HP ALM Web Client

Software Version: 12.20

User Guide

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Contents

Chapter 1: The ALM Web Client Overview

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

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

This topic includes:

- "Why use the ALM Web Client?" below

- "What features does the ALM Web Client support?" on the next page

- "Who should use this client?" on page 11

Why use the ALM Web Client?

Here are some ALM Web Client benefits.

Pure web client

When using the ALM Web Client, no client components are downloaded to your machine. The lack of a client footprint ensures that:

- You are always working with the most up-to-date client modules

- No residual files clutter up your machine

- Administrator privileges are no longer necessary when using the client

- The ALM Web Client loads more quickly, as expected from a pure web application

Cross-platform and cross-browser

The ALM Web Client modules are not browser-dependent and can be used on various operating systems, such as Unix, Linux, and Mac. See the *ALM Readme* for supported browsers and operating systems.

Work side-by-side

You can keep both the ALM Web Client and the ALM Desktop Client open simultaneously. Changes are visible in both clients after a refresh, data are retained in the same database, and full locking capabilities maintain data integrity.

More functionality

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

- **Author mode.** A document-centric viewing mode that enables you to see a list of requirements in a single document view and allows for quick editing of descriptions. This helps you to have a better overall perspective of the requirements.

- **Category views.** A dynamic hierarchical structure based on virtual folders allows for flexibility in manipulating the view. Views can be updated on-the-fly by selecting new category fields. This flexibility lets you determine the way in which your ALM project data are organized.

What features does the ALM Web Client support?

- The ALM Web Client currently supports the Requirements and Defects modules.

- ALM users who work mainly with data analysis should use the ALM Desktop Client until full analysis capabilities are available in the ALM Web Client.

Note: The roles mentioned above should be considered a partial list of suggested users. There may be other job titles in your organization, with similar responsibilities, who may also benefit from using the ALM Web Client.

Who should use this client?

The following are some of the roles that are suited to working with the ALM Web Client:

Business analysts, functional architects, project managers, and product owners	These users can work exclusively in the ALM Web Client to create, update, and view requirements. Users that rely on reports and dashboards to analyze requirements, such as project managers, can work with the ALM Desktop Client as it currently supports a more comprehensive suite of analysis tools. Also, those working extensively with Business Process Modeling should continue to use the ALM Desktop Client.
Developers	Developers can use the ALM Web Client for viewing and updating requirements and defects assigned to their team, or for creating new requirements or defects.
Administrators	Administrators should work in both the ALM Desktop Client and the ALM Web Client to provide access to the ALM Web Client and to customize the user experience.

Note: The roles mentioned above should be considered a partial list of suggested users. There may be other job titles in your organization, with similar responsibilities, who may also benefit from using the ALM Web Client.

See also

- "What's New in ALM Web Client 12.20" below

- **Administrators**: "Managing projects" on page 239

- **Administrators**: "Customizing the ALM Web Client" on page 171

What's New in ALM Web Client 12.20

The ALM Web Client offers an alternative user interface for managing the lifecycle of your application, and is part of HP's ongoing commitment to providing innovative

products and solutions. The ALM Web Client is user-friendly and easy to navigate, and with its new features and functionality, shortens work processes and provides an improved user experience.

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

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

- "Traceability " below

- "Customization" below

- "Additional functionality and usability enhancements" on the next page

- "Online Help" on the next page

Traceability

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

Customization

Customization enhancements include:

- Define rules that validate fields when an entity is created, deleted, or modified.

- Define rules that set field values by copying the value from another field.

- Select multiple list values within a business rule condition field. The values are connected with an Or indicator. For example, Priority is 2-Medium or 3-High.

- Business rules override predefined values, but are themselves overridden by user defined values.

Additional functionality and usability enhancements

- **Inline editing.** Fields of grid items can now be edited directly in the grid.

- **Bulk update.** Modify up to three fields simultaneously in multiple entities.

- **Email entities.** Users can now send an entity by email. Recipients can click the link in the mail to navigate directly to the entity.

- **Data export.** You can now export grid data to an Excel file, in addition to the existing formats.

- A new **Report defect** button on the main toolbar simplifies defect reporting. When you report a defect in this way, the defect is automatically linked to the entity from which it was reported.

Online Help

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

Chapter 2: Using the ALM Web Client

The ALM Web Client and helps you become familiar with its user interface and behavior.

The first time that you log in to a project, the main window opens and displays the Home page. From then on, the view in which you last worked during your previous session will be displayed after logging in to the project.

A close look at the masthead

In the top banner (masthead) you can see the current domain and project, as well as your user name. The masthead is visible in all ALM modules and views.

You can perform the following actions from the masthead:

- Navigate between ALM Web Client modules

- Switch to a different domain and project

- Configure your user profile

- Access the ALM Web Client online help

- Log out of your project

- Customize your user settings

- 👤 Administrators can customize the ALM Web Client
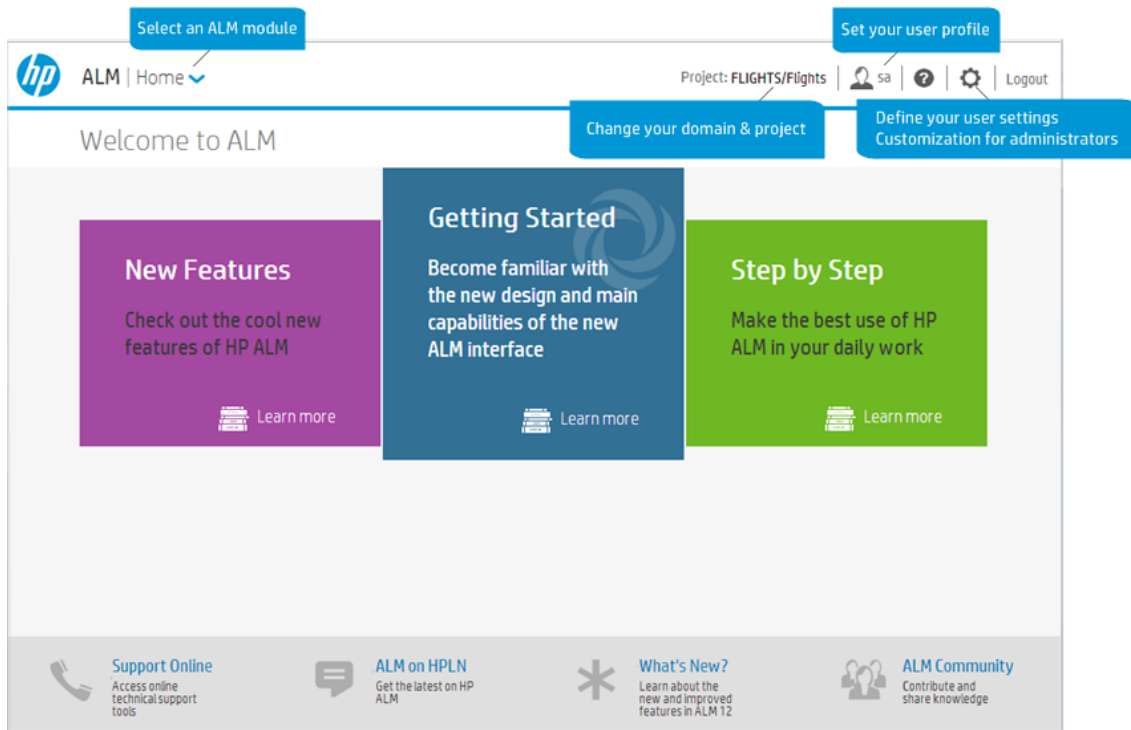
Here is additional information for some of these tasks.

Selecting an ALM Module

Home ⌄ Home Requirements Defects	Switch between modules

How can this help me?

You have quick and easy access to your work environments.

Note: Only the modules to which you have been given access permissions by your site administrator are listed.

Changing your domain and project

	Switch between domains and projects

How can this help me?

You can quickly switch to other projects that you are working on from the main window in any module.

Setting your user profile

How can this help me?

Personalize your user profile by adding your contact details and uploading a photo.

> **Note:** When changing your photo, it may take up to 24 hours for your updated photo to be visible to all project users.

Defining your user settings & customization

User settings

You can define user settings to the ALM Web Client works how you want it to work.

Auto-save

You can enable the **Auto Save** setting so that ALM Web Client saves your changes as you navigate from one entity to another, without being prompted by a dialog box to save your changes.

How can this help me?

You get to choose the way that you prefer to work when using the ALM Web Client.

Enable Auto Save by selecting the **Apply Auto Save** checkbox and clicking **Save**.

> **Note:** Auto Save does not save if you log out of the ALM Web Client before navigating to a different entity. The lock on the entity, however, is released so as not to block other users from modifying the entity.

Drag and Drop

When working in the tree in the navigation pane, you might accidentally move items with drag and drop. To avoid this, the ALM Web Client prompts you with a confirmation dialog box. This allows you to verify that you intended to move items, and that the drag and drop was not some slip of the mouse. You can disable this setting so that the ALM Web Client allows you to drag and drop items in the navigation pane tree without confirming the operation.

 How can this help me?

You get to choose the way that you prefer to work when using the ALM Web Client.

To disable the confirmation message, select the **Do not confirm drag and drop in tree** checkbox and click **Save**.

Manage Templates

You can determine the values that the ALM Web Client should use when creating a new entity, by defining values for fields and saving them in a template. You can create multiple templates that you can then manage in **User Settings**.

How can this help me?

Templates save time and effort when creating new entities.

Managing templates

> **Note:** Before you can set a template as the default, you need to first have created and saved a template for the entity. You do this while adding a new entity. For more details, see "Defining requirements" on page 60 and "Defining defects" on page 85.

1. In the masthead, select ⚙ and then **User Settings**.

2. Select **Manage Templates** to see a list of available templates.

3. To set a new default template, select the template name from the list and click **Set as default**. If no template is selected, the **System** default is used. The System default has no predefined values for fields.

4. To delete a template, click ✕ next to the template name.

For more details on preset values, see "Using templates" on page 34.

Customization

The administrator has control over the information displayed in the ALM Web Client.

For details: "Customizing the ALM Web Client" on page 171.

How can this help me as the end user?

Work with your administrator to make sure the data you need is available to you. The administrator can:

- Set up new icons for your requirement types

- Customize forms for easier viewing and editing of entities

- Create business rules to ease your workflow

 How can this help me as the administrator?

Work with your end users to make sure ALM Web Client is meeting their needs:

- By creating forms, you can make sure end users can only view and access information that is relevant to them

- Using business rules, you can make sure the data entered for each entity has "in context" integrity

Note: The ALM Web and Desktop Clients have been designed to work together as seamlessly as possible. Certain limitations or differences may exist between their functionality and their interoperability.

See also

- "Getting started" on page 22

- "Displaying what you need" on page 27

- "Common functionality" on page 33

- "Working with requirements by job function" on page 53

- "Working with defects by job function" on page 81

Starting the ALM Web Client

Let's learn how to started the ALM Web Client.

1. **Administrators**: Check the prerequisites listed in the *HP ALM Readme*.

2. **Administrators**: Set up access to ALM projects in the ALM Desktop Client. For

details, see "Managing projects" on page 239.

3. Open your browser and type your ALM URL

`http://<ALM server name/IP address>[<:port number>]/qcbin.`

Contact your administrator if you do not have the URL.

> **Note:** The URL cannot contain underscores.

The HP Application Lifecycle Management Options window opens.
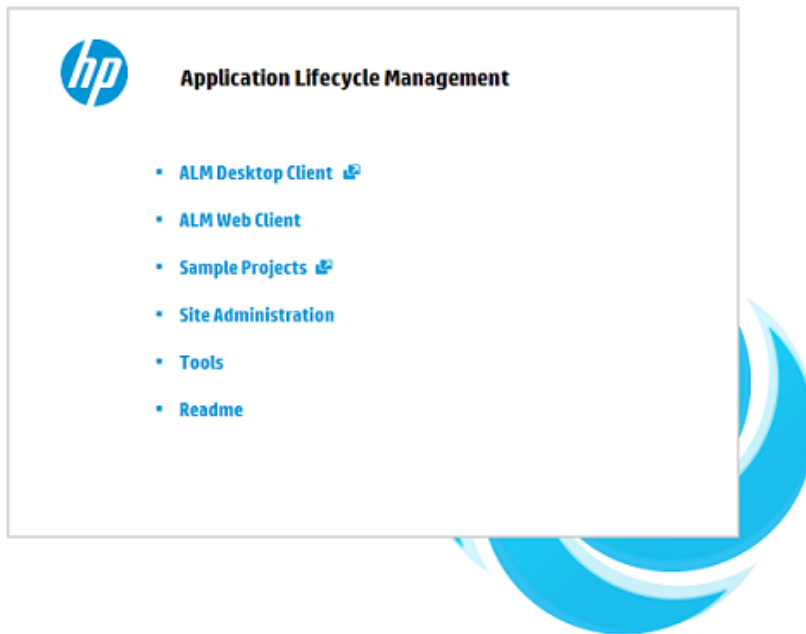
4. Click **ALM Web Client**.

5. Select your domain and project.

> **Note:** If you encounter an error message and blank screen after logging in, try typing the following URL:
>
> ```
>  http
> (s)://<server>:<port>/qcbin/ui/?p=<domain>/<project>#/clea
> r-settings
> ```

Now that you have started the **ALM Web Client**, choose the module to work in from the masthead.

> **Tip:** The **ALM Web Client** lists only the modules to which you have access, based on user group permissions set in Site Administration using the ALM Desktop Client.

See also

- "Managing projects" on page 239 for working in the ALM Desktop Client

- "Managing projects" on page 239 for enabling the ALM Web Client using Site Administration

Getting started

This section provides an overview of working with the various ALM Web Client modules.

This section demonstrates how to work using the Requirements module as an example. You can work with most modules in a similar way.

To work with a module, select the module from the masthead.
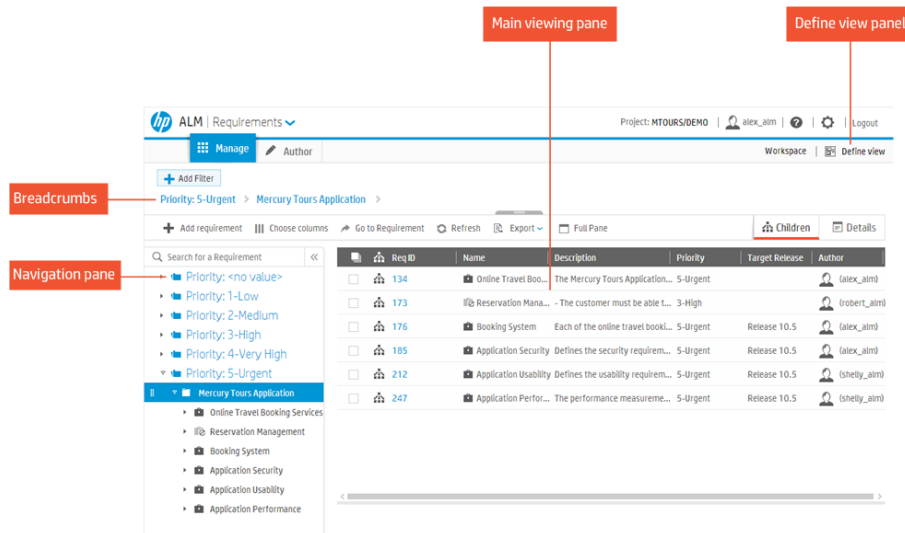
From any module, click **Define view** and a panel opens allowing you to define how the data is displayed. For more details, see "Displaying what you need" on page 27.

Using the navigation tree

In modules that support a hierarchy, the navigation pane displays the hierarchy of items in a tree structure.

- Items are created at multiple levels either above, below, or at the same level as other items. This results in a physical hierarchical structure. When no categories are defined in the view, the tree displays the items according to their actual physical hierarchy.

- Category views use field values of entities to create virtual category folders. These folders are superimposed on the actual tree, and so the tree includes both category folders and items. Categories are displayed in blue with a category icon 📁. Items are displayed in the tree under the lowest defined category. When the item in the tree is an entity, the icon next to the item indicates the entity type.

> **Tip:** To view entity items when then the selected category folder is not the lowest level folder, select the **<Entity name>** tab. Switch to the **Overview** tab to display summary category.

Requirements module only: As the items themselves are not physically located in these virtual category folders, they do not need to match the categories. Often a parent item will not match a particular category but will have a child or grandchild item that does. To preserve the physical hierarchical structure of the requirements, the parent item must appear even though it is not part of that category. An item that doesn't match the category folder under which it appears is displayed in light gray with an out of scope icon ⊘.
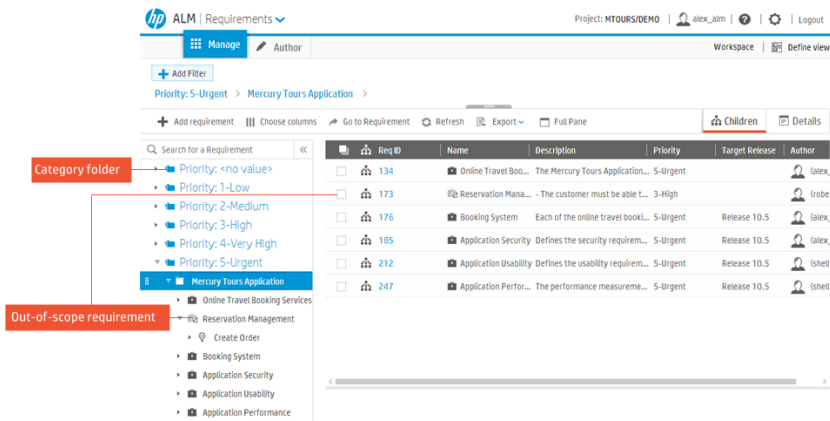
When a category view is applied to a field that has multiple values, the same item appears multiple times as it belongs to more than one category.

For example

Requirement *Online Travel Booking Services* is assigned to *Target Cycle 1 – New features* and *Target Cycle 2 – New features & Regression*. If you define a category view to display requirements by Target Cycle, *Online Travel Booking Services* will be displayed under both categories.
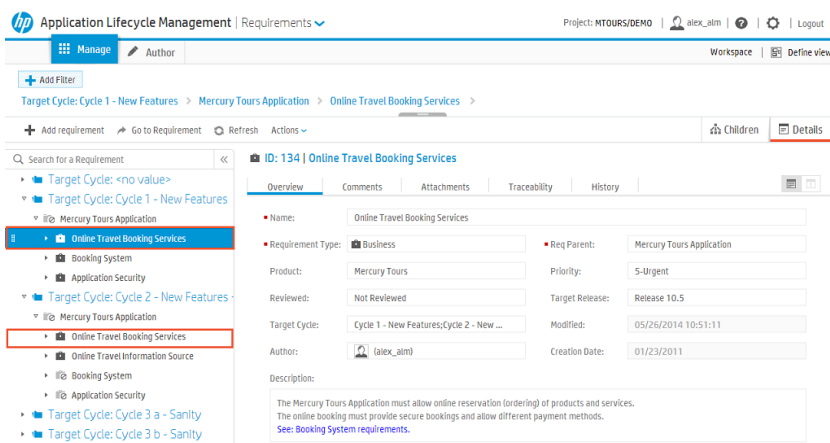
You can resize the width of the navigation pane. You can also collapse the pane by clicking « in the top right corner, which will enlarge the viewing area so to that more data can be displayed.

When you define the view to display items with no hierarchy, and no category fields are defined, there is no navigation pane.

You can also navigate the tree using the following keys:

- **Up arrow.** Moves up.

- **Down arrow.** Moves down.

- **Right arrow.** Expands the item

- **Left Arrow.** Collapses the item.

- **Enter** or **Space**. Selects the item.

Breadcrumbs navigation bar

The breadcrumbs navigation bar is displayed on top of the tree pane and the view area. The bar represents the path in the tree hierarchy. (In the Requirements module, this includes both categories and items.) When you select an item in the tree, the corresponding path is shown in the breadcrumbs navigation bar.

You can navigate quickly through the hierarchy by selecting any breadcrumb link from the navigation bar. You can also select a neighboring item by clicking the breadcrumb separator icon ❯ and selecting an item from the drop-down list.
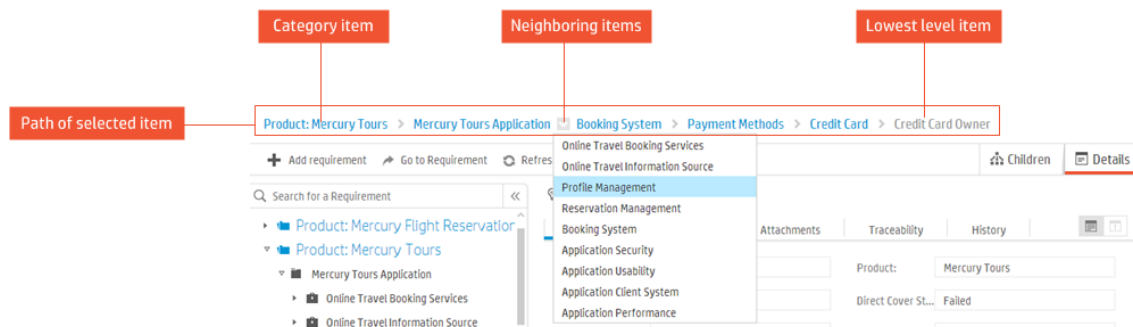
The breadcrumbs navigation bar is also displayed when the tree pane is collapsed.

Changing the display in the main viewing area

The way in which information is displayed in the main viewing area is determined by the view that you define, as well as the following:

The item selected in the navigation tree	When the navigation pane is displayed, selecting an item in the navigation pane displays information corresponding to that item in the main viewing pane.
The tab selected in the main viewing pane	When using category folders, if the selected category folder is not the lowest level folder, you can select the **<Entity name>** tab to display the items in that category in a grid. Switch to the **Overview** tab to display summary category. **Requirements module only:** • **Details.** Displays specific detailed information of a selected item in the tree. • **Children.** Displays a grid with summary information of the direct children of a selected item. When using a Display Requirements with a Hierarchy view type ![icon], toggling on **Include children** ![icon] displays all the children of the selected entity, ordered by ID number, and not just direct children.
The mode selected (Requirements module only)	**Manage.** Displays the information in a data-centric view. **Author.** Displays requirements in a document view.

For more details on changing the display, see "Displaying what you need" on the next page.

See also

- "Displaying what you need" below

- "Working with requirements by job function" on page 53

- "FAQs for requirements" on page 78

Displaying what you need

There are many ways to set up how information is displayed in ALM. Set up your display according to your own preference and then save it as a workspace to be reloaded and used in the future.

To watch a movie on how to display what you need, refer to this section in the ALM Web Client Online Help.

Administrators can determine what end users see by:

- "Managing projects" on page 239

- "Customizing the ALM Web Client" on page 171

Defining the view

From any module, click **Define view** and a panel opens allowing you to define how the data is displayed.

Selecting the type of view

Depending on the module, you can toggle between a hierarchy , a hierarchy with out-of-scope children (Requirements module only), or a flat type of view . Hierarchy views preserve the hierarchical structure of the entities, whereas the flat view displays entities all at the same level.

> **Note:** Some modules only support some of these view types. For example, the Defects module only supports Flat view types.

Requirements module:

View Type	Display
⬛ **Display Requirements with a Hierarchy**	When using categorization or filters, this type of view preserves the hierarchical structure of the entities and displays the parent-child path to the matching items. Items that don't match the category or the filter are indicated with an out-of-scope ⊘ icon.
⬛ **Hierarchy view with out-of-scope children** (Requirements module only)	The difference between the **Display Requirements with a Hierarchy** view and the **Hierarchy view with out-of-scope children** view is only evident when categorizing or filtering. When using categorization or filters this type of view displays the parent-child path to the matching items, but in addition provides a more complete view by also displaying the out-of-scope children of the matching items. Out-of-scope items are items that don't match the category or the filter. These items are indicated with a ⊘ icon.
⬛ **Flat**	Items are displayed without a hierarchy. When categorization or filters are applied, only matching items are displayed.

The difference between the **Display Requirements with a Hierarchy** view and the **Hierarchy view with out-of-scope children** view is only evident when using categorization or filters.

Defining category fields

Categories let you separate your data into groups according to specified fields and to define a hierarchical order for displaying the information. This view makes it easier to navigate through large sets of data.

Category views enable you to quickly manipulate your project data and to create dynamic views. These views arrange large amounts of project data in a way that allows you to analyze and manage the information more effectively. You can also drill down within a view to see more detailed information of a particular item.

1. Click **Add category field**.

   If your project has requirements and is not a new project or an existing project without requirements, you can define a view with category folders. When you add category fields, you create virtual category folders for displaying your requirements based on the fields that you define. You can select up to four hierarchy levels.

2. Select a field from the drop-down list.

3. Continue adding fields as necessary. You can add up to four category fields.

Note:

- **Requirements module.** When a hierarchical view (or)is selected, there may be items in the view that don't meet the category conditions. These are displayed to preserve the hierarchical structure and give you a better overall perspective by displaying the parent-child path to the matching requirements, and in the **Hierarchy view with out-of-scope children**, also the children of the matching requirements. The icons of these items are displayed in gray with a ⊘ icon to indicate that they are out of the scope of the current category. If you want to see only those requirements that match the defined category without reference to their hierarchical position, select **Define view > Flat view** , and click **Apply**.

Setting sort fields

You can determine the order in which items are displayed by sorting the items by a specified field.

Note: In some modules, such as Requirements, you need to select **Flat view** to set fields for sorting.

---

1. Click **Add sort field**.

2. Select a field from the drop-down list. You can arrange the items in ascending or descending order.

When you have finished defining the categories and the sort order, click **Apply**.

To clear a view, click **Define view** and clear the category and sort fields. Click **Apply**.

Filtering

You use a filter to limit what data is displayed. When you add a filter, ALM displays the specific items that match the conditions that you set.

Filters are useful for monitoring and tracking entities, as they allow you to focus on the information that is important to you. For example, you can create a filter to display all defects assigned to you, with a status field value of *Not fixed*. That way you limit the defects displayed to the items assigned to you, that need your attention.

Adding a filter

1. Click **Add Filter.**

2. Select a field for filtering the items. A filter panel opens with condition statements and values specific to the field that you selected. Where the field has no predefined values, such as a free text field like **Name**, no values are displayed.

3. Click the condition field and select a statement from the list.

4. Select one or more field values from the list. If there is no list, enter a value.

Continue adding additional filters as required.

> **Note:**
>
> - **Requirements module.** When **Display Requirements with a Hierarchy** ▤ or **Hierarchy view with out-of-scope children** ▤ is selected, there may be items in the view that don't meet the filter conditions. These are displayed to preserve the hierarchical structure and give you an overall perspective by displaying the parent-child path to the matching requirements, and in the **Hierarchy view with out-of-scope children**, also the children of the matching requirements. The icons of these items are displayed in gray with a ⊘ icon to indicate that they are out of the scope of the current filter. If you want to see only those requirements

that match the defined filter without reference to their hierarchical position,

select **Define view > Flat view** , and click **Apply**.

Choosing between detailed or summary information

In most modules you can switch between the Details and the Children tabs to display the following:

- Entity Details

  Detailed information relating to a selected entity, including comments, attachments, traceability and history.

- Summary details of a list of entities in a grid

  When entities are displayed in a grid, click the ID link of an entity to switch to displaying detailed entity information.

- A combination of both

  When items are arranged in a grid, click **Split Pane** to display a grid in the top half of the pane, and details of a selected item in the bottom half. You can choose what tabs are displayed by clicking on the right hand side of the preview pane. To remove the details preview pane, click **Full Pane**.

Choosing columns

In a grid, you can choose which columns are displayed. You can also change the order in which columns are displayed, by dragging and dropping them.

To remove a column, hover over a column header and click .

> **Note:** The position of certain columns is fixed. These columns can't be moved. This includes, for example:
>
> - The entity **ID** column
>
> - The **Children** column in the Requirements module

Workspaces

Workspaces are customized views made up of one or more of the following elements:

- Settings used in **Define view**

- Filters

- Selected columns

Once you have set up your display as explained above, you can save your view as a workspace. The workspace can then be loaded in the future as needed. To remove a loaded workspace you can either clear the workspace or load another one in its place. You can also modify a workspace, share it with all users of the project, or add it to your list of favorites for quick access. You can stop sharing workspaces that you created at any time, and workspaces that you no longer use can be deleted.

A workspace is unique to the module in which the view is created. For example, the Workspaces menu in the Requirements module will contain only views created for this module.

Some functionality may not be available to you depending on the permissions that your administrator has assigned to you.

Requirements module: By default, workspaces are loaded in **Manage** mode. To view a workspace created in **Author** mode, load the workspace and switch to **Author** mode.

See also

- "FAQs for using the ALM Web Client" on page 49

- "Getting started" on page 22

Common functionality

There are a number of things that you can do in the ALM Web Client that can be done in all modules. The following common functionality is available:

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Common actions

Actions toolbar

When you select one or multiple items in a grid, the actions toolbar is displayed at the bottom of the window. The buttons available on the toolbar differ depending on the module selected. Not all options are enabled when selecting multiple items, and some options may be disabled depending on the user permissions that your project administrator has defined for you.

Use the toolbar to perform the following:

- Delete one or multiple items

- Add an item before or after a selected item

- Copy, cut or paste items

- Send a selected item by email

- Bulk update

  Modify fields of multiple items in a single operation:

  a. Select the items in the grid and click **Bulk update**.

  b. Select a field to update, and then select or fill in the new value for the field.

     After you select a new value for that field's bulk update, another row becomes available for another field to update.

     You can add up to three fields.

     > **Note:**
     >
     > ○ Updates to memo fields such as Description and Comments are added to the current content.
     >
     > ○ If you select a field to update and leave the value empty, the existing value is overwritten with a blank value.

Actions menu

The Actions menu is displayed only when viewing entity Details, and can be used to perform common actions such as cut, copy, and paste on items in the navigation tree.

Using templates

You can determine the values that the ALM Web Client should use when creating a new entity, by defining values for fields and saving them in a template. You can then load

the values for multiple fields in one step. This saves time and effort when creating new entities.

Templates are useful in cases where:

- You often use the same values for particular fields when creating an entity.

- You add defects for different products, each with its own set of values. Defects for *Product A* have one set of values while defects for *Product B* have a different set of values.

- You use several types of requirements, each with a different set of fields and you would like to set different initial values for the fields depending on the requirement type.

Example

Let's say you are creating requirements for the Mercury Tours 10.5 release of the Flight Reservation Desktop Application. You would like all your requirements to have a value of *Mercury Flight Reservation Desktop Application* for the **Product** field and a value of *Release 10.5* for the **Target Release** field. In addition, you would like to set the following values automatically when creating **Business** and **Functional** requirements:

For **Business** requirements:
Requirement Type: Business
Reviewer: kelly_alm
Reviewed: Not Reviewed

For **Functional** requirements:
Requirement Type: Functional
Reviewer: james_alm
Reviewed: Not Reviewed
Dev Owner: alex_alm

You can define a template for the each requirement type. Once you do this, the next time you add a requirement you can select the template that should be loaded for that

requirement by clicking the drop-down arrow next to the **Add requirement** button .
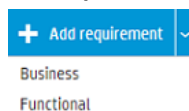
The values for the fields defined in template are automatically completed, so if you loaded the **Business** template, the following values would automatically be filled in:

> **Note:** As ALM is highly customizable, this example may use customized fields that are not available in your organization.

You can create multiple templates for an entity, and set a particular template to be the Default template. When you create a new entity, the values defined in the Default template are automatically filled in, or you can select a different template that should be loaded for one-off use.

For a slide show on using defining templates refer to this section in the ALM Web Client Online Help.

Defining templates

You define the values for the template while adding a new entity.

1. Click the **Add entity** button and complete the fields that you would normally fill in.

2. In the Add Entity dialog, before clicking **Add** to save the new entity, click **Save Template**.

3. Give your template a name. To use the template that you are currently defining as the default template, select **Set as default for adding new entity**.

4. Select the fields to be included in the template. Selected fields are marked with a blue border.

5. Click **OK** to save the template.

> **Note:** Some field values may be determined by rules created by your administrator. In these cases, the value that you define may be overridden.or. In these cases, the value that you define may be overridden.

Loading templates

If you've defined a template for an entity and saved the template as the Default, the values in this template are loaded automatically when you add a new entity of the same type. You can also load a different template for one-off use when adding a new entity. Click the drop-down next to the Add Entity button and select the template to be loaded.

Managing templates

You can also set a different template as the default or delete templates by selecting ⚙ in the masthead and then selecting **User Settings > Manage Templates**. For more details, see "Manage Templates" on page 19.

Viewing all fields or only required/invalid fields

When creating a new entity, ALM automatically checks if required fields are missing or if fields are invalid. You can change the display to view only missing or invalid fields to focus on the most important field values to enter. You do this by clicking the ⚠ button in the top toolbar.

> **Tip:** After specifying values for the required or invalid fields, if you happen to have invalidated a field that is not in the current display, the ⚠ button is displayed in red like this: 🔴. Click the 📄 button to make corrections.

Adding comments

Comments are useful for discussing issues regarding a specific entity and are important for collaboration with other ALM users. Comments are displayed in the **Comments** tab of an entity.

1. In the Details of the entity, click the **Comments** tab. Click **Add comment** in the text editor toolbar. A new section is added to the comments field with your user name and the current date.

2. Type your comment. You can use the text editor to change the font type and size, or to format your text.

3. Click **Save** to update the entity.

Working with attachments

Use attachments to provide additional background information relevant to the item. For example, for a defect you can attach a screen recording of the scenario in which the bug occurred. You can add attachments when adding a new entity or add them at a later stage.

You can add, access, and manage attachments in the **Attachments** tab of the entity. The **Attachments** tab is entity specific, and displays only files attached to the selected entity. When editing or deleting attachments, you can select a single attachment or multiple attachments. A blue boundary indicates the selection. Download an attachment from the **Attachments** tab of an entity by clicking .

Adding an attachment when adding a new entity	Adding an attachment to an existing entity

1. Do one of the following:
   a. Click **Attach** (top left-hand corner of the **Add Entity** dialog box) and select the file you want to upload.
 	
   b. Drag and drop the file from Windows Explorer onto the **Add Entity** dialog box.
 	
2. To rename the file or to add a description, click the file name in the yellow panel at the top of the **Add Entity** dialog box. Although the file name is displayed in the panel, the actual attachment is only uploaded when you save the entity.
Click ✕ to remove an attachment from the panel.
 	
3. Click **Add** to save the new entity. The attachment is uploaded and displayed in the **Attachments** tab as a tile including an icon for the application associated with the attachment, as well as file details such as name, size, and modification date.
	1. Do one of the following:
	   a. In the Details of the entity, click the **Attachments** tab. Click **Add attachment** and select the file you want to upload.
	
	   b. Drag and drop the file from Windows Explorer onto any tab of the entity.
	
	   c. Copy and paste images or screenshots from the clipboard directly to the **Attachments** tab (Chrome browser only).
	
	2. When the attachment is uploaded, it is displayed as a tile including an icon for the application associated with the attachment, as well as file details such as name, size, and modification date. To rename the attachment, select the file name field and make your change.
	
	3. Save your changes. You can update multiple attachments and then save all your changes at once by clicking **Save**.

Tip: Add a description so that other users know what the file contains and whether this is relevant to them.

Image attachments

Click the thumbnail of an image file attachment to preview the image. A broken image attachment 🏞️ is displayed when a file with an image extension is attached but the image can't be displayed. This can happen if the file is corrupt or has a file size of zero, or if the file is not really an image file but was renamed with an image extension.

> **Note:** An image inserted in a memo field of an entity is also added as an attachment and displayed in the **Attachments** tab.

Viewing the history of an item

You can see the change history of a selected item in the **History** tab in the Details of an entity. Hover on the purple dots to get the full date and time of each change. Some of the texts in the history records are truncated. Hover on the text to display a tooltip with the complete text.

What changes are recorded?

Changes to all fields that have been defined to include a history of changes. (Your administrator determines which fields should include history.)

What information can I see for each change?

- Who made the change

- The date and time of the change

- The old and new value of field

> **Tip:** Use the filter to remove less recent changes from the view, or to display changes for a specific field only.

Locating an entity using Go to entity ID

When creating a new entity, ALM automatically assigns a unique ID number to that entity. You can navigate directly to an item by entering the entity ID and clicking **Go to**. Click ⌄ in the entity ID field to display the Go to entity history. You can navigate to a specific entity by selecting an item from the list of previously used ID numbers.

Reordering items using drag and drop

- **Tree items.** In the navigation pane, hover over the entity you want to move. Gray squares are displayed ⬚. Click the squares to drag and drop the entity in the new location.

- **Grid items.** To re-order child entities under the same parent, hover over the start of a row in the grid (to the left of the check box). Gray squares are displayed ⬚. Click the squares to drag and drop the entity to a new place in the grid.

> **Note:**
>
> - Drag and drop functionality in a grid is not available in Flat views, or when **Include children** is toggled on.
>
> - Entities currently cannot be moved between categories.

Exporting data

You can export all or selected items in a grid, or data from Author mode (Requirements module) by selecting **Export**. The following formats are available: HTML, Word, PDF, or Excel (grid data only). The export operation does not include any unsaved changes, so if you have recently made modifications to an entity that you would like to include in the exported data, make sure to save your changes first.

Keyboard shortcuts

You can use your keyboard to perform the following common actions in a specific module:

Keyboard keys	Action
ALT + G	Go to entity
ALT + F5	Internal refresh
ALT + N	Add entity

Keyboard keys	Action
ESC	Close a dialog box. In drop-downs, close the drop-down list without changing the existing selection.
ENTER	In drop-downs, select the highlighted option and close the drop-down.
DELETE	When editing text, delete the character to the right of the cursor or the selected text. Delete items selected in a grid. Delete selected attachments in the Attachments tab, and images in the Image Manager.
ALT + F1	Open the Help Center (online help).
CTRL + left arrow	When viewing the Details of an entity in a flat view, move to previous item.*
CTRL + right arrow	When viewing the Details of an entity in a flat view, move to next item.*
CTRL + up arrow	When viewing the Details of an entity in a flat view, switch back to the grid.*

* Not available from inside a field, or when viewing details in a split pane.

Memo field actions

Memo fields are entity fields that allow for rich text content. The **Description** field is an example of a memo field. You can perform the following actions in memo fields:

- Text in memo fields can be formatted using the formatting toolbar. When there is not enough space to display the entire toolbar in one row, toolbar groups collapse. Click the drop down arrow to open the group. You can also hide the entire toolbar by

  clicking collapse toolbar   » .

- For the equivalent of a paragraph break, press <Enter>. For the equivalent of a line break (<BR>), press **SHIFT + ENTER**.

- You can paste images or text directly into a memo field using **CTRL + V**, or using the right-click menu.

- Right-click menu options are available when selecting content.

- Words that are spelled incorrectly are highlighted by your browser spell checker. If you select a misspelled word and press **CTRL +** right mouse button, the spell checker suggests corrections and you can select the right word.

> **Note:**
>
> - Images pasted in memo fields are also added as attachments. In the ALM Desktop Client, when viewing a memo field with an image in the entity preview pane, a placeholder image is displayed instead.
>
> **Microsoft Internet Explorer.** Spell check in memo fields is not available.

Send mail

You can send an email about an entity by selecting the entity and clicking **Send mail**. You can specify an email address, or select the recipient/s from the drop-down list of users. The list of users also shows users by role. For example, *Author*, *Detected by* or *Assigned to*. If there are multiple users for a particular role, they are displayed as individual items in the list.

What information is included in the email?

- A link that enables the recipient to go directly to the entity, provided they are a user of the project with access to the ALM Web Client.

- The message that you added in the field below the subject in the Send Mail dialog.

- Details of the entity.

- Attachments (if you select the checkbox to include attachments).

By default, the maximum file size of each email attachment is limited. If an attachment exceeds the size limit, the email is sent without that attachment. Other attachments that are smaller than the limit will still be sent. The attachment size limit can be modified by your administrator by editing the ATTACH_MAX_SIZE

parameter in the Site Configuration tab in Site Administration. For details, see the *HP Application Lifecycle Management Administrator Guide.*

Requirements module: When you send an email of an entity in **Author** mode only the selected entity is sent. The format of the mail is the same as an entity sent by mail in **Manage** mode. When the recipient clicks the link to go to the entity, ALM Web Client opens in **Manage** mode.

Report a defect

You can report a defect on a selected entity by clicking **Report defect**. When you create a defect in this way, a traceability link is automatically created between the defect and the selected entity.

See also

- "Displaying what you need" on page 27

- "Editing requirements" on page 66

- "Editing defects" on page 87

Traceability

Traceability establishes links between one or more entities so that you can manage the lifecycle of the application more effectively. Using traceability helps you find answers to questions that relate to overall release quality, such as:

- How is the quality of your application, based on the number and severity of defects related to a particular requirement, and the direct cover status of your requirements?

- Are all defects linked to a requirement fixed?

Adding traceability links while adding an entity

1. In the Add dialog box for the entity, click **Trace**.

2. Choose the option for the entity you want to link to/from:

   ■ **Requirement coverage** or **Link to requirement**

   ■ **Link from requirement**

   ■ **Link to defect**

   > **Note:** Not all entities support each of these traceability links. Only supported entities are listed.

3. Depending on the entity you are linking, you can select the entity by:

   ■ **ID**. Click the **ID** radio button, if it exists and enter the ID number.

   ■ **Tree**. Click the **Tree** radio button, if it exists. Expand the tree as necessary and navigate to the entity.

   ■ **Search**. Enter a string in the **Search** field, if it exists.

   A preview of the entity is displayed on the right.

4. Select the entity in the resulting list of matches.

5. Click **OK**.

Adding traceability links while editing an entity

1. In Details of the entity, click the **Traceability** tab.

2. Using the view selector | Summary ⌄ | on the right, select **Summary** or the entity whose links you want to view or add.

3. Click **Add traceability** or the **Add** button for adding the entity you selected with the view selector.

4. If you are viewing the summary, choose the option for the entity you want to link to/from:

- **Requirement coverage** or **Link to requirement**

- **Link from requirement**

- **Link to defect**

> **Notes**
>
> - Not all entities support each of these traceability links. Only supported entities are listed.
>
> - If you not viewing the summary, but instead are viewing one type of linked entity, that is the only type of traceability link that you can add.

5. Depending on the entity you are linking, you can select the entity by:

- **ID**. Click the **ID** radio button, if it exists and enter the ID number.

- **Tree**. Click the **Tree** radio button, if it exists. Expand the tree as necessary and navigate to the entity.

- **Search**. Enter a string in the **Search** field, if it exists.

A preview of the entity is displayed on the right.

6. Select the entity in the resulting list of matches.

7. Click **OK**.

Why should I view the link summary?

Use the table below to help you decide whether you want to view the summary or details.

Summary	Details
Displays all types of traceability links.	Displays a traceability links for a specific entity in a grid.
Summary information.	Detailed information. **Tip:** You can choose what columns to display in the grid.
Displays up to 100 unique items per entity listing. Items are consolidated in this view. If there are several traceability links to the same entity, only one representative link is displayed. **Example** *Requirement 1* and its children *Requirement 11* and *Requirement 12* are linked to *Defect A*. In the **Traceability** tab of *Requirement 1,* select the **Summary** view and include children [icon]. Although *Requirement 1,Requirement 11* and *Requirement 12* are all linked to *Defect A* , *Defect A* is only listed once. 	Displays all traced items, and may include duplicate items. Duplicate items are not identical as the nature of the link is different. **Example** *Requirement 1* and its children *Requirement 11* and *Requirement 12* are linked to *Defect A*. In the **Traceability** tab of *Requirement 1,* select the **Linked defects** view and **Include children** [icon]. *Defect A* appears three times in the grid. However, the grid rows are not identical because the data in the **Linked Entity ID** fields is different.

Summary	Details
You can't filter the items	You can filter the entity data, or select what information is displayed by changing the columns selected.
	Fields relating to the link itself such as Linked Entity Type or Link Comments can't be filtered at this stage.
You can't remove a traceability link	You can remove traceability links

Viewing the traceability of indirect links to defects

To see an entity's linked defects, choose **Linked defects** from the view selector in the Traceability tab.

The default setting is to display both direct and indirect links.

If you want to display only direct links, toggle **Include Indirect Links** off. When the view does not include indirect links, an icon is displayed when viewing the summary.

Filters and how they affect the summary

When a filter has been applied to a specific traceability view, if you switch to **Summary**, only matching items are visible and a filter icon is displayed. Click the icon to see the filter details.

See also

- "Requirement traceability" on page 73

- "Defect traceability" on page 89

FAQs for using the ALM Web Client

Here are some frequently-asked questions about using the ALM Web Client.

> **Tip:** Do you have some tips you'd like to add? Email us at sw-doc@hp.com.

General

I work on a number of projects in ALM and want to work on them in the ALM Web Client. Why can't I see all my projects when I try to select a project?

If your project is a version control project, it will not be available in ALM Web Client.

Why can't I see the Requirements or Defects module?

If you don't have permission to access a particular module, the module will not be listed.

How can I send information about an entity to other project users?

Select the entity and click **Send mail**. The email contains the text that you added in the body of the mail, and basic details of the entity. Recipients can use the link in the email to access the entity if they require more information.

Why can't I add comments and attachments to entities?

You may not have permission to modify entities.

How can I print data from my project?

Export your data from a grid view or from Author mode (Requirements module) to HTML, Word, PDF, or Excel (grid data only) format by selecting **Export**. You can then print your data, or copy or paste it into other formats that are not available.

In the traceability tab of a selected requirement I see the same defect appearing several times in the Linked defects view. When I switch to Summary view, the defect only appears once. Why does this happen?

In the **Summary** view, there is consolidation of traceability links. What this means is that if there are several links to the same entity, only one representative link is displayed. This can happen when a requirement and its children are all linked to the

same defect, and you select [icon]. This consolidation does not take place in the specific traceability views. You will notice In the **Linked defect**s view that although the Defect ID is the same, the items are not identical because the Link ID field is different. Fore more details, see using traceability.

Why can't I log into the ALM Web Client as a different user in the same browser window as another user? I keep entering the ALM Web Client without an opportunity to log in as a different user.

You actually can! Depending on your browser, there are ways that you can open a separate browser session (not a tab within the same browser) that does enable you to log in to the ALM Web Client as a different user connecting to the same ALM.

- **Internet Explorer**: Use InPrivate browsing.

- **Chrome**: Use Incognito mode.

- **Firefox**: Use Private browsing.

The same issue and solution applies to ALM Web Client Customization also.

Using templates

Why can't I fill in values in the fields of the template form?

When you add a new entity, first fill in values for the fields. Only once you have completed the fields in the Add entity dialog should you click **Save template** and select the fields to save in the template.

Why does the drop-down arrow for loading a template not appear when I click the Add requirement button?

The drop-down arrow only appears if you have defined templates for a particular entity. You can check what templates you have defined by selecting **User Settings > Manage Templates**.

I defined values for some fields in a template. When I load the template, one of the field values is different from the one that I set. Why is this happening?

Some field values may be determined by rules created by your administrator. In these

cases, the value that you define may be overridden.

How can I change the default template for an entity?

In **User Settings > Manage Templates**, select the template and click **Set as default**.

How do I delete a template?

In **User Settings > Manage Templates**, select the template and click ✕ to delete it.

How do I rename a template?

Add a new entity and select the template that you want to rename from the drop-down list next to the Add button. Click **Save template**, enter the new name for the template and select the fields to use in the template. Click **Save**. In **User Settings > Manage Templates**, select the old template and click ✕ to delete the template.

See also

- "Using the ALM Web Client" on page 15

- "Common functionality" on page 33

Chapter 3: Working with requirements by job function

ALM's Requirements module helps you to define, manage, and track requirements at all stages of the application lifecycle. Working with requirements in the ALM Web Client involves the following tasks:

Note: Depending on what permissions you have, you may not be able to perform all these tasks.

Working with requirements involves collaboration across different job functions and teams. Whether you are a business analyst or part of the development team, you can use ALM to plan, define, and collaborate on a set of requirements.

See below for use case scenarios explaining how the following job functions work with requirements:

- Business analyst

- Development - Team lead

BUSINESS ANALYST

Responsible for creating, updating and managing the business and functional requirements

Alternative job titles
Functional architect
Product manager
Product owner

Define

Define the business requirements

Using **Author** mode, start writing your business requirements document. Describe the business needs in a clear manner. Create sections and sub-sections to add a logical flow to your document. You can also paste diagrams or images into your document.

Tip: Have your administrator set up a "QuickAdd" requirement form for users from the Business Analyst group, requiring only a **Type** and **Name** field. A default value should be set for the **Type**. This way you focus on writing up your document, without having to complete additional requirement details.

Send for review

Collaborate with other stakeholders by sending the requirements document for review. You can copy the URL of your document and email it to other stakeholders to view in ALM, or export from **Author** mode to Word or PDF Format.

The following additional actions can be performed while defining your requirements, or after they have been reviewed and agreed to, as part of refining requirements during the Edit stage .

Prioritize

Select a value from a drop-down list of the Priority field.

Tip: Have your administrator set up the Priority field with a drop-down list of values that support your business processes.

Assign status

Use a status field to track your requirements. The initial status of a new requirement is usually Draft.

Tip: Have your administrator set up a Status field with a drop down list of values that support your business processes.

Assign to release and cycle

Select a value from the drop-down list in the Target Release and Target Cycles fields of the requirement.

Edit

Detail requirements

Add more details to your requirements document. Complete the fields that you left out when you first created the requirements.

Comment

Add comments to questions or other comments that stakeholders added during their review, and if needed, update the requirement accordingly.

Add supporting resources

Often you will have supporting documents, created in other applications, that belong with a requirement. Attach these documents to your requirements to add valuable background information.

Manage relationships between requirements

Add traceability links between a selected requirement and other requirements. Some requirements may need to be changed in the future, so traceability will allow you to easily identify other requirements affected by the change.

Move requirements

Requirements and development plans can change, and you may need to reorganize your requirements to match the breakdown and structure of your planned delivery. You can move requirements around, or change their order.

Update status

Using a status field to track your requirements is an ongoing process. As your requirements move from stage to stage in their lifecycle, update their status by selecting the appropriate values from the drop-down list. Some typical values for the status field are: *Draft, Reviewed, Scoped, In Progress, Implemented, In Testing, Tested, Delivered, Cancel, Descoped.*

Monitor

Track your requirements

Define views and filters for monitoring your requirements so that you can identify those items that need your attention. You can then save the views as workspaces for use in the future.

For example, you can define a category view of all requirements for the upcoming release, with a Priority of *Urgent*, and then add a filter to display only those requirements with a Status of *Open*. Based on this you may decide that additional resources are required, or you may de-scope some items from the release. You can click on the ID link of a particular requirement to view its full details.

Monitor traceability

Check if there is test coverage for a specified requirement, and see the status of the tests.

Once development starts, monitor the quality of your application by keeping track of the number and severity of defects related to a particular requirement.

When changes to requirements are needed, identify inter-dependencies between requirements so that you can see the full impact of a proposed change.

This is an example only. As ALM is highly customizable, your organization may use different work processes and requirement fields from those presented in this scenario.

DEVELOPMENT TEAM LEAD

Responsible for ensuring that the application is developed on time and according to the requirements

Define

Break down the requirements

Break the high level requirements created by the business analyst down into child requirements, to create smaller more manageable deliverables for the development team. If your organization has several development teams, it can also be useful for tracking purposes to use a field for the team responsible for the requirement. For each child requirement, include a description of the functionality that needs to be developed.

Tip: Define a category view by Target Release and team responsible for the requirement. When you add requirements under the category folder for your team, the new requirements are automatically assigned to your team, and the Target Release field is assigned the same value as the Target Release category folder.

Prioritize

Set your team's priorities for the child requirements. Select a value from a drop-down list of the Priority field.

Tip: Have your administrator set up the Priority field with a drop-down list of values that support your business processes.

Assign to cycle

Select a value from the drop-down list in the Target Cycles field of the requirement.

Estimate development time

A field for estimated development time (days) for each requirement can help you to plan the development effort, and distribute the workload. If the given development time for building the application exceeds the number of days until the release, you may need to remove some lower priority items.

Distribute the workload

Use an owner field to assign each requirement to a developer. Select the owner from a drop-down list of users.

Tip: Have your administrator set up rules so that when you assign a requirement to a developer, the developer gets notified by email.

Assign status

Track your requirements using a status field. Some typical values for the status field are: Draft, Reviewed, Scoped, In Progress, Implemented, In Testing, Tested, Delivered, Cancel, Descoped. The initial status of a new requirement is usually Draft.

Tip: Have your administrator set up a status field with a drop down list of values that support your business processes. Your administrator can also define email rules to notify you whenever there is a change in the status of a requirement.

Edit

Add details to requirements

Complete fields that you left out when you first created the requirements.

Keep your statistics up to date

Fields such as number of remaining days required to complete the requirement, and number of invested days will let you see if your team is on track. As development progresses, have team members update these fields for the requirements assigned to them.

Attach additional information

Attach any relevant information associated with the requirement such as notes from meetings or email threads.

Update status

Update the status field to continually track progress on your requirements. For example, as a developer starts to work on a requirement, have them change the status to In Progress. When the functionality defined by the requirement has been developed, the developer should change the status to Implemented. That way you can track the progress of your team, and QA knows what functionality is ready for testing.

Monitor

Track your requirements

Check for requirements without an owner. Add a filter to display your team's requirements with an empty owner field.

Define views and filters for monitoring how your team is doing. For example, you can define a category view by owner and status, and then add filters to display requirements for the upcoming release cycle, for which your team is responsible. You can click on the ID link of a particular requirement to view its full details*.

Tip: Save your views as workspaces, so that you can use them again in the future without having to redefine them.

Gain insight into what is blocking completion of a requirement

*In the traceability tab of the requirement you can see the status of test coverage and defects related to a particular requirement.

This is an example only. As ALM is highly customizable, your organization may use different work processes and requirement fields from those presented in this scenario.

See also

- "Requirements overview" below

- "Using the ALM Web Client" on page 15

Requirements overview

Requirements describe in detail what needs to be solved or achieved to meet the objectives of your application. Requirements create a clear picture of the deliverables, and are critical to a project's success. Poorly defined requirements can lead to IT projects that are over budget, lack functionality, and are not delivered on time.

One of the keys to developing applications that meet business needs and user expectations is to define the requirements up front. Clearly and correctly defining requirements at the start of a project has the following advantages:

- Creates a common vision of what needs to be delivered

- Sets clear expectations and priorities

- Cuts waste

Defining and managing requirements involves collaboration between many people, across different job functions. Whether you are a business analyst, project manager, or part of the development or QA team, you can use ALM to plan, define, communicate, and collaborate on a set of requirements.
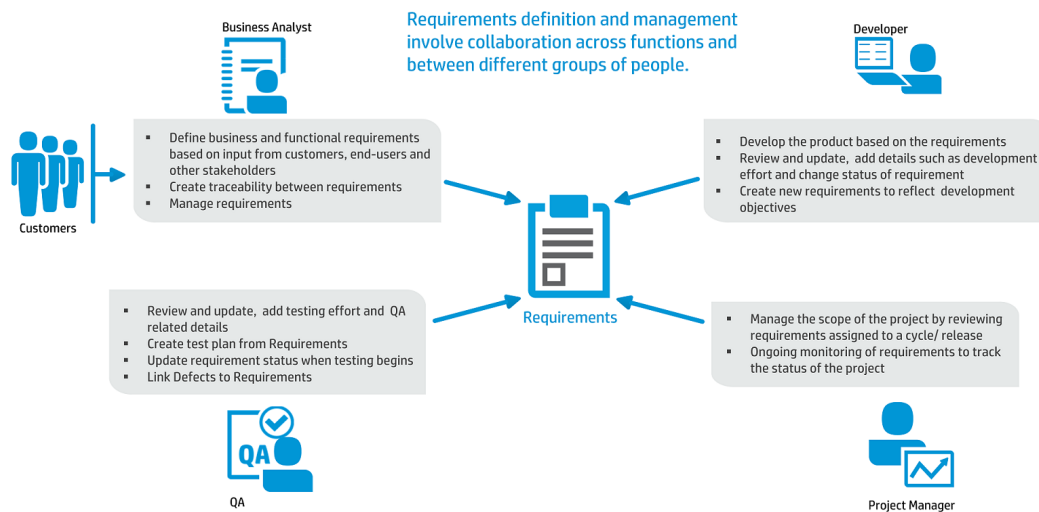
Note: Some of the functionality in the diagram above requires working with the ALM Desktop Client. For more information on suitable candidates for using the ALM Web Client, see "The ALM Web Client Overview" on page 9.

How do I start working with requirements?

Start by gathering information such as functional and technical specifications, marketing and business requirements documents, and stakeholders goals.

Here are some of the questions that you can ask:

- What is the main purpose of the application?

- What challenges do you have today with your current processes that you are you trying to solve?

- What are the major features of the application?

- What are the critical constraints 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 priorities?

- Do your customers/end-users agree with your priorities?

> **Tip:** Before starting to work with requirements, work with your administrator to customize the ALM Web Client to the suit the needs of your organization.
>
> Customizing the ALM Web Client
>
> Each organization has its own processes for working with requirements, and you can customize the ALM Web Client to fit the way that your organization works. Here are some things you should consider:
>
> - In addition to the system fields that are built-in to ALM, are there any other fields that are needed to manage and track requirements?
>
>   The ALM Web Client administrator can create custom forms with user defined fields. See "Designing and managing forms" on page 174.
>
> - Are there field values that some users should see, but not be able to modify?
>
>   Are certain fields that are required under certain circumstances?
>
>   Are different field look-up lists needed at different times?
>
>   The ALM Web Client administrator can control how fields are displayed and modified using business rules. See "Defining business rules" on page 191.
>
> - What specific requirement type should be set as a document root so that it can be viewed and edited in Author mode? See "More about Author mode" on page 70.

You are now ready to begin defining and detailing your requirements. When defining requirements in ALM, you can choose from a selection of ready-made default requirement types, or your administrator can create custom requirement types suited to your organization to capture all levels of requirements. The table below shows some of the default requirement types:

Requirement Type	Use
Business	Specifies the high level objectives that describe what the application as a whole must deliver to the business and its end-users
Functional	Details what the application must do in order to achieve the business requirements
Group	Represents a collection of related requirements
Testing	Specifies the testing areas and use cases that need to be covered

As part of defining a requirement, you can attach supporting documents to provide background information. Requirements can also be updated when necessary as development of the application progresses.

Managing and monitoring requirements

Once the project requirements have been detailed and approved, you can manage and monitor them. Defining links between requirements and other entities will allow you to monitor inter-dependencies. You can use traceability to view links between requirements and other entities, to create links between requirements and other requirements or defects. Keep track of your requirements and assess the readiness of the application with workspaces, filters, dashboards, and reports.

> **Note:** Comprehensive requirements management capabilities are currently available only in the ALM Desktop Client. For more information, see the *HP Application Lifecycle Management User Guide*.

See also

- "Working with requirements by job function" on page 53

Defining requirements

Begin by adding new requirements and defining them.

Tip:

- You can create a basic framework of high level requirements, and then add child requirements to further break them down. Splitting a higher level requirement into smaller child requirements can be helpful in providing team members with a better understanding of what specifically needs to be achieved, and can give a more accurate picture of progress on the requirement.

- Developers may find it useful to break a feature down into smaller deliverables by creating child requirements.

To add a new requirement, you must have permission from your administrator to do so.

ALM Web Client's Requirements module supports a dual approach to working with requirements, and you can choose the mode that best suits the way you like to work.

- Use Manage mode if you prefer a data-centric approach.

- If you prefer working with requirements in a document view, you can work in Author mode.

Adding a requirement using Manage mode

1. In the masthead, select the Requirements module and make sure that **Manage** mode is selected.

2. Decide where to add the requirement. The breakdown and structure of the requirements should match your planned delivery.

   > **Tip:** If you have defined a category view for your requirements, adding a new requirement under a specific category folder will automatically populate the new requirement with the corresponding category field values. For example: If you define your category view to display requirements by Product and then by Priority, when you add a new requirement under the Product *Mercury Tours*, Priority *5-Urgent* categories, the product and priority fields of the new requirements are automatically completed with the category values.

3. Add the requirement in one of the following ways:

   - Select an item in the requirements tree and click **Add Requirement** to add a child requirement to the selected item.

   - Select a requirement in the **Children** grid, and click **Add Before** or **Add After** to add a new requirement either before or after the selected requirement.

   - If you are viewing requirements in Flat view, click **Add Requirement**. You will need to assign a parent to the requirement in order to add it.

   Working with templates

   Templates are useful if you often use the same values for particular fields.
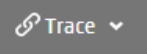
   - To create a template, proceed to the next step or see "Defining templates " on page 36.

   - To manage and delete templates, see "Managing templates " on page 37.

4. Fill in the various fields.

- Select the requirement type that best describes the requirement you are creating such as business, feature, functional, non-testable requirement, etc.

- Give the requirement a name and complete any other required fields, indicated by a red square to the left of the field name. (Grayed out fields are read-only.) You can also add further details to the requirement by completing the non-required fields, or this can be done when editing the requirement.

    > **Tip:** In list fields, click the field and start typing any part of the value. The auto-complete functionality displays matching suggestions enabling you to quickly locate list options. For fields that require a selection of a value from within a tree, for example *Target Cycle*, fill in part of the value in the search field above the tree to quickly locate the value in the tree.

    You can save the values that you have filled in as a template for future use. For details, see "Defining templates " on page 36.

5. You can trace your requirement from or to other requirements by clicking
   ⧉ Trace ⌄ . Traceability links can also be added when editing your requirements.

6. You can also add attachments. For details, see "Working with attachments" on page 38.

7. Click **Add** to save the requirement, or click **Add & Another** to save the requirement and to immediately add another one.

Adding a requirement using Author mode

- Author mode is disabled when requirements are displayed with no hierarchy. To enable Author mode, select **Define view**, switch to **Hierarchy view** or **Hierarchy with children view** and click **Apply**.

- Requirements are displayed in Author mode only if the type of the selected requirement, or the type of one of its parents, is configured to display in this mode. For details, see More about author mode. If there are no requirement types configured to display in this mode, contact your administrator.

Tip for getting started quickly in a new project

1. Click **Add Requirement** and add a new requirement of a type that has been configured to display in author mode. For details, see More about author mode.

2. The name of this requirement should be the title of your document. Complete any other required fields.

3. Select the requirement that you created and click **Add Requirement** to add a child requirement. The requirement can be of any type. Complete the required fields.

4. Click **Refresh**. You should now be able to display the requirements in **Author** mode.

1. In the masthead, select the Requirements module and make sure **Author** mode is selected.

2. Decide where in the document you want to add the requirement by moving the mouse cursor to the place where the new requirement should be inserted. The breakdown and structure of the requirements should match your planned delivery.

   Although Author mode displays the content as one document, each requirement is managed in a separate edit box. As you move the mouse between requirements, a gray dotted line with an **Add requirement** button is displayed. If you are below a requirement that has child requirements, the button option is **Add child requirement**. If you are below a requirement that has no child requirements **Add sibling requirement** will be displayed. Click the button to add a requirement.

   Tip: If you have defined a category view for your requirements, adding a new

requirement under a specific category folder will automatically populate the new requirement with the corresponding category field values. For example: If you define your category view to display requirements by Product and then by Priority, when you add a new requirement under the Product *Mercury Tours*, Priority *5-Urgent* categories, the product and priority fields of the new requirements are automatically completed with the category values. Although these fields are not displayed in the document, you can view them at any time by clicking the section number to the left of the requirement name to open the Requirement details dialog box.

3. Fill in the requirement name.

4. In the area below the name, add a description. You can use the editor toolbar for rich text editing of this text. You can also paste images from the clipboard into this area.

   Depending on how your administrator has configured the settings for author mode, the text that appears under the requirement name is either the Description field of the requirement, or the contents of the Rich Text tab of the requirement in the ALM Desktop Client.

5. To view requirement fields that are not displayed in Author mode, click the section number of the requirement to the left of the requirement name.

6. When you leave the requirement, your changes are saved automatically without having to click **Save**. If there are missing required fields, you will be prompted to complete these fields before saving the requirement.

See also

- "Working with requirements by job function" on page 53

- Managing templates

- "Common functionality" on page 33

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Editing requirements
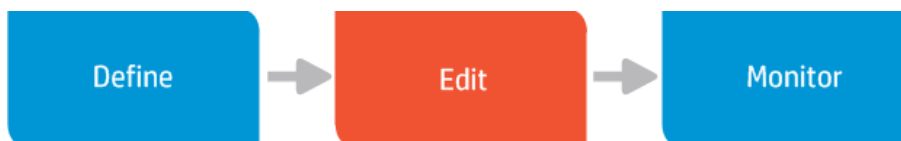
Requirements usually go through an iterative process where the details are refined and clarified, and the requirement needs to be edited. As work on the requirement progresses, some of the fields may also need to be updated in order to allow proper tracking of the requirement. For example, some organizations use a status field to track the progress of a requirement. Users update the value from *Draft* to *Reviewed* to *Scoped* etc. as work on the requirement progresses.

You can update the details for each requirement, or add attachments and comments. As requirements change, you can also rearrange them and move them around. To edit or delete a requirement you must be given these permissions by your administrator. Fields that are grayed out cannot be edited.

While multiple users can view a requirement simultaneously, only one user at a time can update a requirement. If you try to edit a requirement that someone else is editing, you will be notified that the requirement is locked by another user. Once the other user saves the change, the requirement is unlocked. However, if someone saves a change to a requirement that you are viewing, and you then start to make changes to the requirement, you may receive a message from the server that your changes have been overridden by the newer values.

ALM Web Client's Requirements module supports a dual approach to working with requirements, and you can choose the mode that best suits the way you like to work. Use Manage mode if you prefer a data-centric approach. If you prefer working with requirements in a document view, you can work in Author mode.

Using Manage mode

1. In the Requirements module, make sure **Manage** mode is selected, and locate the requirement that you want to update.

   > **Tip:** To quickly locate a requirement, fill in part or all of the requirement's name in the search field at the top of the navigation pane.

2. Modify the details in the appropriate fields or tabs of the requirement. This can be done in several ways:

   - When viewing **Details**, you can modify the fields directly in the view. To change the requirement type, click the type icon.

   - When viewing requirements in a grid, editable fields can be modified directly in the grid.

   - You can also open the preview pane for editing by clicking **Split Pane**, or click the ID link of a requirement in the grid to switch to **Details**.

   > **Tip:**
   > Use bulk update to modify several requirements at once.
   >
   > When using category folders, if you edit a requirement and change the value of the field on which a category folder is based, click **Refresh** to move the requirement to the corresponding category folder.

3. While on the modified record, click **Restore** to undo the changes, or click **Save**.

When editing your requirements you can also:

- **Rearrange your requirements.** Use drag and drop in the tree or grid, or change the hierarchical position of a requirement by changing the Parent field.

- **Cut, copy, paste, delete.** Use the **Actions** menu for performing actions in the tree when the **Details** tab is selected, or select an item in the grid and use the toolbar to

perform actions when the **Children** tab is active. Paste is not available when requirements are displayed in flat view without a hierarchy.

> **Note:**
>
> To move a requirement to a different category, change the field on which the category folder is based.
>
> When you delete a requirement, you also delete its child requirements. Traceability links to the requirement or to child requirements are also deleted. A deleted requirement is immediately removed from all the categories in which it is shown.

- **Insert comments.** Comments are useful for collaboration between users. Each comment gets a timestamp and an indication of who added the comment. For details, see "Adding comments" on page 38.

- **Add attachments**. Use attachments to provide additional background information relevant to the requirement. For details, see "Working with attachments" on page 38.

- **Add traceability links.** Traceability establishes a link between your requirement and other requirements and defects. Use traceability links to monitor your requirements and manage your application more effectively. For details, see "Requirement traceability" on page 73.

Using Author mode

Requirements are displayed in Author mode only if the type of the selected requirement, or the type of one of its parents, is configured to display in this mode. For details, see More about author mode.

> **Note:** Author mode is disabled when requirements are displayed with no hierarchy. To enable Author mode, select **Define view**, switch to **Hierarchy view** or **Hierarchy with children view** and click **Apply**.

Updating a requirement

1. Open the Requirements module and select **Author** mode. A document is displayed in the main viewing area.

   Tip: You can navigate the document using the tree, the breadcrumbs, **Go to Requirement**, or the scrollbar.

2. Locate the requirement that you want to update and select it.

   Tip: To quickly locate a requirement, fill in part or all of the requirement's name in the search field at the top of the navigation pane.

3. Change the displayed details directly in the document.
   Although Author mode displays the content as one document, each requirement is managed in a separate edit box. You can use the editor toolbar at the top of the document view for rich text editing of text under the requirement name. You can also paste a copied image into this area.

   Depending on how your administrator has configured the settings for author mode, the text that appears under the requirement name is either the Description field of the requirement, or the contents of the Rich Text tab of the requirement in the ALM Desktop Client. To view or update other fields or tabs of the requirement that are not visible, click the section number (to the left of the requirement name) to open the **Details** dialog box of the specific requirement.

While you are in the process of editing a requirement in the document, click ⟳ in the top right of the edit box to undo your changes. You can also click 💾 at any time to save recent changes. When you leave the requirement, your changes are saved automatically without having to click the save button 💾.

Changing the hierarchical structure or the order of requirements

In the requirements tree, select a requirement, and drag and drop it into the new location. The document will be updated accordingly.

> **Note:** Requirements currently cannot be moved between categories.

You can also move an individual requirement up or down one level by selecting the requirement in the document and clicking decrease indent ⬕ or increase indent ⬕ at the top right of the edit box.

Deleting a requirement

To delete a requirement, select the requirement in the document and click ✕.

> **Note:** When you delete a requirement, you also delete its child requirements.Traceability links to the requirement or to child requirements are also deleted.

See also

- "More about Author mode" below

- "Working with requirements by job function" on page 53

- "Requirements overview" on page 56

- "Displaying what you need" on page 27

- "Common functionality" on page 33

More about Author mode

A selected requirement is displayed in Author mode only if its type, or a parent requirement's type has been defined to display in this mode. This is done by your administrator in ALM Web Client Customization, by defining the requirement type as a document root. For more details, see Setting requirement type characteristics. In an addition, your Administrator can configure Author mode to display either the contents of the **Description** field or the **Rich Text** tab of a requirement in the area under the requirement name. For more details, see How to configure what is displayed for requirements in Author mode.

It is not always necessary to view all the requirements of an ALM project as a single document, and often it may be better to view certain types of requirements as several separate documents. In order to allow flexibility in determining the scope of document, the document root is used to determine the start of a new document view.

In Author mode, the document view spans from the highest level document root until the last of its children, irrespective of whether the child requirement types have been defined to display in this mode. The top level document root is displayed as the title, and all its children as numbered sections. When the type of a child requirement of a document root is itself a document root, this will not mark the start of a new document.

When no requirement types have been defined to display in Author mode, a message is displayed in the view area. A temporary view is available by clicking **Try**, but the document scope is lost when refreshing or moving to a sibling or parent requirement.

Example: Your site administrator has defined the **Business** requirement type ▪ and the **Functional** type ♀ to display as documents. In the scenario below, the top-level Business requirement *Online Travel Booking Services* marks the start of a document, and this requirement becomes the title. All child requirements are displayed as numbered sections in the same document. Although the Functional requirement type used for the *Flight Tickets*, *Car Rentals* and *Tour/Cruises* requirements has been defined to display as a document, these requirements don't each become the start of individual documents because *Online Travel Booking Services* is at a higher level in the requirement tree. Requirement types that are not defined to display as a document, such as the Undefined type used for *Hotel Reservations*, also become numbered sections in the document by virtue of the fact that they are child requirements of a Business requirement. The document ends with the bottom-most child requirement under *Flight Booking System*.

The Business requirements *Online Travel Booking Services, Online Travel Information Source* and *Profile Management* are sibling requirements at the same level in the tree, and so each of these marks the start of a separate document.
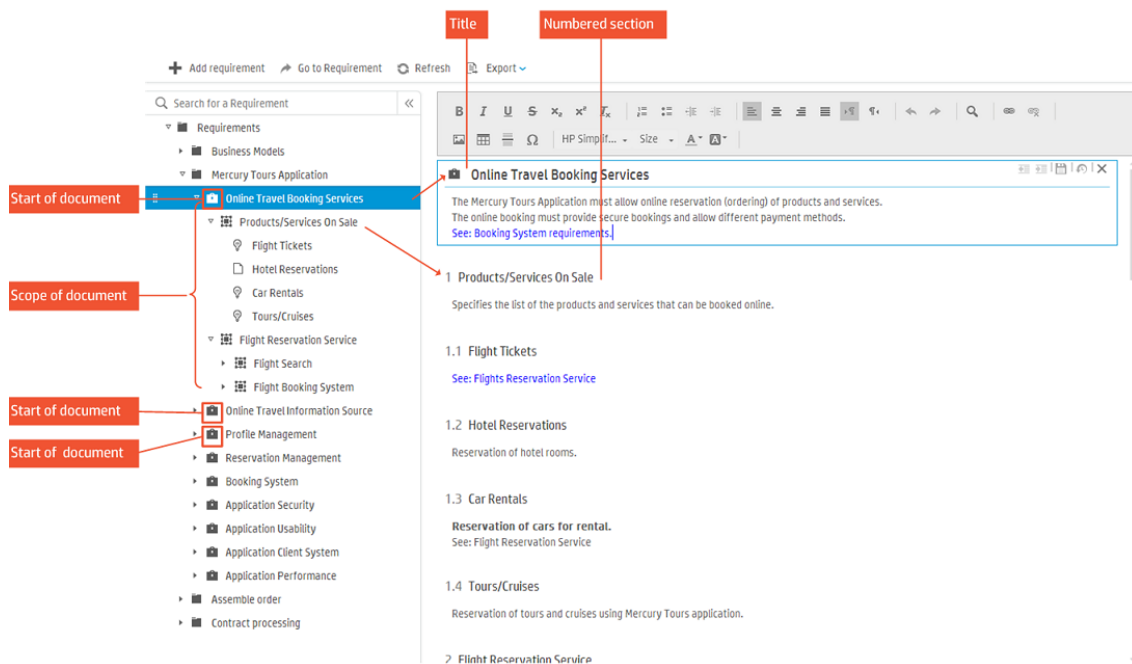
See also

- "Editing requirements" on page 66

- "Working with requirements by job function" on page 53

- "FAQs for requirements" on page 78

Monitoring and managing requirements

Monitoring requirements lets you keep track of the progress and quality of the application, and gives you an indication of how well the project is doing in terms of meeting its overall objectives.

- Using traceability, you can define links between requirements and other items so that you can monitor inter-dependencies and manage the application lifecycle more effectively.

- Using workspaces, views, and filters, you can focus on the information that is relevant to you, making it easier to identify problem areas and to assess the readiness of the application.

This topic includes:

- "Requirement traceability" below

- "Using workspaces " on page 77

Requirement traceability

Traceability establishes a link between one or more items, and offers the following benefits:

- You can analyze the impact that a proposed change to a specific requirement will have on other requirements and entities affected by the change. This provides broader visibility so that you make informed decisions about whether or not to make the change.

- You can monitor the quality of your application by keeping track of the number and severity of defects related to a particular requirement, and the direct cover status of your requirements.

For details on working with traceability, see "Traceability" on page 44.

This section contains the following topics:

- "Adding traceability links to requirements while adding a requirement" on the next page

- "Adding traceability links to requirements while editing the requirement" on the next page

- "Viewing requirement coverage traceability links" on page 76

- "Viewing traceability links for a requirement's children" on page 76

- "Viewing the traceability of indirect links to defects" on page 77

- "Removing traceability links to requirements" on page 77

Adding traceability links to requirements while adding a requirement

1. In the Add dialog box for the entity, click **Trace**.

2. Choose the option for the entity you want to link to/from:

   - **Requirement coverage** or **Link to requirement**

   - **Link from requirement**

   - **Link to defect**

   Note: Not all entities support each of these traceability links. Only supported entities are listed.

3. Depending on the entity you are linking, you can select the entity by:

   - **ID**. Click the **ID** radio button, if it exists and enter the ID number.

   - **Tree**. Click the **Tree** radio button, if it exists. Expand the tree as necessary and navigate to the entity.

   - **Search**. Enter a string in the **Search** field, if it exists.

   A preview of the entity is displayed on the right.

4. Select the entity in the resulting list of matches.

5. Click **OK**.

Adding traceability links to requirements while editing the requirement

1. In Details of the entity, click the **Traceability** tab.

2. Using the view selector ⸺Summary ⌄⸺ on the right, select **Summary** or the entity whose links you want to view or add.

3. Click **Add traceability** or the **Add** button for adding the entity you selected with the view selector.

4. If you are viewing the summary, choose the option for the entity you want to link to/from:

   ▪ **Requirement coverage** or **Link to requirement**

   ▪ **Link from requirement**

   ▪ **Link to defect**

   > **Notes**
   >
   > ▪ Not all entities support each of these traceability links. Only supported entities are listed.
   >
   > ▪ If you not viewing the summary, but instead are viewing one type of linked entity, that is the only type of traceability link that you can add.

5. Depending on the entity you are linking, you can select the entity by:

   ■ **ID**. Click the **ID** radio button, if it exists and enter the ID number.

   ■ **Tree**. Click the **Tree** radio button, if it exists. Expand the tree as necessary and navigate to the entity.

   ■ **Search**. Enter a string in the **Search** field, if it exists.

   A preview of the entity is displayed on the right.

6. Select the entity in the resulting list of matches.

7. Click **OK**.

Viewing requirement coverage traceability links

You can view the following types of links from the summary view of requirements:

- **Traced from requirements.** Requirements that the selected requirement depends on.

- **Traced to requirements.** Requirements that depend on the selected requirement.

- **Linked defects.** Defects related to the selected requirement.

> **Tip:**
>
> - In the Traceability tab, use filters to limit the links that are displayed so that you can focus on what is important to you. for details, see "Filters and how they affect the summary" on page 48.
>
> - Click the ID of any linked entity to view its details.

Viewing traceability links for a requirement's children

You can choose to display traceability links only for the selected requirement, or to also display traceability links for children of the selected requirement.

Including children can be helpful for monitoring requirements as it can give you a better overall view of the status of your requirement.

> **Example**
>
> You may have a parent requirement with no items in the traceability tab, with a child that has many traced from requirements with a direct cover status of *Failed*. By including children in the view, potential quality issues are noticeable already from the summary view of the parent requirement without having to look through the individual child requirements.

To display links for children, toggle **Include Children** on the traceability toolbar.

Viewing the traceability of indirect links to defects

To see an entity's linked defects, choose **Linked defects** from the view selector in the Traceability tab.

The default setting is to display both direct and indirect links.

If you want to display only direct links, toggle **Include Indirect Links** off. When the view does not include indirect links, an icon is displayed when viewing the summary.

Removing traceability links to requirements

You can remove traceability links in the Traceability tab.

1. Using the view selector, select the option for the entity you want to delete.

2. In the grid, select the entity you want to delete.

3. Click **Remove Trace**.

Using workspaces

Use workspaces based on defined views and filters to monitor and manage your requirements. For example, you can track your requirements by creating a workspace for:

- Viewing requirements with a **Priority** value of *High*, *Very High* or *Urgent*, with a **Review** field status of *Not Reviewed*.

- Viewing requirements by **Direct cover status** so that you can analyze coverage and assess the status of your requirements.

> **Note:** Comprehensive requirements management capabilities are currently available only in the ALM Desktop Client. For more information, see the *HP Application Lifecycle Management User Guide*.

See also

- "Traceability" on page 44 for an overview of traceability

- "Displaying what you need" on page 27

FAQs for requirements

Here are some frequently-asked questions about working with requirements.

> **Tip:** Do you have some tips you'd like to add? Email us at sw-doc@hp.com.

General

There are no requirements displayed in the main viewing area when I select a requirement in the tree. Where have my requirements gone?

If you are in Children view, the main viewing area will be empty if the requirement that you selected in the tree has no children.

I want to set the sort order for my requirements but the option is disabled. What do I do?

In order to add a sort field, you need to select **Flat view**.

I logged in to ALM and my requirements tree has gone. What has happened?

ALM saves the last view in which you worked during your previous session. When you log in to ALM again, this is the view displayed. In your last session you may have used a workspace, or applied a view to display your requirements without a hierarchy. Check if a workspace is loaded (the name of the workspace will appear next to Workspace menu). Load a different one or modify the existing workspace if needed. To bring the requirements tree back, click **Define view** and switch to **Hierarchy view** or **Hierarchy view with out-of-scope children**. Click **Apply**.

I want to add a requirement but there is no Add Requirement button. How do I add a requirement?

If you do not have permission to add requirements, the Add Requirement button is not displayed. Contact your administrator.

Author Mode

I am trying to view requirements in Author mode but the button is disabled?

Author mode is disabled in flat view. To enable the Author mode button, click **Define view** and switch to **Hierarchy view** or **Hierarchy view with out-of-scope children**. Click **Apply**.

I am in Author mode and I have selected a requirement, but there is a message that the selected requirement cannot be displayed. How do I get Author mode to display my requirements?

A selected requirement is displayed in Author mode only if its type, or a parent requirement's type has been defined to display in this mode. This is done by your administrator in ALM Web Client Customization, by defining the requirement type as a document root. For more details, see more about Author mode.

To get a general idea of what Author mode does, you can try it out by clicking **Try**. The document view is only temporary and is lost when you move to a parent or sibling requirement.

Can I print my requirements in Author mode?

Yes, click the **Export** button and select a file format. You can then print the file. If you have recently made changes to a requirement that you would like included in the exported data, click **Save** before exporting.

See also

- "Getting started" on page 22

- "Displaying what you need" on page 27

- "Common functionality" on page 33

- "Working with requirements by job function" on page 53

- "Requirements overview" on page 56

Chapter 4: Working with defects by job function

ALM's Defects module helps you to define, manage, and track defects at all stages of the application lifecycle. Working with defects in the ALM Web Client involves the following tasks:

Note: Depending on what permissions you have, you may not be able to perform all these tasks.

See below for use case scenarios explaining how the following job functions work with defects:

How developers work with defects

DEVELOPER | **DEFECTS MODULE**

In addition to developing the application, the developer is responsible for repairing defects, tracking progress by creating and updating defects, and communicating status to other stakeholders.

Define

Edit

Search for a similar defect
To avoid creating duplicate details, it is good practice to first search for similar defects that already exist.

> Use the View and Workspaces features to look for similar defects.

Define defect
While developing, you might come across defects that need to be repaired. Define a defect by giving your defect a summary and a severity. A detailed description is always helpful. You can come back to fill in more details.

Prioritize
Prioritize the work. Select a value from a drop-down list of the **Priority** field.

> Have your administrator set up the **Priority** field with a list of values that support your business processes.

Add attachments
Attach any supporting documents that belong with a defect. These attachments can be pictures, video clips—anything that will help illustrate the problem that needs to be fixed.

Assign a user
When you know who will be responsible for fixing the defect, assign the defect to that user—maybe even yourself!

Search for your defects
Search for the defects assigned to you so you know what you need to repair in the application.

> Use the View and Workspaces features to look for your defects. Narrow down your search to look for defects for a specific release and/or cycle.

Detail the defect
Complete the fields that you left out when you first created the defect. For example, assign a different user based on availability or skill set.

Assign to a release and cycle
When you are ready to schedule the defect for repair, assign it to a release and cycle. Select a value from the drop-down list in the **Target Release** and **Target Cycles** fields.

Update status
Use the **Status** field to track your defect. Select the appropriate status from the drop-down list. Typically, developers select **Open** when starting to repair a defect and **Fixed** when done.

> Have your administrator set up the **Status** field with a list of values that support your business processes.

Add comments
Add comments and questions for other stakeholders. As stakeholders review your work, they can add comments and questions for you too.

This is an example only, and in your organization you may use different processes.
Also, as ALM is highly customizable, the scenario may use fields that are not available in your organization.

How exploratory testers work with defects

EXPLORATORY TESTER

DEFECTS MODULE

The exploratory tester invents test cases and finds defects in the application based on his/her knowledge of the application. As defects are found, the tester tracks progress by creating and updating defects, and communicating status to other stakeholders.

Define	Edit	Monitor

Search for a similar defect

To avoid creating duplicate details, it is good practice to first search for similar defects that already exist.

> Use the View and Workspaces features to look for similar defects.

Define defect

While testing, you come across defects that need to be repaired. Define a defect by giving the defect a summary and a severity. A detailed description is always helpful. You can come back to fill in more details.

Prioritize

Prioritize the work. Select a value from a drop-down list of the **Priority** field.

> Have your administrator set up the **Priority** field with a list of values that support your business processes.

Add attachments

Attach any supporting documents that belong with a defect. These attachments can be pictures, video clips—anything that will help illustrate the problem that needs to be fixed.

Assign a tester

When you know who will be responsible for testing the repaired defect, assign the defect.

Search for your defects

Search for the defects detected by you.

> Use the View and Workspaces features to look for the defects you need to test. Narrow down your search to look for defects for a specific release and/or cycle.

Detail the defect

Complete the fields that you left out when you first created the defect.

Update status

Use the **Status** field to track defects and verify fixed defects. Select the appropriate status from the drop-down list. Typically, testers select *Closed* and *Reopen*.

> Have your administrator set up the **Status** field with a list of values that support your business processes.

Add comments

Add comments and questions for other stakeholders. As stakeholders review your work, they can add comments and questions for you too.

Track defects

Define views and filters for monitoring defects so that you can identify those items that need your attention. You can then save the views as workspaces for use in the future. For example, you might want to define a category view for the upcoming **Release**, with a **Priority** of *Urgent*, and then add a filter to display all defects with a **Status** of *Fixed*. You now have a list of the defects ready for testing.

Monitor traceability

- Check the test coverage for a specified defect.
- When changes to defects are needed, use traceability to identify inter-dependencies between requirements and defects.
- Monitor the quality of your application by keeping track of the number and severity of defects related to a particular requirement.

This is an example only, and in your organization you may use different processes.
Also, as ALM is highly customizable, the scenario may use fields that are not available in your organization.

See also

- 👤 **Administrators**: "Customizing the ALM Web Client" on page 171

Defect overview

Ensuring the quality of your application is of utmost importance. Using the ALM Web Client you can report flaws in your application and track their repair. This can be done during all stages of the application management process. These flaws are reported as defects.

How ALM Web Client users collaborate

ALM Web Client users update and monitor defect statuses on an ongoing basis, providing full transparency to the state of application quality at any time.

Defect definition and management involves collaboration across functions and between different groups of people.

Customers and Support:
- While working with the application, customers contact support if they encounter an issue
- Support creates defects to track the issue

QA testers:
- Create defects for developers while checking the application under test
- Review defects, adding testing effort and QA-related details
- Determine if defects are resolved
- Link defects to requirements and tests for release quality, of particular interest to project managers

Defects

Application developers:
- Fix defects created by support and QA
- Review and update defects, adding technical details and reporting on progress of repairs
- Link defects to related defects to ensure a comprehensive, complete fix for the customer

Project Managers:
- Monitor defects on an ongoing basis to make sure the application is delivered at a high level of quality and that defects are repaired at a reasonable rate
- Use the status fields and ALM Web Client email, comments and priority functionality to keep all in the loop

See also

- "Working with defects by job function" on page 81

- 👤 **Administrators**: "Customizing the ALM Web Client" on page 171

Defining defects

The main way to create defects is from the Defects module.

1. Select the Defects module.

2. Verify that a similar defect has not already been created by setting up views and filters. For details, see "Displaying what you need" on page 27 and "Filtering" on page 30.

3. If the Add Defect page is not yet open, click **Add Defect**.

4. Templates are useful if you often use the same values for particular fields. Decide if you want to use preset values when adding defects.

   Working with templates

   ■ If you've defined a default template, its values are automatically loaded. For details, see "Using templates" on page 34.

   ■ To add a defect with preset values from a specific template, you can click the drop down next to **Add Defect** and select the template of values to load.

   ■ To manage and delete templates, see "Managing templates " on page 37.

   ■ To create a preset template, proceed to the next step or see "Defining templates " on page 36.

   > **Note:** Business rules defined by your administrator might override your preset values. If this happens, contact your administrator.

5. Fill in the various fields.

> **Tip:** For list fields, click on the field and start typing any part of the value. The ALM Web Client suggests matching values.

You can save these values as a template for future use. For details, see "Defining templates " on page 36.

6. Save the defect.

7. After saving, click the defect ID to edit the defect and:

    ■ **Add attachments**. Screen captures and recorded sessions demonstrate problems much more effectively than words can. Click the **Attachments** tab to work with attachments. For details, see "Working with attachments" on page 38.

    ■ **Insert comments.** Comments are very useful for communication between various users. Each comment gets a timestamp and an indication of who added the comment. Click the **Comments** tab and **Add Comment**. For details, see "Adding comments" on page 38.

    ■ **View history** Do you need background information? Viewing the history of a defect can give you perspective over why a defect was opened, how many people have worked on the defect, and how a defect eventually became assigned to you. Click the **History** tab to view the history. For details, see "Viewing the history of an item" on page 40.

    ■ **Create traceability**.

       Is the determination of whether a requirement is met contingent on the defect you are adding? If so, create a relationship between the relevant requirements and this defect. This lets you see how well your project is meeting its requirements.

       Click **Traceability** and then **Add traceability** to create the relationship. You can link to a requirement or another defect. For details on traceability, see "Defect traceability" on page 89.

See also

- "Working with defects by job function" on page 81

- "Defect overview" on page 84

- "Editing defects" below

- "Defect traceability" on page 89

- "Getting started" on page 22

- "Displaying what you need" on page 27

- "Common functionality" on page 33

Editing defects
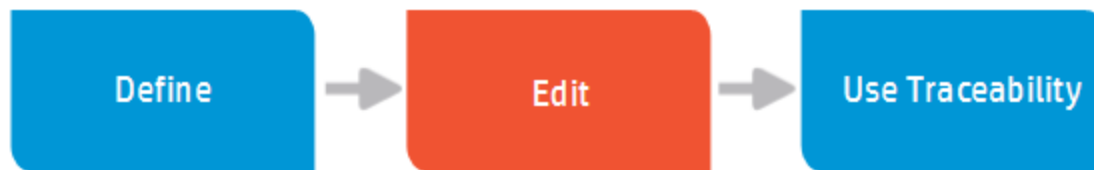
ALM Web Client users update defects differently depending on their different work functions.

1. Select the Defects module.

2. Look for the relevant defect, such as one assigned to you, by setting up views and filters. For details, see "Displaying what you need" on page 27 and "Filtering" on page 30.

   Open the defect by clicking its ID number.

   > **Tip:** You can also open a defect by "going" to it. For details, see "Locating an entity using Go to entity ID" on page 40.

3. Click the **Overview** tab.

4. While filling in the various fields, make sure to:

- **Change statuses**. Did you start working on a defect? Did you fix a defect? The available default statuses are: **New**, **Open**, **Fixed**, **Closed**, and **Cancelled**.

- **Add attachments**. Screen captures and recorded sessions demonstrate problems much more effectively than words can. Alternatively, you can attach screen captures that demonstrate that the defect was fixed. Click the **Attachments** tab to work with attachments. For details, see "Working with attachments" on page 38.

- **Insert comments.** Comments are very useful for communication between various users. Each comment gets a timestamp and an indication of who added the comment. Click the **Comments** tab and **Add Comment**. For details, see "Adding comments" on page 38.

- **View history** Do you need background information? Viewing the history of a defect can give you perspective over why a defect was opened, how many people have worked on the defect, and how a defect eventually became assigned to you. Click the **History** tab to view the history. For details, see "Viewing the history of an item" on page 40.

- **Create traceability**.

  Is the determination of whether a requirement is met contingent on the defect you are adding? If so, create a relationship between the relevant requirements and this defect. This lets you see how well your project is meeting its requirements.

  Click **Traceability** and then **Add traceability** to create the relationship. You can link to a requirement or another defect. For details on traceability, see "Requirement traceability" on page 73.

5. Click the **Back to Grid** when done.

See also

- "Working with defects by job function" on page 81

- "Defect overview" on page 84

- "Defining defects" on page 85

- "Defect traceability" below

- "Getting started" on page 22

- "Displaying what you need" on page 27

- "Common functionality" on page 33

Defect traceability

Using traceability, you can define links between defects and other items so that you can monitor inter-dependencies and manage the application quality.

Traceability offers the following benefits:

- You can monitor the quality of your application by keeping track of the number and severity of defects related to a particular requirement, and the direct cover status of your requirements.

  A requirement is met if its linked defects are fixed. These are direct links.

  A requirement is met if its linked defects, and all defects linked to the requirements' defects, are fixed. These are indirect links.

Adding traceability links to defects while adding a defect

1. In the Add dialog box for the entity, click **Trace**.

2. Choose the option for the entity you want to link to/from:

   - **Requirement coverage** or **Link to requirement**

   - **Link from requirement**

   - **Link to defect**

   > **Note:** Not all entities support each of these traceability links. Only supported entities are listed.

3. Depending on the entity you are linking, you can select the entity by:

   - **ID**. Click the **ID** radio button, if it exists and enter the ID number.

   - **Tree**. Click the **Tree** radio button, if it exists. Expand the tree as necessary and navigate to the entity.

   - **Search**. Enter a string in the **Search** field, if it exists.

   A preview of the entity is displayed on the right.

4. Select the entity in the resulting list of matches.

5. Click **OK**.

Adding traceability links to defects while editing the defect

1. In Details of the entity, click the **Traceability** tab.

2. Using the view selector [Summary ⌄] on the right, select **Summary** or the entity whose links you want to view or add.

3. Click **Add traceability** or the **Add** button for adding the entity you selected with the view selector.

4. If you are viewing the summary, choose the option for the entity you want to link to/from:

- **Requirement coverage** or **Link to requirement**

- **Link from requirement**

- **Link to defect**

> **Notes**
>
> - Not all entities support each of these traceability links. Only supported entities are listed.
>
> - If you not viewing the summary, but instead are viewing one type of linked entity, that is the only type of traceability link that you can add.

5. Depending on the entity you are linking, you can select the entity by:

- **ID**. Click the **ID** radio button, if it exists and enter the ID number.

- **Tree**. Click the **Tree** radio button, if it exists. Expand the tree as necessary and navigate to the entity.

- **Search**. Enter a string in the **Search** field, if it exists.

A preview of the entity is displayed on the right.

6. Select the entity in the resulting list of matches.

7. Click **OK**.

Viewing traceability links for defects

You can view the following types of links from the defect summary:

- **Linked requirements.** Requirements that depend on the selected defect.

- **Linked defects.** Other defects that depend on the selected defect.

> **Tip:**
>
> - In the Traceability tab, use filters to limit the links that are displayed so that you can focus on what is important to you. for details, see "Filters and how they affect the summary" on page 48.
>
> - Click the ID of any linked entity to view its details.
>
> - You can also link to defects from the Requirements module.

Removing traceability links to defects

You can remove traceability links in the Traceability tab.

1. Using the view selector, select the option for the entity you want to delete.

2. In the grid, select the entity you want to delete.

3. Click **Remove Trace**.

See also

- "Traceability" on page 44 for an overview of traceability

- "Working with defects by job function" on page 81

- "Defining defects" on page 85

- "Editing defects" on page 87

- "Displaying what you need" on page 27

Chapter 5: Technical preview: Working with test management by job function

Note: This section describes a technical preview feature.

ALM's Test Management module helps you define tests, make sure requirements are covered by tests, run tests, and track testing progress.

Note: Access to automated tests (such as Performance Center or UFT tests) from the ALM Web Client is limited. Use the ALM Desktop Client for full management of automated tests, and use the ALM Web Client for full management of all other tests.

Working with test management in the ALM Web Client involves the following tasks:

Define Release Settings for Testing → Design Tests → Design Test Sets → Run → Track Testing Progress

Notes

- Depending on what permissions you have, you may not be able to perform all these tasks.

Working with tests involves collaboration across different roles and teams. Whether you are a QA team lead, a tester, or part of the development team, you can use ALM to plan, design, and collaborate on a set of tests. For details about collaboration, see "How ALM Web Client users collaborate when working with environments" on page 100, "How ALM Web Client users collaborate when working with tests" on page 109, and "How ALM Web Client users collaborate when working with test sets" on page 146.

QA Team Lead: How do I start?

1. Start by looking at existing information, such as the requirements that have already been defined and other specifications available to you. Start envisioning what the overall testing strategy should be.

   Questions to ask

   - What is the main purpose of the application?

   - How can you categorize the functionality of the application in a meaningful way to provide test coverage of the application's features?

   - Do you want to test chronologically, such as functionality available in each cycle?

   - Do you want to test by feature, so as each feature is tested its corresponding requirements can be considered covered?

   - Do you want to test functionality on each supported hardware/software environment?

   - Do you want to run the same test repeatedly, using different sets of data?

   - What are your testing priorities?

   - What types of testing do you need—functional, sanity, acceptance?

2. The next step is to make sure all entities that you need for managing tests are defined. This way, you are able to select these other entities as you create your testing entities. For details, see "Defining release settings for testing" on page 96.

3. Next, create test folders, tests and test configurations. This might be done by either you or the QA tester. For details, see "Designing tests by job function" on page 105.

4. Design test sets, and corresponding test set folders, to enable QA testers to run tests in an organized way that represents your testing goals. For details, see "Designing test sets by job function" on page 137.

QA Tester: How do I start?

1. The first step is to make sure all entities that you need for managing tests are defined by contacting your QA team lead. This way, you are able to select these other entities as you create your testing entities.

   The entities that should be prepared in advance include environments and requirements.

2. Next, create test folders, tests and test configurations. This might be done by either you or the QA team lead. For details, see "Designing tests by job function" on page 105.

QA Team Lead: How can I track overall testing progress?

Once the tests are defined and run, you can manage and monitor them.

- Defining links between tests and other entities allow you to monitor inter-dependencies. You can use traceability to view links between testing entities (tests, configurations, runs) and other entities, such as requirements and defects.

- Keep track of your tests and assess the quality of the application with workspaces, filters, dashboards, and reports.

See also

- "Designing tests by job function" on page 105

- "Designing test sets by job function" on page 137

- "Defining release settings for testing" on the next page

- "Designing environments by job function" on page 97

- **Administrators**: "Customizing the ALM Web Client" on page 171

Defining release settings for testing

Note: This section describes a technical preview feature.

When setting up tests in ALM, it is helpful to define certain settings and create certain entities in advance.

- **Define releases and cycles in the ALM Desktop Client.** This enables you to assign cycles when creating test set folders. For details, see the *HP Application Lifecycle Management User Guide*.

- **Define environments.** This enables you and QA testers to select the environment when creating test sets, test configurations, and defects without having to come back later. For details, see "Designing environments by job function" on the next page.

- **Make sure requirements are already defined.** Contact the business analyst (or, depending on your organization, the functional architect, product manager, or product owner) to make sure requirements are defined. This way, you or QA testers can add tests to a test set by requirement. This is a time-saver and ensures that your test set has a logical purpose: Testing to make sure the requirement is met. For details, see "Working with requirements by job function" on page 53.

See also

- "Technical preview: Working with test management by job function" on page 93

- "Working with requirements by job function" on page 53

- "Designing environments by job function" on the next page

- 👥 **Administrators**: "Customizing the ALM Web Client" on page 171

- 👥**Administrators**: The information about customizing environments in the *HP Application Lifecycle Management Administrator Guide.*

Designing environments by job function

Note: This section describes a technical preview feature.

ALM's Environments module helps you to manage test coverage by defining different environments for your tests. Each environment represents a different set of software and/or hardware configurations on which each test and its configurations should run.
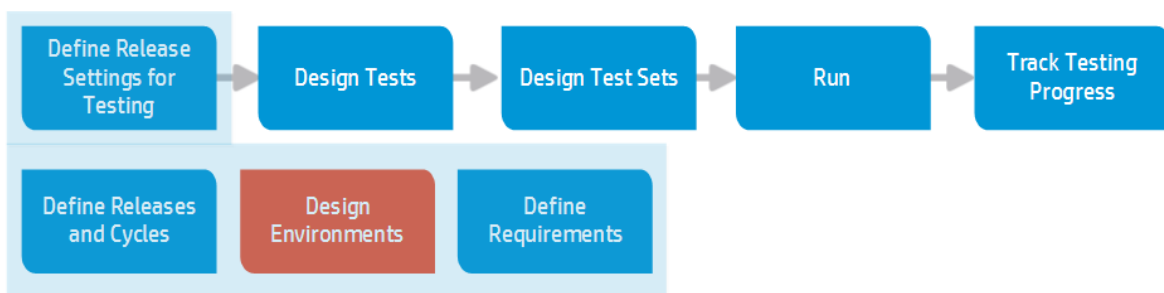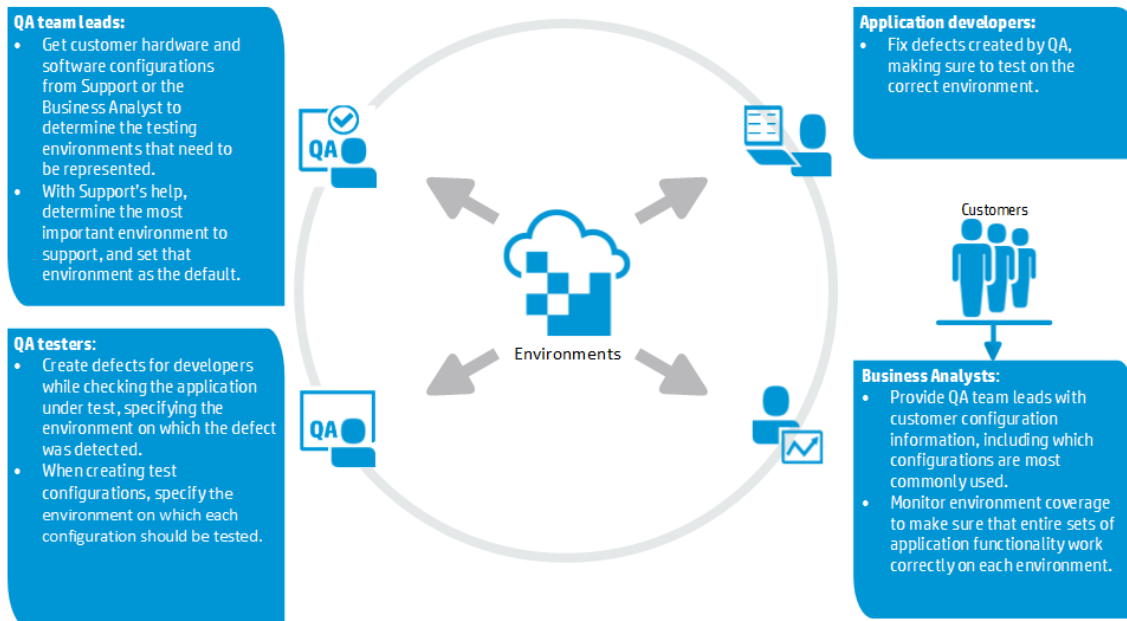

Note: Depending on what permissions you have, you may not be able to perform all these tasks.

See below for use case scenarios explaining how the following job functions manage tests:

- "QA team lead" below

- "Designing environments by job function" above

QA team lead

QA team lead   Responsible for ensuring that the application is developed on time at good quality and according to the requirements.

Define

Define environments

Once environments are defined, you can run the same tests using the same configurations with the same data—for different environments.

Tip: Environments are generally based on operating systems and browsers, but you can ask your administrator to create user-defined fields to represent other areas of the environments you want to test, such as mobile devices, CPUs, and so on.

Assign

Assign environments

You can assign an environment to a test set or a test set folder for complete testing on each required environment. You can report defects on an environment basis to clearly indicate what under which environmental circumstances problems occurred.

Set the default environment at the test set level. The default can be overwritten for specific test configurations and during test runs.

This is an example only. As ALM is highly customizable, your organization may use different work processes and requirement fields from those presented in this scenario.

QA tester

QA tester Responsible for creating tests, running tests, and opening defects to report issues to fix.
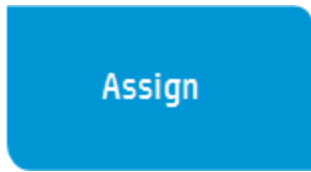
Assign

Assign environments

In some cases, set the default environment for all tests in a test set.

You can assign environments to specific test configurations, overriding the default.

When running tests, assign environments to test runs to override the default value (set at the test set level).

When opening defects, specify the environment on which the defect was detected.

This is an example only. As ALM is highly customizable, your organization may use different work processes and requirement fields from those presented in this scenario.

See also

- "Defining release settings for testing" on page 96

- "Environment overview" below

- "Defining environments" on page 103

- "Assigning environments" on page 104

- "Technical preview: Working with test management by job function" on page 93

- **Administrators**: "Customizing the ALM Web Client" on page 171

Environment overview

Note: This section describes a technical preview feature.

Manage environment coverage for your tests by defining different environments. Each environment represents a different set of software and/or hardware configurations on which each test and its configurations should run.

You can run the same tests using the same configurations with the same data—for different environments... or any combination of tests and configurations for different environments.

> **Tip:** Environments are generally based on operating systems and browsers, but you can ask your administrator to create user-defined fields to represent other areas of the environments you want to test, such as mobile devices, CPUs, and so on.

How ALM Web Client users collaborate when working with environments

ALM Web Client users work together to providing full environment coverage while testing the state of application quality.

Environment definition and assignment involves collaboration across functions and between different groups of people.

QA team leads:
- Get customer hardware and software configurations from Support or the Business Analyst to determine the testing environments that need to be represented.
- With Support's help, determine the most important environment to support, and set that environment as the default.

QA testers:
- Create defects for developers while checking the application under test, specifying the environment on which the defect was detected.
- When creating test configurations, specify the environment on which each configuration should be tested.

Application developers:
- Fix defects created by QA, making sure to test on the correct environment.

Customers

Business Analysts:
- Provide QA team leads with customer configuration information, including which configurations are most commonly used.
- Monitor environment coverage to make sure that entire sets of application functionality work correctly on each environment.

Environments

How do I start?

1. Start by gathering information about each customer's hardware and software configurations. You might want to ask support or professional services to help you gather the information. Questions you might ask are:

   Here are some of the questions that you can ask

   ■ What operating systems are supported? 32-bit? 64-bit? Which versions and sub-versions?

   ■ What browsers are supported? Which versions?

   ■ What mobile devices are in use? Which generations?

   ■ What CPUs are in use?

   ■ What database servers are in use? Which versions?

   ■ What languages are supported?

2. When you have gathered the software and hardware information, provide this information to the ALM Desktop Client administrator.

   Why give this information to the 🔧 ALM Desktop Client Administrator?

   Using the ALM Desktop Client, the administrator can:

   ■ Create user-defined fields to represent information other than the operating system and the browser.

   ■ Create lists values for all fields. For example, values for the Browser field might contain Internet Explorer, Chrome, and Firefox.

   ■ Set user and group permissions for environments.

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

3. You are now ready to begin defining environments. For details, see "Defining environments" on page 103.

4. As part of defining an environment, you can attach supporting documents to provide background information. Environments can also be updated when necessary.

> **Note:** Comprehensive environment capabilities are available only in the ALM Web Client. You can, however, view and customize environments in the ALM Desktop Client. To view environment information in the ALM Desktop Client, see the *HP Application Lifecycle Management User Guide*.

What do administrators **have to do?**

- ALM Desktop Client Administrators can, customize environments in the ALM Desktop Client. This includes setting permissions, adding user-defined fields, and creating field lists. For customization details, see the *HP Application Lifecycle Management Administrator Guide*.

- ALM Web Client administrators can create custom forms for each job function. See "Designing and managing forms" on page 174.

- ALM Web Client administrators can control how fields are displayed and modified using business rules. See "Defining business rules" on page 191.

See also

- "Defining release settings for testing" on page 96

- "Designing environments by job function" on page 97

- "Defining environments" on the next page

- "Assigning environments" on page 104

- "Technical preview: Working with test management by job function" on page 93

- **Administrators**: "Customizing the ALM Web Client" on page 171

Defining environments

> **Note:** This section describes a technical preview feature.

You define environments to cover your tests and configurations on various environments, such as operating system and browsers.

Generally, the QA team lead sets up environments.

1. Select the **Test Management > Environments** module.

2. Click **Add environment**.

3. Fill in the various fields.

4. You can also add attachments by clicking **Attach** . For details, see "Working with attachments" on page 38.

5. Save the environment.

After adding the environments, you can assign them to test runs, tests configurations, and test sets.

See also

- "Designing environments by job function" on page 97

- "Defining release settings for testing" on page 96

- "Assigning environments" on the next page

- The *HP Application Lifecycle Management Administrator Guide* for details on customizing environments, such as setting permissions, creating user-defined fields, and value lists

- "Test set overview" on page 143

- "Getting started" on page 22

- "Displaying what you need" on page 27

- "Common functionality" on page 33

Assigning environments

> **Note:** This section describes a technical preview feature.

You can assign an environment to test sets, test configurations, test runs, and defects.

1. Select the relevant entity in the relevant module, and fill in the environment value.

Entity	Field
Test sets	Test Management > Test Sets > *<Root folder >* > *<test set folder>* > **Default environment** field
Test configurations	Test Management > Test Sets > *<test instance>* > *<configuration>* > **Environment** field **Note:** The default value for tests and their configurations is based on the test set's **Default environment** field.
Test runs	Manual Runner > *<test>* > Run Details > **Environment** field **Note:** The environment value for test runs is based on the test's **Environment** field, if specified. If the Environment field has no value, the environment value for the test run is based on the test set's **Default environment** field. If no default environment is defined at the test set level, the environment value for test runs is empty.

2. Save the entity.

See also

- "Designing environments by job function" on page 97

- "Technical preview: Working with test management by job function" on page 93

- "Defining release settings for testing" on page 96

- The *HP Application Lifecycle Management Administrator Guide* for details on customizing environments, such as setting permissions, creating user-defined fields, and value lists

Designing tests by job function

Note: This section describes a technical preview feature.

Working with **Tests** in ALM Web Client's Test Management module helps you to create, design, maintain, and track your tests. Designing tests involves the following tasks:
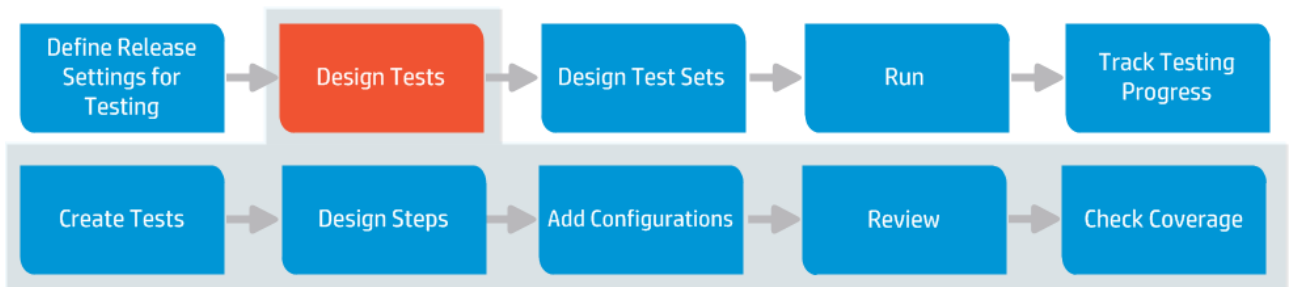
Note: Currently in the ALM Web Client, you can create and design steps for manual tests only.

Working with tests involves collaboration across different job functions and teams. QA Managers and testers can use ALM to plan, design, and manage tests.

See below for use case scenarios explaining how the following job functions work with tests:

- QA Manager

- QA Tester

QA Manager

QA MANAGER | Responsible for managing the tasks of the QA testers, tracking coverage, and reporting quality status of the application.

Create Tests
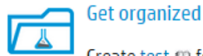
Get organized

Create test 📖 folders according to product areas for testing or functionality.

Add Manual Tests

Add manual tests under the test folders. At this stage define basic information about the test, such as its name, and a description.

Trace tests to requirements

When adding your test, create a trace to the requirements that is it testing. In this way, any defects that arise during testing will be traced back to the original requirement 📖, allowing you to keep track of the status of your application. Also, if requirements change, it is easier to identify which tests to update.

Add supporting resources

Often you will have supporting documents, created in other applications, that belong with a test. Attach these documents to add valuable background information.

Assign design status

Use the Design Status field to track your tests. The initial value is usually *Design*.

Tip: Have your administrator set up a drop down list of values that support your business processes.

Check Coverage

Check coverage

Check that all the requirements are covered by tests.

You can define a category view to display requirements by *Direct Cover Status* so that you can analyze test coverage 📖 and identify gaps. You can monitor, add, and modify requirement coverage 📖 of a specific test in the Traceability tab of the test.

This is an example only. As ALM is highly customizable, your organization may use different work processes and fields from those presented in this scenario.

QA Tester

QA TESTER Responsible for creating tests, running tests, and opening defects as necessary to report quality issues that must be fixed.

Create Tests

Get organized
Create test folders for your tests according to product areas for testing or functionality.

Add Manual Tests
Add manual tests under your test folders. At this stage define basic information about the test, such as its name, and a description.

Trace tests to requirements
When adding your test, add a traceability link to the requirements that are being tested. In this way, any defects that arise during testing will be traced back to the original requirement, allowing you to keep track of the status of your application. Also, if requirements change, it is easier to identify which tests to update.

Add supporting resources
Often you will have supporting documents, created in other applications, that belong with a test. Attach these documents to add valuable background information.

Assign design status
Use the *Design Status* field to track your tests. The initial value is usually *Design*.

Tip: Have your administrator set up a drop down list of values that support your business processes.

Design Steps

Add steps
Look at the requirements linked to your test. Detail each action that the tester should perform, and the expected result.

After adding the steps, you can reorder them at any time as necessary.

Use parameters
If a step requires the tester to input data, consider using parameters. This way you can always change the data without having to change the test.

Add supporting resources to steps
You can attach supporting documents to a step such as attachments, documents, and worksheets.

Call other tests
If you have common instructions that need to repeated in several tests, put these instructions into one test. You can then re-use this test multiple times by calling it in a test step.

Add Configurations

Add configurations
Instead of creating multiple tests to cover different scenarios, create multiple configurations for a single test.

Edit configurations
Change the values of the parameters for the configuration. Rename, duplicate, or delete configurations.

Trace to specific configuration
Trace a requirement to a specific test configuration to provide finer granularity for coverage.

Review

Review tests
Have other stakeholders review your tests. You can also email a selected test, or export test data.

Tip: Your administrator can set up a *Review Status* field with a drop down list of values that support your business processes. Your administrator can then also define email rules to notify you whenever there is a change in the status.

Edit tests
If needed, update the test based on feedback from the review.

Comment
Add comments to questions or other comments that stakeholders added during their review. If you have questions about a specific test, you can email it to other users. The email includes a link so that the recipient can go directly to the entity.

Rearrange tests
Requirements and development plans can change, and you may need to reorganize your tests to match the breakdown and structure of your planned delivery. You can move tests and test folders around, change their order, and delete tests if necessary.

Update status
Update the design status field of the test to *Ready* when the test is ready for use.

This is an example only. As ALM is highly customizable, your organization may use different work processes and fields from those presented in this scenario.

See also

- 👤 **Administrators**: "Customizing the ALM Web Client" on page 171

Test overview

> **Note:** This section describes a technical preview feature.

The typical application is too large to test as a whole. Dividing an application into units, by functionality for example, lets you break it down into manageable parts for testing. In ALM, you divide your application into testing units by creating tests and folders in the **Tests** tree. The tree is a hierarchical representation of your testing areas or subjects.

How ALM Web Client users collaborate when working with tests

HP Application Lifecycle Management keeps your tests in a centralized repository, allowing collaboration between users across different job functions. Edit history of a tests ensures there is visibility during the test creation and editing phase of what changes were made, and by which users. Stakeholders can also provide feedback on a specific test with comments.

Working with tests involves collaboration across functions and between different groups of people

Requirements

QA Team Leads
- Create a general framework for testing the requirements by adding tests and basic test information.
- Assign the tests to QA Testers to design the test steps.
- Check that there is test coverage for all requirements.
- Track the Design Status field to see when tests are ready to be run.
- Keep QA testers in the loop using status fields and comments, or by emailing tests from ALM Web Client.

Developers
- Review tests
- Keep all in the loop by updating fields, using comments and emailing tests from ALM Web Client.

Tests

QA Testers
- Create tests for covering the requirements.
- Design the test steps to be carried out when conducting the test.
- Define test configurations for coverage of different scenarios under which tests need to run based on customer needs and product functionality.
- Keep QA leads in the loop by updating status fields, by emailing tests from ALM Web Client, or by using comments.

How do I start working with tests?

> **Tip:** Before starting to work with tests, work with your administrator to customize the ALM Web Client to the suit the needs of your organization.
>
> Customizing the ALM Web Client
>
> Each organization has its own processes for working for tests, and you can customize the ALM Web Client to fit the way that your organization works. Here are some things you should consider:
>
> - *In addition to the system fields that are built into ALM, are there any other fields that are needed to manage and track tests?*
>
>   The ALM Web Client administrator can create custom forms with user defined fields. See "Designing and managing forms" on page 174.
>
> - *Are there field values that some users should see, but not be able to modify?*
>
>   Are certain fields required under certain circumstances?
>
>   Are different field look-up lists needed at different times?
>
>   The ALM Web Client administrator can control how fields are displayed and modified using business rules. See "Defining business rules" on page 191.

- Begin by looking at your requirements. The aim of your tests is to verify that your requirements are being met.

- Divide your application into testing units or subjects by creating folders in the tests tree. A test folder serves as a container for tests, allowing you to organize your tests in the tests tree. Consider how you can you categorize the product areas in a meaningful way to provide test coverage of the application's features. A common practice is to create folders according to functionality to be tested.

- You then start adding tests under the folders. At this stage, you define basic information about the test, such as its name, design status, and a description. When you add a test, trace it to the requirement that it is covering. This ensures traceability between your requirements, tests, and any subsequent defects created when you run your tests, and is essential for managing your application more effectively. You can also attach a file, URL, screenshot or system information to illustrate a test.

- You are now ready to define the actual test steps. These provide detailed instructions on how to carry out the test and evaluate the results. For each step, you specify the actions to be performed on your application and the expected result. Before writing your test steps, consider:

What data will be used in the test?

It's good practice to separate the data used in a test from the actual test logic. You can do this by using parameters. Using parameters can increase the flexibility of your tests by enabling you to run the same test repeatedly with different data each time.

Are there any commonly used instructions that will be used repeatedly in different tests?

If you have common steps you often want to perform as part of other tests, you can include a call to another manual test. For example, you can create a test *Login* that logs a user in when starting the application. You can then call this test at the beginning of each test. In this way commonly used instructions can be referenced in various manual tests, avoiding duplication of effort in test creation.

What are the different scenarios that tests should cover?

Instead of using multiple tests to cover several test cases, you can use the same test to test different use-cases by defining configurations. You set the data to be used in a particular scenario by adding parameter values for each test configuration.

You can also use test configurations for finer granularity when covering requirements.

- Once you have designed your tests and they have been reviewed, check that there is test coverage for all requirements. Your tests are now ready to assign to test sets and to run.

> **Note:** Currently in the ALM Web Client, you can add and design/edit steps for **Manual** test types only. Other types of tests can be viewed, their basic information can be edited, and you can also work with comments, attachments and traceability links.

Managing and monitoring tests

During the application development process, requirements can change and you may need to modify your tests. You can update your tests at any time. Before updating or deleting a test, check to see which tests sets are using the test.

Keep track of your testing effort and assess the readiness of tests with filters, dashboards, and reports. Track how test design is progressing by monitoring the status of tests and seeing how many are draft, reviewed, or ready. Check that all requirements are covered by tests. Traceability links not only help to ensure compliance between requirements, and tests, but also ensure that any defects arising during testing can be tracked to specific requirements. This allows for more effective management of the application lifecycle.

> **Note:** Comprehensive analysis and reporting capabilities are currently available only in the ALM Desktop Client. For more information, see the *HP Application Lifecycle Management User Guide*.

See also

- "Designing tests by job function" on page 105

- "Technical preview: Working with test management by job function" on page 93

- "Getting started" on page 22

- "Displaying what you need" on page 27

- "Common functionality" on page 33

 Administrators: "Customizing the ALM Web Client" on page 171

Creating tests

> **Note:** This section describes a technical preview feature.

Begin by looking at your requirements. Create a basic framework of high level test folders that break your application up into subjects (testing areas) and serve as containers for organizing your tests. A general practice is to create folders according to functional areas in the application. For each of these folders you then define tests.

Tests can only be created under a test folder. To add test folders and tests, you must have permission from your administrator to do so.

1. Select **Test Management** > **Tests**.

2. Decide where to add the test folder by selecting the root **Subject** folder or an existing folder in the Tests tree, and clicking **Add Test Folder**.

3. Give the folder a name and description, and complete any required fields. Click **Add** to save the folder.

You can now add additional folders or begin adding tests.

> **Note:** Currently in the ALM Web Client you can only add manual tests.
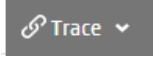
1. Add tests to a test folder:

    - Select a test folder in the tree and click **Add Test** to add a test under the selected folder.

    - Select a test in the **Children** grid, and click **Add Before** or **Add After** to add a new test either before or after the selected test.

    - When viewing tests in Flat view, click **Add Test**. You will need to assign a subject (test folder) to the test in order to add it.

2. Fill in the various fields.
    - Give the test a name and a description.

    - Complete any other required fields indicated by a red square to the left of the field name. (Grayed out fields are read-only.) You can also add further details by completing the non-required fields, or this can be done at a later stage.

    > **Note:** For list fields, click the field and start typing any part of the value. The auto-complete functionality displays matching suggestions enabling you to quickly locate list options.

3. Add requirement coverage by clicking ⬚ Trace ⌄ and selecting the requirement that the test covers. This ensures traceability between requirements, tests and any subsequent defects submitted for the tests, allowing you to manage your application more effectively. Traceability links can also be added later. For details, see "Traceability" on page 44.

4. You can also add attachments. For details, see "Working with attachments" on page 38.

5. Click **Add** to save the test, or click **Add & Another** to save the test and to immediately add another one.

See also

- "Designing tests by job function" on page 105

- "Test overview" on page 109

- "Getting started" on page 22

- "Displaying what you need" on page 27

- "Common functionality" on page 33

Designing steps

Note: This section describes a technical preview feature.

After you create a general framework by adding test folders and tests, you detail your tests by adding steps. Test steps contain detailed instructions on how to carry out the test, and how to evaluate the results.

To add steps to a test you must be given these permissions by your administrator.

1. Select **Test Management > Tests** , and select the test to which the steps should be added.

   Tip: To quickly locate a test folder or test, fill in part of the name in the search field at the top of the navigation pane.

2. Click the **Steps** tab.

3. Describe the steps a tester must perform to run the test.

a. Click the **Requirements** tab to see if there are any requirements linked to the test. Reading through the requirements that the test is meant to cover can assist you in designing the steps.

b. Click **Add test step.**

You can fill in a short description as part of the Step Name.

> **Note:** If you start the Step Name with the prefix **Step** followed by a step number (such as to use the same convention as step names in the ALM Desktop Client), the ALM Web Client removes the prefix and the number. (If the prefix is not capitalized, it is not removed.)
>
> **Example**
>
> If you enter a Step Name of "**Step 5 Log out of system**," the Step Name is displayed as "**Log out of system**."

c. Describe what action the tester should perform, and the expected result. You can use the rich text editor to format your steps, for example, to number the list of actions in the **Description**.

Example

To test the Flight Booking feature in the Mercury Tours application, you might design steps as follows:
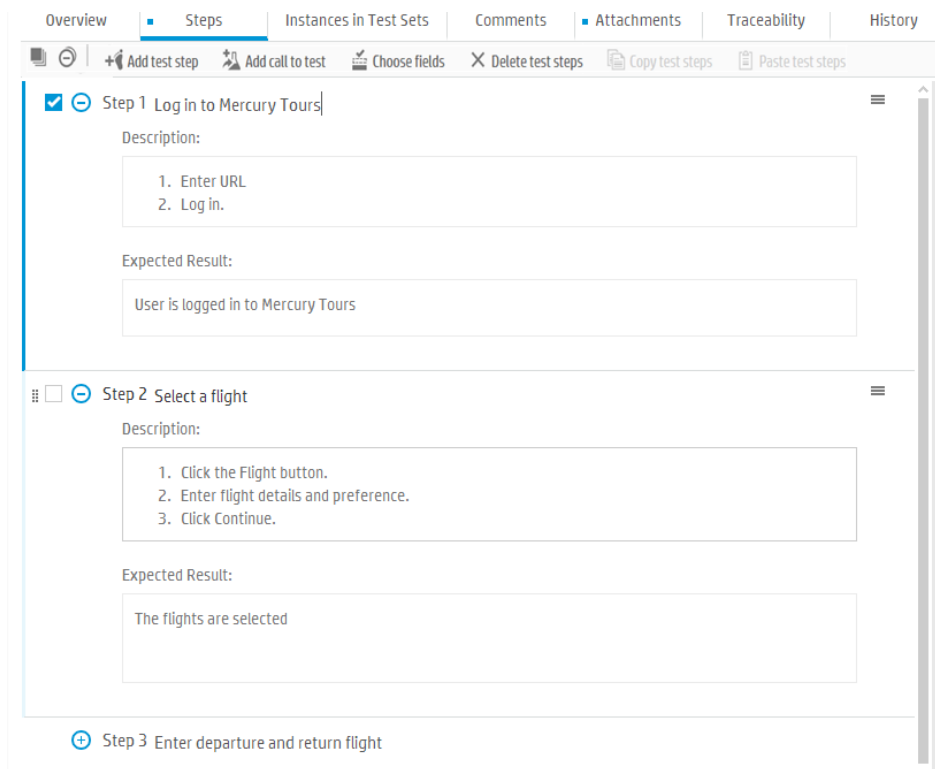
4. It is generally good practice to use parameters in your tests whenever the tester needs to enter data.

To open a pane for working with parameters, click .

   a. Add parameters.

      i. In the **Parameters** tab, add the parameters that are needed for your test by selecting the menu icon ≡ > **Add parameter**.

      ii. Fill in the value field if you know the value to be used for the parameter, or set the value to the parameter's default value.

> **Tips**
>
> - A parameter that is not in use in any step is marked in the **Parameters** tab with a ⁞ icon.
>
> - A visible indicator lets you know that a default parameter value has been overridden in a test configuration or in a test instance.

b. Use the parameters in steps.

    i. Click in the step where you want to insert the parameter.

    ii. On the formatting toolbar, click **Insert Parameter** and select the parameter to use.

> **Tip:** Alternatively, you can add parameters as you design your test steps using one of the following methods:
>
> - In the **Description** or **Expected Result**, type a new or existing parameter name using the syntax **<<<parameter name>>>**.
>
> - You can also click **Insert Parameter**, select **<New Parameter>**, and type the parameter name.
>
> If the parameter is new, it is automatically added to the **Parameters** tab when you save the step.

You can later define default values in the **Parameters** tab by selecting the menu icon ≡ > **Default values**.

> **Note:** 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**.

For more details, see "Setting parameter values for use in steps" on page 122.

5. As part of your test step design, you can include a call to another manual test.

   a. Select the step below which you want to add the called test, and click **Add call to test**.

   b. Select the test that you want to call. You can also select a specific configuration to call.

      A call to the selected test is inserted in the step. You can view the **Description** and **Expected Result** of the called test. To edit these fields, go to the test itself by clicking 🡒 in the test step.

      > **Tip:**
      >
      > - Use a call to a test if you have common steps that you 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* that logs in a user when you start your application. You can then call this test at the beginning of each test.
      >
      > - Called tests can include test parameters. You can change the parameter values that the called test should use when it is run in a particular step.

6. You can also add attachments to a step. Hover on the step or select it, and click the menu icon ≡ to the right of the step name. Click **Details** to access the **Attachments** tab of the step. For more details, see "Working with attachments" on page 38.

7. At any time, you can edit your test steps:

   - Reorder steps using drag and drop.

   - Add additional steps by selecting the step below which you want to add a new step, and clicking **Add test step**.

   - Copy and paste the contents of a field in a test step using keyboard shortcuts (**CTRL + C**, **CTRL + V**).

- Copy and paste steps within a test or between tests by selecting the steps and pressing **Copy test steps** and then **Paste test steps**.

- Delete steps by selecting them and clicking **Delete test steps** or by pressing **DELETE**.

- Change parameter names and values by selecting and editing the relevant fields in the **Parameters** tab.

- Delete a parameter from the test by selecting it in the **Parameters** tab and selecting menu icon ☰ **> Delete**.

- Go to the name field of the first step by pressing **CTRL + HOME**.

- Go to the name field of the last step by pressing **CTRL + END**.

- Expand or collapse the details of the a step. by clicking on the **Step #** prefix or pressing **ENTER** on the Step Name field.

The ALM Web Client way...

Handling "Step" prefixes from the ALM Desktop Client

In the ALM Desktop Client, the prefix **Step** plus a number is added before the description of each step.

In the ALM Web Client, steps are automatically numbered based on their position in the step list, so this prefix is not necessary.

If you switch between both clients, note that the ALM Web Client removes the **Step** prefix and its number when a step created using the ALM Desktop Client is saved. (If the "step" prefix is lowercase, it is not removed.) Only the text that follows the **Step** prefix and the number is displayed in the ALM Web Client.

See also

- "Designing tests by job function" on page 105

- "Test overview" on page 109

Setting parameter values for use in steps

> **Note:** This section describes a technical preview feature.

It's good practice to separate the data used in a test from the actual test logic. Unbinding the data from the test by using parameters makes the test more flexible and generic.

You can do this by adding parameters to your manual test steps whenever the user needs to input data. If you have numerous test scenarios each requiring a different set of values, you can run the same test repeatedly with different data each time, eliminating the need for multiple tests. And if you ever need to change the data, you don't need to change the actual test steps.

Values for parameters can be assigned at various stages:
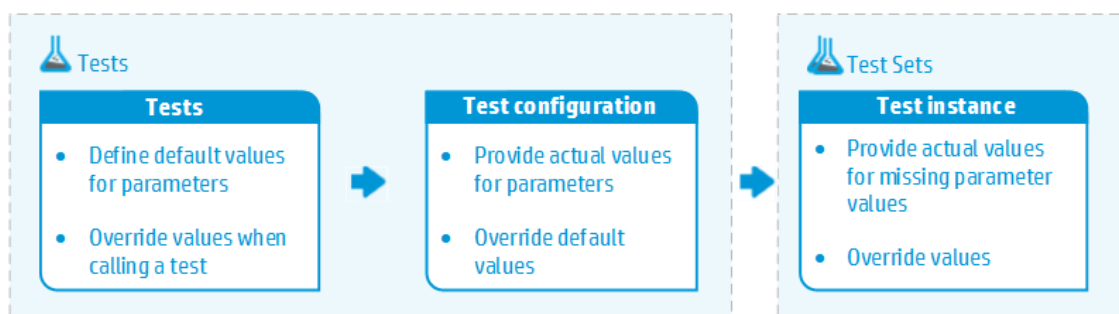
Setting parameter values in Test Management>Tests

You can set parameter values in the following ways in **Test Management>Tests**:

- Set a default value for every parameter when adding the parameter to the test.

- Assign actual values to parameters when you call a test or a configuration from

within another test.

> **Example**
>
> You can create a test **Login** that logs a user in when you start the application. You can then call the **Login** test at the beginning of each test. In some cases, you will want to log in as a regular user while in other cases, you will need to log in as the project administrator. For this purpose, you can create two parameters, **<<<user name>>>** and **<<<password>>>**. If the most common login is a regular user, you can set the default values for the parameters to a name and password of a regular user, and then for administrator users, change the values in the test that calls the **Login** test.

- Use the auto-generated (default) configuration, and add other configurations, to override the default values. When the parameter value is overridden, a yellow dot is displayed next to the parameter value in the **Parameters** tab.

> **Note:**
> - If no value is assigned to a parameter in a test configuration, the default value is used.
>
> - If no default value is assigned to a parameter, the default value is blank. If you then define a value for the parameter in a configuration, a yellow dot is displayed indicating that the default (empty value) has been overridden.
>
>   For details, see "Adding configurations" on page 125.
>
> - If you change the default value for a test parameter in the **Parameters** tab in **Test Management>Tests**, the change is automatically propagated to all test configurations using that default value. Test instances that have already been added to test sets are also updated automatically when changes are made— unless the parameter values for these test instances have been changed manually.

Setting parameter values in Test Management > Test Sets:

- Override the default value or the test configuration value by updating parameter values for test instances in test sets. When you change a parameter value in a test instance, a yellow dot is displayed next to the value. This lets you know that the value assigned at the level of the test has been overridden. The value in the test instance is the value that will be used when the test is run. Overridden values in the test instance can also be reset before a run to their original configuration values, or to the default values. For more details, see "Working with tests in test sets" on page 163.

The ALM Web Client way...

How the ALM Web Client handles parameter values once test instances are added to test sets

In the ALM Desktop Client, once a test is added to a test set, any parameter updates made to the test in the Test Plan module are not propagated to the test instances in the test set.

In the ALM Web Client, even after a test is added to a test set, any parameter updates made to the test in the **Parameters** tab in **Test Management>Tests** are propagated to the test instances in the test set. If you manually update the parameter values in the test instances, the parameter updates are then no longer propagated.

See also

- "Designing steps" on page 116

- "Adding configurations" on the next page

- "Designing tests by job function" on page 105

Adding configurations

Note: This section describes a technical preview feature.

A test configuration represents a specific use-case of a test. Test configurations unbind the data from the test, making the test more generic. Instead of creating multiple tests to cover various scenarios, the same test can be used, each time with a different set of data. Test configurations also provide finer granularity for requirement coverage. You can use a single test to cover multiple requirements by associating different test configurations in the same test with each requirement.

Configurations and parameters are closely connected. A configuration is a specific combination of parameter values. A test always has at least one configuration. This default configuration, with the same name as the test, is generated automatically when you add a test. If you define default values for parameters, these values will be included in the default configuration. To assign an alternative set of values to the parameters, you add a new configuration. For more details on parameters, see "Setting parameter values for use in steps" on page 122.

Example:

For a test that checks payment by credit card, you define default parameter values. To test different types of credit cards using the same test, you add configurations that use different parameter values.

The yellow dot next to the parameter values in the **Mastercard** and **Diners** configurations indicates that the default value for the parameter has been overridden.

Default configuration:

Mastercard configuration:

Diners configuration:

To add configurations to a test you must be given these permissions by your administrator.

1. Select **Test Management > Tests** , and select the test to which the configuration should be added.

   > **Tip:** To quickly locate a test folder or test, fill in part of the name in the search field at the top of the navigation pane.

2. Click the **Steps** tab.

3. In the **Parameters** tab, click the menu icon ≡ and select **Add configuration**.

   The configuration's parameters are automatically assigned the default values.

4. Assign actual values to the parameters. Each test configuration uses a different set of data. Define the data to be used by assigning the parameter values for the configuration that you are adding.

   - When no value is assigned to the parameter in the configuration, the default value is used.

   - When the default value for a parameter is overridden in a particular configuration, a yellow dot is displayed to the left of the value.

5. You can add and delete configurations, as long as at least one remains. To delete a configuration, select the configuration from the drop-down list Configuration: [Credit Card ˅] and select ≡ > **Delete configuration**.

6. You can also edit configurations at any time:

   - Change the values assigned to the parameters in the configuration.

   > **Note:** When you change a parameter value in a test configuration, the changes are not automatically propagated to the tests that have already been added to test sets. To update parameter values for tests in test sets, click the **Instances in Test Sets** tab, select the test instances in the grid and click **Reset**

> **Parameter Values.**

- Duplicate or rename configurations by selecting the configuration and selecting the relevant option from the menu ≡ .

7. After adding new configurations, consider if coverage for any linked requirements should be updated to include only a specific configuration. For more details, see modifying test configuration coverage.

See also

- "Designing tests by job function" on page 105

- "Test overview" on page 109

- "Getting started" on page 22

- "Displaying what you need" on page 27

- "Common functionality" on page 33

Reviewing tests

> **Note:** This section describes a technical preview feature.

Usually after you have defined your tests and included test steps and configurations, the tests are reviewed. As a result of this review process, you may need to update your tests. Also, as work on the test progresses, some of the fields may need to be updated in order to allow proper tracking of the test. For example, updating the **Design status** field from *Design* to *Ready* etc. will enable to you track which tests are ready to use.

To edit or delete a test you must be given these permissions by your administrator.

Before updating or deleting a test, check which tests sets are using the test. You can view this information in the **Instances in Test Sets** tab.

1. Select **Test Management > Tests** , and select the test folder or test that you want to update.

   > **Tip:** To quickly locate a test folder or test, fill in part of the name in the search field at the top of the navigation pane.

2. Modify the details in the appropriate fields or tabs.

   To modify fields in a grid, select the item and click the field to modify. You can also split the pane and modify the field details in the preview pane, or click the ID link of a test in the grid to open the Details for editing.

   > **Tip:** Use bulk update to modify several tests at once. For example, you might want to update the **Design status** of multiple tests to *Ready* and assign them to the same tester. For details, see "Bulk update" on page 34.

   While on the modified record, you can undo the changes by clicking **Restore**.

3. To add or update test steps, parameters, or configurations, click the **Steps** tab. For more details, see "Designing steps" on page 116 and "Adding configurations" on page 125.

4. When editing you can also:

   - **Rearrange your tests.** You can change the order of tests and test folders. Use drag and drop in the tree or grid, or change the hierarchical position of a test by changing the **Subject** field.

   - **Cut, copy, paste, delete.** Use the **Actions** menu for performing actions in the tree when the **Details** tab is selected, or select an item in the grid and use the toolbar to perform actions when the **Children** tab is active. Paste is not available when tests are displayed in flat view without a hierarchy.

> Deleting a test also deletes its test steps or script, and any traceability links. In addition, the test is removed from any tests sets in which it is included, and all run history is deleted. Before you delete a test, check to see if and where it is used by clicking the **Instances in Test Sets** tab.
>
> When you delete a test folder you delete all tests in the folder.

- **Insert comments.** Comments are useful for collaboration between users. Each comment gets a timestamp and an indication of who added the comment. For details, see "Adding comments" on page 38.

- **Add attachments**. Use attachments to provide additional background information relevant to the requirement. For details, see "Working with attachments" on page 38.

- **Add traceability links.** Use traceability links to manage your application more effectively. Traceability establishes a link between tests and requirements. Once tests are linked to requirements, any defects that arise during testing will be indirectly linked to the requirements. For details, see "Checking coverage using test traceability" on the next page

See also

- "Designing tests by job function" on page 105

- "Test overview" on page 109

- "Getting started" on page 22

- "Displaying what you need" on page 27

- "Common functionality" on page 33

Checking coverage using test traceability

Note: This section describes a technical preview feature.

| Create Tests | → | Design Steps | → | Add Configurations | → | Review | → | Check Coverage |

Once your tests have been designed and reviewed, check that all requirements are covered by tests. It's important to check for coverage not only to ensure compliance between requirements and tests, but also to manage the application lifecycle more effectively. By linking a test to a requirement you also ensure that any defects that arise from the test are linked to the requirement. This allows you to assess the quality of your application.

To identify gaps in coverage more easily, define a category view in the **Requirements** module to display requirements by *Direct Cover Status.* This will provide you with an overall view of coverage, and allow you to pinpoint requirements with no coverage. For more details, see Defining category fields.

Adding traceability links to tests while adding a test

1. In the Add dialog box for the entity, click **Trace**.

2. Choose the option for the entity you want to link to/from:

   ■ **Requirement coverage** or **Link to requirement**

   ■ **Link from requirement**

   ■ **Link to defect**

   Note: Not all entities support each of these traceability links. Only supported entities are listed.

3. Depending on the entity you are linking, you can select the entity by:

   - **ID**. Click the **ID** radio button, if it exists and enter the ID number.

   - **Tree**. Click the **Tree** radio button, if it exists. Expand the tree as necessary and navigate to the entity.

   - **Search**. Enter a string in the **Search** field, if it exists.

   A preview of the entity is displayed on the right.

4. Select the entity in the resulting list of matches.

5. Click **OK**.

Adding traceability links to tests while editing the test

1. In Details of the entity, click the **Traceability** tab.

2. Using the view selector | Summary ⌄ | on the right, select **Summary** or the entity whose links you want to view or add.

3. Click **Add traceability** or the **Add** button for adding the entity you selected with the view selector.

4. If you are viewing the summary, choose the option for the entity you want to link to/from:

   - **Requirement coverage** or **Link to requirement**

   - **Link from requirement**

   - **Link to defect**

   Notes

   - Not all entities support each of these traceability links. Only supported entities are listed.

> ■ If you not viewing the summary, but instead are viewing one type of linked entity, that is the only type of traceability link that you can add.

5. Depending on the entity you are linking, you can select the entity by:

   - **ID**. Click the **ID** radio button, if it exists and enter the ID number.

   - **Tree**. Click the **Tree** radio button, if it exists. Expand the tree as necessary and navigate to the entity.

   - **Search**. Enter a string in the **Search** field, if it exists.

   A preview of the entity is displayed on the right.

6. Select the entity in the resulting list of matches.

7. Click **OK**.

Viewing test coverage traceability links

You can view the following types of links from the test summary:

- **Requirement coverage.** Requirements that are linked to the selected test.

- **Linked defects.** Defects related to the selected test.

> **Tip:**
>
> - In the Traceability tab, use filters to limit the links that are displayed so that you can focus on what is important to you. for details, see "Filters and how they affect the summary" on page 48.
>
> - Click the ID of any linked entity to view its details.

Removing traceability links for tests

You can remove traceability links in the Traceability tab.

1. Using the view selector, select the option for the entity you want to delete.

2. In the grid, select the entity you want to delete.

3. Click **Remove Trace**.

Modifying test configuration coverage for test traceability links

1. In the Traceability tab of the entity, use the view selector to select either **Requirement coverage** or **Test coverage**.

2. In the **Coverge: Coverage Mode** column in the grid, select the field that you want to modify.

3. Click **Edit**, and make your changes.

4. Click **OK**.

For details, see Test Configurations.

See also

- "Traceability" on page 44 for an overview of traceability

- "Displaying what you need" on page 27

FAQs for tests

> **Note:** This section describes a technical preview feature.

Here are some frequently-asked questions about working with tests.

> **Tip:** Do you have some tips you'd like to add? Email us at sw-doc@hp.com.

Why can't I see the Add Tests button?

- To add a test, you need to first add a test folder.

- If you do not have permission to add test, the Add Tests button is not displayed. Contact your administrator.

I am viewing a functional test but there are missing tabs. Why can't I see the script tab?

Currently in ALM Web Client you can create and edit steps for manual tests only. Other types of tests can be viewed, their basic information can be edited, and you can also add comments, attachments and traceability links. However, steps or scripts can't be edited and that's why the tab is hidden.

Why can I only add a manual test? Why can't I change the test type?

Currently in the ALM Web Client, you can add and design/edit steps for **Manual** test types only. Other types of tests can be viewed, their basic information can be edited, and you can also add comments, attachments and traceability links.

My test steps calls another test. I want to make changes to the called test but it is read-only. How can I edit the called test?

You can change parameter values for a called test in the **Parameters** pane. To change the steps of a called test, go to the test by clicking ➚ in the test step.

What happened to my step name? I called my step *"Step 1 Login to system"* but when I saved the step, the name changed to "*Login to system*".

Step numbering in the ALM Web Client is automatic and any reference to a step number in a step name is removed. Separating the step number from the name means that

steps can be dragged and dropped and their numbering will be updated accordingly. If your team works with both the ALM Web Client and the ALM Desktop Client, this change in functionality may impact the way that you work with test steps.

I am adding a test step but there is no Expected Result field in the test step. Where can I include the expected result for the step?

Click **Choose fields** and select **Expected Result**. The **Expected Result** field will now be displayed in the step.

Why can't I drag and drop tests in the grid?

If the **Include children** toggle is on, or if you have a defined the view to display tests in a flat type of view, drag and drop is disabled in the grid.

If parameter values can be changed at various levels, how do I know when the default or test configuration value has been overridden?

In **Tests Management>Tests**, when you override a default value in a test configuration, a yellow dot is displayed next to the value. This lets you know that the value being used for a parameter is not the default value. When the test is added to a test set in **Test Management >Test Sets**, the yellow dot is no longer displayed. If the value assigned to the test instance in the test set is changed, a yellow dot is displayed again. This lets you know that the value being used in the test instance is different from the value being used at the level of the actual test. However, if you assign a test to a test set and then change the value of a parameter in the test, the test instance is not updated with the new value and no yellow dot is displayed. For more details, see "Setting parameter values for use in steps" on page 122.

I changed the values of the parameters in a test configuration. How do I make sure that all test sets using this test configuration are also updated with the new value?

In order to update parameter values for tests that have already been added to test sets, in **Tests Management>Tests**, click the **Instances in Test Sets** tab, select the test instances of the configuration, and click **Reset parameter value**.

I want to delete the test configuration but there is no delete option in the menu. How do I delete the test configuration?

When you add a test, the ALM Web Client automatically adds a test configuration with the same name as the test. Each test must have at least one configuration. You can

delete configurations as long as one configuration remains.

See also

- "Designing tests by job function" on page 105

- "Using the ALM Web Client" on page 15

- "Common functionality" on page 33

Designing test sets by job function

Note: This section describes a technical preview feature.

ALM's Test Sets module helps you to define and manage test sets, and track test runs. Working with test sets in the ALM Web Client involves the following tasks:
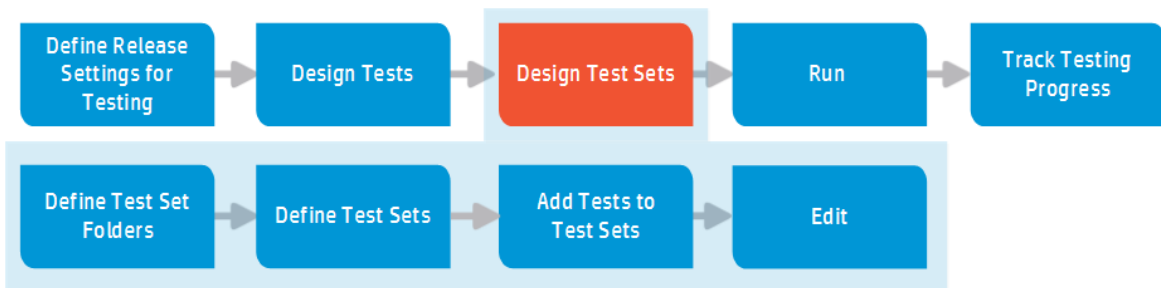
Note: Depending on what permissions you have, you may not be able to perform all these tasks.

See below for use case scenarios explaining how the following job functions work with test sets:

- "QA team lead" on page 139

- "QA Tester" on page 140

-

-

QA team lead

QA team lead

Responsible for ensuring that the application is developed on time at good quality and according to the requirements.

| Define Test Set Folders | Design Test Sets | Add Tests to Test Sets | Edit | Track Testing Progress |

Define Test Set Folders

Get organized using test set 📖 folders

Organize test execution by creating test set folders to achieve specific test goals.

By creating test set folders, you can focus your testing activities on specific areas that should be tested together.

Assign cycles

You can assign a cycle to a test set folder to track progress between cycles or to create iteration plans for the testers.

Select a value from the drop-down list in the **Target Cycles** field of the test set folder.

Tip: The cycles listed in the drop-down list are defined in the ALM Desktop Client.

Design Test Sets

Get organized using test sets

Organize test execution by creating test sets to achieve specific test goals. For example, you can group your tests according to a specific logical flow, such as tests for handling a particular transaction, or group your tests for execution purposes, such as tests that should run using the same set of parameters.

Organize your test sets into a hierarchy by defining folders.

Tip: You can assign a cycle to a test set folder to track progress between cycles or to create iteration plans for the testers.

Add Tests to Test Sets

Populate test sets

Add test configurations to the test set. You can add test configurations directly. But you can also add all tests and configurations related to a particular requirement 📖 or defect 📖, so you are guaranteed coverage for a particular requirement or defect.

Edit

Distribute the workload and set the execution date

Assign the tester that will create tests for the test set and/or run the test set.

Tip: Have your administrator set up rules so that when you assign a test set to a tester, the tester gets notified by email.

Send emails to communicate changes in assignments to your testers.

Assign environments

You can assign an environment 📖 to a test set or a test set folder for complete testing on each required environment. You can report defects on an environment basis to clearly indicate what under which environmental circumstances problems occurred.

Manage relationships

Add traceability links between a selected test set and defects from the Test Sets module.

Tip: You can also add links to a selected test set and requirements from the Requirements module 📖.

The relationships can be indirect as well as direct, meaning if you link a test run to a defect, its test is also linked to the defect.

Maintain test sets

- Keep test sets up-to-date. Testing plans can change, and you may need to reorganize your test sets and test set folders to match the changes in your planned delivery.

- Add comments to questions or other comments that stakeholders added. Email questions to other users. The email includes a link so that the recipient can go directly to the entity 📖.

- Often you will have supporting documents. Attach these documents to add valuable background information.

Track Testing Progress

Track your tests

Check the status of tests that are included in the test coverage 📖 for requirements. You can use views and filters to identify those items that need your attention. You can then save the views as workspaces for use in the future.

When looking at a requirement, check the **Direct Cover Status** field. This is the status of the requirement, and it is determined according to the status of the tests associated with the requirement.

Tip: You can see graphs which give you an overall picture of traceability using the ALM Desktop Client. For details, see the *HP Application Lifecycle Management User Guide.*

- How many tests ran? How many tests passed or failed? Were any tests blocked? Are there any QA holders that would hold up a release?

- How many tests did each tester handle?

- Was requirement coverage 📖 met?

- Was environment coverage met?

Monitor the quality of your application by keeping track of the number and severity of defects related to tests covered by requirements.

Tip: You can see graphs which give you an overall picture of traceability using the ALM Desktop Client. For details, see the *HP Application Lifecycle Management User Guide.*

Send emails to communicate testing progress and expectations to your testers and other stakeholders.

This is an example only. As ALM is highly customizable, your organization may use different work processes and requirement fields from those presented in this scenario.

QA Tester

QA tester Responsible for creating tests, running tests, and opening defects as necessarily to report quality issues that must be fixed.

Design Tests

Run

Define tests

Divide your application into testing units by creating folders in the Tests tree. The tree is a hierarchical representation of your testing areas or subjects.

For each folder in the tree, you define tests that contain steps.

For each test step, you specify the actions to be performed on your application and the expected result.

ALM also enables you to use the same test to test different use-cases, each with its own test configuration. You define the data to be used by adding test parameter values for each test configuration.

After tests are defined, you or your QA team lead can add them to test sets.

Run tests

Run manual tests in your project 📖 to locate defects and assess quality. 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.

Report defects

While testing, you might come across defects that need to be repaired. Define a defect by giving your defect a summary and a severity. A detailed description is always helpful. You can come back to fill in more details.

This is an example only. As ALM is highly customizable, your organization may use different work processes and requirement fields from those presented in this scenario.

Developer

Developer In addition to developing the application, the developer is responsible for repairing defects, tracking progress by creating and updating defects, and communicating status to other stakeholders.

Fix Defects

Run

Fix defects

As defects are assigned to you, review and repair the problem.

Run tests and test sets

Run manual tests in your project to verify that your defects are fixed.

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.

Report defects

While testing, you might come across defects that you need to repaired. Define a defect by giving your defect a summary and a severity. A detailed description is always helpful. You can come back to fill in more details.

This is an example only. As ALM is highly customizable, your organization may use different work processes and requirement fields from those presented in this scenario.

Project Manager

Project Manager

Responsible for ensuring that the application is developed on time at good quality and according to the requirements.

Track Testing Progress

Track your tests

Check the status of tests that are included in the test coverage for requirements. You can use views and filters to identify those items that need your attention. You can then save the views as workspaces for use in the future.

When looking at a requirement, check the **Direct Cover Status** field. This is the status of the requirement, and it is determined according to the status of the tests associated with the requirement.

> **Tip:** You can see graphs which give you an overall picture of traceability using the ALM Desktop Client. For details, see the *HP Application Lifecycle Management User Guide*.

- How many tests ran? How many tests passed or failed? Were any tests blocked? Are there any QA holders that would hold up a release?

- How many tests did each tester handle?

- Was requirement coverage met?

- Was environment coverage met?

Monitor the quality of your application by keeping track of the number and severity of defects related to tests covered by requirements.

Send emails to communicate testing progress and expectations to your testers and other stakeholders.

> **Tip:** You can see graphs which give you an overall picture of traceability using the ALM Desktop Client. For details, see the *HP Application Lifecycle Management User Guide*.

This is an example only. As ALM is highly customizable, your organization may use different work processes and requirement fields from those presented in this scenario.

See also

- "Technical preview: Working with test management by job function" on page 93

- "Designing tests by job function" on page 105

- "Designing test sets by job function" on page 137

- "Designing environments by job function" on page 97

- "Running tests manually" on page 166

- **Administrators**: "Customizing the ALM Web Client" on page 171

Test set overview

> **Note:** This section describes a technical preview feature.

You organize test execution by creating test sets and test set folders. By creating test sets and folders, you can focus your testing activities on specific areas that should be tested together.

Test set folders

Create folders in the Test Sets module to organize your application testing process by organizing test sets in different hierarchical levels.

> **Tip:** To organize your test set tree, change the value in the **Test Set Folder Father ID** field for each folder, or drag and drop folders and test sets in the test set tree.

Example	Description

▽ 🗋 **Mercury Tours Web Site**
 	
    ▽ 🗋 **Functionality And UI**
 	
        🗋 Mercury Tours Functionality
 	
        🗋 Mercury Tours Sanity
 	
        🗋 Mercury Tours UI
 	
    ▽ 🗋 Performance And Load
 	
        🗋 Mercury Tours Loading
 	
        🗋 Performance Under Load
 	
    ▽ 🗋 Sanity
 	
        🗋 Select Airlines Sanity
	You may want to organize by types of tests: Functionality, Performance, and Sanity. This way you can draw conclusions on the quality of each of these test aspects independently.

Example	Description
▽ 🗋 **Release 10.5** 　　▽ 🗋 **Cycle 1** 　　　　🗋 New Features 　　▽ 🗋 **Cycle 2** 　　　　🗋 New Features 　　　　🗋 Regression 　　▽ 🗋 **Cycle 3** 　　　　🗋 Sanity 　　▽ 🗋 **Cycle 4** 　　　　🗋 New Features 　　　　🗋 Regression 　　　　🗋 Sanity	You can organize chronologically by releases and cycles, checking the quality of each cycle independently.
▽ 🗋 **Modeling** 　　🗋 Assemble Order 　　🗋 Fill Order	You may want to consider organizing by functionality, so feature-by-feature, you can assess quality.

Test sets

Add test sets to folders in the Test Sets module to group them because they have something in common. A test set contains a subset of the tests in your project designed to achieve specific test goals.

> **Examples**
>
> - To verify a certain requirement, you can add all the tests covering this requirement to a test set.
>
> - To plan tasks for a specific activity, add all tests related to the activity to a test set.
>
> - To test according to a specific logical flow, all all tests related to the logical flow to the test set.
>
> - To group tests for execution purposes, such as for setting all run-time parameters once for multiple runs.

Add tests and their configurations to the test sets in the Tests module.

Each test contains a default test configuration, and you can add as many as you need. A **test configuration** enables you to run the same test under different scenarios. For more details on test configurations, see "Creating tests" on page 114.

How ALM Web Client users collaborate when working with test sets

Test set definition involves collaboration across functions and between different groups of people.

QA testers:
- Define tests for the application based on requirements created by the business analyst
- Add tests to test sets according to specific testing goals
- Run tests, communicating the results to all stakeholders
- Create defects for developers while running test sets on applications

Application developers:
- Run preliminary test sets before sending the app to QA for testing
- Let QA know the various scenarios under which the tests should run, so QA can create test configurations
- Fix defects created by support and QA

QA team leads:
- Using goals obtained from customer support, design test sets and test set folders to organize test execution according to these goals.
- Assign QA testers to test sets, and keep testers in the loop using status fields, ALM Web Client email, and comments

Project Managers:
- Monitor test runs on an ongoing basis to make sure the application is delivered at a high level of quality
- Compare test results to requirement coverage for release quality, of particular interest to project managers
- Keep all in the loop using the status fields, ALM Web Client email, and comments

Test sets

Note: Some of the functionality in the diagram above requires working with the ALM Desktop Client. For more information on suitable candidates for using the ALM Web Client, see "The ALM Web Client Overview" on page 9.

When do I need test sets?

There are many reasons why you would organize tests into test sets, based on the task you need to accomplish. Below are some common use cases.

I would like to generate an iteration plan for a cycle.

Use test sets to group any set of tests that must be run and tracked for a specific cycle. Specify the cycle, assign testers, and add tests to the test set. When all tests in the test set are ready, run the test. Send results and other details to testers to keep them up-to-date.

When creating test sets for an iteration plan, you generally do want to track the results when the tests in a test set are run.

Periodically, I would like to check overall testing progress.

By grouping tests into test sets, you can look at the status of all tests in a test set for general statistics: How many tests ran? How many failed? How many passed? Is there some correlation between these statistics and a particular tester?

Send emails to the relevant testers and stakeholders to keep them up-to-date.

I would like to verify a development build.

If you created a test set that represents all the tests whose features are included in a development build, you can run that test set to verify the build. Send an email to developers to let them know how if features passed the testing phase.

I received an email that a new requirement was added to the content for the release. I want to add additional tests to my test set.

If you have a test set that contains all the tests linked to particular set of requirements for a certain feature, and a new requirement is added, make sure to add the new, relevant tests to the test set by using the **By requirement** option. This automatically adds any tests linked to the requirement to the test set; you do not have to add the tests individually.

I would like to run sets of tests that affect one environment at a time, so I can declare specific environments fully tested.

You can duplicate a test set, testing the exact same functionality, for different environments. This way, you can announce full support on an environment basis as the tests in each test set pass.

I would like to run sets of tests that test the application using different languages, so I can declare specific languages fully supported.

You can duplicate a test set, testing the exact same functionality, for different languages. This way, you can announce full support on a language basis as the tests in each test set pass.

I would like to verify that all defects were fixed.

If you create a tests set by adding tests linked to a specific set of defects, you can use this test set for verifying that the relevant defects were fixed.

I would like to perform regression testing.

Test sets that include tests that only test for regressions are useful for making sure no defects were introduced when features were added.

I would like to perform requirement validation when a requirement's corresponding features are implemented.

You can create a test set by requirement. Only tests related to a specific requirement or set of requirements are added to the test set. This way, you can check requirement coverage on a requirement-by-requirement basis.

When don't I need test sets?

I would like to perform end-to-end sanity tests.

You can create a test set that only contains tests that will indicate, if they pass, that the application passes basic sanity criteria, but this is generally not useful because the testing period is generally short and run repeatedly, with no need to retain the results. If your situation is different, of course you can set up a test set.

I would like to perform user acceptance tests on a customer database.

If you want to perform user acceptance tests that you expect will run a long time, you

may want to createa test set whose test configurations data are based on actual data from the customer. If all the tests in this test set pass, you know that your testing efforts can progress to the next stage.

However, generally, this is not the type of situation that necessitates retaining the test results.

How do I start working with test sets?

Customize the experience of the ALM Web Client user

You know your business and the needs of each ALM Web Client user based on his/her job function. Start by gathering information for each job function, and ask your administrator to customize the Test Sets module so that each user's experience is efficient and productive. Questions you might ask are:

- What information does each ALM Web Client user, based on his/her job function, need to access?

  The ALM Web Client administrator can create custom forms for each job function. See "Designing and managing forms" on page 174.

- Are there field values that some users should see, but not be able to modify?

  Are certain fields mandatory under certain circumstances?

  Are different field look-up lists needed at different times?

  The ALM Web Client administrator can control how fields are displayed and modified using business rules. See "Defining business rules" on page 191.

Consider your testing goals

To decide which test sets to create, consider the goals you defined at the beginning of the application testing process. Consider:

- Issues such as the current state of the application, and the addition or modification of new features.

- Different scenarios that tests must cover.

- The amount of time you have for testing at this point in the application lifecycle.

Examples

Following are examples of test sets you can create to organize test execution:

Test Set	Description
Sanity	Basic checks of the entire application—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, you could test whether the application opens, and enables you to log in.
Regression	An in-depth test of the system. 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	Testing of 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.

Organize test sets and folders according to your goals

Create test set folders to indicate the hierarchy of your tests sets in an organized way.

Create test sets to represent your testing goals in a logical way or according to execution.

For details, see "Defining test sets" on the next page.

How do I run tests?

Once the test sets have been designed, you can run them and/or their associated tests. Running a test set means running each test instance and each configuration in the test set—or a subset of them.

Defining links between requirements, defects, and tests allow you to monitor inter-dependencies. You can use traceability to view links the entities. Keep track of your requirements and assess the readiness of the application with filters, dashboards, and reports.

For details, see "Running tests" on page 165 and "Track testing progress" on page 169.

> **Note:** Comprehensive requirements management capabilities are currently available only in the ALM Desktop Client. For more information, see the *HP Application Lifecycle Management User Guide*.

See also

- "Technical preview: Working with test management by job function" on page 93

- "Designing tests by job function" on page 105

- "Designing test sets by job function" on page 137

- 👤 **Administrators**: "Customizing the ALM Web Client" on page 171

Defining test sets

> **Note:** This section describes a technical preview feature.

You define test sets to test your application in an organized way. The organization reflects your test goals.

Generally, the QA team lead sets up test sets and test set folders.

Begin by looking at your test sets. Create a basic framework of high level test set folders that break your application up into subjects (testing areas) and serve as containers for organizing your tests. A general practice is to create folders according to functional areas in the application. For each of these folders you then define test sets.

Test sets can only be created under a test folder. To add test set folders and test sets, you must have permission from your administrator to do so.

1. Select **Test Management > Test Sets**.

2. Decide where to add the test set by selecting the corresponding test set folder, or click **Add test set folder** to create a new test set folder.

   - Fill in the various fields.

   - You can change the hierarchical location of the test set in the tree by changing the **Test Set Folder** field.

   - You can add attachments to test set folders.

3. If the **Add test set** page is not yet open, click **Add test set**.

4. Fill in the various fields.

   You can change the hierarchical location of the test set in the tree by changing the **Test Set Folder** field.

   Set a default environment on which it is assumed the tests in this test will be run. This default can be overwritten at the test configuration level or the run level. To do this, change the **Default Environment** field.

   > **Tip:** For list fields, click on the field and start typing any part of the value. The ALM Web Client suggests matching values.

5. You can also add attachments by clicking the **Attachments** tab. For details, see

"Working with attachments" on page 38.

6. Save the test set.

7. To add tests to the test set, click the test set ID to edit the test set. For details, see "Adding tests to test sets" on page 155.

8. After adding the tests to the test set, you can:

   ■ Change the columns displayed in the grid by clicking **Choose columns**.

   ■ Run the entire test set by clicking **Run test set**, or run individual or multiple tests by selecting them and clicking **Run selected**.

   ■ Remove tests from the test set by clicking **Delete**.

   ■ Update many tests at once by clicking **Bulk update**. Select the tests, and in the Bulk Update page, enter the fields and values for the bulk update. For details, see "Bulk update" on page 34.

   ■ Reset selected tests' parameters to their original configuration values by clicking **Reset parameters**.

9. While editing the test set, you might want to:

   ■ **View history** Do you need background information? Viewing the history of a test set can give you perspective, including how many people have worked on the test set, and how many times a test set is run. Click the **History** tab to view the history. For details, see "Viewing the history of an item" on page 40.

   ■ **Create traceability**.

   Is the quality of the application based on how many defects are open for the test set? If so, click **Traceability** and create the relationship with the defects.

   > **Tips**
   >
   > ○ Is the determination of whether a requirement is met based on the test set? If so, create an indirect link in the Requirements module. An indirect

link could be from a requirement to a test configuration to its test to its test set. For details, see "Monitoring and managing requirements" on page 72.

- Here are some other ways you can create traceability links to testing entities.

From... To...	Type	Link	Module
Test set > defect	Direct	Test set > defect	Test Management > Test sets
Defect > test set	Indirect	Defect > test > test set	Defects
Requirement > test set	Indirect	Requirement > test configuration > test > test set	Requirements
Requirement > test in test set	Indirect	Requirement > test configuration > test	Requirements
Defect > test	Direct	Defect > test	Defects
Defect > test	Indirect	Run step > run > defect > test	Manual Runner
Defect > test	Indirect	Run > defect > test	Manual Runner

10. Save the test set.

See also

- "Designing test sets by job function" on page 137

- "Test set overview" on page 143

- "Checking coverage using test set traceability" on page 159

- "Getting started" on page 22

- "Displaying what you need" on page 27

- "Common functionality" on page 33

Adding tests to test sets

Note: This section describes a technical preview feature.

Test sets often represent a group of tests that have something in common. For example, to verify a certain requirement, add all the tests covering this requirement to a test set.

1. Select the **Test Management > Test Sets** module.

2. Look for the relevant test set by setting up views and filters. For details, see "Displaying what you need" on page 27 and "Filtering" on page 30.

    Open the test set by clicking its ID number.

    Tip: You can also open a test set by "going" to it. For details, see "Locating an entity using Go to entity ID" on page 40.

3. Click the **Tests** tab.

    Click **Add tests**.

You can add tests in several ways:

- Directly, by choosing **Select > By Tests**

- Adding all tests linked to specific requirements, by choosing **Select > By requirements**

  > **Note:** When adding tests by requirements, tests of non-supported test types are not added. For example, if a Performance Center test is linked to the requirement that you are using to add tests, it is not added.

- Adding all tests linked to defects (both directly and indirectly), by choosing **Select > By defects**

  Locate the entities by filtering, entering text in the search box, or using the tree.

  When a single test is selected, details for that test are displayed in the right pane.

  When multiple tests are selected, a summary is displayed in the pane.

4. Select all configurations or specific configurations.

5. Click **Add**.

See also

- "Designing test sets by job function" on page 137

- "Test set overview" on page 143

- "Defining test sets" on page 151

- "Editing test sets" on the next page

- "Working with tests in test sets" on page 163

Editing test sets

Note: This section describes a technical preview feature.

Keep test sets up-to-date by editing the test set, including adding additional tests, setting the planned execution date, assigning environments, and reassigning testers.

Also, testing plans can change, and you may need to reorganize your test sets and test set folders to match the changes in your planned delivery.

You can edit test sets at any point.

1. Select the **Test Management > Test Sets** module.

2. Look for the relevant test set by setting up views and filters. For details, see "Displaying what you need" on page 27 and "Filtering" on page 30.

   Open the test set by clicking its ID number.

   Tip: You can also open a test set by "going" to it. For details, see "Locating an entity using Go to entity ID" on page 40.

3. Click the **Overview** tab.

4. While filling in the various fields, you can:

   - **Assign testers**. Assign the tester that will create tests for the test set and/or run the test set.

   - **Assign cycles**. You can assign a cycle to a test set to track progress between cycles or to create iteration plans for the testers.

   - **Assign environments**. You can assign an environment to a test set or a test set

folder for complete testing on each required environment. You can report defects on an environment basis to clearly indicate what under which environmental circumstances problems occurred.

- **Change the location of the test set in the tree**. By changing the **Test Set Folder** field, you can change the hierarchical position of the test set in the tree.

- **Add attachments**. Click the **Attachments** tab to work with attachments. For details, see "Working with attachments" on page 38.

- **Insert comments.** Comments are very useful for communication between various users. Each comment gets a timestamp and an indication of who added the comment. Click the **Comments** tab and **Add Comment**. For details, see "Adding comments" on page 38.

- **View history** Do you need background information? Viewing the history of a defect can give you perspective over why a defect was opened, how many people have worked on the defect, and how a defect eventually became assigned to you. Click the **History** tab to view the history. For details, see "Viewing the history of an item" on page 40.

- **Create traceability**. Is the quality of the application under test contingent on how many defects are open for tests in the test set? If so, create a relationship between the defect and this test set. Click **Traceability** and create the relationships. For details on traceability, see "Checking coverage using test set traceability" on the next page.

  > **Tip:** You can also add links to a selected test set and requirements from the Requirements module.

  The relationships can be indirect as well as direct, meaning if you link a test run to a defect, its test is also linked to the defect.

5. Click the **Tests** tab to:

   - **Add tests**. Locate the tests you want to add using the tree and click **Add**. For details, see "Adding tests to test sets" on page 155

- **View details**. View the details of a specific test.

- **Perform bulk updates**. Select the tests you want to edit and click **Bulk Update**. Choose the fields you want to update and enter values for the update. Click **Update**. For details, see "Bulk update" on page 34.

- **Delete**. Delete a test(s).

6. Choose **Actions > Reset test set** in any tab to reset the status of all test instances in the current test set to **No Run**.

See also

- "Designing test sets by job function" on page 137

- "Test set overview" on page 143

- "Checking coverage using test set traceability" below

- "Checking coverage using test set traceability" below

- "Getting started" on page 22

- "Displaying what you need" on page 27

- "Common functionality" on page 33

Checking coverage using test set traceability

Note: This section describes a technical preview feature.

Once your tests have been run, check that the defects reported on a test set have been fixed. This allows you to assess the quality of your application.

Adding traceability links to test sets while adding a test set

1. In the Add dialog box for the entity, click **Trace**.

2. Choose the option for the entity you want to link to/from:

   ■ **Requirement coverage** or **Link to requirement**

   ■ **Link from requirement**

   ■ **Link to defect**

   > **Note:** Not all entities support each of these traceability links. Only supported entities are listed.

3. Depending on the entity you are linking, you can select the entity by:

   ■ **ID**. Click the **ID** radio button, if it exists and enter the ID number.

   ■ **Tree**. Click the **Tree** radio button, if it exists. Expand the tree as necessary and navigate to the entity.

   ■ **Search**. Enter a string in the **Search** field, if it exists.

   A preview of the entity is displayed on the right.

4. Select the entity in the resulting list of matches.

5. Click **OK**.

Adding traceability links to test sets while editing the test set

1. In Details of the entity, click the **Traceability** tab.

2. Using the view selector [Summary ⌄] on the right, select **Summary** or the entity whose links you want to view or add.

3. Click **Add traceability** or the **Add** button for adding the entity you selected with the view selector.

4. If you are viewing the summary, choose the option for the entity you want to link to/from:

   ■ **Requirement coverage** or **Link to requirement**

   ■ **Link from requirement**

   ■ **Link to defect**

   > **Notes**
   >
   > ■ Not all entities support each of these traceability links. Only supported entities are listed.
   >
   > ■ If you not viewing the summary, but instead are viewing one type of linked entity, that is the only type of traceability link that you can add.

5. Depending on the entity you are linking, you can select the entity by:

   ■ **ID**. Click the **ID** radio button, if it exists and enter the ID number.

   ■ **Tree**. Click the **Tree** radio button, if it exists. Expand the tree as necessary and navigate to the entity.

   ■ **Search**. Enter a string in the **Search** field, if it exists.

   A preview of the entity is displayed on the right.

6. Select the entity in the resulting list of matches.

7. Click **OK**.

Viewing test set traceability links

You can view the following types of links from the test set summary:

- **Requirement coverage.** Requirements that are indirectly linked to the selected test set (linked from the Requirements module).

- **Linked defects.** Defects related to the selected test set.

> **Tip:**
>
> - In the Traceability tab, use filters to limit the links that are displayed so that you can focus on what is important to you. for details, see "Filters and how they affect the summary" on page 48.
>
> - Click the ID of any linked entity to view its details.

Viewing the traceability of indirect links to defects

To see an entity's linked defects, choose **Linked defects** from the view selector in the Traceability tab.

The default setting is to display both direct and indirect links.

If you want to display only direct links, toggle **Include Indirect Links** [🔗] off. When the view does not include indirect links, an 🔗 icon is displayed when viewing the summary.

> **Tip:**
>
> - Use filters to limit the data that is displayed so that you can focus on what is important to you.
>
> - Click the ID of any linked requirement or defect to view its details.

Removing traceability links for test sets

You can remove traceability links in the Traceability tab.

1. Using the view selector, select the option for the entity you want to delete.

2. In the grid, select the entity you want to delete.

3. Click **Remove Trace**.

See also

- for an overview of traceability

-

-

-

-

Working with tests in test sets

> **Note:** This section describes a technical preview feature.

Define Test Set Folders → Define Test Sets → Add Tests to Test Sets → Edit

You can get additional details about specific test instances and their runs in a test set, and perform actions on the test in the test set.

1. Select the **Test Management > Test Sets** module.

2. Look for the relevant test set by setting up views and filters. For details, see and .

Open the test set by clicking its ID number.

> **Tip:** You can also open a test set by "going" to it. For details, see "Locating an entity using Go to entity ID" on page 40.

3. In the Overview tab, click the link for the test instance.

4. Perform the desired activities:

   - See all test runs for the test in the test set.

   - Send the test to a colleague.

   - Open a defect for a particular test in the test set.

   - See linked requirements and defects.

   - Add traceability links.

   - Add attachments.

   - Update parameter values for test instances in test sets, overriding the default set at the test set level and the configuration level.

See also

- "Designing test sets by job function" on page 137

- "Test set overview" on page 143

- "Defining test sets" on page 151

- "Editing test sets" on page 157

- "Adding tests to test sets" on page 155

Running tests

> **Note:** This section describes a technical preview feature.

Define Release Settings for Testing → Design Tests → Design Test Sets → **Run** → Track Testing Progress

You can run the a single test, some tests, or all tests in a test set. You can also manage your test runs, including functions like viewing and editing a test run's details, deleting a test run, and continuing a test run.

1. Select the **Test Management > Test Sets** module.

2. Look for the relevant test set by setting up views and filters. For details, see "Displaying what you need" on page 27 and "Filtering" on page 30.

   Open the test set by clicking its ID number.

   > **Tip:** You can also open a test set by "going" to it. For details, see "Locating an entity using Go to entity ID" on page 40.

3. Click the **Tests** tab.

4. Run the tests.

   ■ To run one or more tests, select the test(s). Click **Run Selected**.

   ■ To run all the tests in the test set, make sure no tests are selected and click **Run**.

   The runner opens. For details on running tests, see "Running tests manually" on the next page.

5. Click the **Test Runs** tab. Here you can see a list of all test instance runs for this test set. From this list, you can:

- Continue the runs for any test run you select.

- View and/or edit the details of a test run.

- Delete a test run.

Tip: Choose **Actions > Reset test set** in any tab to reset the status of all test instances in the current test set to **No Run**.

See also

- "Designing test sets by job function" on page 137

- "Test set overview" on page 143

- "Running tests manually" below

- "Track testing progress" on page 169

Running tests manually

Note: This section describes a technical preview feature.

When running tests in a 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 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.

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 using the manual runner. For details on starting the manual runner, see "Running tests" on the previous page.

Using the manual runner

1. In the **Environment** section, review the environment for performing the steps. If you are testing on a different environment, you can change the default. For details, see "Defining environments" on page 103.

2. Follow the instructions detailed in the test step descriptions.

3. Compare the actual results with the expected results. Did the application respond according to the expected results?

4. Click ⃝˅ to the right of the step names to assign a pass or fail status to each step, depending on whether the expected results match the actual results.

   Tip: To assign the same status to all test steps at once, click ◐˅ in the upper right of the window.

5. If a step fails, explain how the application actually responded. A test fails if one or more steps fail.

6. When running tests manually you can also:

   ▪ **Add defects.** You can add defects to test runs and to test steps.

      ○ To add defects to a test step, click the menu icon ≡ to the right of the step name.

      ○ To add defects to a test run, click the defect icon ▭ in the upper right of the window.

   Click **Add Defect** and fill in the various fields.

   For details, see "Defining defects" on page 85.

- **Link to defects.** Link to defects related to test runs and to test steps.

  - To link defects to a test step, click the menu icon ≡ to the right of the step name. Click **Link to Existing**.

  - To link defects to a test run, click the menu icon [≡] in the upper right of the window. Click **Link to Existing**.

  Enter the ID of the defect to link.

  For details, see "Defect traceability" on page 89.

- **Add attachments.** You can add attachments to test runs and to test steps.

  - To add attachments to a test step, click the menu icon ≡ to the right of the step name. .

  - To add attachments to a test run, click the attachment icon [📎] in the upper right of the window.

  Click **Add Attachment** and select the file you want to upload.

  For details, see "Working with attachments" on page 38.

7. To view or edit the details of a test run, click the run details icon [≡] in the upper right of the window.

> **Tip:** If a test run was paused during execution, you can continue the run later. To restart Manual Runner and continue the run, click the **Test Runs** tab. Select the test run and click **Continue run**.

See also

- "Designing test sets by job function" on page 137

- "Test set overview" on page 143

- "Running tests" on page 165

- "Track testing progress" below

Track testing progress

> **Note:** This section describes a technical preview feature.

| Define Release Settings for Testing | → | Design Tests | → | Design Test Sets | → | Run | → | Track Testing Progress |

You can monitor test runs in several ways.

- "Viewing the test runs" below

- "Viewing the test run results report" below

- "Viewing direct coverage status from the Requirements module" on the next page

- "Viewing traceability links" on the next page

Viewing the test runs

For all test sets. In the Test Management module, click **Test Sets** and select the **Root** folder. In the **Test runs** tab you can see a list of all test runs for all test sets. You can filter as necessary to see only the relevant test runs and you can modify the columns to display.

For tests in a test set. In the Test Management module, click **Test Sets > Test Runs** tab. Here you can see a list of all test runs for this test set. You can filter as necessary to see only the relevant test runs and you can modify the columns to display.

Viewing the test run results report

After running a test, the test run results report is generated. Look at the report to see if the test configurations and steps passed. To view the report, open the run and click the **Report** tab.

Viewing direct coverage status from the Requirements module

In the Requirements module, change the view as necessary to see if each requirement is covered, meaning, its linked tests have met the requirements' criteria.

Viewing traceability links

1. Select the Test Sets module.

2. Look for a relevant test set by setting up views and filters. For details, see "Displaying what you need" on page 27 and "Filtering" on page 30.

3. Open the test set details.

4. Click **Traceability**. Existing traceability links for the test set are displayed.

   For details, see "Viewing test set traceability links" on page 162.

See also

- "Designing test sets by job function" on page 137

- "Test set overview" on page 143

Chapter 6: Customizing the ALM Web Client

👤 **Administrators**: As the ALM Web Client administrator, you can customize the end user's ALM Web Client experience. You can customize the Requirement and Defects modules.

Working with customization in the ALM Web Client involves the following tasks:
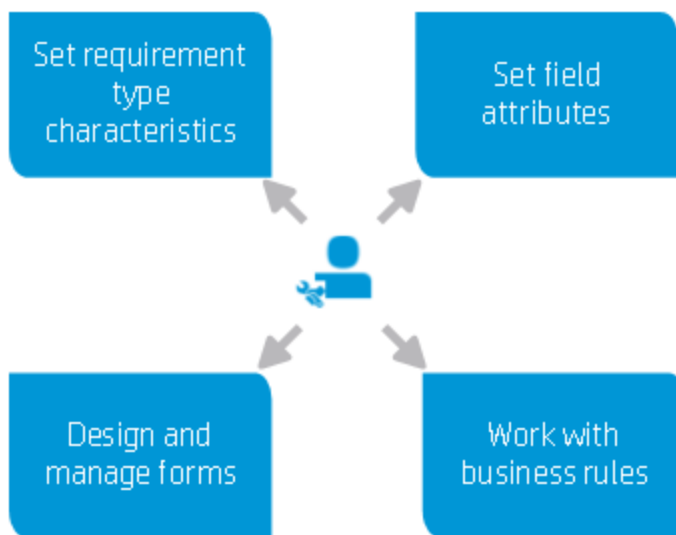
Only one administrator can make changes in Customization at a time. However, administrators can view existing settings at any time, even if another administrator is making changes.

When entering Customization, click **Edit & Lock** on the upper-right to make changes. Remember to **Unlock** when finished.
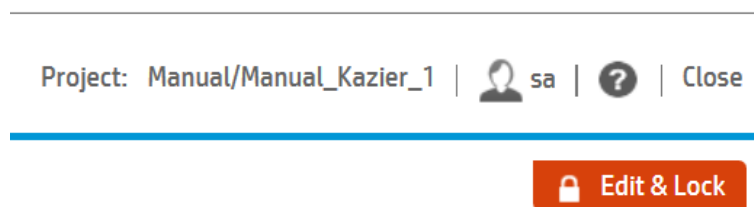
See also

- "Managing projects" on page 239

Setting requirement type characteristics

As the ALM Web Client administrator, you can customize requirement types on a project-by-project basis to meet the needs of your users.

1. Select ⚙ and then **Customization** at the upper right to enter customization.

2. Select the module to customize. In this case, **Requirements**.

3. Select **Types**.

4. Select the requirement type you want to change, and then:

   - To change a requirement type's icon, select a new icon from the **Type Icon** drop-down list.

   - To set the default type for the requirement type's children, select a requirement type from the **Default Child Subtype** drop-down list.

     Example

     If you set **Functional** as the default child subtype for the **Group** requirement type, when you create a requirement under a **Group** requirement, the child requirement will be of type **Functional** automatically.

   - To set a requirement type as a document root when working in Author mode, set **Document Root** to **Y**. For details on working in author mode, see "Editing requirements" on page 66.

     You can set more than one requirement type as a document root.

     Tip: If a child or a grandchild of a document root is also a document root,

> Author mode creates documents starting with the highest level document root.

5. Click **Save**.

See also

- "Customizing the ALM Web Client" on page 171

Setting field attributes

As the ALM Web Client administrator, you can customize how fields are displayed and used in the ALM Web Client. For example, you can make certain fields visible in the ALM Web Client and modify a description displayed when the user makes the mouse hover over the field.

Set field attributes

You can change field attributes for requirements and defects.

1. Select ⚙ and then **Customization** at the upper right to enter customization.

2. Select the module to customize.

3. If necessary, click **Edit & Lock** to edit Customization.

4. Select **Fields**.

   Default values are retrieved from the ALM server.

5. Select the field to customize.

   > **Note:** Some fields are read-only.

6. Edit the attributes for the field.

> **Note:** Some field attributes can be modified only from the desktop client.

7. Click **Save**.

8. Click **Unlock** so others can modify values in Customization.

Restore field attributes

1. Select ⚙ and then **Customization** at the upper right to enter customization.

2. Select the module to customize.

3. If necessary, click **Edit & Lock** to edit Customization.

4. Select **Fields**.

5. Click **Restore** to discard changes made since the last save.

6. Click **Unlock** so others can modify values in Customization.

See also

- "Customizing the ALM Web Client" on page 171

Designing and managing forms

As the administrator, you can design forms for use in each project. Forms enable end users to view and edit relevant information for entities using a Details layout that is meaningful to their organization.

Administrators can design and manage forms for the Requirements module and the Defects module.

To watch a movie on how to work with forms, refer to this section in the ALM Web Client Online Help.

Forms are defined per module within a project. For example, you can define different forms for the Requirements module, and the Defects module in the same project. Which form is used is controlled by the business rules you create. For details, see "Defining business rules" on page 191.

> **Tip:** You can create forms in a staging area and, after testing, put them into production. For details, see "Staging rules and forms, and putting into production" on page 210

This section contains the following:

- "How administrators design forms" on the next page

- "What are the parts of the form designer?" on page 177

- "Designing forms" on page 177

- "Deleting forms" on page 179

- "What are the parts of the form designer?" on page 177

How administrators design forms

CUSTOMIZATION: FORMS

The administrator is responsible for creating and maintaining various data input forms for different users in the organization and for the various circumstances users encounter during the life cycle of application design, development, and testing.

Define	Implement

Stage

Consider designing forms in a project for staging purposes only. This way, users can continue working while you enhance existing forms.

Plan

Consider each type of user and his/her needs.

- Do all users need a quick, easy form for initially creating an entity 🔖?

- Does each user need access to different fields when editing an entity?

Meet with different types of users to understand the needs.

Duplicate and edit

An efficient way to make sure that your forms initially contain the same information is to duplicate the system default form. Then modify it as you wish.

Set a default form

If no special circumstances exist, the ALM Web Client uses the form you set as a default.

Define business rules

With business rules, you can set up which form to use and when. For details, see Working with business rules.

Put into production

Export and the import your forms and rules for each module into the project used for production. For details, see Staging rules and forms, and putting into production.

What are the parts of the form designer?
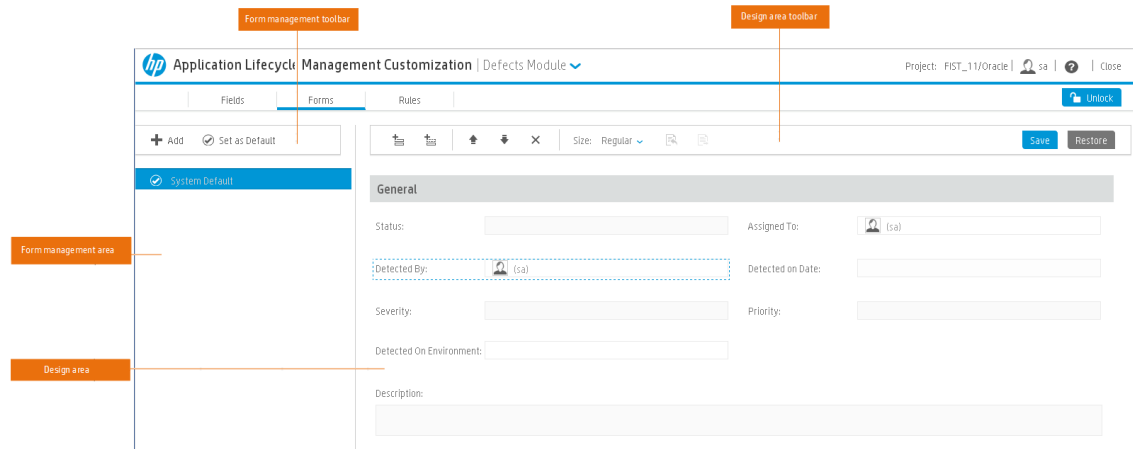
In the Form Designer, you can:

- View existing forms, add forms, delete forms, and set default forms in the Form management area.

- Add fields to the form, and group them into sections, in the Design area.

- Set display and editing properties for fields with the Design area toolbar.

- Reorder and/or remove fields in the form by selecting a field in the Design area and using the Design area toolbar.

Note: Name and Type fields cannot be accessed in the Form Designer.

Designing forms

1. Click ⚙ and then **Customization** at the upper right to enter customization.

2. Select the module for the form.

3. If necessary, click **Edit & Lock** to edit Customization.

4. Click **Forms**.

5. In the Form management area:

   ■ Select an existing form.

   ■ Click **Add** to create a new form, or select the system default form and click ⌄
     > Duplicate to make a copy of the system default form. You can then modify
     your copy.

   > **Tip:** Make sure to specify a unique name for the new form.

6. In the Design area, add fields and sections using the ⊞ **Add field** and ⊟ **Add
   section** buttons.

   Adding fields:

   ■ You can search for a field using the **Type to search** box.

   ■ You can also associate a field with a section by choosing the section from a list
     or creating a new section.

   ■ Fields are added after the currently selected field.

   ■ When adding or editing fields, choose either **Regular** or **Full** in the **SIze** drop-
     down. This setting determines if the field takes up an entire row or if the
     ALM Web Client can put it on a row with other fields.

   ■ When finished adding fields, click outside the list to close the list.

   Adding and deleting required fields:

   ■ All required fields must be added to the form. For your convenience, the
     ALM Web Client required fields are automatically added to the form for you. You
     can move them on the form but you cannot delete them.

7. Modify the attributes for each field or section in the Design area toolbar. For
   example, you can set whether a field (other than memo) takes up half the space on
   the form or the full space by setting the **Size** to **Regular** or **Full**.

> **Tip:** You can also use the Design area toolbar to:
>
> - Reorder fields
>
> - Delete fields
>
> - Delete a section with or without its fields
>
> - Navigate between fields

8. Click **Unlock** so others can modify values in Customization.

Deleting forms

1. Click ⚙ to enter customization.

2. Select the module for the form.

3. If necessary, click **Edit & Lock** to edit Customization.

4. Click **Forms**.

5. In the Form management area, select the form to delete.

6. Click ⌄ **> Delete**.

7. Click **Unlock** so others can modify values in Customization.

Setting the default form

1. Click ⚙ to enter customization.

2. Select the module for the form.

3. If necessary, click **Edit & Lock** to edit Customization.

4. Click **Forms**.

5. In the Form management area, select the form that should be the default.

6. Click **Set as default**.

7. Click **Unlock** so others can modify values in Customization.

Want to see sample forms? See "Designing the needed forms" on page 218.

See also

- "Customizing the ALM Web Client" on page 171

- "Staging rules and forms, and putting into production" on page 210

- FAQ for "Importing and exporting rules and forms" on page 216

FAQs for forms

Here are some frequently-asked-questions about working with forms.

> **Tip:** Do you have some questions and answers you'd like to add? Email us at sw-doc@hp.com.

Creating and designing

I can't edit my system default form.

The system default form is a read-only form. This way, you can always revert back to

these default settings. You can duplicate the form (**> Duplicate**) to modify a new form based on these default settings.

I can't delete a field.

- If the field is a required field for the entity, you cannot delete it.

- If you are using the system default form, you cannot make any changes.

The system default form is a read-only form. This way, you can always revert back to these default settings. You can duplicate the form (⌄ > **Duplicate**) to modify a new form based on these default settings.

See also

- "Designing and managing forms" on page 174

Working with business rules

👤 **Administrators**: As the ALM Web Client administrator, you can customize the end user's ALM Web Client experience using business rules.

> **Note:** Business rules is a Web Client feature and is not applicable to any REST integrations.

To watch a movie on the basics of how to work with business rules, refer to this section in the ALM Web Client Online Help.

To watch a movie on designing sets of business rules that work together to enforce company policy, refer to this section in the ALM Web Client Online Help.

How administrators design business rules

CUSTOMIZATION: BUSINESS RULES

The administrator is responsible for creating and maintaining business rules to enforce organization policies, dictate workflow, and to handle the various circumstances users encounter during the life cycle of application design, development, and testing.

Define

Stage

Consider designing rules in a **project** for staging purposes only. This way, users can continue working while you enhance existing rules.

Plan

For each module, consider each type of user and his/her needs.

- What forms are needed by which users?

- What is the workflow for each user? For example, when a developer works on a **defect**, the statuses available should be different than the statuses available to a tester.

- What notifications does each user need, and under what circumstances? For example, a tester would want to know if a defect is fixed.

Meet with different types of users to understand the needs.

Create associated entities

Business rules help to control your application lifecycle and can make use of other entities to do so. For example, you can control the list values that users see, or the fields a user sees when creating a new **requirement** or defect.

- Create the various forms your users need for data entry. For details, see Designing and managing forms.

- Create user lists, user-defined fields, and any other relevant entities in ALM Desktop Client Customization. For details see the *HP Application Lifecycle Management Administrator Guide.*

Create business rules

You can create rules or duplicate existing similar rules.

Implement

Order business rules

The order in which your rules are listed impact the order in which actions are performed.

Make sure your rule are listed in a logical order that meets your organization's needs.

Put into production

Export and the import your forms and rules for each module into the project used for production. For details, see Staging rules and forms, and putting into production.

See also

Understanding business rules

⚇ Administrators. Business rules customize the ALM Web Client user interface and control actions users can perform. The rules enable administrators to implement and enforce organizational, departmental, and group policies on a project-by-project basis.

> **Note:** The Business rule feature in the ALM Web Client is not the same as the set of workflow features in ALM Desktop Client. The business rule feature does not work in conjunction with the workflow features.

Business rules contain an action and usually a condition. You set the action that should occur when the defined condition is true.

Actions

- Most actions affect fields. These actions generally affect organizational policy. You can:

  - Make certain fields required or optional.

  - Make certain fields read-only or editable.

  - Change the values for field lookup lists—either to a different lookup list or a subset of a lookup list.

  - Set a default value for a field when creating or changing an entity.

  - Set a value for a field if the value of another field changes.

  - Send an email if an entity is created, changed, or deleted.

  - Validate an entity when it is created, changed, or deleted.

- Some actions affect forms, such as enabling users to choose different form layouts for adding and editing entities. These actions affect usability.

Conditions

Conditions, when met, cause the rule's action to be performed. Conditions can be based on a value of a field or on the group associated with a user.

You don't have to specify a condition, but you can. If you don't specify a condition, the rule's action is always performed.

The ALM Web Client evaluates complex conditions only until the condition evaluates to either true or false, and then does not continue evaluating the rest of the complex condition.

- If the ALM Web Client evaluates an OR condition, and the first part of the condition evaluates to true, there is no need to continue evaluating the second part of the condition. The complex condition is met.

- If the ALM Web Client evaluates an AND condition, and the first part of the condition evaluates to false, there is no need to continue evaluating the second part of the condition. The complex condition is not met.

Tip: Conditions can evaluate to false if the ALM Web Client encounters a field in a rule definition that it cannot process because the field does not exist. Sometimes this is because a field was removed from the project.

However, there are situations where this is not an error, but part of the logic necessary to implement your organization's policy.

For example, different requirement types have different fields. When defining a condition, if you refer to a field that is not available for all requirement types, the condition will not be met if the requirement type being processed does not have that field. In this case, the best practice is to define the condition so that it quantifies the requirement type also. For an example, see the FAQ: ""I am defining a rule for different requirement types that have different fields. The condition I defined takes the requirement types into account, but still fails. Why?" on page 216."

How to work with rules

| Plan | Define actions | Define conditions | Save |

Think about the rules you need. What use case should your rules handle? What should the rules achieve?

- There may be a use case for which several rules are needed. For example, to set different lookup lists based on a field value, you need a rule for each lookup list.

- The order in which the rules appear in the rule list is also important. Later rules override the actions of earlier rules.

Define *what* actions to perform in the Action tab.

In this tab, you can also:

- Add remarks that explain the purpose and logic behind the rule.

- You can also describe the use case, as determined during the Plan phase. Deactivate the rule. (Rules, by default, are activated.)

Define *when* actions are performed using conditions in the Condition tab.

- The condition can be based on a value of a field or on the group associated with a user.

- Don't define a condition if you want the Set Email, Validate, and Set Value actions to be performed under all circumstances, meaning, unconditionally.

  Rules containing any other action must have a condition.

Save the changes.

Once saved, expect the rules to run in real-time.

Examples of rules you can create

Switching Lookup lists

Depending on the requirement type, possible priorities for requirements might be different. You can create a rule that assigns different lookup lists based on requirement type.

Condition: If the **Requirement Type** field is a specific value...

Action: Use a different lookup list for the requirement's possible **Priority** values.

Setting a subset of a Lookup list

Depending on the current product, certain releases are available. You can create a rule that makes only a subset of the current lookup list available, based on the product.

Condition: If the **Product** field is a specific value...

Action: Select the **Release** values that are relevant to that product.

Making fields required

When assigning a defect status to **Open**, it is implied that a developer is assigned to the defect. It would not be appropriate for the **Assigned to** field to be blank.

Condition: If the **Status** field is **Open**...

Action: The **Assigned to** field is required.

Setting default field values

When creating a requirement, make sure certain fields are set to default values .

Condition: Under all circumstances...

Action: Set the **Covered Status** field to **Not Covered**.

Sending an email

When reassigning a defect to another developer, make sure the developer gets notified.

Condition: A defect's **Assigned to** field is changed..

Action: Send an email to the new **Assigned to**..

Picking forms

When a tester creates a defect to report a bug, organizational policy dictates that the tester be able to view and edit the following fields: **Summary**, **Description**, **Priority**, and **Severity**.

Similarly, when a developer starts fixing a defect, the developer must be able to view and edit the following fields: **Status**, **Target Cycle**, and **Target Release**.

Define two rules:

- **Rule 1**:Sets a form for developers.

  Condition: If the current user belongs to the **Developer** group…

  Action: The form for developers is used.

- **Rule 2**:Sets a form for testers.

User's groups	include	Developer

  Condition: If the current user belongs to the **Tester** group…

  Action: The form for testers is used.

See also

- "Business rule activation and performance" on the next page

- "Defining business rules" on page 191

- "Customizing the ALM Web Client" on page 171

- "Designing and managing forms" on page 174

# Business rule activation and performance

This section describes how the ALM Web Client decides which rule actions to perform and when to perform them. It also discusses the significance of the order of the rules in the grid.

- "When are rule conditions evaluated and rule actions performed? " below

- "Does the order my rules are listed in the grid affect how they run? " on page 190

- "My organization has many rules. Any tips on how to list them in the grid? " on page 190

When are rule conditions evaluated and rule actions performed?

Most rules are evaluated on an ongoing basis and their actions are performed when necessary. Other rules are evaluated after certain events occur.

The ALM Web Client evaluates rule conditions and performs rule actions in one of two ways:

- **As users work, on an ongoing basis.** The ALM Web Client checks to see if the conditions for activated rules are being met. When conditions are met, rule actions are performed. Most rules fall into this category (**Read-only** rules, **Use form** rules, and so on).

- **If certain events occur.** In addition to evaluating the conditions of activated rules to make sure the conditions are met, certain events must also occur for these rules' actions to be performed. These events include the creation of a new entity, deletion of an existing entity, or changing an existing entity.

  Note: You do not have to specify a condition when defining the following types of rules. Their actions can be performed when the event occurs without any other constraints.

Examples include:

- **Value-setting rules.** These rules change the value of a field as an entity is created or changed. These rules' actions occur as soon as the operation is initiated.

- **Email rules**. These rules send an email if an entity is created, changed, or deleted. These rules' actions are performed when the creation, change, or deletion completes.

- **Validate rules**. These rules validate an entity when it is created, changed, or deleted. These rules' actions are performed when the creation, change, or deletion completes.

> **Note:** Moving an entity in the tree is not considered a change to the entity.

> **Note:** When creating rules that determine if a field is required or read-only, only one rule can be activated for a specific field. For example, you cannot activate two rules on the field **Priority**, one making the field **Priority** mandatory and the other making the field **Priority** optional, at the same time. Both rules can exist, but they cannot both be activated. For details, see "Is it possible for my rules to conflict logically, and if so, how is this handled?" on page 214

By default, rules are activated when they are defined.

> **Tip:** To deactivate a rule after it is defined, select the rule in the Rule list and click **OFF**.

Does the order my rules are listed in the grid affect how they run?

If an entity meets the conditions of several rules, each of the rules' actions are performed on that entity in the order the rules are listed in the grid.

> **Example**
>
> A rule checks if a requirement is new (**Edit mode=New**) and if so, sets the input form to **TheAddForm**. This form lets users enter the basic information for a requirement, without getting into details that are generally only known at a later time.
>
> The next rule in the list checks if a requirement is already in existence and being edited (**Not (Edit mode=New)**). In this case, the rule sets the input form to **TheEditForm**.
>
> A third rule checks if the **Priority** for the requirement is **1-Critical** and if so, sets the form to **TheCriticalForm**. This form forces the specification of additional fields for explaining why this requirement is critical. This rule contradicts the setting of the second rule, because as it is the last to run, its result is the one that is retained— even if the requirement is not new.

My organization has many rules. Any tips on how to list them in the grid?

If so, you may find it helpful to organize your rule list according to how the ALM Web Client processes rules. This has no impact on when rule actions run, but it may help you see the big picture.

This order also most resembles the way the ALM Web Client processes the rules "behind the scenes."

1. First list the rules that occur after a certain event:

   a. Rules that change field values as an entity is being created.

   b. Rules that change field values when an entity is changed or deleted.

c. Rules that send emails.

d. Rules that validate an entity.

2. List all other rules. These are the rules that are evaluated and performed on an ongoing basis.

> **Tip:** You are likely to have many rules that set different lookup lists and sublists to cover all scenarios. It's easier to read if these are grouped together at the end.

See also

- "Understanding business rules" on page 183

- "Defining business rules" below

- "Customizing the ALM Web Client" on page 171

- "Designing and managing forms" on page 174

Defining business rules

The ALM Web Client administrator can create business rules on a project-by-project basis.

> **Tip:** You can prepare business rules in a staging area, and then put the rules into production by importing them into your live project. For details, see "Staging rules and forms, and putting into production" on page 210.

1. Click ⚙ and then **Customization** to enter customization.

2. Select the module for the rule.

3. If necessary, click **Edit & Lock** to edit Customization.

4. Click **Rules**. Existing rules display in a grid.

> **Tip:**
>
> ■ Rules that are not defined correctly display with a and individual fields display with a red border.
>
> ■ You can filter the rules you see in the grid. Using the text box at the top of the grid, enter text. Only rules whose **Action**, **Condition**, or **Remark** contain this text are listed in the grid. To clear the filter, erase the text in the text box.

5. Click **Add Rule**, or select a rule and click **Duplicate Rule**.

6. Set the business rule's action and the condition. See "Defining actions" on the next page and "Defining conditions" on page 199.

> **Tip:** If you want the rule containing either a **Set Value** , **Validate**, or a **Send Email** action to be performed under all circumstances, you do not need to set a condition. Define the action and proceed to the next step.

Rules are added to the Rule list. Added rules are appended to the end of the rule list. Duplicated rules are added after the selected rule.

> **Tip:** You can search for rules in the grid. Type a string in the text box at the top of the grid. Rules whose action, condition, or remark does not contain the string are hidden.

7. By default, rules are activated. For details, see "Business rule activation and performance" on page 188.

8. Order the rules. Click **Move Up** or **Move Down** to reorder the rules in the Rule list.

> **Tip:** When run, the actions of the rules at the end of the list override the rules earlier in the list. For details, see "Is it possible for my rules to conflict logically, and if so, how is this handled?" on page 214.

9. Click **Save Changes**.

10. Click **Unlock** so others can modify values in Customization.

See also

- "Understanding business rules" on page 183

- "Business rule activation and performance" on page 188

- "Defining actions" below

- "Defining conditions" on page 199

- "Customizing the ALM Web Client" on page 171

- "Designing and managing forms" on page 174

Defining actions

You can define rules that:

- Set the Details layout of the requirement or defect using forms.

  > **Tip:** The forms must be defined in the ALM Web Client before creating the rules.

- Set a field to be required or optional

- Set a field to be read-only or editable

- Send an email

- Validate an entity

- Set a value, such as a default value

- Change a field's lookup list to a different list or a subset of a lookup list

> **Tip:** The lookup list must be defined in the ALM Desktop Client before creating the rules.
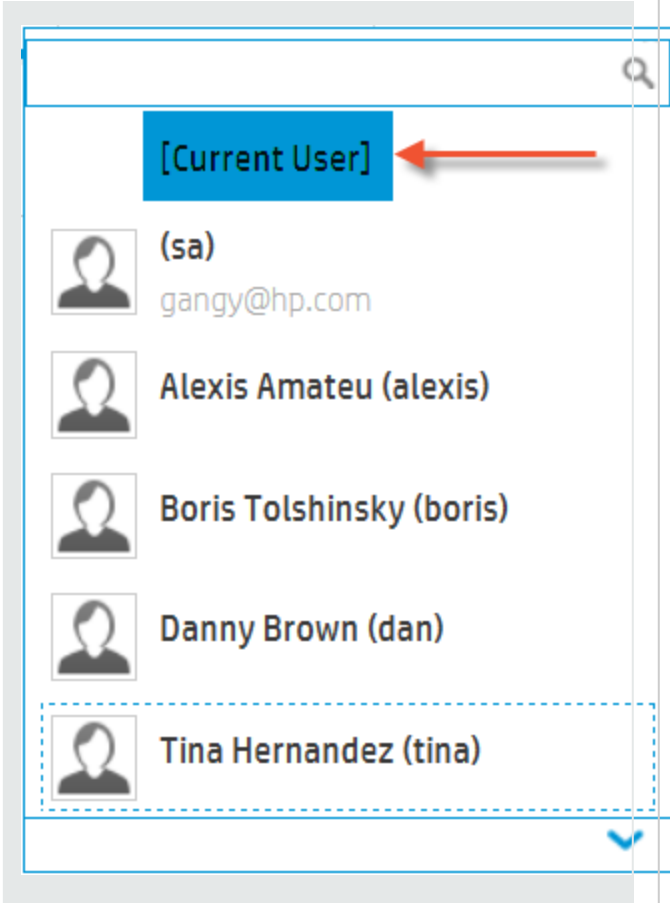
To define actions:

1. Click the **Action** tab.

2. Define the action you want the rule to perform.

For this action...	Enter the following...	See sample...
Make required	■ The field you want to make required.	■ "Setting up default forms and values" on page 217
Make optional	■ The field you want to make optional.	■ "Setting up default forms and values" on page 217
Make read-only	■ The field you want to make read-only.	■ "Setting up default forms and values" on page 217
Make editable	■ The field you want to make editable.	■ "Setting up default forms and values" on page 217

For this action...	Enter the following...	See sample...
Modify lookup list	■ The field whose list you want to change. ■ The name of a pre-defined list you want to use. This list must be pre-defined in ALM Desktop Client Customization. ■ You can limit the options in the lookup list by selecting specific values from the lookup list.	■ "Limiting status choices based on the user's project" on page 234
Use form	■ A pre-defined form layout, created in **Customization > Forms**.	■ "Transitioning through the life cycle of a defect" on page 231

For this action...	Enter the following...	See sample...
Set field value	■ The trigger that causes a value to be set, which can be when an entity is created, or an entity field is changed. This is called **Timing**. ■ The field whose value you want to set. ■ The new value, empty, or a copy of another field's value When setting a date value, the **[Date of change]** option sets the date to the date the change was made. **Tip:** When you select a field that lists users, you can select the special user **[Current User]** for the currently-logged in user:	■ "Setting up default forms and values" on page 217 ■ "Handling changes to priorities" on page 228

For this action...	Enter the following...	See sample...

For this action...	Enter the following...	See sample...
Send email	■ The trigger that causes an email to be sent, which can be when an entity is created, deleted, or changed. This is called **Submission mode**. ■ The recipient, which can be users defined in the project or users whose names appear in fields' lookup lists. ■ The subject of the email. (The body of the email is generated automatically by the ALM Web Client.)	■ "Transitioning through the life cycle of a defect" on page 231 ■ "Handling changes to priorities" on page 228
Validate	■ The trigger that causes a validation to be performed, which can be when an entity is created, deleted, or changed. This is called **Submission mode**. ■ The validation type, either error, warning, or information. ■ The text of the validation message.	

3. Add remarks to explain the purpose and logic behind the rule. Documenting the rule is very important for overall management of business rules.

4. To set a condition for the rule, see "Defining conditions" on the next page. If your rule contains a **Set Email** , **Validate**, or **Set Value** action, setting conditions is optional.

See also

- "Understanding business rules" on page 183

- "Defining business rules" on page 191

- "Customizing the ALM Web Client" on page 171

- "Designing and managing forms" on page 174

Defining conditions

1. Click the **Condition** tab.

2. Create the condition.

   > **Note:** Only one condition can be defined. The condition can be a complex condition.

   a. In the **Field** box, choose a field on which to base the condition, or a special circumstance.

      > **Tip:** Start typing a field name in the corresponding box to search and choose from a list.
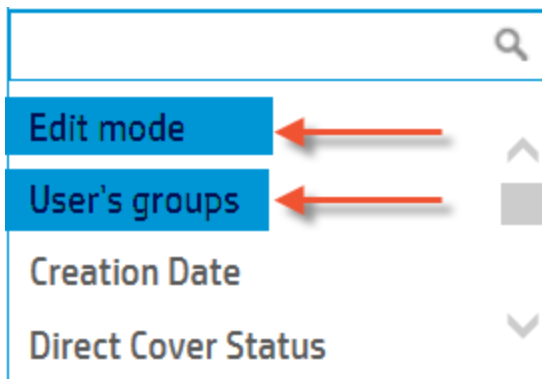
Special circumstances include:

○ **Edit Mode**. The condition is based on whether the current entity existed already and is now being edited, or if the current entity is new.

To check if new: **Edit mode = New**

To check if existing: **Not(Edit mode = New)**

> See samples:
>
> - "Defining a rule to use the QuickAdd Requirements form" on page 223
>
> - "Defining a rule to use the Business Analyst form" on page 223
>
> - "Defining a rule to use the Project Manager form" on page 224

○ **User's Groups**. The condition is based on whether the current user belongs to a specific user group, as defined in ALM Desktop Client Customization.

> See samples:
>
> - "Defining a rule to use the Business Analyst

form" on page 223

- "Defining a rule to use the Project Manager form" on page 224

- "Limiting status choices based on the user's role" on page 232

> **Tip:** You can base your condition on the values of fields from other modules, such as a **Target Release** or **Target Cycle** from the Releases module.

b. In the next box, choose an operator.

Depending on the field, different operators are available. For example, date fields display different operators from text fields.
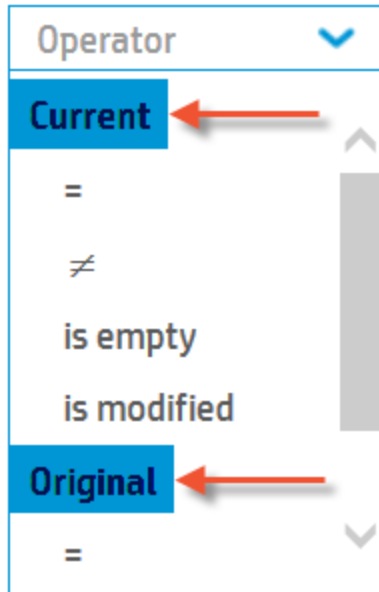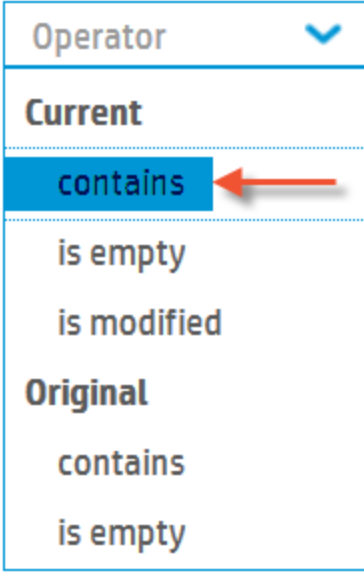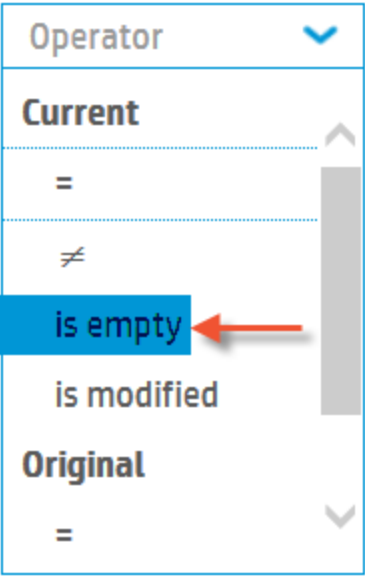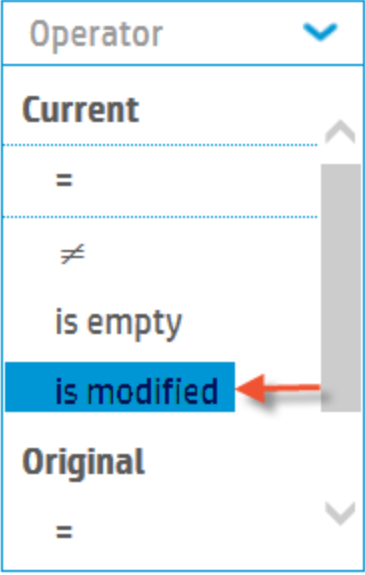
You can set conditions that assess the original value of a field (when the entity was first accessed) or the current value of a field (because you may have changed the field value since the entity was initially accessed).

- To base the condition on the original value, select an operator under the heading **Original** in the operator drop-down list.

- To base the condition on the current value, select an operator under the heading **Current** in the operator drop-down list.

> See sample: "Alerting a developer if a defect gets an urgent priority" on page 231

In addition to typical operators (=, <, >, and so on), some fields support special operators, such as:

contains	Checks if the field contains the values you select from a list.
	
	Operator ⌄
	Current
	  contains ←
	  is empty
	  is modified
	Original
	  contains
	  is empty

include	Checks if the **User's Group** contains the user groups you select from a list. See samples: ○ "Defining a rule to use the Business Analyst form" on page 223 ○ "Defining a rule to use the Project Manager form" on page 224 ○ "Limiting status choices based on the user's role" on page 232

is empty	Checks if the field is empty.
is modified	Checks if the field is modified from its original value. This operator is not available for new entities.

c. In the **Value** box, enter a value. You can enter a value or select one or more values from a list. If you select multiple values, they are connected with an Or statement.

Example

The condition:

| 1 | Priority | = | 1-Critical;2-High |

is fulfilled when either **Priority** equals **1 - Critical** or **Priority** equals **2 - High**.

Tip: Start typing a value in the corresponding box to search and choose from a list.

3. If necessary, add additional expressions to the condition by choosing **AND** or **OR** in the **Gate** box and clicking [+].

Tip: You can use parentheses to build sophisticated conditional expressions. Hover over the area where you would like to insert a parenthesis, and click the parenthesis when it appears.

:Before

| 1 | Field | | Value | |

During hover:

| 1 | (| Field | | Value |) | | + |

After:

| 1 | (| Field | | Value |) |

Parentheses can be nested.

If you select a parenthesis, its corresponding open or close parenthesis is highlighted also.

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

As you build the condition, a textual representation of the condition is displayed in the **Description** box.

You cannot save the rule if there are errors. Errors include syntax errors, such as an unclosed set of parentheses, or context errors, such as a referenced user-defined field or form being deleted.

4. Click **OK**.

Examples

Desired Result	Action	Field	Form / List / Timing	Condition
For every defect whose status is **In Progress**, **Assigned to** must be set. (It would not make sense for a defect to be unassigned yet already being worked on.)	Make required	Assigned to	NA	Status ≠ New

Desired Result	Action	Field	Form / List / Timing	Condition
Developers may switch requirements from one **Target Cycle** to another, but do not have the authority to assign requirements to a different **Target Release**.	Make editable	Target Release	NA	Current User Groups Contains Developers
For a specific product, the project manager has decided that only two levels of priority are necessary: **High** and **Low**. Other release have five levels of priority. Users should use this simpler set of **Priority** values instead of the default set.	Modify lookup list	Priority	Choose a list	Product = MyProduct

Desired Result	Action	Field	Form / List / Timing	Condition
Only testers and project managers have the authority to officially close fixed defects. If a tester or project manager opens a defect that is fixed, the CloseDefect form opens. This form displays only the fields that are relevant to closing defects.	Use form	NA	CloseDefects	(Current User Groups contains Tester OR Current User Groups contains ProjectManager) AND Status = Fixed
Developers can select certain statuses (**Open**, **Fixed**) while working a defect. Testers can select all the statuses. If a developer is working with a defect, he/she uses a subset of the status list.	Modify lookup list	Status	Choose a list, and then select the statuses **Open** and **Fixed**	Current User Groups contains Developers

Desired Result	Action	Field	Form / List / Timing	Condition
When creating a new requirement, its default release should be set to the next release, version 6.50.	Set field value	Choose the target release, **6.50**, from the list.	**Timing:** On new entity	**Action:** Set "Target Release" value to "6.50" on New Entity **Condition:** Not(Edit mode - New)
Send an email to the **Author** user and the project manager, **boris**, if a user that is not a project manager deletes a requirement.	Send email	NA	**Submission mode:** On delete entity	**Action:** Send Email to Author, boris on Delete Entity **Condition:** Not(User's groups include Project Manager)

Tip: For complete sets of sample rules, see "Sample business rules" on page 217.

See also

- "Understanding business rules" on page 183

- "Defining business rules" on page 191

- "Customizing the ALM Web Client" on page 171

- "Designing and managing forms" on page 174

Staging rules and forms, and putting into production

As the administrator, the set of business rules you define for your project work together to provide complete and comprehensive enforcement of organizational, departmental, and group policies.

For this to work, you create rules that handle all possible use cases and order them logically in the business rules grid to get the outcome your organization requires. Also, you create any entities on which the rules depend, such as user input forms.

The best practice for designing rules and forms is to create the complete set of rules and forms in a project created for staging purposes only. In this project, you make sure that everything works together and correctly.

When ready, export the rules and forms from the staging project to a file, and then import the file into the production project.

What do I need to consider?

To make sure the rules remain valid while being put into production:

- All entities to which rules can refer must be the same in both the staging and production projects.This includes user lists, requirement types, user-defined fields, form names, and so on. We also recommend that the values and names of these entities match, for example, the actual user names.

- The export process creates files that you then use to import into production. Do not edit the exported files.

- Importing erases all existing rules and forms that are currently in production, overriding them with the more up-to-date rules and forms. Back up the production project before importing.

- When importing, you must:

  a. First, import forms.

  b. Then, import rules.

How do I put rules and forms into production?

1. In ALM Desktop Client Site Administration, create a project for staging purposes. Make sure all its entities are the same as the entities in the production project For details on creating projects, see the *HP Application Lifecycle Management Administrator Guide.*

2. In the staging project, in ALM Web Client Customization for each relevant module, create forms and rules that match the entities in the production project. Then make changes as necessary to the forms and rules. For details, see "Designing and managing forms" on page 174 and "Defining business rules" on page 191.

3. In the staging project, in ALM Web Client Customization for each relevant module:

   a. In the Forms tab, click . Save the exported form file.

   b. In the Rules tab, click . Save the exported rule file.

4. Back up the production project. For details, see the *HP Application Lifecycle Management Administrator Guide.*

5. In the production project, in ALM Web Client Customization for each relevant module:

   a. In the Forms tab, click . Navigate to, and select, the exported form file.

   b. In the Rules tab, click . Navigate to, and select, the exported rule file.

   Caution: Make sure to import the forms before you import the rules.

6. Check rules to see if any are invalid (indicated in red) and correct as necessary. When you enter customization for each relevant module, an error message appears if there are any invalid rules.

See also

- "Understanding business rules" on page 183

- "Defining actions" on page 193

- "Defining conditions" on page 199

- "Customizing the ALM Web Client" on page 171

- "Designing and managing forms" on page 174

FAQs for business rules

Here are some frequently-asked-questions about working with business rules.

> **Tip:** Do you have some questions and answers you'd like to add? Email us at sw-doc@hp.com.

General

How come I cannot edit any fields in Customization?

Only one administrator can work in Customization for a project at a time. Click **Edit & Lock** a the upper right to see if you can edit the fields. If not, another user is probably working in Customization. While you are waiting, however, you can view all tabs and fields in Customization.

How come some fields don't appear in the drop-down lists?

If a field does not appear in a drop-down list, it is not supported. For example, when creating rules for the Requirements module, the ALM Web Client does not allow you to select the requirement parent.

Are business rules and workflow the same?

No. The Business rule feature in the ALM Web Client is not the same as the set of workflow features in ALM Desktop Client. The business rule feature does not work in conjunction with the workflow features.

ALM Desktop Client workflow is based on events and the timing of these events. Events trigger all workflow activities.

Certain business rules are activated based on specific events and their timing (such as **Set field value**, **Validate**, and **Send email** rules). Most business rules, however, are activated based on their condition, which is constantly being evaluated in the ALM Web Client. These rules' corresponding actions are performed as soon as the condition exists without any user intervention and without any specific event being triggered.

Which modules support business rules?

You can create rules for the following modules in the ALM Web Client:

- Requirement

- Defect

Are the business rules that I define for the entire site?

Business rules are defined on a project-by-project basis. You can have different sets of business rules for each project.

How come some business rules don't change the field value as expected?

Business rules work together with other processes to determine a field's value. Hard coded predefined values and category context values are overridden by business rules, but user defined values override values generated by business rules. Thus, if a business rule changes the value of a user defined field, the user defined value for that field, not the business rules value, will be used to value the field.

Rule validation

Does the ALM Web Client perform any validation on my rules?

Yes. The ALM Web Client checks for the following:

- **Syntax**. The ALM Web Client does not let you save a set of rules if even one of the rules is syntactically invalid. For example, if a parenthesis is missing, a red border is displayed around the lone parenthesis.

- **Missing entities**. If a rule refers to an entity that once existed but no longer does (for example, if a user-defined form was deleted since the rule was created), the rule

is skipped and its action is not performed. Essentially, the rule is treated as if it is deactivated.

No errors are issued. However, you can check the ALM Server log files to see if any rules were skipped.

> **Note:** It is possible for an entity, such as a form, to be deleted and then subsequently, a new form be created with the same name. This new form might have no similarity to the original form. In this case, the rule's action is performed without errors, yet with unexpected results.

Is it possible for my rules to conflict logically, and if so, how is this handled?

It is possible for the conditions of multiple rules in one project to be true at the same time. If these rules have conflicting actions, the ALM Web Client processes both of them in the order they are specified in the rule list. Therefore, the later one in the list overrides the actions set by the earlier one.

Use the **Move up** and **Move down** buttons to order the rules.

> **Examples**
>
> - Two rules can have overlapping conditions on the same field.
>
>   One rule's condition could be **Closing Date > December 31st, 2014** and another rule's condition could be **Closing Date < February 1st 2015**. If the closing date is in the month of January, which rule's action is performed? The rule that is defined later in the rule list is the one whose action is performed.
>
> - Two rules can have overlapping conditions on different fields.
>
>   - A rule, **SetFormForDev**, sets the form for the Defects module to a form called **DevForm** if the user assigned to the defect belongs to the developer group. This form includes fields that are relevant to developers and hides fields that are relevant only to testers and project managers.
>
>   - A rule, **SetFormPlanning**, sets the form for the Defects module to a form called **DevTeamLeadForm** if the **Estimated Fix Time** of the defect is greater

> than 1 week. The **DevTeamLeadForm** only displays fields that are related to planning and scheduling of defects for a particular release and cycle.
>
> - Because a developer team lead is likely to be in the developer group, both of these conditions can be true for one particular defect.
>
> - If the **SetFormDev** rule appears after the **SetFormPlanning** rule in the rule list, the **DevTeamLead** form will never be used. In this case, the **SetFormDev** rule must be before the **SetFormPlanning** in the list.

Condition processing

When evaluating a condition, what does the ALM Web Client do if it encounters a field on which a condition is based, yet the field has no value?

The ALM Web Client assumes a value depending on the field type. The rule is then evaluated and processed as usual.

> **Note:** This assumption is for the purposes of evaluating the condition; the value is not actually assigned to the field.

Type	Assumed Value
Integer	**0**
Date	**1970-01-01**
String	**"" (empty string)**
Lookup lists	**"" (empty string)**

I am defining a rule for different requirement types that have different fields. The condition I defined takes the requirement types into account, but still fails. Why?

Different requirement types can have different fields. When defining a condition, if you refer to a field that is not available for all requirement types, the condition will not be met if the requirement type being processed does not have that field. In this case, the best practice is to define the condition so that it quantifies the requirement type also.

Best practice:

Condition
("Requirement Type" = "ReqTypeA" AND "FieldA" = "a") OR ("Requirement Type" = "ReqTypeB" AND "FieldB" = "b")

Worst practice:

Condition
"FieldA" = "a" OR "FieldB" = "b"

Rules whose action has its own timing (such as **Set Email**, **Validate**, and **Set Value** rules) fail if the ALM Web Client encounters a field that does not exist in the current requirement type, yet you cannot specify the requirement type as part of a condition.

To handle these types of rules, create two rules instead of one. This way, there is no problem if the rule that doesn't apply to the current requirement type is not performed.

Best practice:

#	Status	Action
1	On	Set "FieldC" value to "c" on "FieldB" Change
2	On	Set "FieldC" value to "c" on "FieldC" Change

Worst practice:

#	Status	Action
1	On	Set "FieldC" value to "c" on "FieldB, FieldA" Change

Importing and exporting rules and forms

When I import my rules into production, I get errors or gibberish.

It is possible that the file created during export is corrupt or was edited manually outside of the import/export process. Re-export and try again.

See also

- "Working with business rules" on page 181

- "Sample business rules" below

Sample business rules

This section provides samples of business rules for various modules. You can use them as a basis for your own rules.

Each sample contains a "Show Me How" movie and step-by-step instructions for defining the rules.

> **Tip:** Do you have some sample rules you'd like to share? Email us at sw-doc@hp.com.

Setting up default forms and values

This sample demonstrates how to create rules for setting up default values and forms.

- "Designing the needed forms" on the next page

- "Defining rules to use forms" on page 220

- "Planning default values for creating a new requirement" on page 221

- "Defining rules to set default values" on page 221

- "Planning the read-only and required attributes for new requirements" on page 222

- "Defining rules to set read-only and required attributes" on page 222

- "Reviewing the rule list" on page 222

To watch a movie on how to work with sets of business rules, refer to this section in the ALM Web Client Online Help.

Designing the needed forms

When creating a requirement, let's assume that the user wants to enter the minimum number of fields necessary, and then return later to enter details. The **QuickAdd Requirements** form can be used.

When editing a requirement, the business analyst is interested in basic requirement and priority fields, while the project manager is interested in fields that help schedule the requirement, such as release and cycle. The **Business Analyst** and **Project Manager** forms can be used.

In all other cases, the **system default** form can be used. If not specified otherwise, this is the default. So there is no need to create a rule for this form.

Later, we will also use a form called **Priority Approvals** for handling urgent, special requirements. For a sample, see .

Make sure the forms are defined before creating rules. Let's take a look at the forms.

- "System Default form" on the next page

- "QuickAdd Requirements form" on the next page

- "Business Analyst form" on page 220

- "Project Manager form" on page 220

System Default form

QuickAdd Requirements form

Business Analyst form

Project Manager form

Defining rules to use forms

Let's create the corresponding rules.

- Defining a rule to use the QuickAdd Requirements form

- Defining a rule to use the Business Analyst form

- Defining a rule to use the Project Manager form

- Ordering the rule list

Planning default values for creating a new requirement

When creating a new requirement, it is helpful if default values are set for certain fields, This saves the user time when entering data.

A logical place to start is to look at the fields in the **QuickAdd Requirements** form and determine the fields that can be pre-set.

QuickAdd Requirements form
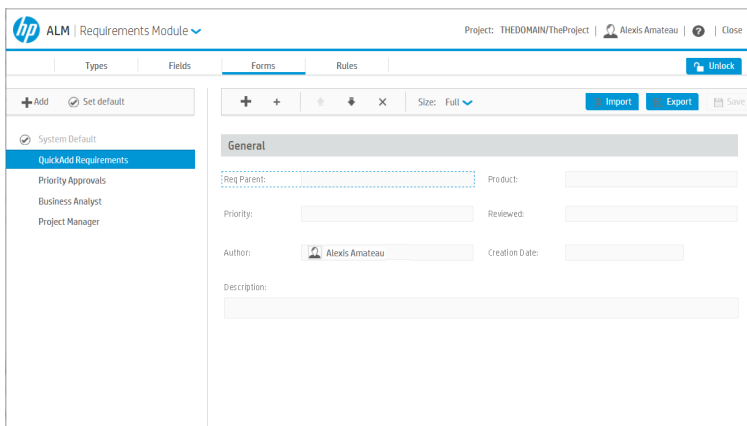
Let's set default values as follows:

Priority	1-Low	Instead of a blank value, the priority is pre-set to **1-Low**.
Reviewed	Not Reviewed	Instead of a blank value, the **Reviewed** field is pre-set to **Not Reviewed**.

Tip: Another way to set default values is to define and load preset values.

Defining rules to set default values

Let's create the corresponding rules.

- Defining a rule to set the priority

- Defining a rule to set the Reviewed field

Planning the read-only and required attributes for new requirements

When creating a new requirement,you can establish company policies by making certain fields read-only and/or required, .

Using the **QuickAdd Requirements** form as a basis, let's set field attributes as follows.

QuickAdd Requirements form
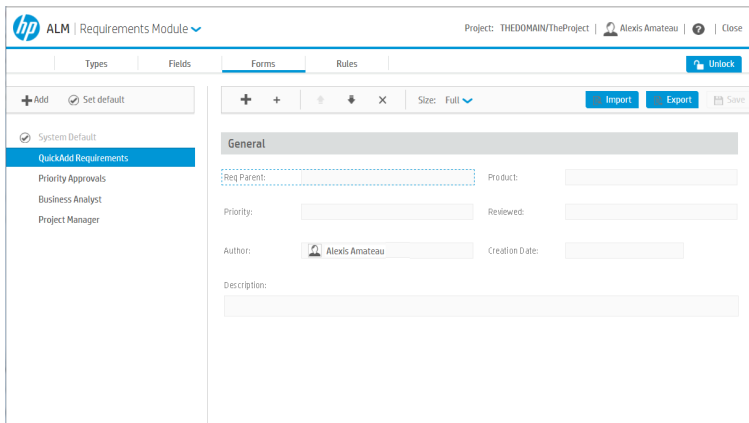
Description	Required
Author	Read-only

Defining rules to set read-only and required attributes

Let's create the corresponding rules.

- [Defining a rule to make the description required](#)

- [Defining a rule to make the author read-only](#)

Reviewing the rule list

Take a look at the rules in the rule list. Does the order produce the desired results? If not, reorder the rules.

See also

- "Understanding business rules" on page 183

- "Defining business rules" on page 191

- "FAQs for business rules" on page 212

Defining a rule to use the QuickAdd Requirements form

Action tab	Select the action for using the form.
	Actions: Use form Form: QuickAdd Requirements
Condition tab	Determine if the user is editing an existing requirement or creating a new requirement with **Edit mode**.
	1 (Edit mode = ⌄ New)
Rule list	

#	Status	Action	Condition
1	On	Use "QuickAdd Requirements" form	Edit mode = New

Defining a rule to use the Business Analyst form

Action tab	Select the action for using the form.
	Actions: Use form Form: Business Analyst
Condition tab	Determine if the user is a business analyst with **User's groups**.
	1 (User's groups include BusinessAnalyst)

Rule list	
	# **Status** **Action** **Condition** ☐ 1 On Use "QuickAdd Requirements" form Edit mode = New ☐ 2 On Use "Business Analyst" form User's groups include BusinessAnalyst

Defining a rule to use the Project Manager form

Action tab	Select the action for using the form. Actions: Use form Form: Project Manager ⌄
Condition tab	Determine if the user is a project manager with **User's groups**. 1 (User's groups include Project Manager ⌄)
Rule list	**#** **Status** **Action** **Condition** ☐ 1 On Use "QuickAdd Requirements" form Edit mode = New ☐ 2 On Use "Business Analyst" form User's groups include BusinessAnalyst ☐ 3 On Use "Project Manager" form User's groups include Project Manager

Ordering the rule list

Now that the rules are defined, let's look at the order in which we defined them.

#	**Status**	**Action**	**Condition**
☐ 1	On	Use "QuickAdd Requirements" form	Edit mode = New
☐ 2	On	Use "Business Analyst" form	User's groups include BusinessAnalyst
☐ 3	On	Use "Project Manager" form	User's groups include Project Manager

The order is important because rules that appear later in the list can override the actions of rules that appear before them in the list. Consider these possibilities:

1. What if the user is a business analyst that is creating a new requirement?

2. What if the user is a project manager editing an existing requirement?

3. What If the user is both a business analyst and a project manager?

4. What if a tester creates a requirement?

5. What if a developer edits an existing requirement?

Answers

Based on the order of the rules in the rule list:

1. When a business analyst creates a requirement, the **Business Analyst** form is used.

2. When a project manager edits an existing requirement, the **Project Manager** form is used.

3. If the user is both a business analyst and a project manager, the **Project Manager** form is used.

4. If a tester creates a requirement, the **QuickAdd Requirements** form is used.

5. If a developer edits an existing requirement, the **System Default** form is used.

You may want to reorder rules in the list to get the desired results.

Defining a rule to set the priority

Action tab	Select the action for using the form. Action: Set field value Timing: ● When creating an entity ○ When changing a value Field: Priority ● Set value: 1-Low ○ Copy value from field: ○ Clear value Remark: *You can add a remark for this rule*
Condition tab	This action is performed when the creation of a new requirement is started. No condition is necessary.

Rule list					
		#	Status	Action	Condition
		1	On	Use "QuickAdd Requirements" form	Edit mode = New
		2	On	Use "Business Analyst" form	User's groups include BusinessAnalyst
		3	On	Use "Project Manager" form	User's groups include Project Manager
		4	On	Set "Priority" value to "1-Low" on New Entity	Unconditional

Defining a rule to set the Reviewed field

Action tab	Select the action for using the form.
	Action: Set field value
	Timing: ⦿ When creating an entity / ○ When changing a value
	Field: Reviewed
	⦿ Set value: Not Reviewed
	○ Copy value from field:
	○ Clear value
	Remark: *You can add a remark for this rule*
Condition tab	This action is performed when the creation of a new requirement is started. No condition is necessary.
Rule list	

	#	Status	Action	Condition
	1	On	Use "QuickAdd Requirements" form	Edit mode = New
	2	On	Use "Business Analyst" form	User's groups include BusinessAnalyst
	3	On	Use "Project Manager" form	User's groups include Project Manager
	4	On	Set "Priority" value to "1-Low" on New Entity	Unconditional
☑	5	On	Set "Reviewed" value to "Not Reviewed" on New Entity	Unconditional

Defining a rule to make the description required

Action tab	Select the action for using the form.
	Action: **Make required**
	■ Field: **Description**
Condition tab	Determine if the user is creating a requirement, instead of editing a requirement.
	1 (Edit mode = New)
Rule list	

	#	Status	Action	Condition
☐	1	On	Use "QuickAdd Requirements" form	Edit mode = New
☐	2	On	Use "Business Analyst" form	User's groups include BusinessAnalyst
☐	3	On	Use "Project Manager" form	User's groups include Project Manager
☐	4	On	Set "Priority" value to "1-Low" on New Entity	Unconditional
☐	5	On	Set "Reviewed" value to "Not Reviewed" on New Entity	Unconditional
☑	6	On	Make "Description" required	Edit mode = New

Defining a rule to make the author read-only

Action tab	Select the action for using the form.
	Action: **Make read-only**
	■ Field: **Author** ⌄
Condition tab	Determine if the user is creating a requirement, instead of editing a requirement.
	1 (Edit mode = New)

Rule list				
	#	Status	Action	Condition
	1	On	Use "QuickAdd Requirements" form	Edit mode = New
	2	On	Use "Business Analyst" form	User's groups include BusinessAnalyst
	3	On	Use "Project Manager" form	User's groups include Project Manager
	4	On	Set "Priority" value to "1-Low" on New Entity	Unconditional
	5	On	Set "Reviewed" value to "Not Reviewed" on New Entity	Unconditional
	6	On	Make "Description" required	Edit mode = New
☑	7	On	Make "Author" read-only	Edit mode = New

Handling changes to priorities

This sample demonstrates how to handle changes to priority for a defect.

To watch a movie on how to work with sets of business rules, refer to this section in the ALM Web Client Online Help.

Requiring additional information if a defect's priority is urgent

People must use discretion before setting defects to urgent priority. If a user chooses urgent priority, an additional section should be added to the input form that forces the user to account for the urgency.

We can use the **Priority Approvals** form for this purpose. It contains two user-defined fields, **Authorized by** and **Justification**.

Priority Approvals form

- Defining a rule to use the **Priority Approvals** form

- Making authorization fields required

- Alerting a developer if a defect gets an urgent priority

See also

Defining a rule to use the Priority Approvals form

Action tab	Select the form to use. Action: Use form Form: Priority Approvals
Condition tab	Is the current priority **5-Urgent**? 1 Priority = 5-Urgent
Rule list	# Status Action Condition 1 On Use "Priority Approvals" form "Priority" = "5-Urgent"

Making authorization fields required

Action tab	Define two different rules, one to make **Authorized by** required and one to make **Justification** required. **Authorized by** Action: Make required Field: Authorized by **Justification** Action: Make required Field: Justification
Condition tab	Is the current priority **5-Urgent**? 1 Priority = 5-Urgent
Rule list	#	Status	Action	Condition | 1	On	Use "System Default" form	"Priority" = "5-Urgent" | 2	On	Make "Authorized by" required	"Priority" = "5-Urgent" | 3	On	Make "Justification" required	"Priority" = "5-Urgent"

Alerting a developer if a defect gets an urgent priority

Action tab	Set the **Send Email** action.
	Action: Send email
	▪ Submission mode: ☑ New ☑ Update ☐ Delete ⓘ
	▪ Send to: Choose project users ⓘ
	Choose roles
	Email subject:
	Remark: Add a remark that describes the rule
Condition tab	Has the priority changed from some other value to **5-Urgent**?
	We only want to notify the developer if there was an actual change to the priority, so we compare the original and current **Priority** values.
	1 Priority Original ≠ 5-Urgent ⌄ AND
	2 Priority = 5-Urgent ⌄
Rule list	

#	Status	Action	Condition
1	On	Use "System Default" form	"Priority" = "5-Urgent"
2	On	Make "Authorized by" required	"Priority" = "5-Urgent"
3	On	Make "Justification" required	"Priority" = "5-Urgent"
4	On	Send Email to Assigned To on Create Entity, Update Entity	Original "Priority" ≠ "5-Urgent" AND "Priority" = "5-Urgent"

Transitioning through the life cycle of a defect

This sample demonstrates how to manage the life cycle of a defect as it moves from status to status and from user to user.

- Limiting status choices based on the user's role

- Limiting status choices based on the user's product

- Limiting status choices based on the original status value

- Setting the fix date of a defect

To watch a movie on how to work with sets of business rules, refer to this section in the ALM Web Client Online Help.

See also

- "Understanding business rules" on page 183

- "Defining business rules" on page 191

- "FAQs for business rules" on page 212

Limiting status choices based on the user's role

Depending on the user working on the defect, not all statuses should be available. For example, it is not reasonable for a tester to change the status of a defect to **Open** because testers do not implement corrections to the application under test.

Action tab	Set the **Modify lookup list** action for all types of users. Here are some examples.

Project Manager

Action:	Modify lookup list
Field:	Status
List:	Bug Status	Sublist: New;Rejected
Remark:	A project manager can open and reject defects.

Developer

Action:	Modify lookup list
Field:	Status
List:	Bug Status	Sublist: Fixed;New;Open
Remark:	A developer can create a defect, indicate the defect is being worked on, and mark the defect fixed so that a tester can begin testing.

Tester

Action:	Modify lookup list
Field:	Status
List:	Bug Status	Sublist: Closed;New;Rejected;Reopen
Remark:	A tester can create, reject, reopen, and close defects.

Condition tab	What type of user is working on the defect?
	User's groups — include — Project Manager ▾
	User's groups — include — Developer
	User's groups — include — QATester

Rule list	

☐	#	Status	Action	Condition
☐	1	On	"Status" uses lookup list: Bug Status ["New","Rejected"]	"User's groups" include "Project Manager"
☐	2	On	"Status" uses lookup list: Bug Status ["Fixed","New","Open"]	"User's groups" include "Developer"
☐	3	On	"Status" uses lookup list: Bug Status ["Closed","New","Rejected","Reopen"]	"User's groups" include "QATester"

> **Tip:** You can further limit the available status options by creating rules that take into account the original value of the status. For example, it is not reasonable to set a status to **New** if the defect was already assigned some other status.

Limiting status choices based on the user's project

Depending on the user working on the defect, different sets of statuses should be available. For example, if an employee works on a product that was originally owned by a different company, and has now been incorporated into the current company, the statuses for that project's workflow might be different during the merger.

Example

Current Company Defect Statuses	New Company Defect Statuses
New	1-New
Open	2-In Progress
Fixed	3-Ready for Testing
Open	4-In Testing
Reopen	5-Complete
Rejected	6-Cancelled

Action tab	Set the **Modify lookup list** action for all types of users. In this example, instead of using the default **Bug Status** lookup list, we enter **Bug Status New Company** in the **List** field.
	Tip: You can further limit the available status options by using the **Sublist** field to select only certain statuses from the list.
	Note: The **Bug Status New Company** list must be defined using ALM Desktop Client Customization before defining the rule.
	Action: Modify lookup list Field: Status List: Bug Status New Company Sublist: Use all list items Remark: You can add a remark for this rule
Condition tab	Is the project for the original company or the newly acquired company (**TheNewProject**)? Project = TheNewProject
Rule list	# Status Action Condition 1 On "Status" uses lookup list: Bug Status New Company "Project" = "TheNewProject"

Limiting status choices based on the original status value

Depending on the status of the defect, not all statuses should be available. For example, it is not reasonable to change the status of a **New** defect to **Closed** without first going through the stages of the defect flow. it is critical to determine the available statuses based on the original value of the status.

Action tab	Set the **Modify lookup list** action for various statuses. Here are some examples. ### New Action: Modify lookup list • Field: Status • List: Bug Status Sublist: Open;Rejected Remark: The status of new defects can only be modified to Open or Rejected. ### Open Action: Modify lookup list • Field: Status • List: Bug Status Sublist: Fixed;Rejected Remark: The status of Open defects can only be modified to Fixed or Rejected. ### Fixed Action: Modify lookup list • Field: Status • List: Bug Status Sublist: Closed;Reopen Remark: The status of fixed defects can only be modified to Closed or reopen
Condition tab	What is the original value of the defect status? Status Original = New Status Original = Open Status Original = Fixed

Rule list	
	Tip: You must use the original value of the status when setting the condition.

Setting the fix date of a defect

If the original status of a defect is **Open**, when this defect is fixed, set the **Fixed Date.**

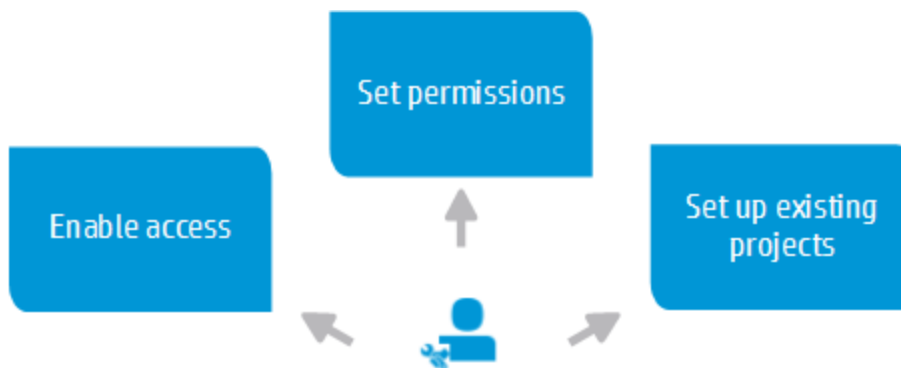| Action tab	Set the **Fixed Date** to the actual date of change.
Condition tab	Did the tester close a fixed defect? If so, its original value is **Fixed** and its current value is **Closed**.
Rule list	

Chapter 7: Managing projects

As the administrator, you must set up end-user access to the ALM Web Client.

Enabling access to the ALM Web Client

To enable end users to access the ALM Web Client, the ALM administrator must set up access in the ALM Desktop Client.

- In Site Administration, add the **ALLOW_WEBUI_ACCESS** site parameter and set its value to **Y**. For details, see the *HP Application Lifecycle Management Administrator Guide*.

- In Project Customization, make sure relevant groups have **Full Access** or **View Access** permissions to the appropriate modules. For details, see "Managing User Groups and Permissions" in the Project Customization part of the *HP Application Lifecycle Management Administrator Guide*.

Setting permissions for ALM Web Client users

ALM Web Client user permissions are based on the user groups defined in the ALM Desktop Client. Make sure that ALM Web Client users are assigned to the appropriate user groups in ALM Desktop Client Customization. For details, see the *HP Application Lifecycle Management Administrator Guide*.

Setting up existing projects for use in the ALM Web Client

Most ALM Web Client users have projects already in use in ALM Desktop Client. For best practices, see "Setting up existing ALM Desktop Client projects for use in the ALM Web Client" below.

See also

- "FAQs for managing projects" on page 242

- "Customizing the ALM Web Client" on page 171

Setting up existing ALM Desktop Client projects for use in the ALM Web Client

The ALM Web Client's flexible view and filter features let you view requirements in different ways without being locked into a physical requirement hierarchy. Creating a hierarchical tree in the ALM Web Client is unnecessary and clutters the view.

If your project's requirement tree already exists in the ALM Desktop Client, it is likely that a physically hierarchical requirement tree is already defined.

How to re-factor the requirements in the tree in the ALM Desktop Client for use in the ALM Web Client

1. Back up the project in Site Administration. For details, see the *HP Application Lifecycle Management Administrator Guide*.

2. Open the project in the ALM Desktop Client.

3. Take a look at the requirements tree and all its child requirements. Make sure that there are no inaccuracies. For example, If the tree has folders for releases and cycles, make sure that all release and cycle fields are correct based on their parent requirement locations in the tree. Make corrections as necessary.

4. Copy all sub-trees and requirements into the main root folder of the requirement tree.

   Make sure to rename requirements if there are requirements from different sub-trees with the same name.

5. Delete all folders under the main root folder. The requirement tree is now one level.

How to work with requirements in both the ALM Desktop Client and the ALM Web Client

- After re-factoring the requirements, to simulate the use of folders and sub-trees in the ALM Desktop Client, use the sort and group by features of ALM. This is similar to using the view and filter features in the ALM Web Client.

How to configure what is displayed for requirements in Author mode

- For Author mode, you can display either the contents of the Description field or the Rich Text tab of the requirement in the area under requirement name. This is done in ALM Desktop Client Site Administration with the **REQUIREMENT_AUTHOR_USE_ RICHTEXT** site parameter. For details, see the *HP Application Lifecycle Management Administrator Guide*.

See also

- "Managing projects" on page 239

- "FAQs for managing projects" on the next page

- "Displaying what you need" on page 27

FAQs for managing projects

👤 **Administrators:** Here are some frequently-asked-questions for administrators about managing projects.

> **Tip:** Do you have some tips you'd like to add? Email us at sw-doc@hp.com.

Logging in and accessing the ALM Web Client

Who should I let access the ALM Web Client and its modules?

Limit access to suitable candidates as described in the "The ALM Web Client Overview" on page 9.

Access to individual modules is based on the permissions of the group to which the user belongs. Setting permissions are described in the *HP Application Lifecycle Management Administrator Guide.*

I would like my project users to get familiar with the ALM Web Client. However, until workflow rules can be implemented, I prefer we enter data using the ALM Desktop Client. How can I enforce this?

You can let users try the ALM Web Client on a read-only basis. This is useful for familiarizing users with the ALM Web Client without impacting actual data. See the **Allow Web Client Full Project Access** and **Allow Web Client View Project Access** group permissions in the Customization part of the *HP Application Lifecycle Management Administrator Guide.*

My computer crashed and ALM Web Client Customization thinks I'm already logged in. How can I get back into Customization?

Only one administrator is able to log into ALM Web Client Customization at a time,

If, for some reason, your computer crashed and the ALM Web Client thinks you are still logged in, open Customization in another browser. When prompted, override the existing lock.

Can I open several sessions of the ALM Web Client, logging in as different users?

You can open several sessions of the ALM Web Client by opening additional browser windows. (You cannot open multiple sessions using different tabs in the same browser window.) Each session in a browser window consumes a different license.

Can I open several sessions of the ALM Web Client, logging in as the same user?

You can open several ALM sessions at the same time, consuming one license overall:

- The ALM Web Client in a browser window

- The ALM Desktop Client in a different browser window

- ALM on a mobile device

In this case, only one license is consumed, not three.

Why can't I log into ALM Web Client Customization as a different user in the same browser window as another user? I keep entering ALM Web Client Customization without an opportunity to log in as a different user.

You actually can! Depending on your browser, there are ways that you can open a separate browser session (not a tab within the same browser) that does enable you to log in to ALM Web Client Customization as a different user connecting to the same ALM.

- **Internet Explorer**: Use InPrivate browsing.

- **Chrome**: Use Incognito mode.

- **Firefox**: Use Private browsing.

The same issue and solution applies to accessing the ALM Web Client also.

Setting up the ALM Web Client

My requirements tree in the ALM Desktop Client is organized into folders. But the ALM Web Client's flexible view and filter features let me view my requirements as I wish without being locked into a physical requirement hierarchy. What's the best way to organize my requirements?

When using the ALM Web Client, it is best to use views and filters to organize requirements. This allows for a more flexible display, with less clutter. For details on

how to set up requirements for use in the ALM Web Client, see "Setting up existing ALM Desktop Client projects for use in the ALM Web Client" on page 240.

Communicating with customer support

Preparing log files for support

If you encounter a problem using the ALM Web Client, you can use your browser's Tools Console to send customer support any warnings, errors, or messages that occur. For example, in Internet Explorer, press **F12** and select the Console tab to see the log messages.

See also

- "Managing projects" on page 239

Send Documentation Feedback

If you have comments about this document, you can contact the documentation team by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

Feedback on User Guide (ALM Web Client 12.20)

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to SW-Doc@hp.com.

We appreciate your feedback!