "[Live Analysis Graph Wizard](#)" on page 943.

3. View Live Analysis graphs

You can change the way a Live Analysis graph is displayed. This includes maximizing the graph to full-screen view, changing the graph appearance, and drilling down to the graph data.

- a. On the sidebar, under **Testing**, select **Test Plan**, **Test Lab**, or **Business Components**.
- b. Select a folder in the module tree.
- c. Click the **Live Analysis** tab. For user interface details, see "[Live Analysis Tab](#)" on the next page.

Live Analysis Graphs User Interface

This section includes:

• Live Analysis Tab	942
• Live Analysis Graph Wizard	943

Live Analysis Tab

This tab enables you to create and display Live Analysis graphs for test subjects, test set folders, and business component subjects.

To access	<ol style="list-style-type: none"> On the ALM sidebar, under Testing, select Test Plan, Test Lab, or Business Components. Select a folder in the module tree, and click the Live Analysis tab.
Important information	<ul style="list-style-type: none"> The Live Analysis graphs that you create are unique for your user login. Each project user can create Live Analysis graphs which will be visible only to that user but will not be visible to other users. Live Analysis graphs represent only nodes that are located directly below the selected folder. They do not include tests, test sets, or business components located at a lower hierarchical level in child folders of the selected folder. The data displayed in the graph reflects the filters that you have set for the module.
Relevant tasks	"How to Generate Live Analysis Graphs" on page 940
See also	"Live Analysis Graph Wizard" on the next page

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

UI Element	Description
Add Graph	Launches the Live Analysis Graph Wizard, enabling you to design a Live Analysis graph. For user interface details, see "Live Analysis Graph Wizard" on the next page .
	View Graph in Full Screen. Maximizes the current graph to full-screen view. <div style="background-color: #e0f2e0; padding: 5px; margin-top: 10px;"> Tip: To return to the normal view, click the Close button. </div>
	Set Graph Appearance. Opens the Graph Appearance dialog box, enabling you to change the current graph's title, color, and display. For more details, see "Graph Appearance Dialog Box" on page 865 .

UI Element	Description
	<p>Delete Graph. Removes the current Live Analysis graph from the Live Analysis tab.</p> <p>Note: If you have two Live Analysis graphs displayed for a folder and you want to create a new graph, you must first delete one of the existing graphs.</p>
<graph area>	<p>You can perform the following actions in the chart area:</p> <p>Drill Down. To further analyze your data, click a bar or segment in the graph. The Drill Down Results dialog box opens. For user interface details, see ""Drill Down Results Dialog Box" on page 865".</p> <p>Set Colors. To change the graph colors, right-click a bar or line. In the Color dialog box that opens, select the new color from one of the color palettes.</p>
<legend>	<p>Displays the chart categories and their corresponding color.</p> <p>Set Colors. Right-click a category to change its color. In the Color dialog box that opens, select the new color from one of the color palettes.</p>

Live Analysis Graph Wizard

This wizard enables you to create Live Analysis graphs for test subjects, test set folders, and business component subjects.

To access	<ol style="list-style-type: none"> On the ALM sidebar, under Testing, select Test Plan, Test Lab, or Business Components. Select a folder in the module tree, and click the Live Analysis tab. Click the Add Graph link in the pane in which you want to display the graph.
Important information	<p>After you define the data that you want to display, the graphs are automatically updated each time the data changes in the tests or test sets in the folder for which you created the graph.</p>
Relevant tasks	"How to Generate Live Analysis Graphs" on page 940
Wizard map	<p>This wizard contains:</p> <p>"Select Graph Type Page" on the next page > "Select Graph Attributes Page" on the next page</p>
See also	"Live Analysis Tab" on the previous page

Select Graph Type Page

This wizard page enables you to select the Live Analysis graph type.

Important information	General information about this wizard is available here: " Live Analysis Graph Wizard " on the previous page.
Wizard map	The " Live Analysis Graph Wizard " on the previous page contains: " Select Graph Type Page " above > " Select Graph Attributes Page " below

User interface elements are described below:

UI Element	Description
Description	A description of the selected graph type.
Entity	The ALM entity covered by the graph.
Graph Type	Select the type of graph that you want to display: Summary Graph. Shows the number of tests in a test subject, the number of tests in test sets in a folder, or the number of components in a business component subject. Progress Graph. Shows how many tests accumulated in a test subject, in the test sets in a folder, or components in a business component subject, at specific points during a period of time. Trend Graph. In the Test Plan module, shows the history of changes to specific Test Plan fields in the selected test subject folder, for each time interval displayed. In the Business Components module, shows the history of changes to specific Business Components fields in a project, at each point during a period of time.

Select Graph Attributes Page

This wizard page enables you to set attributes for the Live Analysis graph.

Important information	General information about this wizard is available here: " Live Analysis Graph Wizard " on the previous page.
Wizard map	The " Live Analysis Graph Wizard " on the previous page contains: " Select Graph Type Page " above > " Select Graph Attributes Page " above

User interface elements are described below:

UI Element	Description
Group By field	<p>The field by which tests or components are grouped in the graph.</p> <p>Note: For progress graphs, you can select only fields for which history has been enabled. For more information on enabling history for a field, refer to the <i>HPE Application Lifecycle Management Administrator Guide</i>.</p>
X-axis field	In summary graphs, the field whose values are displayed along the x-axis.

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