

ALM120 – Application Lifecycle Management 12.0 Essentials



For version: 12.0

Revision A.1

Lab Guide

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Lab Guide

Revision A.1

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ALM120 – Application Lifecycle Management 12.0 Essentials

Lab Guide

Revision A.1

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Lab 1 – Course Overview

There are no labs for this module.

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Lab 2 – Introduction to Application Lifecycle Management

Objective

After completing this lab, you should be able to

- Log in to the lab environment
- Analyze the Application Under Test (AUT)

Scenario

For the duration of this class you will be using a virtual lab environment to work with HPE Application Lifecycle Management (ALM). First, you will log into the lab environment and then you explore the applications that are used in connection with ALM during the class.

Exercise 1 – Logging in to the Lab Environment

To log in to the lab environment, complete the following steps:

1. Navigate to the HP Software Training Center using the appropriate URL for your region (listed below). If you are logging in for the first time, you might be asked to install a browser add-on.

For the AMS <https://vtms.houston.hp.com>

For EMEA <https://vtms-emea.houston.hp.com>

For APJ <https://vtms-apj.houston.hp.com>

2. Log on to the HP Software Training Center using your assigned credentials, as shown in the following screenshot.

The screenshot shows the login interface for the HP Software Training Center. At the top, a dark blue header bar displays the text "HP Software Training Center". Below this, the main content area has a white background. It contains three input fields: "Username" with the value "StudentXXXX-XX", "Password" with several redacted dots, and "Organization" with the value "SoftwareEducation" followed by a dropdown arrow. Below these fields are two links: "Forgot Password?" and "Is Your Browser Ready?". A large "Log On" button is centered at the bottom of the form area. In the bottom right corner of the page, there is footer text: "version: 7.5.1.465", "© 2010 Quest Software, Inc.", "ALL RIGHTS RESERVED", and "Protected by U.S. Patents #6,990,666, #7,643,484, #7,769,004, #7,257,584, #7,287,186, #7,574,496, #6,880,002 and additional patents pending." To the left of the footer text, the HP logo is visible.

- In the Username and Password fields (case sensitive), enter the information given to you at the beginning of class.
- From the Organization drop-down list, select Software Education.

c. Click Log On.

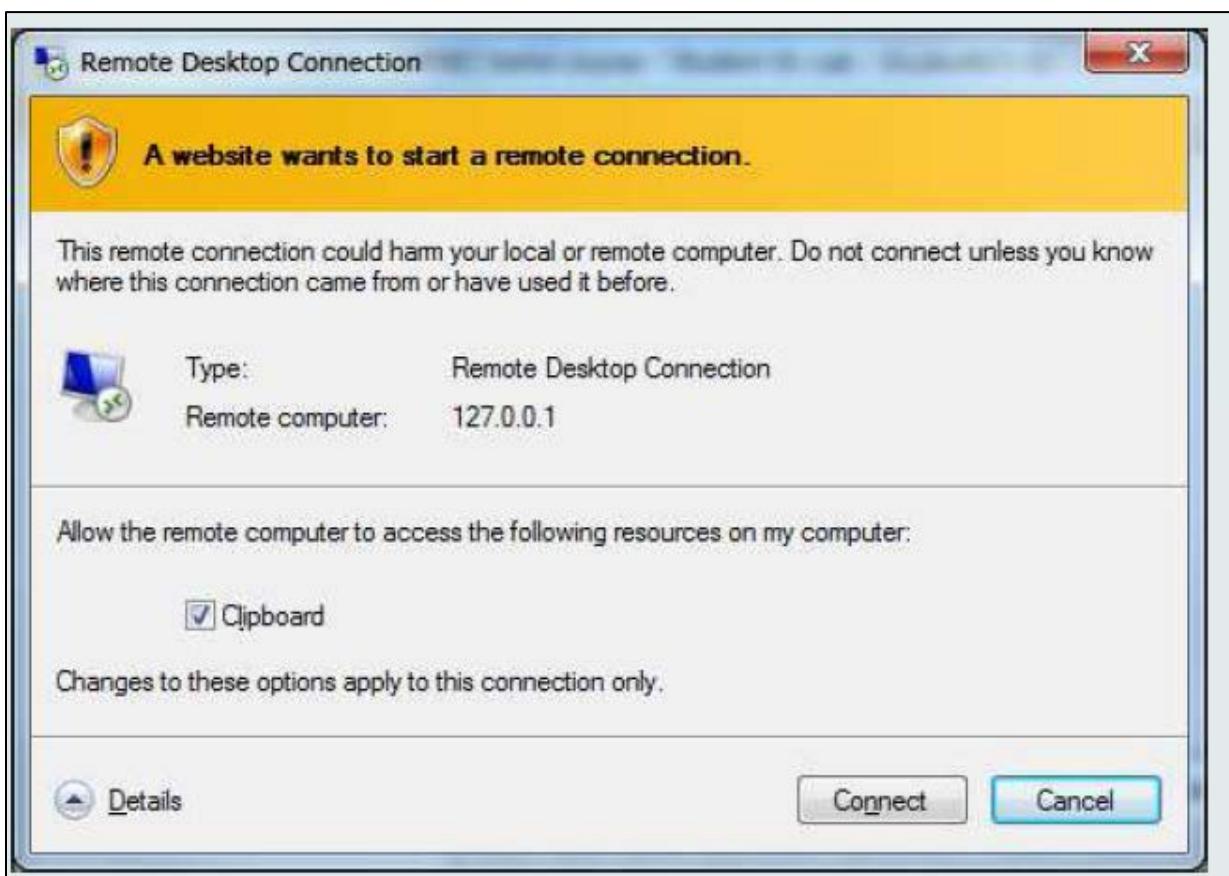
You should see your home page upon successful login.

The screenshot shows the HP Software Training Center interface. At the top, it displays "Student2205-03 (Student User)" and "1 Notifications | 8/20/2014 12:49 PM Eastern Daylight Time". Below this is a navigation bar with "Workbench". Under "Workbench", there's a section titled "Student Sessions" which lists "[DEV] ALM 120 12.01 v1.0". A green "View" button is located to the right of this entry. Below the session list, there's a note: "CHECK WITH DEN before using". It also shows "Instructor: dcaddy", "Time Remaining: 19 days 10 hours 18 minutes", and "Status: Available".

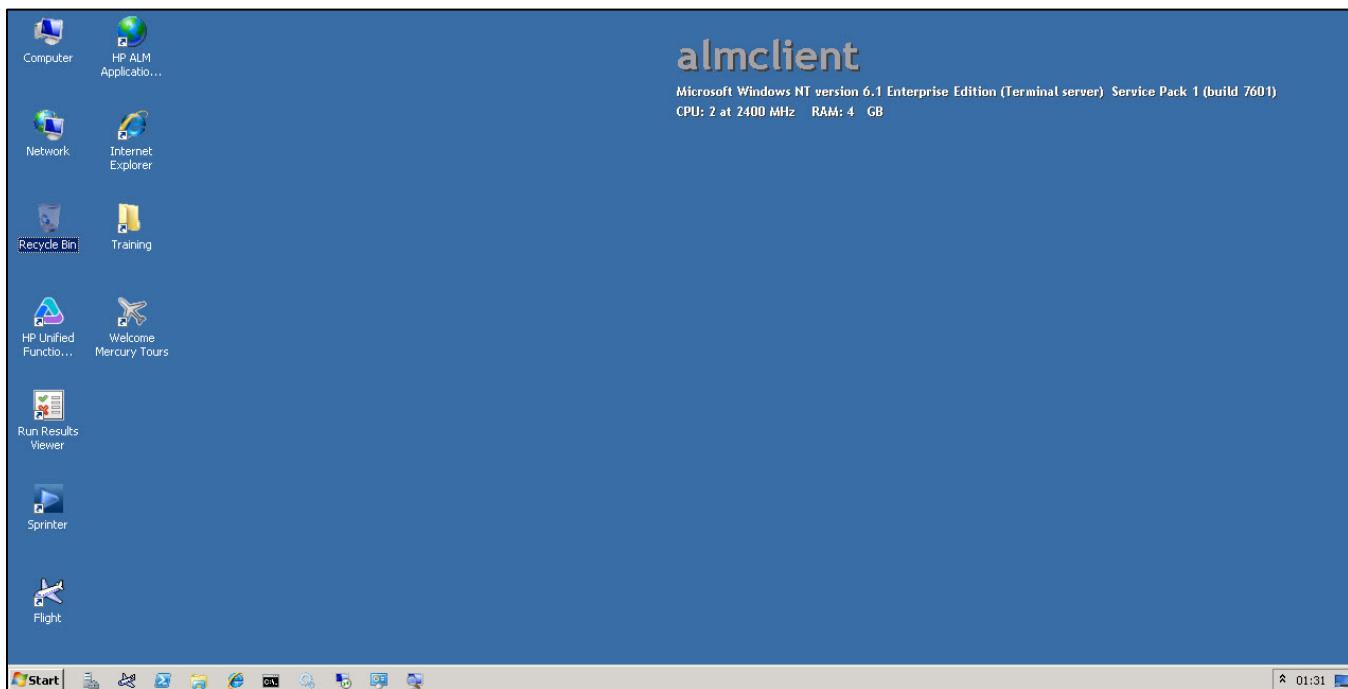
3. Start the virtual lab.

The ALM120 lab assigned to you is listed on your home page/Workbench.

4. Click the green View button at the right side of the home page/Workbench.
5. Click Connect, as shown in the following screenshot:



6. You now have access to the ALM Client image, as shown in the following screenshot.



Note: When you are logged in to the Access virtual machine (AVM), you can continue with the lab. If you are having problems connecting to your AVM desktop, let your instructor know that you need help. The AVM is your desktop from now on. This is the only way you can get to the other backend lab servers in the environment.

Exercise 2 – Analyzing the Application Under Test (AUT)

To properly create a project in ALM, you must understand the business processes that are part of an application. The better you understand these processes, the better you can use ALM capabilities.

In this exercise, you perform the following tasks:

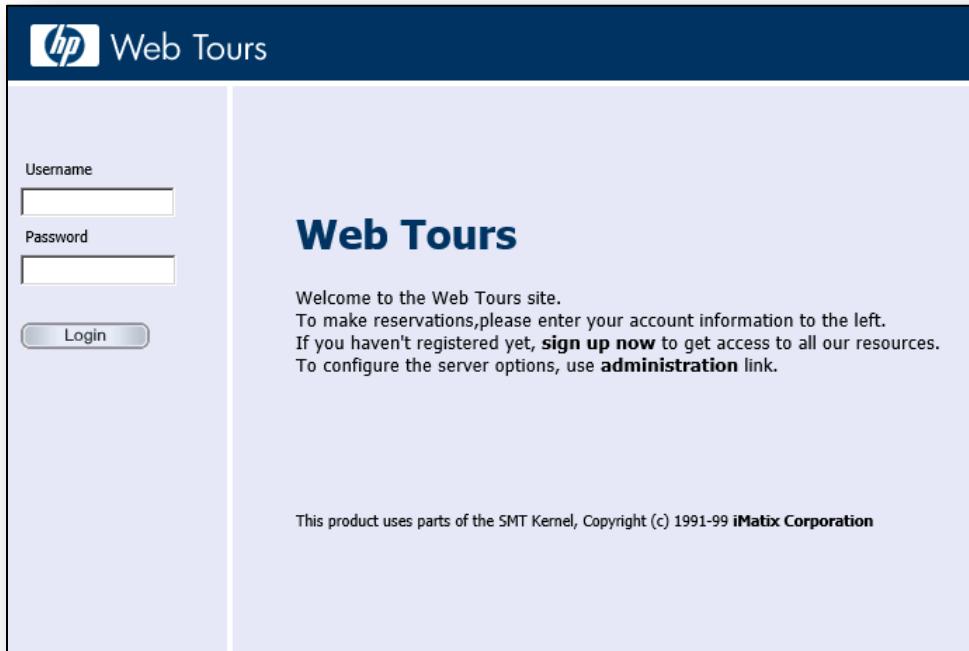
- Task 1 – Navigate the HP Web Tours Reservation site
- Task 2 – Learn the HP Web Tours Reservation application
- Task 3 – Navigate the HP Flight Reservation application
- Task 4 – Learn the HP Flight Reservation application

Task 1 – Navigating the HP Web Tours Reservation Site

In this task, you complete steps to open the HP Web Tours Reservation application and create a new user account. Make note of the business processes you observe while navigating through the screens and explore options not covered in the steps below. This will help you thoroughly document all business processes that are part of the HP Web Tours Reservation application.

To log in to the HP Web Tours Reservation Application, complete the following steps:

1. Double-click the HP Web Tours Reservation Application shortcut icon  on your desktop. The Login page is displayed.



2. On the Main Web Tours page, click the text **sign up now**.

3. The Customer Profile page should be displayed. Create a user profile that you will use throughout this training.

The screenshot shows the 'Customer Profile' registration page from the HP Web Tours application. The page has a dark blue header with the 'Web Tours' logo. On the left, there is a sidebar with 'Username' and 'Password' fields and a 'Login' button. The main content area is titled 'Customer Profile' and contains instructions for first-time registrants: 'First time registering? Please complete the form below. Please choose a username and password combination for your account. We'd also like some additional contact information for yourself. We'll use it as default shipping and billing information when making all your travel arrangements.' Below these instructions are seven input fields labeled 'Username', 'Password', 'Confirm', 'First Name', 'Last Name', 'Street Address', and 'City/State/Zip'. A 'Continue...' button is located at the bottom right of the form area.

4. Click the Continue button after you fill out the form and click Continue a second time to confirm that your user profile was created. You should be logged into the HP Web Tours Reservation application.
 - a. Type your Username/Password here:
 - Username: _____
 - Password: _____
 - b. **Note:** If you are not already logged into the site, navigate back to the home page and test out your newly created username and password credentials.

Task 2 – Learning the HP Web Tours Reservation Site

In this task, you continue to learn about the main business processes within the HP Web Tours reservation site. In the following task, you book a flight in the main Web Tours reservation page. Complete the following steps:

1. If you are not already logged into the HP Web Tours site, navigate to the home page and log in using the credentials you created in Task 1, step 4a.
2. Click the Flights button.  The Find Flight page is displayed.
3. Enter the form details as indicated below:
 - Select the Departure City:  Los Angeles
 - Select the Arrival City:  Paris
 - Select Window as the Seating Preference.
 - Enter 10/10/2015 in the Departure Date field.
 - Enter 10/25/2015 in the Return Date field.
 - Select the Roundtrip ticket checkbox.
 - Select First as the Type of Seat.



The screenshot shows the 'Find Flight' form. It has two sets of dropdown menus for departure and arrival cities, with 'Los Angeles' and 'Paris' selected respectively. Below these are fields for 'No. of Passengers' (set to 1) and 'Return Date' (set to 10/25/2014). On the left, there's a 'Seating Preference' section with radio buttons for 'Aisle', 'Window' (which is selected), and 'None'. On the right, there's a 'Type of Seat' section with radio buttons for 'First' (selected), 'Business', and 'Coach'. A checked checkbox labeled 'Roundtrip ticket' is also present. At the bottom is a 'Continue...' button.

4. Click the Continue button. A list of available flights should be displayed on the next page. Choose the first available flight listed and click the Continue button.

The Payment Details page should be displayed. By default the details you provided in the Profile page earlier should be the data displayed here.

5. Enter 12345678910 as the Credit Card number and 10/17 as the Exp Date.

Payment Details

First Name : StudentXX
Last Name : LNameXX
Street Address : 123 Main Street
City/State/Zip : New York, NY 10001
Passenger Names : StudentXX LNameXX

Total for 1 ticket(s) is = \$ 1644
Credit Card : 12345678910 Exp Date : 10/17
 Save this Credit Card Information

Continue...

6. Click the Continue button. An Invoice page should be displayed.
7. List the HP Web Tours Reservation Application business processes that you observed.
-

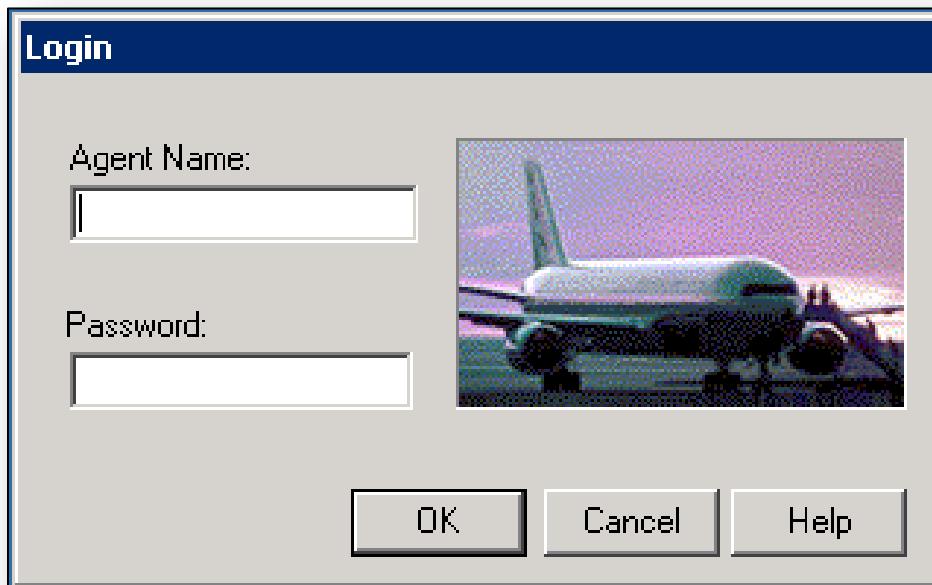
Note: After you answer the question, click the Sign Off button to log off the application.

Task 3 – Navigating the HP Flight Reservation Application

In this task, you open and log in to the HP Flight Reservation client/server application. Note the business processes you observe while navigating through the screens and explore options not covered in the steps below. This will help you thoroughly document all business processes that are part of the HP Flight Reservation application.

To log in to the HP Flight Reservation application, complete the following steps:

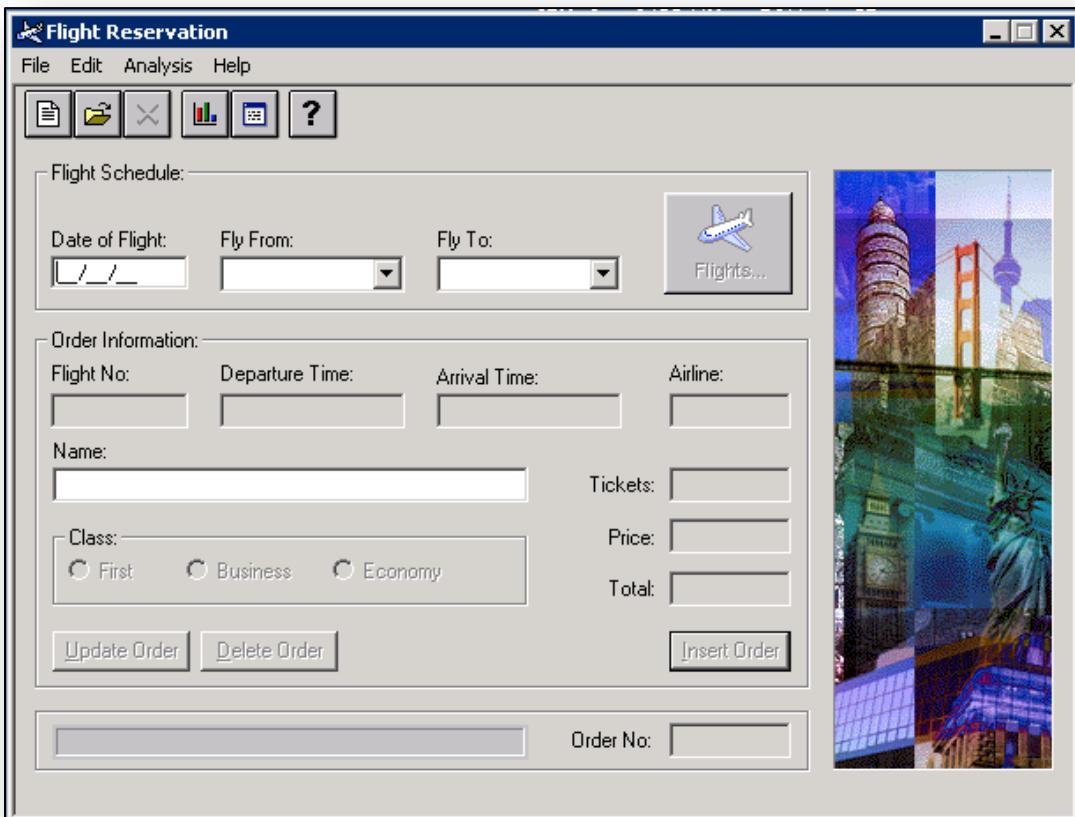
1. Double-click the HP Flight Reservation application shortcut icon  on your desktop. The Login dialog box is displayed.



2. On the Login screen:
 - a. Type <your name> in the Agent Name field.
 - b. Type **mercury** in the Password field.

- c. Click the OK button.

The Flight Reservation main window should be displayed, as shown in the following screenshot.



Task 4 – Learning the Flight Reservation Application

In this task, you continue to learn about the main business processes within the HP Flight Reservation application. In this task, you book a flight in the main Flight reservation window. Complete the following steps:

1. If you are not already logged in to the HP Flight Reservation application, double-click the desktop icon and log in.
2. Click the New button. A new Flight Reservation screen is displayed with empty fields.
3. Enter the following details into the form:
 - In the Date of Flight field, enter **10/10/15**.
 - From the Fly From drop-down menu, select **Los Angeles**.

- From the Fly To field, select  Paris



4. Click the Flights button.
5. Choose the first available flight within the Flights Table Window, and click OK.
6. Notice that the Flight No., Departure Time, Arrival Time, Airline, Price, and Total fields have been populated in the Flight Reservation main window.
7. Type <your name> in the Name field.
8. Choose First as the Class.
9. Enter 2 in the Tickets field.
10. Click the Insert Order button.
11. Notice that when the order is processed, an order number is provided in the Order No. field.
12. Select File → Exit to close out of the Flight Reservation application.

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Lab 3 – Working with the ALM Web Client

Objectives

After completing this lab, you should be able to:

- Access the ALM Web client
- Navigate around the Requirements module
- Navigate around the Defects module
- Define and filter the view within the Defects module

Scenario

As an acting business analyst for a growing airline, your responsibilities include managing the feature release of the Flights Reservation system move from a traditional client/server application to the Web and Mobile application interface. This requires defining, authoring, managing, and tracking requirements as they are being developed and tested by the IT application development and quality teams.

With your organization moving to an agile development lifecycle, this requires constant movement and quick turnarounds on feature sets, so they can be included in the next Sprint/Release cycle.

Exercise 1 – Accessing the ALM Web Client

To better acquaint yourself with the ALM Web client, complete the following steps:

1. Double-click the Internet Explorer (IE) icon on the desktop and type the URL for the ALM server: `http://almserver:8080/qcbin/`.

Note: Your instructor will provide you the ALM server information, if required.

- a. On the home page, click the ALM Web Client link.

The ALM login page is displayed.

- b. In the Name and Password fields, type `training` and `welcome`, respectively.
- c. Click the Authenticate button.
- d. From the Domain and Project fields, select `STUDENT00_ESS` and `ALM_Demo`, respectively.

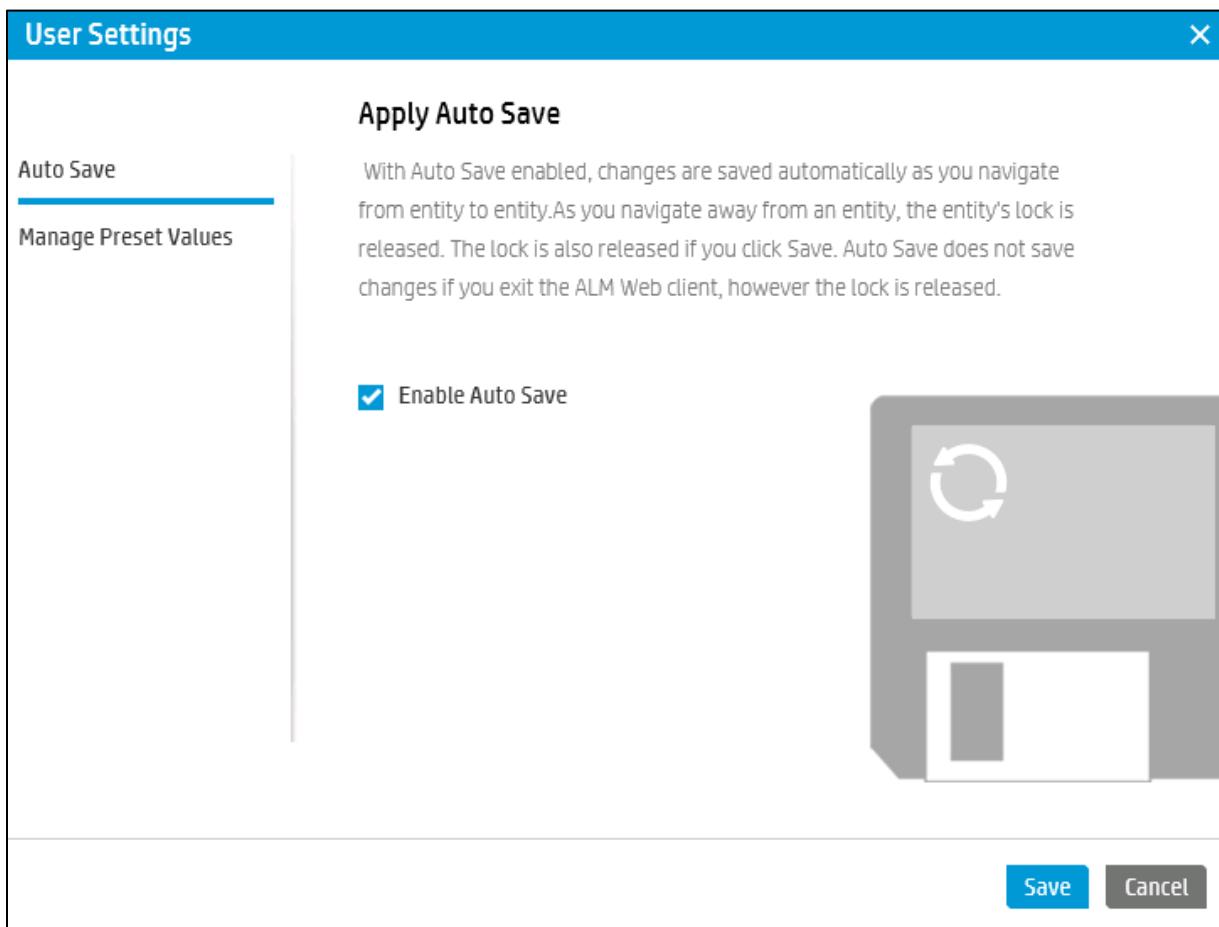
- e. Click the Login button, as shown in the following screenshot:

The screenshot shows the login interface for HP Application Lifecycle Management Edition. At the top left is the HP logo. To its right, the text "Application Lifecycle Management Edition" is displayed. Below this, there are two sets of input fields: "Name:" with "training" entered, and "Password:" with six asterisks. A light gray "Authenticate" button is positioned below these. Further down, there are two more input fields: "Domain:" with "STUDENT00_ES5" entered, and "Project:" with "ALM_Demo" entered. A blue "Login" button is located at the bottom right of these fields.

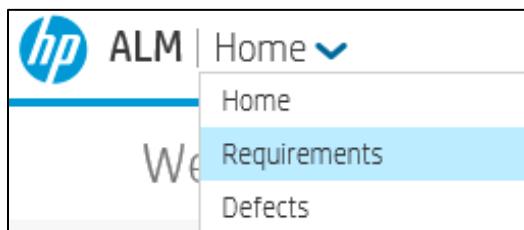
The Welcome window is displayed, as shown in the following screenshot:

The screenshot shows the "Welcome to ALM" page. At the top, there is a header bar with the HP logo, "ALM | Home", "Project: STUDENT00_ES5/ALM_Demo", user information ("training"), and "Logout" buttons. Below the header, the main content area has three main sections: "New Features" (purple background), "Getting Started" (blue background with a circular icon), and "Step by Step" (green background). Each section contains descriptive text and a "Learn more" button. At the bottom of the page, there is a footer bar with four links: "Support Online", "ALM on HPLN", "What's New?", and "ALM Community".

2. Navigate to the top-right corner of the Window and select the Settings Icon .
 - a. Under the drop-down, select User Settings.
 - b. Apply Auto Save. With Auto Save enabled, changes are saved automatically as you navigate from entity to entity, so that you do not lose any of your work. Click the Enable Auto Save checkbox and select the Save button, as shown in the following screenshot:



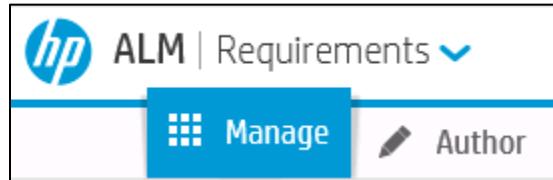
3. Navigate to the top-left corner to the Home drop-down menu. Notice the available choices in the drop-down selection. Select the Requirements module, as shown in the following screenshot:



Exercise 2 – Navigating around the Requirements Module

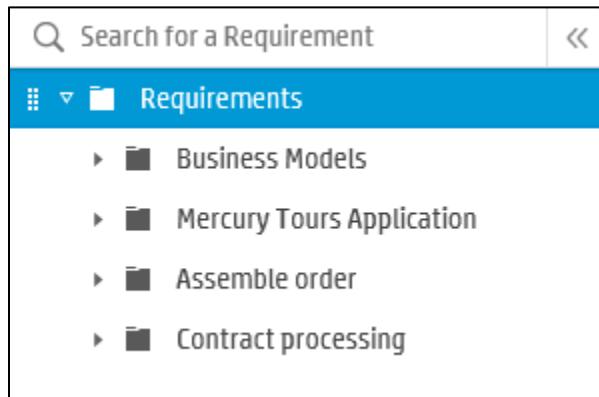
To manage and author requirements within the ALM Web Client, perform the following steps:

1. Navigate to the Manage tab of the Requirements module, as shown in the following screenshot:



2. Navigate to the Requirements tree in the left-side panel.

- a. If the Requirements tree is not visible, click the arrow button to view the Requirements tree.
- b. Expand the Requirements folder to view the high-level business requirements listed under the root directory, as shown in the following screenshot:



- c. Expand the Mercury Tours Application folder to view all of the business requirements under this directory. Select the Mercury Tours Application folder and click the Add Requirement.

Add requirement button.

d. Fill in the following data to add a new requirement:

Note: If all buttons are not visible within the default window size, maximize the window to ensure that all buttons are within the frame.

The screenshot shows the 'Add Requirement' dialog box. It contains fields for Name, Requirement Type, Req Parent, Product, Priority, Reviewed, Target Release, Target Cycle, Modified, Author, and Creation Date. There is also a large Description area with a placeholder text. At the bottom right, there are four buttons: Add (highlighted in blue), Add & Another, Clear, and Cancel.

e. Click the Add button upon completion. Your new business requirement should be listed under the Mercury Tours Application folder.

3. View the details of an existing Requirement by navigating to:
 - a. Requirements → Mercury Tours Application → Booking System → Payment Methods → Credit Card → Credit Card Number.

Note: As you are navigating through the Requirements tree, notice the Breadcrumbs Navigation Bar at the top with the selected path.

[Requirements](#) > [Mercury Tours Application](#) > [Booking System](#) > [Payment Methods](#) > [Credit Card](#) > [Credit Card Number](#)

b. Review the Overview details and document the following information:

- Requirement Type: _____
- Target Release: _____

- Target Cycle: _____
- Creation Date: _____

c. Click the Comments tab and then click the **Add comment** button.

d. Type in the following after your user/date stamp: **The Credit Card Number field will require security review for verification against vulnerabilities.**

Attach

e. Click the Attachments tab and click the **Attach** button. Navigate to the following directory, to access a file to attach to this Requirement.

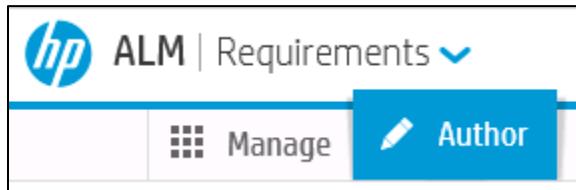
Desktop → Training → ALM_QC 12 Essentials → FRS_Requirements

f. Click the Save button at the bottom of the Common Actions toolbar, as shown in the following screenshot:

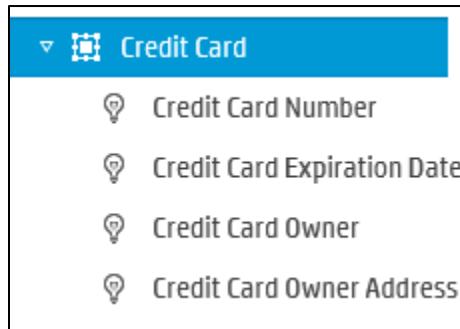
g. View the Traceability tab to understand what defects and test plans are currently tied to this requirement. Record them below:

- How many defects are linked to this Requirement? _____
- How many Tests are linked to this Requirement? _____

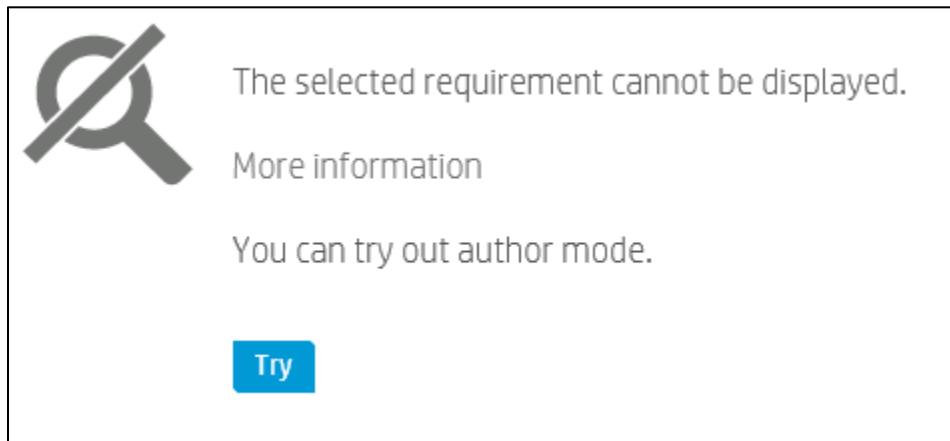
- h. Click the Author tab in the top-left corner, under the Requirements module title, as shown in the following screenshot:



- i. In the Requirements tree, go up a few levels to the parent requirement, Credit Card, as shown in the following screenshot:



- j. In the right panel for this requirement, ensure that the following screen is visible. Click the Try button on this screen, as shown in the following screenshot:



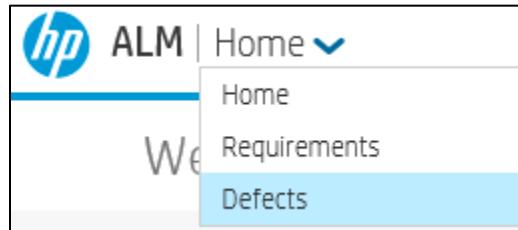
- k. View how the parent and child requirements are listed on the Authoring mode pane. Notice the Word-like editor to make any edits or updates to the requirement.
- l. Click back to the Home module on the top dropdown to close out of the Requirements module.

Exercise 3 – Navigating around the Defects Module

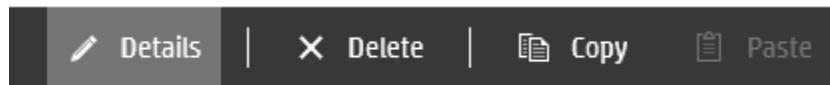
As a developer, you must understand what defects have been captured by the QA teams and have been assigned to you to fix.

To navigate around the Defects module of the ALM Web client, complete the following steps:

1. From the Home drop down, select the Defects module, as shown in the following screenshot:



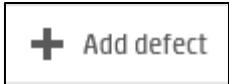
2. From the Grid view of Defects, highlight Defect ID 2. Notice the Description details listed in the bottom pane of the window. Click the Details button from the Common Actions toolbar, as shown in the following screenshot.



- a. As the Defect details are displayed, take note of some of the details. Document the following information:

- Assigned To: _____
- Detected By: _____
- Priority: _____
- Severity: _____

- b. Click the History tab. Under the Show drop-down field, set the value to All. Notice the last few times that this defect has been modified and by who. Click the Cancel button when you have completed this review.

3. Click the  button in the top navigation menu. Add the following details to this newly created defect:

Add Defect

Attach Load preset values Define preset values

Summary: Mobile App Welcome Screen Logo does not appear on the Android version App.

Defect ID: Status:

Assigned To: Detected By:

Detected on Date: Severity:

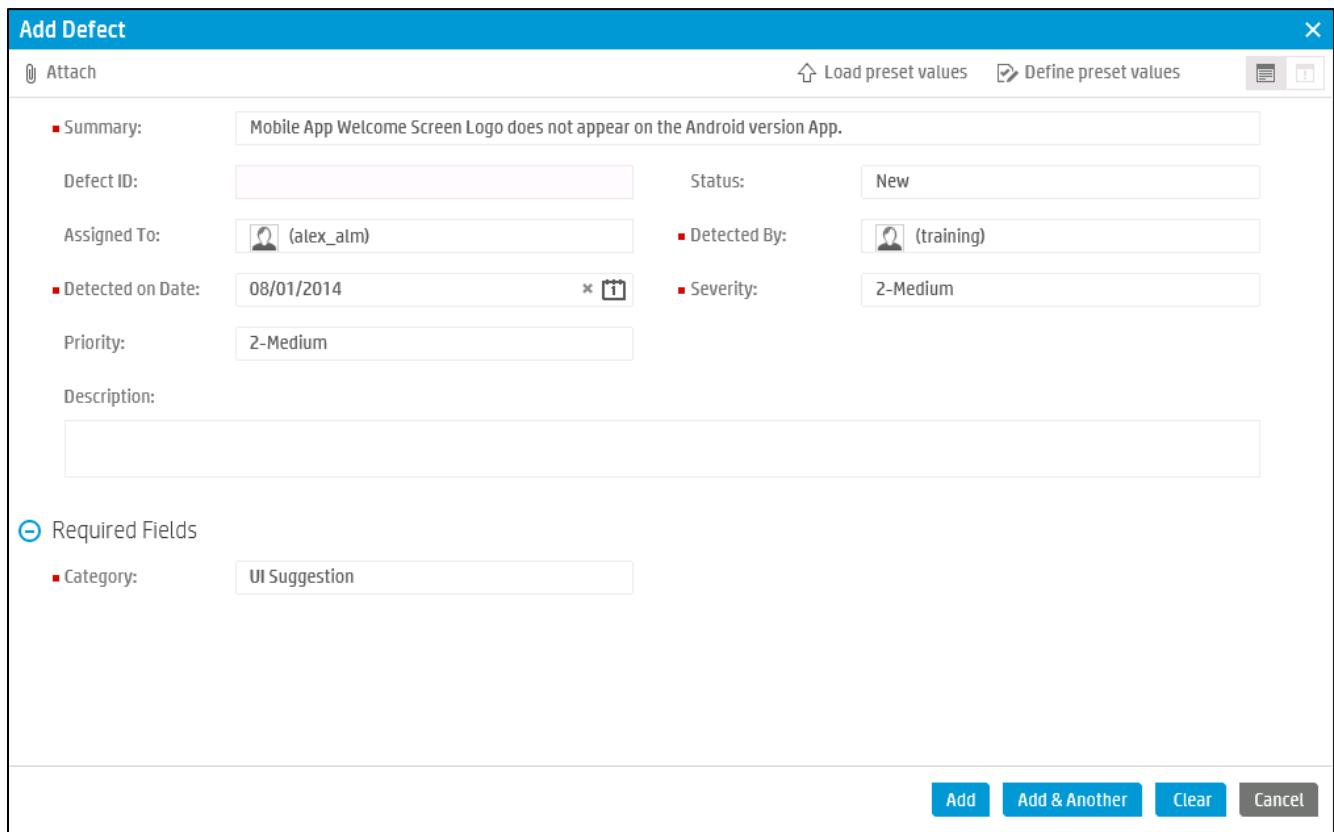
Priority:

Description:

Required Fields

Category:

Add Add & Another Clear Cancel



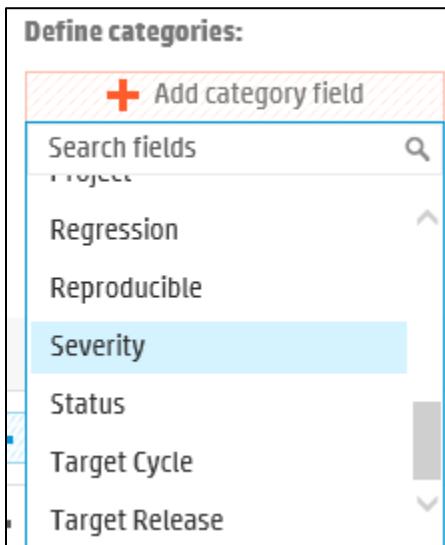
4. Click the Add button when you have completed filling in the fields.

Exercise 4 – Defining and Filtering the View within the Defects Module

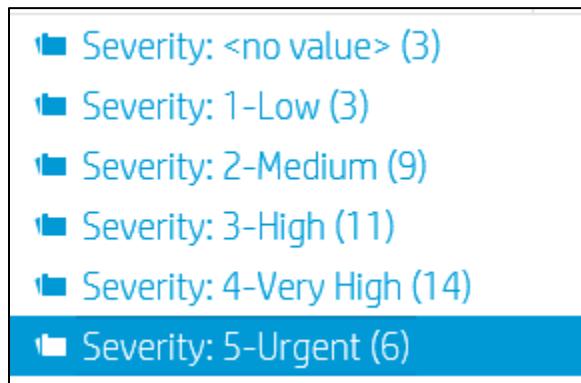
To personalize the defects grid to better access defects only assigned to you or with a specific priority or severity value, you can define and filter the defects grid.

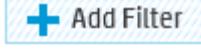
To begin, you define a preferred view. Complete the following steps:

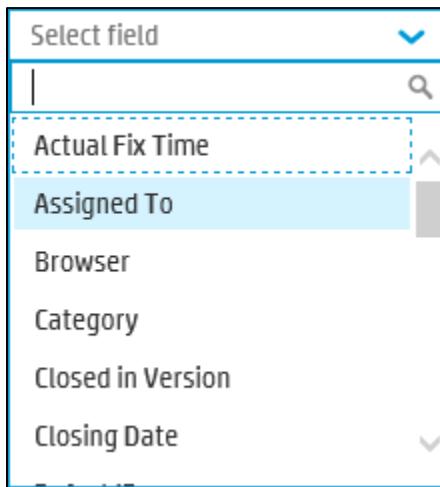
1. In the top-right corner, select the **Define view** button, and under the Define category field section, click the **+ Add category field** button and select the Severity category, as shown in the following screenshot:



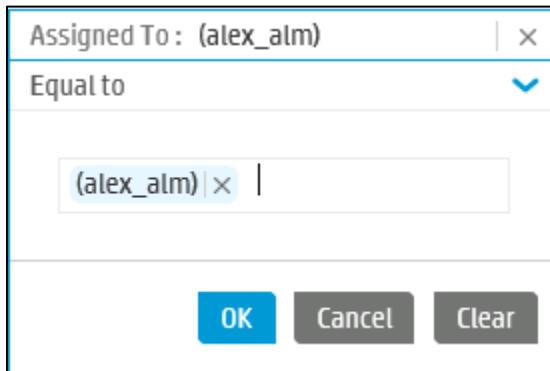
2. Click the Apply button. You will notice that a new left pane is now visible, categorizing all defects, by Severity level, as shown in the following screenshot:



3. Click the  button above the menu items and select the Assigned To field, as shown in the following screenshot:

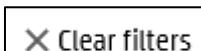


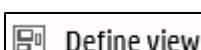
4. Equal to: (alex_alm), as shown in the following screenshot:



5. Press the OK button.

How many defects are visible within what Severity category?

6. Click the  button at the top navigation bar.

7. Click the  button in the top-right corner, click the  button under the Define categories section, and select Apply. Your defect grid should be back to its original condition.

8. Log out of the ALM Web client.

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Lab 4 – Working with Releases

Objectives

After completing this lab, you should be able to:

- Create a release
- Create cycles within a release
- Specify cycle details
- Reschedule dates

Scenario

The software development team of your organization has developed release 4.0 of the Flight Reservation application. You now need to test the application to verify the new features, existing functionality, and performance of the Create Order business process. Each of these metrics is tested within a separate testing cycle. The total available testing time is 90 days.

To test the application, you define the following testing cycles:

- Cycle 1, New Features – This cycle tests the new features in Release 4.0 of the Flight Reservation application. The duration of this cycle is 30 days.
- Cycle 2, Integrated System Testing – This cycle tests the new features with existing features that might have been impacted by the changes. The duration of this cycle is 10 days.
- Cycle 3, Performance – When application functionality testing is complete, this cycle measures the performance of critical screens and business processes to ensure that the new features have not negatively affected the response time. The duration of this cycle is 10 days.
- Cycle 4, User Acceptance Testing – This cycle ensures that the new features meet the expectations of the business. The duration of this cycle is 10 days.

Exercise 1 – Creating a Release

To create a release, complete the following steps:

1. Double-click the ALM icon on the desktop or open IE and type the url for the ALM server: `http://almserver:8080/qcbin/`
 - a. On the home page, click the ALM Desktop Client link.
 - b. The ALM login page is displayed, as shown in the following screenshot.

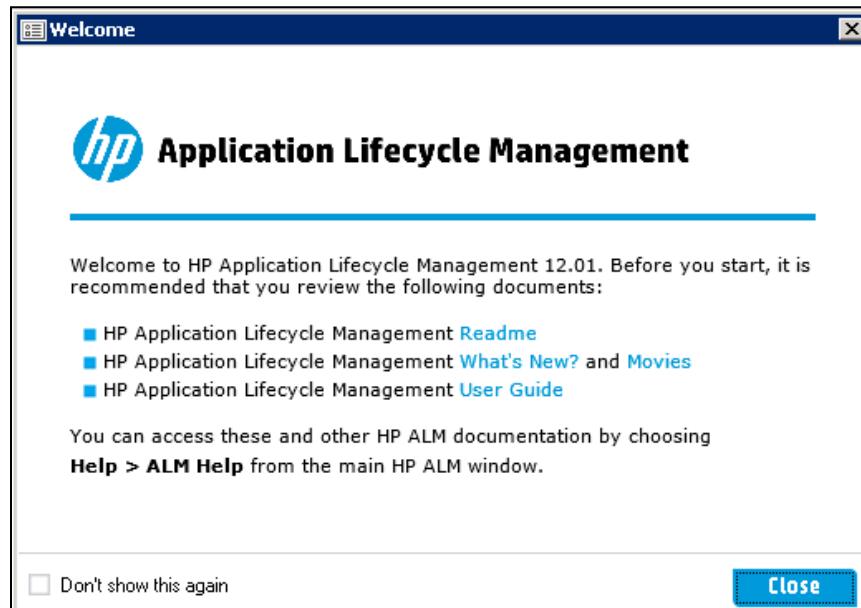
The screenshot shows the ALM login interface. At the top left is the HP logo. To its right is the title "Application Lifecycle Management". Below the title are two input fields: "Name" containing "training" and "Password" which is empty. Underneath these is a checkbox labeled "Automatically log in to my last domain and project on this machine", which is unchecked. To the left of this checkbox is a link "Forgot password". To the right is a blue "Authenticate" button. Below the password field are dropdown menus for "Domain" (set to "STUDENT00_ESS") and "Project" (set to "FlightApplication"). At the bottom right is a grey "Login" button.

- c. In the Login Name and Password fields, type **training** and **welcome**, respectively.
- d. Ensure that the Automatically log in to my last domain and project on this machine checkbox is *not* checked.
- e. Click the Authenticate button.
- f. From the Domain and Project lists, select STUDENT00_ESS and FlightApplication, respectively.

g. Click the Login button, as shown in the following screenshot.

The screenshot shows the login interface for HP Application Lifecycle Management. At the top left is the HP logo. The title "Application Lifecycle Management" is centered above the form fields. The "Name:" field contains "training". The "Password:" field contains "*****". There is an unchecked checkbox for "Automatically log in to my last domain and project on this machine". Below the password field is a "Forgot password" link and a "Authenticate" button. Underneath the main form, there are dropdown menus for "Domain:" set to "STUDENT00_ES5" and "Project:" set to "FlightApplication". A blue "Login" button is located at the bottom right of the form area.

The Welcome window is displayed, as shown in the following screenshot.



- h. Click the Close button.

The ALM User Site interface opens.

Note: You can prevent the Welcome window from appearing every time you log in

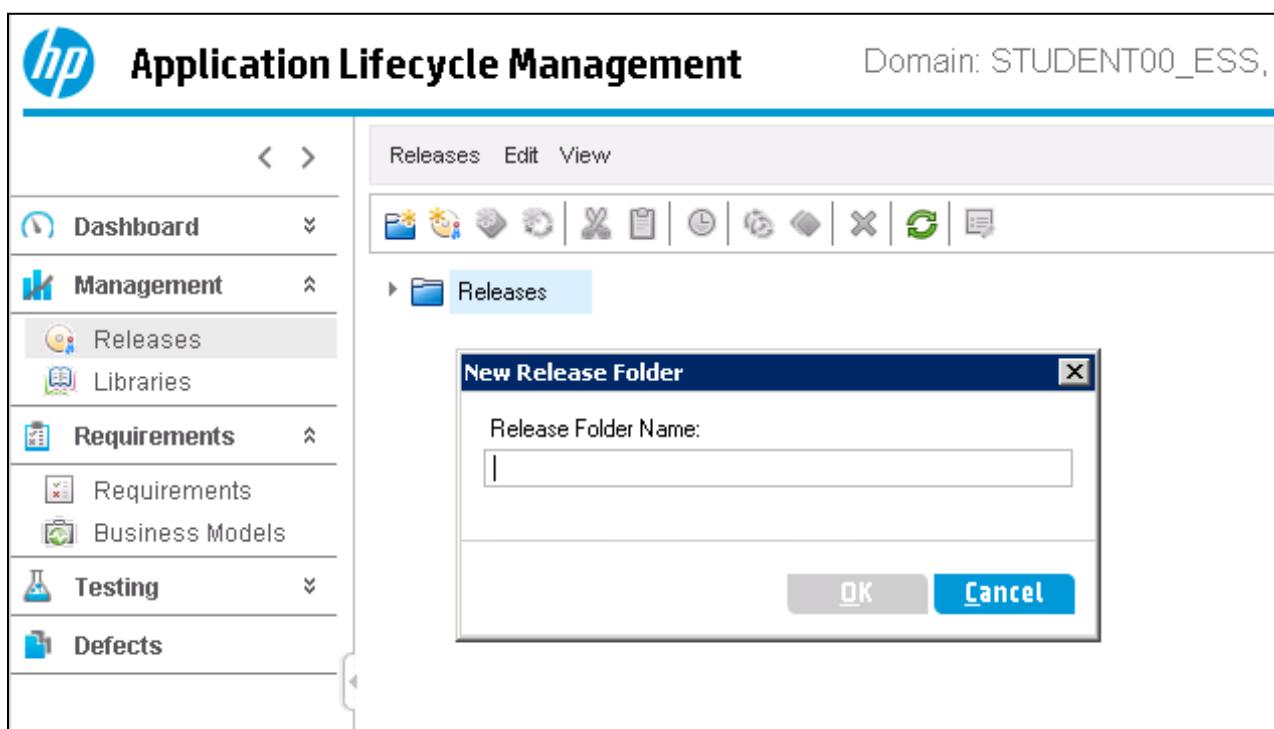
by selecting the **Don't show this again** checkbox.

2. To create a folder for the Flight Reservation project and a new release within that folder, complete the following steps:

- a. In the left pane, under the Management module, click the Releases module.

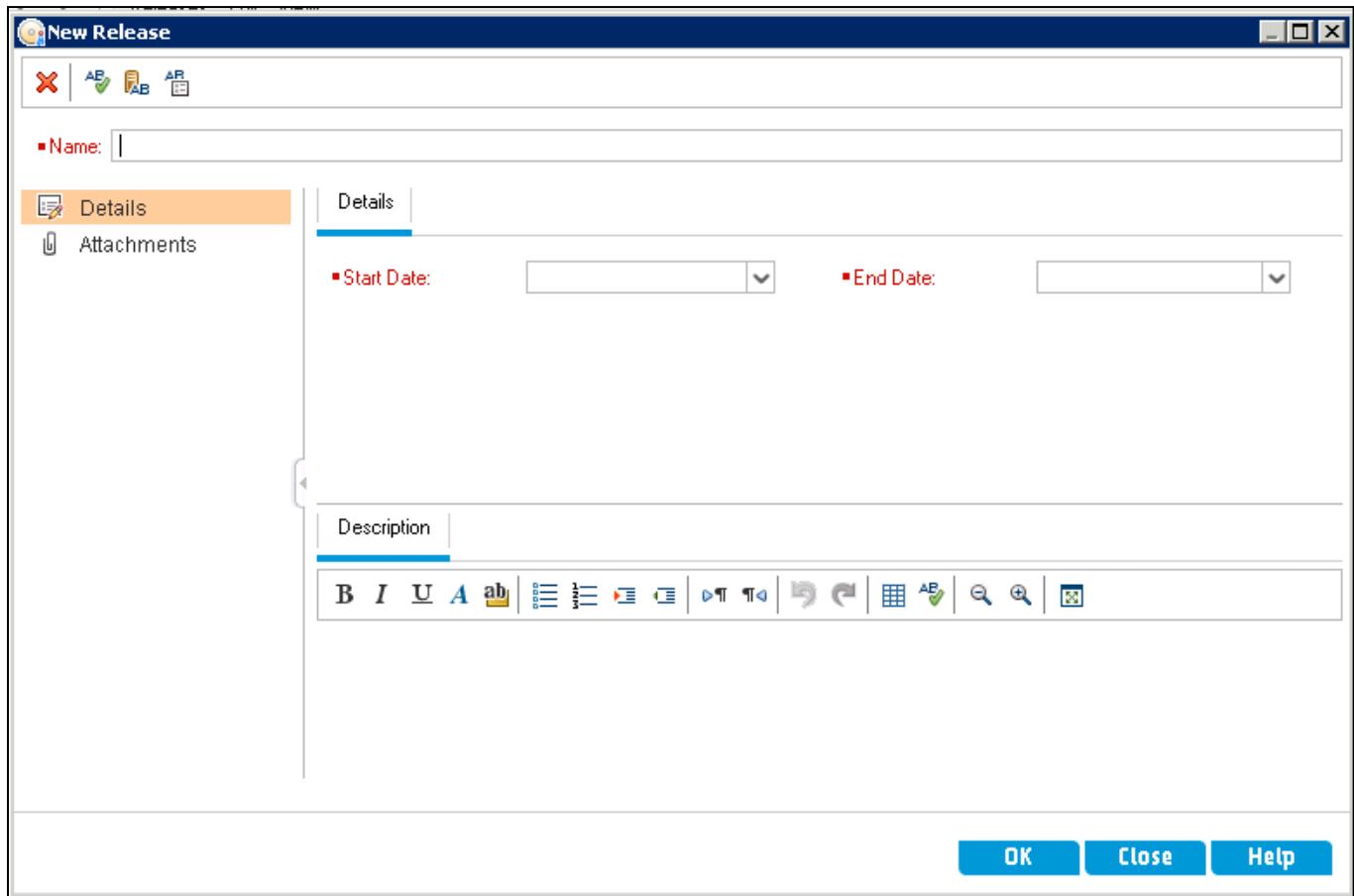
- b. Highlight the Releases folder in the tree view. On the toolbar, click the New

Release Folder  button. The New Release Folder dialog box is displayed, as shown in the following screenshot.



- c. In the Release Folder Name field, type **FLIGHT RESERVATION** and click the OK button to close the dialog box.

- d. On the toolbar, click the New Release  button. The New Release dialog box is displayed, as shown in the following screenshot.



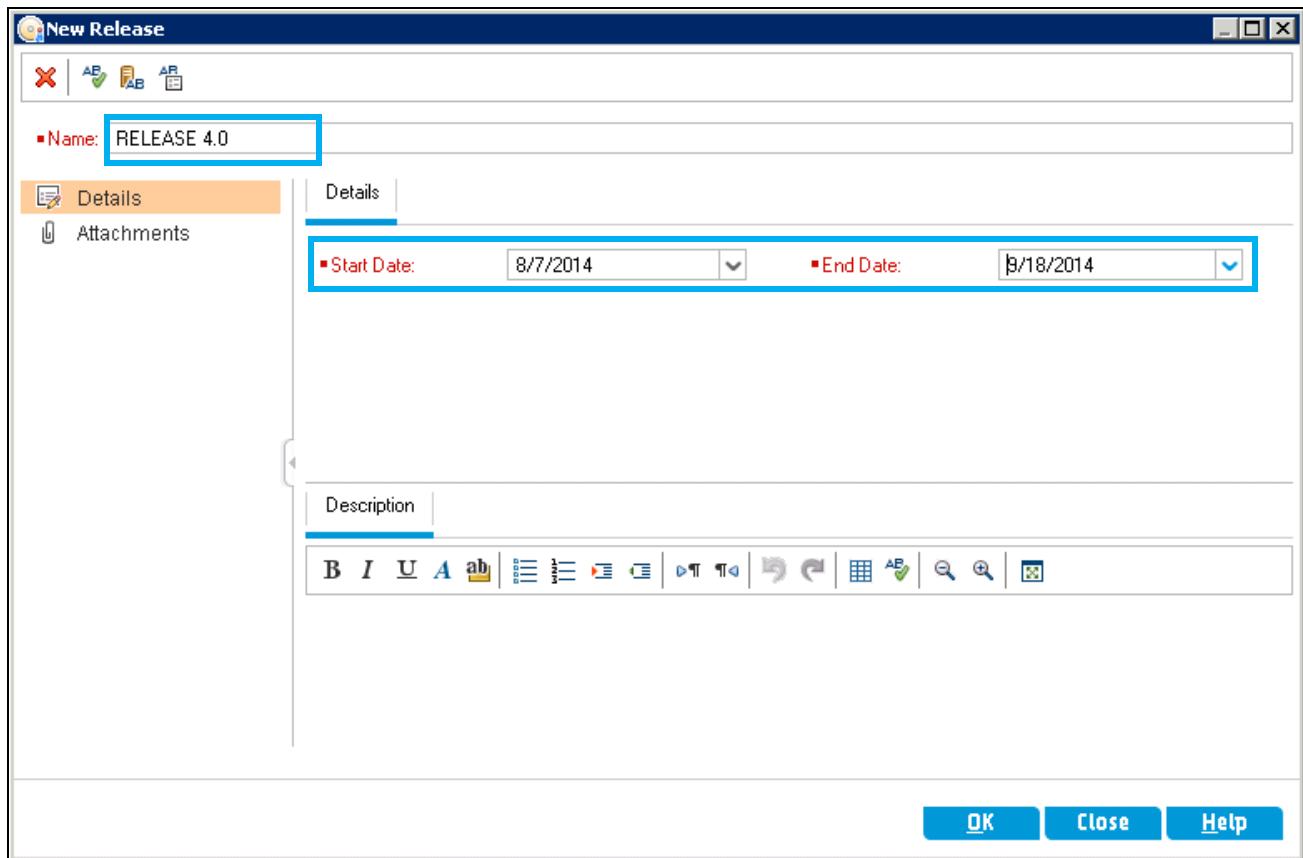
- e. In the Name field, type **RELEASE 4.0**.
3. Click the Details tab and specify a date range for the release:

- a. In the Start Date field, select today's date.

Note: In general, the start date of a release matches the start date of its first cycle.

- b. In the End Date field, select a date that is 30 days from today. Include only weekdays when selecting the date.

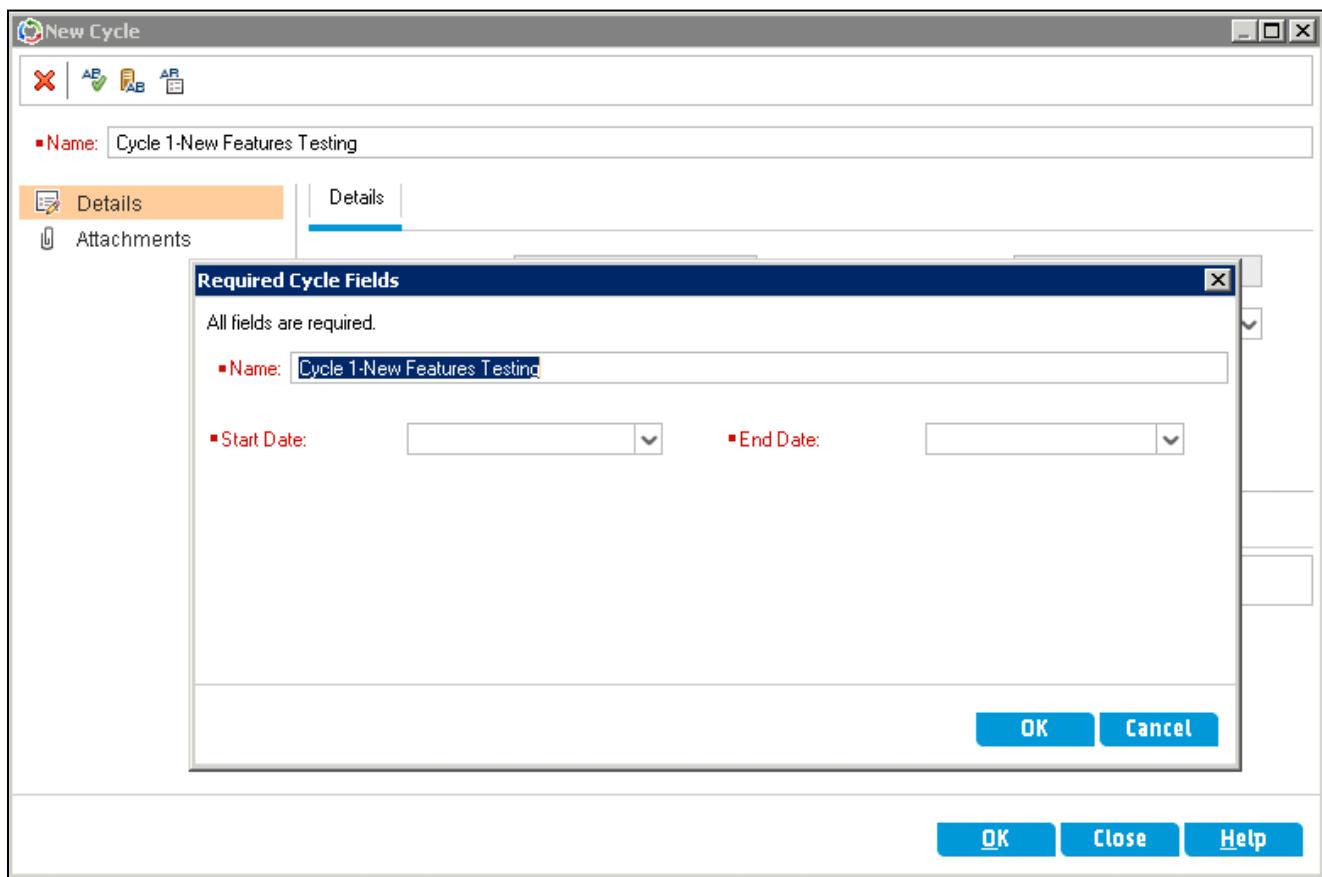
- c. Click the OK button to close the New Release dialog box. The new release is displayed in the Release tree under the Release folder, as shown in the following screenshot.



Exercise 2 – Creating Cycles within a Release

To create cycles within a release, complete the following steps:

1. Create a cycle to support this release:
 - a. From the Release tree, select Release 4.0.
 - b. On the toolbar, click the New Cycle  button. The New Cycle dialog box is displayed, as shown in the following screenshot.



- c. In the Name field, type **Cycle 1-New Features Testing**.
- d. Click the OK button. Note the alert that indicates that Start and End dates are required.
- e. In the Start Date field, select today's date.
- f. In the End Date field, select a date that is 10 days from today. Include only weekdays when selecting the date.
- g. Click the OK button to close the Required Cycle Fields dialog box.

2. Repeat Steps 1a through 1g to add three additional cycles to the Release tree with the information that follows:

- a. Name: **Cycle 2-Integrated System Testing**.
 - i. In the Start Date field, select a date that is one day after the end date of the first cycle. This implies that Cycle 2 starts one day after Cycle 1 ends. Include only weekdays while selecting the date.
 - ii. In the End Date field, select a date that is 10 days from the start date. Include only weekdays while selecting the date.
 - iii. In the Description field, type **Test new features merged with existing application and perform necessary regression**.
- b. Name: **Cycle 3-Performance Testing**.

Note: The Integrated System Testing and Performance Testing cycles sometimes overlap, so select a begin date for Performance Testing that is half way through the Integrated System Testing cycle.

- i. In the Start Date field, select a date that is five days prior to the end date for Cycle 2. Include only weekdays when selecting the date.
 - ii. In the End Date field, select a date that is five days after the end date for Cycle 2. Include only weekdays while selecting the date.
3. Insert Cycle 4-User Acceptance Testing with a value in the Start Date field that is a day after the end date for Cycle 3 and the value in the End Date field as the last day of the release.

4. Your release tree should be similar to the release tree shown in the following screenshot.

The screenshot shows the HP Application Lifecycle Management (ALM) application interface. The top navigation bar includes the HP logo, the title "Application Lifecycle Management", and a "Domain: S" indicator. The left sidebar contains links for Dashboard, Management (with sub-links for Releases and Libraries), Requirements (with sub-links for Requirements and Business Models), Testing, and Defects. The main content area displays a hierarchical release tree under the "Releases" section. The tree structure is as follows:

- Releases
 - FLIGHT RESERVATION
 - RELEASE 4.0
 - Cycle 1-New Features Testing
 - Cycle 2-Integrated System Testing
 - Cycle 4-User Acceptance Testing
 - Cycle 3-Performance Testing

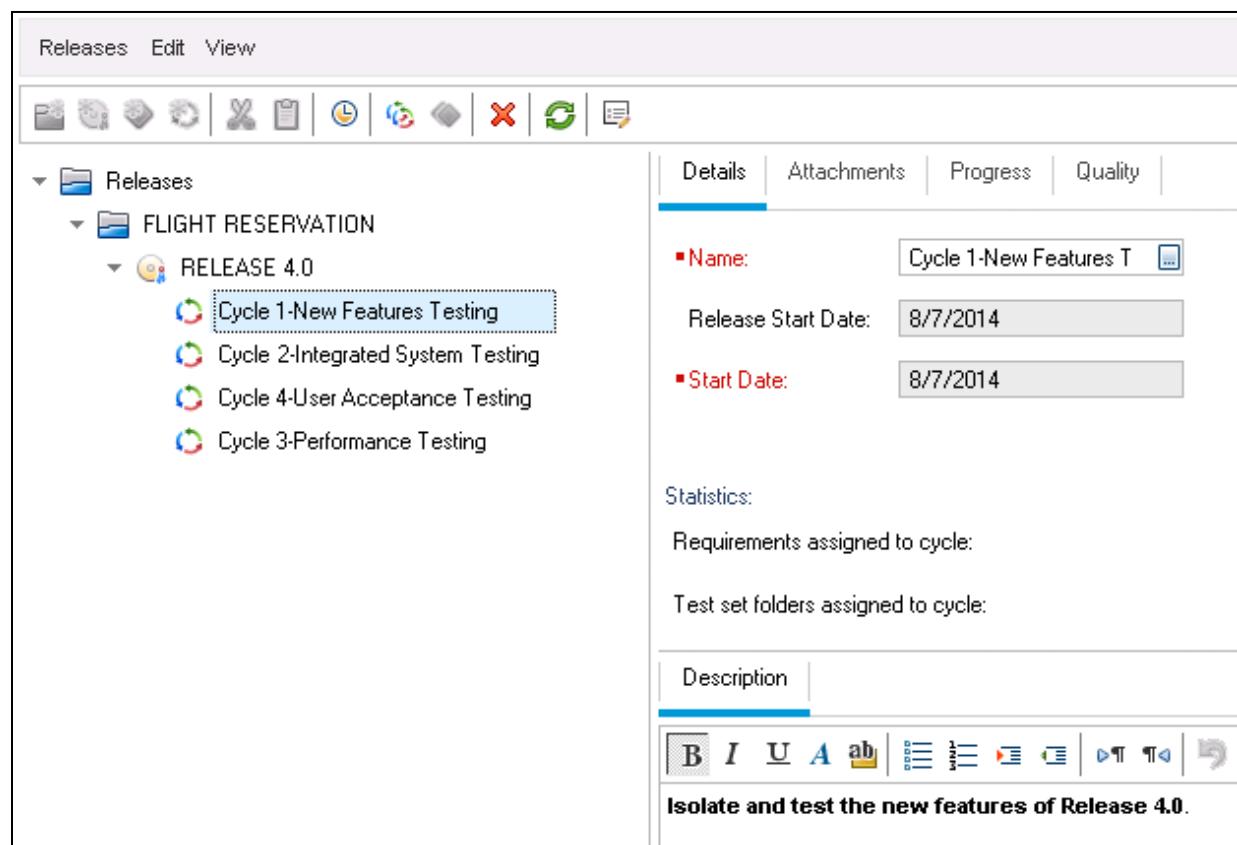
The "RELEASE 4.0" node is highlighted with a dashed blue border. A toolbar with various icons is located above the release tree.

Exercise 3 – Specifying Cycle Details

After creating cycles within a release, you can modify cycle details, such as the start date, end date, and description.

To specify cycle details, complete the following steps to modify the details for Cycle 1:

1. From the Release tree, select Cycle1-New Features Testing.
2. In the right pane, select the Details tab.
3. Click the Description tab
4. In the Description field, type **Isolate and test the new features of Release 4.0**, as shown in the following screenshot.



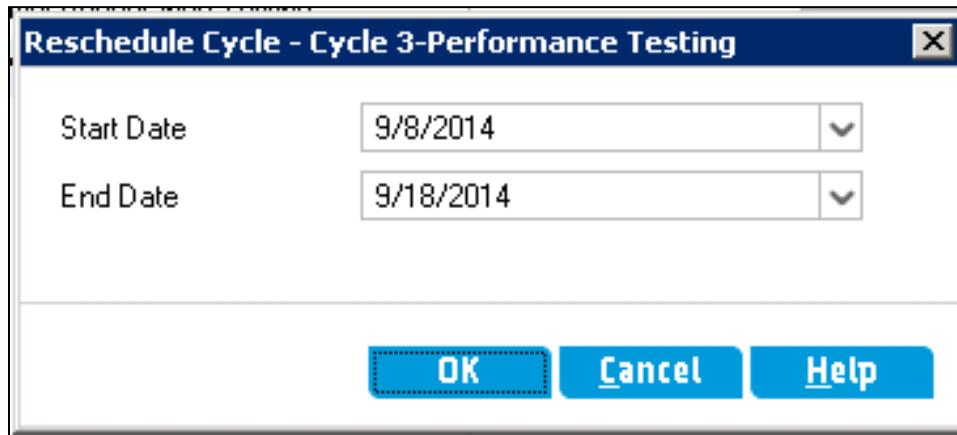
Exercise 4 – Rescheduling Dates

To reschedule dates, complete the following steps:

1. Specify details about a cycle so that it overlaps another:
 - a. In the Release tree, select Cycle 2-Integrated System Testing and note its end date:

Cycle 2 end date: _____

- b. Right-click the Cycle 3-Performance Testing and click the Reschedule  button.
- c. The Reschedule Cycle dialog box is displayed.



- d. Choose the start date as one day after the existing start date, and click the OK button.
2. Examine the Details tab for the release and each cycle and note the date ranges in the following table:

| | Start Date | End Date |
|-------------|-------------------|-----------------|
| Release 4.0 | | |
| Cycle 1 | | |
| Cycle 2 | | |
| Cycle 3 | | |
| Cycle 4 | | |

3. Log off from ALM.

Lab 5 – Project Planning and Tracking

Objectives

After completing this lab, you should be able to:

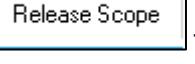
- Define milestones and scope items
- Define and configure milestones
- Assign and configure Key Performance Indicators (KPIs)
- Create a custom KPI
- Calculate KPIs
- View the scorecard
- Modify threshold settings

Scenario

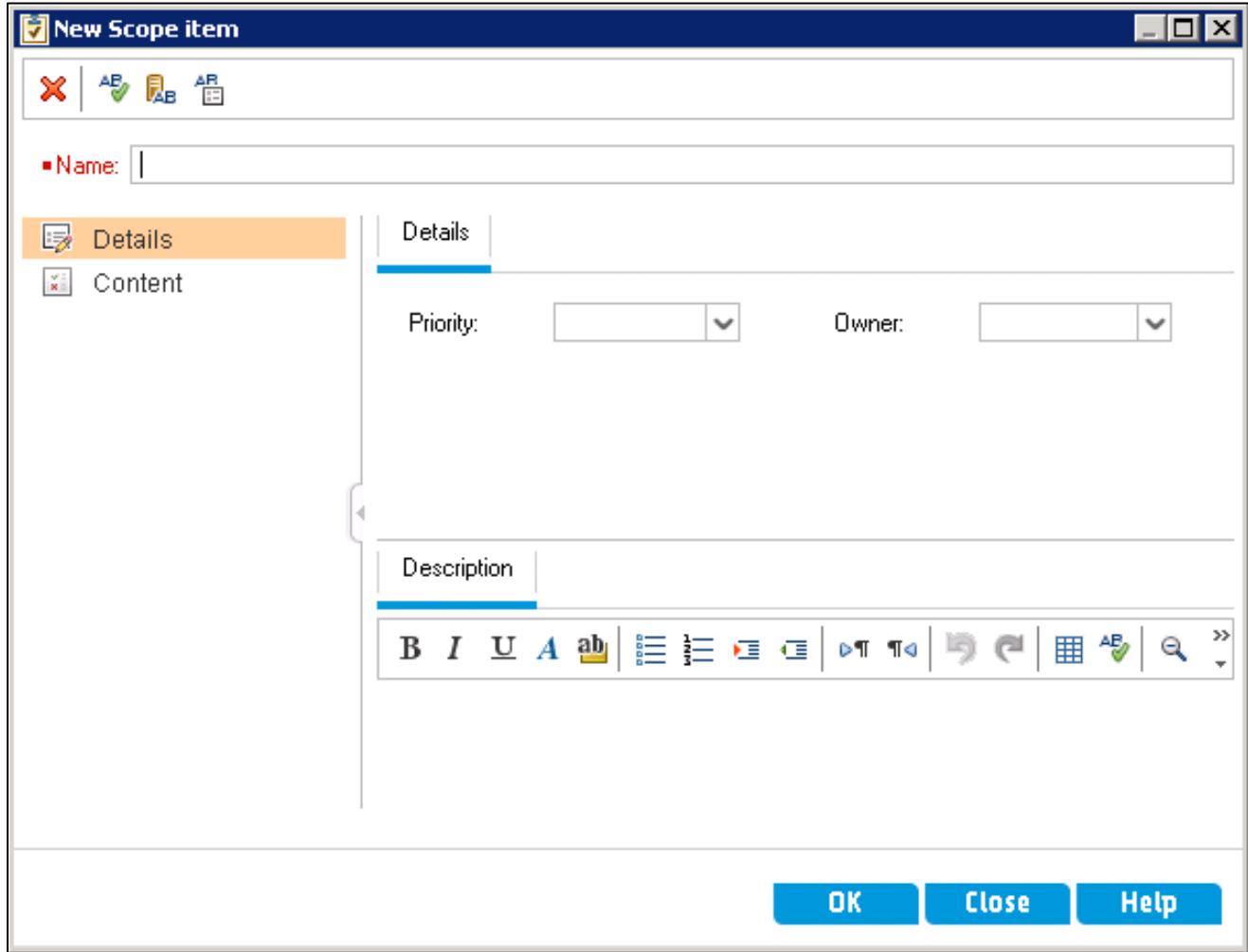
Project Planning and Tracking allows users and managers to track the readiness of their application as defined by milestones. In this lab, you define the milestones and scope items for an existing release, and then assign and configure the Key Performance Indicators (KPIs) to analyze the data of your defined milestones. You also view the scorecard and learn how to modify the threshold settings.

Exercise 1 – Defining Milestones and Scope Items

To define milestones and scope items for an already existing release, complete the following steps:

1. Log in to ALM using the ALM Desktop client:
 - a. In the Login Name and Password fields, type **training** and **welcome**, respectively.
 - b. Click the Authenticate button.
 - c. From the Domain and Project lists, select STUDENT00_DTA and PPT_Project, respectively.
 - d. Click the Login button.
2. To define a new release, complete the following steps:
 - a. Click the Management option on the sidebar and select the  Releases module.
 - b. Expand the Releases folder and click the Flight Application folder.
 - c. Add a new release called **Release 5.0**. Enter a value in the Start Date field of 30 days earlier than today, enter a value in the End Date field that is a week from today, and click the  OK button.
3. In this release of the Flight application, you add two scope items. To add scope items, complete the following steps:
 - a. Select the Release 5.0 you just created.
 - b. Click the  Release Scope tab.

- c. Click the New Scope Item  icon to add a new item. The New Scope Item window is displayed, as shown in the following screenshot:



- d. Enter **Go Green** in the Name field.
e. In the Priority field, enter **2-Medium**.
f. Click the  button.

- g. Use Steps 3c through 3f to create a new scope item named **SecureIT** with a priority of **3-High**, as shown in the following screenshot:

The screenshot shows the 'Release Scope' tab in the HP ALM interface. On the left, a tree view shows 'Releases' expanded, with 'Flight Reservation' selected, revealing 'Release 4.0' and 'Release 5.0'. The main area displays a table of scope items:

| Scope Item ID | Name | Priority |
|---------------|----------|----------|
| 1001 | Go Green | 2-Medium |
| 1002 | SecureIT | 3-High |

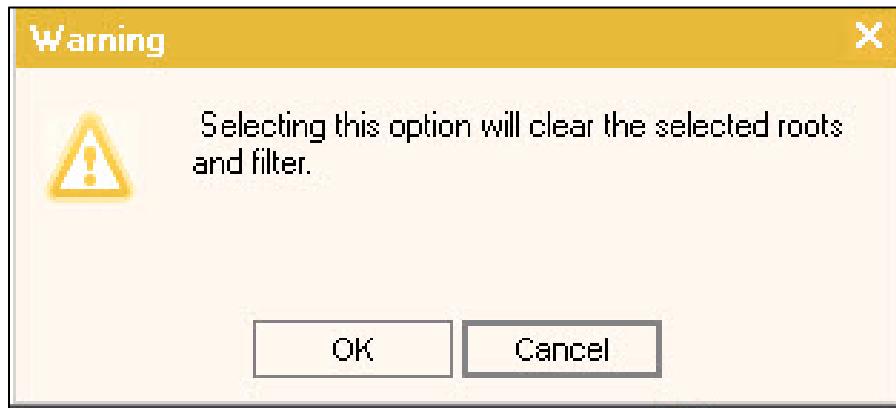
Below the table, tabs for 'Content' and 'Description' are visible. Under 'Content', the 'Requirements' tab is selected, showing a tree view with 'Requirements' expanded. Other tabs include 'Tests', 'Test Sets', and 'Defects'.

4. To assign content to scope items, complete the following steps:
 - a. Select the Go Green scope item.
 - b. In the Content tab, expand the Requirements tree and the Flight Reservation folder.

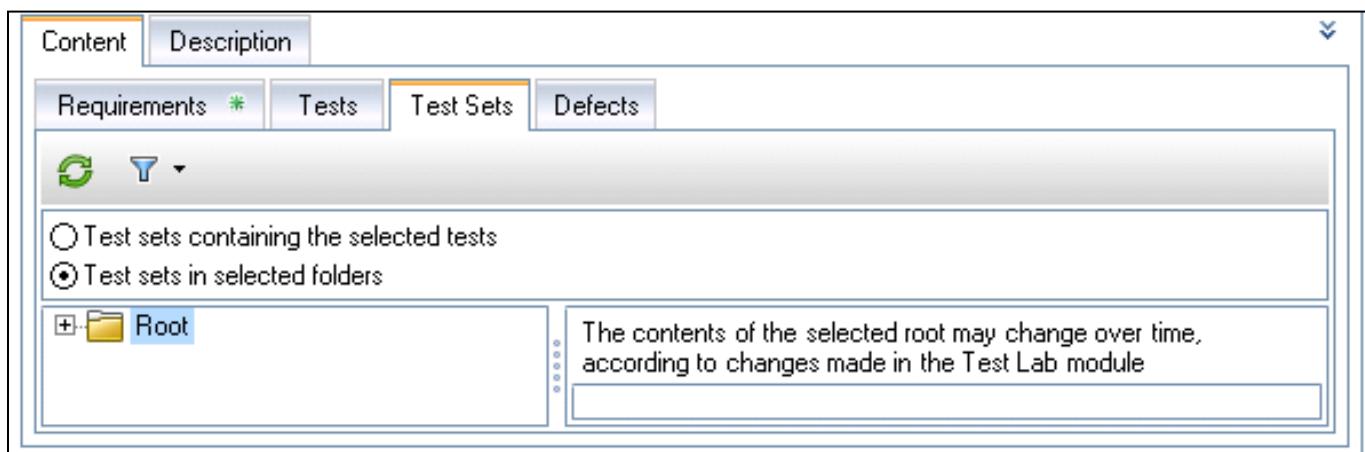
- c. Click the Business Processes, New Features, and Field Validation checkboxes to select this content, as shown in the following screenshot:

The screenshot shows the HP ALM interface with the 'Release Scope' tab selected. A table displays two scope items: 'Go Green' (Priority 2-Medium) and 'SecureIT' (Priority 3-High). In the 'Content' section, the 'Requirements' tab is active. On the left, a tree view for 'Flight Reservation' requirements shows the following structure with checkboxes:
- Requirements
 - Flight Reservation
 - Business Processes (checked)
 - Security
 - New Features (checked)
 - Field Validation (checked)

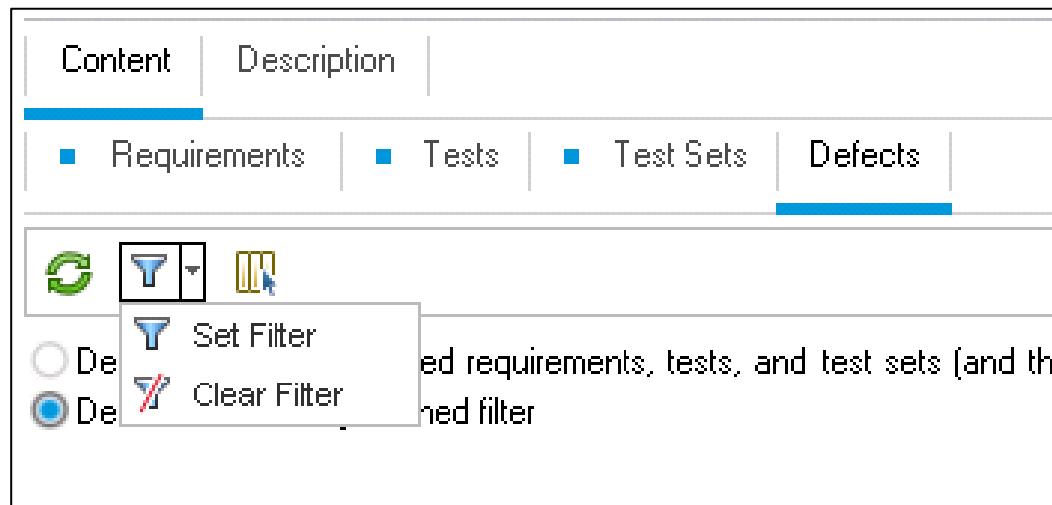
- d. Click the Tests tab.
e. Select the Tests covering selected requirements radio button. Click the OK button in the warning message, as shown in the following screenshot:



- f. Click the Test Sets tab, as shown in the following screenshot:

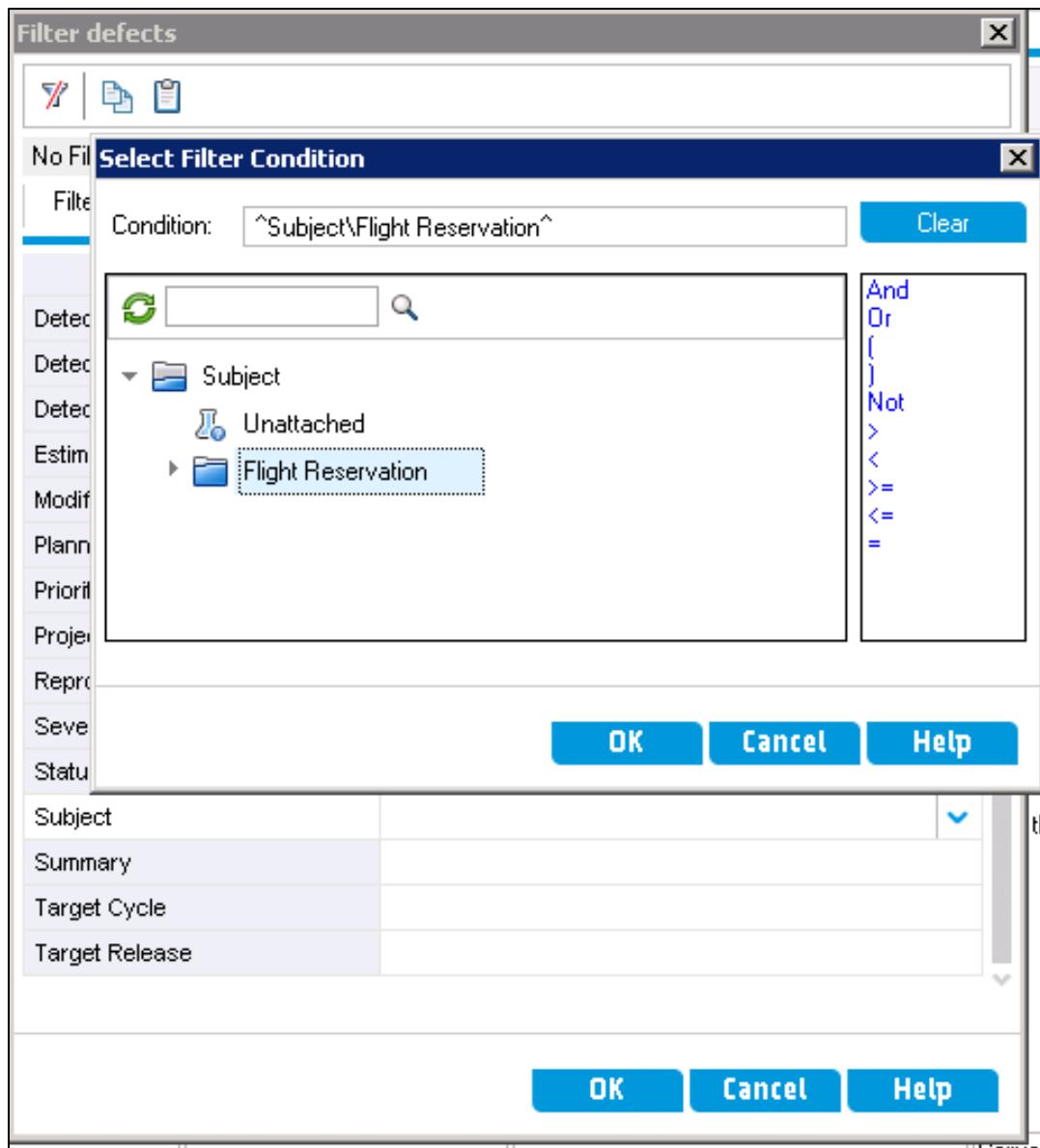


- g. Select the Test sets containing the selected tests radio button. Click the OK button in the warning message.
5. To select content for the SecureIT scope item, follow the same process as in Step 4, but select the Security Requirements folder.
6. To define defect content, complete the following steps:
- With the SecureIT scope item selected, choose Content → Defects tab.
 - Click the down arrow with the Filter Sort button.
 - Select Set Filter, as shown in the following screenshot:



- d. In the Filter Defect window, in the Subject field, click the down arrow to display the Select Filter Condition dialog box.

- e. Select the Flight Reservation folder under the Subject field. The entry is displayed as Subject\Flight Reservation, as shown in the following screenshot:

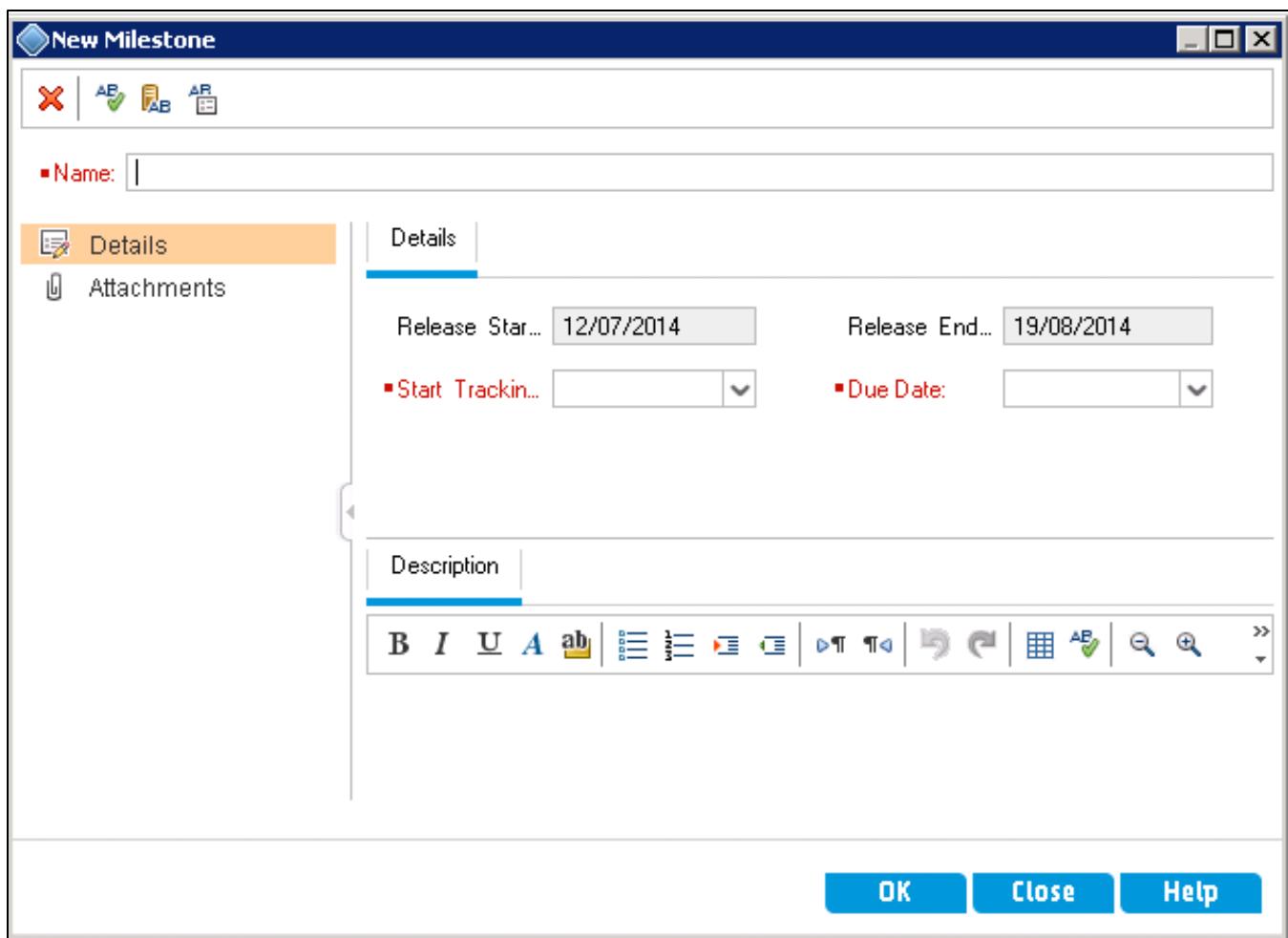


- f. Click the button in the Select Filter Condition dialog box.
- g. Click the button again in the Filter Defects dialog box.
- h. Repeat Step 6 for the Go Green scope item.

Exercise 2 – Defining and Configuring Milestones

To define milestones and configure the related scope items, complete the following steps:

1. To define milestones:
 - a. Ensure that Release 5.0 is selected.
 - b. On the Releases toolbar, click the New Milestone icon  to add a milestone to the release. The New Milestone dialog box is displayed, as shown in the following screenshot:



- c. Enter the following two milestones:

| Name | Start Tracking | Due Date |
|---------------------|----------------|-----------------|
| Initiation Complete | 30 days ago | Today's date |
| Unit Test Complete | 7 days ago | Tomorrow's date |

- d. The milestone is displayed.

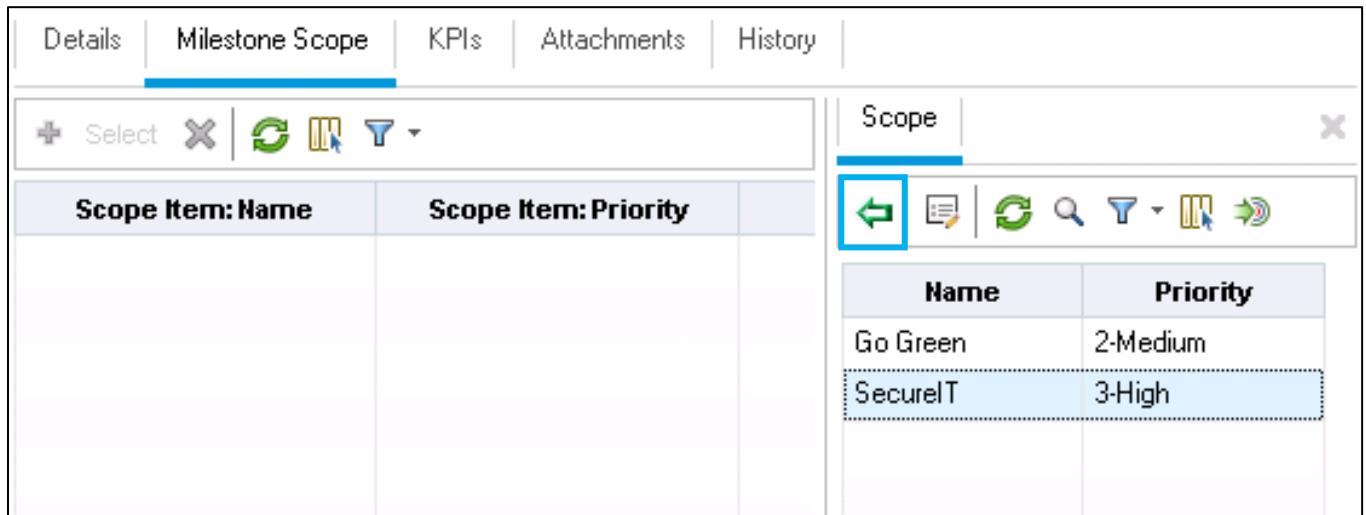
2. To define a milestone scope, complete the following steps:

- Select the Initiation Complete milestone.

b. Click the  tab.

c. Click the Select Scope Items  button.

d. From the Scope pane on the right, highlight all scope items and click the Add Scope Item button, as shown in the following screenshot:



| Name | Priority |
|----------|----------|
| Go Green | 2-Medium |
| SecureIT | 3-High |

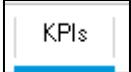
- Repeat Steps 2b to 2d for the Unit Test Complete milestone.

Exercise 3 – Assigning and Configuring Key Performance Indicators (KPIs)

To add a default KPI to a milestone, complete the following steps:

1. Assign a KPI to the Initiation Complete milestone:

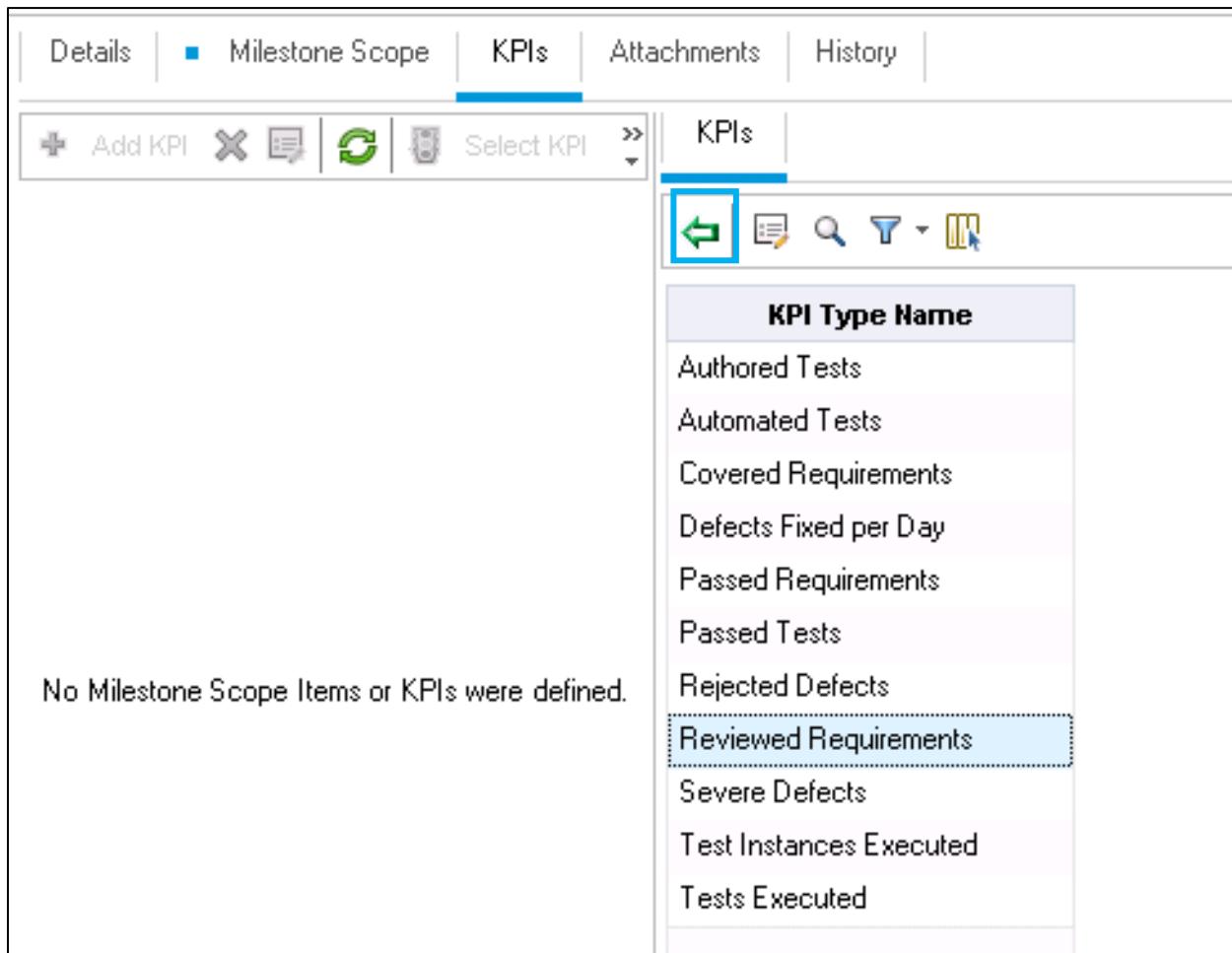
- a. Select the Initiation Complete milestone.

- b. Click the  tab.

- c. Click the  button.

- d. Select the Reviewed Requirements KPI from the list on the right.

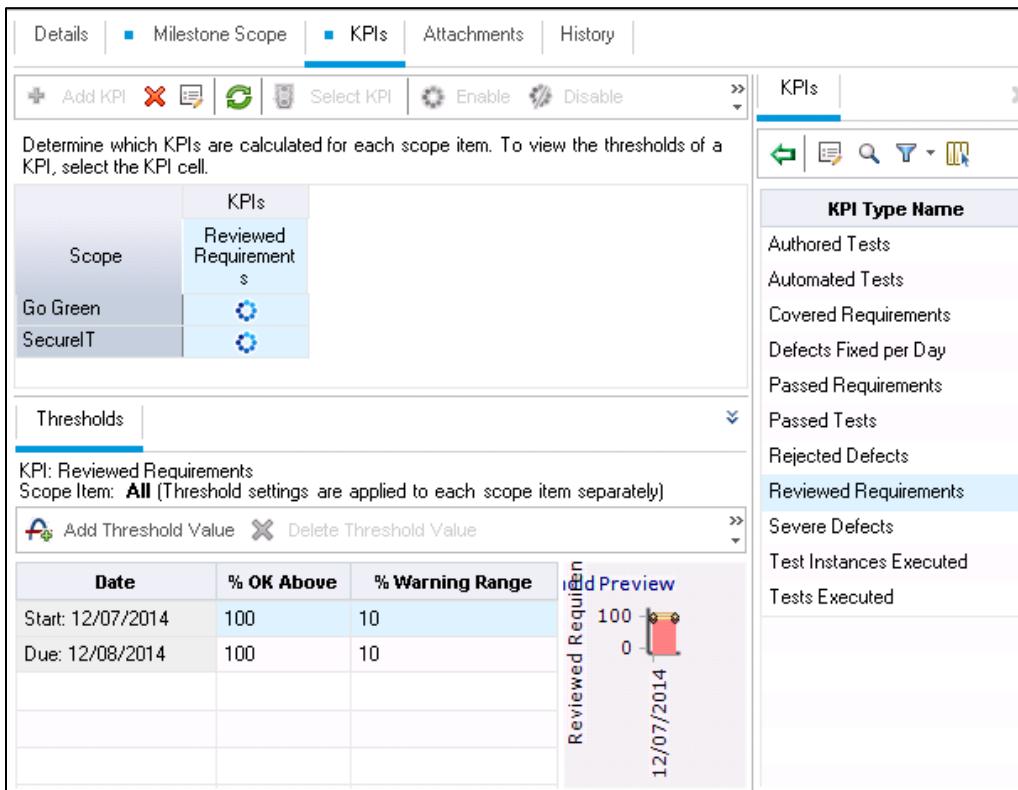
- e. Click the Add KPI button, as shown in the following screenshot:



The screenshot shows a software interface for managing KPIs. At the top, there is a navigation bar with tabs: Details, Milestone Scope (which is selected and highlighted in blue), KPIs, Attachments, and History. Below the navigation bar is a toolbar with several icons: a plus sign for 'Add KPI', a delete icon, a refresh icon, and a 'Select KPI' button. To the right of the toolbar is a search bar with a magnifying glass icon and a dropdown arrow. The main area is titled 'KPIs'. On the left side of this area, there is a toolbar with icons for back, forward, edit, search, and refresh. Below this is a table titled 'KPI Type Name' containing a list of KPI types. The 'Reviewed Requirements' KPI is highlighted with a dashed border. The text 'No Milestone Scope Items or KPIs were defined.' is displayed at the bottom left of the main area.

| KPI Type Name |
|-------------------------|
| Authored Tests |
| Automated Tests |
| Covered Requirements |
| Defects Fixed per Day |
| Passed Requirements |
| Passed Tests |
| Rejected Defects |
| Reviewed Requirements |
| Severe Defects |
| Test Instances Executed |
| Tests Executed |

- f. Leave the default threshold values and observe the threshold graph, as shown in the following screenshot:



2. To assign a KPI to the Unit Test Complete milestone, complete the following steps:

- a. Select the Unit Test Complete milestone.

b. Click the tab.

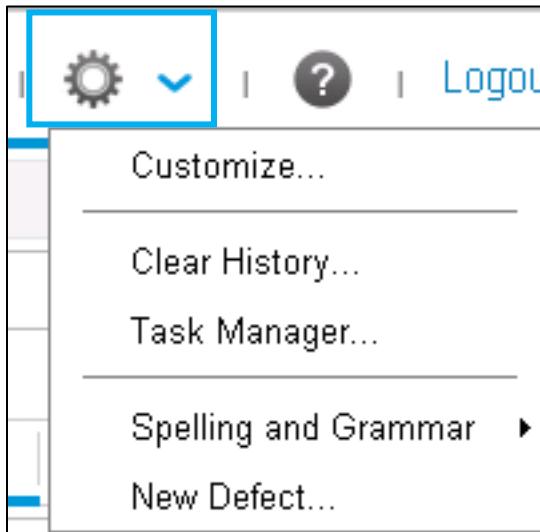
c. Click the button.

- d. Select the Severe Defects KPI from the list on the right and then click the Add KPI button.

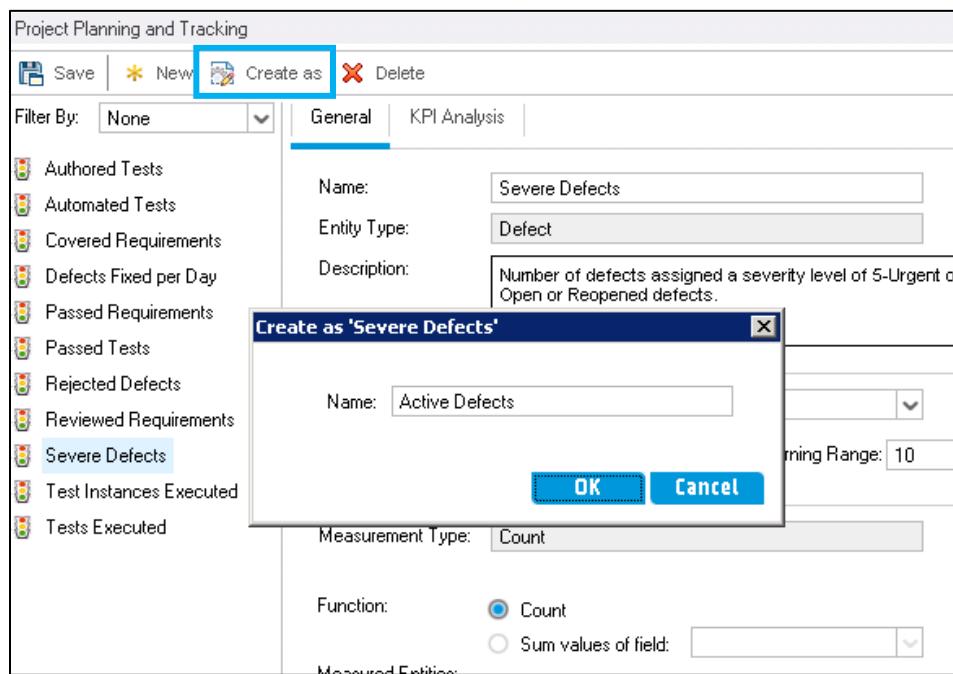
Exercise 4 – Creating a Custom KPI

To create a custom KPI based on a default KPI, complete the following steps:

1. To create a new Count KPI:
 - a. On the masthead, click the tools icon and select Customize from the drop-down menu, as shown in the following screenshot:



- b. Select the Project Planning and Tracking link.
- c. Select the Severe Defects KPI.
- d. Click the Create as button, as shown in the following screenshot:



e. Enter **Active Defects** in the Name field.

OK

f. Click the **OK** button.

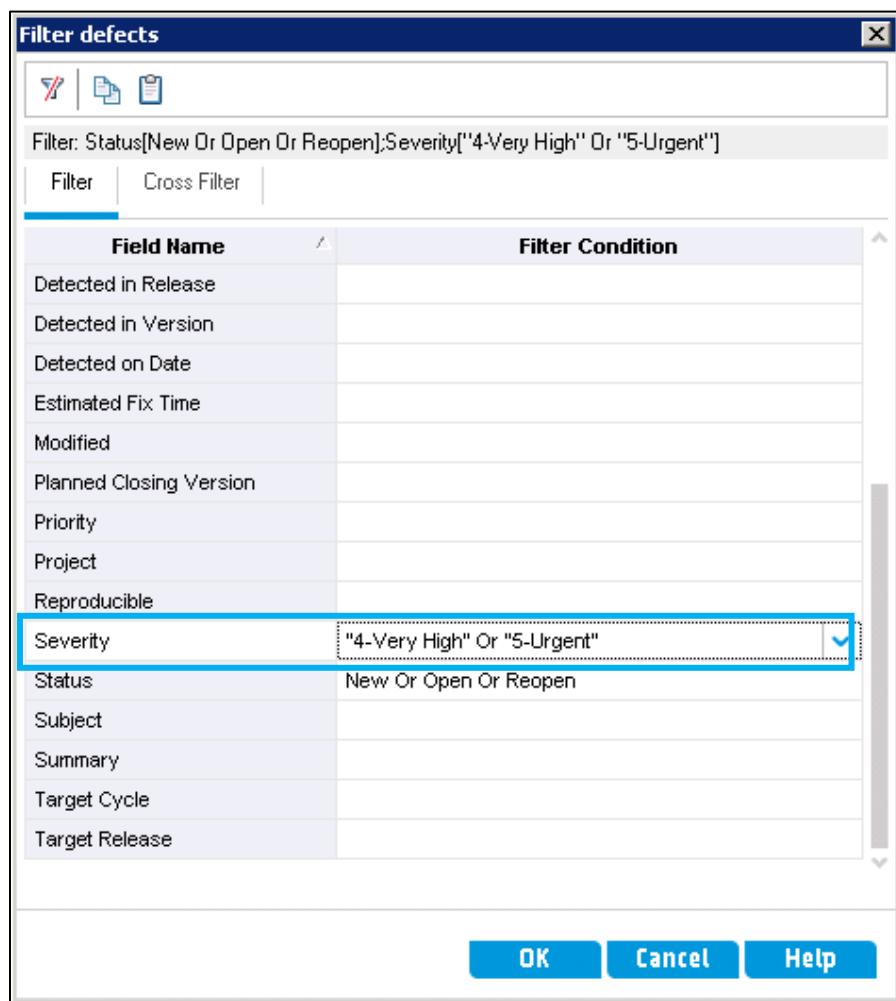
g. Change the value in the Default Threshold OK Below field to 25, as shown in the following screenshot:

The screenshot shows a configuration interface for 'Threshold Settings'. It includes fields for 'KPI is better when values are' (set to 'Lower'), 'Default Threshold OK Below' (set to '25'), and 'Warning Range' (set to '10 %').

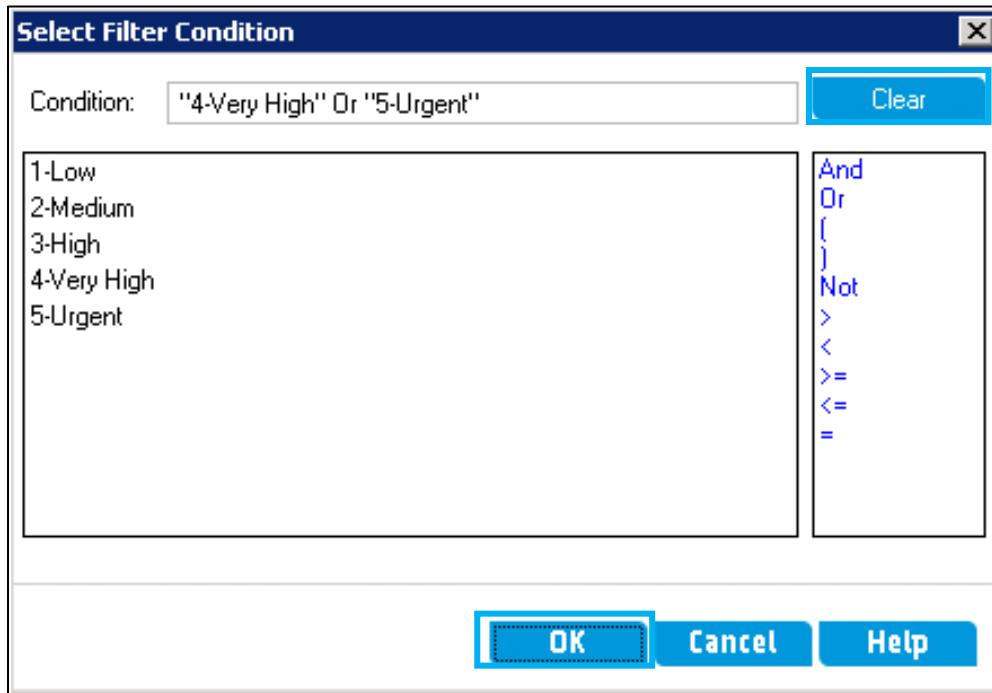
h. In the Measured Entities section, click the Set Filter/Sort button.

The screenshot shows the 'Measured Entities' section of the configuration interface. It includes fields for 'Name' ('Active Defects'), 'Entity Type' ('Defect'), and a 'Description' box containing the text: 'Number of defects assigned a severity level of 5-Urgent or Open or Reopened defects.' Below this is the 'Threshold Settings' section with the same configuration as the previous screenshot. At the bottom, the 'Measured Entities' section contains a 'Set Filter/Sort' button (highlighted with a blue border), a 'Consider Transitions' checkbox, and a 'Configure' button.

- i. In the Filter Defects dialog box, click in the Filter Condition column for Severity.



- j. Click the blue down arrow  in the Severity Filter Condition column to open the Select Filter Condition dialog box.



- k. Click the  button to clear the Filter Condition column for the Severity field.

- l. Click the  button again for the Select Filter Condition dialog box and again for the Filter Defects dialog box.

m. Click the KPI Analysis tab, as shown in the following screenshot:

In the Scorecard tab of the Releases module, you can click a cell in the scorecard to display the progress of a KPI as a graph. This graph page can contain up to two additional graphs. In this tab you can customize the graph page and determine whether or not to display these additional graphs.

Graph 1

Name: Active Defects

Function: Count

Measured Entities: Filter: Status[New Or Open Or Reopen]

Group By: Severity

Graph 2

Name:

Function: Count

Measured Entities:

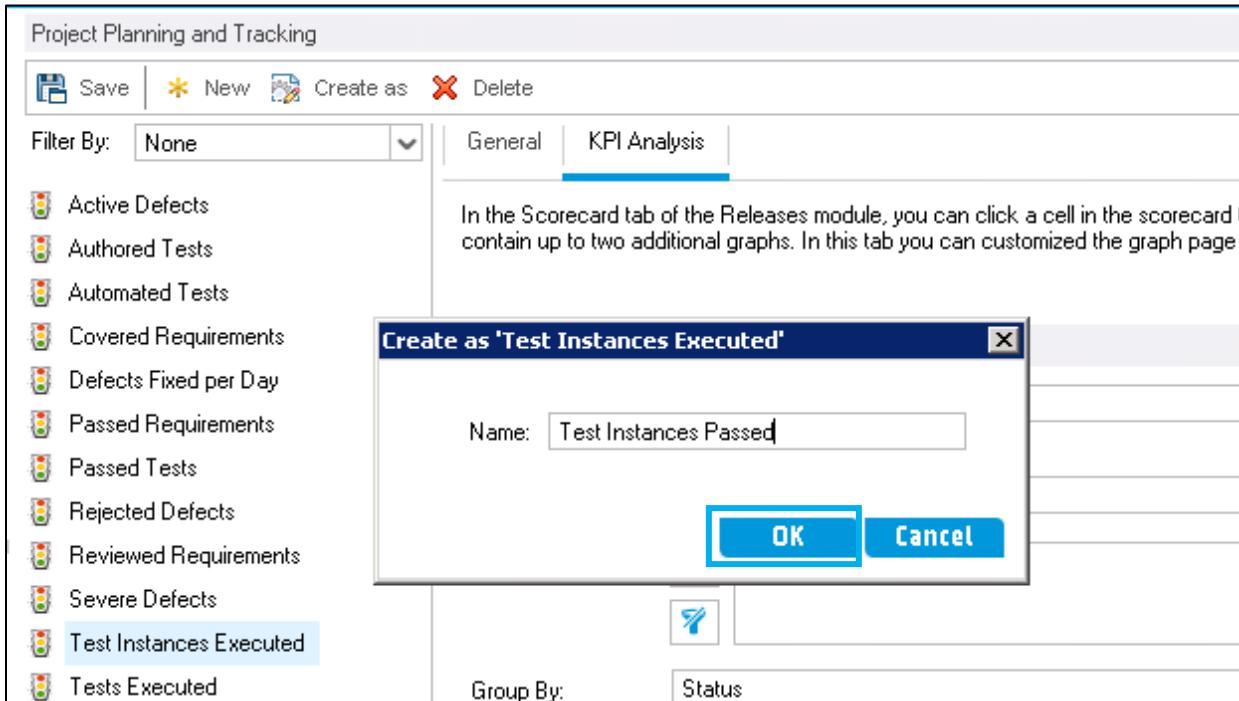
Chart Types: Bar, Pie, Grid

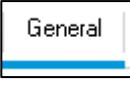
- n. Enter **Active Defects** in the Name field.
- o. Click Save.
- p. Click OK in the information message box.



2. To create a new Percentage KP, complete the following steps:
 - a. Select KPI Test Instances Executed, and then click the Create as button to create a KPI. In the Name field, enter **Test Instances Passed**.

- b. Click the  button to close the Create as dialog box, as shown in the following screenshot.



- c. In the  tab, in the Measured Entities section, click the Set Filter/Sort  button.
- d. In the Filter Test Instances dialog box, change the Filter Condition column for the Status field to **Passed**.
- e. Click the  button for the Select Filter Condition dialog box and again for the Filter Test Instances dialog box.
The KPI Analysis for this KPI can be left unchanged.
- f. Click Save and then click OK in the information message box.

- g. Click the  button in the right-hand corner of the masthead.
- h. Choose the Major Change option in the Customization Changes dialog box and click the  button.

3. Add the following KPIs to the Unit Test Complete milestone:

| KPI |
|-------------------------|
| Active Defects |
| Test Instances Passed |
| Test Instances Executed |

Exercise 5 – Calculating KPIs

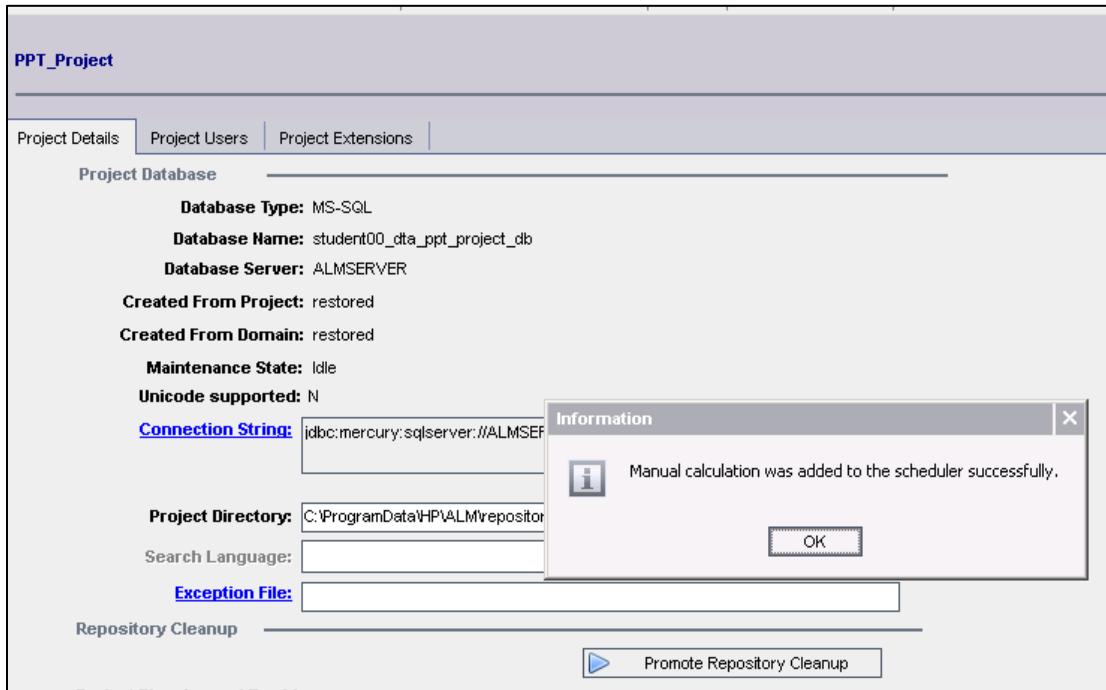
ALM calculates KPIs automatically at a scheduled time of day. However, for the purpose of this exercise, you can force the KPIs to be calculated using the following steps:

1. To open Site Administration page:
 - a. Open a new tab in IE.
 - b. Select the **Site Administration** link.
 - c. Log in using the following credentials:

Username: **admin**

Password: **admin**
 - d. Under the Site Projects tab, select the PPT_Project project under the STUDENTXX_DTA domain, where XX corresponds to the last two digits of your access code.
2. In the Project Details tab, under the Project Planning and Tracking section (*not* the Project Planning and Tracking tab), click the Run Now button.

This submits a task to run the KPI calculations immediately instead of at the scheduled time, as shown in the following screenshot:

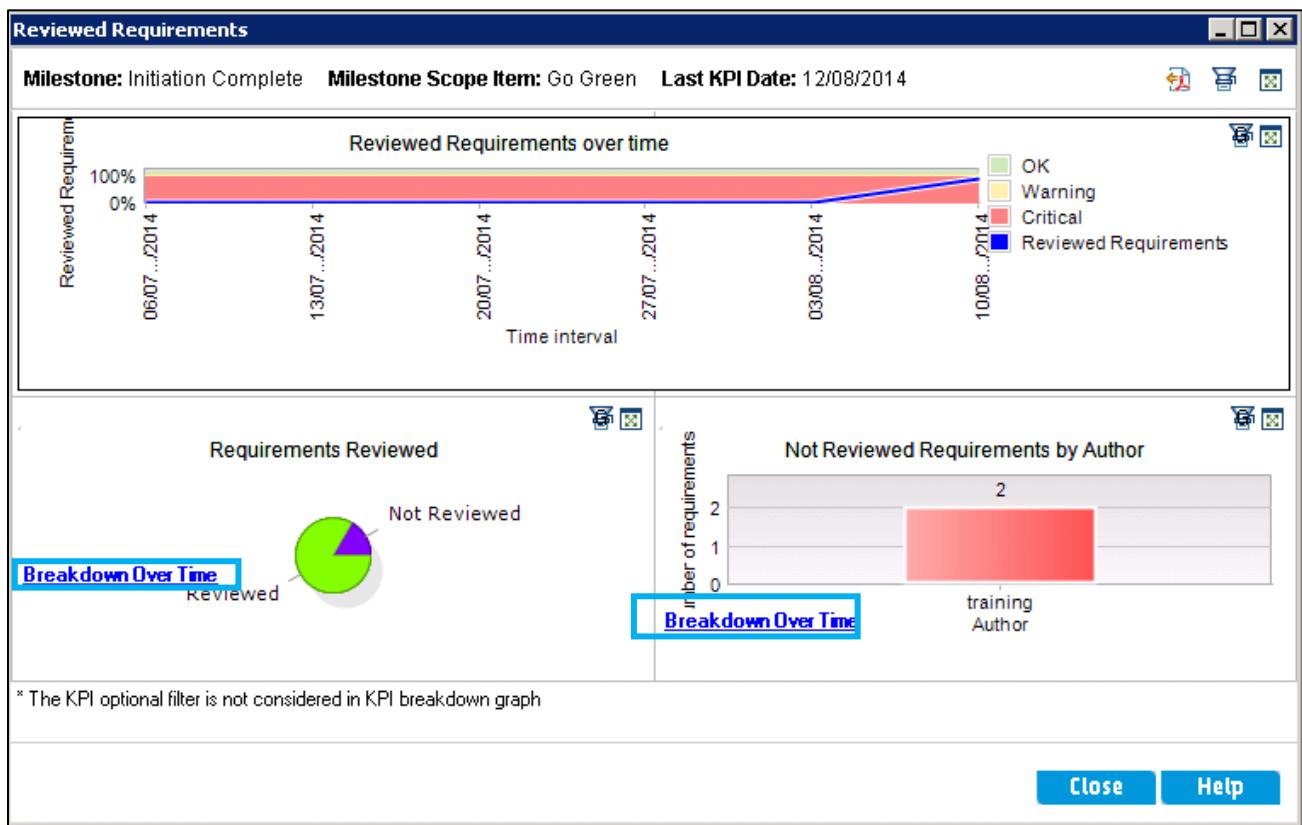


3. Click the OK button on the Information message.

Exercise 6 – Viewing the Scorecard

To view the scorecard, perform the following steps:

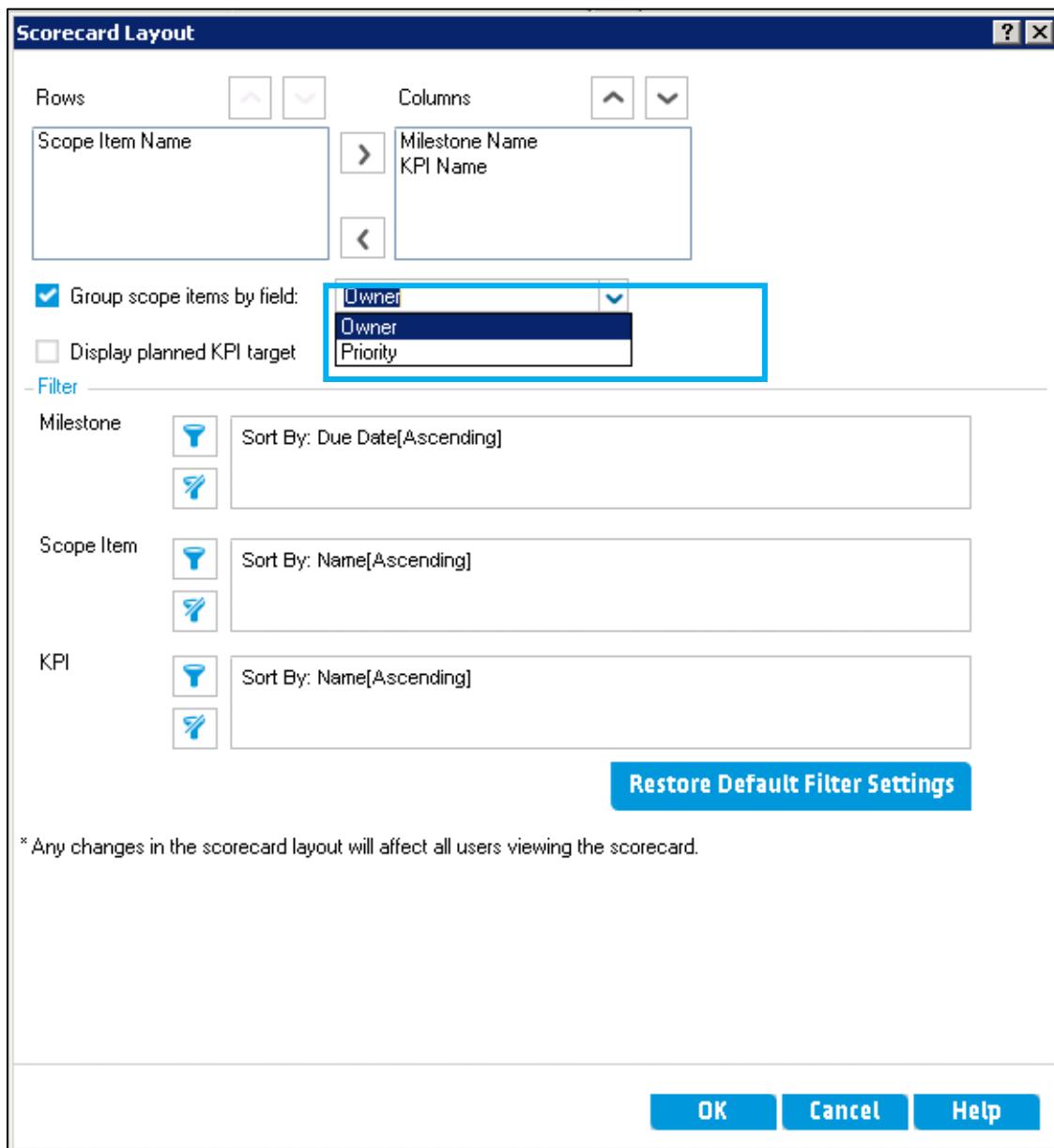
1. To review the scorecard:
 - a. Click the **LOGOUT** button in the upper-right corner of the screen to log out of the Site Administration page.
 - b. Return to the project.
 - c. Click the Release 5.0 item in the Releases tree.
 - d. Select the Score Card tab (You might need to click the Generate button).
2. To drill down to a KPI, complete the following steps:
 - a. Double-click a cell along the Reviewed Requirements KPI that you created for the Initiation Complete scope milestone, as shown in the following screenshot:



- b. Review the graphs.
- c. Click the Breakdown Over Time link.
- d. Close the drill-down windows.

3. To customize the layout, complete the following steps:

- a. Click the  button.
- b. Select the Group Items by Field checkbox and select Priority, as shown in the following screenshot:



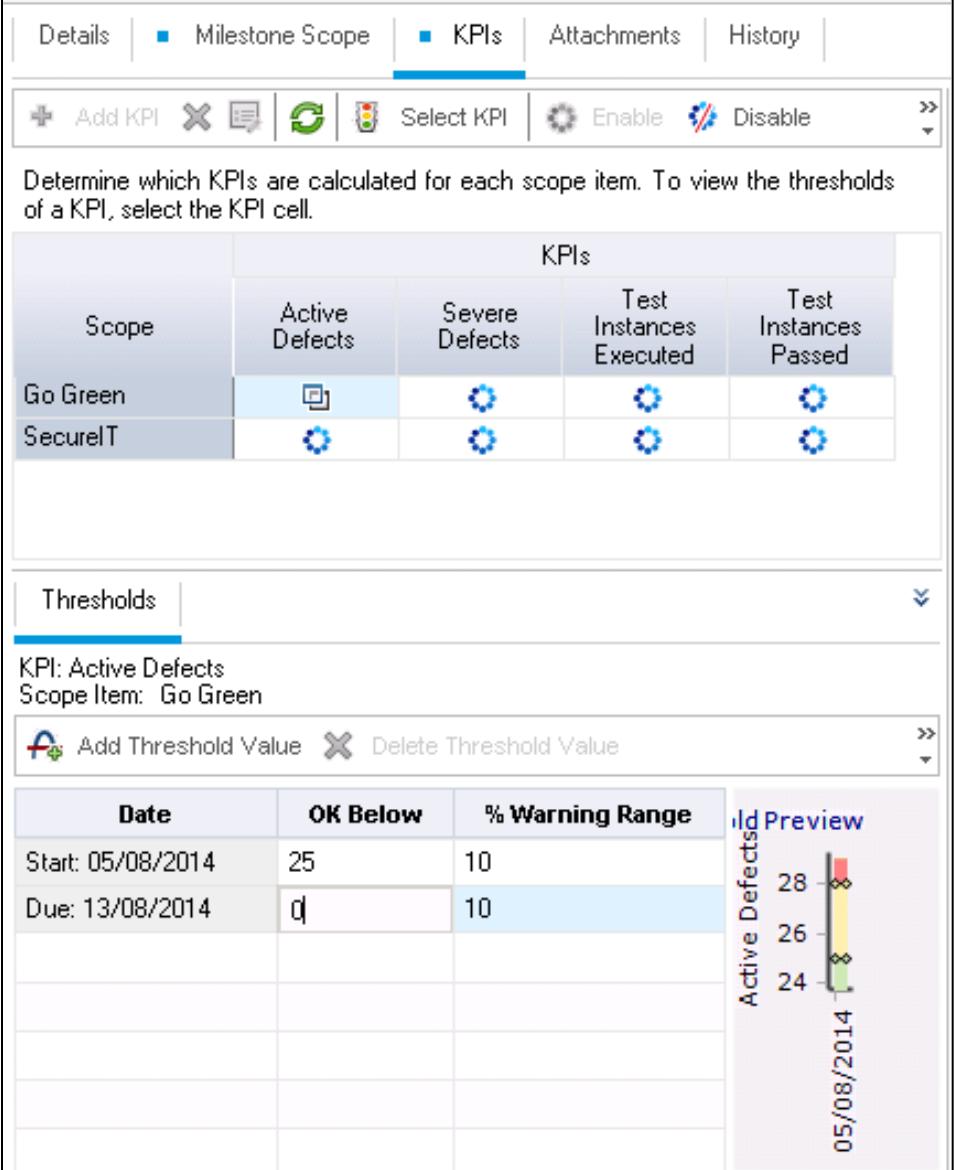
* Any changes in the scorecard layout will affect all users viewing the scorecard.

- c. Click the  button. Observe that the items are grouped by Priority.

Exercise 7 – Modifying Threshold Settings

To modify threshold settings, perform the following steps:

1. Select Unit Test Complete under Release 5.0 and click the  tab.
2. Click the Go Green scope item and then click the Active Defects cell.
3. In the Threshold table, refer to the row in the Date column where the due date is tomorrow's date. In the OK Below field, enter a threshold value of 0, as shown in the following screenshot:



The screenshot shows the KPIs tab selected in the navigation bar. Below it is a toolbar with buttons for Add KPI, Delete, Select KPI, Enable, Disable, and a dropdown menu. A message box says: "Determine which KPIs are calculated for each scope item. To view the thresholds of a KPI, select the KPI cell." The main area displays a table of KPIs for two scope items: Go Green and SecureIT. The columns are Scope, Active Defects, Severe Defects, Test Instances Executed, and Test Instances Passed. The Active Defects column for Go Green has a blue edit icon over it. Below the table is a section titled "Thresholds" with a message: "KPI: Active Defects Scope Item: Go Green". It includes buttons for Add Threshold Value and Delete Threshold Value. A table shows threshold values for the Active Defects KPI. The first row is for the start date (05/08/2014) with OK Below at 25 and % Warning Range at 10. The second row is for the due date (13/08/2014) with OK Below at 0 and % Warning Range at 10. To the right of the table is a "Live Preview" chart for "Active Defects" from 05/08/2014, showing a single data point at approximately 28.

| Date | OK Below | % Warning Range |
|-------------------|----------|-----------------|
| Start: 05/08/2014 | 25 | 10 |
| Due: 13/08/2014 | 0 | 10 |

4. Click the Go Green scope item and then click the Tests Executed cell.

5. In the threshold table, refer to the row in the Date column where the due date is tomorrow's date. In the Ok Above field, enter a threshold value of 25%.
6. Go to Site Administration to recalculate the scoreboard, then view the scoreboard and observe the changes.

Lab 6 – Working with Requirements and Analyzing Risk

Objectives

After completing this lab, you should be able to:

- Build the requirements tree
- Analyze the requirements risk

Scenario

By creating detailed requirements, you are able to clearly define and detail what needs to be tested in an application. By establishing traceability relationships between requirements, you can successfully analyze the impact of requirement changes.

In this lab, you build a Requirements tree, create traceability, and review the impact analysis.

Exercise 1 – Building the Requirements Tree

You have created the testing cycles and are now ready to input requirements into your project.

In this exercise, you perform the following tasks:

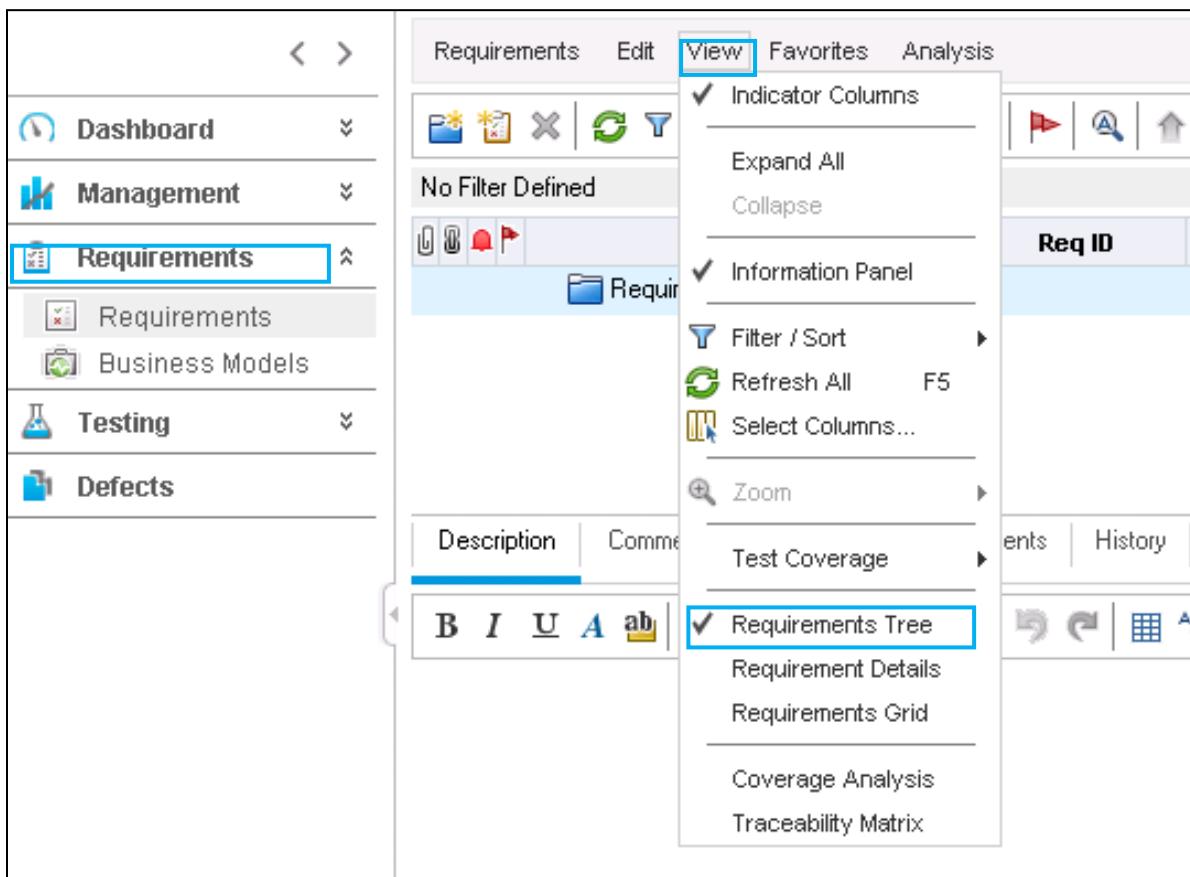
- Task 1 – Alter the Requirements view
- Task 2 – Add folders and requirements
- Task 3 – Create different types of requirements
- Task 4 – Assign the requirements to a cycle
- Task 5 – Assign the requirements to a release
- Task 6 – Use a Rich Text Editor and Requirements template

Task 1 – Altering the Requirements View

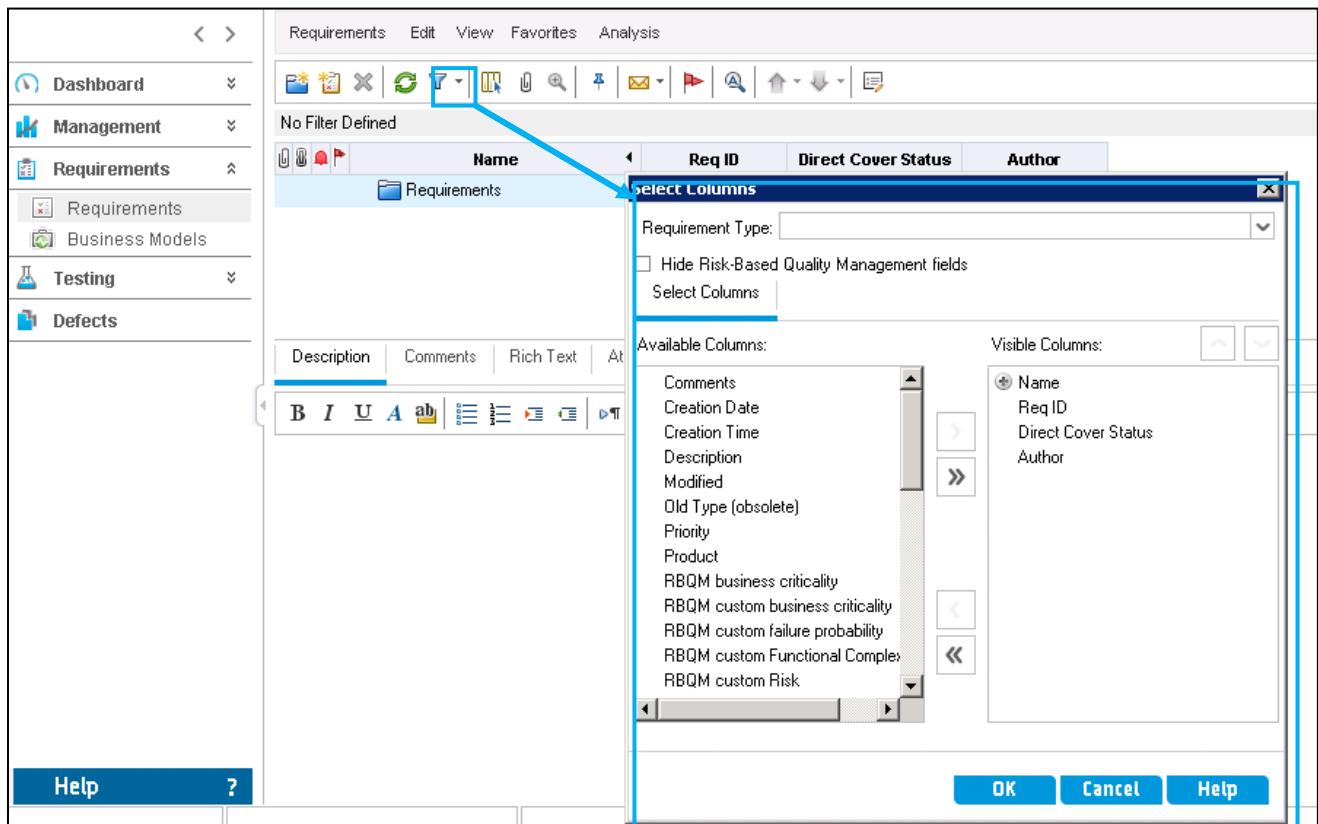
To alter the requirements view, perform the following steps:

1. Log in to ALM:
 - a. In the Login Name and Password fields, type **training** and **welcome**, respectively.
 - b. Click the Authenticate button.
 - c. From the Domain and Project fields, select STUDENT00_ESS and FlightApplication, respectively.
 - d. Click the Login button.
2. In the ALM left pane, select the Requirements  module.

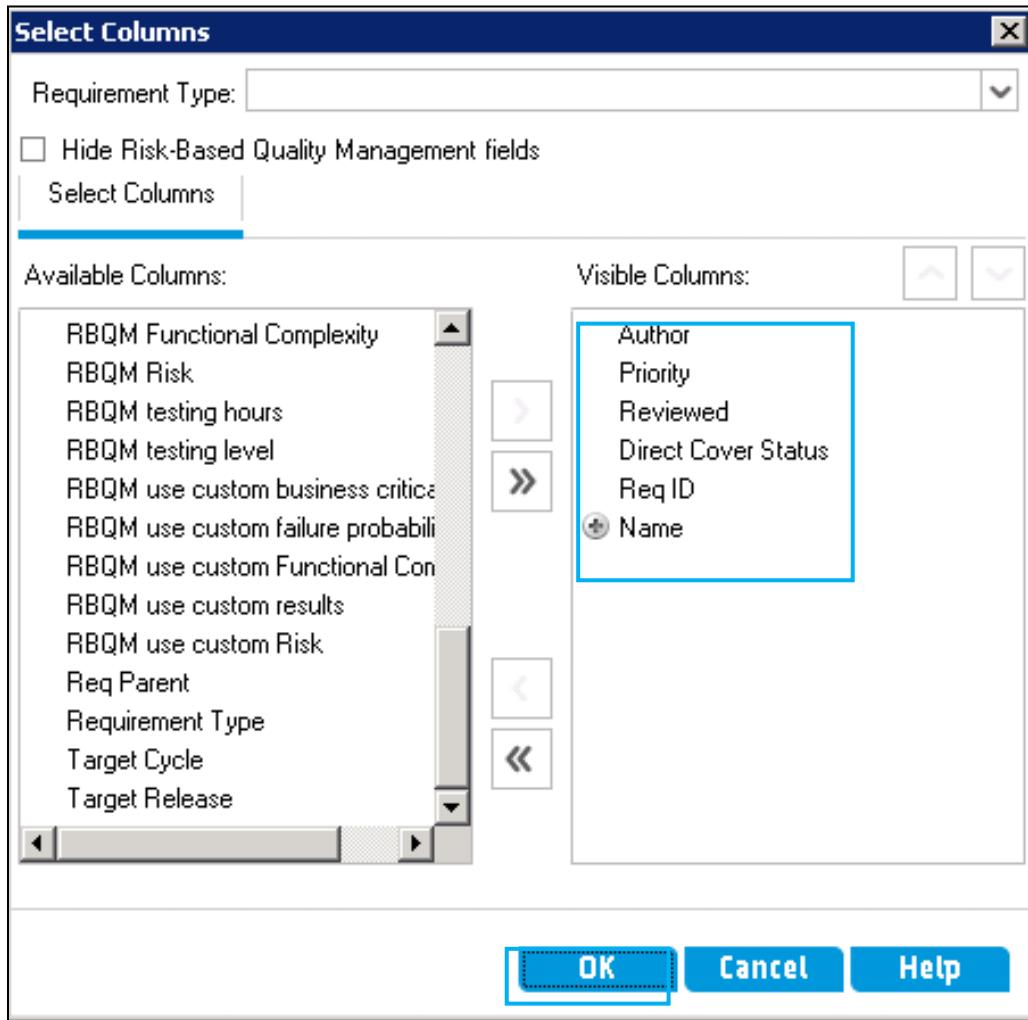
3. Ensure that you are in Requirements Tree view, as shown in the following screenshot:



4. To change the columns displayed in tree view, complete the following steps:
- On the toolbar, click the Select Columns  button. The Select Columns dialog box is displayed.
 - To move all the entries from Available Columns to Visible Columns, click the arrow button . Only required fields remain, as shown in the following screenshot:



- c. Under Available Columns, double-click the following column names in this sequence to make them visible: Author, Priority, Reviewed, Direct Cover Status, Req ID. The column names are now displayed under Visible Columns, as shown in the following screenshot:



- d. If columns are not in the sequence shown above, use the up and down arrows



above Visible Columns to ensure that the sequence is followed.

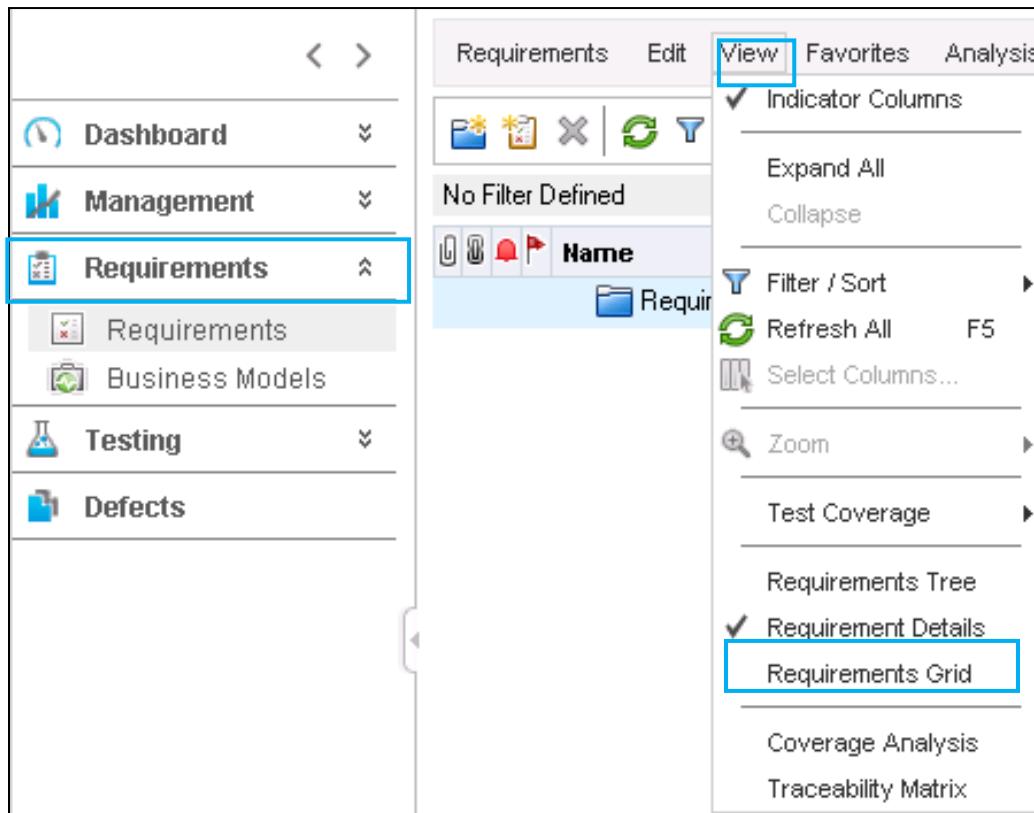
- e. Click the OK button. The new column sequence/order is displayed.

Task 2 – Adding Folders and Requirements

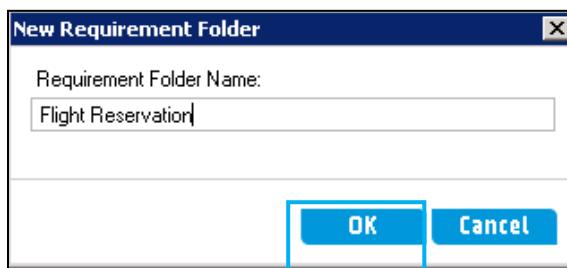
In this task, you create several folders and their associated requirements.

1. Create a Flight Reservation Requirements folder in the Requirements module.

Ensure that you are on the Requirements Details View, as shown in the following screenshot:

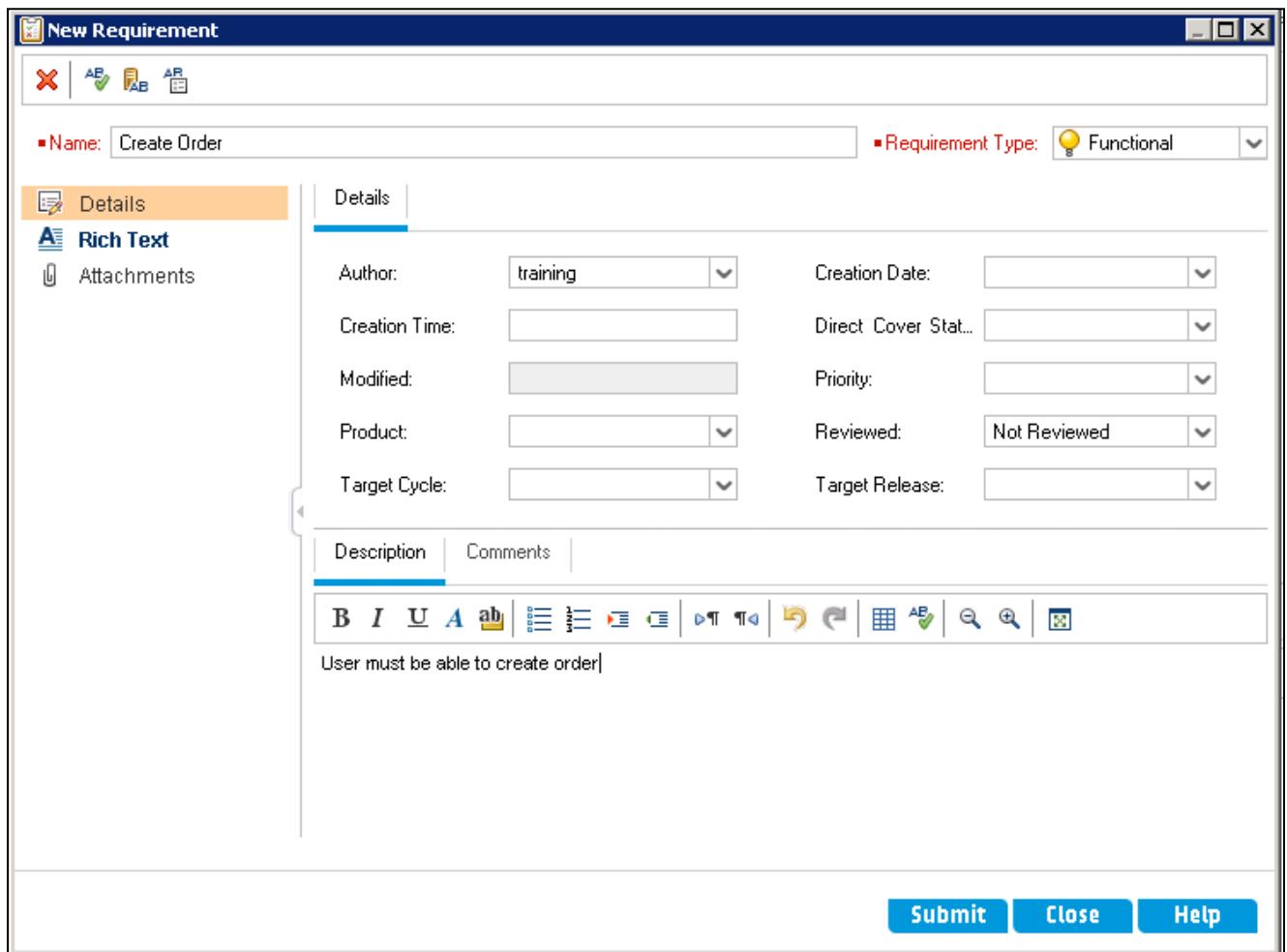


- a. Select the Requirements folder and click the New Folder button on the toolbar. The New Requirement Folder dialog box is displayed.
- b. In the Requirement Folder Name field, type **Flight Reservation** and then click the **OK** button.



2. To create a **Business Processes** folder and associated requirements, complete the following steps:
 - a. Select the **Flight Reservation** folder and click the New Folder  button on the toolbar.
 - b. In the Requirement Folder Name field, type **Business Processes** and then click the OK  button.
 - c. On the toolbar, click the New Requirement  button. The New Requirement dialog box appears.

- d. In the Name field, type **Create Order**.

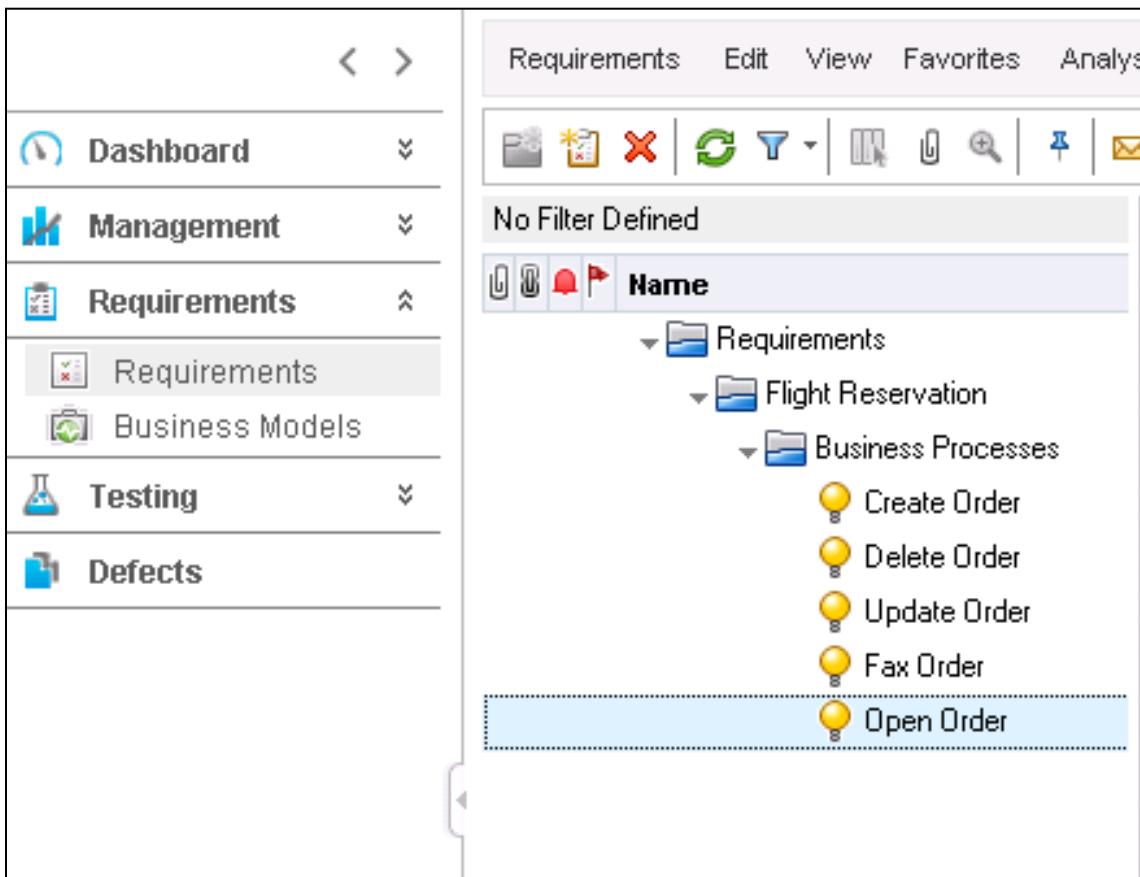


- e. From the Requirement Type list, select Functional.
- f. Click the Description tab and type: **User must be able to create an order.**
- g. Click the **Submit** button. The requirement is created and fields in the New Requirement dialog box are cleared. Note the message in the status bar of the window to indicate that the requirement was added successfully.
- h. Click the **Close** button. Note your new requirement under the Business Processes folder.

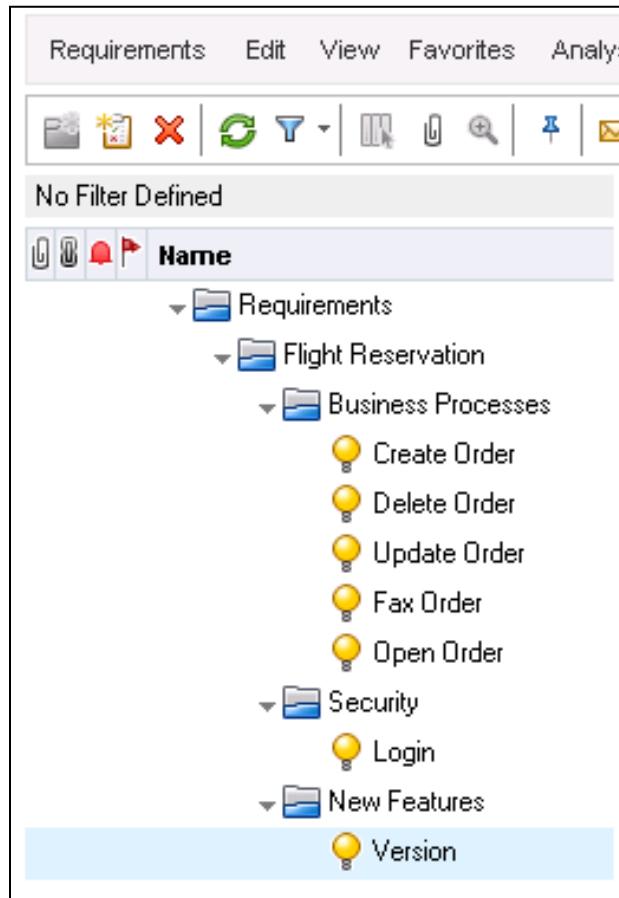
- i. Ensure that you selected the Business Processes folder. Create the additional functional requirements detailed in the following table:

| Name | Description |
|--------------|--|
| Delete Order | User must be able to delete an order. |
| Update Order | User must be able to update an order with a valid set of data. |
| Fax Order | User must be able to fax an order |
| Open Order | User must be able to open an order by number, name, and date. |

- j. After you submit the requirements, click the Close button. Verify your requirement details with the following screenshot:



- k. Use the table below to create additional folders and functional requirements in the Flight Reservation folder. After creating, verify with the following screenshot:



| Name | Type | Description |
|--------------|---|---|
| Security | Folder (under Flight Reservation) | Application must allow access to authorized users only. |
| Login | Functional Requirement (in Security Folder) | User must be able to log in with password mercury. Password must be case sensitive. |
| New Features | Folder (under Flight Reservation) | This folder contains new features. |
| Version | Functional Requirement (in New Features Folder) | Application version is displayed in menu Help→About. |

Task 3 – Creating Different Types of Requirements

ALM supports a variety of requirement types. This section demonstrates the requirement types and relationships.

1. To create a group of functional requirements, complete the following steps:
 - a. From the Requirements tree, expand the Requirements folder and select the Flight Reservation folder.
 - b. In the toolbar, click the New Requirement  button. The New Requirement dialog box is displayed.
 - c. In the Name field, type **Field Validation**.
 - d. From the Requirement Type list, select  Group.
 - e. In the Priority field, select 3-High.
 - f. Click the **Submit** button to save the requirement. Click the **Close** button to close the New Requirement dialog box.

Note: The new Field Validation group requirement is at the same level in the Requirements tree as the Business Process, Security, and New Features folders.

2. To create requirements within the group, complete the following steps:
 - a. In the Requirements tree, select the newly-created Field Validation requirement.
 - b. In the toolbar, click the New Requirement  button. The New Requirement dialog box is displayed.
 - c. In the Name field, type **Customer Name**.
 - d. In the Requirement Type field, select Functional.
 - e. In the Priority field, select 3-High.

| | | |
|---------------|-------------|---|
| Priority: | 3-High |  |
| Req ID: | 1-Low | |
| Target Cycle: | 2-Medium | |
| | 3-High | |
| | 4-Very High | |
| | 5-Urgent | |

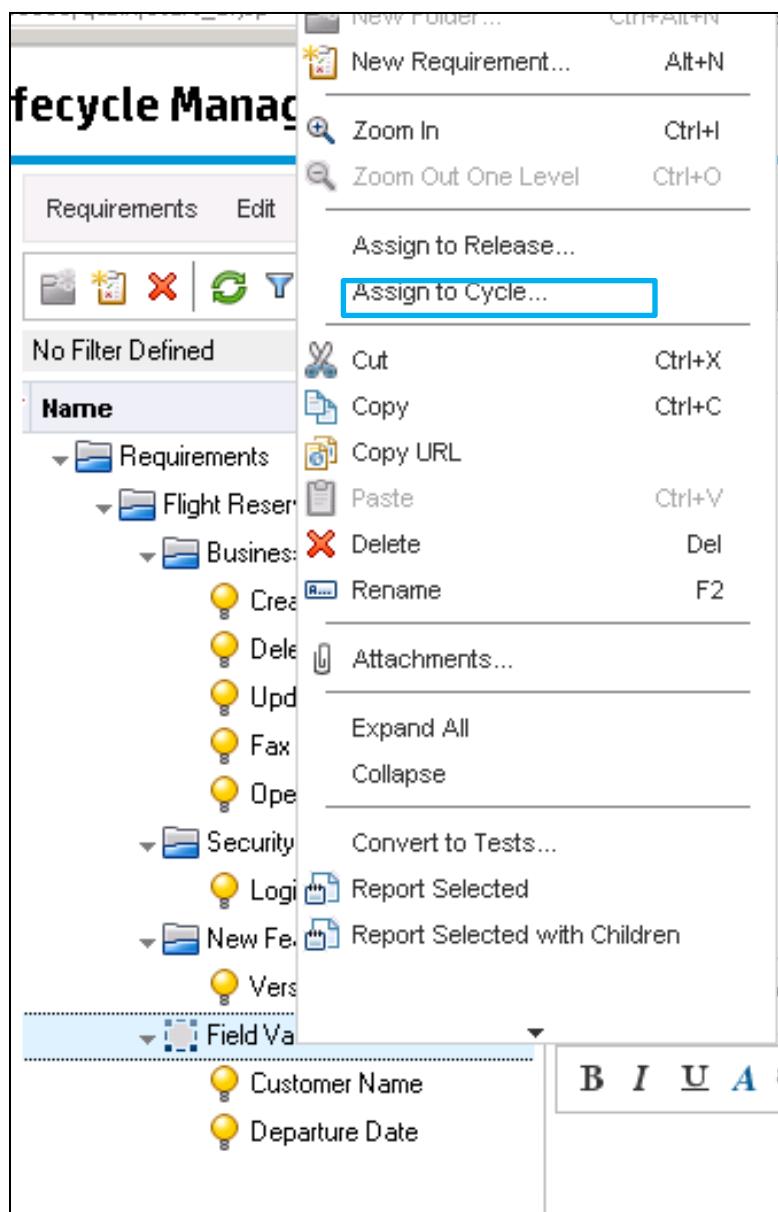
- f. In the Description field, type **Customer Name may not contain numbers or symbols.**
- g. Click the **Submit** button. You can continue to add requirements.
- h. While still in the New Requirement dialog box, in the Name field, type **Departure Date**.
- i. From the Requirement Type list, select **Functional**.
- j. In the Priority field, select 4-Very High.
- k. In the Description field, type **Departure Date must be a future date**.
- l. Click the **Submit** button to save the requirements, and then click the **Close** button.
3. To verify the changes in the Details view, complete the following steps:
- From the menu, select View → Requirement Details to see the details for the requirement.
 - For each requirement created in Step 2, click the name in the Requirements tree, then click the Details tab at right. Use the following screenshot to verify that the Requirement Type, Priority, and Description fields reflect the values entered in Step 2.

| Details | Rich Text | Attachments | Linked Defects | Requirement Traceability | Test Coverage | Business Models Linkage | Risk Assessment |
|--|---|-------------|----------------|--------------------------|---------------|-------------------------|-----------------|
| Name: <input type="text" value="Departure Date"/> Author: <input type="text" value="alex_alm"/> Creation Time: <input type="text" value="08:48:51"/> Modified: <input type="text"/> Product: <input type="text"/> Reviewed: <input type="text" value="Not Reviewed"/> Target Release: <input type="text"/> | Requirement Type: Functional Creation Date: <input type="text" value="06/08/2014"/> Direct Cover Status: <input type="text" value="Not Covered"/> Priority: <input type="text" value="4-Very High"/> Req ID: <input type="text" value="14"/> Target Cycle: <input type="text"/> | | | | | | |
| Description Comments | | | | | | | |
| | | | | | | | |
| Departure Date must be a future date | | | | | | | |

Task 4 – Assigning the Requirements to a Cycle

Field validation is typically heavily scrutinized in every cycle of a release to ensure that the requirements are carefully understood and that data are being stored correctly in the database. However, field validation has no effect on application performance, so the Field Validation group is only linked back to the cycles it impacts.

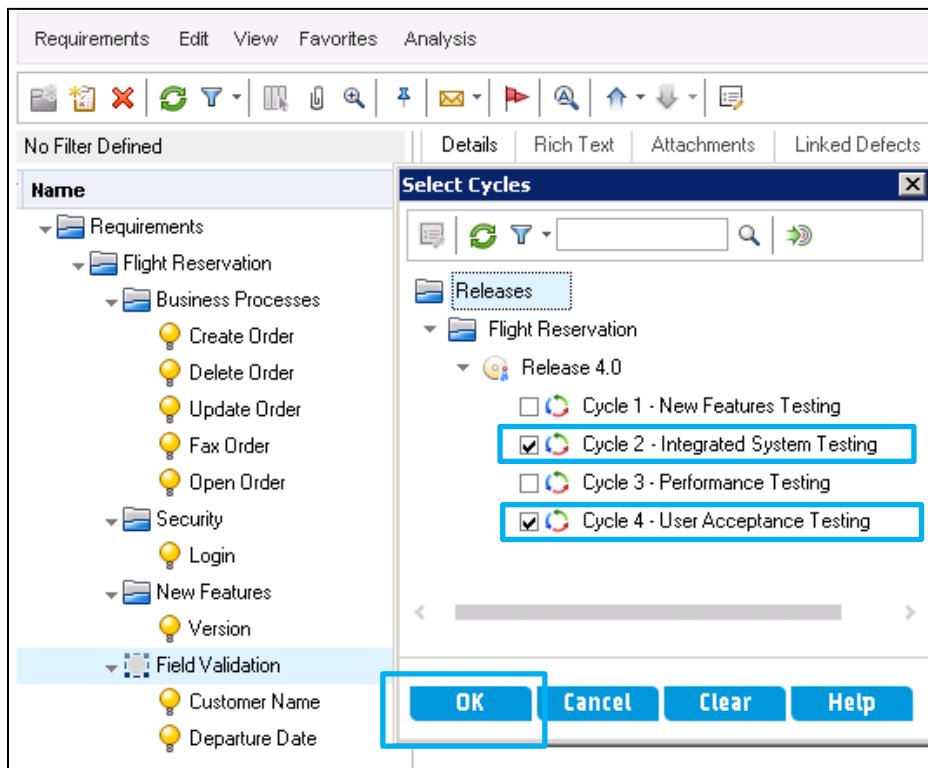
1. To assign a requirements group to a cycle, complete the following steps:
 - a. From the menu bar, select View → Requirement Details.
 - b. From the Requirements tree, right-click the Field Validation group and select Assign to Cycle....



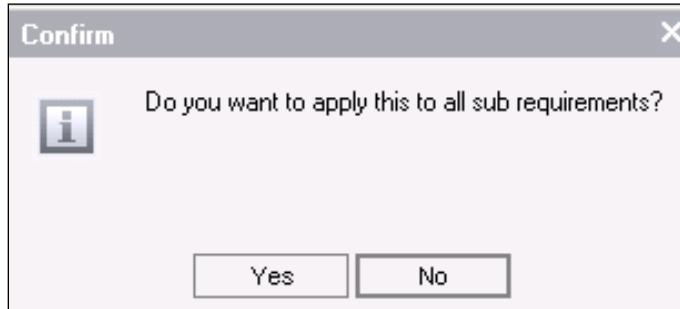
- c. The Select Cycles dialog box is displayed. Expand the tree until all cycles in Release 4.0 are visible (Flight Reservation → Release 4.0).

If Cycles are not visible, redo Lab 3.

- d. Select the checkboxes for Cycle2-Integrated System Testing and Cycle4-User Acceptance Testing, as shown in the following screenshot:



- e. Click the **OK** button. The Confirm message box is displayed, as shown in the following screenshot:



- f. Click the **Yes** button to confirm that you would like to assign all sub-requirements of the Field Validation group to Cycle 2 and Cycle 4.

2. To verify the number of requirements associated with each cycle, complete the following steps:

- On the ALM left panel, select **Management** and then select the **Releases** module.
- On the toolbar, click the Refresh All  button.
- Expand the Release tree to show the cycles that are part of Release 4.0 (Releases → Flight Reservation → Release 4.0).
- For the release and each of its cycles, record the number of assigned requirements from the Statistics section on the Details tab.

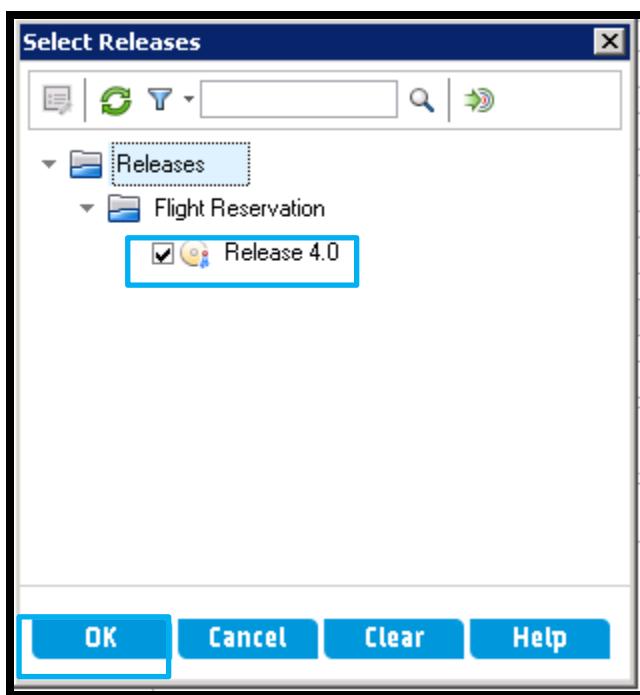
| Release/Cycle | Requirements Assigned |
|----------------------|------------------------------|
| Release 4.0 | |
| Cycle 1 | |
| Cycle 2 | |
| Cycle 3 | |
| Cycle 4 | |

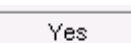
Task 5 – Assigning the Requirements to a Release

To assign the requirements to a release, perform the following steps:

1. To assign a requirements folder to an entire release, complete the following steps:

- a. On the left pane, select the  Requirements module.
- b. From the Requirements tree, right-click the New Features folder and select  Assign to Release... . The Select Releases dialog box is displayed.
- c. Expand the release tree until Release4.0 is visible (Flight Reservation → Release 4.0).
- d. Select the Release 4.0 checkbox, as shown in the following screenshot:



- e. Click the  button. If the Confirm message box is displayed, click the  Yes button to confirm that you would like to assign all sub-requirements of the New Features folder to Release 4.0.
 2. To verify the number of requirements associated with each cycle, complete the following steps:
- a. On the left pane, select the  Releases module.

- b. On the toolbar, click the Refresh All  button.
- c. In the release tree, select Cycle1-New Features Testing and compare the Requirements Assigned to Cycle indicator to the value recorded in the table above. Is there any change? Why?
- d. Compare the remaining cycles against the table above to verify there is no change in the number of assigned requirements.
- e. In the Release tree, select Release 4.0 and compare the Requirements Assigned to Release indicator to the value recorded in the table above. Is there any change?

Task 6 – Using the Rich Text Editor and Requirements Template

In this task, you add another requirement to see a demonstration of the Requirements template using the Rich Text editor. These templates provide project leaders with the opportunity to enforce consistent reporting across the team.

To use the rich text editor, complete the following steps:

1. On the left pane, select the  Requirements module.
2. Expand the Requirements tree and select the New Features folder.
3. Add a new requirement by clicking the New Requirement button. Enter **Help** as the name, and set the type to .

4. Select the Description tab and enter **User must be able to access Help**.

Click the **Submit** button, and then click the **Close** button, as shown in the following screenshot:

The screenshot shows the 'New Requirement' dialog box. The 'Details' tab is selected. The 'Name' field contains 'Help'. The 'Requirement Type' dropdown is set to 'Undefined'. The 'Rich Text' tab is highlighted. The 'Description' field contains the text 'User must be able to access Help'. At the bottom, there are 'Submit', 'Close', and 'Help' buttons.

5. Select the Help requirement, and then select View → Requirement details.

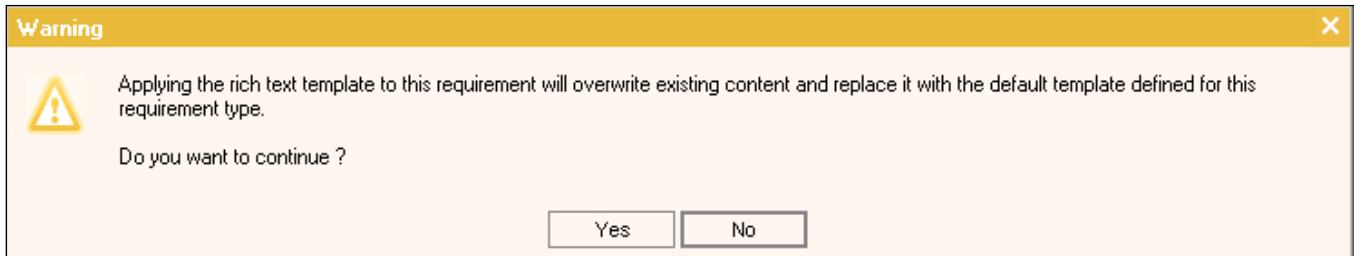
6. Click the **Rich Text** tab. Note that the page is blank. This indicates that a template has not been created for the undefined requirement.

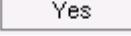
7. Return to the Details tab and change the Requirement Type to

Requirement Type: Functional

8. Return to the **Rich Text** tab.

9. Click the Apply Rich Text Template button  on the extreme right side of the Rich Text editor toolbar. A warning message is displayed stating that the template will overwrite the existing content.

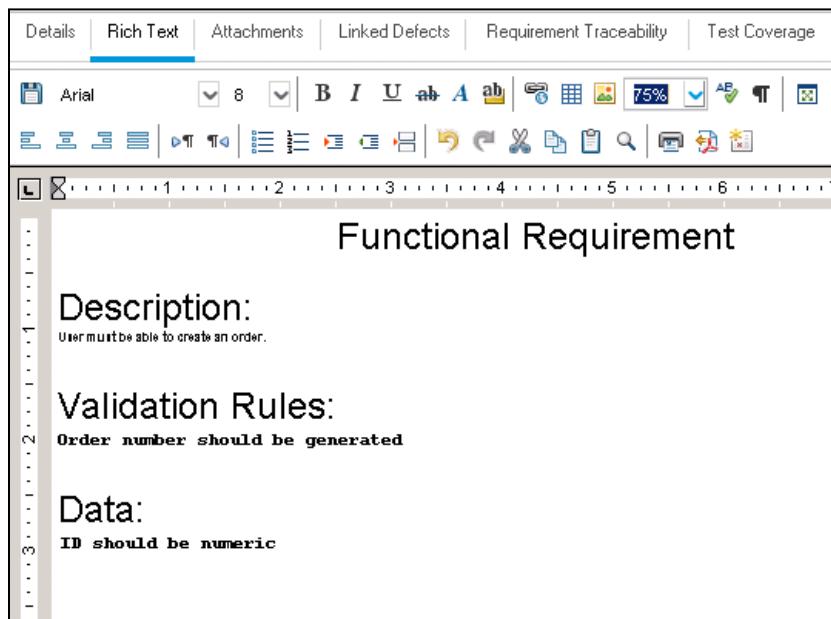


10. Click the  button. The template is applied.

11. Enter the following in the Apply Rich Text template.

- a. Under Description, enter **User must be able to create an order.**
- b. Under Validation Rules, enter **Order number should be generated.**
- c. Under Data, enter **Order ID should be numeric.**

12. Click the Save button.



Functional Requirement

Description:
User must be able to create an order.

Validation Rules:
Order number should be generated

Data:
ID should be numeric

13. To export the report, click the PDF Export  button. The Save As dialog box is displayed.

14. Browse to the Desktop in the Save In drop-down, enter **Help** in the File Name field, and click the Save button.
15. Open the file **HELP.PDF** to view the contents and close the file.
16. Log off from ALM.

Exercise 2 – Analyzing the Requirement Risks

After assigning requirements to testing releases and cycles, you add traceability links between requirements to establish their interdependencies and identify the risks associated with the requirements.

After adding the traceability links between requirements, you calculate the risk associated with the Business Processes requirements folder by establishing the business criticality and failure probability for the Create Order, Update Order, and Delete Order requirements.

In this exercise, you perform the following tasks:

- Task 1 – Add traceability links between requirements
- Task 2 – Perform risk analysis

Task 1 – Adding Traceability Links between Requirements

To add traceability links between requirements, complete the following steps:

1. Log in to ALM using **training** as the Username and **welcome** as the Password.
After user authentication, select the STUDENT00_ESS domain and FlightApplication project.
2. Ensure that your ALM Essentials window is fully expanded.
3. From the left pane, select the  Requirements module.
4. From the menu, select View → Requirement Details.

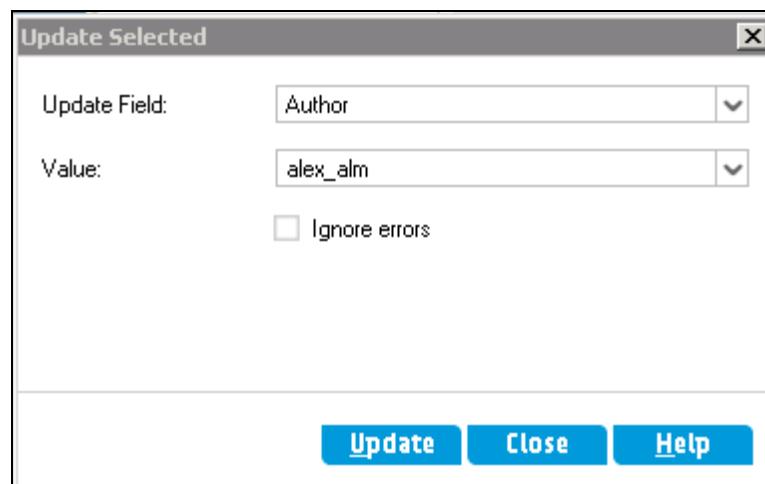
5. Expand the Requirements tree and update the Author field of the requirements created under the Flight Reservation folder to **alex_alm** and include the Requirements folder.

- a. Select the Open Order requirement and click Edit → Update Selected, as shown in the screenshot below:

The screenshot shows the HP ALM interface. On the left is a navigation sidebar with sections like Dashboard, Management, Requirements (selected), Testing, and Defects. The Requirements section has sub-options for Requirements, Requirements, and Business Models. The main area shows a requirements tree. A context menu is open over a requirement named 'Open Order'. The menu includes options like Cut, Copy, Paste, Delete, Rename, Find..., Find Next, Replace, Text Search, Alerts, Clear Alerts, Flag for Follow Up..., and Clear Follow Up Flag. The 'Update Selected...' option is highlighted. To the right is a 'Details' tab of a requirement card. The requirement details are as follows:

| | |
|-----------------|----------------------|
| Name: | Open Order |
| Author: | training |
| Creation Time: | 6:41:08 PM |
| Modified: | 8/25/2014 6:41:08 PM |
| Product: | (dropdown) |
| Reviewed: | Not Reviewed |
| Target Release: | (dropdown) |

- b. From the Update Selected dialog box, select **alex_alm** in the Value field and click the Update button.



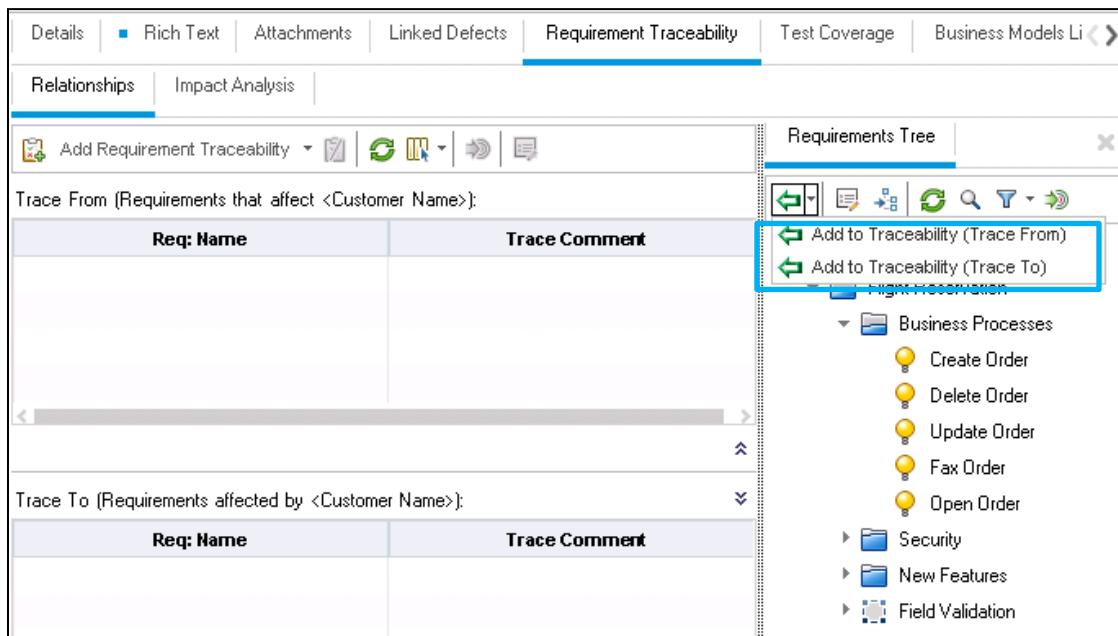
- c. Click the OK button on the information dialog box that is displayed and click the Close button on the Update Selected dialog box.
 - d. Repeat Steps 5a to 5c for changing the author for the remaining requirements as well.
6. Under the Requirements tree, select the Field Validation group (Flight Reservation → Field Validation).
7. A change to the behavior of the Customer Name requirement can affect other parts of the application, so add traceability *from Customer Name* to other requirements:
- a. In the requirements tree, select the Customer Name requirement.
 - b. In the right pane of the Requirement Details view, click the Requirement Traceability tab. The Requirement Traceability page is displayed.

- c. Click . The Requirements tree is displayed in the right pane of the Requirement Traceability tab.

- d. In the requirements tree of the right pane, as shown in the following screenshot, expand Requirement until the requirements under Business Processes are visible (Requirements → Flight Reservation → Business Processes). Select Create Order, as shown in the following screenshot:

The screenshot shows the Requirements Traceability interface in HP ALM. The top navigation bar includes 'Details', 'Rich Text', 'Attachments', 'Linked Defects', 'Requirement Traceability' (which is selected and highlighted in blue), 'Test Coverage', and 'Business Models Li'. Below the navigation bar are two tabs: 'Relationships' and 'Impact Analysis', with 'Relationships' being the active tab. A toolbar below the tabs contains icons for 'Add Requirement Traceability', 'Search', 'Refresh', and other traceability operations. The main area is divided into two sections: 'Trace From (Requirements that affect <Customer Name>)' and 'Trace To (Requirements affected by <Customer Name>)'. Both sections have tables with columns 'Req: Name' and 'Trace Comment'. On the right side, the 'Requirements Tree' pane is open, showing a hierarchical structure of requirements. The 'Requirements' node is expanded, showing 'Flight Reservation' and 'Business Processes'. 'Business Processes' is further expanded to show 'Create Order', 'Delete Order', 'Update Order', 'Fax Order', and 'Open Order'. The 'Create Order' node is selected and highlighted with a blue border.

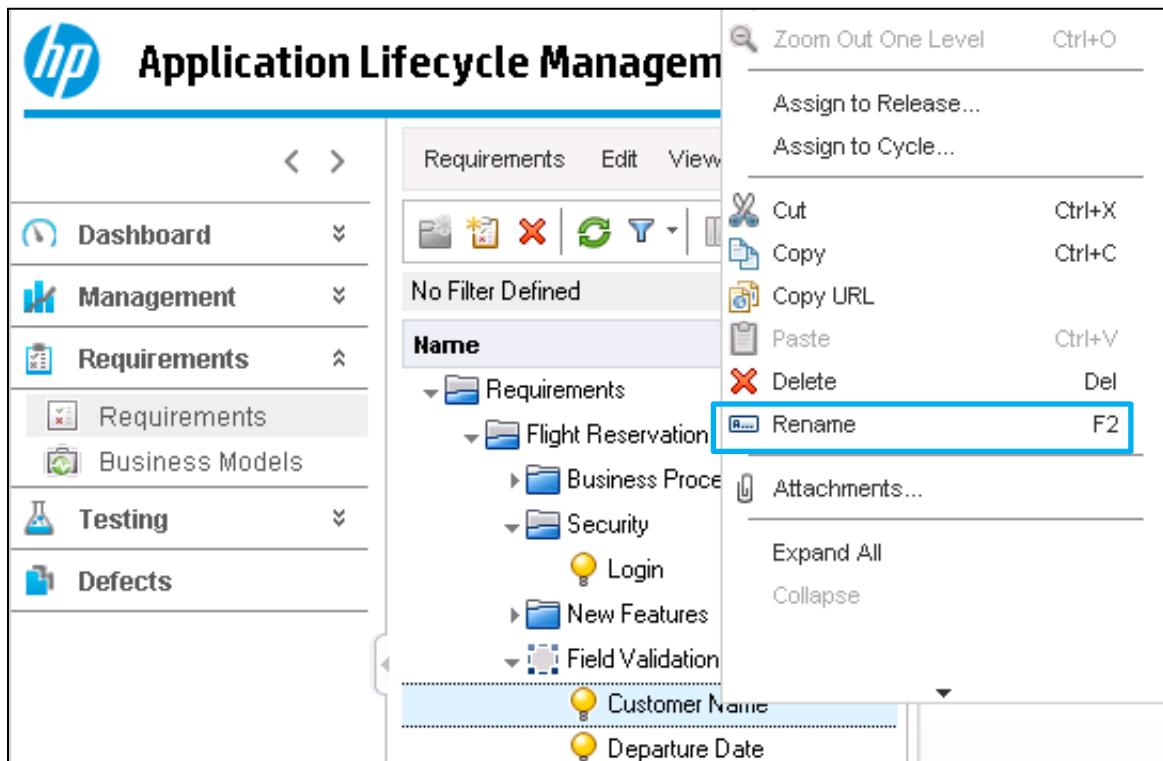
- e. In the toolbar, click the Add to Traceability drop-down menu (left-pointing arrow) and select Add to Traceability (Trace To). The Create Order requirement is displayed in the Trace To section of the Relationships tab.



- f. To add another trace, select Update Order.
- g. In the toolbar, click the Add to Traceability drop-down menu (left-pointing arrow) and select Add to Traceability (Trace To). The Update Order requirement is displayed in the Trace To section of the Relationships tab.
- h. Test the traceability between requirements by generating an alert, as shown in the following procedure. Select OK to close this window.

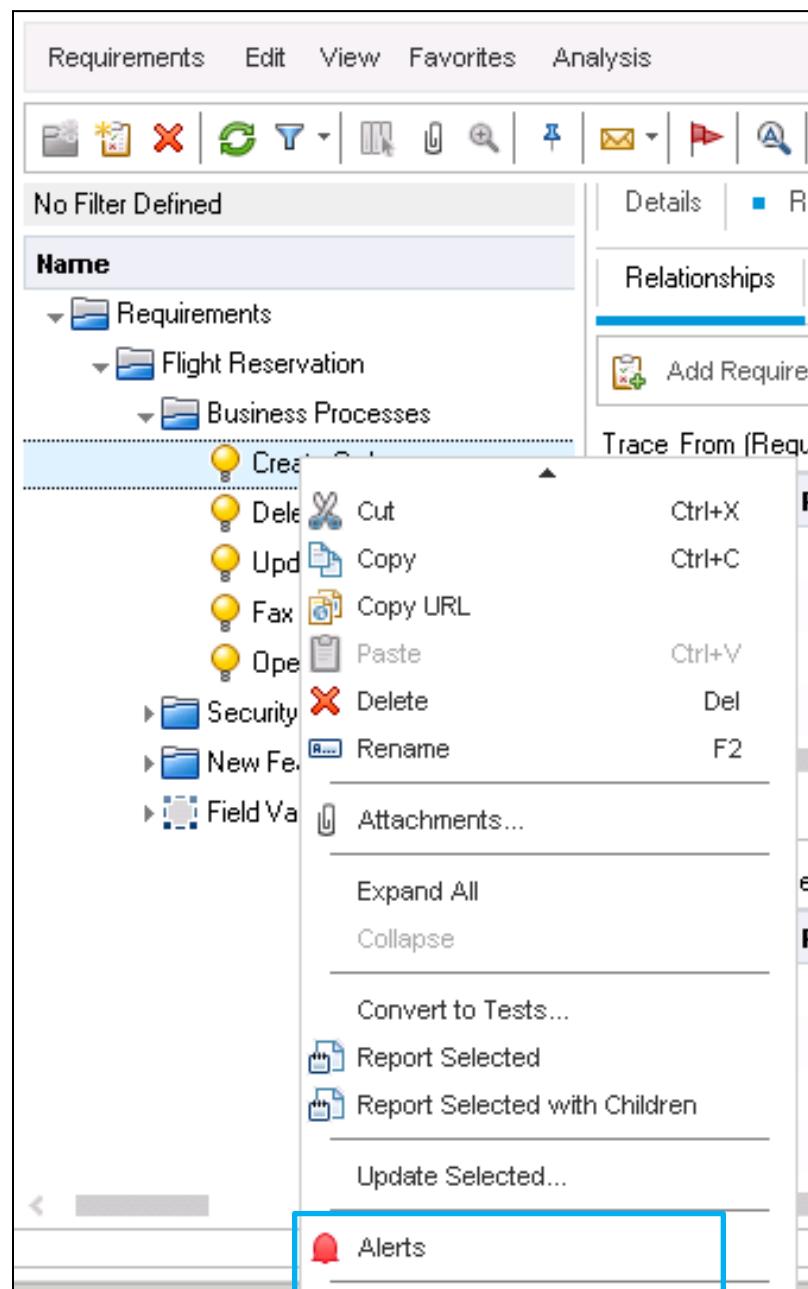
Note: The default project alert rules were modified for this task to illustrate ALM's ability to generate alerts. Alert rules are covered in more detail in the ALM Site Administration course.

- i. Right-click the Customer Name requirement in the Requirements tree (Requirements → Flight Reservation → Field Validation) and select Rename. Enter User Name as the new requirement name.

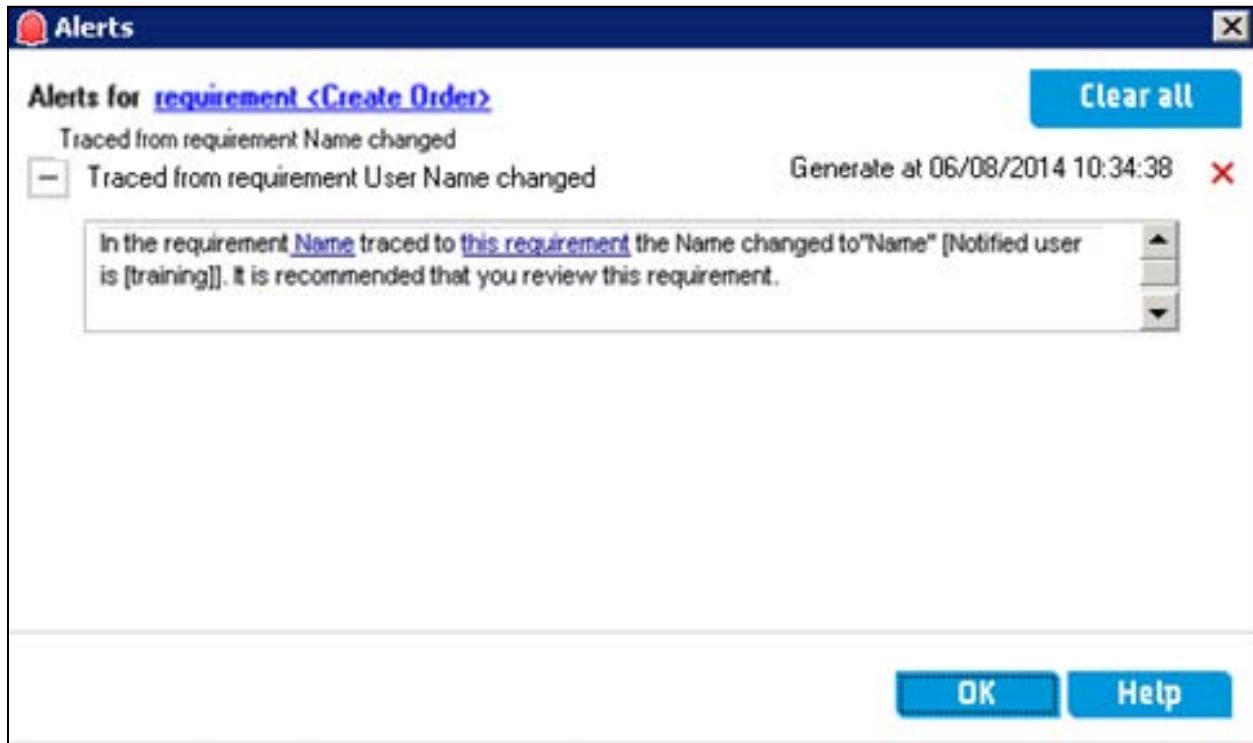


- j. Click Refresh All and then expand the requirements tree until Create Order and Update Order are visible (Requirements → Flight Reservation → Business Processes).

- k. Select the Create Order requirement, right-click, and click Alerts. The Alerts window is displayed. Observe that the alert was generated. Create Order is notified of the name change because Customer Name traces to it.



- I. In the Alerts dialog box, click the Clear All button to remove all alerts from the requirement. A confirmation message box is displayed.



- m. Click Yes to confirm that you would like to clear all alerts.
- n. Close the Alerts dialog box.
- o. Right-click the User Name requirement and select Rename. Enter **Customer Name** to restore the original requirement name.

Task 2 – Performing Risk Analysis

After establishing traceability links between requirements, perform a risk analysis to analyze the risks associated with the requirements.

1. To calculate the business criticality of requirements, complete the following steps:
 - a. Select the Create Order requirement.
 - b. In the Requirement Details view, select the Risk Assessment tab.

- c. Select the Assessment Questions tab and then select the Business Criticality tab, as shown in the following screenshot:

| | | | | | | | | |
|---|----------------------------------|---|----------------|--------------------------|---------------|-------------------------|-----------------|---------|
| Details | Rich Text | Attachments | Linked Defects | Requirement Traceability | Test Coverage | Business Models Linkage | Risk Assessment | History |
| Assessment Status: Not Started <input type="checkbox"/> Exclude from Analysis | | | | | | | | |
| Assessment Results Assessment Questions | | | | | | | | |
| Business Criticality Failure Probability Functional Complexity | | | | | | | | |
| Assign values to the following criteria to assess the Business Criticality of this requirement: | | | | | | | | |
| Criteria | Value | Description of Criterion: "Type of process" | | | | | | |
| Type of process | <input type="button" value="▼"/> | The type of process represented by the requirement. This criterion has the following possible values: Calculation/ Validation - The feature represented by the requirement is an important calculation or validation. Data Change - The feature represented by the requirement modifies application data. Display - The feature represented by the requirement modifies the application display. | | | | | | |
| Impact of failure | <input type="button" value="▼"/> | | | | | | | |
| Frequency of use | <input type="button" value="▼"/> | | | | | | | |
| Number/Significance of affected users | <input type="button" value="▼"/> | | | | | | | |

- d. In the Value column to the right of Type of process, select Calculation/Validation to indicate that the Create Order process performs calculations and validation on data.
- e. To the right of Impact of failure, select Wrong Information to signify that if the Create Order requirement fails, users cannot book flights or might receive erroneous information.
- f. To the right of Frequency of use, select Very Often.
- g. To the right of Number/Significance of affected users, select Many/High, as shown in the following screenshot:

| | | |
|--|----------------------------------|--------------------------------|
| Assessment Results | Assessment Questions | |
| Assessment Questions Business Criticality Failure Probability Functional Complexity | | |
| Assign values to the following criteria to assess the Business Criticality of | | |
| Criteria | Value | Description |
| Type of process | <input type="button" value="▼"/> | How r This c Many |
| Impact of failure | <input type="button" value="▼"/> | Wrong Infor... Some |
| Frequency of use | <input type="button" value="▼"/> | Very often Few |
| Number/Significance of affected users | <input type="button" value="▼"/> | Many/ High All |

- h. Repeat Steps 1d through 1g to assign values for the Update Order and requirements. Use the following table as your reference.

| Requirement Name | Criterion | Value |
|------------------|---------------------------------------|-------------------|
| Update Order | Type of process | Data Change |
| | Impact of failure | Wrong Information |
| | Frequency of use | Often |
| | Number/Significance of affected users | Some/Medium |
| Delete Order | Type of process | Data Change |
| | Impact of failure | Wrong Information |
| | Frequency of use | Rare |
| | Number/Significance of affected users | Few/Low |

Requirements Edit View Favorites Analysis

No Filter Defined

Name

- Requirements
 - Flight Reservation
 - Business Processes
 - Create Order
 - Delete Order
 - Update Order
 - Fax Order
 - Open Order
 - Security
 - New Features
 - Field Validation

Assessment Status: In Progress Exclude from Analysis

Assessment Results | Assessment Questions

Business Criticality | Failure Probability | Functional Compl.

Assign values to the following criteria to assess the Business Criticality:

| Criteria | Value |
|---------------------------------------|---|
| Type of process | Data Chan... <input type="button" value="▼"/> |
| Impact of failure | Wrong Infor... <input type="button" value="▼"/> |
| Frequency of use | Rare <input type="button" value="▼"/> |
| Number/Significance of affected users | Few/ Low <input type="button" value="▼"/> |

2. To calculate the failure probability of requirements, complete the following steps:
- In the Requirements tree, select the Create Order requirement.
 - In the right pane under the Risk Assessment tab -> Assessment Questions tab, click the Failure Probability tab.
 - To the right of Change type, select Changed Feature to signify that the Create Order requirement has changed in release 4.0 of the Flight Reservation application.
 - To the right of Software maturity, select Mature.
 - To the right of Defects rate, select Low.
 - To the right of Number of affected screens/entities, select More than 4, as shown in the following screenshot:

The screenshot shows the 'Risk Assessment' tab selected in the top navigation bar. Below it, the 'Assessment Questions' tab is also selected. A table is displayed with the following rows:

| Criteria | Value | Description |
|-------------------------------------|--------------|---|
| Change type | Changed F... | Description of Criterion: "Number of affected screens/entities" |
| Software maturity | Mature | How many application screens and entities are affected by the requirement. This criterion has the following possible values: > 4, 2-4, < 2. |
| Defects rate | Low | |
| Number of affected screens/entities | More than 4 | |

- g. Repeat Steps 2c through 2f to assign values for the Update Order and Delete Order requirements. Use the following table as your reference.

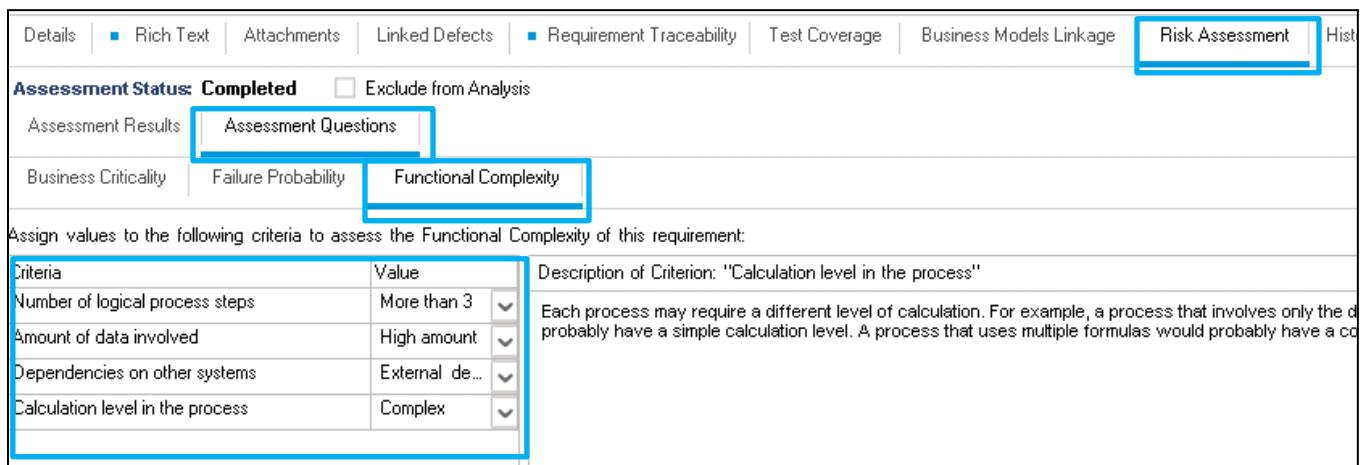
| Requirement | Criterion | Value |
|--------------|-------------------------------------|-----------------|
| Update Order | Change type | Changed Feature |
| | Software maturity | Intermediate |
| | Defects rate | Medium |
| | Number of affected screens/entities | 2 – 4 |

| Requirement | Criterion | Value |
|--------------|-------------------------------------|-------------------|
| Delete Order | Change type | Unchanged Feature |
| | Software maturity | Mature |
| | Defects rate | Low |
| | Number of affected screens/entities | Less than 2 |

The screenshot shows the HP ALM interface. At the top, there's a menu bar with 'Requirements', 'Edit', 'View', 'Favorites', and 'Analysis'. Below the menu is a toolbar with various icons for file operations like save, print, and search. A message 'No Filter Defined' is displayed. On the left, a tree view under 'Name' shows categories: Requirements, Flight Reservation, Business Processes (with sub-items Create Order, Delete Order, Update Order, Fax Order, Open Order), Security, New Features, and Field Validation. The 'Delete Order' item is selected. To the right, there are tabs for 'Details', 'Rich Text', 'Attachments', and 'Linked Defects'. Under 'Assessment Status: In Progress', there are tabs for 'Assessment Results' (selected) and 'Assessment Questions'. Below these are tabs for 'Business Criticality', 'Failure Probability' (selected), and 'Functional Complexity'. A table titled 'Assign values to the following criteria to assess the Failure Probability' lists five criteria with dropdown menus: Change type (Unchanged...), Software maturity (Mature), Defects rate (Low), and Number of affected screens/entities (Less than 2).

3. To calculate the functional complexity of requirements, complete the following steps:
 - a. In the Requirements tree, select the Create Order requirement.
 - b. In the right pane under the Risk Assessment tab → Assessment Questions tab, click the Functional Complexity tab.
 - c. To the right of Number of logical process steps, select More Than 3 to signify the number of windows, dialogs, or steps used to perform the Create Order requirement of the Flight Reservation application.

- d. To the right of Amount of data involved, select High Amount.
- e. To the right of Dependencies on other systems, select External Dependencies.
- f. To the right of Calculation level in process, select Complex, as shown in the following screenshot:



The screenshot shows a software interface for risk assessment. At the top, there are several tabs: Details, Rich Text, Attachments, Linked Defects, Requirement Traceability, Test Coverage, Business Models Linkage, Risk Assessment (which is highlighted with a blue border), and History. Below these tabs, there are three sub-tabs: Assessment Status (Completed), Exclude from Analysis, Assessment Results, and Assessment Questions (which is highlighted with a blue border). Under Assessment Questions, there are three tabs: Business Criticality, Failure Probability, and Functional Complexity (which is highlighted with a blue border). A note below these tabs says: "Assign values to the following criteria to assess the Functional Complexity of this requirement:". Below this note is a table with four rows. The first row has two columns: Criteria and Value. The second row has two columns: Number of logical process steps and More than 3. The third row has two columns: Amount of data involved and High amount. The fourth row has two columns: Dependencies on other systems and External de... (with a dropdown arrow). The fifth row has two columns: Calculation level in the process and Complex (with a dropdown arrow). To the right of the table, there is a description of the "Calculation level in the process" criterion: "Description of Criterion: 'Calculation level in the process'" followed by a detailed explanation: "Each process may require a different level of calculation. For example, a process that involves only the addition of two numbers probably have a simple calculation level. A process that uses multiple formulas would probably have a complex calculation level." The entire table area is also highlighted with a blue border.

| Criteria | Value |
|----------------------------------|----------------|
| Number of logical process steps | More than 3 |
| Amount of data involved | High amount |
| Dependencies on other systems | External de... |
| Calculation level in the process | Complex |

Description of Criterion: "Calculation level in the process"

Each process may require a different level of calculation. For example, a process that involves only the addition of two numbers probably have a simple calculation level. A process that uses multiple formulas would probably have a complex calculation level.

- g. Repeat steps 3c through 3f to assign values for the Update Order and Delete Order requirements. Use the following table as your reference.

| Requirement Name | Criterion | Value |
|-------------------------|---------------------------------|----------------------------|
| Update Order | Number of logical process steps | 2-3 |
| | Amount of data involved | Medium Amount |
| | Dependencies on other systems | Internal dependencies only |
| | Calculation level in process | Average |
| Delete Order | Number of logical process steps | Less than 2 |
| | Amount of data involved | Low Amount |
| | Dependencies on other systems | No dependencies |
| | Calculation level in process | Simple |

The screenshot shows the HP ALM Requirements module interface. On the left, there's a navigation tree under 'Name' with categories like Requirements, Flight Reservation, Business Processes, Security, New Features, and Field Validation. Under Business Processes, several requirements are listed: Create Order, Delete Order, Update Order, Fax Order, and Open Order. The 'Delete Order' requirement is selected and highlighted with a blue background. The main panel on the right displays an 'Assessment Status' of 'Completed'. Below it, there are tabs for 'Assessment Results' and 'Assessment Questions', with 'Assessment Questions' being the active tab. A section titled 'Functional Complexity' is shown, with sub-sections for Business Criticality, Failure Probability, and Functional Complexity. The 'Functional Complexity' section contains four criteria with dropdown menus: 'Number of logical process steps' (Less than 2), 'Amount of data involved' (Low amount), 'Dependencies on other systems' (No depend...), and 'Calculation level in the process' (Simple). To the right of these tables, there is a vertical column with descriptive text that is partially cut off.

4. To exclude requirements from risk analysis, complete the following steps:
- From the Requirements tree, select the Open Order requirement.
 - In the right pane, click the Exclude from Analysis checkbox, as shown in the following screenshot:

The screenshot shows the Requirements tool interface. On the left, the 'Name' tree view displays several categories: Requirements, Flight Reservation (expanded), Business Processes (expanded), and a list of actions: Create Order, Delete Order, Update Order, Fax Order, and Open Order. The 'Open Order' item is highlighted with a blue selection bar. On the right, the 'Assessment Status' section shows 'Excluded' with a checked checkbox labeled 'Exclude from Analysis'. Below it are tabs for 'Assessment Results' and 'Assessment Questions', with 'Assessment Questions' being the active tab. Underneath are three assessment criteria: Business Criticality, Failure Probability, and Functional Complexity, each with a dropdown menu. A large table below these criteria is titled 'Assign values to the following criteria to assess the Functional Complexity of this requirement'. The table has columns for 'Criteria' and 'Value', with rows for 'Number of logical process steps', 'Amount of data involved', 'Dependencies on other systems', and 'Calculation level in the process'.

- Repeat these steps to exclude the Fax Order requirement.

This screenshot is identical to the one above, showing the Requirements tool interface. The 'Name' tree view highlights the 'Fax Order' requirement. The 'Assessment Status' section shows 'Excluded' with the 'Exclude from Analysis' checkbox checked. The 'Assessment Questions' tab is active. The functional complexity table is present at the bottom.

5. For each requirement listed below, click the Assessment Results tab and in the Assessment Summary section note the results. Record the values in the Risk and Functional Complexity fields in the table below. (At present, leave the Calculated Testing Time column blank because you will see that information after you perform the risk analysis.)

| Requirement | Risk | Functional Complexity | Calculated Testing Time |
|--------------|------|-----------------------|-------------------------|
| Create Order | | | |
| Delete Order | | | |
| Update Order | | | |

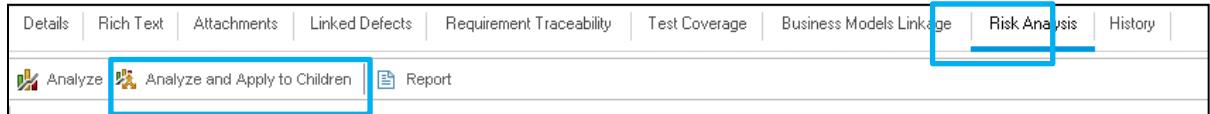
The screenshot shows the HP ALM Requirements interface. The top navigation bar includes 'Requirements', 'Edit', 'View', 'Favorites', and 'Analysis'. Below the navigation is a toolbar with various icons for file operations. The main area has a 'No Filter Defined' message. On the left, a tree view shows 'Requirements' expanded, with 'Flight Reservation' and 'Business Processes' further down. Under 'Business Processes', 'Create Order' is selected and highlighted with a blue border. To the right, there are tabs for 'Details', 'Rich Text', 'Attachments', and 'Links'. The 'Assessment Status' is set to 'Completed'. The 'Assessment Results' tab is currently selected and highlighted with a blue border. The 'Assessments Summary' section contains the following information:

- Risk:** A-High
- Business Criticality:** A-Critical
- Failure Probability:** 2-Medium
- Functional Complexity:** 1-High

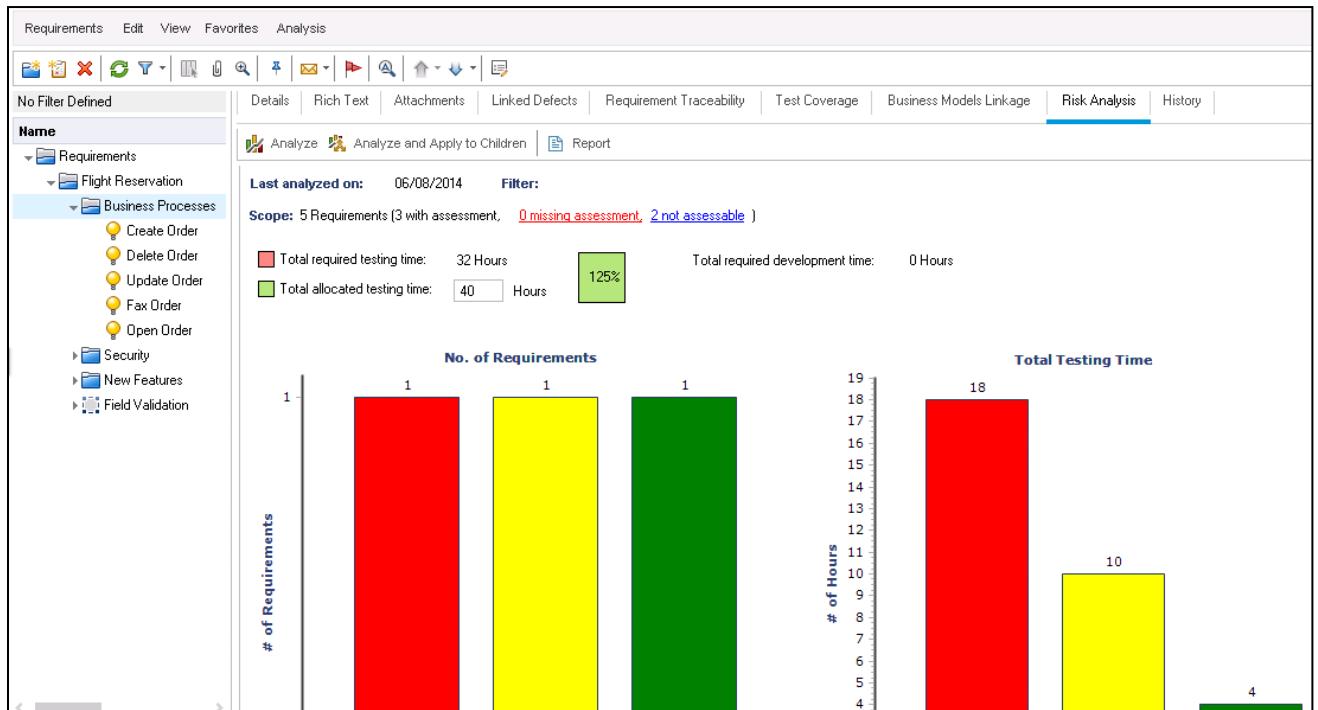
At the bottom, the 'Testing Policy' section is partially visible.

Why are no values displayed in the Testing Policy section for any of the requirements?

6. Perform risk analysis on the Business Processes Requirement folder and generate a report:
- From the requirements tree, select the Business Processes folder. Observe the differences in the Risk page while changing from this analysis requirement to an assessment requirement, such as Create Order. The data for an analysis requirement are generated from the data you supplied for each assessment requirement.
 - On the Risk Analysis page, type **40** in the Total Allocated Testing Time field.
 - Click Analyze and Apply to Children. The Information message box informs you that data were successfully propagated.



- Click the OK button to close the Information message box.
- The updated graphs and fields are displayed on the Risk Analysis page. Compare your Risk Analysis page with the following screenshot:



What is the relationship between the values you recorded in the table in Step 5 and the graphs on the previous page?

Has enough testing time been allocated for these requirements?

7. Click Refresh All, return to Step 5, and complete the table. This time recording the values for the Calculated Testing Time field in the Testing Policy section.

| | | | | | | | |
|--|---|---|----------------------------|--|---------------|----------|--|
| Details | <input checked="" type="checkbox"/> Rich Text | Attachments | Linked Defects | <input checked="" type="checkbox"/> Requirement Traceability | Test Coverage | Business | |
| Assessment Status: Completed <input type="checkbox"/> Exclude from Analysis | | | | | | | |
| <input checked="" type="checkbox"/> Assessment Results | | <input type="checkbox"/> Assessment Questions | | | | | |
| Assessments Summary | | | | | | | |
| Risk: A-High | <input type="checkbox"/> Use custom: <input type="text"/> | | | | | | |
| Business Criticality: A-Critical | <input type="checkbox"/> Use custom: <input type="text"/> | | | | | | |
| Failure Probability: 2-Medium | <input type="checkbox"/> Use custom: <input type="text"/> | | | | | | |
| Functional Complexity: 1-High | <input type="checkbox"/> Use custom: <input type="text"/> | | | | | | |
| Testing Policy (Calculated from Risk and Functional Complexity) | | | | | | | |
| Based on analysis requirement: | [2]Business Processes | | | | | | |
| Last analyzed on date: | 06/08/2014 | | | | | | |
| <input type="checkbox"/> Use these for the next calculation: | | | | | | | |
| Calculated Testing Level: | 1-Full | Testing Level | <input type="text"/> | | | | |
| Calculated Testing Time: | 18 Hours | Testing Time | <input type="text"/> Hours | | | | |
| Estimated development time (optional): <input type="text"/> | | | | | | | |

8. In the Requirements tree, click the Fax Order requirement and verify that the Testing Policy section was not updated because this requirement was excluded from analysis.

The screenshot shows the HP ALM Requirements module interface. On the left, there is a tree view of requirements under 'Name'. The 'Fax Order' requirement is selected and highlighted with a blue border. In the top navigation bar, the 'Assessment Status' is set to 'Excluded' with the 'Exclude from Analysis' checkbox checked. The 'Assessment Results' tab is selected in the ribbon. Below the ribbon, there is a section titled 'Assessments Summary' with fields for 'Risk', 'Business Criticality', 'Failure Probability', and 'Functional Complexity', each with a 'Use custom:' dropdown. At the bottom, there is a section titled 'Testing Policy (Calculated from Risk and Functional Complexity)' with a note: 'To view/edit testing policy you must first f...'. There is also a field for 'Estimated development time (optional)'.

The screenshot shows the HP ALM Requirements module. The top navigation bar includes 'Requirements', 'Edit', 'View', 'Favorites', and 'Analysis'. Below the navigation is a toolbar with various icons for file operations like New, Open, Save, Print, and Search. A message bar at the top states 'No Filter Defined'.

The main area is divided into sections:

- Name:** A tree view of requirements:
 - Requirements
 - Flight Reservation
 - Business Processes
 - Create Order
 - Delete Order
 - Update Order
 - Fax Order
 - Open Order
 - Security
 - New Features
 - Field Validation
- Assessment Status:** Excluded Exclude from Analysis
- Assessments Summary:** Fields for Risk, Business Criticality, Failure Probability, and Functional Complexity, each with a 'Use custom:' checkbox and a dropdown menu.
- Testing Policy (Calculated from Risk and Functional Complexity):** A large text area with a message: 'To view/edit testing policy you must first fill in the fields above.' Below this is a field for 'Estimated development time (optional)' with a dropdown menu.

9. Log off from ALM.

Lab 7 – Test Planning

Objectives

After completing this lab, you should be able to:

- Convert requirements to test plans
- Create and modify tests
- Define test configurations
- Create the Open Order test
- Link requirements to tests

Scenario

After adding traceability links between requirements and analyzing the risks associated with the requirements, you must create tests to verify whether the requirements have been met.

You decide to convert the requirements to create the initial set of test plans. However, while test plans are created from converted requirements that can be linked to those requirements automatically, they still do not have test steps.

In this lab, you complete the converted tests by adding test steps, parameterization, and marking some as templates. You then call your reusable templates from other tests.

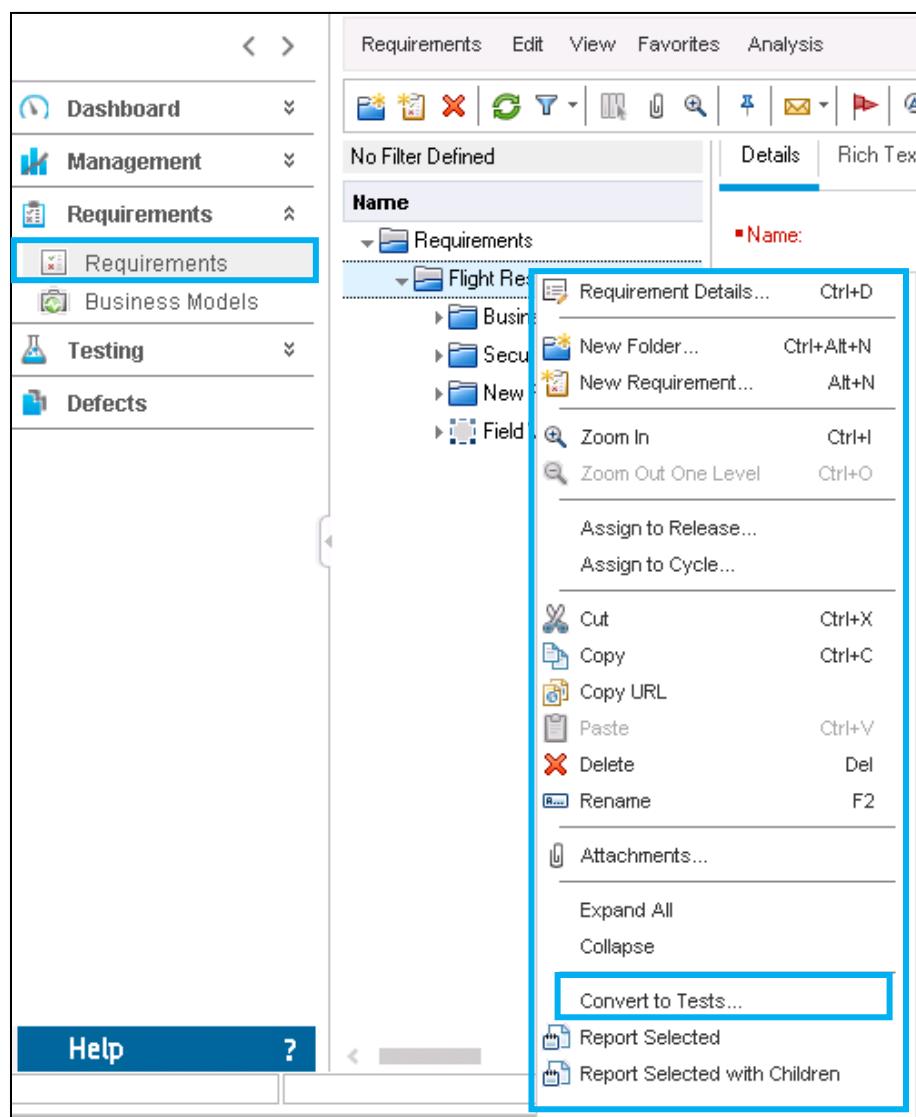
You work with the Login test in this exercise. This is a manual test that validates whether the Flight Reservation application responds correctly to user name and password combinations. The password should be case-sensitive.

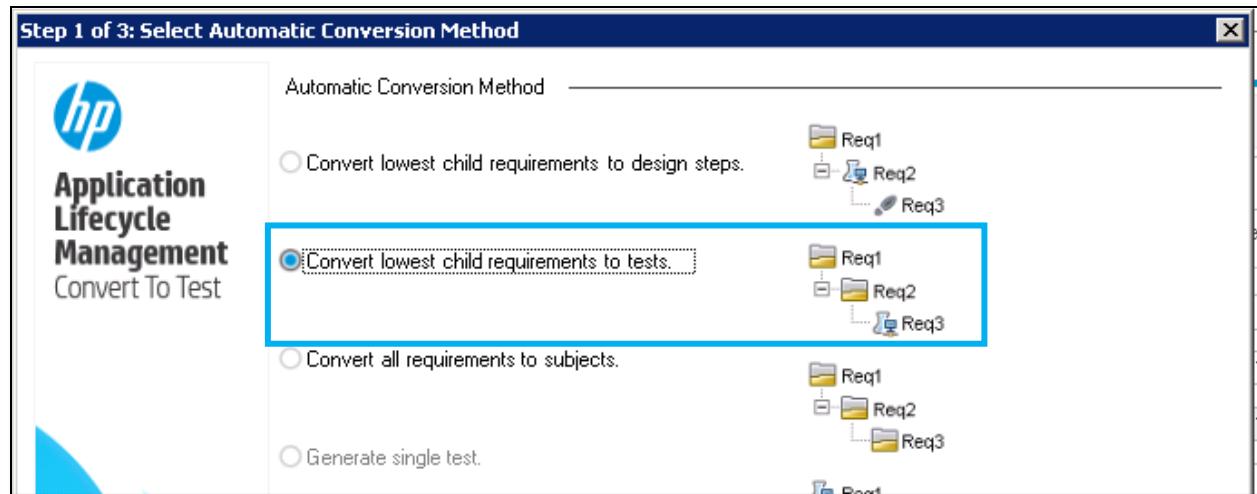
After creating the tests, you link the tests to the corresponding requirements to establish whether the requirements have been met.

Exercise 1 – Converting Requirements to Test Plans

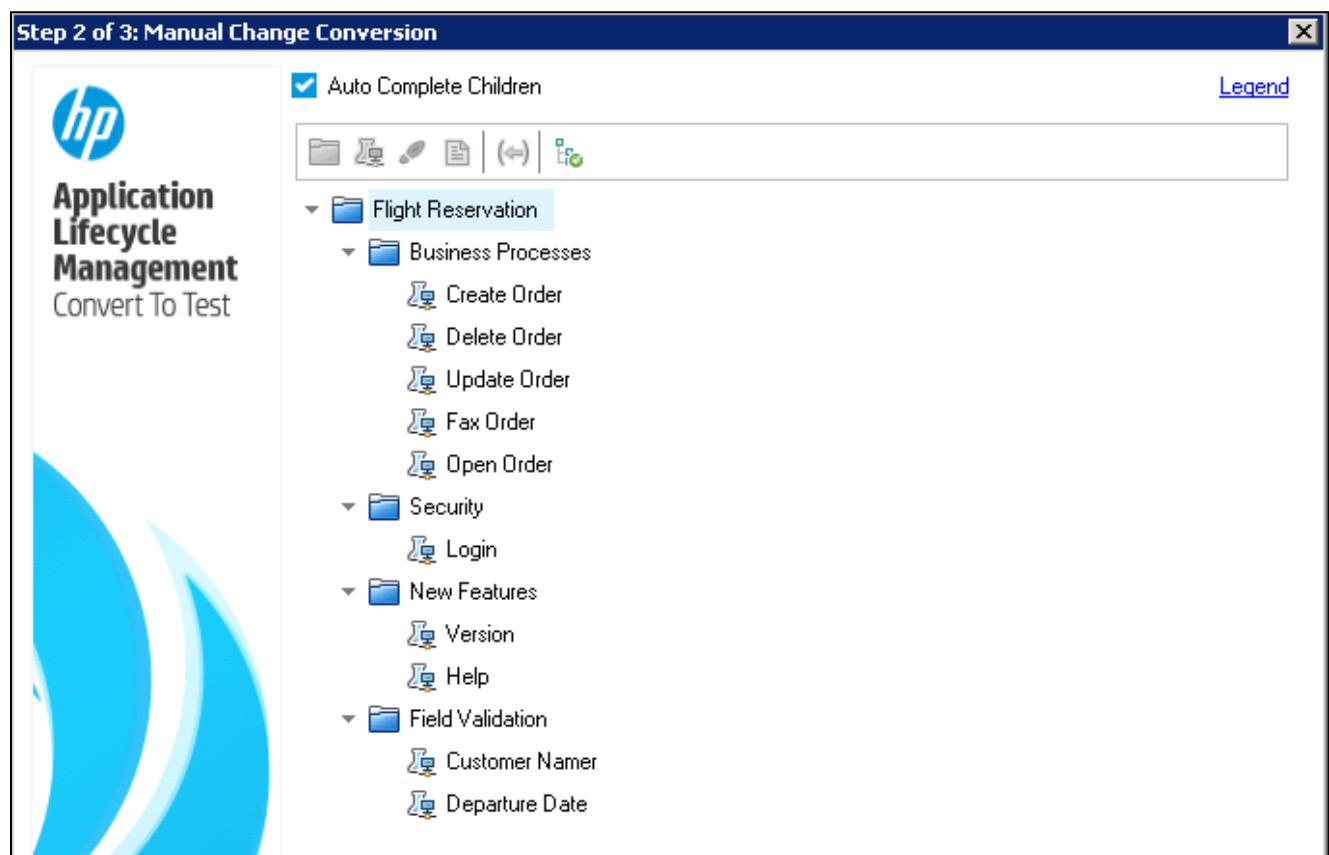
ALM automatically converts your requirements into tests using a wizard that maps requirements to subjects, tests, or test steps.

1. To convert requirements to tests, complete the following steps:
 - a. Log in to ALM Desktop client using **training** as the Username and **welcome** as the Password. After user authentication, select the STUDENT00_ESS domain and FLIGHTAPPLICATION project.
 - From the left pane, select the **Requirements** module.
 - b. From the Requirements tree, right-click the Flight Reservation folder and select Convert to Tests..., as shown in the following screenshot.





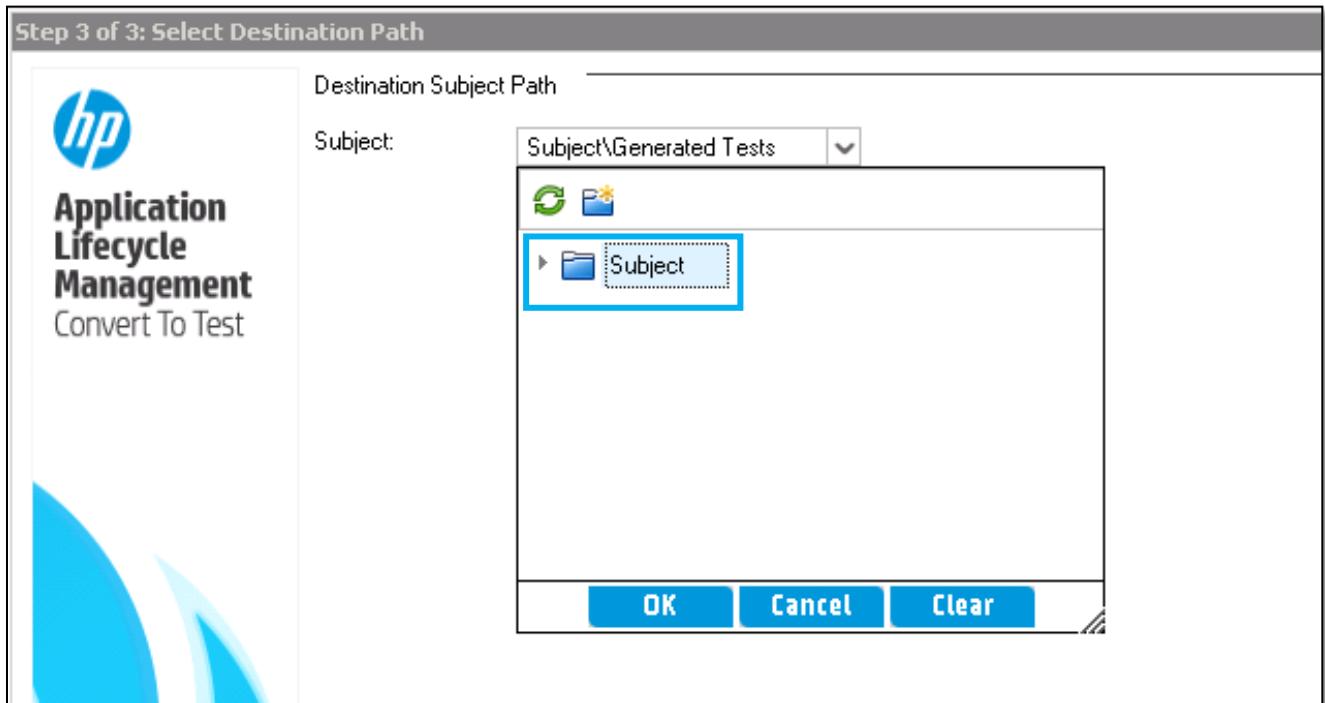
- c. In the Select Automatic Conversion Method dialog box, select the Convert lowest child requirements to tests radio button.
- d. Click the **Next >** button.



- e. Observe the test plan structure in the Manual Change Conversion dialog box that results from the conversion. The requirements folder structure is duplicated and each child requirement becomes a test.

Note: To see the result of another conversion method, click back and repeat Steps 1d and 1e for a different option. Before proceeding, be sure to again select the Convert lowest child requirements to tests radio button.

- f. Because adjustments to the test structure are necessary, click the **Next >** button. The Select Destination Path dialog box is displayed. From the Subject drop-down box, select Subject and click the OK button, as shown in the following screenshot.

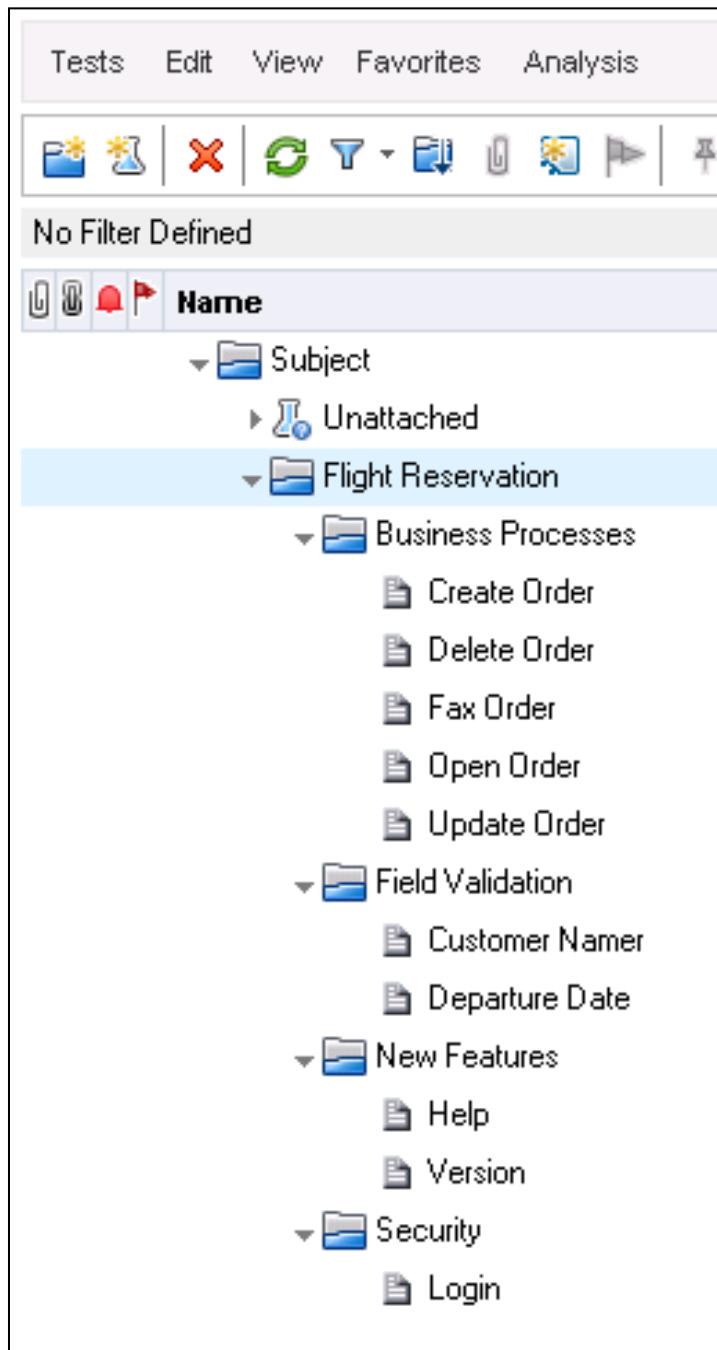


- g. Click the **Finish** button to accept the root test subject folder.



- h. After the conversion completes successfully, the Information dialog box is displayed.
- i. Click the **OK** button in the Information message box to close it.
2. To verify that the conversion was successful, complete the following steps:
- From the left pane, select the Testing group and then select the **Test Plan** module.
 - Click Refresh All to ensure that all newly created tests are displayed.
 - Right-click the Subject folder and choose Expand All to see all subfolders and tests. Click the Yes button on the Information message box.

d. Compare your Test Plan tree with the following screenshot:



Are the tests linked to their corresponding requirements?

Exercise 2 – Creating and Modifying Tests

In addition to automatically creating tests from requirements, you can manually create tests by specifying the exact steps to follow. This process is also helpful for cleaning up tests that were automatically mapped from requirements because sometimes the mapping process does not produce the needed results.

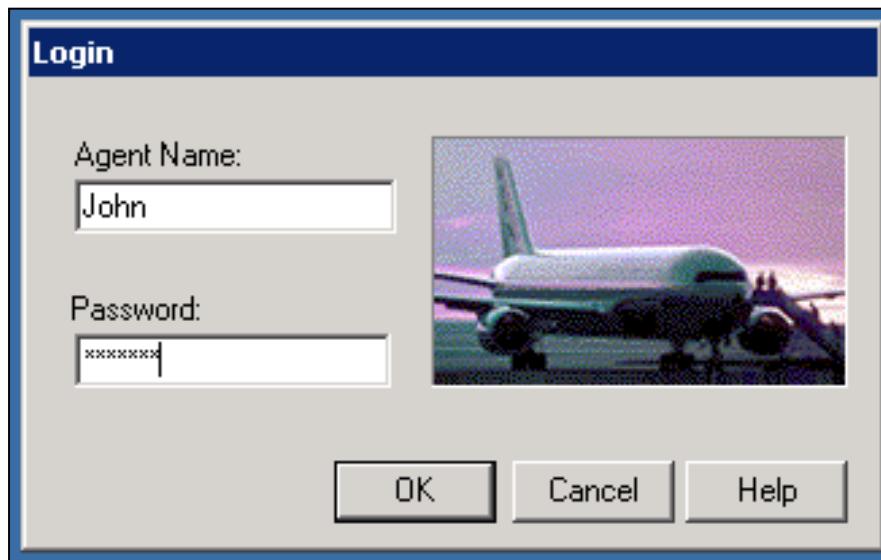
Next, you create the Login test. For the purposes of this task, you manually execute your test in the application and then enter the steps into an ALM test plan. In reality, you would manually execute your test while simultaneously creating test steps and entering data into the Description and Expected Results fields. Always keep in mind that you are writing instructions for a test execution engineer, not necessarily for yourself.

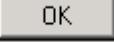
1. To rehearse the process of logging into the Flight Reservation application, complete the following steps:

- a. Minimize all applications, so your desktop is visible.
- b. Double-click the Flight  icon on the desktop to activate the Flight Reservation application. The Login window is displayed.
- c. In the Agent Name field, enter your first name.

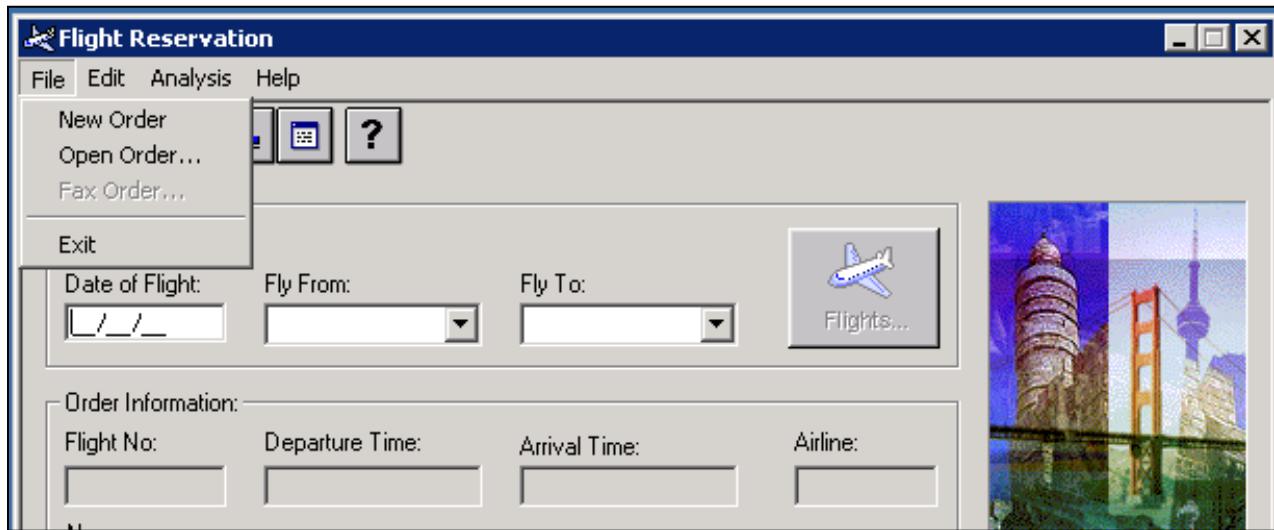
Note: An agent name must be at least four characters.

- d. In the Password field, enter **mercury** (lowercase).



- e. Click the  button to log in. The Flight Reservation window is displayed.

- f. Log out of the application by selecting File → Exit from the menu, as shown in the following screenshot.



- g. The Flight Reservation window closes.
2. To create a basic login test by manually adding test steps, complete the following steps:

- a. Maximize ALM. The Test Plan module and expanded Test Plan tree should still be visible. (Use the View menu to ensure that you are in Test Plan Tree view.)
- b. Select the Login test from the Security folder.

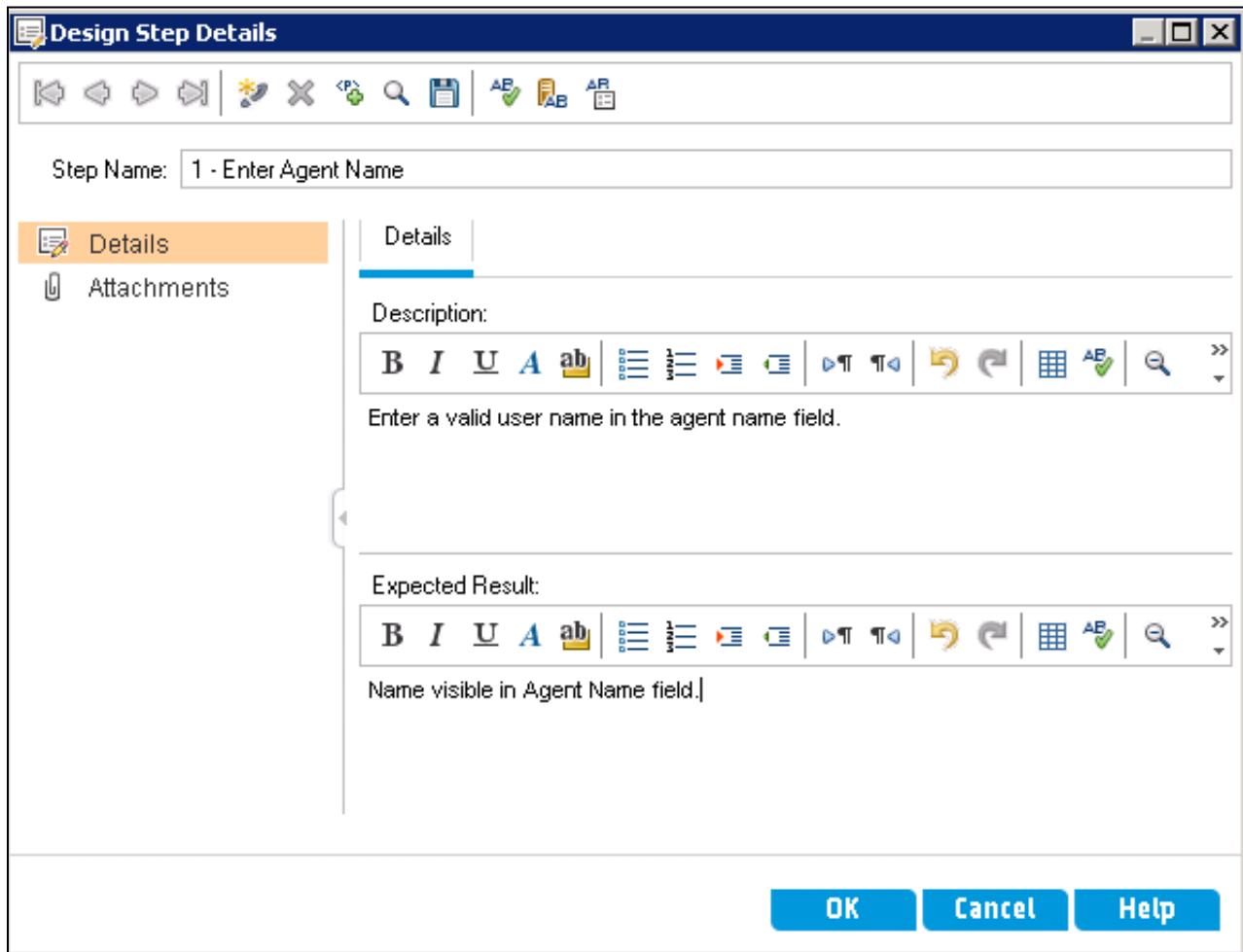
- c. In the right pane, select the **Design Steps** tab, as shown in the following screenshot.

| Step Name | Description |
|-----------|-------------|
| | |

- d. From the toolbar, click the New Step button. The Design Step Details dialog box is displayed.
- e. In the Step Name field, replace the default value Step 1 with **1-Enter Agent Name**.

Note: As a best practice, add step numbers to the names of your steps.

- f. In the Description field, type **Enter a valid user name in the agent name field**, as shown in the following screenshot.



- g. In the Expected Result field, type **Name visible in Agent Name field**.
- h. In the Design Step Details toolbar, click the New Step button.
- i. In the Step Name field, replace the default value with **2 - Enter Password**.
- j. In the Description field, type **Enter a valid password in the Password field**.
- k. In the Expected Result field, type, **Password entry is masked**.

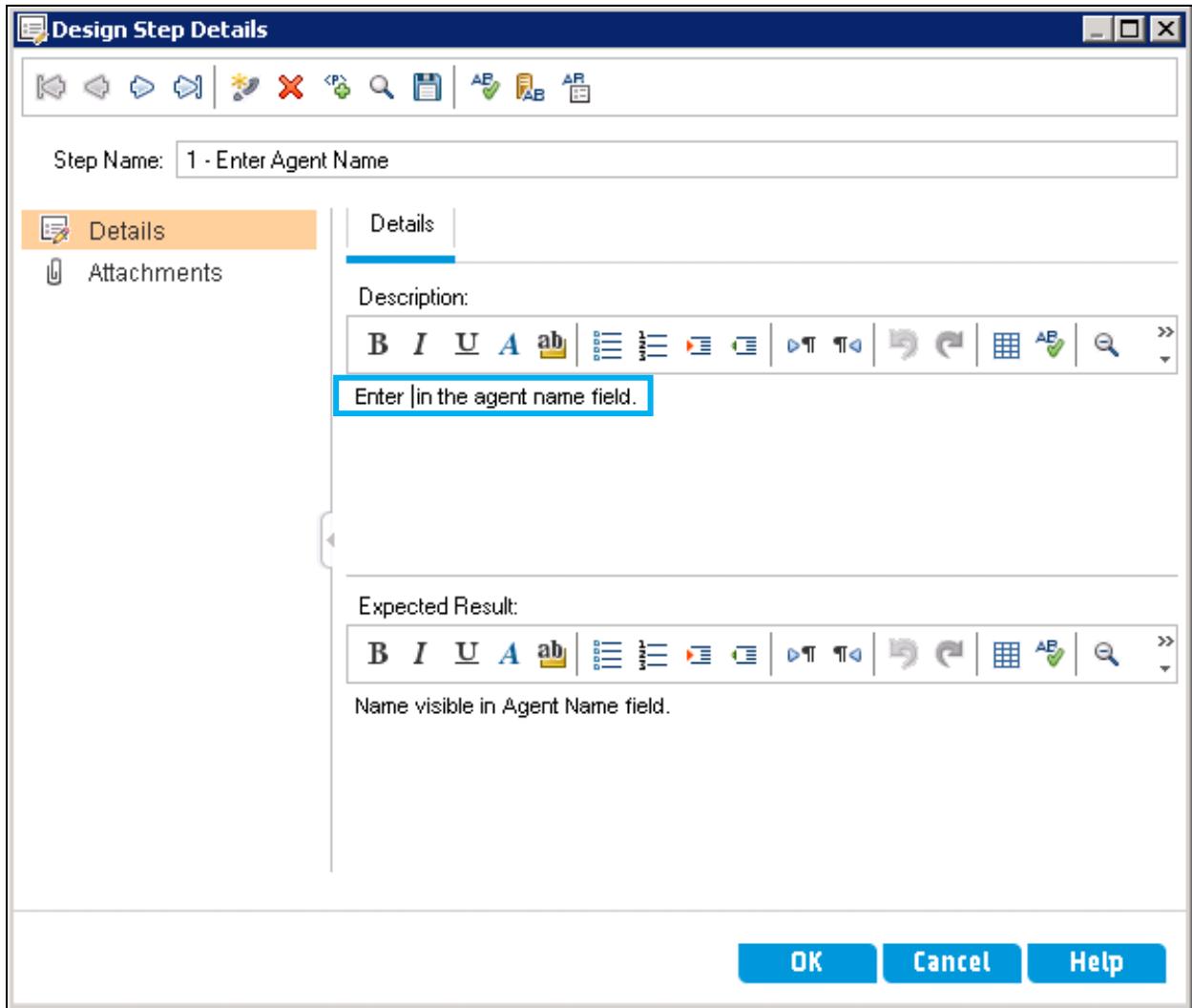
- I. In the Design Step Details toolbar, click the New Step button.
- m. In the Step Name field, type 3 - Click OK.
- n. In the Description field, type Click the OK button.
- o. In the Expected Result field, type If valid user and password, Flight Reservation screen is displayed. If invalid user or password, error message is displayed.
- p. Click the **OK** button to create all steps entered. Observe the steps as they are displayed in the Design Steps page and compare your results with the screenshot below.

| Step Name | Description | Expected Result |
|----------------------|--|--|
| 1 - Enter Agent Name | Enter a valid user name in the agent name field. | Name visible in Agent Name field. |
| 2 - Enter Password | Enter a valid password in the Password field. | Password entry is masked. |
| 3 - Click OK | Click the OK button | If valid user and password, Flight Reservation screen is displayed. If invalid user or password, error message is displayed. |

A powerful feature of automated testing is the ability to use the same test for different sets of data. Parameterization of user input takes advantage of that feature, and saving a test as a template allows it to be reused, providing additional flexibility.

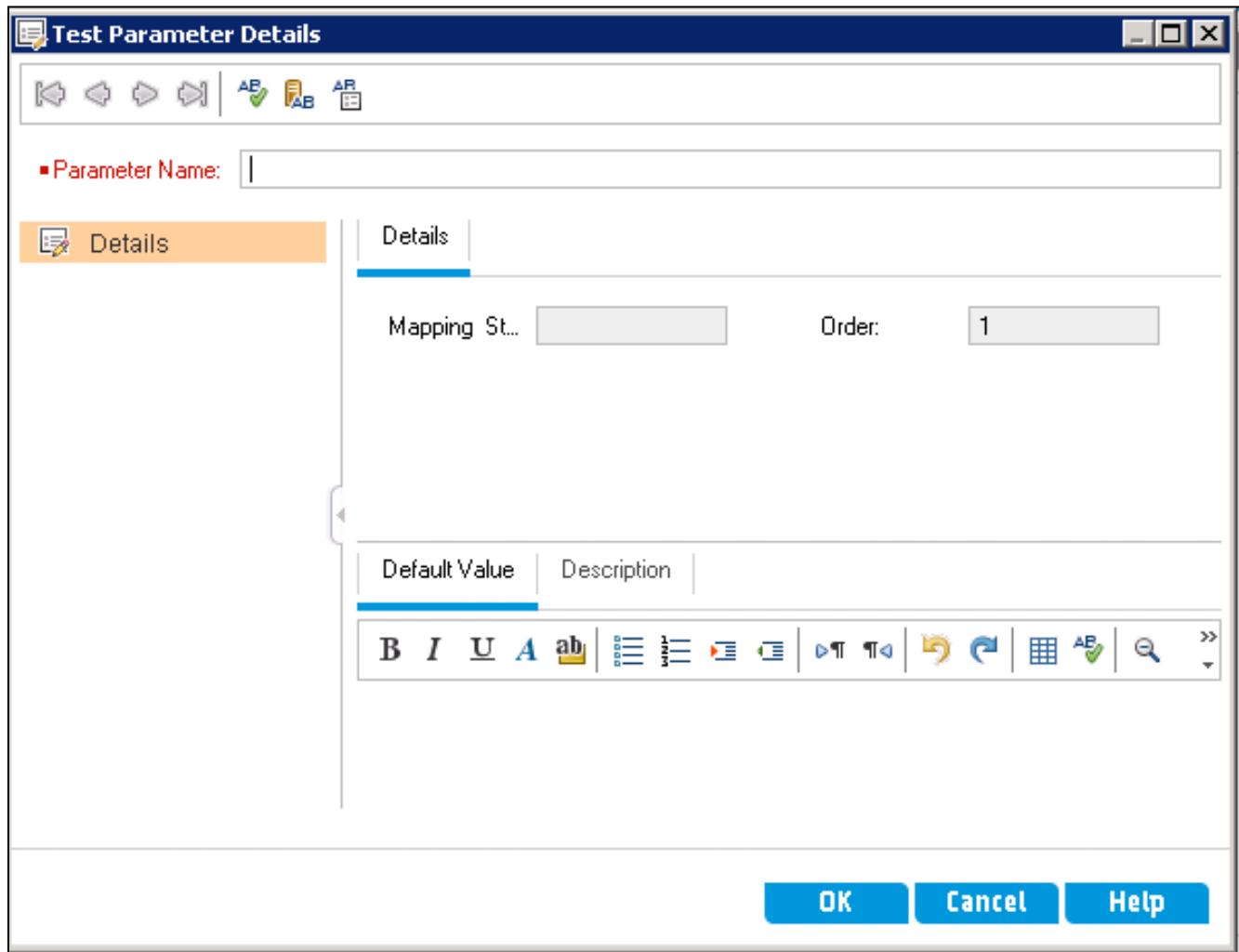
3. To parameterize the steps that require user input and then mark the test as a template, complete the following steps:
 - a. From Design Steps tab, select the 1- Enter Agent Name step and click the Edit Step  button.

- b. Delete the text, a valid user name, in the Description field. The field should read **Enter [CURSOR] in the Agent Name field** (with your cursor immediately before the word in, as shown in the screenshot).



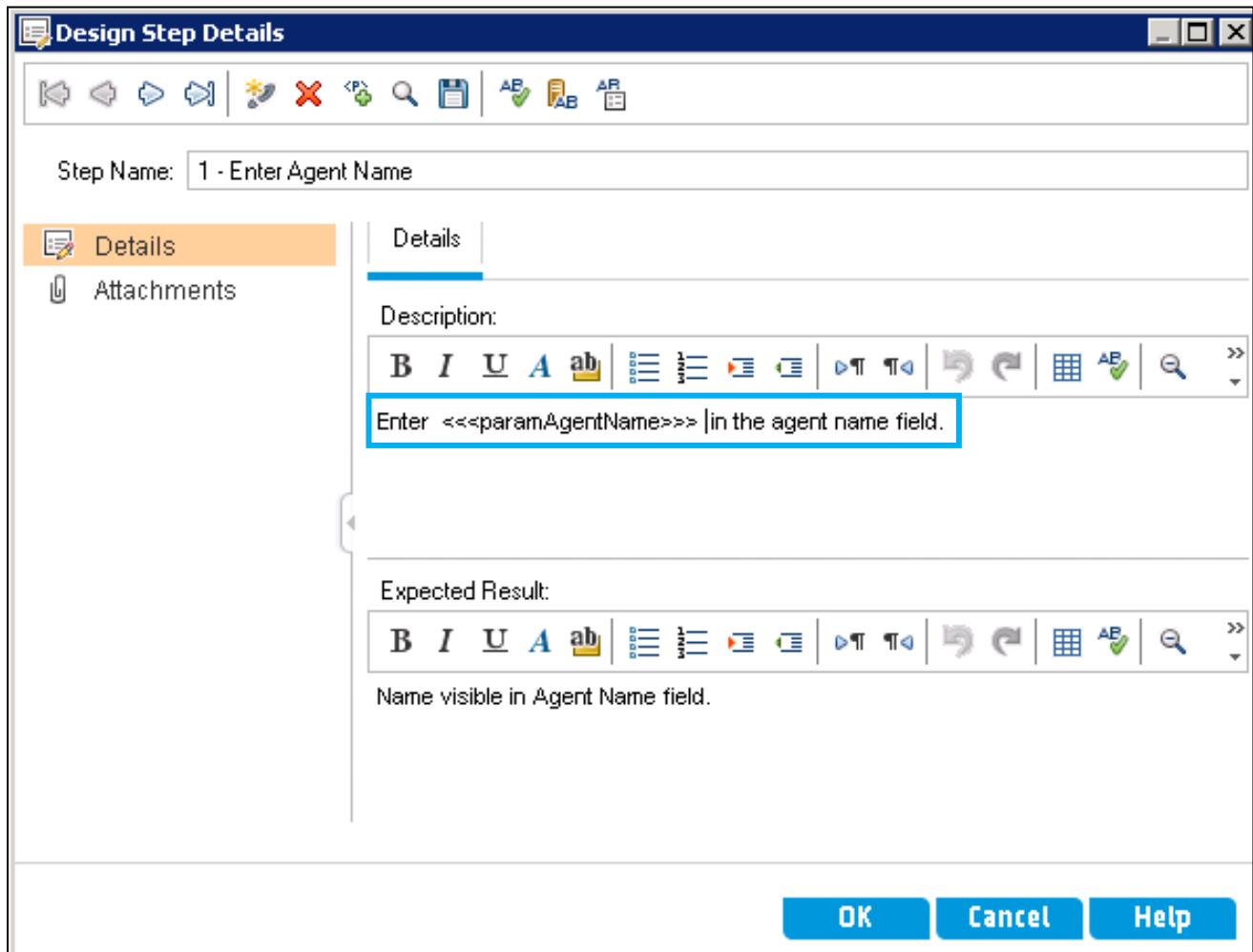
- c. Without moving the cursor, click the Insert Parameter button. The Parameters dialog box is displayed.

- d. In the Parameters dialog box, click the  New Parameter button. The Test Parameter Details dialog box is displayed, as shown in the following screenshot.



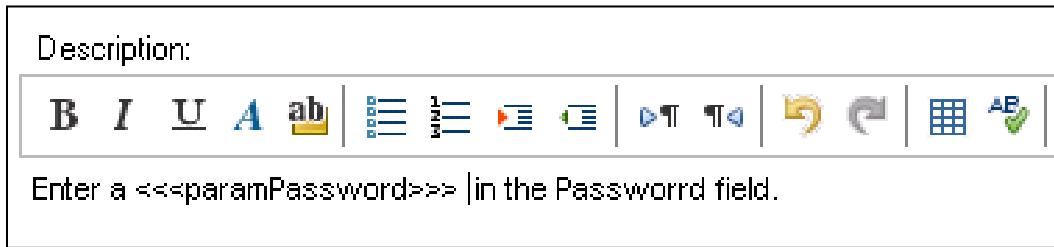
- e. In the Parameter Name field, type `paramAgentName`, click the  button, and then click OK again.

- f. The Description field now reads **Enter <<<paramAgentName>>>** in the agent name field, as shown in the following screenshot.



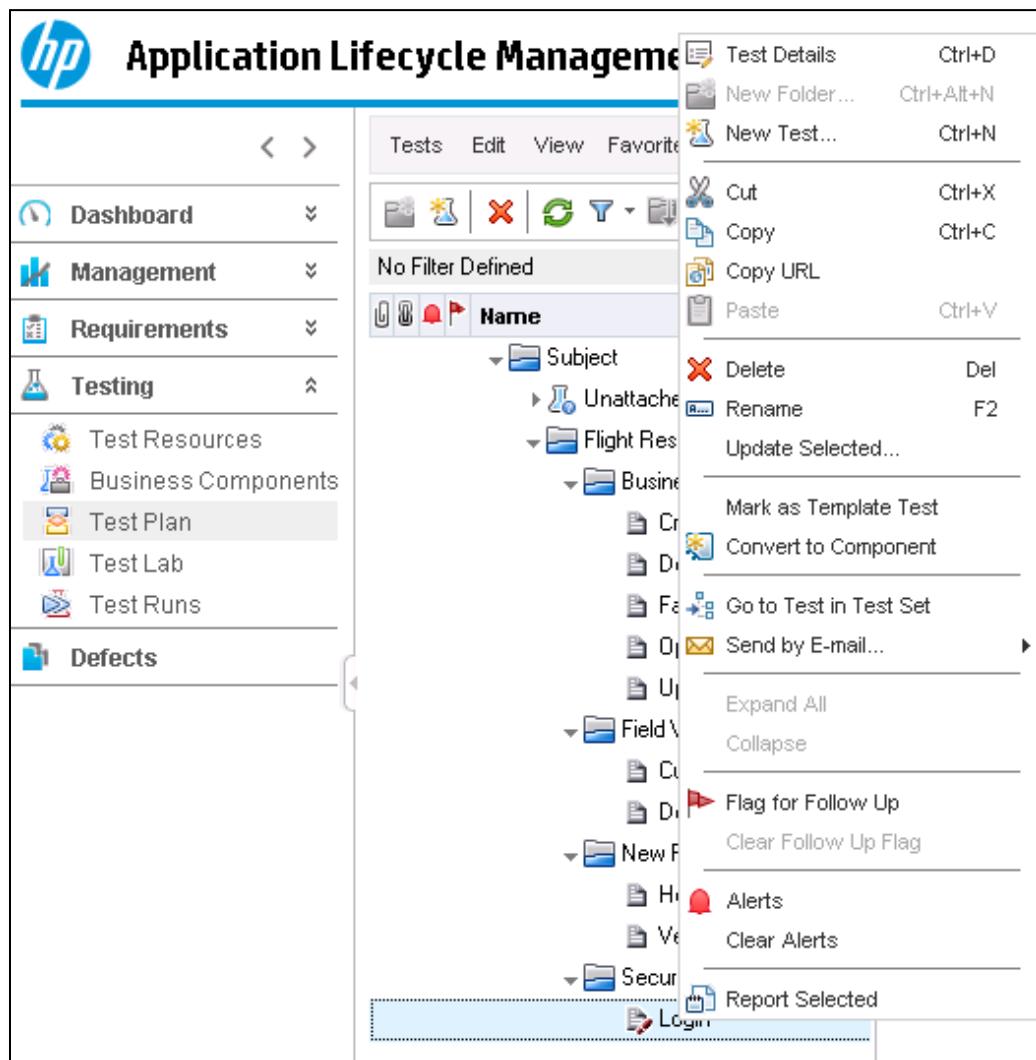
- g. In the toolbar, click the Next Entity button to move to the Enter Password step.
- h. Delete the text, a valid password, in the Description field. Without moving the cursor, click the Insert Parameter button. The Parameters dialog box is displayed.
- i. In the Parameters dialog box, click the New Parameter button. The Test Parameter Details dialog box is displayed.

- j. In the Parameter Name field, type **paramPassword** and click the  button twice.
- k. The Description field now reads **Enter <<paramPassword>>** in the **Password field**, as shown in the following screenshot.



- l. Click the  button to close the Design Step Details.

- m. In the Test Plan tree, right-click the Login test and select Mark as Template Test, as shown in the following screenshot, to indicate that this test is called by other tests.



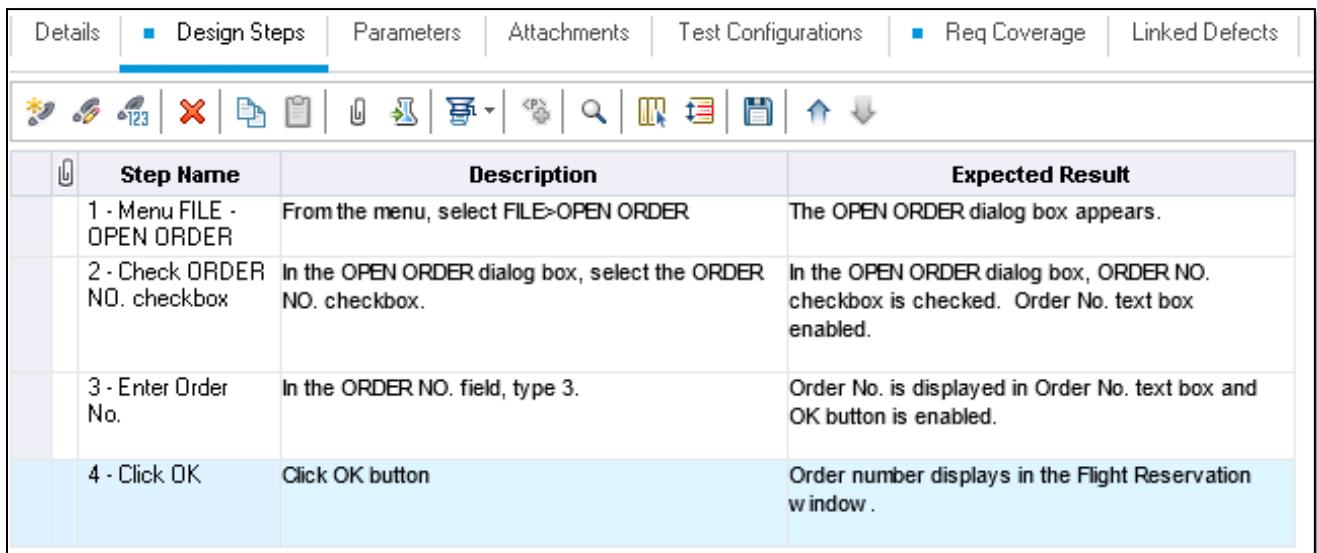
Exercise 3 – Creating the Open Order Test

For additional practice documenting test steps, you now repeat the process from Exercise 2, this time for the Open Order business process. The following are a set of high-level steps for you to execute and document with minimal instruction.

To create the Open Order test, complete the following steps:

1. Log in to the Flight Reservation application. Refer to Exercise 2, Steps 1a through 1e, if you are unsure of the procedure.
2. Maximize ALM and prepare to document the test steps:
 - a. From the left pane, select the Test Plan module.
 - b. Right-click the Flight Reservation folder and choose Expand All.
 - c. Select the Open Order test.
 - d. In the right pane, click the Design Steps tab then the New Step button.
3. Follow these steps to open an order in the Flight Reservation application and simultaneously document your steps and expected results in the Design Step editor. Review Exercise 2 if you are unsure of how to document the test steps.
 - a. From the menu, select File → Open Order. The Open Order dialog box is displayed.
 - b. In the Open Order dialog box, select the Order No. checkbox.
 - c. In the Order No. field, type 3.

- d. Click the  button. Order number 3 displays in the Flight Reservation window.



The screenshot shows a software interface with a top navigation bar containing tabs: Details, Design Steps (which is selected), Parameters, Attachments, Test Configurations, Req Coverage, and Linked Defects. Below the navigation bar is a toolbar with various icons. The main area is a table titled "Design Steps" with three columns: Step Name, Description, and Expected Result. The table contains four rows:

| Step Name | Description | Expected Result |
|------------------------------|--|--|
| 1 - Menu FILE - OPEN ORDER | From the menu, select FILE>OPEN ORDER | The OPEN ORDER dialog box appears. |
| 2 - Check ORDER NO. checkbox | In the OPEN ORDER dialog box, select the ORDER NO. checkbox. | In the OPEN ORDER dialog box, ORDER NO. checkbox is checked. Order No. text box enabled. |
| 3 - Enter Order No. | In the ORDER NO. field, type 3. | Order No. is displayed in Order No. text box and OK button is enabled. |
| 4 - Click OK | Click OK button | Order number displays in the Flight Reservation window . |

4. In the previous screen in Step 3, Enter Order No, in the Description field, insert a parameter by deleting the value 3. Name the parameter **paramOrderNo**. Parameterize the value entered in the Order No. field and name it **paramOrderNo**, as shown in the following screenshot.



5. Close the Flight Reservation application.
 6. Mark the Open Order test as a template test.

Exercise 4 – Defining Test Configurations

In some situations, you might want to have a test that you can use in different scenarios or test with different data. In this task, you create a new configuration so that you can test on two different order numbers.

1. To update an existing test configuration, complete the following steps:

- a. With the Open Order test selected, click the Test Configurations tab, as shown in the following screenshot.

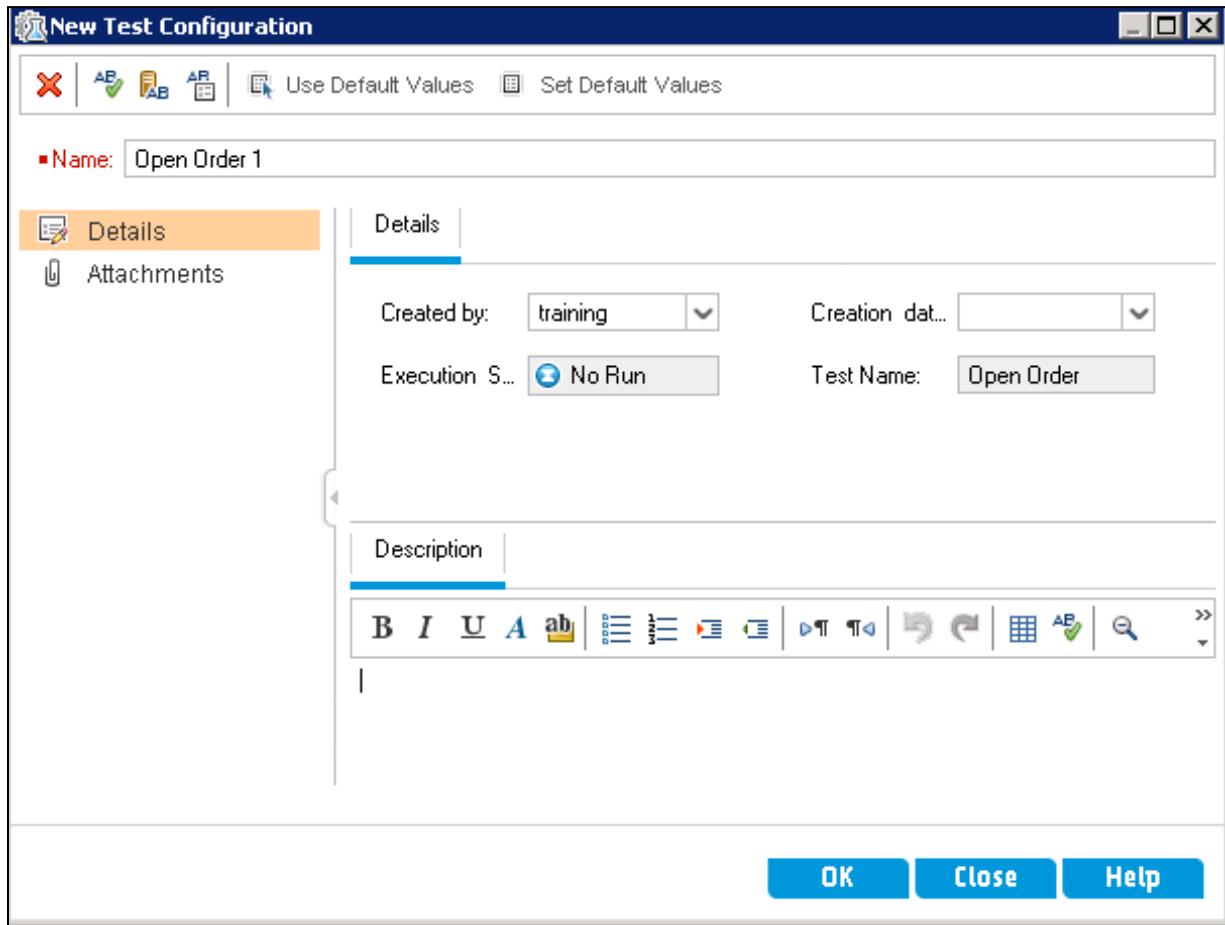
The screenshot shows the HP ALM interface for managing test configurations. The top navigation bar includes 'Tests', 'Edit', 'View', 'Favorites', and 'Analysis'. Below the navigation is a toolbar with various icons. The main area has a sidebar titled 'Name' containing a tree view of project structures like 'Subject', 'Flight Reservation', 'Business Processes', and 'Open Order'. The 'Test Configurations' tab is highlighted with a blue border. A table lists configurations with columns: Name, Created by, Creation date, Execution Status, and ID. One row is selected, showing 'Open Order 3' created by 'alex_alm' on '06/08/2014' with 'No Run' status and ID '1013'. Below the table are tabs for 'Description', 'Data' (which is selected), 'Attachments', and 'History'. Under the 'Data' tab, there's a section for parameters with columns: Used, Parameter Name, Default Value, Actual Value, and Source Test. A row is selected for 'paramOrderNo' with 'Used' checked, 'Parameter Name' as 'paramOrderNo', 'Default Value' as 'Open Order', and 'Actual Value' and 'Source Test' both empty.

| Name | Created by | Creation date | Execution Status | ID |
|--------------|------------|---------------|------------------|------|
| Open Order 3 | alex_alm | 06/08/2014 | No Run | 1013 |

| Used | Parameter Name | Default Value | Actual Value | Source Test |
|------|----------------|---------------|--------------|-------------|
| ✓ | paramOrderNo | Open Order | | |

- b. Click the cell that contains the name of the configuration and change the name to **Open Order 3**.
- c. Click the Data tab.
- d. In the Actual Value column, click in the field and then the drop-down and enter **3** for paramOrderNo.

2. To define a new test configuration, complete the following steps:
 - a. Click the New Test Configuration button. The New Test Configuration dialog box is displayed, as shown in the following screenshot.



- b. Enter **Open Order 1** in the Name field. Click the OK button.

- c. In the Data tab, in the Actual Value column, click in the field and then from the drop-down enter 1 for paramOrderNo.

The screenshot shows the HP ALM Test Plan interface. The top navigation bar includes Tests, Edit, View, Favorites, and Analysis. Below the navigation is a toolbar with various icons for managing tests. A filter bar indicates "No Filter Defined". The main area has tabs for Details, Design Steps, Parameters, Attachments, Test Configurations (which is selected), and Req Coverage. On the left, a tree view under "Name" shows categories like Subject, Flight Reservation, Business Processes, and Open Order, with "Open Order" currently selected. The central part of the screen displays a table of test configurations:

| ID | Name | Created by | Creation date | Execution Status |
|------|--------------|------------|---------------|------------------|
| 1013 | Open Order 3 | alex_alm | 06/08/2014 | No Run |
| 1015 | Open Order 1 | alex_alm | 06/08/2014 | No Run |

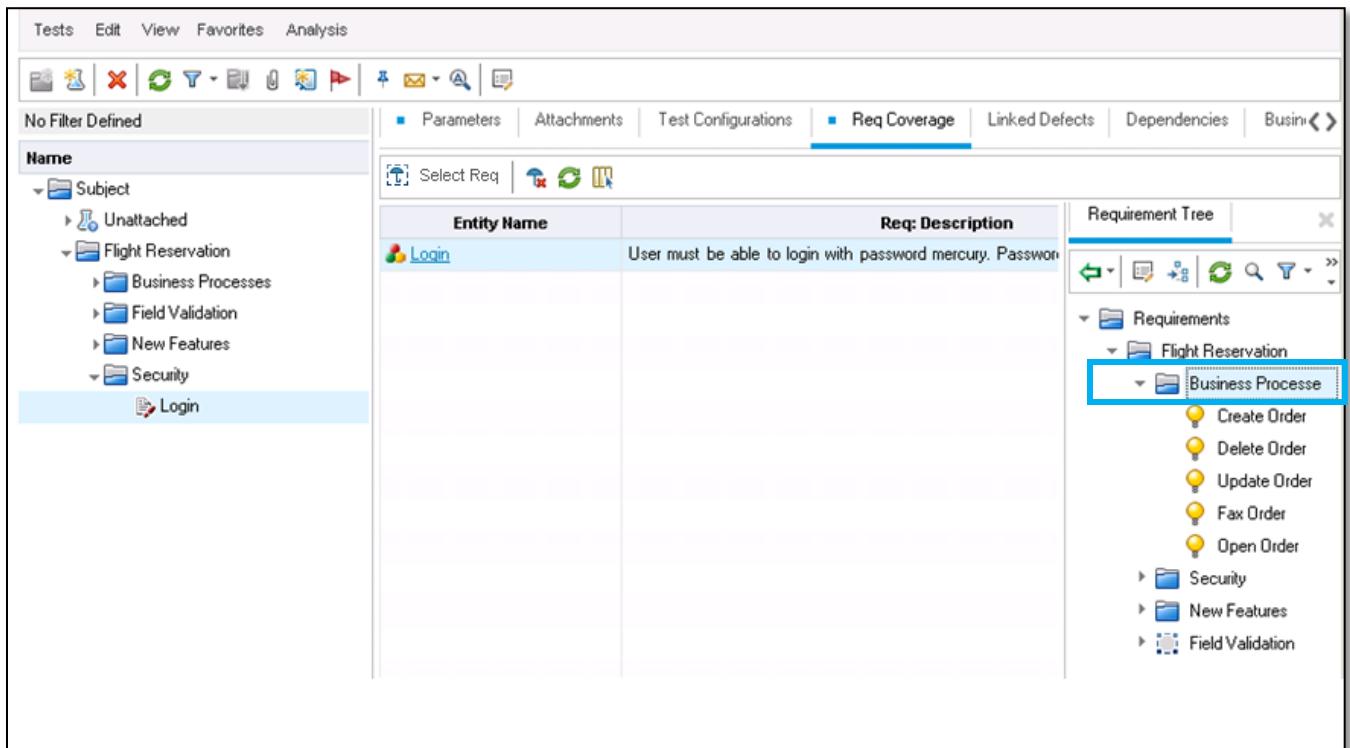
Below the table are tabs for Description, Data (which is selected), Attachments, and History. At the bottom, there are buttons for Copy Default Values and Update Selected Parameters. The Data tab shows a parameter configuration table:

| Used | Parameter Name | Default Value | Actual Value | Source T |
|------|----------------|---------------|--------------|------------|
| ✓ | paramOrderNo | | 1 | Open Order |

Exercise 5 – Linking Requirements to Tests

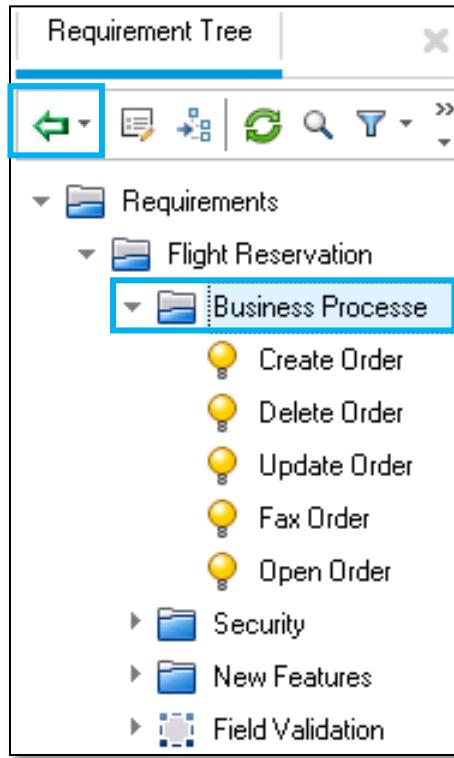
To link requirements to test, perform the following steps:

1. Create a link between the Login test and the Business Processes requirement:
 - a. Expand the test plan tree and select the Login test.
 - b. In the right pane, click the **Req Coverage** tab and then click the  Select Req button.
 - c. The Requirements tree is displayed in the right pane of the Req Coverage page.
 - d. From the Requirements tree, expand the Requirements folder and the Flight Reservation folder and then select the Business Processes folder requirement.



| Entity Name | Req: Description |
|-------------|--|
| Login | User must be able to login with password mercury. Password must be at least 8 characters long. |

- e. Click the Add To Coverage (Including Children) button.



- f. The Confirm message box is displayed.
- g. Click Yes to add the Business Processes requirement and its children to the coverage. All Business Processes requirements are displayed individually under the Entity Name column.
- h. Compare your screen with the following screenshot:

| No Filter Defined | Parameters | Attachments | Test Configurations | Req Coverage | Linked Defects | Dependencies | Bus |
|------------------------------|---|--|---------------------|--------------|----------------|--------------|-----|
| Name | | | | | | | |
| ▼ Subject | <input type="button" value="Select Req"/> | | | | | | |
| ▼ Unattached | | | | | | | |
| ▼ Flight Reservation | | | | | | | |
| ► Business Processes | | | | | | | |
| ► Field Validation | | | | | | | |
| ► New Features | | | | | | | |
| ▼ Security | | | | | | | |
| ► Login | | | | | | | |
| | | | | | | | |
| Entity Name | | Req: Description | | | | | |
| Login | | User must be able to login with password mercury. Password must be case sensitive. | | | | | |
| Create Order | | User must be able to create order | | | | | |
| Delete Order | | User must be able to delete an order. | | | | | |
| Update Order | | User must be able to update an order with a valid set of data. | | | | | |
| Fax Order | | User must be able to fax an order | | | | | |
| Open Order | | User must be able to open an order by number, name and date. | | | | | |

2. Log off from ALM.

Lab 8 – Requirements Coverage

Objectives

After completing this lab, you should be able to:

- Perform coverage analysis
- Perform execution analysis

Scenario

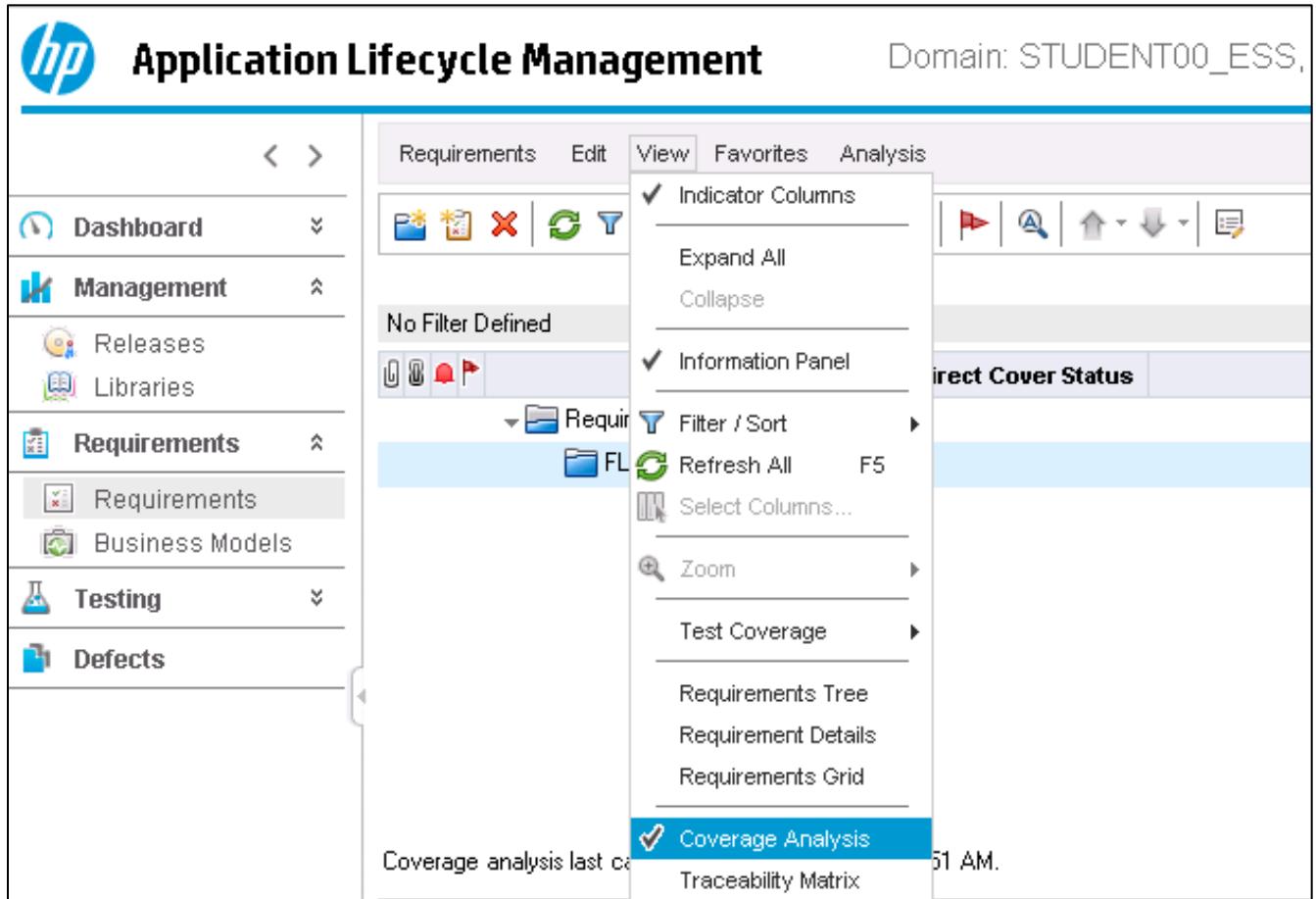
By defining requirements coverage for a test, you can track the relationship between the tests in your test plan and your requirements.

In this lab, you examine the status of your requirements by displaying the breakdown of child requirements according to test coverage.

Exercise 1 – Performing Coverage Analysis

To perform coverage analysis, complete the following steps:

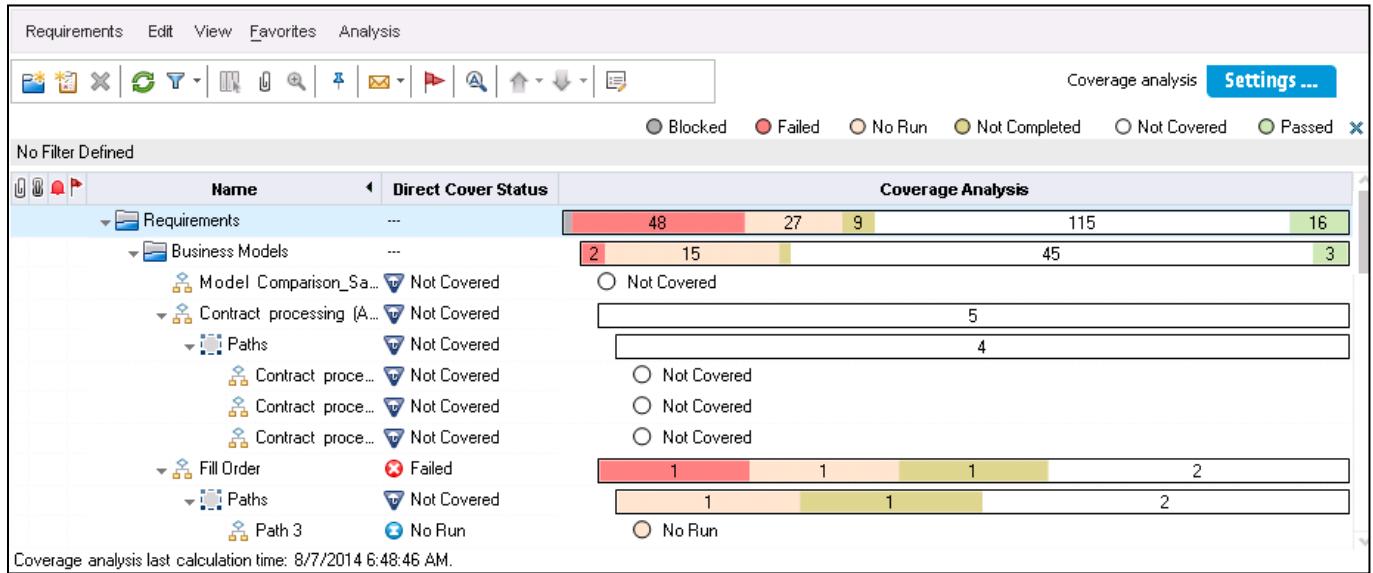
1. Log in to ALM Desktop Client using **training** as username and **welcome** as password and open the **ALM_Demo** project, within the **STUDENT00_ESSENTIALS** domain.
2. In the **Requirements** module, select Coverage Analysis from the View menu, as shown in the following screenshot.



3. Expand the Requirements tree to view the child requirements.

4. Click the [Legend](#) link to view the legend for the Coverage Analysis column.

The Direct Cover Status column shows the status of your requirements and child requirements according to test coverage, as shown in the following screenshot.

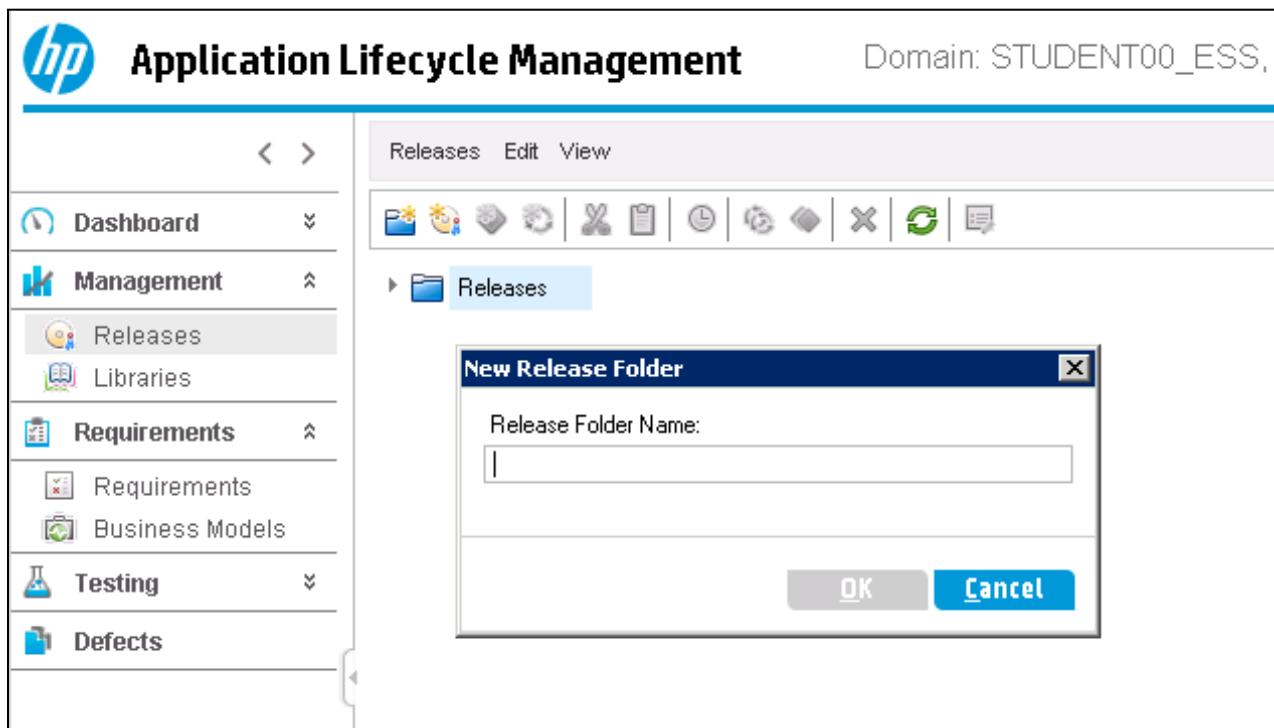


Exercise 2 – Performing Execution Analysis

To perform execution analysis, complete the following steps:

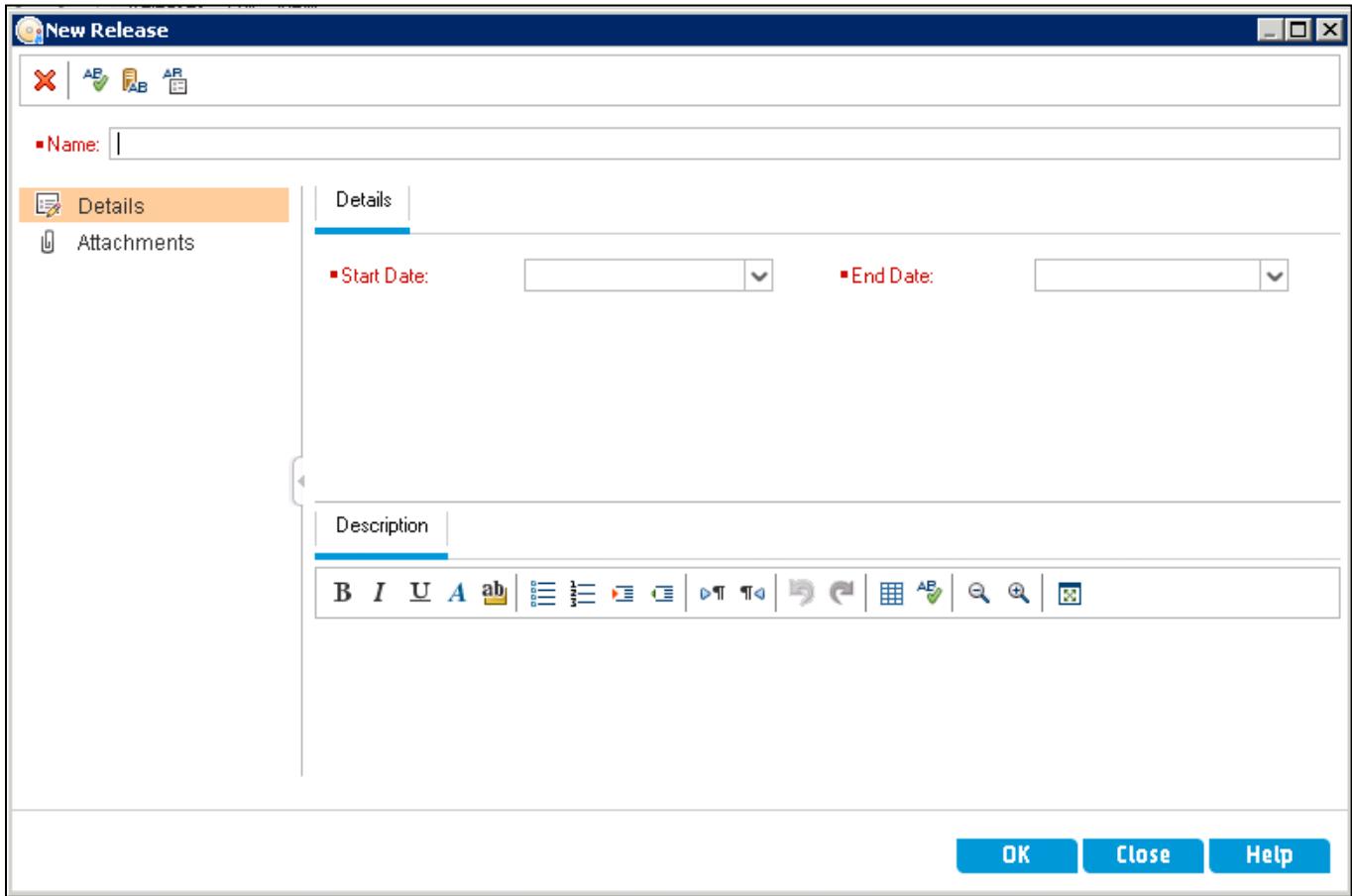
Note: Make sure that RELEASE 4.0 exists on the Releases module within the Management module. If not, follow the steps to create it:

1. To create a folder for the Flight Reservation project and a new release within that folder, complete the following steps:
 - a. In the left pane, under the Management module, click the Releases module.
 - b. Highlight the Releases folder in the tree view. On the toolbar, click the New Release Folder button. The New Release Folder dialog box is displayed, as shown in the following screenshot.



- c. In the Release Folder Name field, type **Flight Reservation** and click the OK button to close the dialog box.

- d. On the toolbar, click the New Release  button. The New Release dialog box is displayed, as shown in the following screenshot.



- e. In the Name field, type **RELEASE 4.0**.
2. Click the Details tab and specify a date range for the release:
a. In the Start Date field, select today's date.

Note: In general, the start date of a release matches the start date of its first cycle.

- b. In the End Date field, select a date that is 30 days from today. Include only weekdays when selecting the date.

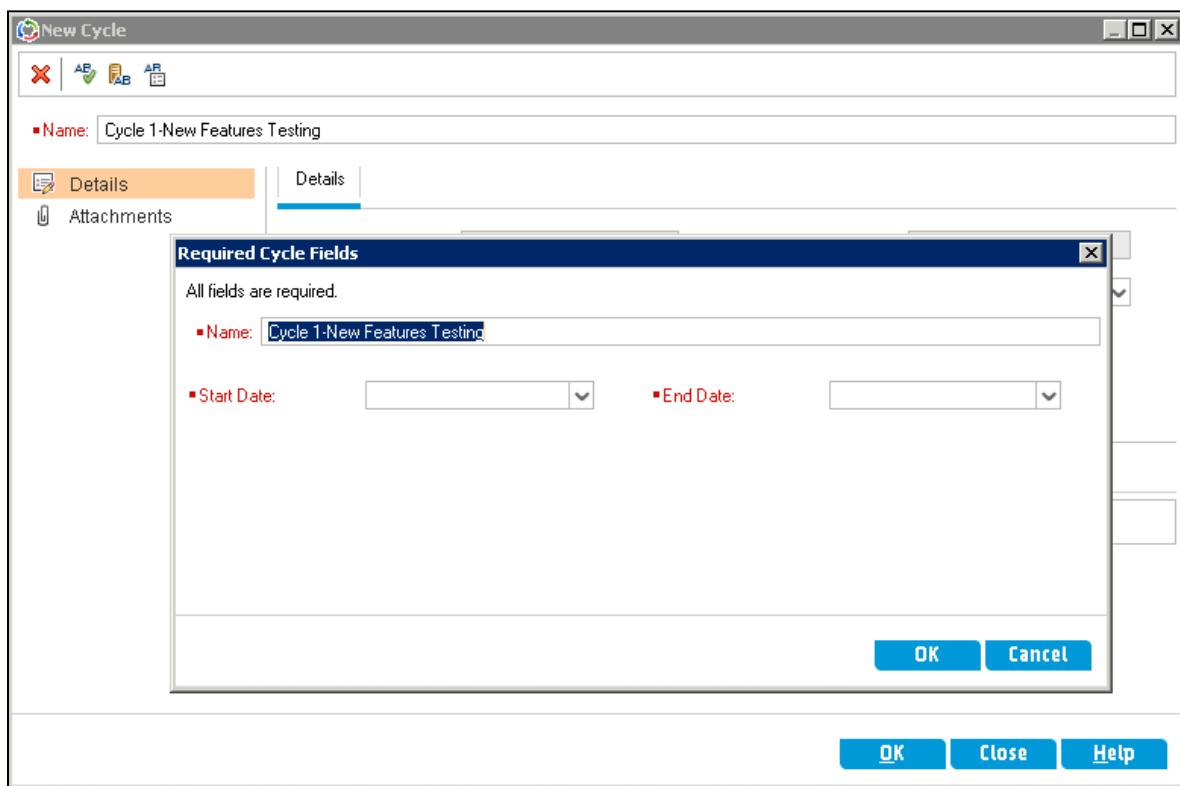
- c. Click the OK button to close the New Release dialog box. The new release is displayed in the Release tree under the Flight Reservation folder within the Releases folder, as shown in the following screenshot.



5. To ensure that cycles exist on this release perform the following steps to create a cycle to support this release:

- a. From the Release tree, select RELEASE 4.0.

- b. On the toolbar, click the New Cycle button. The New Cycle dialog box is displayed, as shown in the following screenshot.



- c. In the Name field, type Cycle 1-New Features Testing.
 - d. Click the OK button. Note the alert that indicates that Start and End dates are required.
 - e. In the Start Date field, select today's date.
 - f. In the End Date field, select a date that is 10 days from today. Include only weekdays when selecting the date.
 - g. Click the OK button to close the Required Cycle Fields dialog box.
6. Repeat Steps 1a through 1g to add three additional cycles to the Release tree with the information that follows:

Name: Cycle 2-Integrated System Testing.

- i. In the Start Date field, select a date that is one day after the end date of the first cycle. This implies that Cycle 2 starts one day after Cycle 1 ends. Include only weekdays while selecting the date.
- ii. In the End Date field, select a date that is 10 days from the start date. Include only weekdays while selecting the date.
- iii. In the Description field, type Test new features merged with existing application and perform necessary regression.

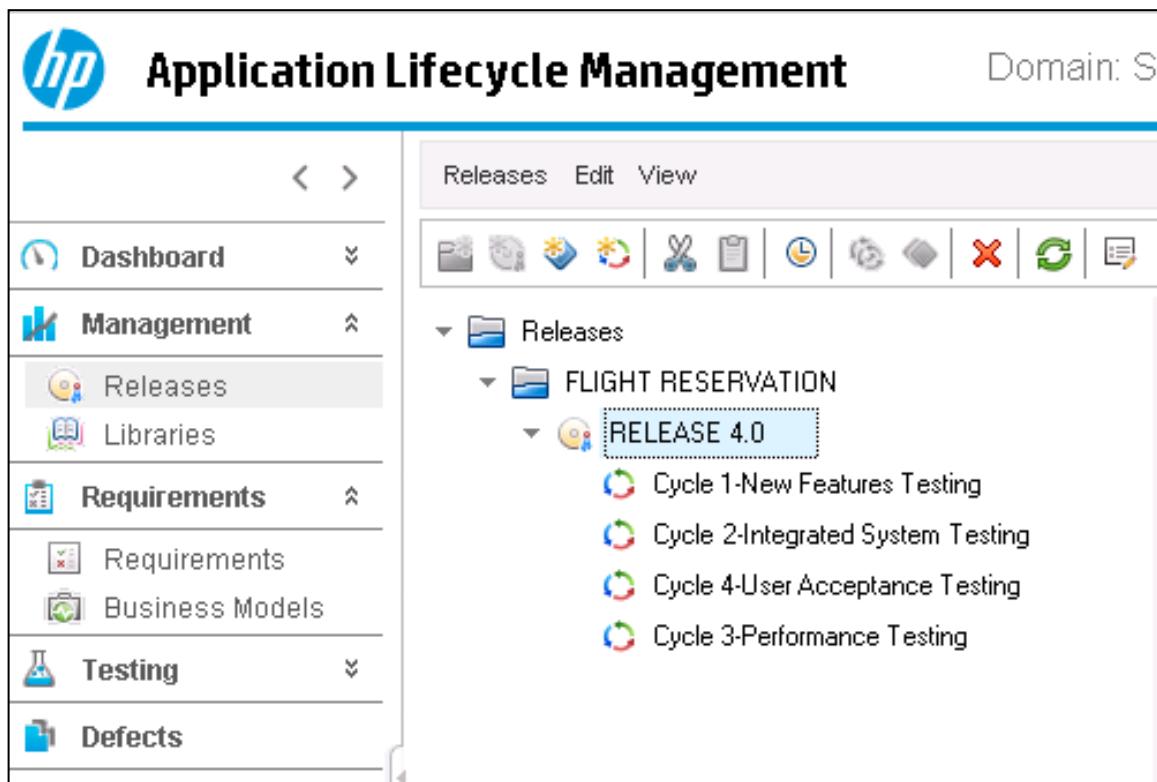
Name: Cycle 3-Performance Testing.

Note: The Integrated System Testing and Performance Testing cycles sometimes overlap, so select a begin date for Performance Testing that is half way through the Integrated System Testing cycle.

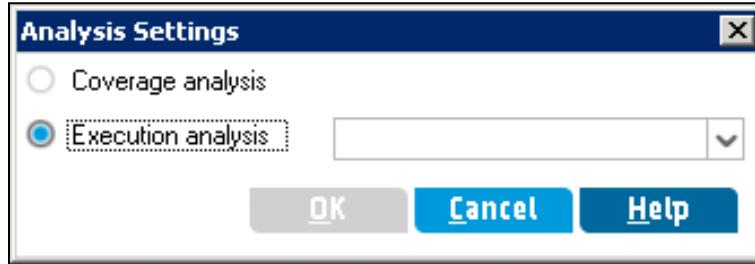
- i. In the Start Date field, select a date that is five days prior to the end date for Cycle 2. Include only weekdays when selecting the date.
- ii. In the End Date field, select a date that is five days after the end date for Cycle 2. Include only weekdays while selecting the date.

Insert Cycle 4-User Acceptance Testing with a value in the Start Date field that is a day after the end date for Cycle 3 and the value in the End Date field as the last day of the release.

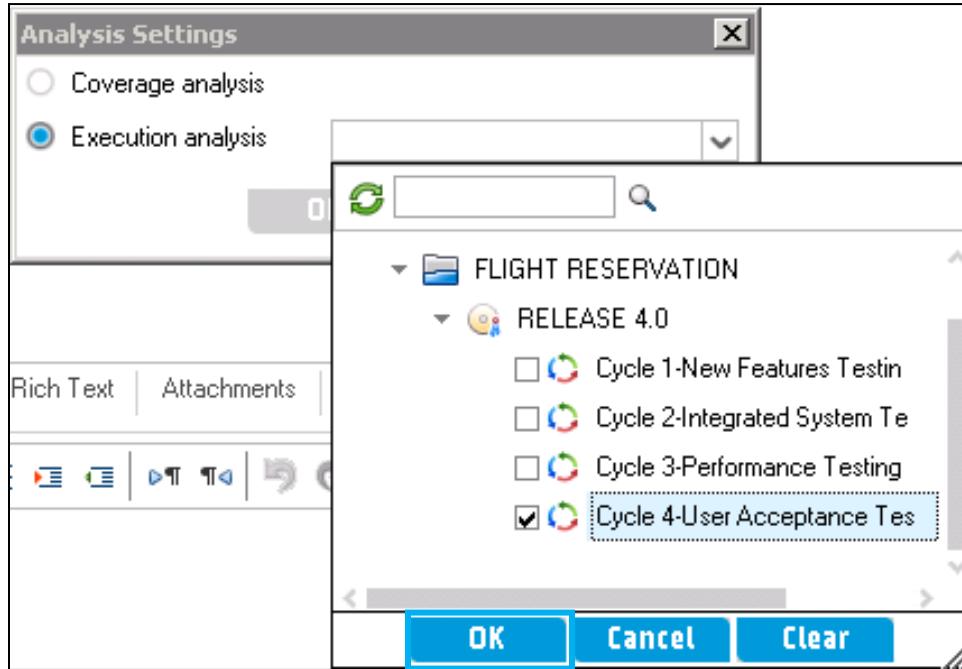
7. Your release tree should be similar to the release tree shown in the following screenshot.



8. Click the **Settings ...** button. The Analysis Settings dialog box is displayed, as shown in the following screenshot.



9. Choose the Execution Analysis option, as shown in the following screenshot.



10. Click the drop-down for Execution Analysis. The Releases tree is displayed.
11. Expand the Releases tree: Releases → Flight Reservation → Release 4.0.
12. Click the box beside CYCLE 4 – User Acceptance Testing and click the OK button.
13. Click the OK button in the Analysis Settings dialog box.
14. Expand the Requirements tree. Observe the Coverage Analysis column for the test execution status by the chosen cycle: Cycle 4.
15. Note the Coverage Analysis column for the New Features folder.
16. Click the **Coverage analysis** **Settings ...** button again. The Analysis Settings dialog box is displayed.
17. Choose the Execution Analysis option.
18. Click the drop-down for Execution Analysis. The Releases tree is displayed.
19. Expand the Releases tree and select Cycle 3 and Cycle 4.
20. Click the **OK** button.
21. Expand the Requirements tree. Observe the Coverage Analysis column for the test execution status by the chosen cycles: Cycle 3 and Cycle 4.

Lab 9 – Test Execution

Objectives

After completing this lab, you should be able to:

- Build the Test Set tree and execute test sets
- Create test sets
- Modify test sets
- Execute tests

Scenario

After creating the Test Plan tree, you create a test set to group the login, create order, and open order tests. You plan to use the following execution conditions for the tests:

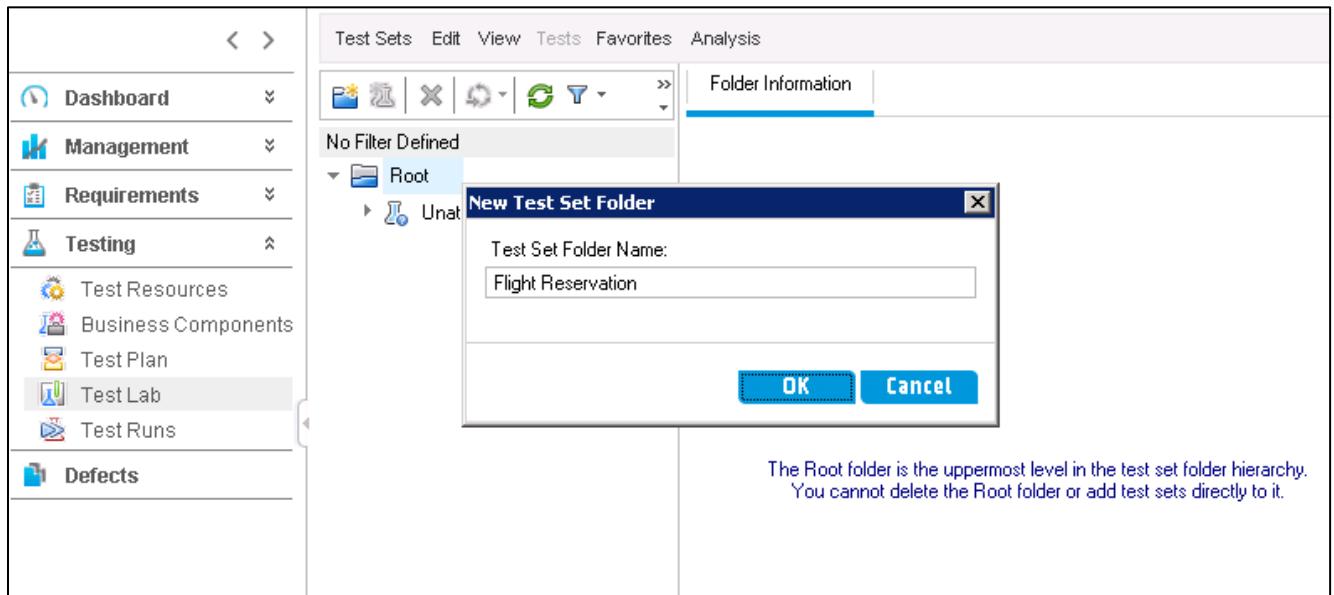
- The Login test should be the first test to execute.
- The Create Order test should execute only if the Login test passes.
- The Open Order test should execute after the Create Order test finishes, regardless of its results.

Note: In the 7FlightApplication project, you will use a prepared automated Unified Functional Testing (UFT, formerly QuickTest Professional QTP) test.

Exercise 1 – Building the Test Set Tree and Executing Test Sets

To build the Test Set tree and execute test set, perform the following step:

1. Create folders to hold the test sets:
 - a. Log in to ALM using **training** as the Username and **welcome** as the Password. After user authentication, select the STUDENT00_ESS domain and 7FlightApplication project.
 - b. In the left pane, click the **Test Lab** module.
 - c. From the Test Sets tree, select the Root folder and, on the ALM toolbar, click the **New Folder** button. The New Test Set Folder dialog box is displayed, as shown in the following screenshot.



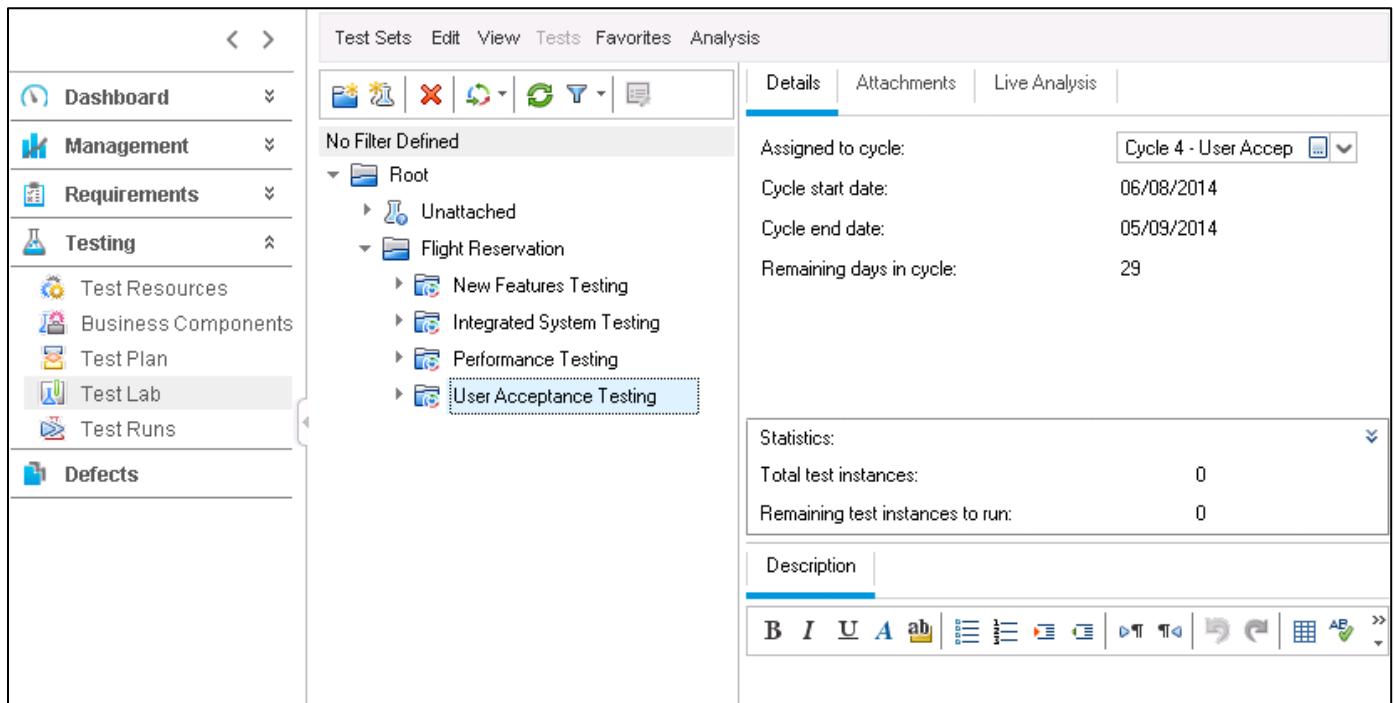
- d. In the **Folder Name** field, type **Flight Reservation**.
- e. Click the **OK** button to close the New Test Set Folder dialog box. Within the **Flight Reservation** folder, you create subfolders to hold test sets that are executed during each of the testing cycles.

- f. Create a new test set folder and name the first test set folder **New Features Testing**. Right-click the folder and select Assign to Cycle from the context menu. The Select Cycles dialog box is displayed with a Release tree in it. From

the list, select **-Cycle 1 - New Features Testing** and then click the  button.

- g. Create three additional folders named **Integrated System Testing**, **Performance Testing**, and **User Acceptance Testing** and assign them to the appropriate release cycle.

Your results should be similar to the screenshot below.

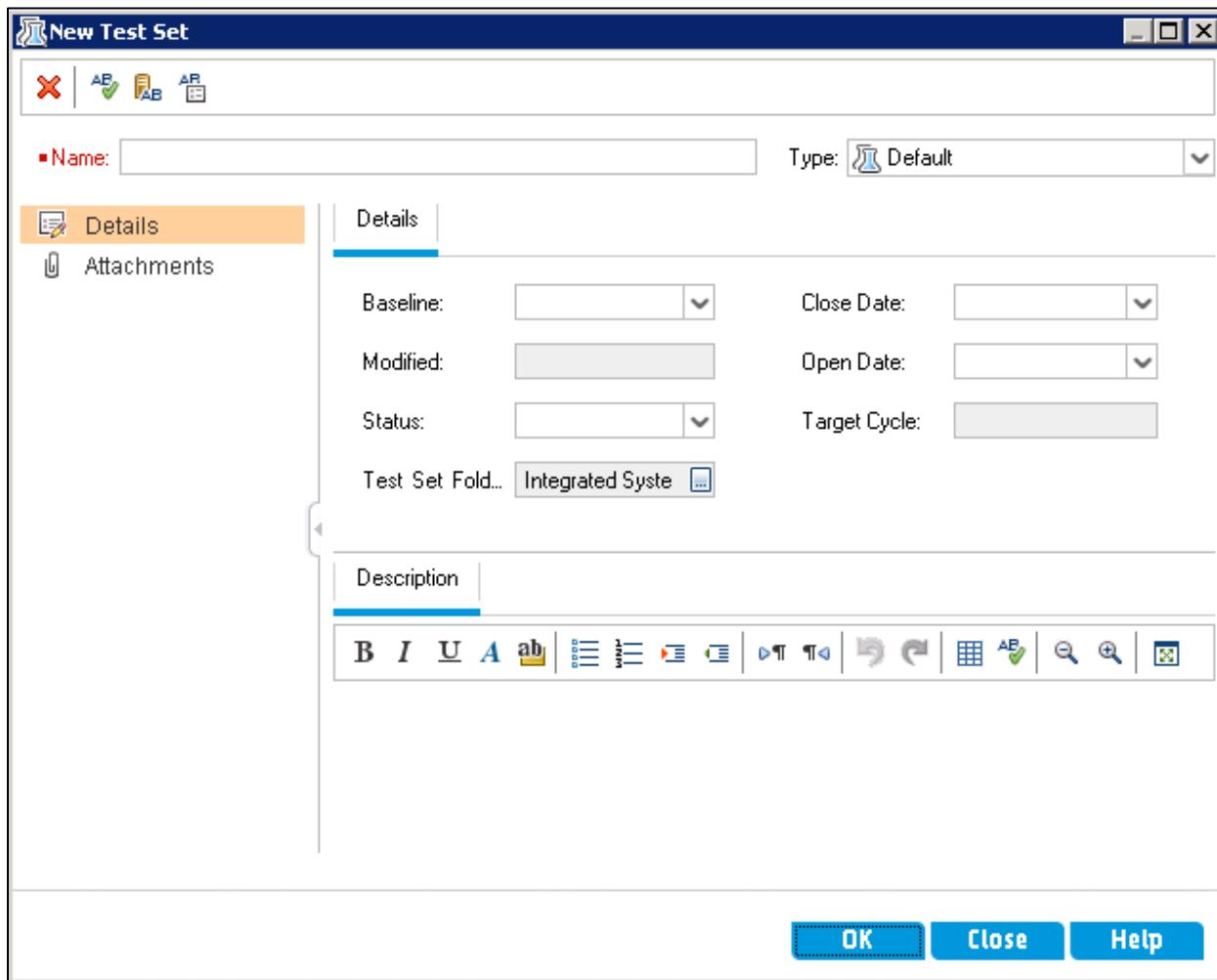


The screenshot shows the HP ALM Test Sets interface. On the left, there's a navigation sidebar with links like Dashboard, Management, Requirements, Testing (which is selected), and Defects. The main area has tabs for Test Sets, Edit, View, Tests, Favorites, and Analysis. Below the tabs, there are icons for creating new items. A message says "No Filter Defined". The main content area shows a tree view of test sets under "Root". Under "Flight Reservation", four test sets are listed: "New Features Testing", "Integrated System Testing", "Performance Testing", and "User Acceptance Testing". To the right of the tree view, there are details about the cycle: "Assigned to cycle: Cycle 4 - User Accep", "Cycle start date: 06/08/2014", "Cycle end date: 05/09/2014", and "Remaining days in cycle: 29". Below these details is a "Statistics" section with "Total test instances: 0" and "Remaining test instances to run: 0". At the bottom, there are buttons for bold, italic, underline, and other text formatting.

Exercise 2 – Creating Test Sets

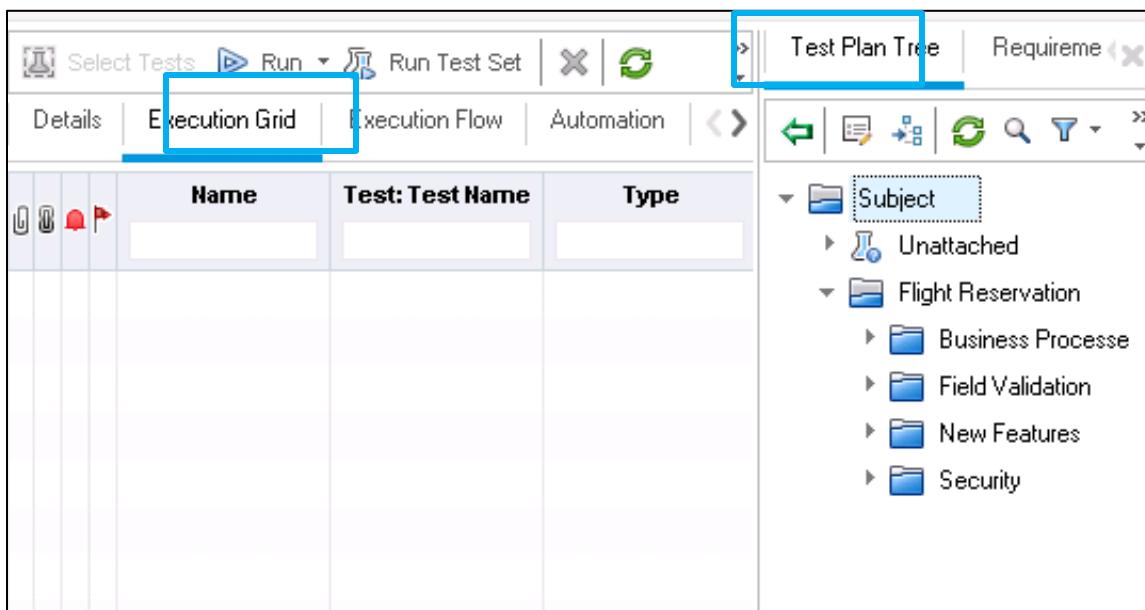
To create test sets, perform the following steps:

1. Create test sets to organize tests related to security and orders:
 - a. Select the Integrated System Test folder and click the New Test Set  button. The New Test Set dialog box is displayed, as shown in the following screenshot.



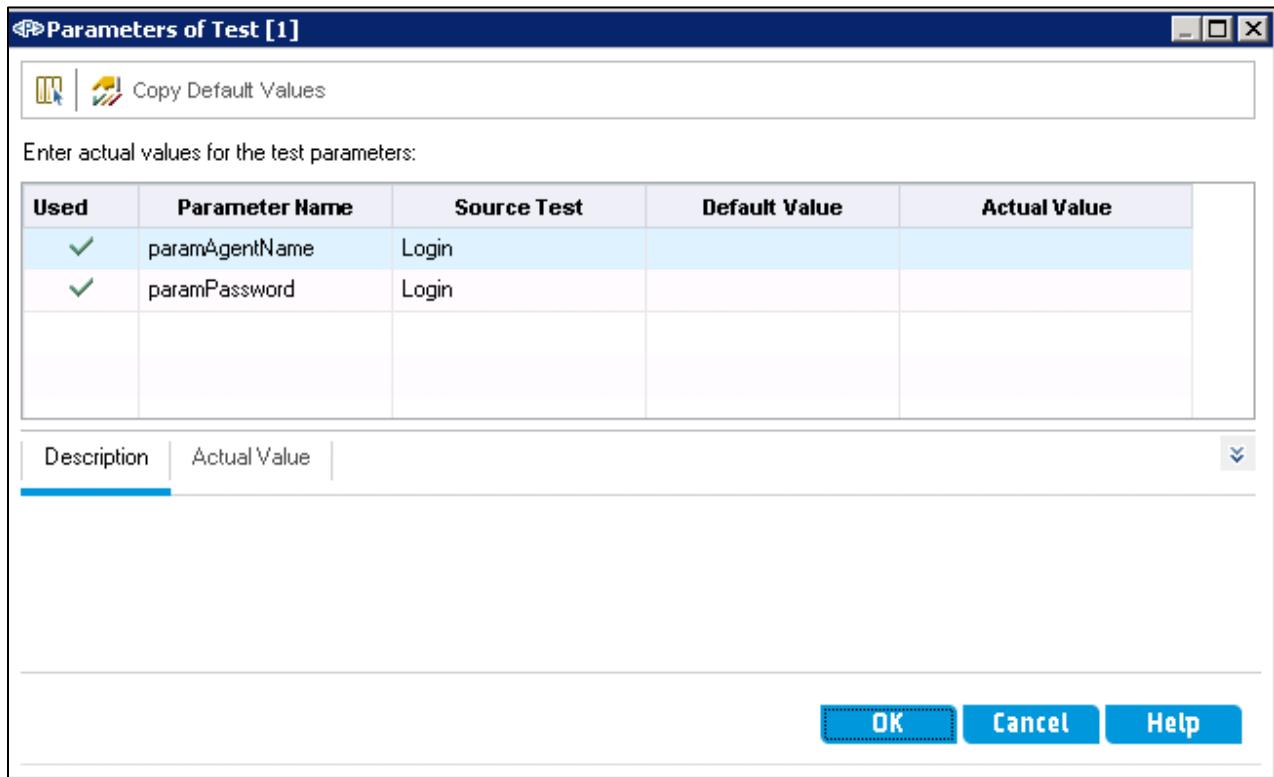
- b. In the Name field, type **orders** and click the  button.
 - c. Repeat Steps 1a and 1b to create a test set named **Security**.

- d. With the Security test set selected, click the **Execution Grid** tab and then click the **Select Tests** button in the middle pane to open the Test Plan tree in a new pane on the right, as shown in the following screenshot.

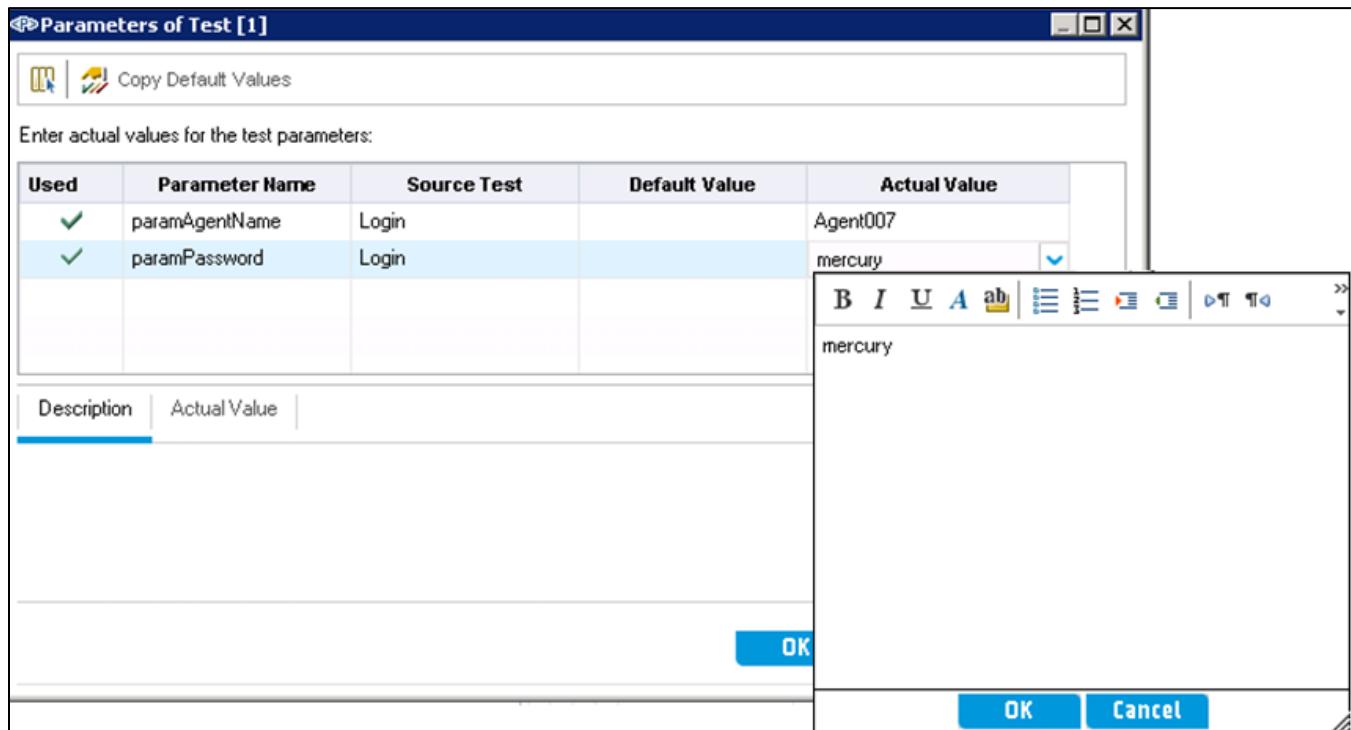


- e. In the right pane, right-click the Subject or Flight Reservation folder and choose Expand All.
f. Select Yes in the confirm message box.

- g. Select the Login test and click the Add Tests To Test Set  button. The Parameters of Test [1] dialog box is displayed, as shown in the following screenshot.



Practice adding Actual parameter values. Unfold the Value editor by placing the cursor in the Actual value column and selecting the down arrow at the end of the column. Use your name for paramAgentName (must be four characters) and use **mercury** for paramPassword, as shown in the following screenshot.



- h. Click the **OK** button to close the dialog box.
- i. The Login test is displayed in the Execution Grid page, as shown in the following screenshot.

| Name | Test: Test Name | Type | Status | Iterations |
|----------|-----------------|--------|--------|------------|
| [1]Login | Login | MANUAL | No Run | |

- j. In the Test Set tree in the left pane, select the Orders test set. Repeat the steps above to add the Login and Create Order tests to the Orders test set.
- Note:** Expand the test tree folders Flight Reservation/Business Processes to see the Create Order and Open Order test cases.
- k. Add the Open Order test to the Orders test set. ALM adds the two available test configurations to the execution grid, as shown in the following screenshot.

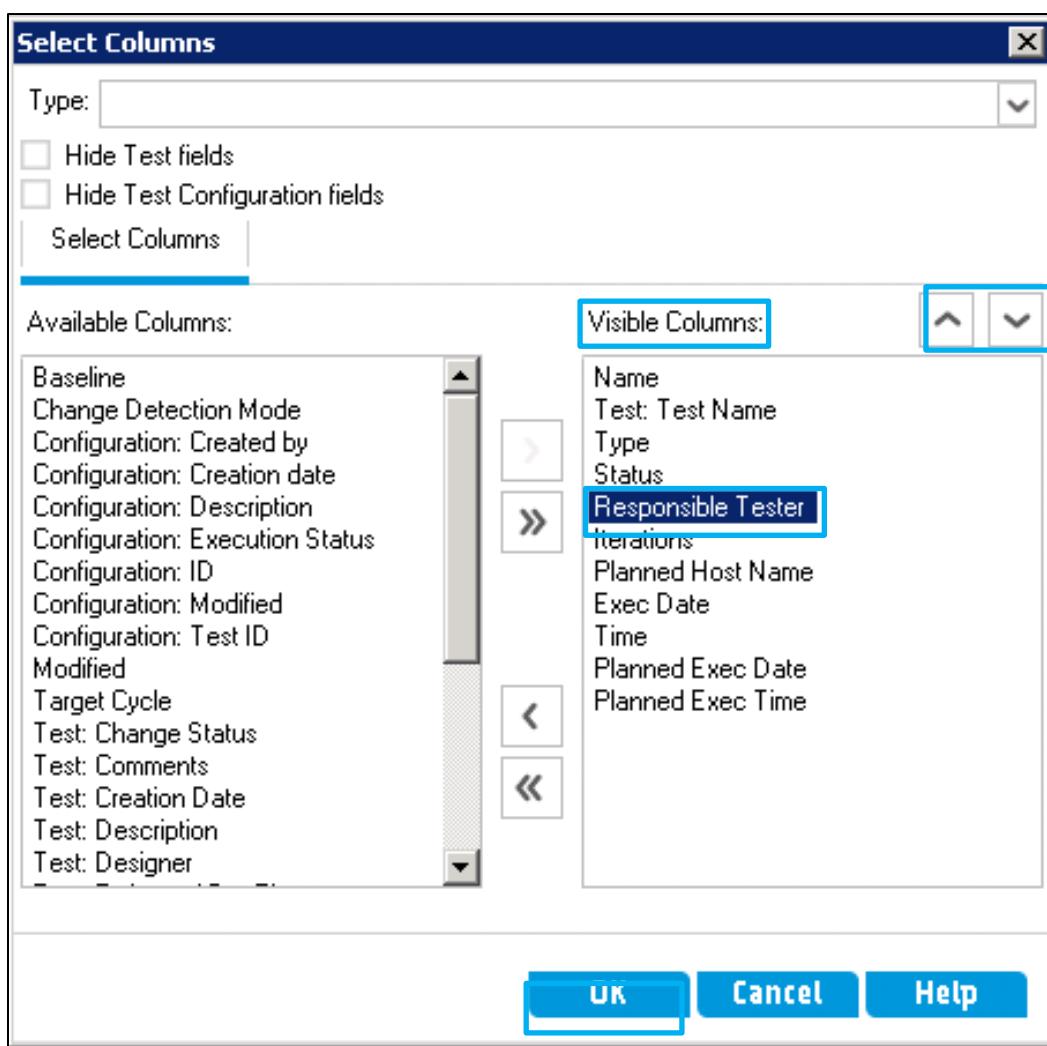
| | Name | Test: Test Name | Type |
|--|-----------------|-----------------|--------|
| | | | |
| | [1]Login | >Login | MANUAL |
| | [1]Create Order | Create Order | MANUAL |
| | [1]Open Order 1 | Open Order | MANUAL |
| | [1]Open Order 3 | Open Order | MANUAL |

Exercise 3 – Modifying Test Sets

To modify the test sets, perform the following steps:

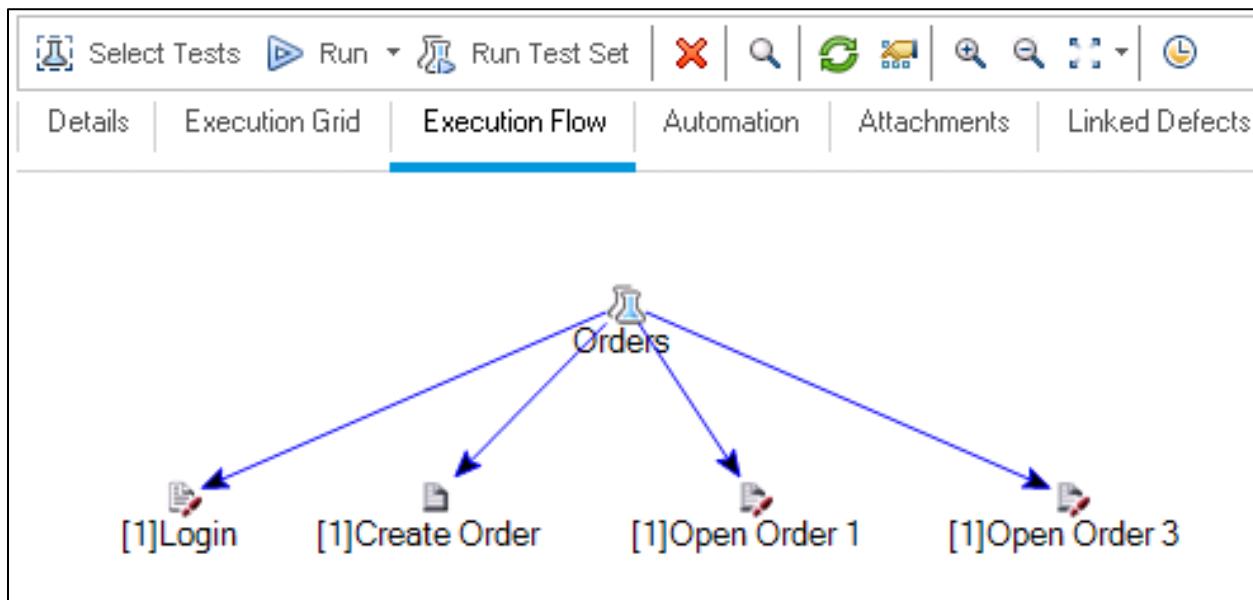
1. To assign tests to a user, first move the Responsible Tester column to the left and then modify the field value for each test:

- a. In the Execution Grid, click the Select Columns  button.
- b. In the Visible Columns box, select the Responsible Tester field.
- c. To the right of the Visible Columns heading, click the up arrow or down arrow  to move Responsible Tester to just below Status and then click the  button, as shown in the following screenshot.



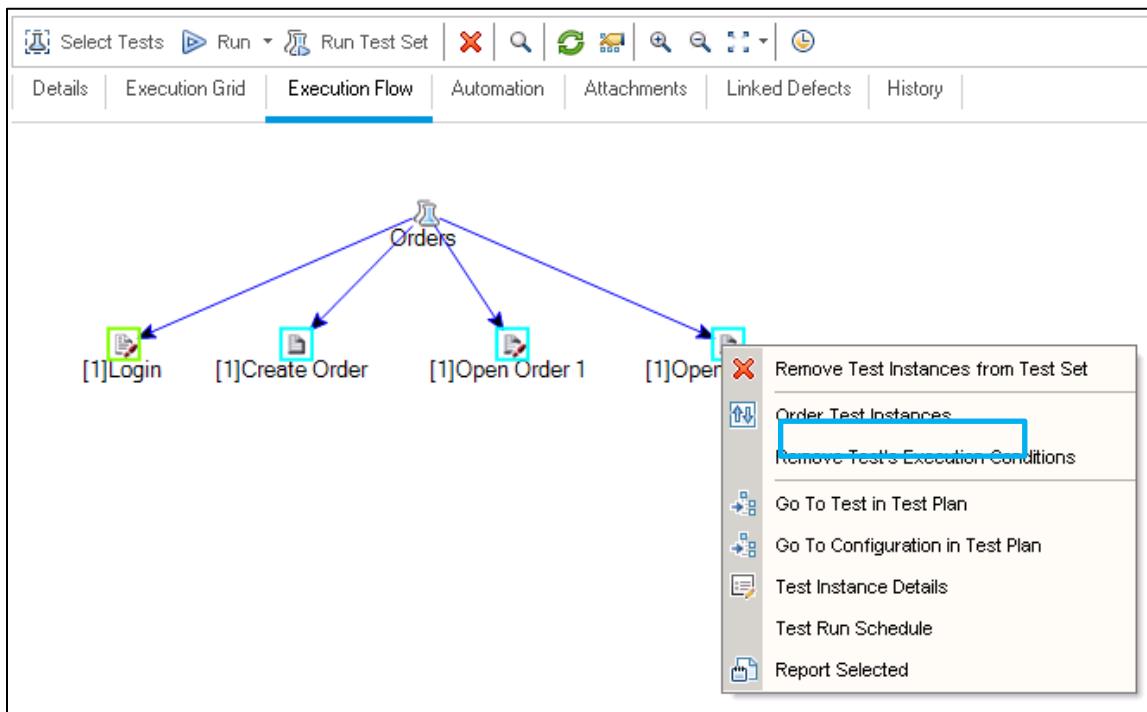
- d. Click the Refresh  button in the tool bar.

2. To change the order of test execution within the test set, complete the following steps:
- At the top of the middle pane, click the Execution Flow tab. A graphic representation of the sequence/order in which tests are executed is displayed.
 - Compare your results to the screenshot below and note the direction of the arrows representing the flow from one test to another, as shown in the following screenshot.

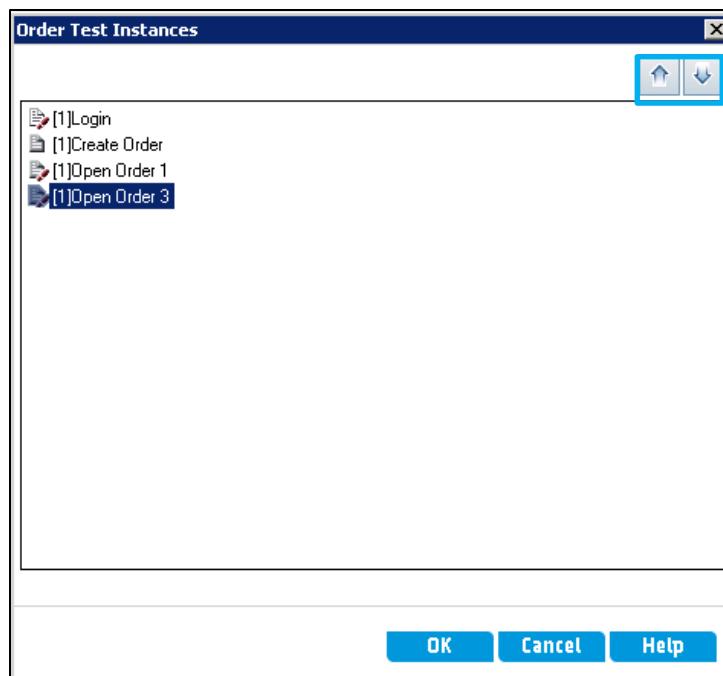


- Using your mouse, drag a selection box around all the tests on the Execution Flow page. Do not include the Orders top test set icon in your selection. When you release your left mouse button, a box should be displayed around each test indicating that it is selected.

- d. Right-click any one of the boxes around the tests on the Execution Flow page and select Order Test Instances, as shown in the following screenshot.



- e. The Order Test Instances dialog box is displayed, as shown in the following screenshot.



- f. Select the Login test and then use the arrows in the upper-right corner of the dialog box to make it first in the execution flow.
- g. Repeat the process in Step 2f until the tests are ordered as follows:
Login, Create Order, Open Order 1, and Open Order 3.

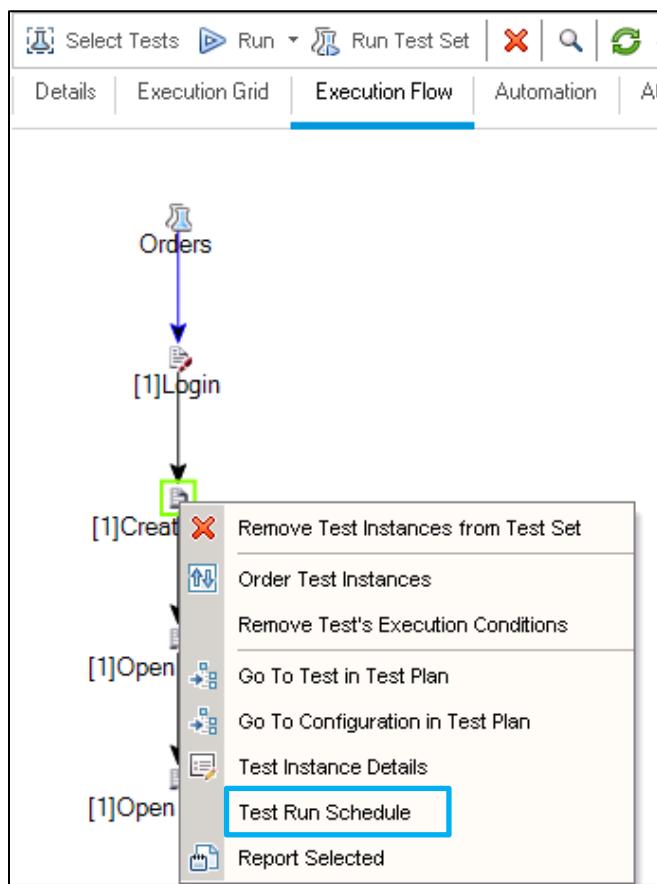
h. Click the  button to close the Order Test Instances dialog box.

i. If necessary, click the Fit In Window  button to reorder the tests on the Execution Flow tab.

What visual changes do you see?

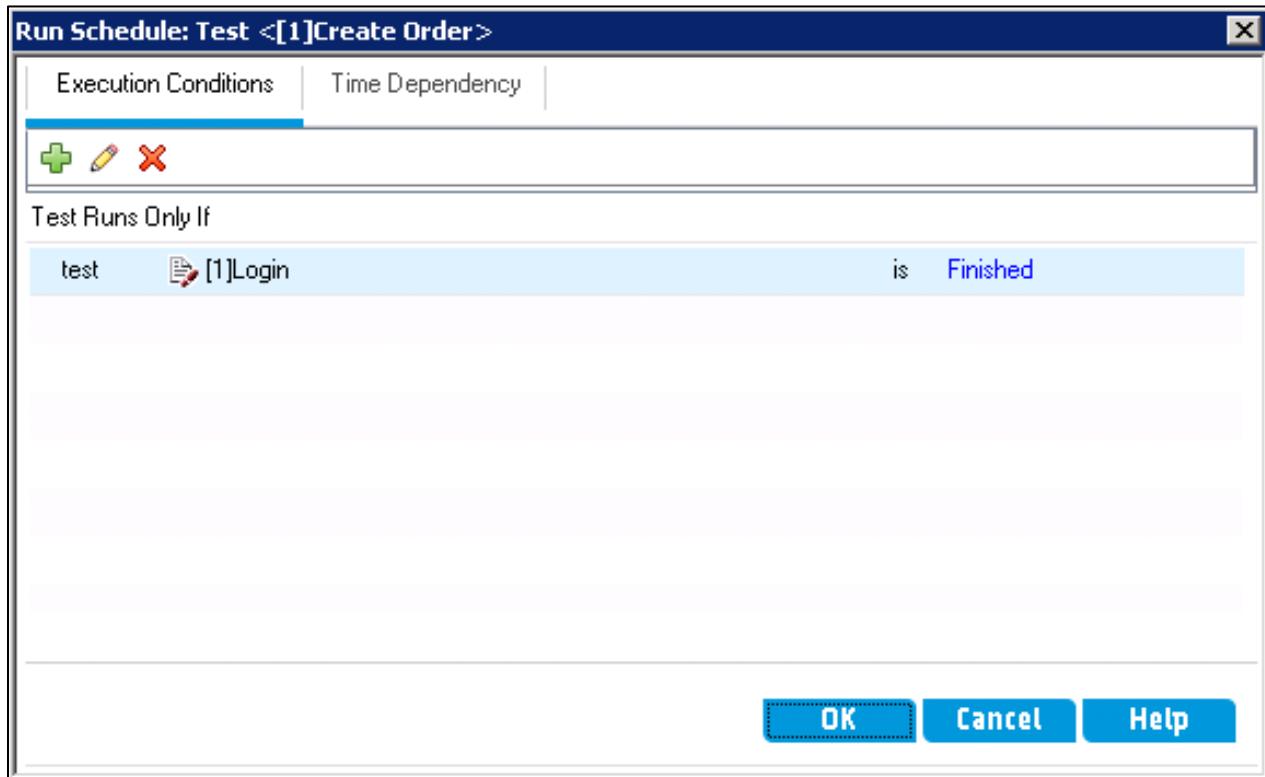
3. To add dependencies to the execution flow, complete the following steps:

- a. On the Execution Flow page, select the Create Order test. Right-click and select Test Run Schedule, as shown in the following screenshot.

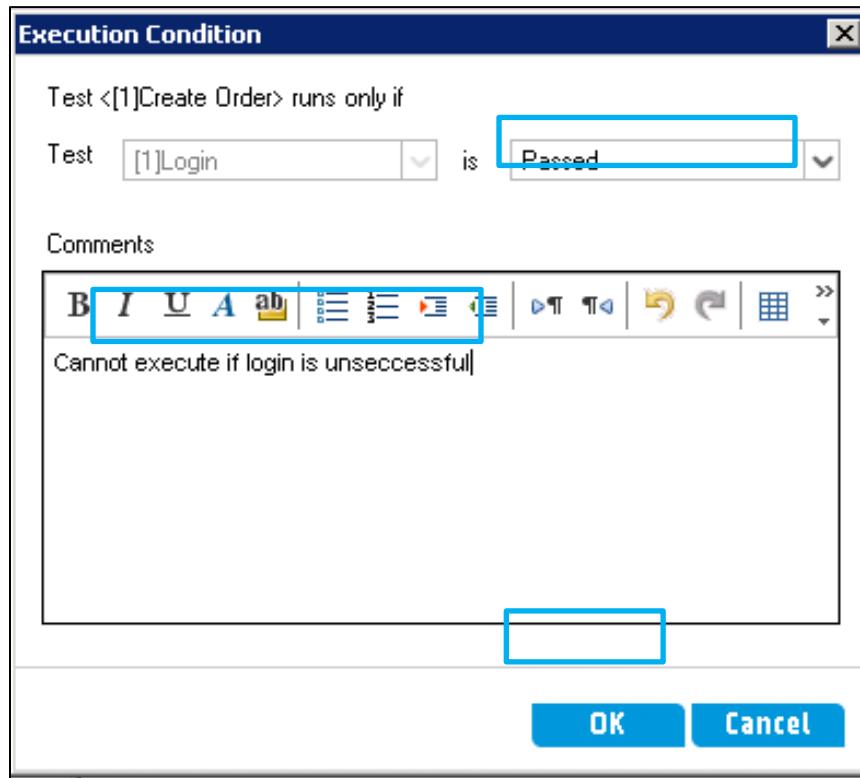


The Run Schedule dialog box is displayed.

- b. On the Execution Conditions tab, click the Edit Execution Condition  button to edit the condition. The Execution Condition dialog box is displayed, as shown in the following screenshot.

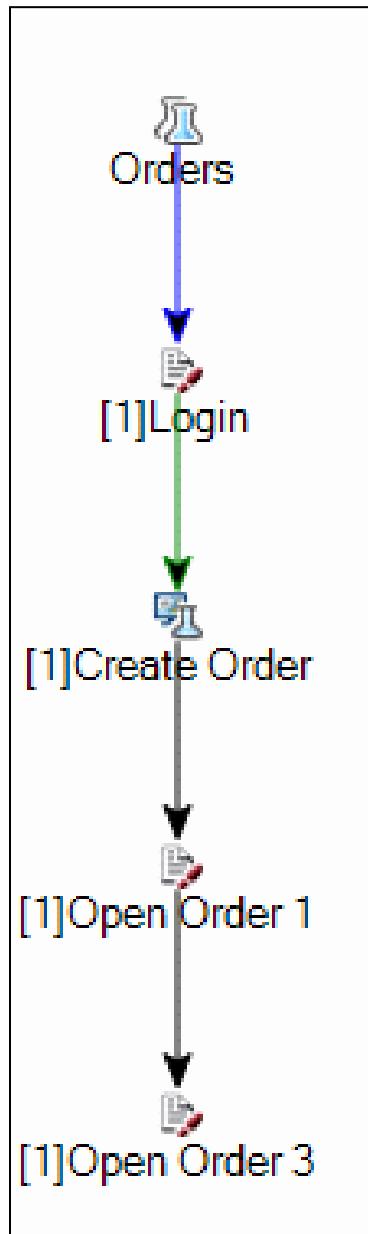


- c. To execute the Create Order test only upon successful completion of the Login test, select Passed in the condition field to the right, as shown in the following screenshot.



- d. Type **Cannot execute if login is unsuccessful** in the Comments field and click the **OK** button to close the Execution Condition dialog box.
- e. Repeat Steps 3a through 3d to cause the Open Order 1 test to wait for the Create Order test to finish. Do not use a comment for this execution condition.
- f. Repeat Steps 3a through 3d to cause the Open Order 3 test to wait for Open Order 1 to finish. Do not use a comment for this execution condition.

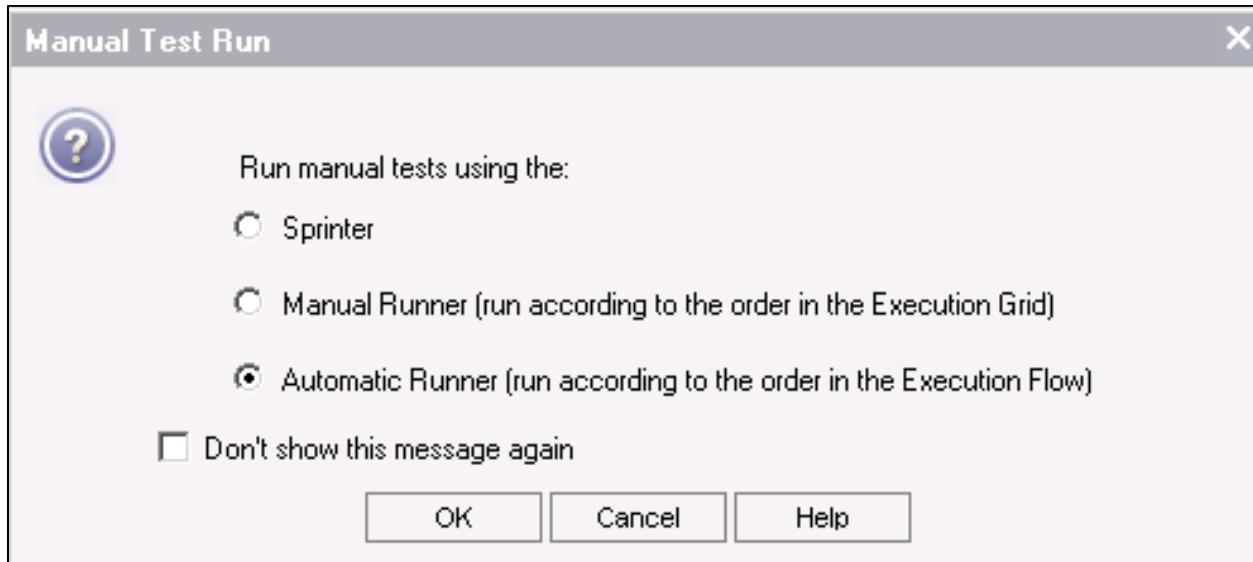
4. Compare your Execution Flow tab with the screenshot below.



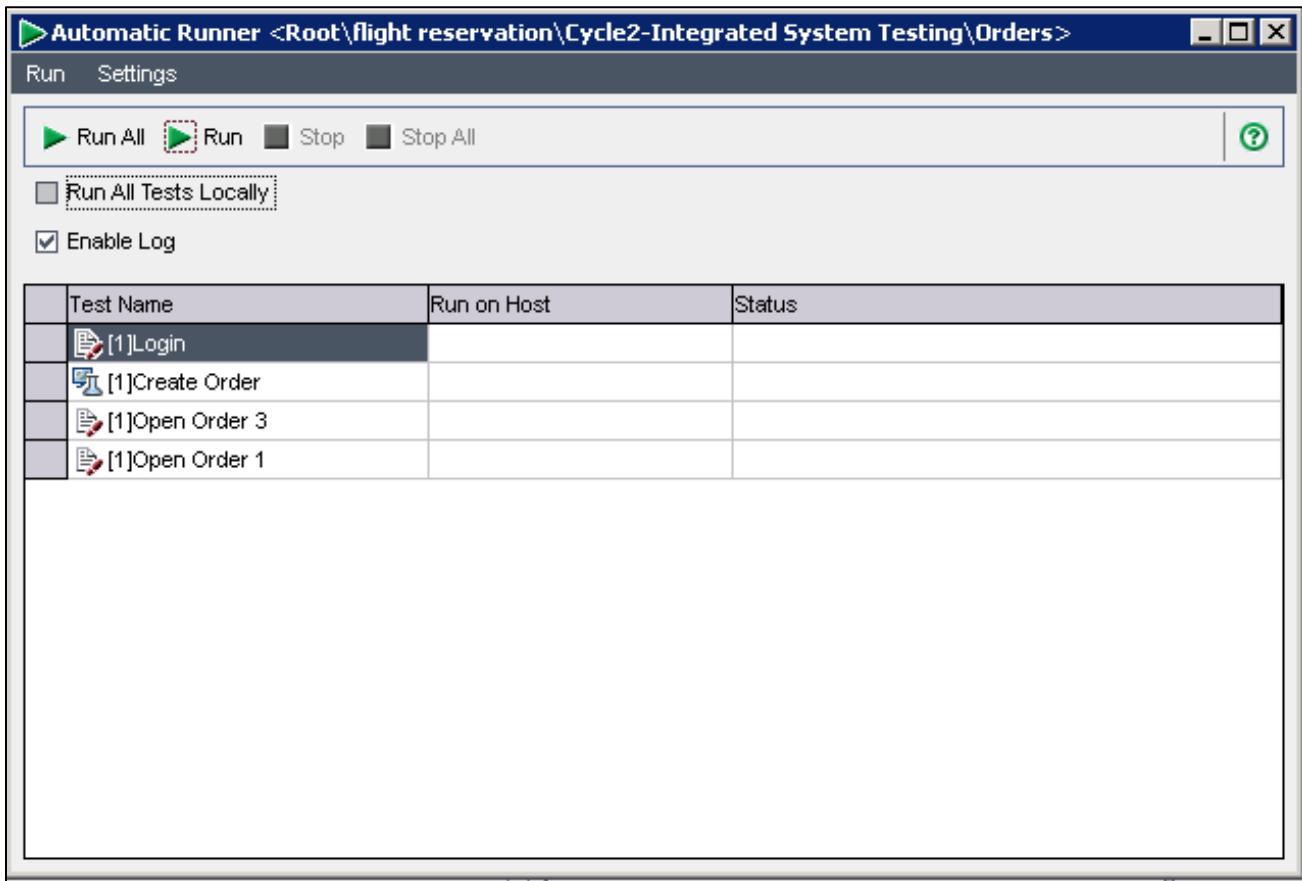
Exercise 4 – Executing Tests

In this task, you execute the test set against the AUT.

1. Open the Flight application, but do not log in yet.
2. To execute the tests in the Orders test set using Automatic Runner, complete the following steps:
 - a. In the Test Lab module, from the Test Sets tree, ensure that the Orders test set under the Flight Reservation → Integrated System Testing folder is selected.
 - b. In the right pane, click the Execution Grid tab.
 - c. On the toolbar, click the  Run Test Set button.
 - d. Select Manual Runner from the Manual Test Run dialog box, as shown in the following screenshot.

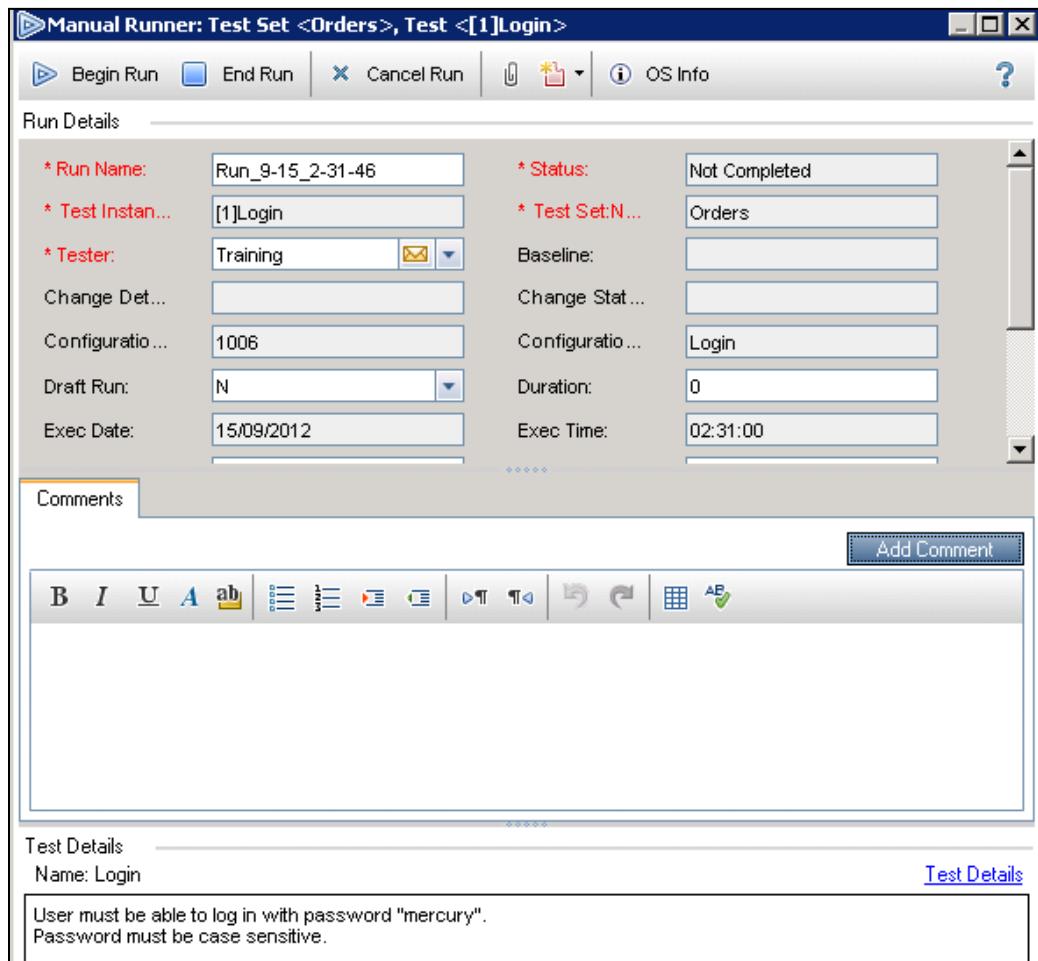


- e. The Automatic Runner window is displayed, as shown in the following screenshot.



- f. In the Automatic Runner dialog box, select the Run All Tests Locally checkbox.

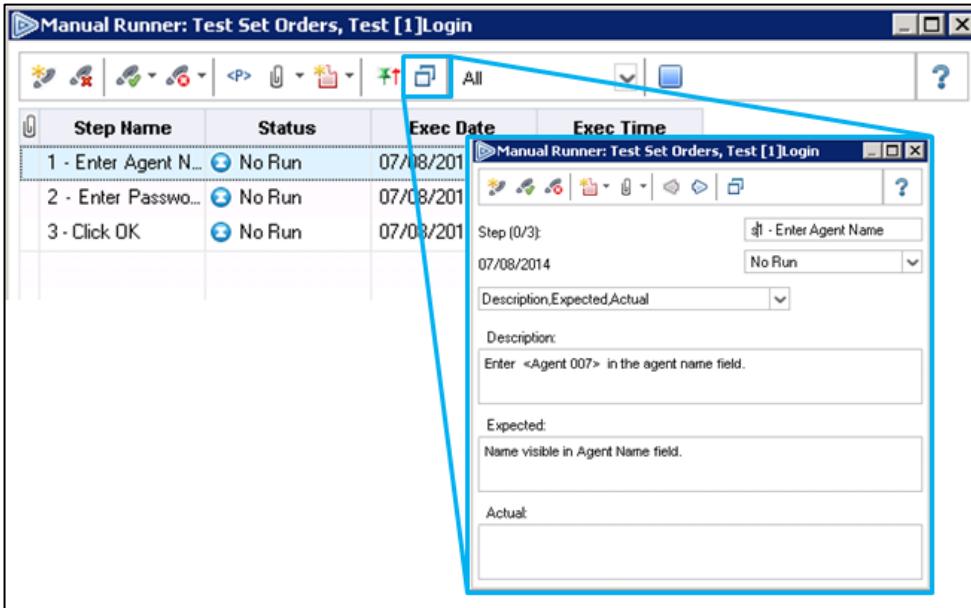
- g. Click the Run All button. Because the first test is a manual test, the Manual Runner: Test Set dialog box is displayed.



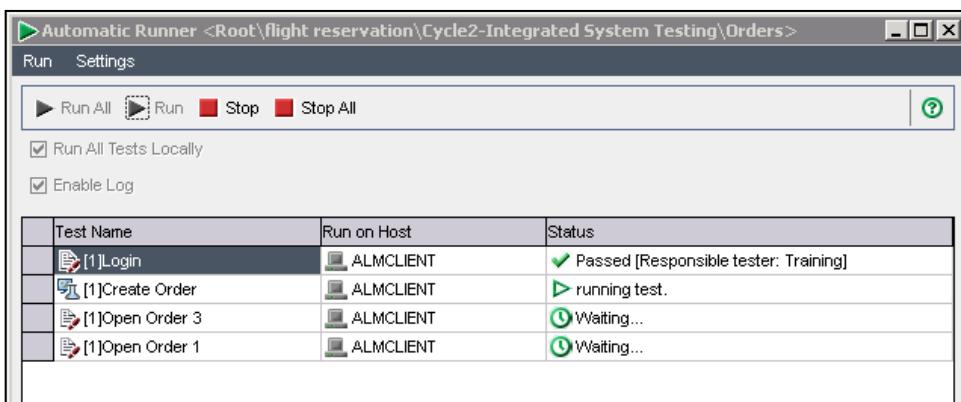
- h. Click the **Begin Run** button.

Note: If you have not assigned values to the parameters during assignment of test instance into test set, the Parameters of Test Run window is displayed, showing the parameters. Click Okay. The Manual Runner screen is displayed.

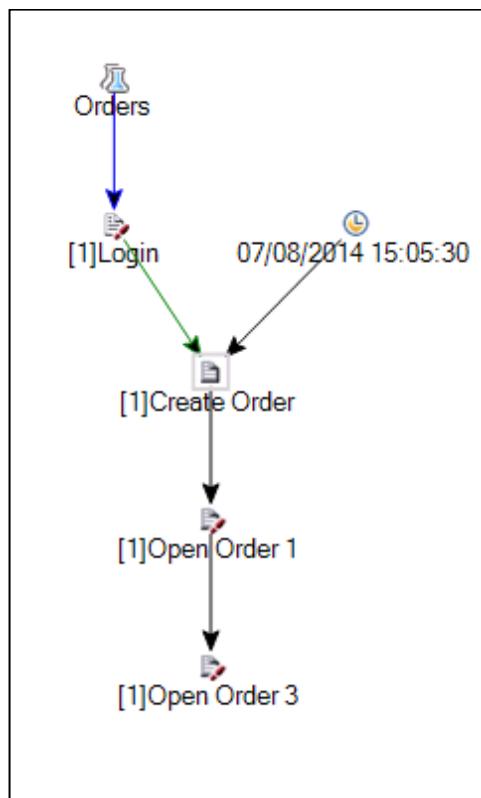
- i. On the toolbar, click the Compact View  button, as shown in the following screenshot.



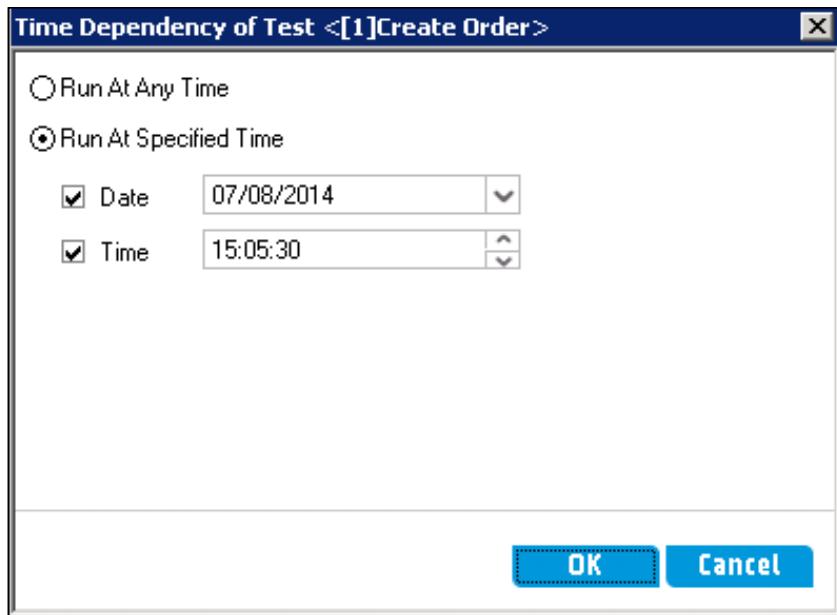
3. Follow Test Case Step instructions in the Manual Runner dialog box to execute the Login test. For each step:
- Execute the step directive provided in the Step description in the Manual Runner against the Flight Reservation application.
 - Observe the comments in the Expected Result field.
 - In the Actual field, describe the result of the step execution.
 - On the toolbar, click the Pass  button to indicate that the actual results matched the expected results.
 - Repeat Steps 3a through 3d until all steps of the Login test are complete.
 - On the toolbar, click the Back To Steps Grid  button (the renamed Compact View button).
4. Click the Stop  button to end the manual Login test. Leave the Main window of Flight application visible for next test to operate.



- Because the next step is a UFT test, the test begins executing automatically.
- a. Wait for the Create Order test to complete. Manual Runner reappears.
 - b. Follow the instructions in Manual Runner to complete the execution of the Open Order 1 test. Use order number 1 for this test parameter value.
 - c. When the Open Order 1 test completes, Manual Runner is displayed again.
 - d. Follow the instructions in Manual Runner to complete the execution of the Open Order 3 test. Use order number 3 for this test parameter value.
 - e. Close the Automatic Runner dialog box.
5. To add a time dependency to the test and execute a scheduled run, select the Execution Flow tab and then click the Add Time Dependency To Flow  button on the toolbar. An icon representing the schedule is displayed on the Execution Flow page.
- Note:** The Add Time Dependency To Flow button is the last button on the toolbar and might not be visible until you expand the toolbar by clicking the double-arrow.
6. Place your mouse on the Schedule icon and then press and hold the left mouse button. Drag your mouse from the schedule icon to the Create Order test icon and release the mouse button. A blue arrow appears between the two icons indicating that the Create Order test now has a time dependency, as shown in the following screenshot.



7. Right-click the Schedule icon and select Time Dependency. The Time Dependency dialog box is displayed with the current date and time as default values, as shown in the following screenshot.



- a. Click the Run At Specified Time option. The format for the Time field is HH:MM:SS. Click the minute value, then, using the up-arrow to the right of the field, increment the value by five minutes.
- b. Click the button to save the schedule.

How else can you determine that the Create Order test has a time dependency?

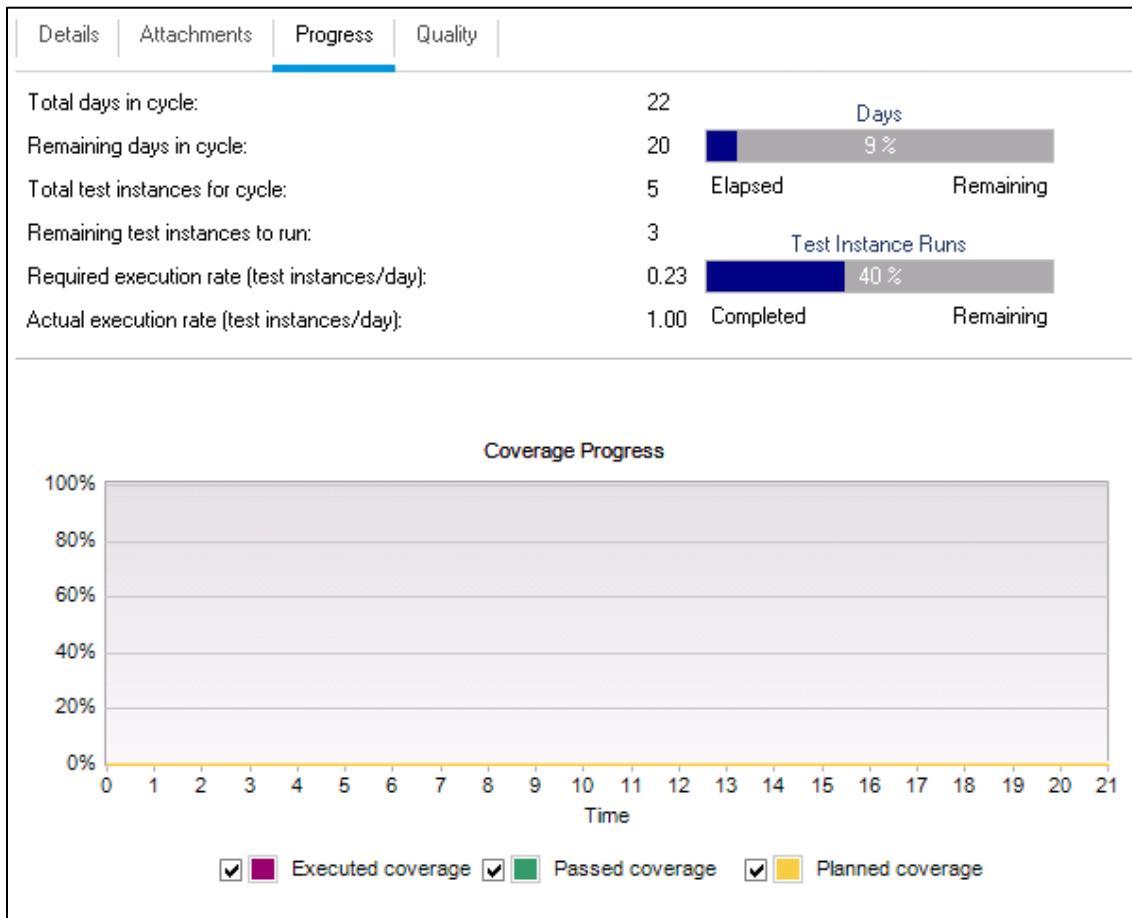
-
- c. Select the Create Order test icon and then click the button on the toolbar to run only this test in the test set. The Automatic Runner dialog box is displayed.
 - d. To start the test, click the checkbox to run the test locally and then click the button on the Automatic Runner toolbar.
 - e. Observe the Waiting message in the Status column and note the schedule icon indicating that this is a scheduled run.
 - f. When the test execution begins, the Waiting message changes to Connecting as ALM connects to Unified Functional Testing to prepare for the run. Click Stop or Stop All to end the execution.
 - g. Close the Unified Functional Testing window and the Automatic Runner dialog box.

8. Observe the results following the run:

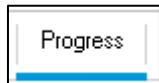
- In the left pane, choose the Management module and the Releases tab.
- Expand Release 4.0 and select Cycle 2-Integrated System Testing.



- In the right pane, click the **Progress** tab and observe the results, as shown in the following screenshot.



- Right-click the release, select Reschedule, and change the Start Date to today's date and the End Date to tomorrow's date.
- Right-click Cycle 2, select Reschedule, and change the Start Date and End Date to today's date.



- Click the **Progress** tab, and then click the Refresh All button on the toolbar. Observe the measurements.
- Log off from ALM.

This page is intentionally left blank.

Lab 10 – Lab Management

Objectives

After completing this lab, you should be able to:

- Review existing hosts
- Create and run tests

Scenario

The lab management module lets you manage remote testing resources, automate deployment schema, and support continuous integration.

In this lab, you review remote hosts and create and run tests.

Exercise 1 – Reviewing Existing Hosts

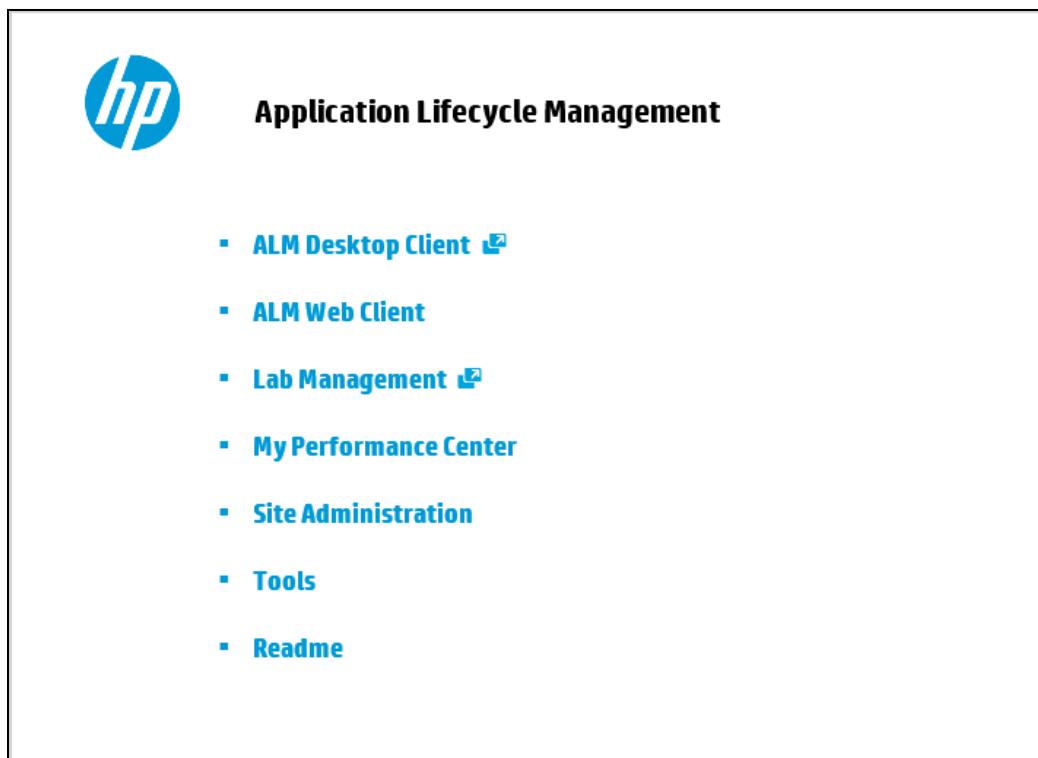
In this exercise, you perform the following tasks:

- Task 1 – Set up the ALM Lab Service
- Task 2 – Verify ALM Service and the Lab Service Agent
- Task 3 – Start ALM
- Task 4 – Add Lab Hosts

Task 1 – Setting up the ALM Lab Service (if not installed)

To set up the lab service, complete the following steps:

1. Start Application Lifecycle Management and click the Tools link, as shown in the following screenshot.



2. In the Application Lifecycle Management - Tools window, click the HP ALM Lab Service link listed, as shown in the following screenshot.



Application Lifecycle Management - Tools

HP ALM Connectivity
Enables you to integrate HP ALM with other tools.

HP ALM Lab Service
Enables you to remotely trigger functional tests and maintenance tasks on a testing host using HP ALM. Install and configure the HP ALM Lab Service agent on functional testing hosts (such as VAPI and United Functional Testing) that need to connect to Lab Management.

HP ALM Client Registration
Deploys and registers ALM components on a client machine.

Shared Deployment for Virtual Environments
Deploys ALM components on a shared location of a client machine.

Webgate Customization
Customizes the WebGate client component.

More HP ALM Add-ins

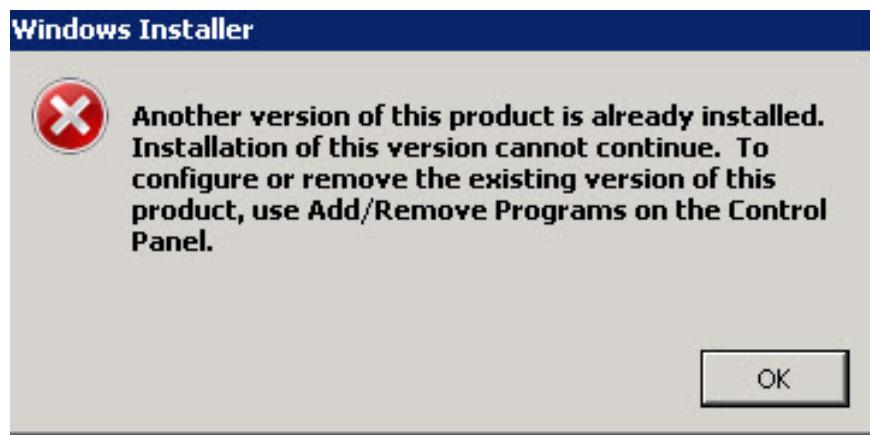
3. Click the Download HP ALM Lab Service for 64-bit operating systems link, as shown in the following screenshot.

The screenshot shows the 'Application Lifecycle Management - Tools' page. In the 'HP ALM Lab Service' section, it says: 'HP ALM Lab Service acts as an agent on a testing host, enabling ALM to remotely execute functional tests and maintenance tasks on the host.' Below this are 'Installation Instructions' and a numbered list of steps. At the bottom, there are two download links: 'Download HP ALM Lab Service for 64-bit operating systems' and 'Download HP ALM Lab Service for 32-bit operating systems'.

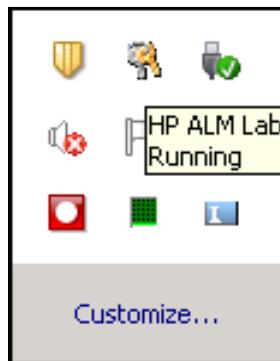
4. Click Run in the File Download – Security Warning dialog box, as shown in the following screenshot.



If you receive the following error, move to Task 2. If there is not an error, continue to Step 5.



5. On the Welcome to HP ALM Lab Service Installation wizard, click the Next button to continue through the default steps of the wizard.
6. When completed, click the Finish button to complete the installation wizard.
7. Verify that HP ALM Lab Service is available in the system tray, as shown in the following screenshot.

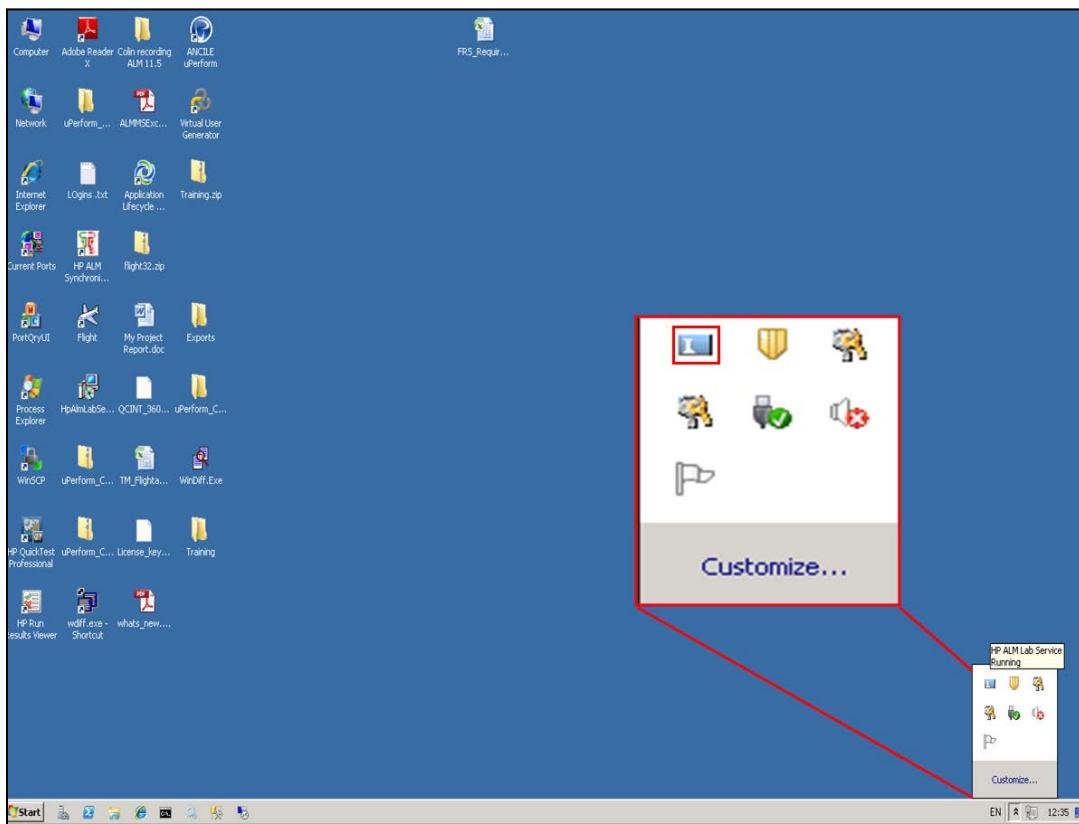


Task 2 – Verifying the HP ALM Lab Service

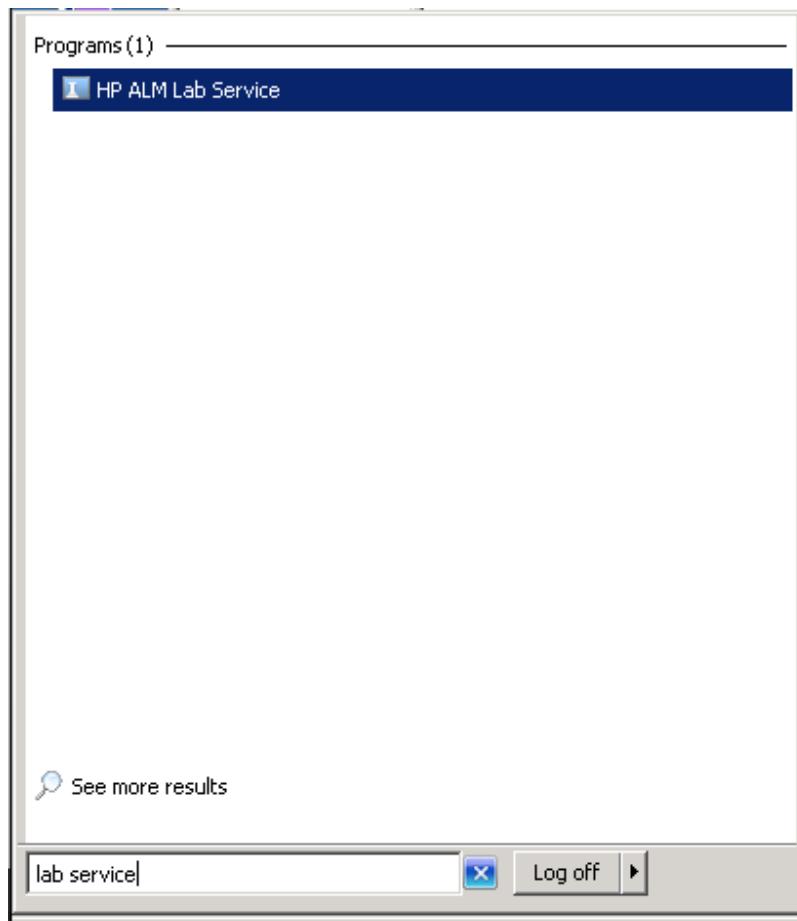
HP ALM Lab Service must be running to use the features of the Lab Management module.

Complete the following steps:

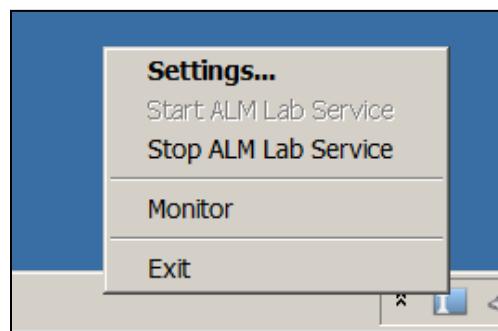
1. Verify that the ALM Lab Service icon is present in the Windows task tray, as shown in the following screenshot.



Note: If the icon is not present, on Windows, go to Start and on Search programs and files, type Lab Service and select the option:



2. Right-click the Lab Management service icon in the task tray  and verify that the Start ALM Lab Service is grayed out, as shown in the following screenshot.



Note: If the Start ALM Lab Service is not grayed out, wait 5 to 6 minutes for it to start automatically. If it does not start in this period, right-click the Lab Management icon  and select Start ALM Lab Service.

Task 3 – Starting ALM

To start ALM, complete the following steps:

1. Launch ALM by double-clicking the IE icon on the desktop.
2. Log in to ALM using the URL `http://almserver:8080/qcbin/`.
3. Select the Lab Management link.
4. In the Name field, enter `admin`.
5. In the Password field, enter `admin`.

The screenshot shows the login interface for the HP Application Lifecycle Management (ALM) Lab Management system. At the top left is the HP logo. To its right, the text "Application Lifecycle Management" is displayed in bold, followed by "Lab Management". Below this, there are two input fields: "Name" with the value "admin" and "Password" which is currently empty. Underneath the password field is a link "Forgot password?". To the right of the password field is a blue "Login" button. The entire form is contained within a white rectangular box with a thin black border.

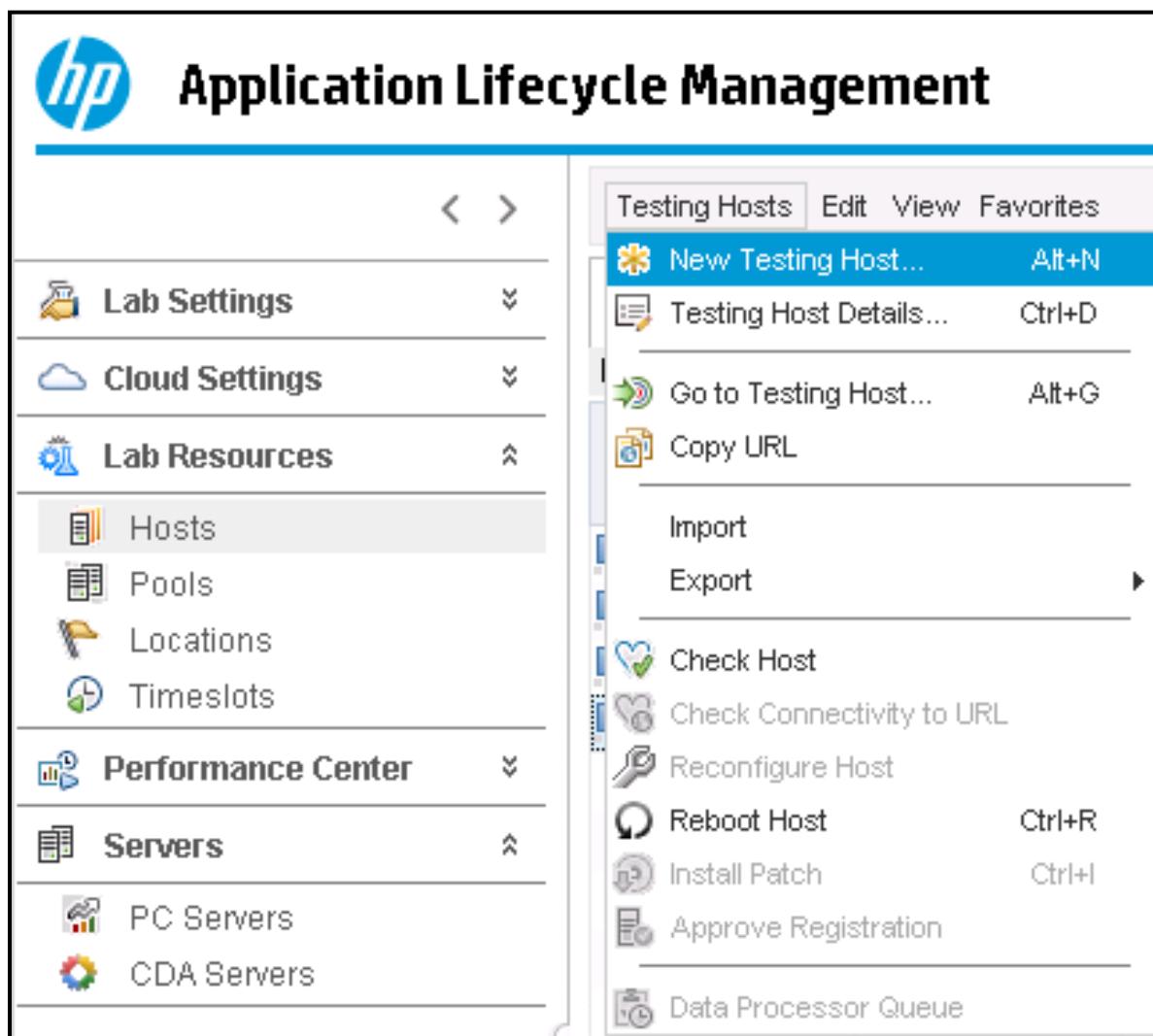
6. Click the Login button.

Task 4 – Adding Lab Hosts

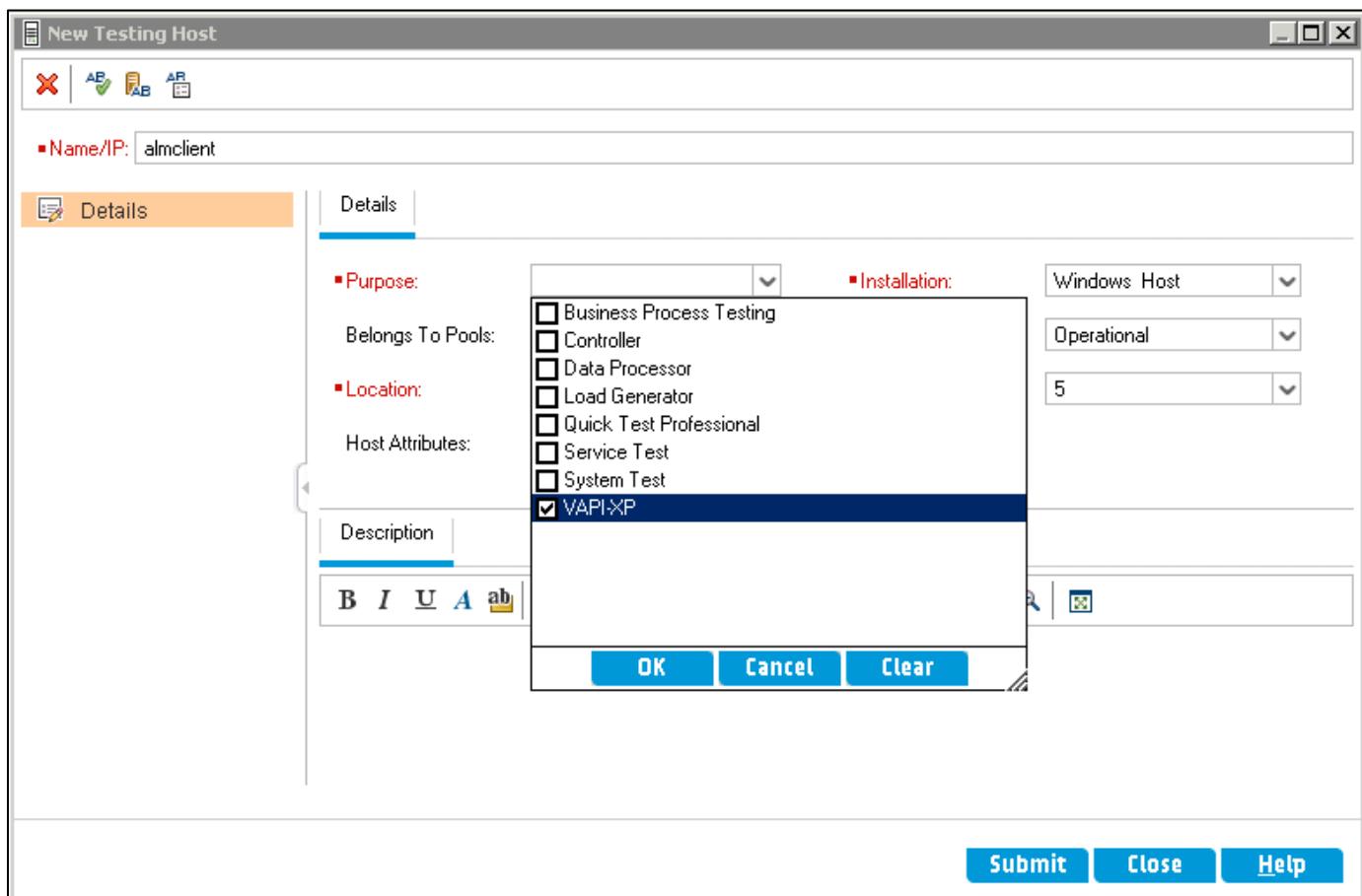
To add lab hosts, complete the following steps:

1. From the desktop, right-click the computer icon and select Properties from the pop-up menu. Note the computer name. In this case, it is `almclient`.
2. Within ALM, Expand the Lab Resources menu.
3. Select the Hosts module.
4. Check if any host already exists in the right tab.

5. If there is a pre-existing host, select that host and click the red cross icon  , in the toolbar, to delete that host.
6. Repeat this process until no more hosts are left.
7. Click Testing Hosts → New Testing Host, as shown in the following screenshot.

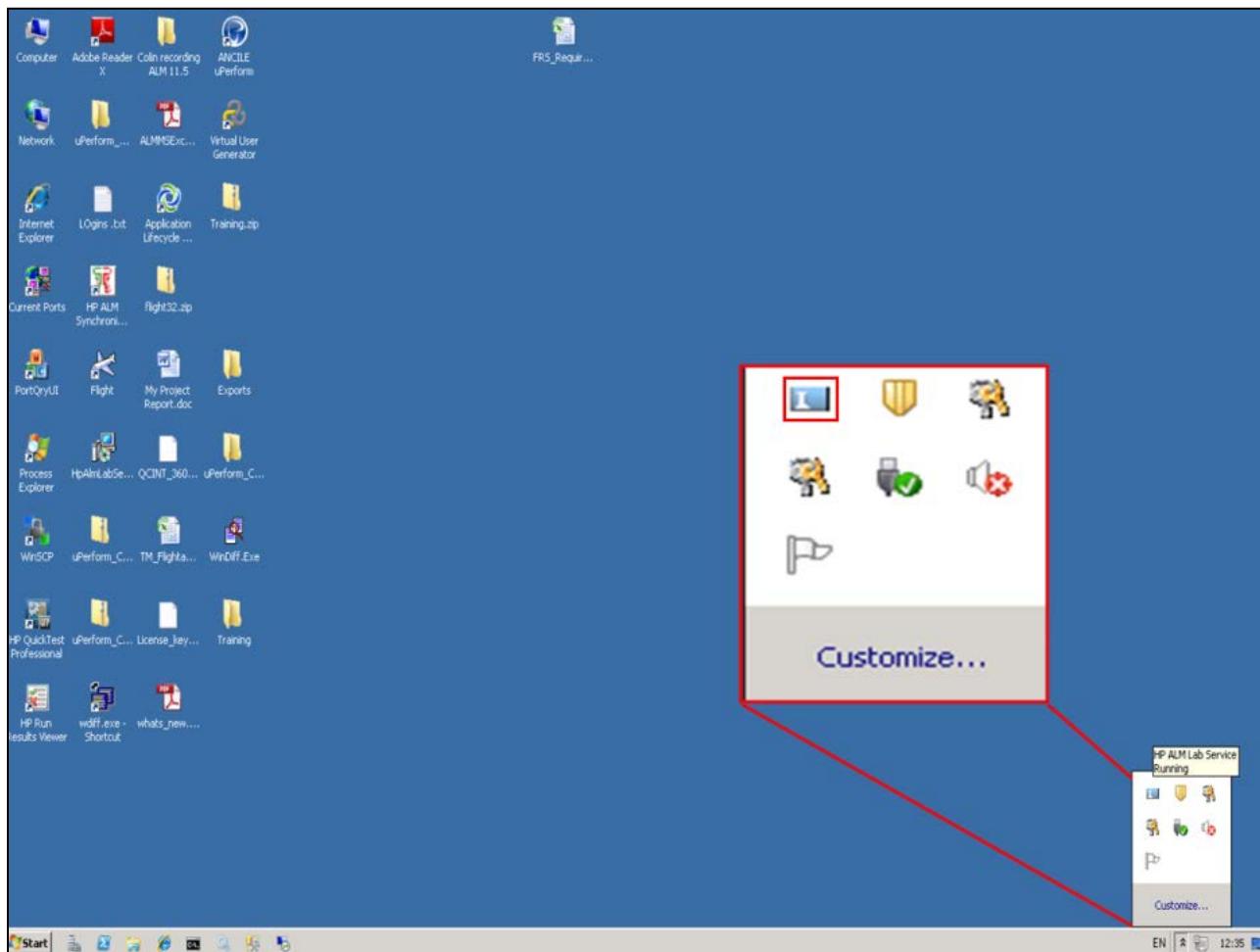


8. The New Testing Host window is displayed. In the Name/IP field, enter **almclient** and, in the Purpose field, click the VAPI-XP checkbox, as shown in the following screenshot.



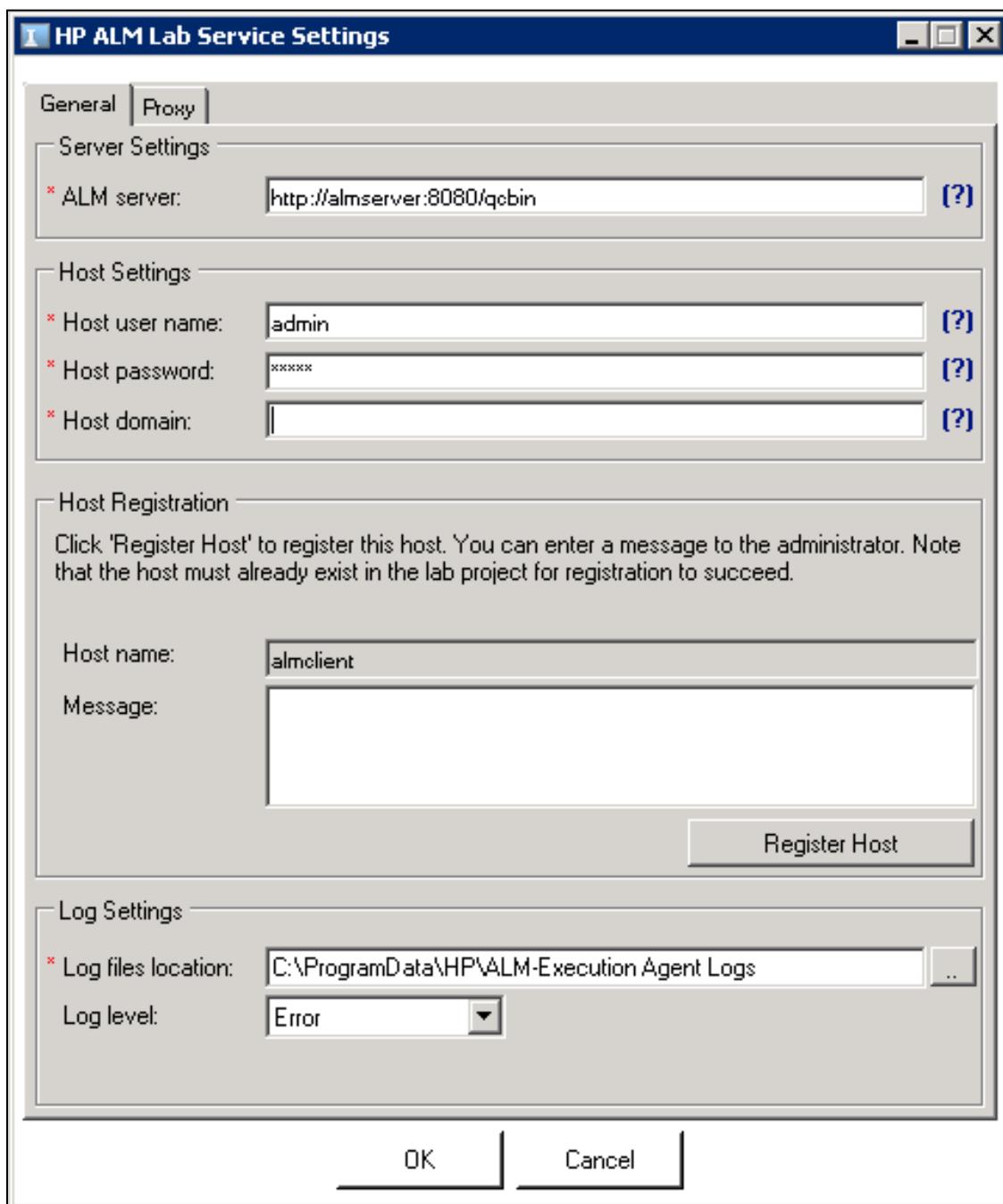
9. Click the OK button and then click Submit.
10. Click the Close button to close the window.
11. Observe that although the host is added, its status is shown as Unavailable.

12. Right-click the Lab Management service icon on the task bar and select the Settings option. The HP ALM Service Settings window is displayed, as shown in the following screenshot.



13. Enter **http://almserver:8080/qcbin** in the ALM Server URL field.
14. Enter **admin** in the Host user name field.
15. Enter **admin** in the Host password field.
16. Enter **STUDENT00_ESS** in the Host domain field.

17. Click the Register Host button, as shown in the following screenshot.



18. When the information dialog is displayed, read the information and click OK. Click the OK button again to close the HP ALM Service Settings dialog box.
19. Go back to Lab Management in ALM. Select the Hosts module under Lab Resources, click refresh, and observe that the status changes to Operational.

Exercise 2 – Creating and Running Tests

In this exercise, you create test sets to run using the legacy system and using the new Lab Management features.

In this exercise, you perform the following tasks:

- Task 1 – Log in to ALM
- Task 2 – Build a VAPI Test
- Task3 – Build and Run a Default VAPI Default Test Set

Task 1 – Logging in to ALM

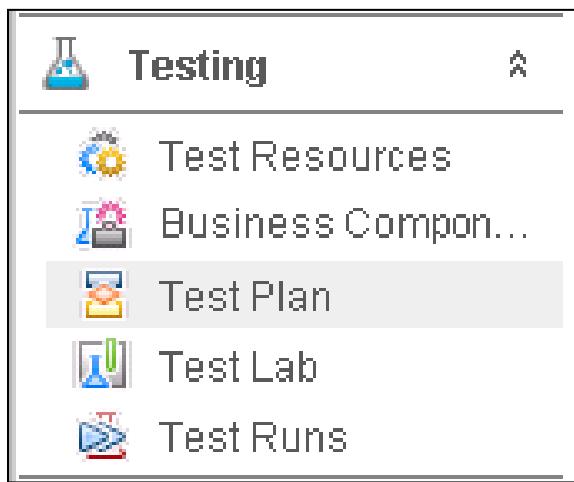
To log in to ALM, complete the following steps:

1. Log in to ALM Desktop Client using the URL
`http://almserver:8080/qcbin/start_a.jsp`.
2. In the Username field, enter **training**.
3. In the Password field, enter **welcome**.
4. Click Authenticate.
5. Select the domain STUDENT00_ESS and the project FlightApplication. Click Login.

Task 2 – Building a VAPI Test

To build a VAPI test, complete the following steps:

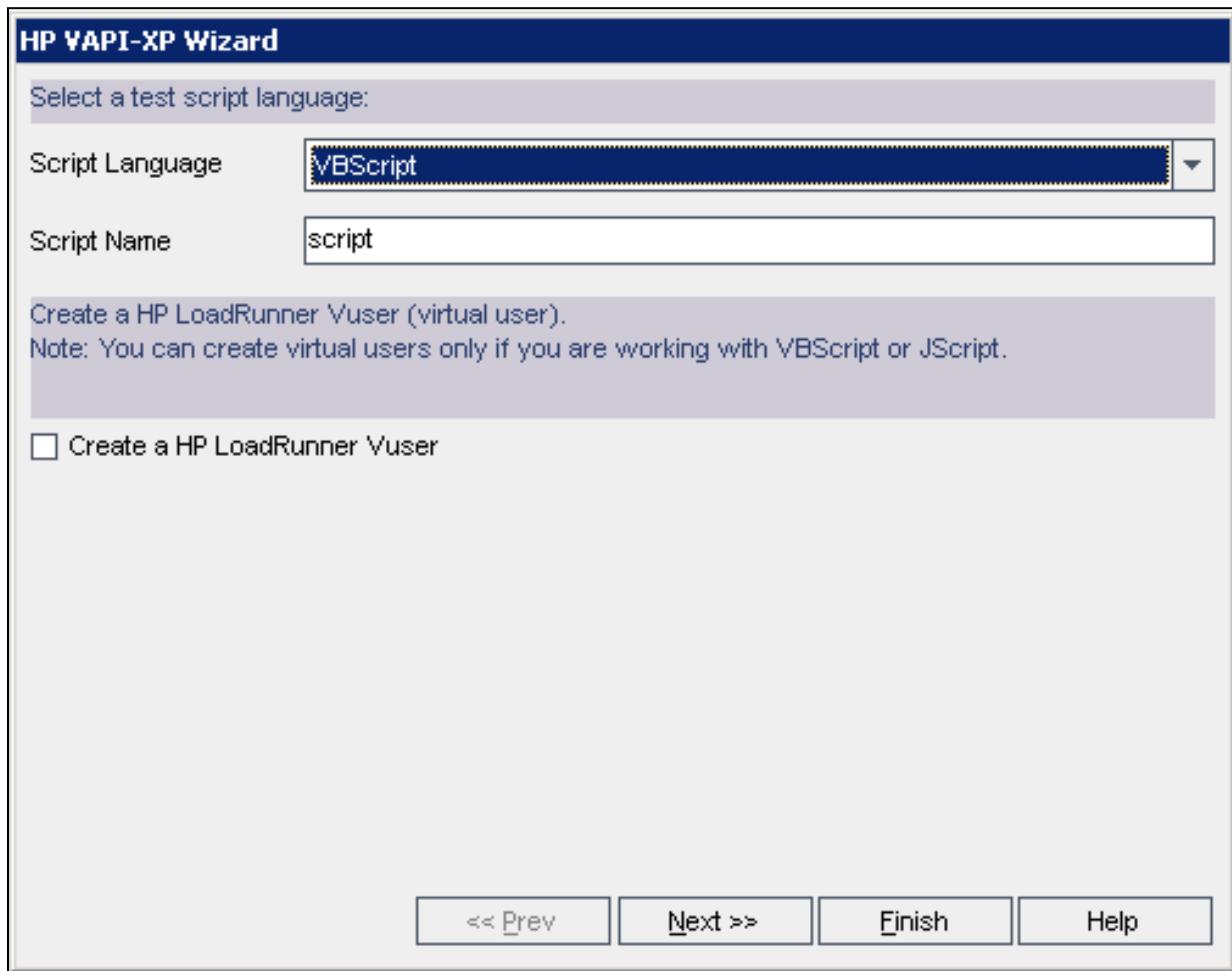
1. Click Testing →Test Plan module, as shown in the following screenshot.



2. Click the Subject folder in the Test Plan tree view.

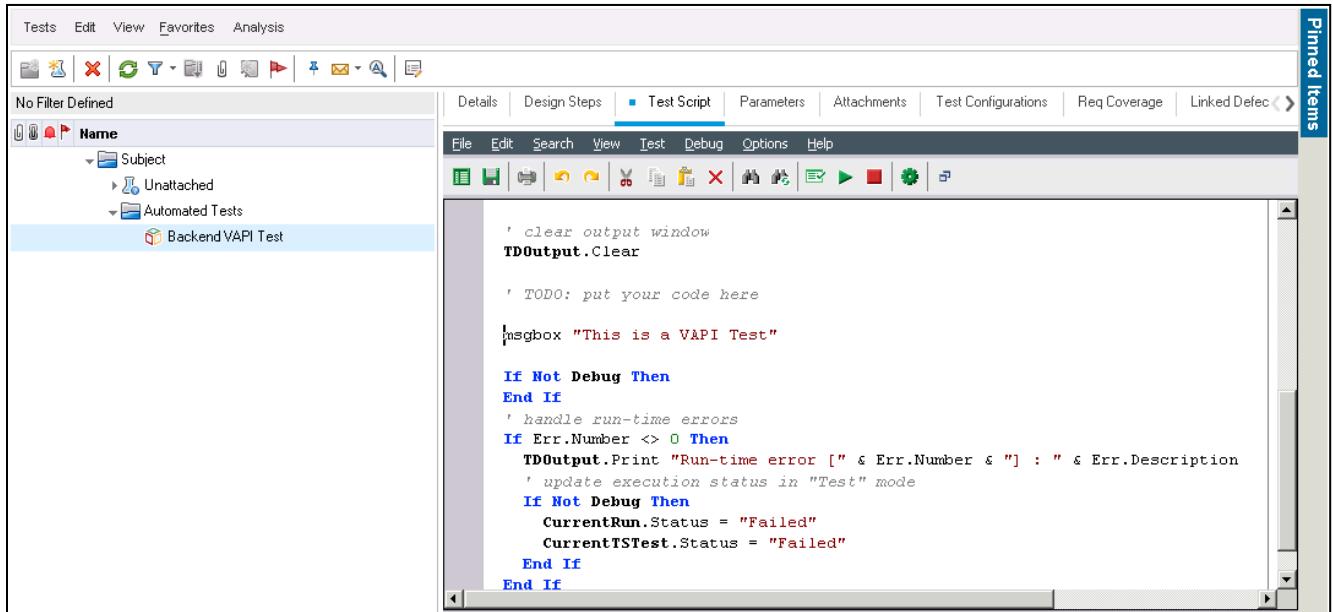
Note: If the view is not set to the Test Plan tree view, change it by going to View →Test Plan Tree.

3. Create a new folder to store your tests by clicking the New Folder icon  on the toolbar.
4. Name the folder **Automated Tests**.
5. Create a new test by going to Test → New Test or clicking the New Test icon  . Enter the following in the New Test dialog:
 - Test name: **Backend VAPI Test**
 - Type: **VAPI-XP-Test**
6. Click OK. The HPVAPI-XP Wizard dialog box is displayed.
7. In the HP VAPI-XP Wizard dialog box, leave the default values (VBScript/script), as shown in the following screenshot.



8. Click the Finish  button to close it.
9. Select the newly created Backend VAPI test and go to the Test Script tab on the right.

10. Add the code `msgbox "This is a VAPI Test"` after the 'TODO: put your code here line in the script, as shown in the following screenshot.



```

Tests Edit View Favorites Analysis
No Filter Defined
Name
Subject
Unattached
Automated Tests
BackendVAPI Test

File Edit Search View Test Debug Options Help
Details Design Steps Test Script Parameters Attachments Test Configurations Req Coverage Linked Defects
Pinned Items

' clear output window
TDOutput.Clear

' TODO: put your code here

msgbox "This is a VAPI Test"

If Not Debug Then
End If
' handle run-time errors
If Err.Number <> 0 Then
    TDOutput.Print "Run-time error [" & Err.Number & "] : " & Err.Description
    ' update execution status in "Test" mode
    If Not Debug Then
        CurrentRun.Status = "Failed"
        CurrentTSTest.Status = "Failed"
    End If
End If

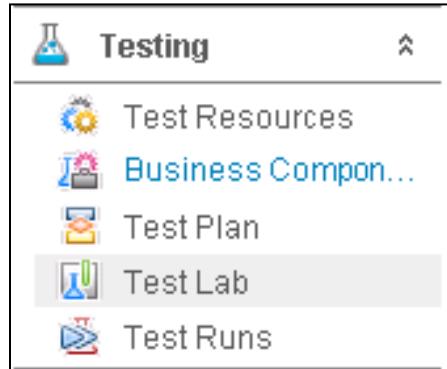
```

11. Click the Floppy icon to save the test.

Task 3 – Building and Running a VAPI Default Test Set

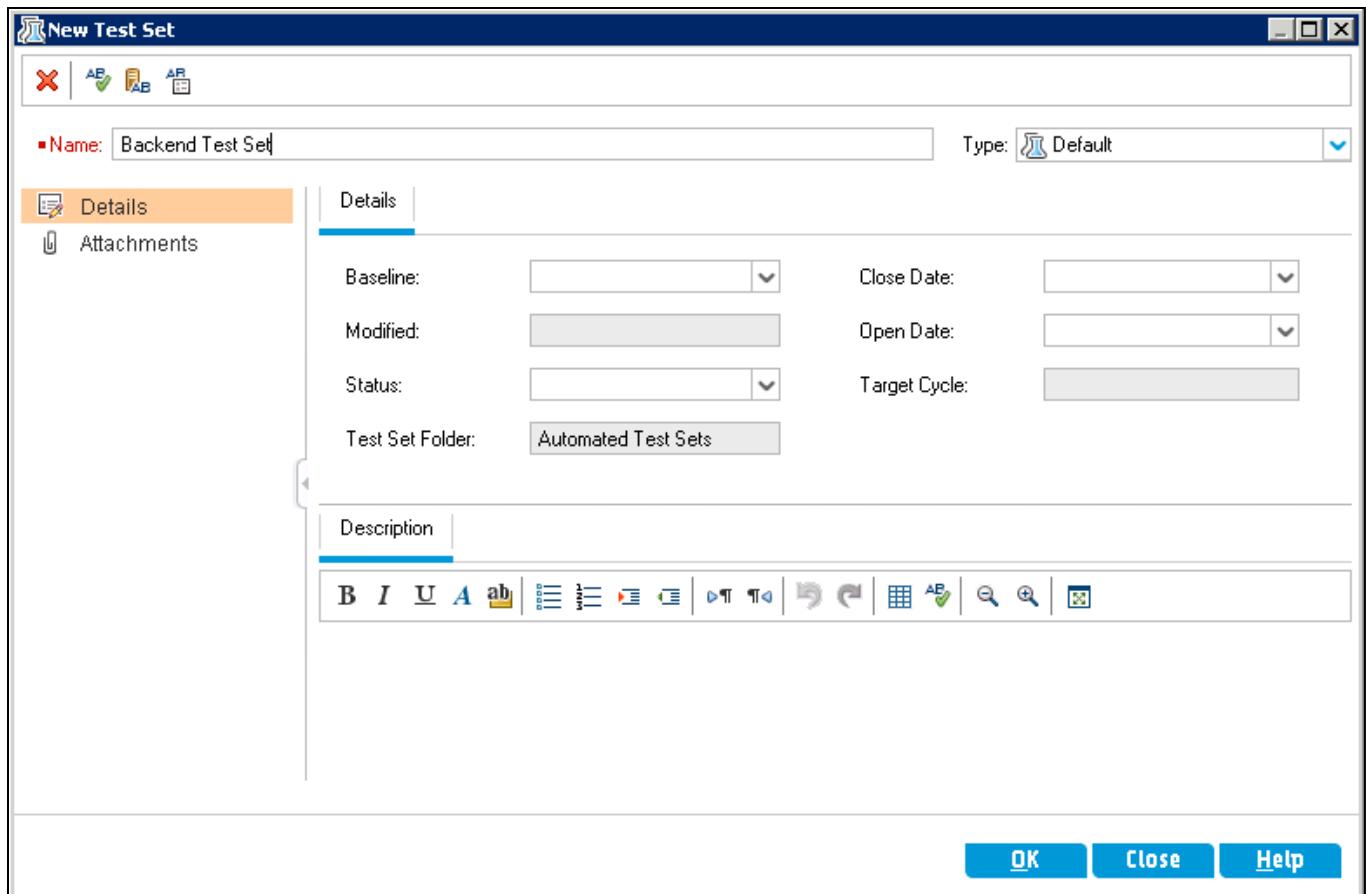
To build and run a VAPI default test set, complete the following steps:

1. Click Testing → Test Lab module, as shown in the following screenshot.



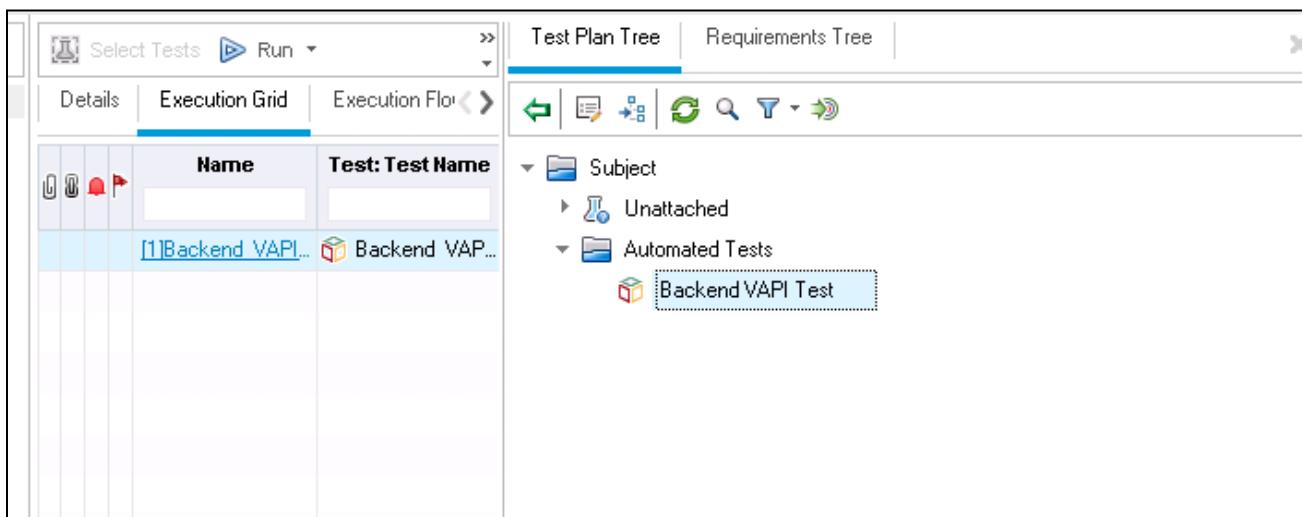
2. Click the root folder in the Test Lab tree view.
3. Create a new folder to store your test sets by clicking the New Folder icon  on the toolbar.
4. Name the folder **Automated Test Sets**.

5. Create a new test set by selecting the Automated Test Sets folder and then by going to Test Sets → New Test Set.
 - a. In the Name field, enter **Backend Test Set**.
 - b. In the Type field, select Default, as shown in the following screenshot.

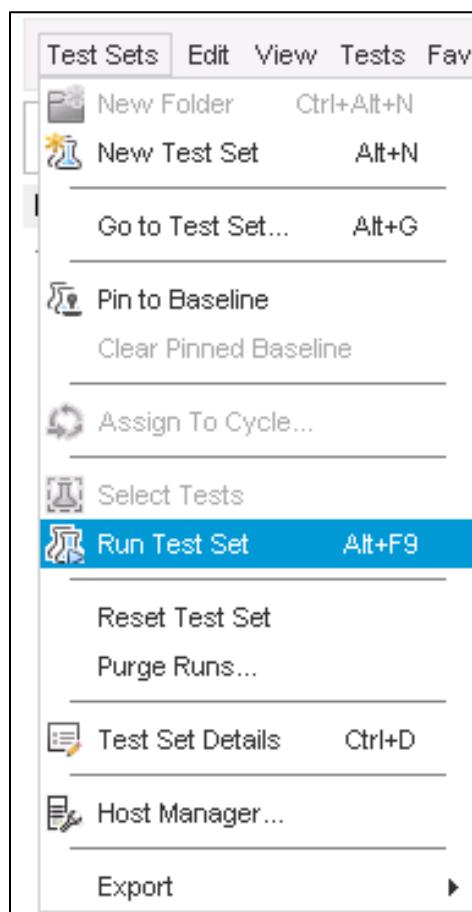


6. Click the OK button.
7. Add tests to the test set, by clicking the Select Tests button on the toolbar .
8. When the Test Plan tree is exposed, browse to the backend VAPI test created in the previous task.

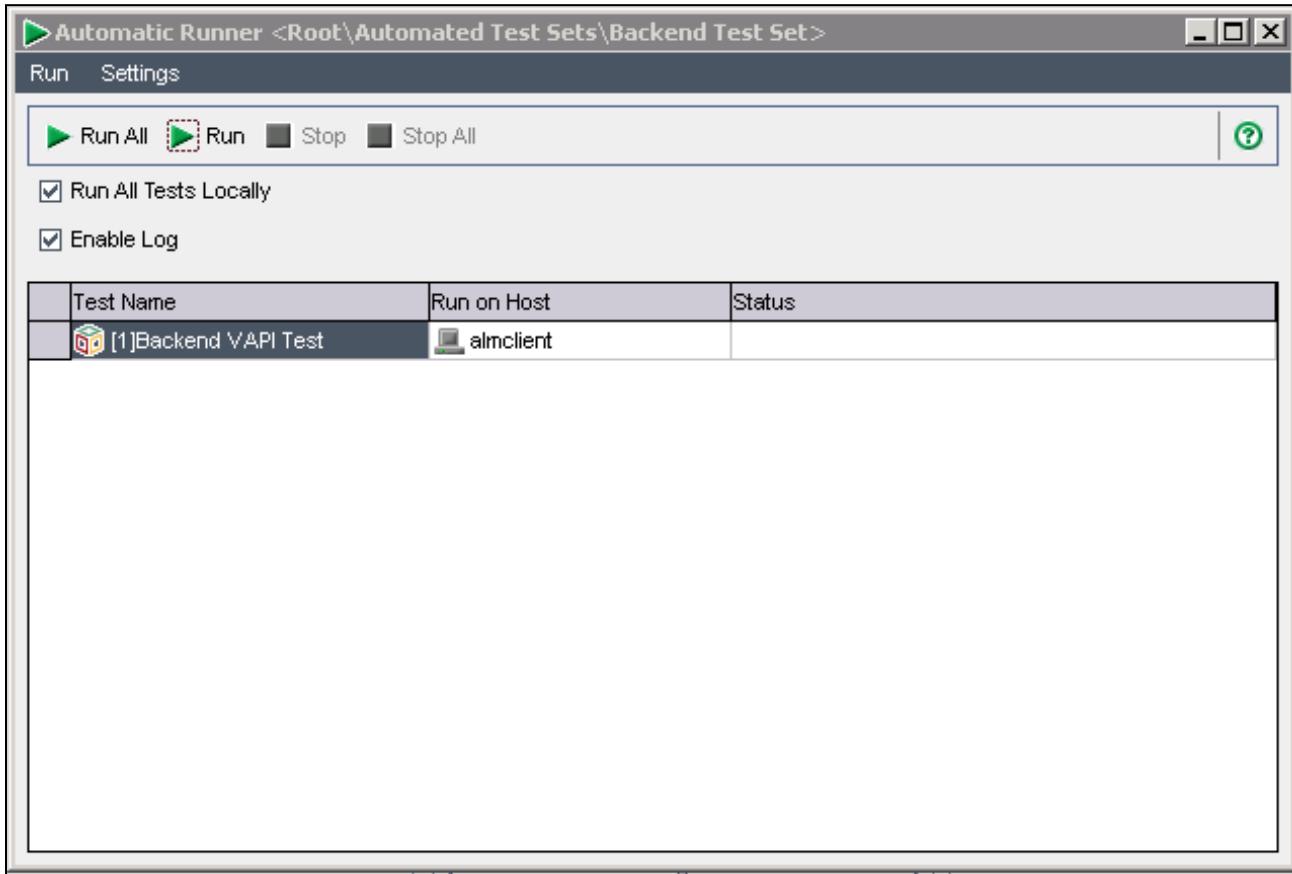
9. Select the test and click the left arrow button to add it to the test set, as shown in the following screenshot.



10. Execute the test set by selecting Test Set → Run Test Set, as shown in the following screenshot.



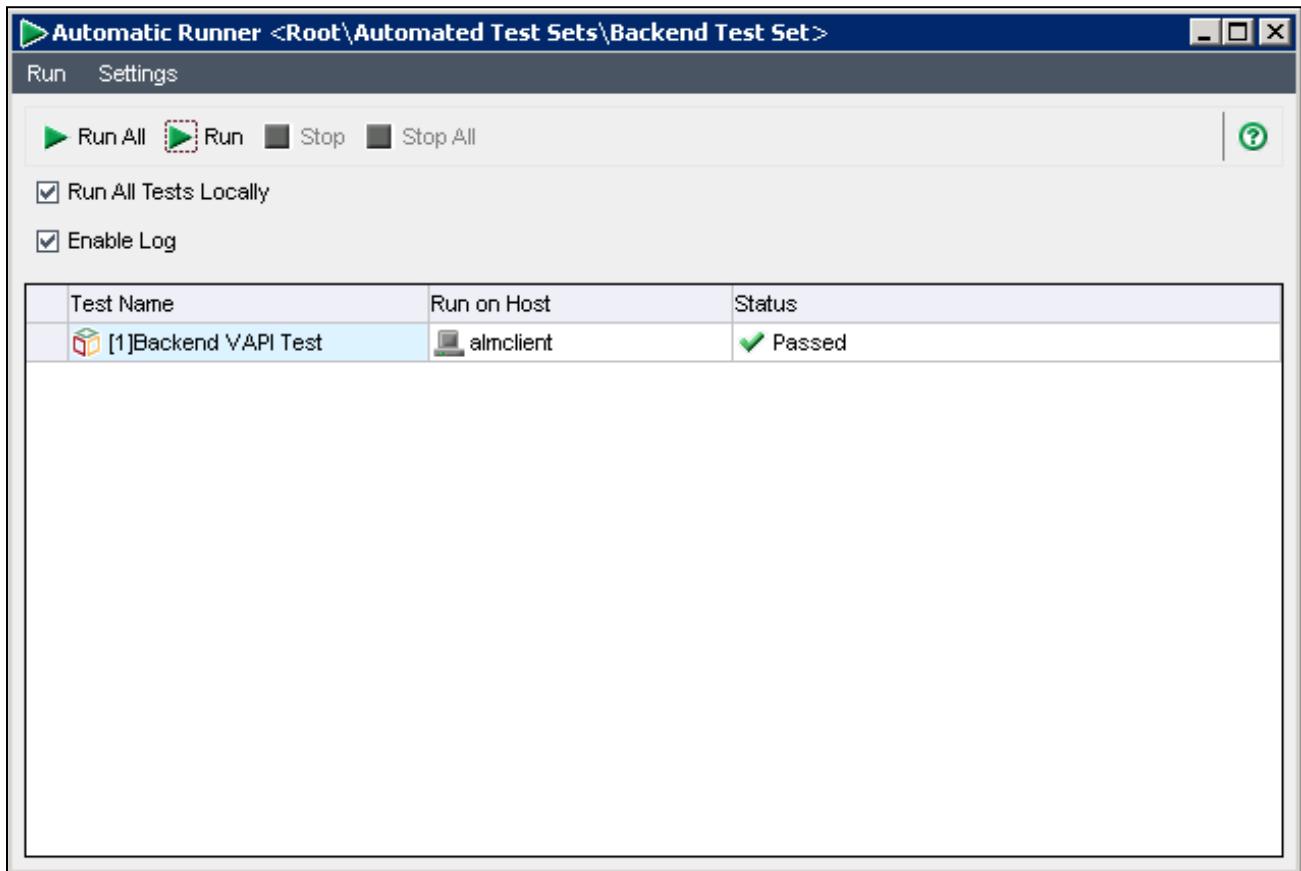
11. In the Automatic Runner window, ensure that Run All Test Sets Locally is checked, as shown in the following screenshot.



12. Click the Run All button in the toolbar ► **Run All** to execute the test set.
13. Your executed code prompted a message box to display the This is a VAPI Test message window.
14. Click OK.

15. Ensure that the test completes.

The testing status might state Error: Failed to Post Run. Even though this error is displayed, the test runs are posted to ALM. Next, verify the test status to ensure that this is the case, as shown in the following screenshot.



16. Close all test run dialogs.

17. Verify the test run result by double-clicking the test to open the Test Instance Details window.

18. Select the Runs option in the left pane and ensure that the test result status is Passed, as shown in the following screenshot.

The screenshot shows the 'Test Instance Details' window. The 'Runs' tab is selected in the left sidebar. A single run is listed in the main pane:

| Run ID | Run Name | Status | Duration | Exec Date | Exec Time |
|--------|------------------|--------|----------|-----------|------------|
| 1 | Run: 8/13/201... | Passed | 0 | 8/13/2014 | 1:18:28 AM |

The status column shows a green checkmark and the word 'Passed'. Below the table, it says 'No steps in this run.'

19. Click OK.

20. Log out from ALM.

Lab 11 – Build Verification

Objectives

After completing this lab, you should be able to:

- Create a Build Verification suite
- Add functional test sets
- Add a performance test
- Run the build verification suite and view the test results

Scenario

Build Verification suites facilitate an automated, end-to-end deployment and testing framework that makes application development more efficient, reliable, and quick.

The Build Verification module enables you to define a suite of functional test sets bundled together with a single performance test. When run together, the Build Verification suite checks the overall status of your build.

Exercise 1 – Creating a Build Verification Suite

First you create a new Build Verification suite. Later you can add functional test sets and a performance test.

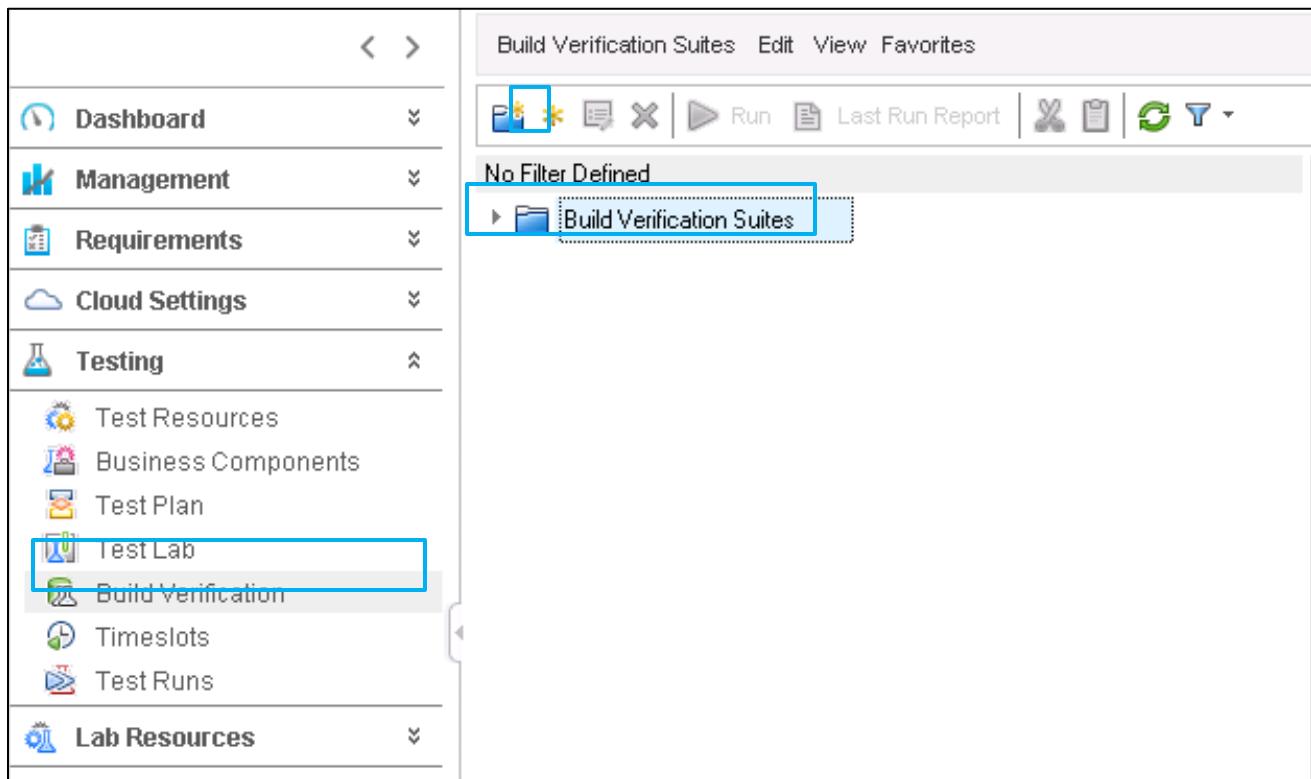
To create a Build Verification suite, complete the following steps:

1. Double-click the IE icon on the desktop and type the URL for the ALM server:
`http://almserver:8080/qcbin/`

Note: Your instructor will provide you the ALM server information, if required.

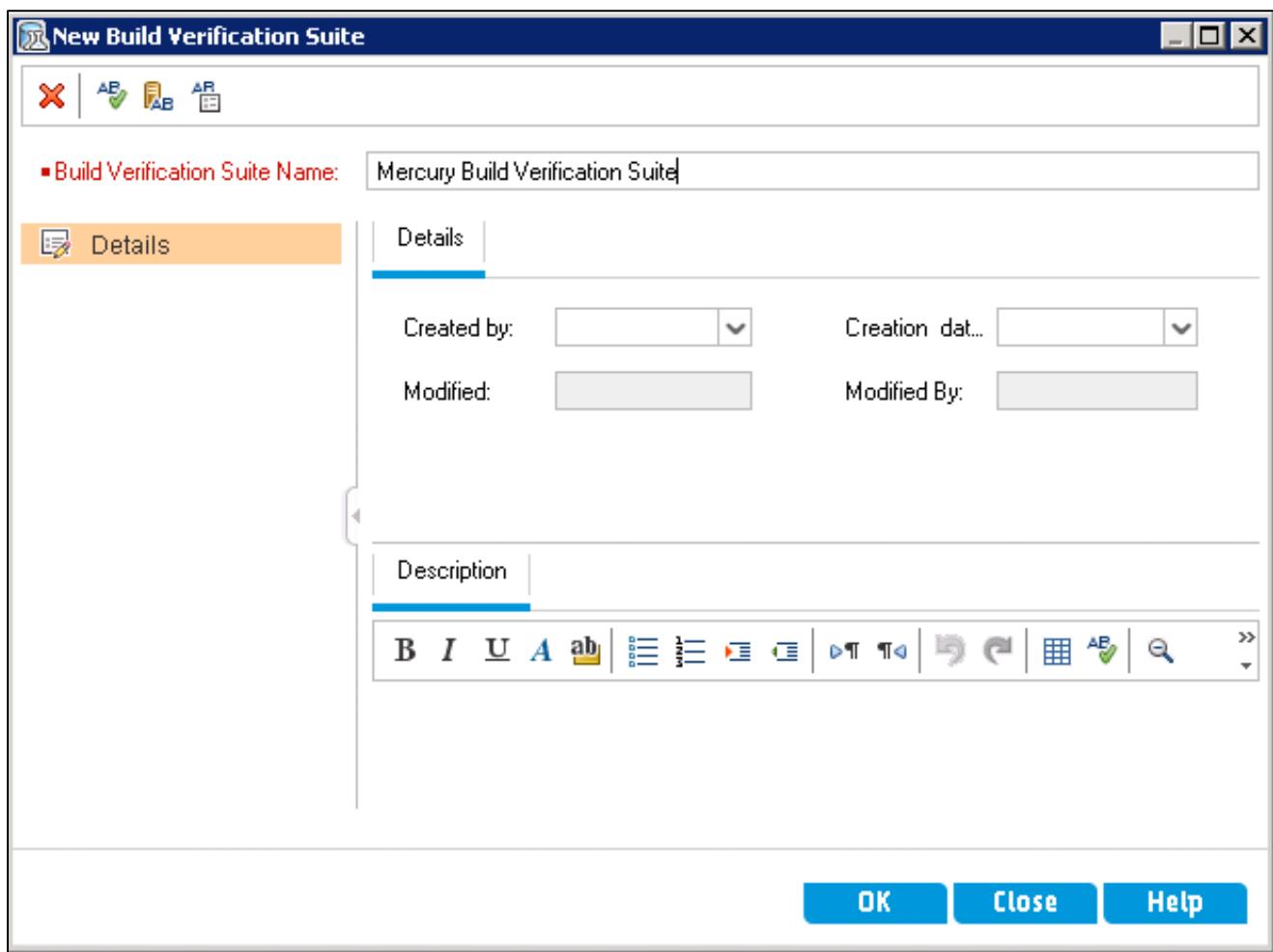
 - a. On the home page, click the ALM Desktop Client link.
 - b. The ALM login page is displayed.
 - c. In the Name and Password fields, type **training** and **welcome**, respectively.
 - d. Click the Authenticate button.
 - e. From the Domain and Project lists, select STUDENT00_ESS and ALM_Demo, respectively.
 - f. Click the Login button.
2. To create a Mercury Build Verification suite and add it to the Build Verification hierarchy, complete the following steps.
 - a. Click the  **Build Verification** menu item in the Testing module.

- b. Click the Build Verification Suites menu tree item, as shown in the following screenshot.



- c. Click the New Build Verification Suite  button.

- d. Type **Mercury Build Verification Suite** in the Build Verification Suite Name field of the New Build Verification Suite dialog box and click the

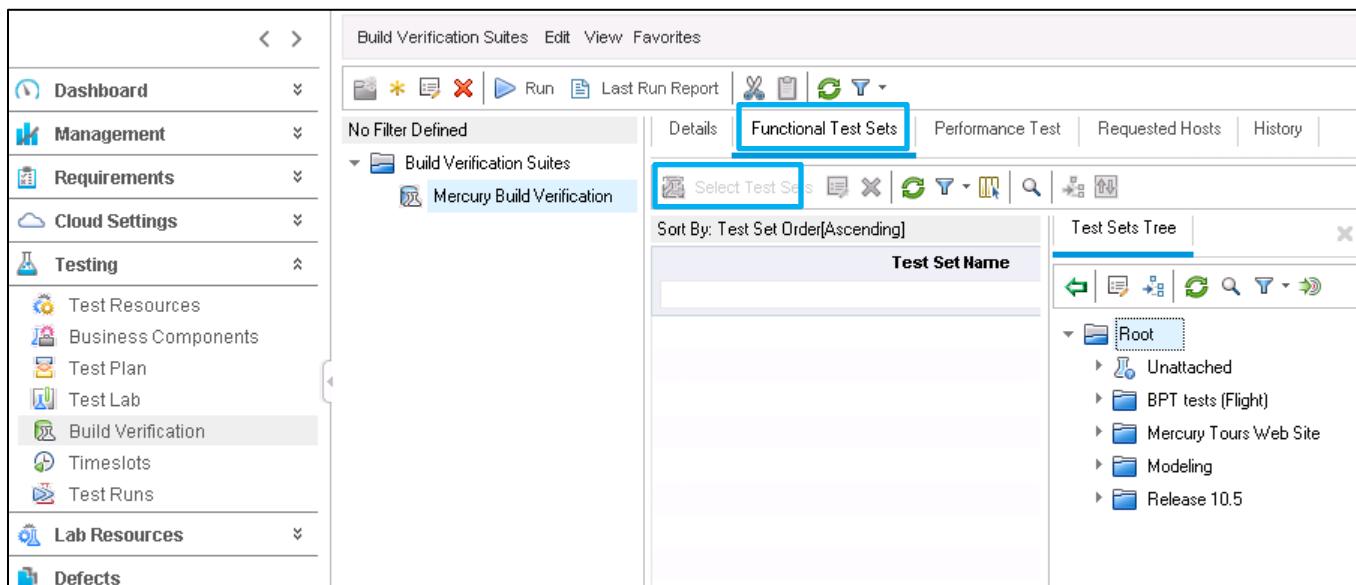
OK button, as shown in the following screenshot.

Exercise 2 – Adding Functional Test Sets

Functional test sets previously created in the Test Lab module are added to the Build Verification suite.

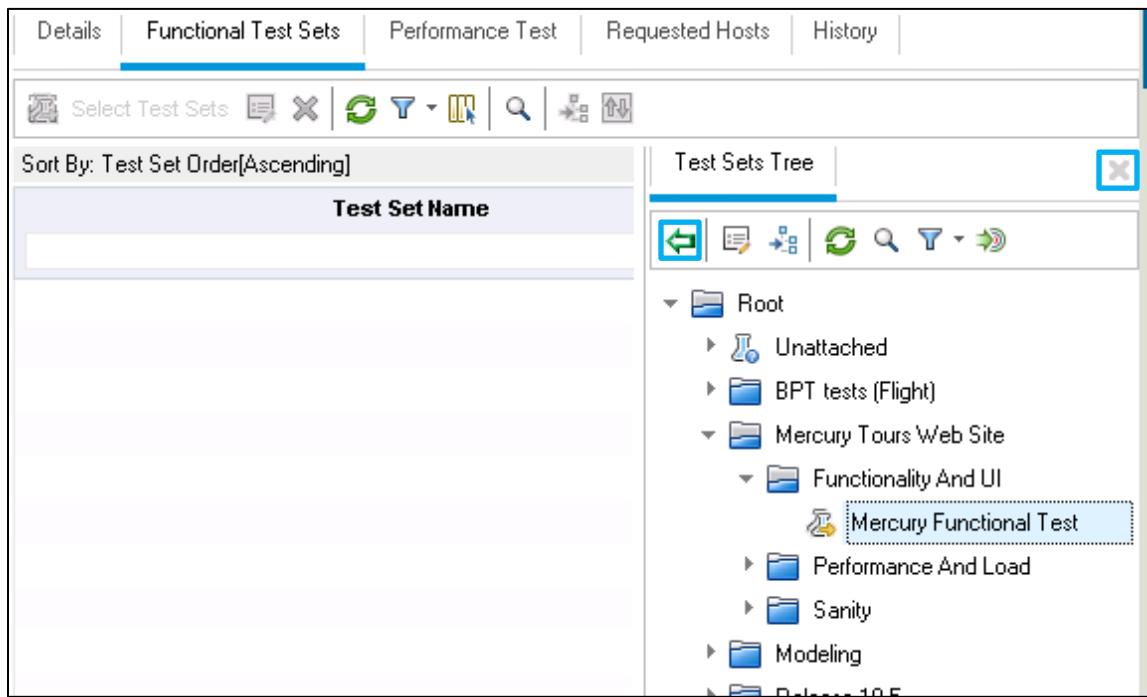
- To add the Mercury Functional test set to the Mercury Build Verification suite, complete the following steps:

- Click the **Build Verification** menu item in the Testing module.
- Expand the **Build Verification Suites** folder to show the Mercury Build Verification suite. Click the **Mercury Build Verification** tree item, as shown in the following screenshot.



- Click the **Functional Test Sets** tab.
- Click the **Select Test Sets** button.

- e. Expand the Root folder, the Mercury Tours Web Site folder, and the Functionality And UI folder. Click the Mercury Functional Test tree item, as shown in the following screenshot.



- f. Click the Add Test Set button.
g. Click the Close Select Test Sets button.

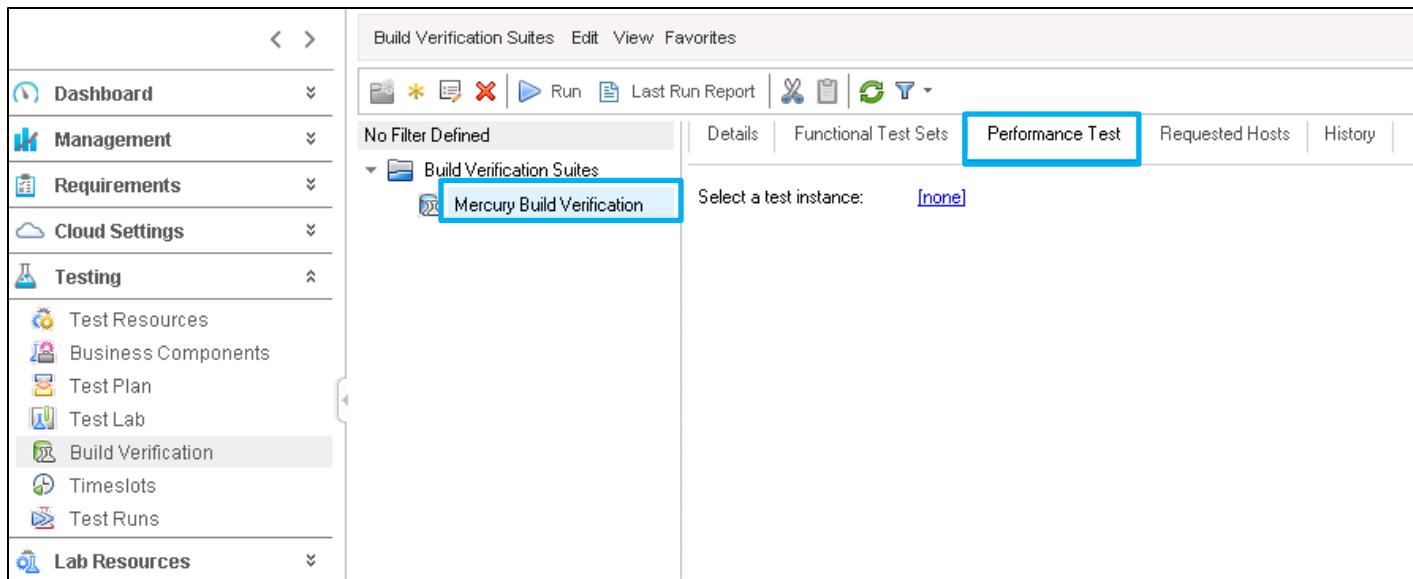
Exercise 3 – Adding a Performance Test

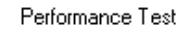
You can include a performance test in the Build Verification suite. An instance of the performance test must be included in a test set to link it to a suite.

Complete the following steps:

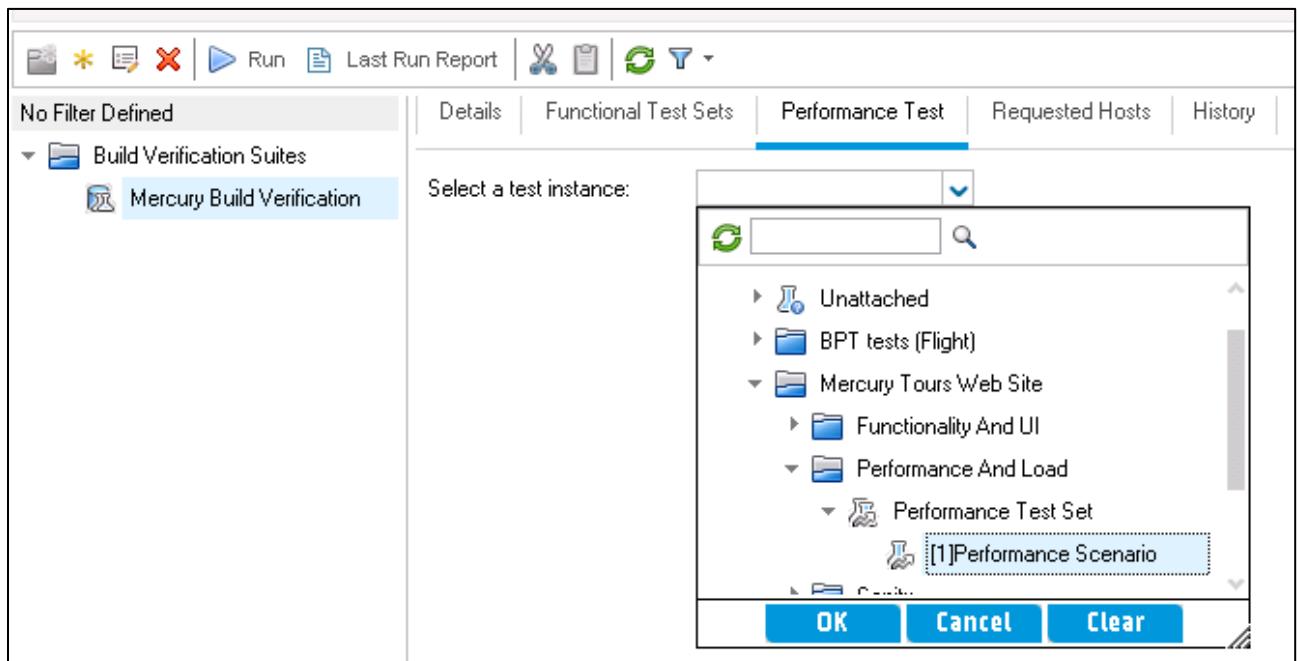
1. Add the Performance Scenario performance test to the Mercury Build Verification suite.

- a. Click the  **Build Verification** menu item in the Testing module.
- b. Expand the **Build Verification Suites** folder to show the Mercury Build Verification suite. Click the **Mercury Build Verification** tree item, as shown in the following screenshot.

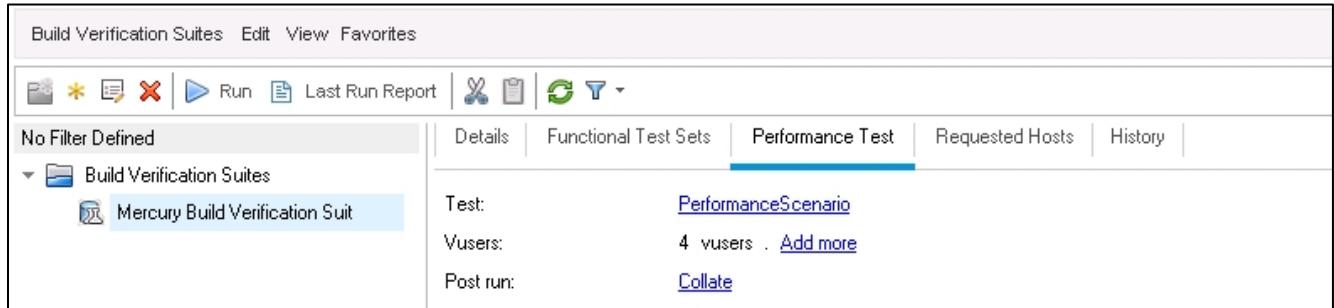


- c. Click the  **Performance Test** tab.
- d. Click the [\[none\]](#) link to the right of Select a test instance to select a link to a test instance.

- e. Expand the Root folder, the Mercury Tours Web Site folder, and the Performance And Load folder. Click the Performance Scenario test set tree item, as shown in the following screenshot.



- f. Click the button. The Performance Scenario performance test is added to the Mercury Build Verification suite, as shown in the following screenshot.



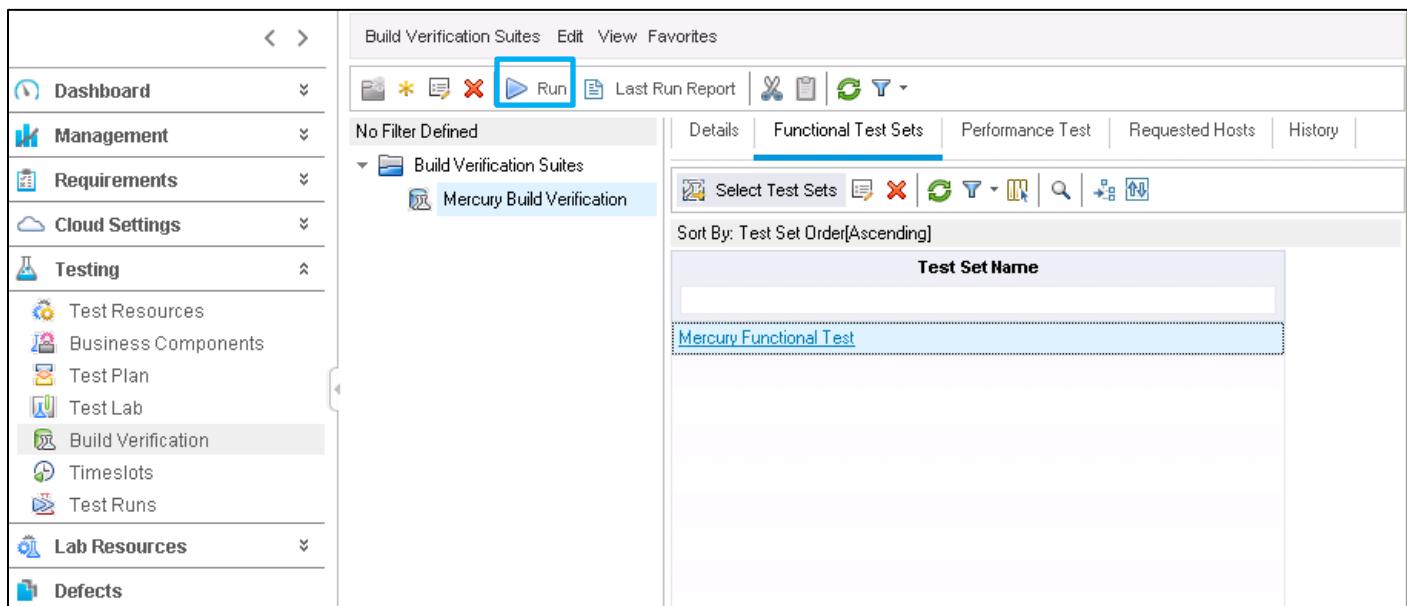
Exercise 4 – Running the Build Verification Suite and Viewing the Test Results

The Build Verification suite may be run immediately or the suite can be reserved and run at a later date or time.

Complete the following steps:

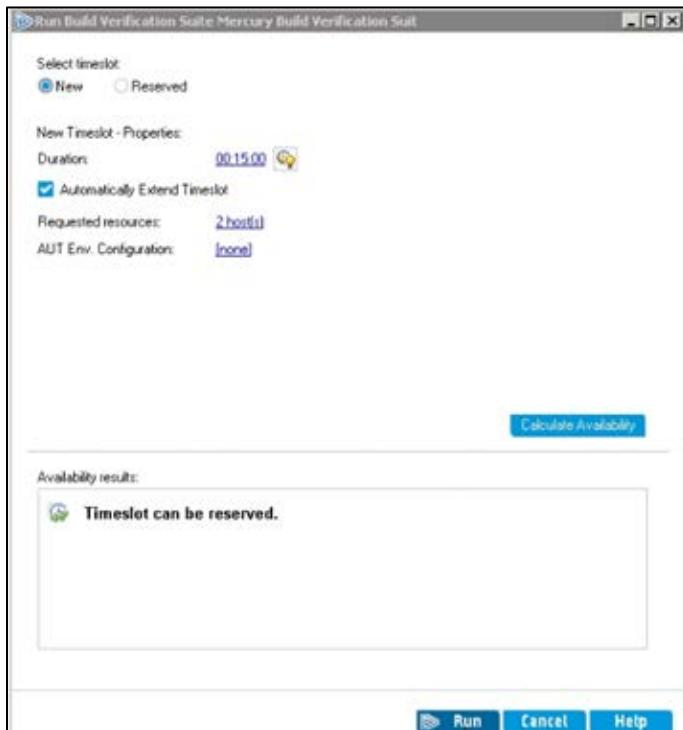
1. Run the Build Verification suite.

- a. Click the  **Build Verification** menu item in the Testing module.
- b. Expand the **Build Verification Suites** folder to show the Mercury Build Verification suite. Click the **Mercury Build Verification** tree item.
- c. Click the  **Run** button, as shown in the following screenshot.

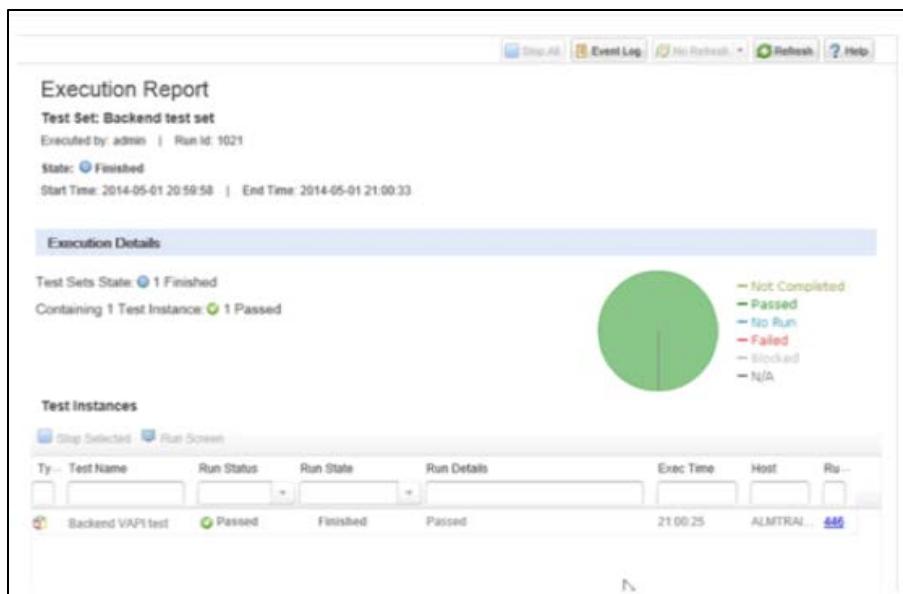


- d. The Run Build Verification Suite Mercury Build Verification Suite dialog box is

displayed. Click the  **Run** button to run the suite immediately, as shown in the following screenshot.



- e. View the details of the completed report.



- f. Close the report and log out from ALM.

This page is intentionally left blank.

Lab 12 – HP Sprinter 12.0

Objectives

After completing this lab, you should be able to:

- Open a test and prepare the test to run
- Run the test
- View the test results
- Use subtitles
- Log defects
- Create a macro
- Author tests in the Plan area

Scenario

You have set up your test sets in the Test Lab module and executed automatic and manual tests from within ALM, sequencing tests and test sets against the Application Under Test (AUT).

In the following exercises, you run your manual tests using Sprinter. While you are running your tests, you also log defects into ALM from Sprinter for defects that are found during the test run.

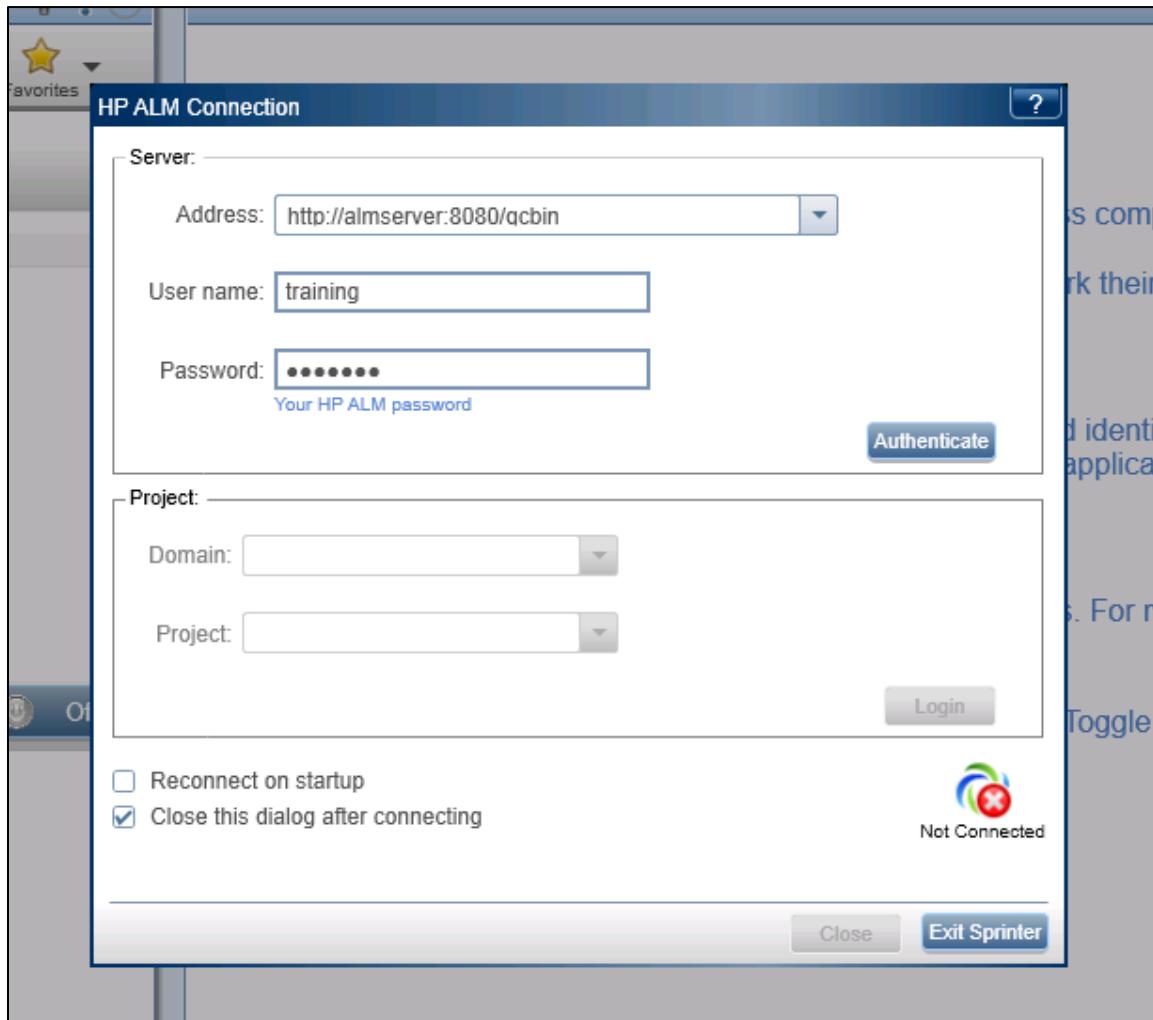
To speed up the testing process, you create macros for areas that don't need to be tested repeatedly, such as logging into your application.

When you have finished running your tests, you determine that an additional test should be part of the test set. You use the Plan area of Sprinter to author a new test, including using the capture steps feature.

Exercise 1 – Opening a Test and Preparing the Test to Run

To open a test and prepare it to run, perform the following steps:

1. Click Start → All Programs → HP Sprinter → Sprinter. The HP ALM Connection window is displayed, as shown in the following screenshot.



2. Enter the following:
 - a. In the Address field, enter `http://almserver:8080/qcbin`.
 - b. In the User Name field, enter `training`.
 - c. In the Password field, enter `welcome`.
3. Click the Authenticate button.

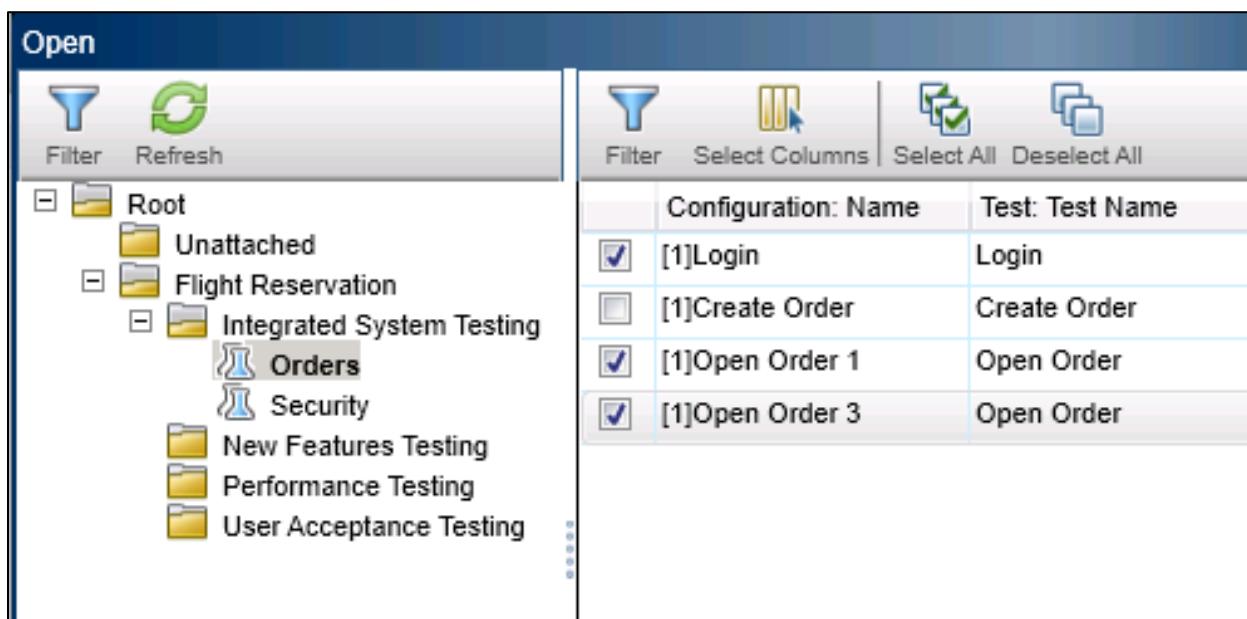
Note: Ask your instructor for the correct server name in your lab environment.

4. Select the following:

- Domain: STUDENT00_ES
- Project: 8aFlightApplication

5. Click the Login button. Sprinter connects to the specified domain and project in ALM.

6. Click the **Run** tab and then click Open HP ALM test.
7. An Open window is displayed with the Root folder.
8. Expand the Root folder and then expand the Flight Reservation folder.
9. Expand the Integrated Systems Testing folder and then select the Orders test set.
10. Select the Login and the Open Order 1 and Open Order 3 tests, as shown in the following screenshot.



11. Click the **Open** button. The Tests Runs list displays the tests to be included in the next run. The Status bar shows how many tests from the Tests list are included in the next run.
12. The right pane shows the Definitions group containing the three nodes: General Settings, Steps, and Parameters. Click on each of these nodes and observe the values shown.

Exercise 2 – Running the Test

In this task, you start your test run and perform the user actions in the AUT.

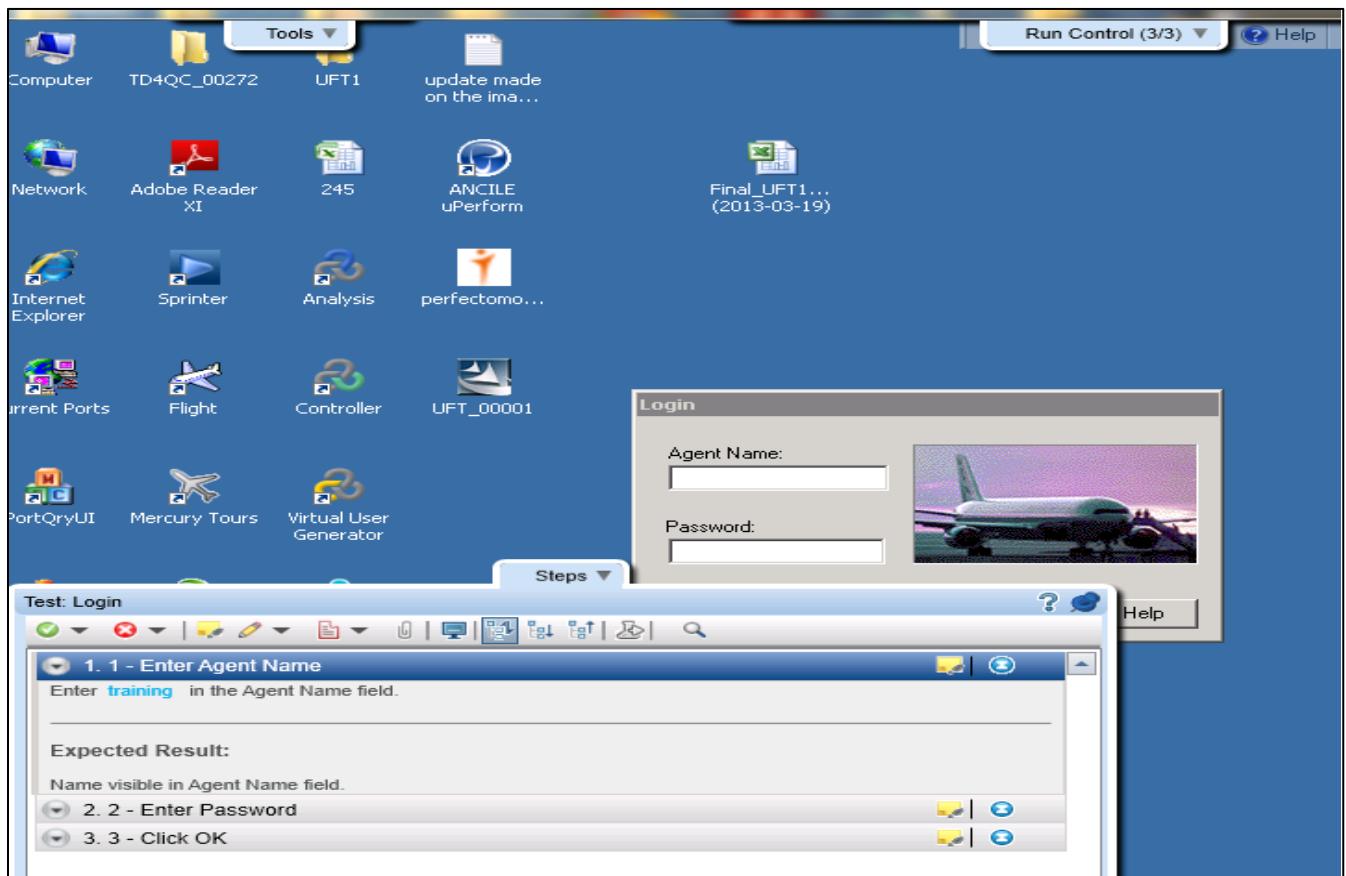
Complete the following steps:



1. Start by opening Flight Application using the Flight icon on your desktop but do not log in.



2. In Sprinter, select the Login test and then click the Run button. The main Sprinter window minimizes, and several sidebars appear along the edges of the Windows desktop, as shown in the following screenshot.



3. Verify that you see the following sidebars:

- The Tools sidebar at the top edge of the Windows desktop
- The Run Control sidebar also at the top edge
- The Steps sidebar at the bottom edge

Note: The default state of the Steps sidebar is expanded.

4. Select the first test step: 1–Enter Agent Name.
5. Perform the instructions and mark the first test step with a Pass status. To do this, click the Pass Selected Steps button  on the Steps sidebar.
6. If needed, select and expand the second step: 2–Enter Password.
7. Perform the instructions in test step 2, and then mark its status as passed.
8. Select the third step: 3–Click OK and then mark its status as passed.

Exercise 3 – Viewing Test Results

In this task, you stop the test run and view the results.

Complete the following steps:

1. Expand the Run Control sidebar found at the top of the Windows desktop.



2. Click the End Run button  to stop the test execution. The Sprinter main window restores.
3. Review your test results in the Run Summary area of the Sprinter main window, as shown in the following screenshot.

 A screenshot of the HP Sprinter application window. The left side features a sidebar titled "Run Setup" with "Test Runs" selected. It lists three test cases: "Login" (Status: Passed), "Open Order 1" (Status: In Progress), and "Open Order 3" (Status: In Progress). Below this is a "Power Mode" section with a switch set to "Off". The main pane is titled "Login" and contains a "Run Summary" section. The summary shows the following details:

| | |
|----------------|--|
| Test instance: | Login |
| Test name: | Login |
| Status: |  Passed |

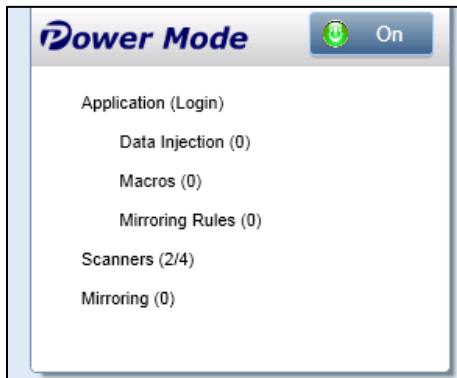
 Below this are sections for "Run name" (Run_8-8_9-35-58), "Tester" (alex_aim), "Start time" (08/08/2014 11:43:07), "End time" (08/08/2014 11:49:36), and "Duration" (00:05:36). At the bottom of the main pane, there are four buttons: "Actions" (0), "Run Defects" (0), "Defect Reminders" (0), and "Comments" (0). There is also a summary table for "Steps" with 3 rows and a "Passed" status.

Exercise 4 – Using Subtitles

In this exercise, you run the Open Order 1 test using Sprinter's subtitles feature.

Complete the following steps:

Note: Make sure power mode is enabled using the button.



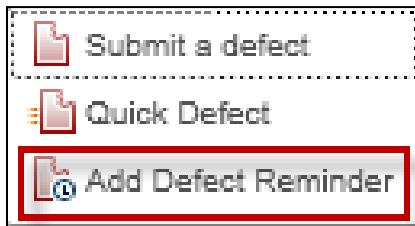
1. Select the Open Order 1 test in Sprinter, and click the Run button .
2. Click the Show Subtitle button  on the Steps sidebar. Notice that test Step 1 displays in a gray ribbon, or subtitle, along the bottom of your Windows desktop.
3. Move your mouse over the subtitle. This makes the Subtitle toolbox dynamically appear. 
The Subtitle toolbox contains the following icons from left to right: Previous Step, Next Step, Pass, Fail, Comment, Step Details, Stop Test, Gear (Settings), and Information.
4. In the Subtitle toolbox, click the Step Details button . The step details are displayed.
5. Click the Step Details button again and the step details collapse.
6. For this task, click Pass for one step and Fail for the second to last step.
7. When you pass a step, notice that Sprinter automatically advances to the next step.
You can also use the Previous and Next buttons  to navigate the test steps.
8. Before finishing the test, click the Hide Subtitles button .

Exercise 5 – Logging Defects

Imagine you notice a problem on the Open Order window. However, you want to finish the current test run, and return later to investigate the issue more deeply. In this situation, Sprinter allows you to add a defect reminder that you can view from the run results after you complete your run.

Complete the following steps:

1. Expand the Tools sidebar  located at the top edge of your Windows desktop.
2. Click the Smart Defect  drop-down menu and select Add Defect Reminder, as shown in the following screenshot.

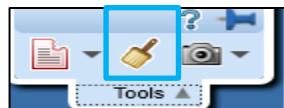


3. In the Defect Reminder dialog box, type the description: **Investigate the problem on the Flight Reservation window.**



4. Click the OK button.

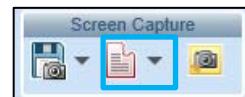
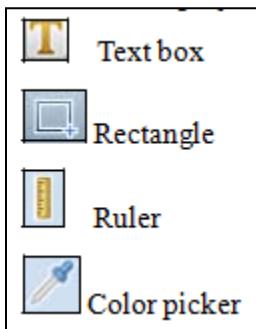
You can also submit a defect to ALM during the test run process. You capture and annotate a screenshot of the problem, and then submit a smart defect with the image attached.



5. On the Tools sidebar, click the Annotation Workspace button. The Annotation Tools sidebar is displayed on left edge of the Windows desktop, as shown in the following screenshot.



6. Spend some time using the different annotation tools:

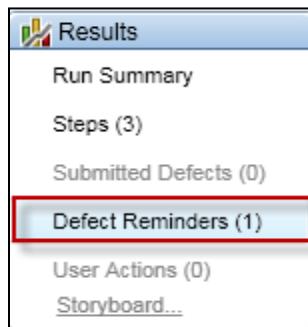


7. In the Annotation Tools sidebar, click the Smart Defect button.
8. In the Smart Defect Settings dialog, check Current Step and Include Last Step's Actual Results Information.

9. Check Current Screen Capture.
10. Click Submit Defect. The New Defect form is displayed.
11. Notice that the Description field has been filled in and there is an attachment containing your annotated screenshot.
12. In the Summary field, type **My defect**, and in the Severity field, select 2- Medium from the drop-down menu.
13. Click the OK button. The defect is submitted to ALM.
14. Close the Annotation Tools sidebar.
15. Expand the Run Control sidebar at the top edge of your Windows desktop and click the End Run button.

The test run summary includes the number of defects you submitted and the number of defect reminders you created. You review your defect reminders and convert them into defects that get submitted to ALM.

16. Click the Defect Reminders node from the Results area, as shown in the following screenshot.



17. Click the Submit Defect button  on Defect Reminders toolbar.
18. On the Smart Defect Setting dialog, select the following options:
 - a. Check Current Step.
 - b. Check Include Last Step's Actual Result Information.
 - c. Uncheck Current Screen Capture.
19. Click the Submit Defect button.
20. In the New Defect window, enter the following in the Summary field: **Issue with toolbar buttons**.
21. Click the OK button to submit the defect to ALM.
22. In the Severity field, select 2- Medium from the drop-down menu.

Exercise 6 – Creating a Macro

During the testing process, parts of your test might require that you perform a series of user actions that you want Sprinter to perform for you. Parts of your test might also involve performing the same set of actions in multiple areas of your application. Having Sprinter perform the set of actions can save testing time and reduce errors.

Complete the following steps:

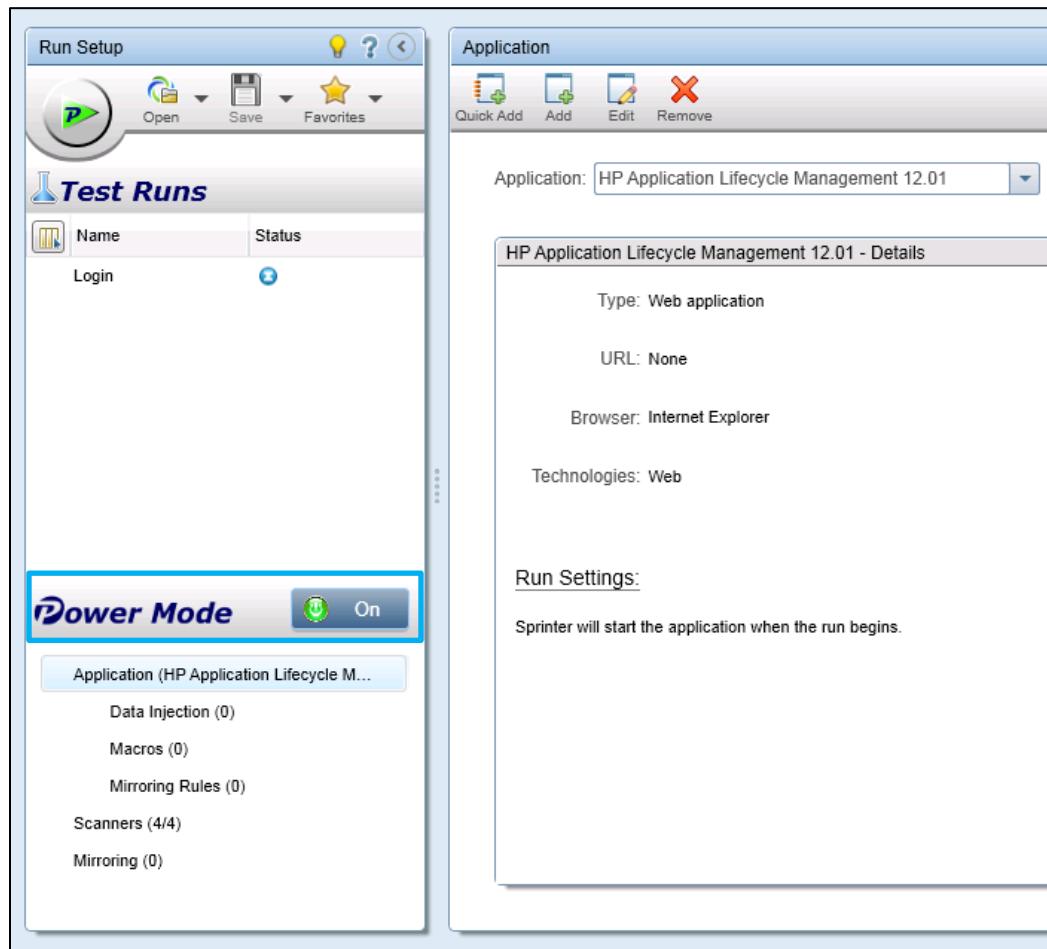


1. Click the Open HP ALM Test button. Expand the Root and Flight Reservation folders and click the Orders test set in the Integrated System Testing test set folder, as shown in the following screenshot.

| Configuration: Name | Test: Test Name | Status |
|--|-----------------|--|
| <input checked="" type="checkbox"/> [1]Login | Login | Not Comp |
| <input type="checkbox"/> [1]Create Order | Create Order | Passed |
| <input type="checkbox"/> [1]Open Order 3 | Open Order | Passed |
| <input type="checkbox"/> [1]Open Order 1 | Open Order | Passed |

2. Choose the [1]Login test and click the button.

3. Click the Power Mode button to activate Power Mode, as shown in the following screenshot.



4. Open the Flight Application using the Flight icon  on your desktop, but do not log in.

5. In Sprinter, select the Login test and then click the Run button . The main Sprinter window minimizes, and several sidebars are displayed along the edges of the Windows desktop.

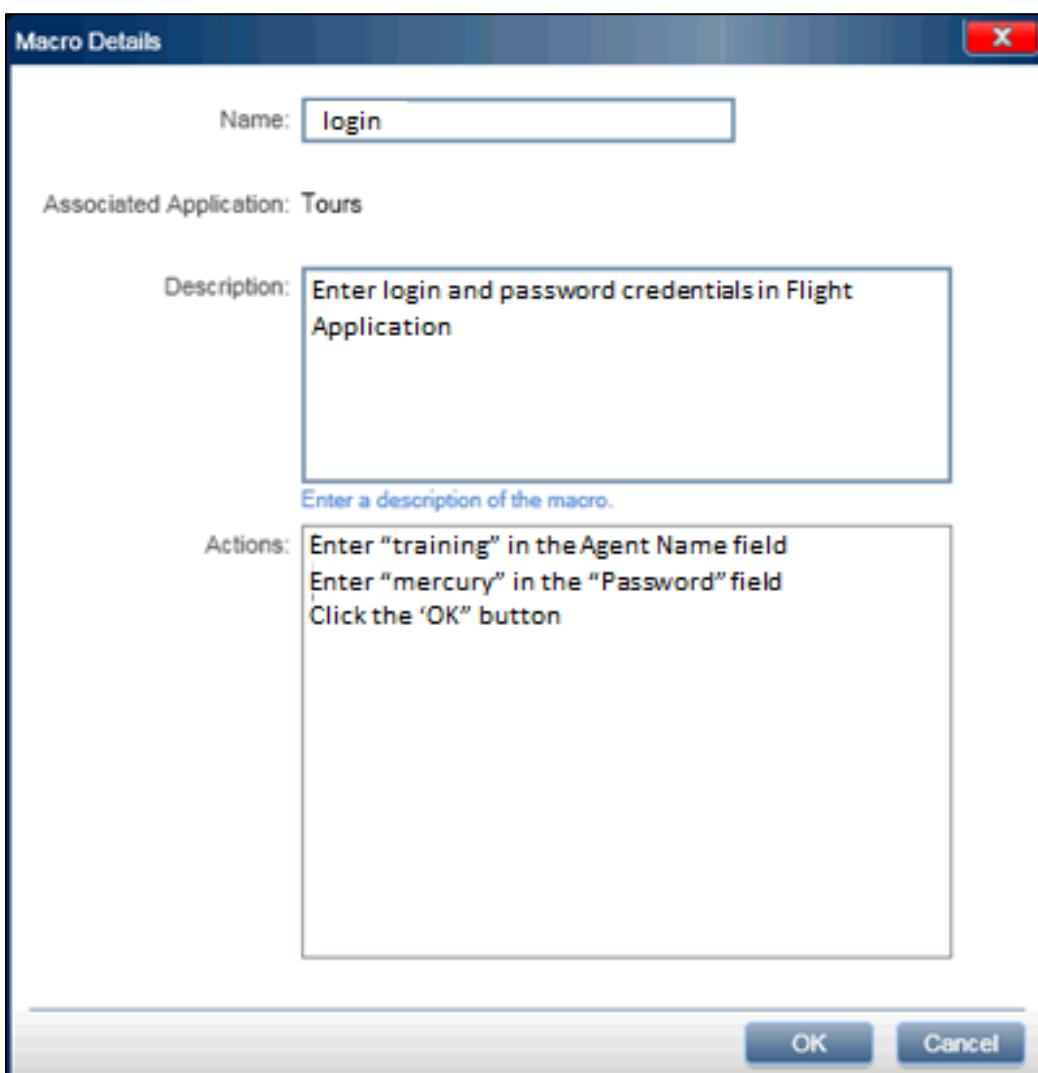
6. Expand the Macros tab  and click the Record macro option .
7. Enter Agent Name and Password in the Login dialog box. Click the  button.



8. Next expand the Macros tab and click the Stop recording macro option.
9. The Macro Details dialog box is displayed. In the Name field, enter **login** and in the Description field enter **Enter login and password credentials in Flight Application**.

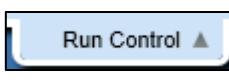
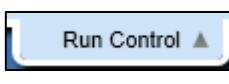
Note: The Description field is completed for you based on the actions that were completed.

Click the **OK** button, as shown in the following screenshot.



10. To test the macro, close the Flight Application and reopen it using the Flight application icon. Reopen the Flight Application using the Flight icon  on your desktop but do not log in.



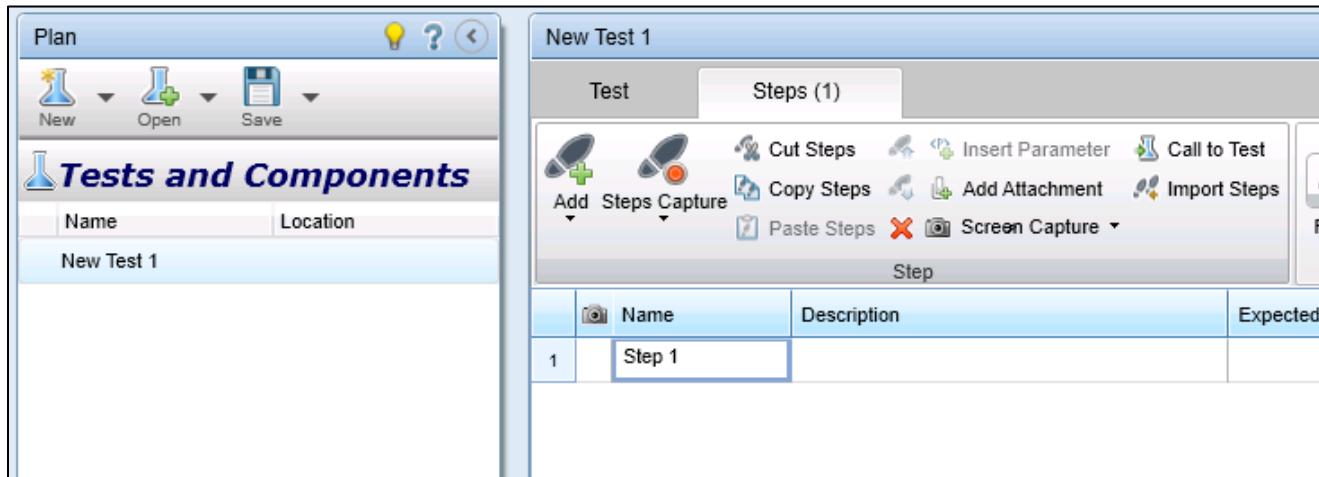
11. Expand the Macros tab  and click the Run button .
12. Expand the Run Control tab  and end the test run.

Exercise 7 – Authoring Tests in the Plan Area

Sprinter's Plan mode enables you to create and edit tests or components directly in Sprinter and save them to ALM. You create and edit steps manually in the Steps tab, or use Steps Capture to automatically generate steps based on your user actions. You can then add screen captures or attachments to steps. You can define input parameters for each step.

Complete the following steps:

1. Click the **Plan** tab at the top of the Sprinter window.
2. Click the New Test  button to create a new HP ALM test, as shown in the following screenshot.



3. Complete the test information for Step 1 by typing into the fields.
 - a. In the Name field, enter **1. - Login**.
 - b. In the Description field, enter **Perform the following steps:**
 - 1. Enter username**
 - 2. Enter Password**
 - 3. Click the Login button**

- c. In the Expected Result field, enter **The welcome page appears**, as shown in the following screenshot.

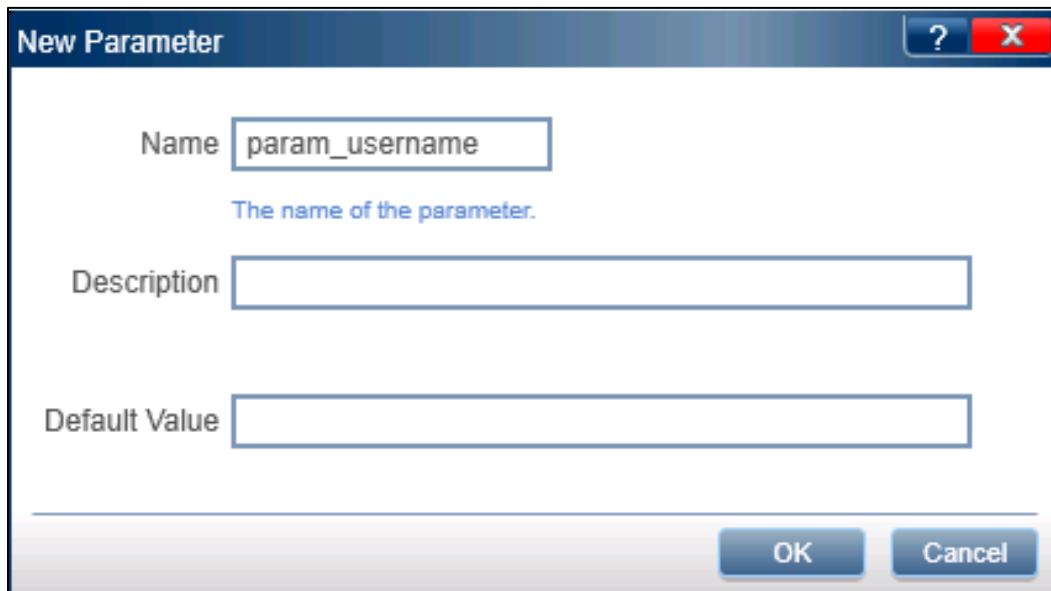
| New Test 1 | | | | |
|-------------|----------------|------------|---|---------------------------|
| Test | | Steps (1) | | |
| Add | Steps Capture | Cut Steps | Insert Parameter | Call to Test |
| Paste Steps | Screen Capture | Copy Steps | Add Attachment | Import Steps |
| Step | | Font | Paragraph | Find |
| | | Name | Description | Expected Result |
| 1 | Login | | Perform the following steps: 1. Enter Username 2. Enter Password 3. Click the Login button | The welcome page appears. |
| | | | | Attachments |

4. Parameterize the Username by highlighting it and then clicking the Insert Parameter  button, as shown in the following screenshot.

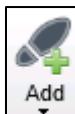
| New Test 1 | | | | |
|-------------|----------------|------------|--|---------------------------|
| Test | | Steps (1) | | |
| Add | Steps Capture | Cut Steps | Insert Parameter | Call to Test |
| Paste Steps | Screen Capture | Copy Steps | Add Attachment | Import Steps |
| Step | | Font | Paragraph | Find |
| | | Name | Description | Expected Result |
| 1 | Login | | Perform the following steps: 1. Enter Username 2. Enter Password 3. Click the Login button | The welcome page appears. |
| | | | | Attachments |

5. The Insert Parameter dialog box is displayed. Click the New Parameter  button.

6. The New Parameter dialog box is displayed. In the Name field, enter **param_username**, click the **OK** button, and then click the **Select** button on the Insert Parameter dialog box, as shown in the following screenshot.



7. Repeat Steps 4 through 6 to parameterize the password.



8. Click the Add a Step button to add the next step.

9. Use the following information to complete Step 2:

| | |
|------------------|--------------------------|
| Name | 2.- Flights Page |
| Description | Click the Flights button |
| Expected Results | Find a Flight Page opens |



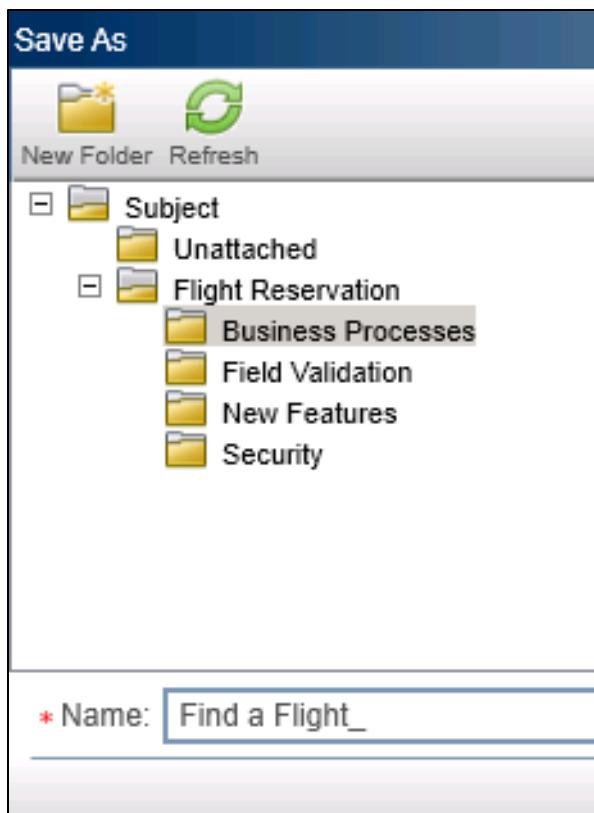
10. Click the Add a Step button to add another step.

11. Use the following information to complete Step 3.

| | |
|------------------|--|
| Name | 3.- Find Flight |
| Description | Perform the following steps: 1. Select Departing City <<<param_departure_city>>> in departure city field |
| Expected Results | 2. Select Arrival City <<<param_arrival_city>>> in the arrival city field |

Note: When using three bracket notations for a parameter, Sprinter automatically creates a new Parameter if it doesn't already exist.

12. Click the  button to save the test. The Save As dialog box is displayed. In the Name field, enter **Find a Flight**. Save it in the Business Process folder under the Flight Reservation folder, as shown in the following screenshot.

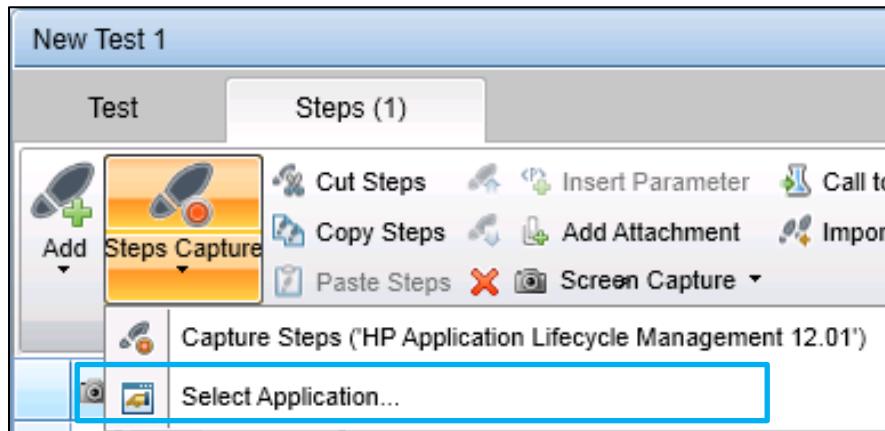


13. Click the OK button to save the test in this location.

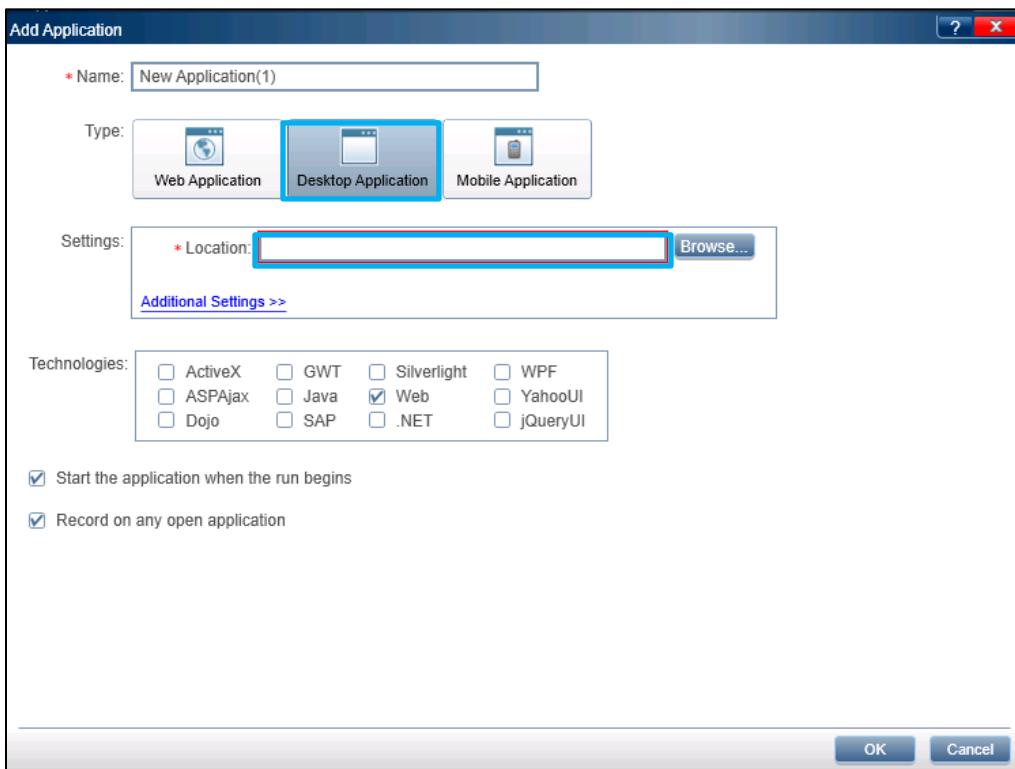


14. Click the New Test button to create a new ALM test.

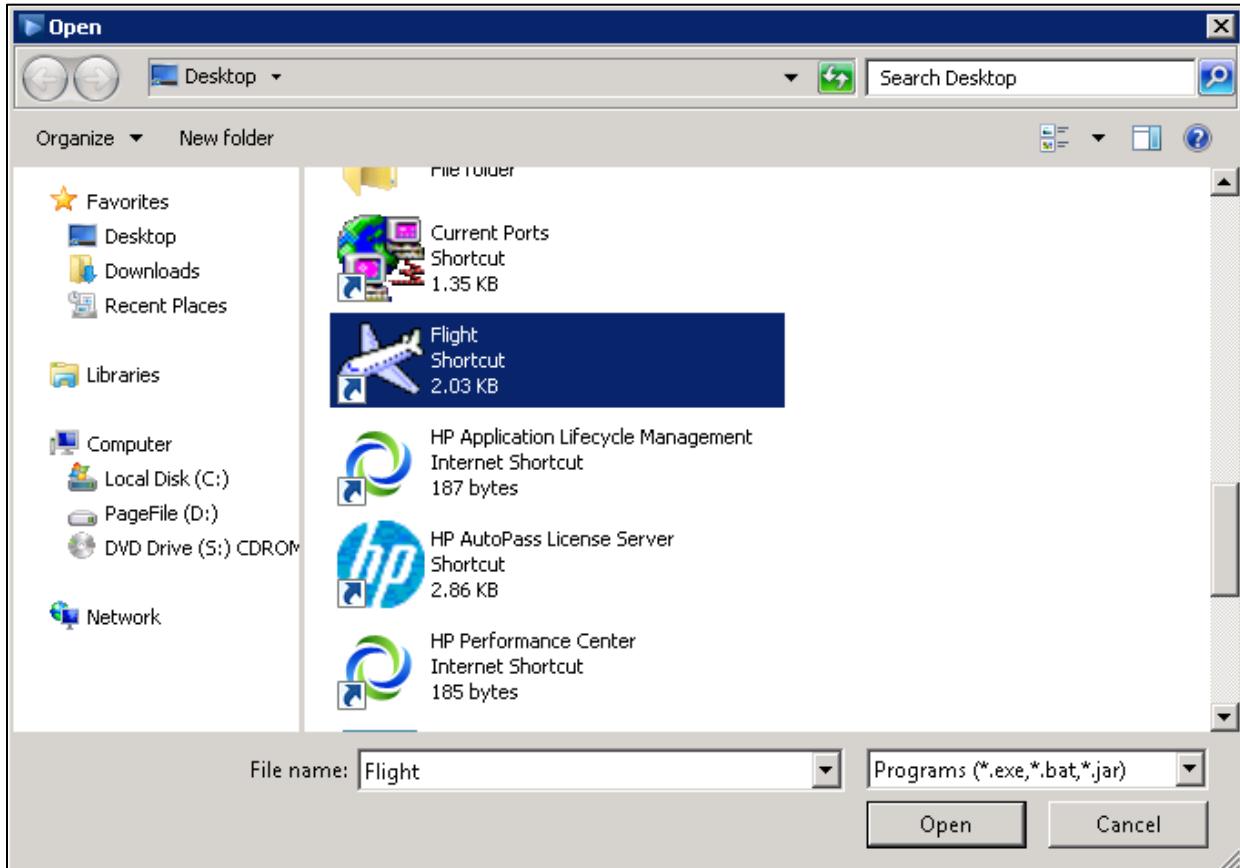
15. Click the down arrow on the Steps Capture step. Choose the Capture Steps ("Flight Application"). If Flight Application is not an option, then choose Select Application, as shown in the following screenshot.

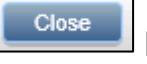


a. The Select Application dialog box is displayed. Click the icon to open the Add Application dialog box.



- b. Click the Desktop Application icon and in the Settings area click the browse button to browse for the location of the HP Web Tours application. Navigate to the desktop files, choose the Flight Application, and click the  button, as shown in the following screenshot.

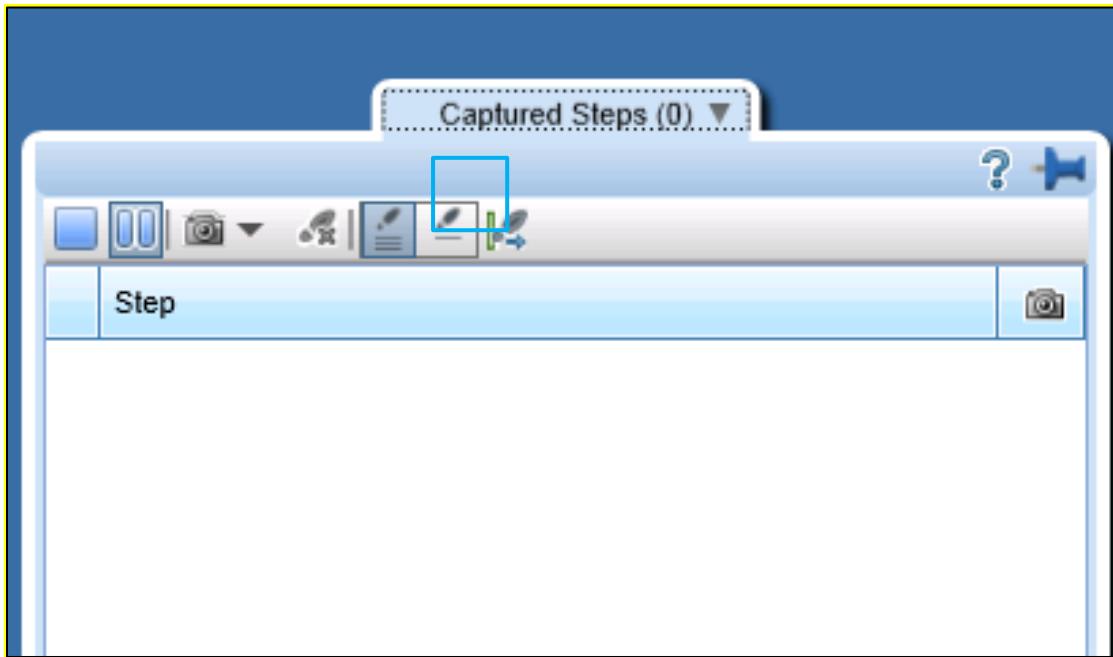


- c. In the Name field of the Add Application dialog box, enter **Flight Application**. Click the  button to close the Add Application dialog box and click the  button to close the Select Application dialog box.



16. Click the Steps Capture  button.

17. The Captured Steps tab is displayed on the screen. Choose the Single Step per action  icon, as shown in the following screenshot.



18. Enter **training** in the Agent Name field and **mercury** in the Password field of the Flight Application and click the OK button.

19. Choose the menu item on File → Exit in the Flight Reservation window.

20. Click the End Step Capture  button.

21. Review the steps that were captured in the test steps area. Add the expected results.



22. Click the  button to save the test. The Save As dialog box is displayed. In the Name field, enter **Flight Application**. Save it in the Business Process folder under the Flight Reservation folder.

23. Close Sprinter.

Lab 13 – Defect Tracking

Objectives

After completing this lab, you should be able to:

- Manually create a defect
- Create a defect based on a test run
- Associate a defect with a requirement

Scenario

Defect data helps you monitor the quality of your application. You can link defects to other entities and reports can ensure that defects are resolved completely in a timely manner.

You associate a defect uncovered in the Logon test with the following:

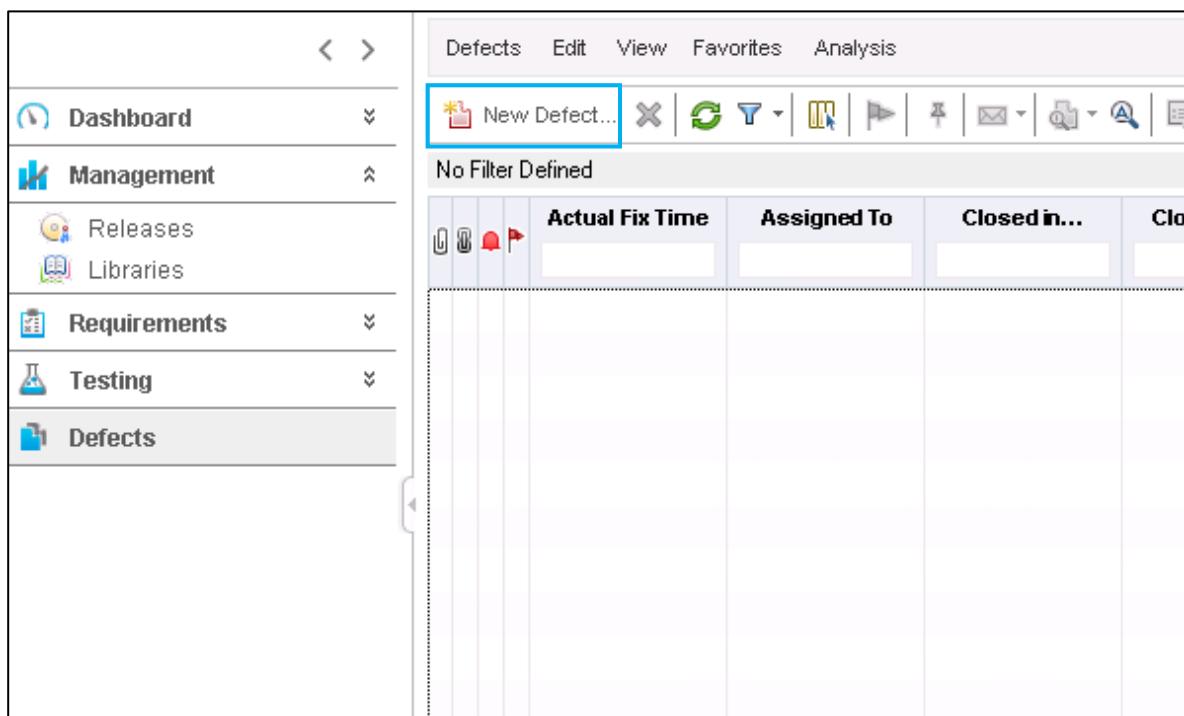
- A test run of the Logon test – This defect-test run association indicates that a single test run of the Logon test failed.
- The Create Order functional requirement – This defect-requirement association implies that the Create Order functional requirement cannot be met because the Logon test has a defect.

You also log a defect to report the graphical calendar function, which is not yet implemented for the Date of Flight field.

Exercise 1 – Manually Creating a Defect

To manually create a defect, perform the following steps:

1. Log in to ALM using **training** as the Username and **welcome** as the Password. After authentication, select the STUDENT00_ESS domain and 9FlightApplication project.
2. In the sidebar, select the **Defects** module.
3. To create a defect for the Calendar function that is not yet implemented for the Date Of Flight defect, complete the following steps:
 - a. On the toolbar, click the **New Defect...** button.



- b. The New Defect dialog box is displayed, as shown in the following screenshot.

The screenshot shows the 'New Defect' dialog box. At the top, there are buttons for 'X', 'Q', 'AB', 'AB', and 'AP'. Below them are links for 'Use Default Values' and 'Set Default Values'. The main area has tabs for 'Summary' (which is selected), 'Details' (which is active), and 'Attachments'. The 'Details' tab contains several input fields: 'Detected By' (set to 'alex_alm'), 'Detected on Date' (set to '12/08/2014'), 'Severity' (dropdown menu), 'Actual Fix Time' (empty), 'Assigned To' (dropdown menu), 'Closed in Version' (dropdown menu), 'Closing Date' (dropdown menu), 'Detected in Cycle' (dropdown menu), 'Detected in Release' (dropdown menu), and 'Detected in Version' (dropdown menu). Below these fields is a 'Description:' label followed by a rich text editor toolbar with buttons for bold (B), italic (I), underline (U), link (A), and other document operations. At the bottom right of the dialog are 'Submit', 'Close', and 'Help' buttons.

- c. In the *** Summary:** field, type **Calendar not implemented for Date of Flight field.**

- d. In the *** Severity:** field, select 2-Medium, as shown in the following screenshot.

New Defect

Summary: Calendar not implemented for Date of Flight field

Details

Attachments

Detected By: alex_alm
Severity: 2-Medium
Assigned To:
Closing Date:
Detected in Release:
Detected on Date: 12/08/2014
Actual Fix Time:
Closed in Version:
Detected in Cycle:
Detected in Version:

Description:
Calendar not implemented for Date of Flight field

Submit Close Help

- e. Click the **Submit** button to save the defect and then click the **Close** button to close the New Defect dialog box.

- f. From the Defects grid, record the Defect ID number:

| Analysis | | | | | | |
|-------------|--------------|--------------|----------|-----------|------------------------------|----------|
| Assigned To | Closed in... | Closing Date | Comments | Defect ID | Description | Detected |
| | | | | | Calendar not imp... alex_alm | |

Defect ID number:

Exercise 2 – Creating a Defect Based on a Test Run

As stated in the requirements, the login Password field should be case sensitive. However, the testers have observed that the application currently does not enforce this rule.

Complete the following steps:

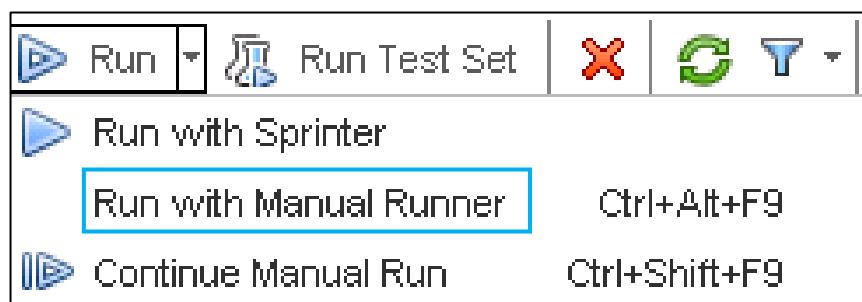
1. Observe the defect in the login process:

- a. On the ALM sidebar, select the **Test Lab** module under the Testing tab.
- b. From the Test Sets tree, expand the **Flight Reservation** folder and select the **Orders** test set in the **Integrated System Testing** folder (**Flight Reservation → Integrated System Testing → Orders**).

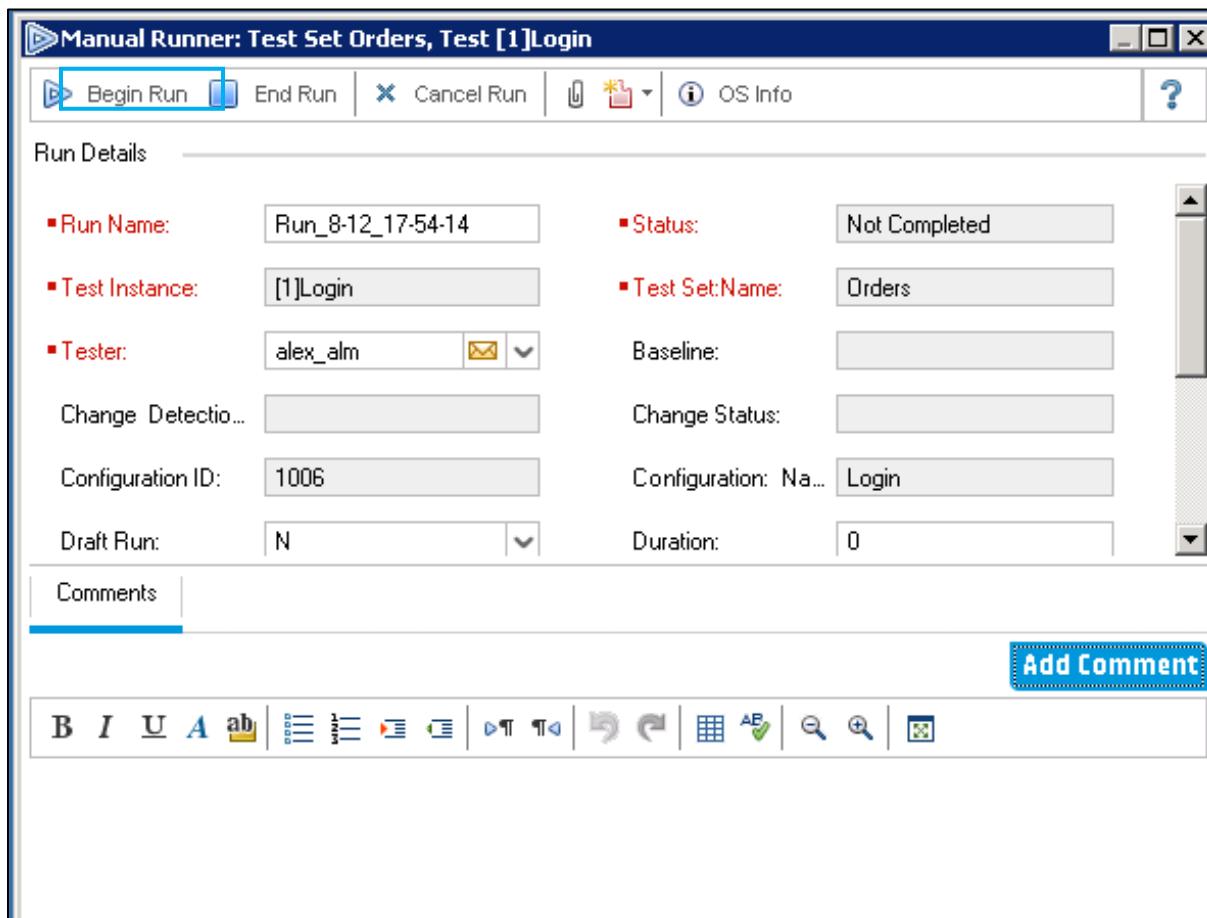
The screenshot shows the HP ALM Test Lab interface. On the left, the Test Sets tree displays a hierarchy: Root > Flight Reservation > Integrated System Testing > Orders. The 'Orders' node is selected. On the right, an execution grid lists several test cases with their names, types, and statuses. The grid has columns for Name, Test: Test Name, Type, Status, and Iterations. All listed tests are passed.

| | Name | Test: Test Name | Type | Status | Iterations |
|--|-----------------|-----------------|-----------------|--------|------------|
| | [1]Login | Login | MANUAL | Passed | |
| | [1]Create Order | Create Order | QUICKTEST_TE... | Passed | |
| | [1]Open Order 3 | Open Order | MANUAL | Passed | |
| | [1]Open Order 1 | Open Order | MANUAL | Passed | |

- c. Click the **Execution Grid** tab, and then select the Login test. Click the dropdown for Run and select Run with Manual Runner.



- d. Click Begin Run  to execute the test, as shown in the following screenshot.



- e. Execute the test using the Flight Application as in the previous lesson, except fail the Click OK step because the application allows the user to log in with a bad password.

Manual Runner: Test Set Orders, Test [1]Login

| Step Name | Status | Exec Date | Exec Time |
|----------------------|--------|------------|-----------|
| 1 - Enter Agent N... | Passed | 12/08/2014 | 17:57:05 |
| 2 - Enter Passwo... | Passed | 12/08/2014 | 17:57:06 |
| 3 - Click OK | Failed | 12/08/2014 | 17:57:10 |

Description

Click the OK button.

Expected: Actual:

If valid user and password, Flight Reservation screen is displayed.
If invalid user or password, error message is displayed.

The screenshot shows the 'Manual Runner' interface for a test named 'Orders'. A table lists three steps: '1 - Enter Agent N...' (Passed), '2 - Enter Passwo...' (Passed), and '3 - Click OK' (Failed). Below the table, a 'Description' section contains the instruction 'Click the OK button.' and two 'Expected' and 'Actual' sections showing the same UI element (a button labeled 'OK').

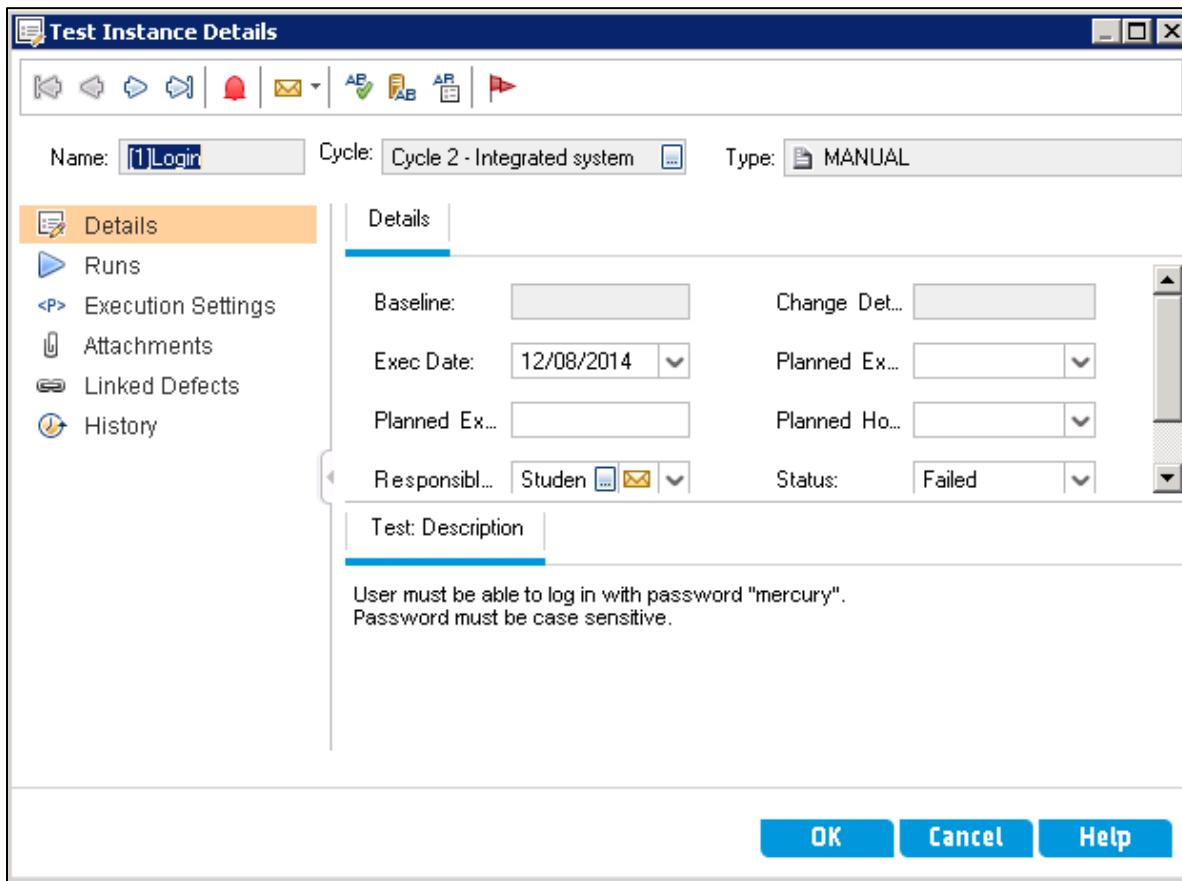
- f. On the Manual Runner toolbar, click the End Run button.

2. To report problems encountered during the login process, complete the following steps:

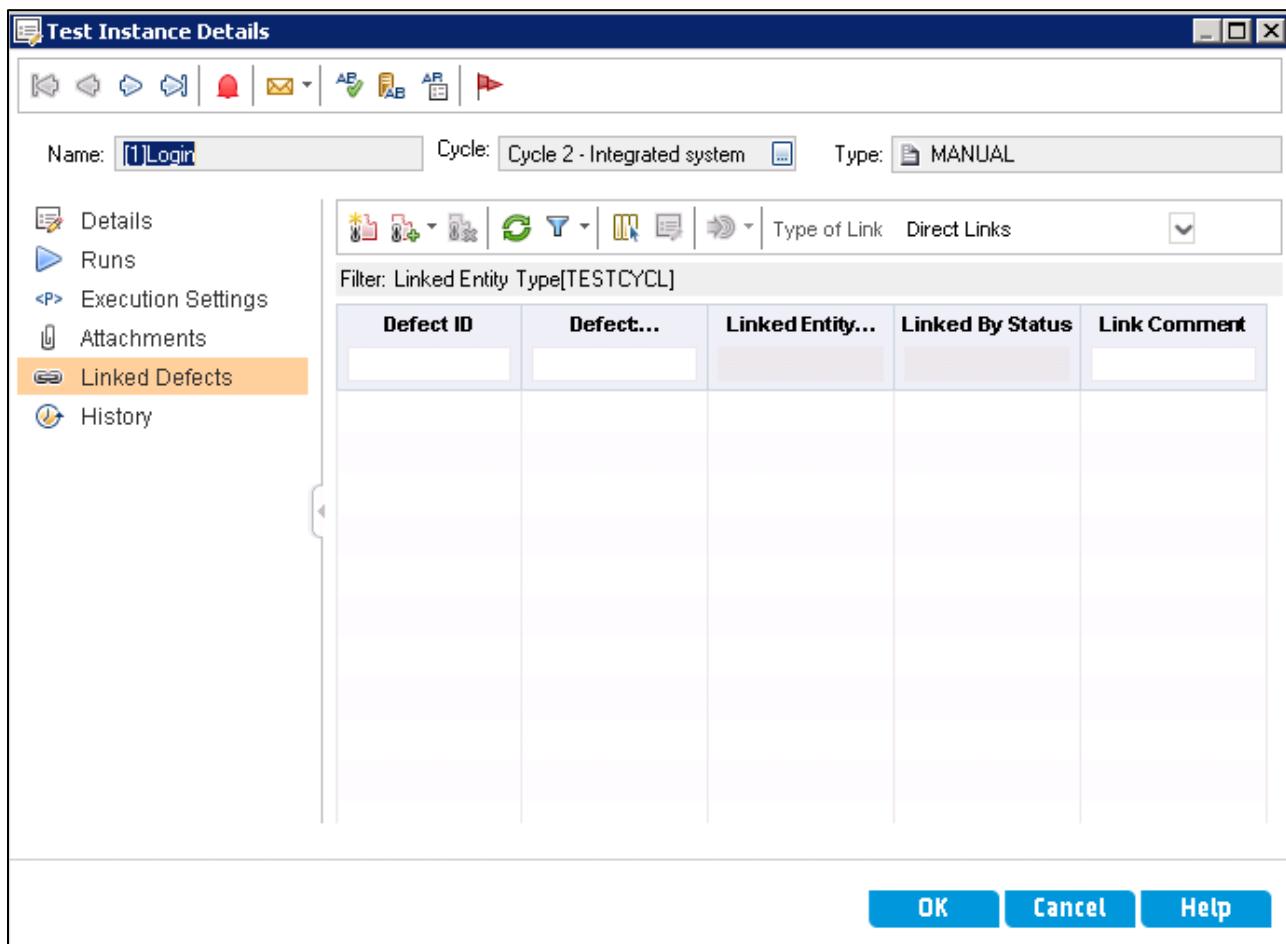
- a. In the right pane, ensure that the **Execution Grid** tab is selected.
- b. On the Execution Grid page, right-click the Login test and select Test Instance Details, as shown in the following screenshot.

The screenshot shows the HP ALM interface. The left pane displays a tree view of test sets, including Root, Unattached, Flight Reservation, Integrated System Testing (with Orders and Security), New Features Testing, Performance Testing, and User Acceptance Testing. The right pane shows the Execution Grid tab selected, displaying a grid of test instances. One instance, [1]Login, is selected. A context menu is open over this instance, with 'Test Instance Details' highlighted. Other options in the menu include Alerts, Flag for Follow Up, Copy URL, Attachments, Remove Test Instances from Test Set, Go to Test in Test Plan, and Go to Configuration in Test Plan.

The Test Instance Details window is displayed, as shown in the following screenshot.

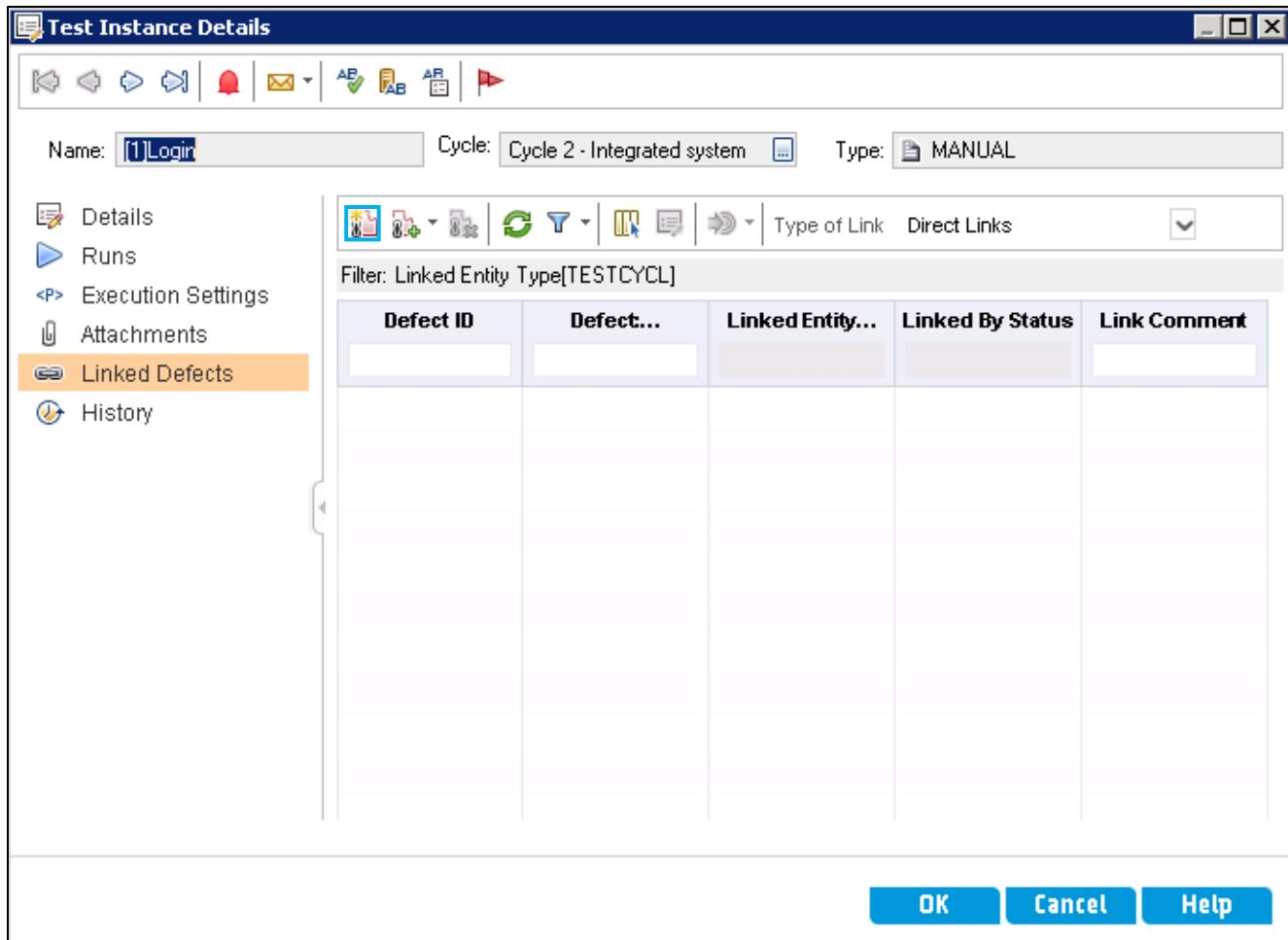


- c. In the Test Instance Details window, click the Linked Defects option in the sidebar, as shown in the following screenshot.

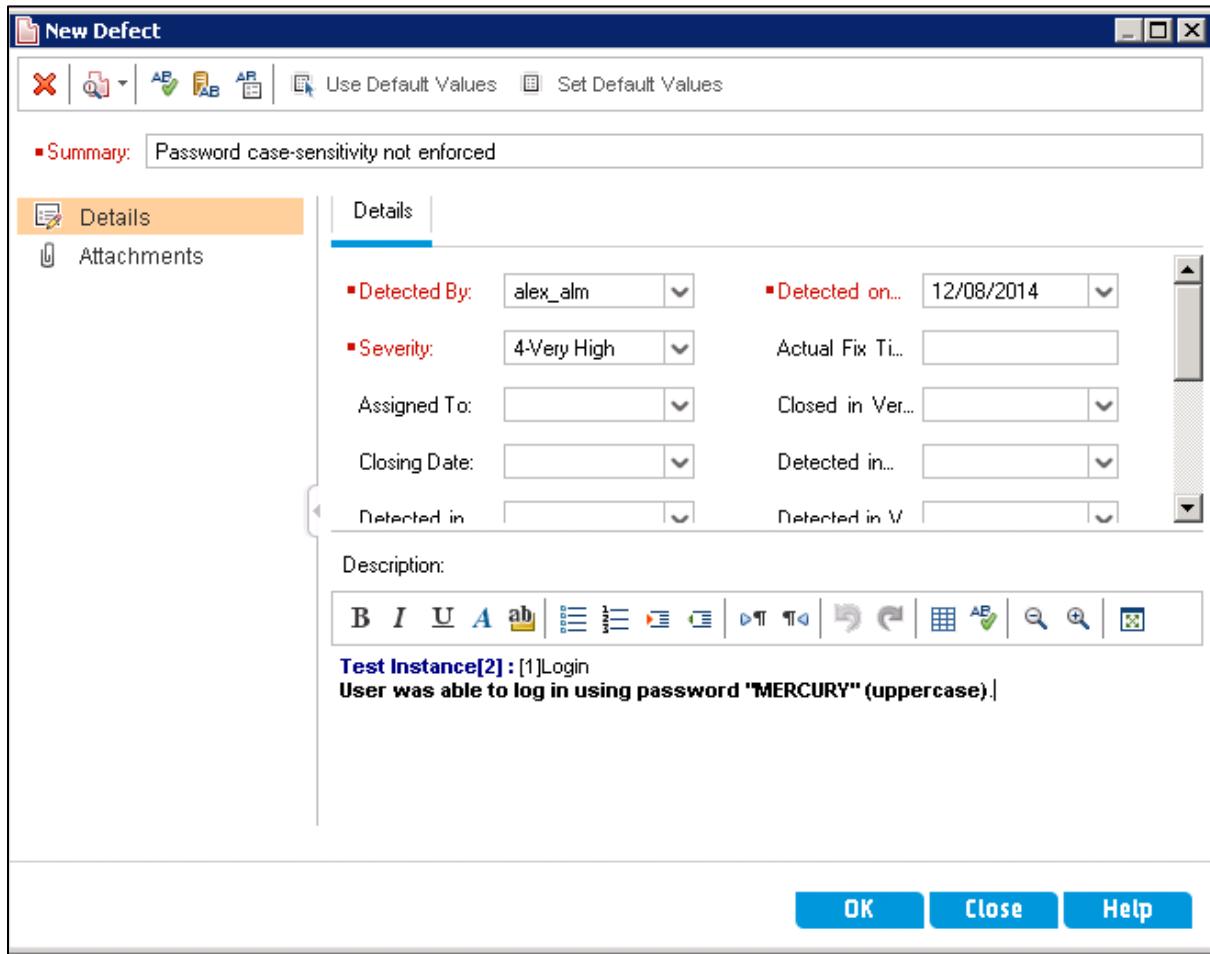


Any linked defects are displayed in the right pane.

d. Click the Add and Link Defect  button.



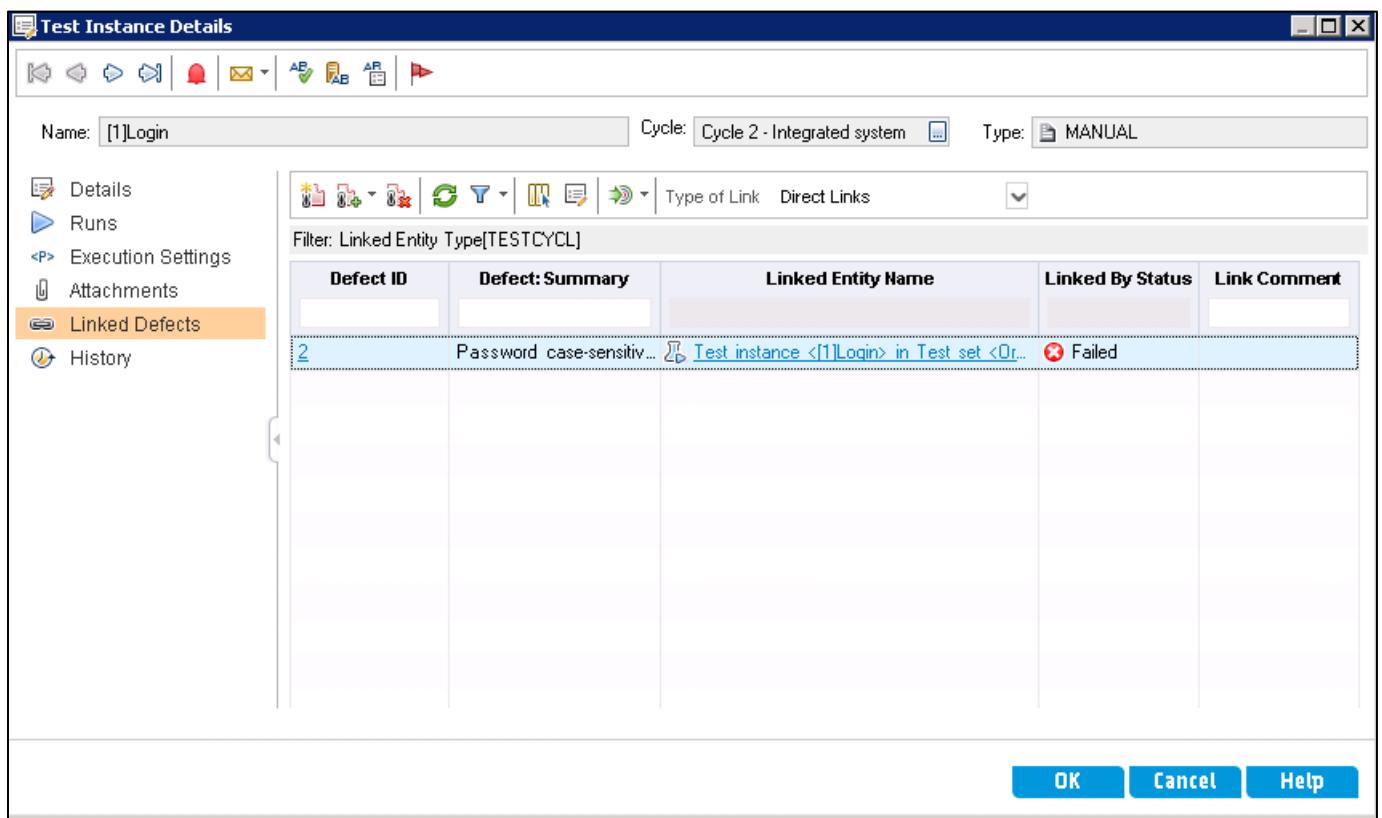
- e. The New Defect window is displayed. In the Summary field, type **Password case-sensitivity not enforced**.
- f. The failure to enforce the password case-sensitivity prevents further testing, so the impact of this defect is high. In the Severity field, select 4 –Very High.
- g. In the Description field, enter **User was able to log in using password "MERCURY" (uppercase)**.



- h. Click the **OK** button to close the New Defect window and record the Defect ID number:

Defect ID number: _____

Your result should be similar to the following screenshot:



3. Click the button to close the Test Instance Details window.

Exercise 3 – Associating a Defect with a Requirement

The calendar function for the Date Of Flight field is not yet implemented and the Login test failed, so these defects should be associated with the Create Order requirement because the requirement cannot be met until these tests pass. This association helps you to track the status of the Create Order requirement when the defects are fixed by the development team.

Complete the following steps:

1. To associate defects with a requirement:

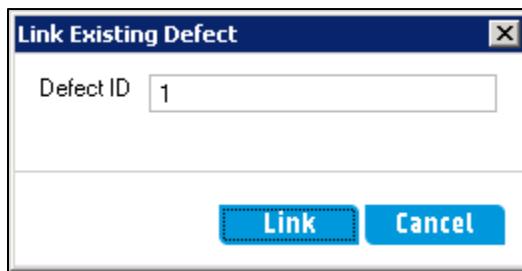
- a. On the sidebar, click the Requirements module.
- b. From the menu, select View→Requirements Details.
- c. Expand the Business Processes folder within Flight Reservation folder and select the Create Order requirement.
- d. In the right pane, click the Linked Defects tab, as shown in the following screenshot.

This screenshot shows the Requirements Details interface. The left sidebar has 'Requirements' selected. The main pane shows a tree view under 'Flight Reservation' with 'Create Order' selected. The right pane has tabs for 'Details', 'Rich Text', 'Attachments', and 'Linked Defects'. The 'Linked Defects' tab is highlighted with a blue border. Below it, there's a table with columns for 'Defect ID', 'Defect...', 'Linked Entity...', and 'Linked By...'. A dropdown arrow in the 'Defect...' column is also highlighted with a blue border.

- e. On the Linked Defects page, click the Link Existing Defect drop-down arrow and select BY ID. The Link Existing Defect dialog box is displayed, as shown in the following screenshot.



- f. In the Defect ID field, type the defect ID that you recorded in Task 1, Step 3f, as shown in the following screenshot.



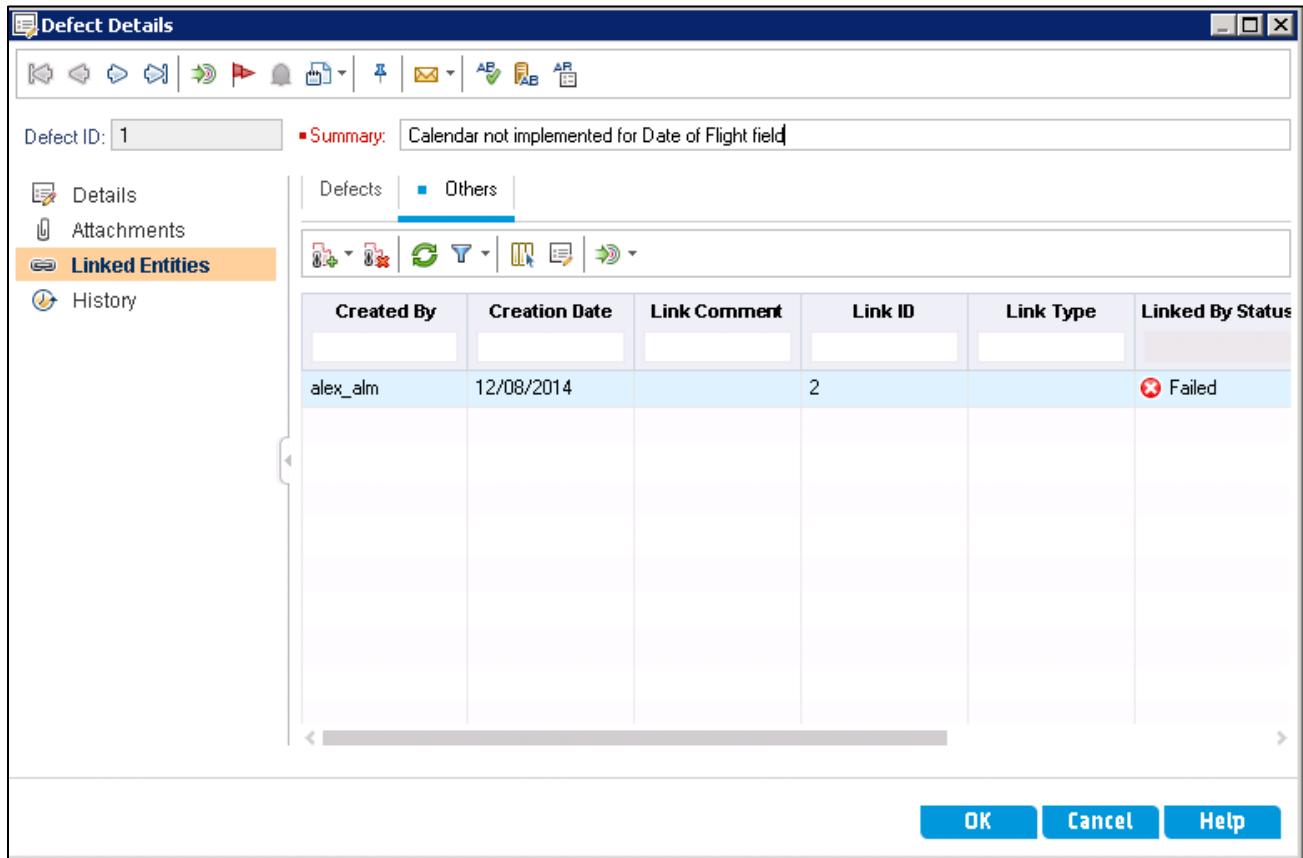
- g. Click the **Link** button to link the Create Order requirement to the defect. The linked defect is displayed on the Linked Defects page.
- h. Repeat Steps 1e through 1g for the Defect ID that you recorded in Task 2, Step 2i.
2. Compare your screen with the following screenshot:

| Defect ID | Defect... | Linked Entity... | Linked By Status | Link Comment |
|-----------|---------------------|------------------|------------------|--------------|
| 1 | Calendar not imp... | Create Order | Failed | |
| 2 | Password case-s... | Create Order | Failed | |

3. To verify that the defects were properly linked, complete the following steps:

- On the ALM sidebar, click the Defects module 
- On the toolbar, click Refresh All 
- Note the link  symbol next to each defect created in Task 1 and Task 2, indicating that the defects are linked to another entity.

- d. For each of the defects, click its link  symbol to the left of the defect to open the Defect Details window, as shown in the following screenshot.



- e. Verify that the Linked by status value validates as defined in the defect link created in Task 1 and Task 2.
- f. Click the  button to close the Defect Details dialog box.
- g. Log off from ALM.

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Lab 14 – Version Control

Objectives

After completing this lab, you should be able to:

- Check out entities
- Check in entities
- Compare versions
- Promote an older version

Scenario

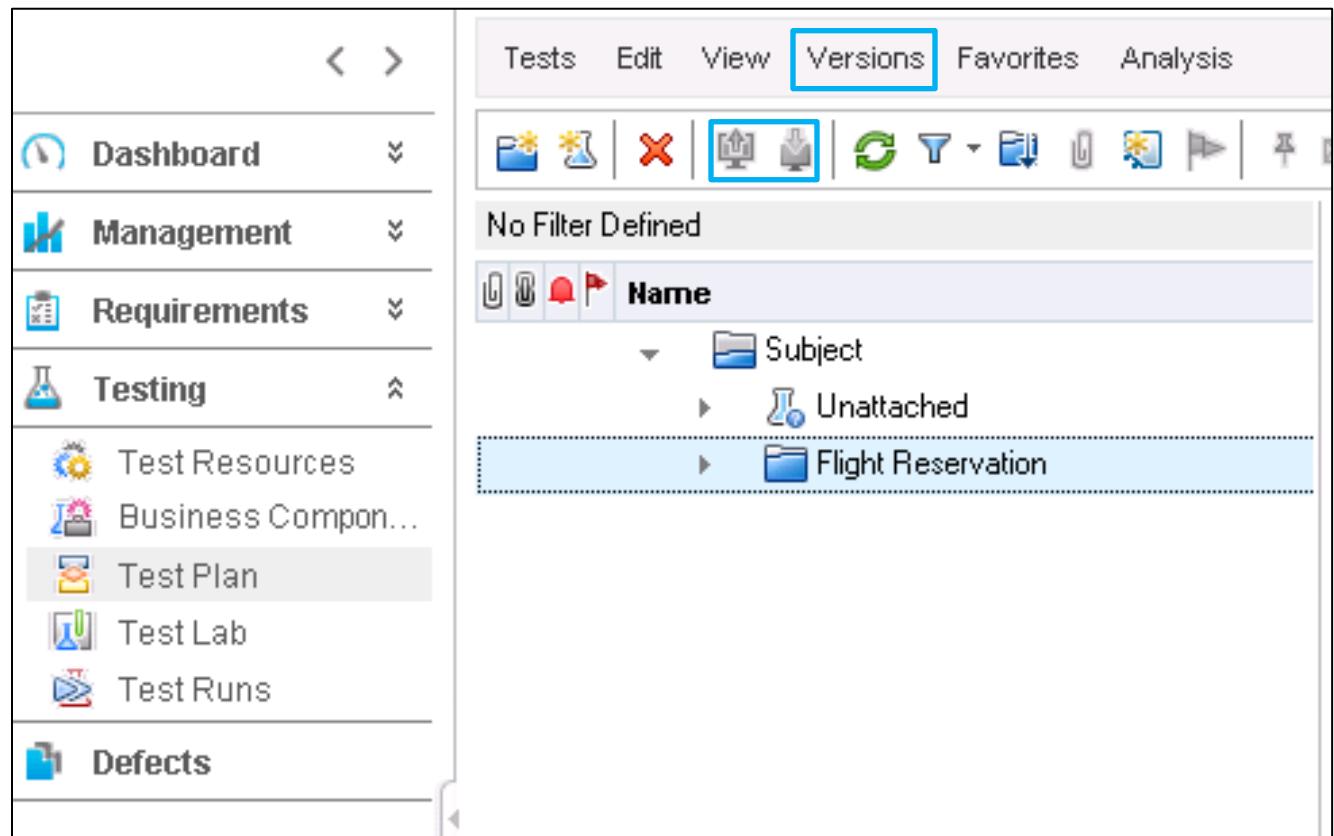
In this lab, you open an existing project, in which versioning has been enabled by the site administrator. You check in and check out entities and see how an entity that has been checked out becomes locked, thereby preventing you or other users from making any changes. You also view and compare previous versions of an entity, and promote a previous version of an entity.

Exercise 1 – Checking Out Entities

In this exercise, you see how checking out entities protects them from revision and learn how to check out entities.

Complete the following steps:

1. Log in to the Student00_ESS domain and 10FlightApplication project, using **training** as the user name and **welcome** as password
2. Select the Test Plan module within the Testing tab. Note that the Versions menu is displayed in the Test Plan menu bar, and the Check In and Check Out icons appear in the button bar.



3. Using the following steps, note the results when someone else checks out an entity:
 - a. Right-click the Flight Reservation folder and select Expand All.
 - b. Click the Create Order test in the Business Processes folder.

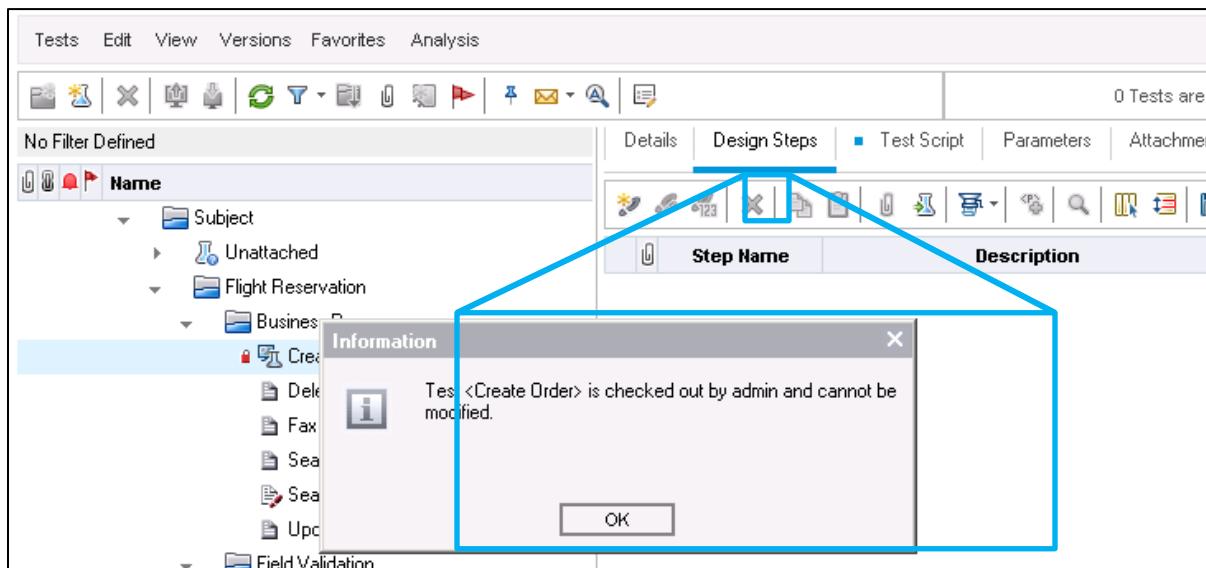
- c. Note the red lock icon to the left of the test name and the notation (checked out by admin).

The screenshot shows the 'Tests' tab selected in the top menu. Below the toolbar, there is a message 'No Filter Defined'. The main area displays a hierarchical tree view under the 'Name' column. The tree structure includes 'Subject', 'Unattached', 'Flight Reservation', 'Business Processes', and three specific test cases: 'Create Order (checked-out by admin)', 'Delete Order', and 'Fax Order'. The 'Create Order' test case is highlighted with a blue selection bar and has a red lock icon to its left.

- d. Select the Design Steps tab and note that most of the buttons are grayed out. You are prevented from making any changes to the Create Order entity at this time.

The screenshot shows the 'Design Steps' tab selected in the top navigation bar. Below the toolbar, there is a table with columns for Step Name, Description, and Expected. The toolbar above the table is highlighted with a blue selection bar, and most of the buttons are grayed out, indicating they are disabled.

- e. If you attempt to create a new step by clicking the New Step  button, a dialog box opens that states: Test <Create Order> is checked out by admin and cannot be modified.

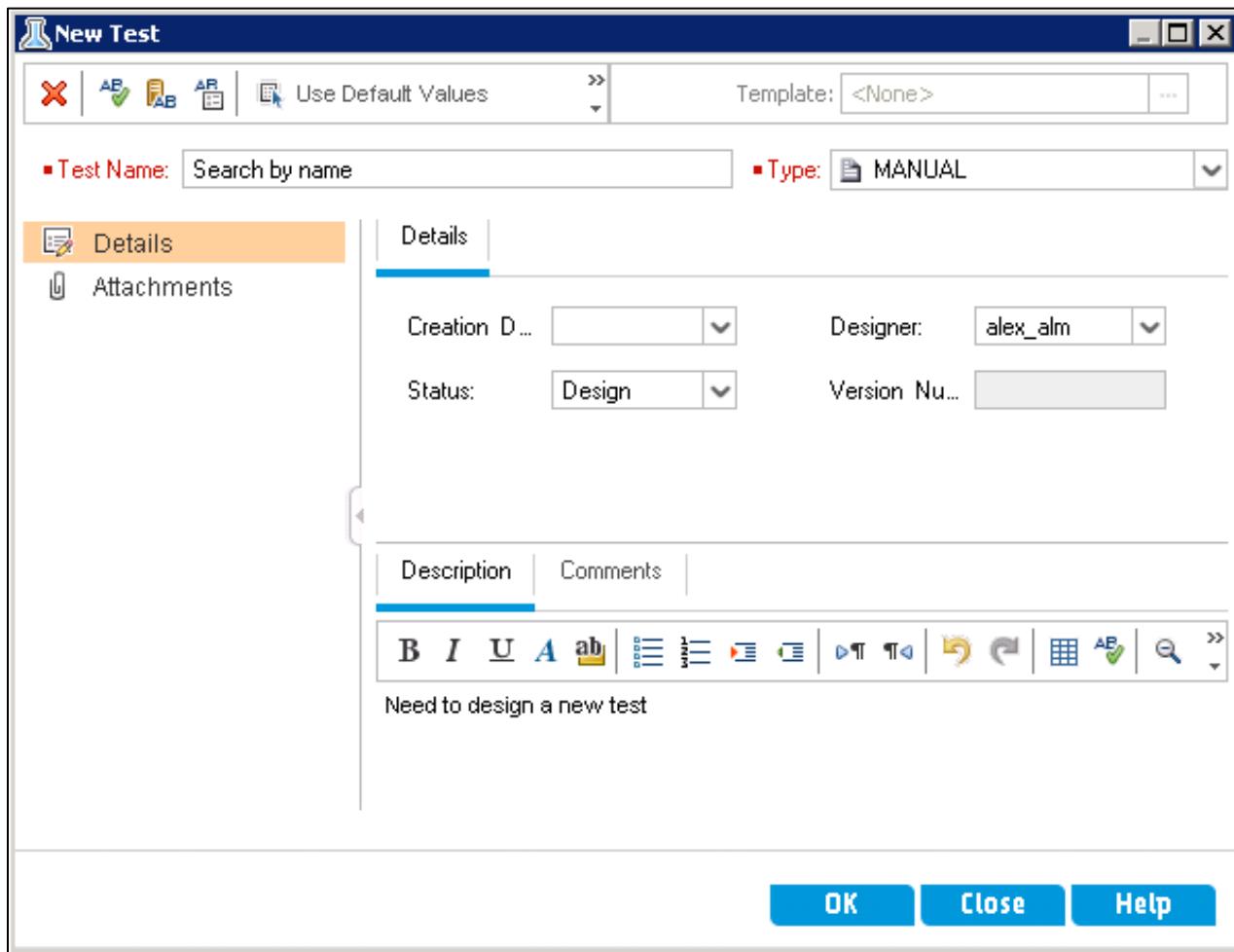


- f. Click the OK  button.

4. Using the following steps, create a new entity and check it out:

a. Select the Business Processes folder.

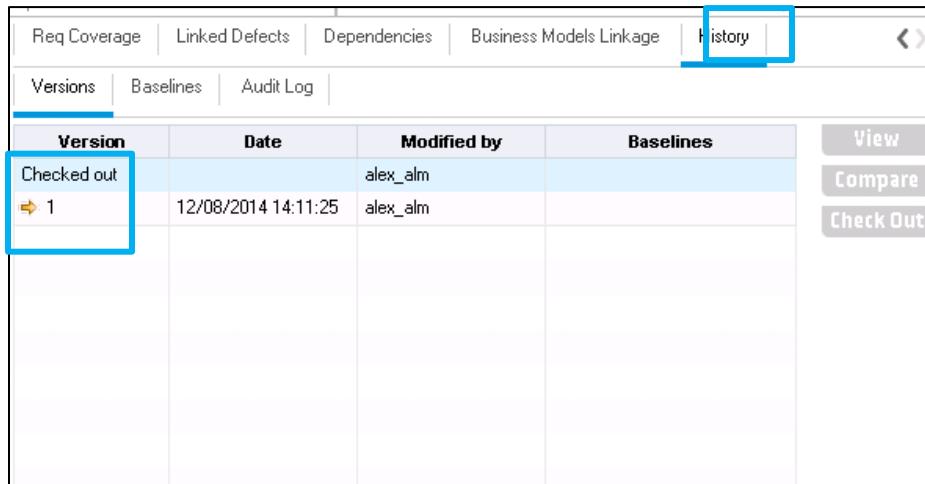
- b. Click the New Test  button or press Ctrl +N. The New Test dialog box is displayed.
- c. In the Type field, ensure that MANUAL is selected for the type and in the Test Name field, enter **Search by name**, as shown in the following screenshot.



- d. In the Description field, type **Need to design a new test**. Click the  button.

What types of changes do you observe in the window?

- e. Click the History tab to view the version status of this brand new item. Note that version 1 exists and you have a new version checked out.
 (You might have to scroll to the right to see the History tab.)

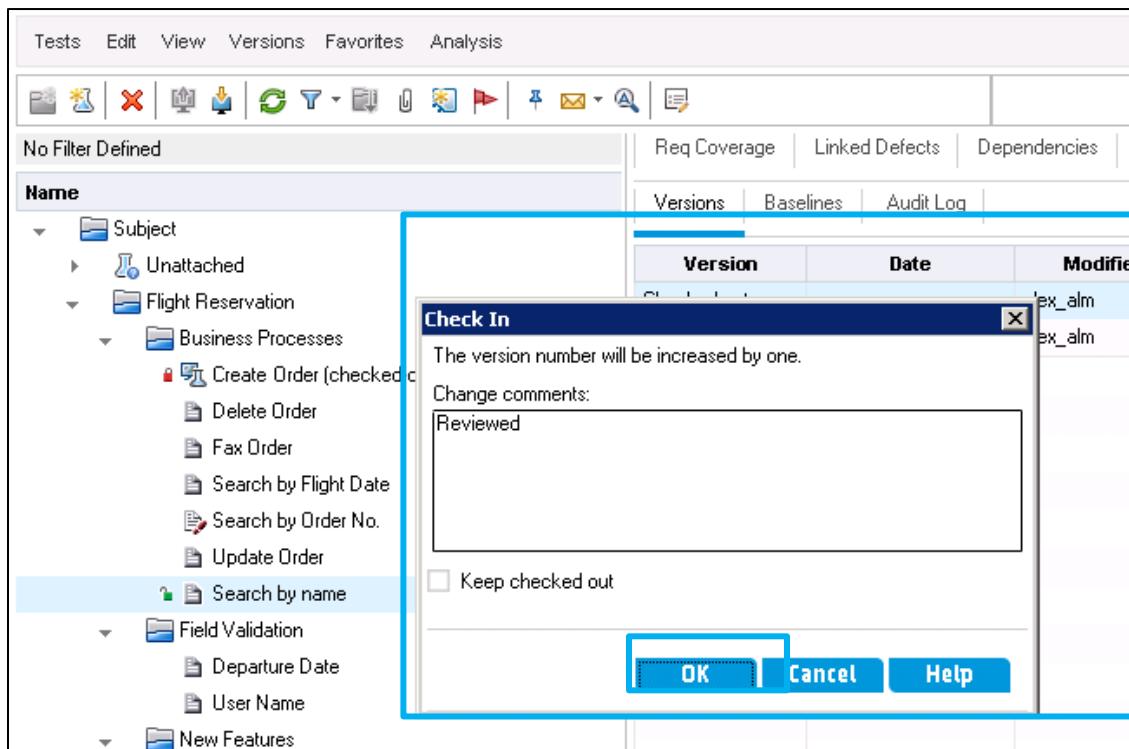


The screenshot shows the History tab of a versioned item in HP ALM. The table has columns: Version, Date, Modified by, and Baselines. A single row is present, highlighted with a blue border. The row contains the value 'Checked out' under 'Version', '12/08/2014 14:11:25' under 'Date', 'alex_alm' under 'Modified by', and an empty column under 'Baselines'. To the right of the table are three buttons: 'View', 'Compare', and 'Check Out'. The 'Check Out' button is highlighted with a blue border.

| Version | Date | Modified by | Baselines |
|--------------------|---------------------|-------------|-----------|
| Checked out ↳ 1 | 12/08/2014 14:11:25 | alex_alm | |

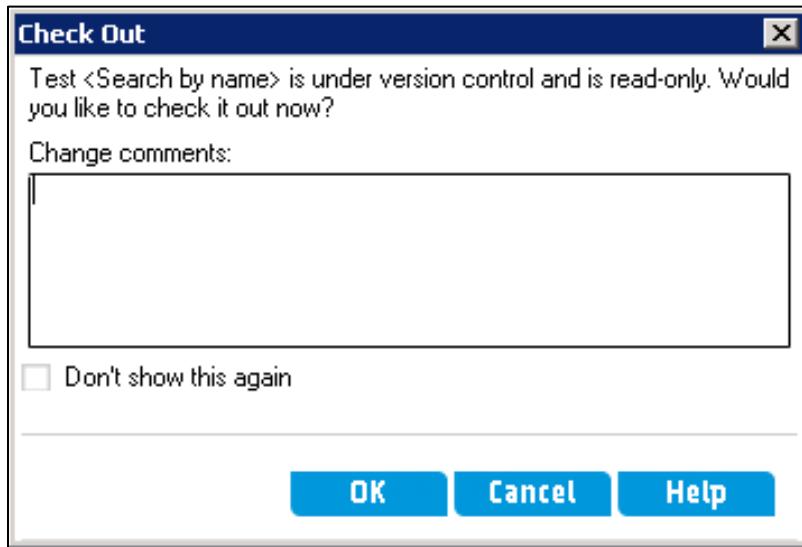
5. Use the following steps to note what happens when you try to add design steps to an entity in a version controlled project:

- With the Search by Name test selected, click the Check In  button.
- The Check In dialog box is displayed. In the Change comments field, enter **Reviewed**.



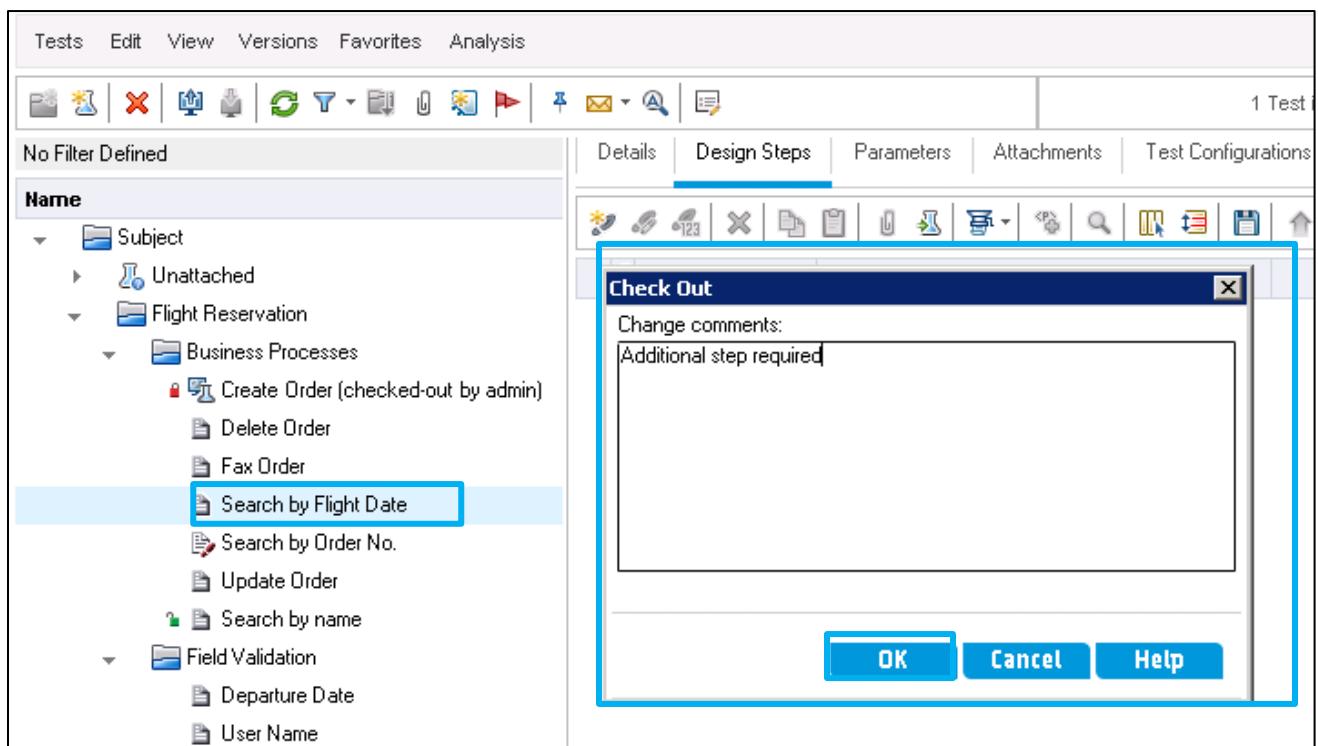
Click the  button.

- c. Click the Design Steps  tab in the right pane.
- d. Click the New Step  button. The Check Out dialog box is displayed, as shown in the following screenshot.



- e. Click the  button to check out the Search by Name test.
 - f. For this exercise, because you do not need to enter any design steps at this time, click the  button to return to the main window.
 - g. On the warning message box displayed, click the Don't Save button.
Based on the behavior of the preceding actions, what can you determine about the versioning mechanism when creating a new test?
6. To check out an existing entity, complete the following steps:
- a. Continue to work in the Test Plan module.
 - b. Select the Search by Flight Date test in the Business Processes folder.
 - c. Check out the Search by Flight Date test by clicking the Check Out  icon on the Test Plan toolbar.

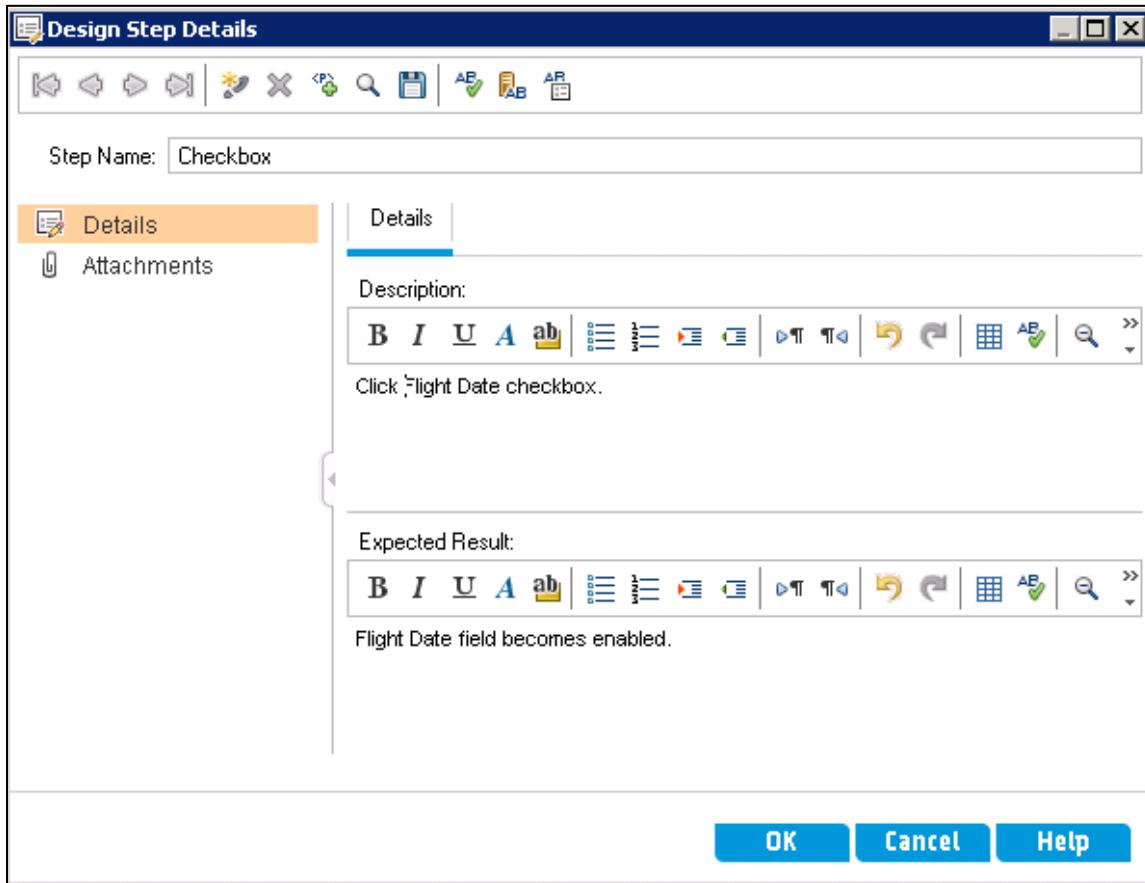
- d. When the Check Out dialog box is displayed, type **Additional Steps Required** in the Change Comments field.



- e. Click the OK button.

- f. Select the Design Steps tab and then select the row after which you would like to place the new step. In this case, select the first row.

- g. Click the New Step  button to add a new step:
- In the Step Name field, enter **Checkbox**.
 - In the Description field, enter **Click Flight Date checkbox.**
 - In the Expected Result field, enter **Flight Date field becomes enabled.**



- h. Click the  button.

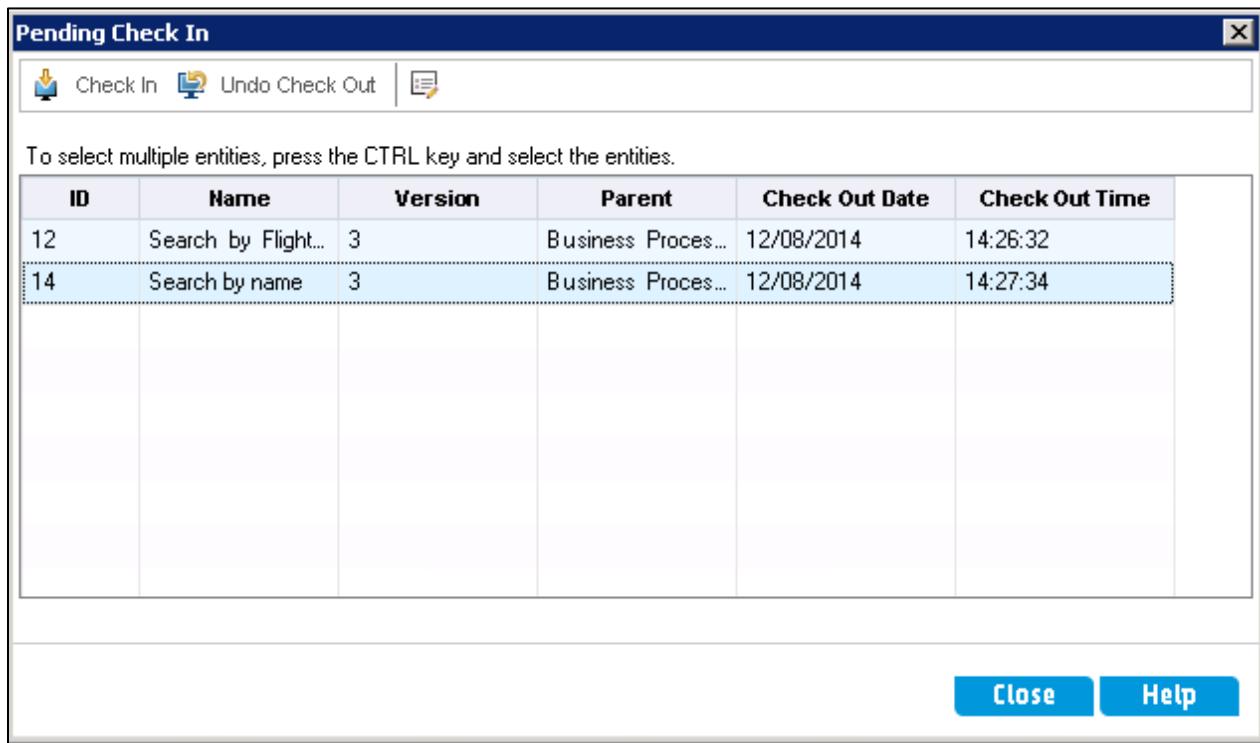
In Exercise 3 of this lab, you compare the first Search by Flight Date version with the one you just updated.

Exercise 2 – Checking In Entities

When you have completed the updates on your entities, you check them back in so that other users have access to the revised entities. You have already seen how to check in one way and now you try another way.

Complete the following steps:

1. Click the Check In button  in the upper-right corner of the interface to open the Pending Check In dialog box.
2. Press the Ctrl and Shift keys and click the tests in the list to select them.
3. Click the Check In  button in this dialog box. Add a comment, if needed, and then click the  button.



The checked out entities have been closed and the green icons disappear. You can no longer make changes to the entities.

4. Click the Close button.

Exercise 3 – Comparing Versions

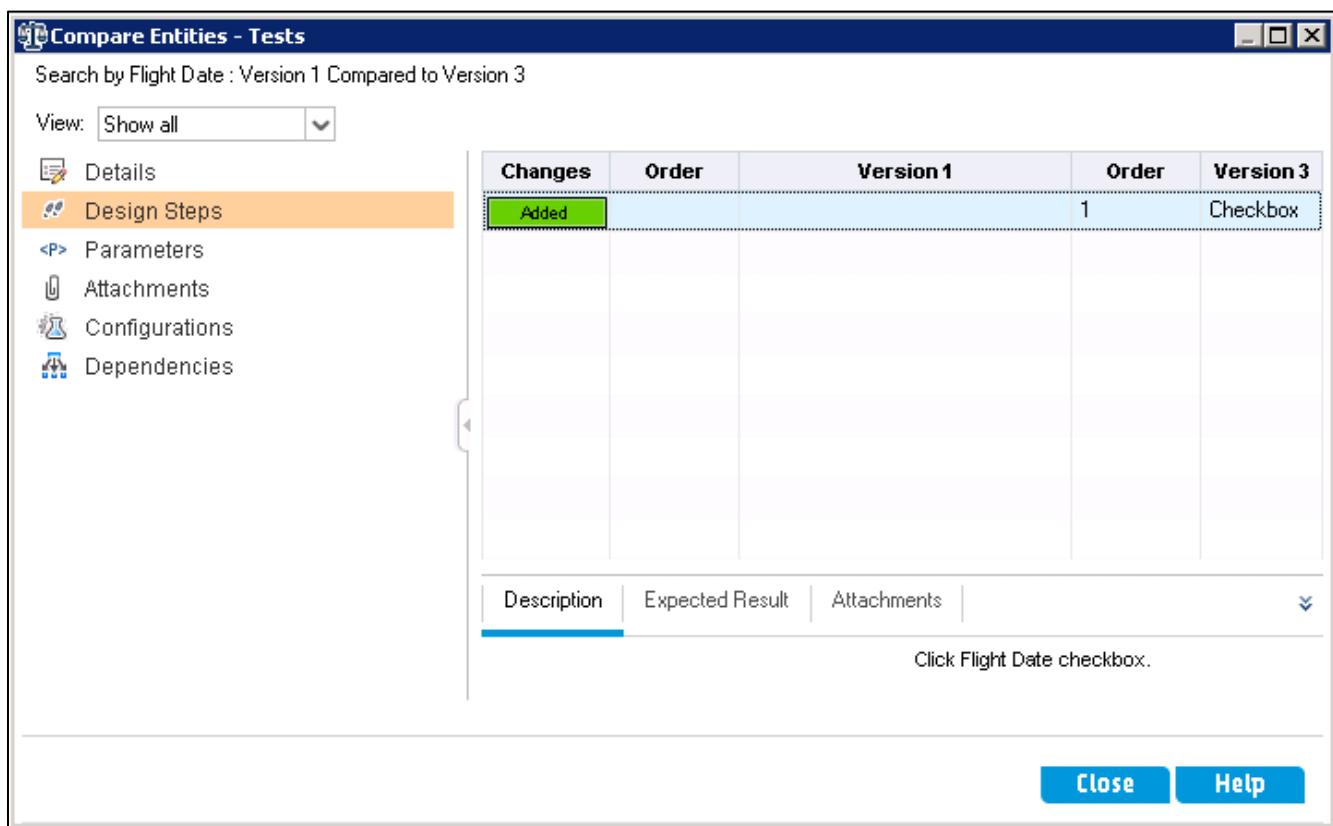
In this task, you compare two versions of two different tests and note the differences.

Complete the following steps:

1. Start by comparing the Search by Flight Date versions.
 - a. Select the Search by Flight Date test.
 - b. Click the History tab.
 - c. Press the Ctrl key and select versions 1 and 3. Both versions should be highlighted.
 - d. The Compare button is now enabled. Click the Compare **Compare** button. The Compare Entities dialog box is displayed, as shown in the following screenshot.

| Version | Date | Modified by | Baselines |
|---------|---------------------|-------------|-----------|
| 4 | 12/08/2014 14:28:37 | alex_alm | |
| 3 | 12/08/2014 14:25:48 | alex_alm | |
| 2 | 05/08/2012 04:47:03 | student00 | |
| 1 | 05/08/2012 04:46:56 | student00 | |

- e. Click the Design Steps option.



What are the differences between the two versions?

- f. Close the Compare Entities dialog box.
2. To compare the versions of the Search by Order No. test, which was previously modified by another user, complete the following steps:
- Select the Search by Order No. test.
 - In the History tab, note that there are two versions of the test.
 - Ctrl-click to select both versions and then click the **Compare** button. The Compare Entities dialog box is displayed.

- d. Note that the test name changed from Open Order in Version 1 and to Search by Order No. in Version 2 and that the description has also changed.

The screenshot shows a software interface titled "Compare Entities - Tests" comparing "Open Order : Version 1 Compared to Version 2".

View: Show all

Changes

| Field Name | Version 1 | Version 2 |
|-------------------|-----------------------|-----------------------|
| Test Name | Open Order | Search by Order No. |
| Creation Date | 03/08/2012 | 03/08/2012 |
| Designer | Student00 | Student00 |
| Estimated DevTime | | |
| Execution Status | <Non-versioned Field> | <Non-versioned Field> |
| Status | Design | Design |
| Template | Y | Y |
| Type | MANUAL | MANUAL |

Description

User must able to open an order by number, name and date. User must able to open an order by number.

Close **Help**

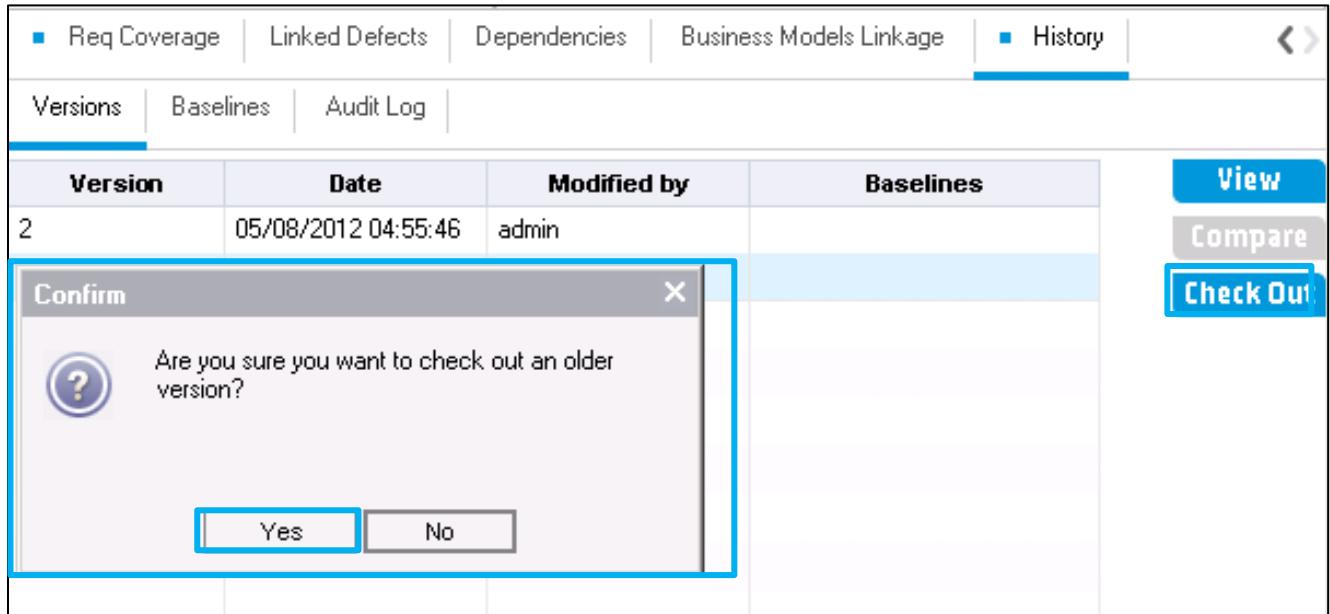
- e. Click the **Close** button.

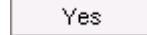
Exercise 4 – Promoting an Older Version

Management has decided to return to the original name and function of the Search by Order No. test. You must promote the older version.

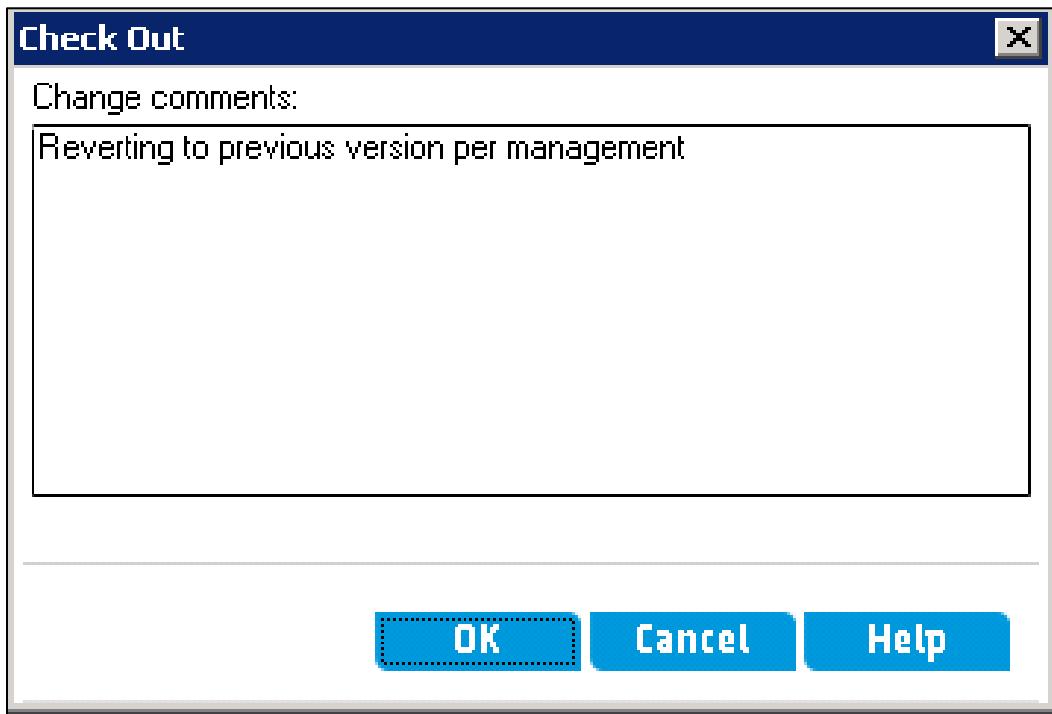
Complete the following steps:

1. From the History tab for the Search by Order No. test, check out Version 1 by highlighting it and click the Check Out  button to the right.



2. Click the Yes  button to confirm that you want to check out an older version; the Check Out dialog box is displayed.

3. In the Change Comments field, enter **Reverting to previous version per management** and then click the  button.



4. Check Version 1 back in (use icon or menu)  to make it the latest version.
5. Examine the results of promoting the older version:
- Select the Details tab. What version number do you see?
 - In the Test Plan tree, do you see the Open Order test?
 - Was Version 1 successfully promoted to the current version?
 - Note that the older description appears in the Description field.
6. Log out from ALM.

Lab 15 – Library Management

Objectives

After completing this lab, you should be able to:

- Examine an existing library
- Define a library
- Define a baseline
- Compare baselines
- Pin a test set to a baseline

Scenario

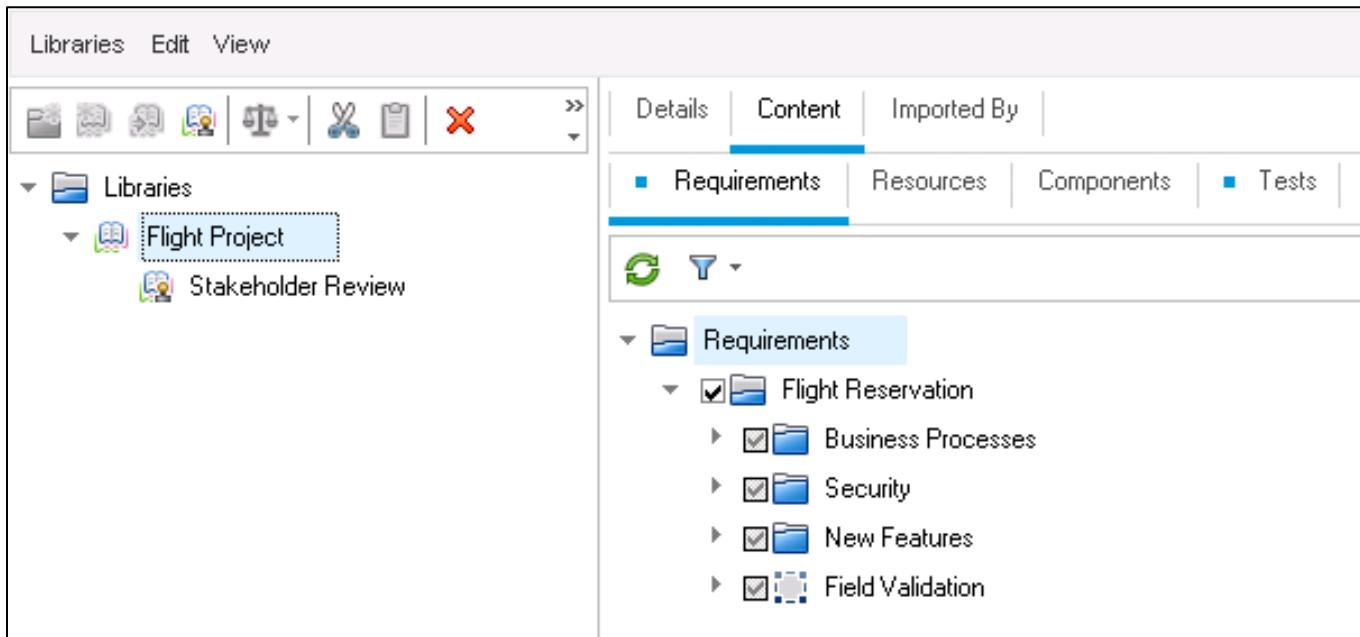
A library represents a set of entities in a project and the relationships between them. After a library has been created, a baseline can be created to keep track of changes that are made to our projects over time.

In this exercise, you examine an existing library and baseline recreated after requirements were defined and the first set of tests deployed. You then create a library and a baseline, compare the baselines, and pin a test set to the baseline.

Exercise 1 – Examining an Existing Library

In this task, you observe an existing library and baseline. To examine an existing library, perform the following steps:

1. Log in to ALM.
 - a. Log in to ALM Desktop Client using **training** as the Username and **welcome** as the Password. Select the STUDENT00_ESS domain and 11FlightApplication project.
 - b. On the sidebar, select Libraries under the Management module.
2. To examine the library that another user has created, complete the following steps:
 - a. Expand the Libraries folder to reveal the Flight Project library.
 - b. Expand the Flight Project library to reveal the Stakeholder Review baseline, as shown in the following screenshot.



The library and base line in this example were recreated sometime after the first of the requirements were defined and the first set of tests deployed. Several changes have been made to the project and the project manager would like to compare the changes against the original stakeholder review.

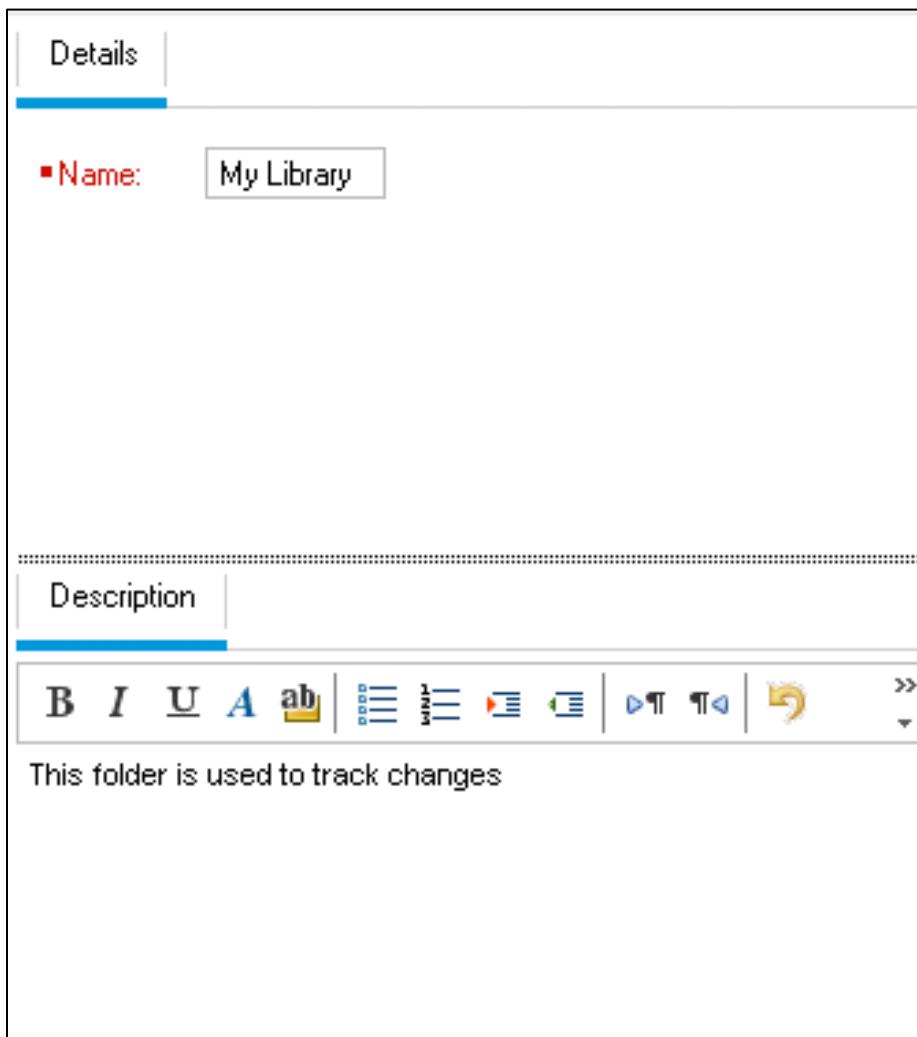
Exercise 2 – Defining a Library

In this task, you see how the Flight Project library was created. Use the following steps to create libraries tree:

1. Click the Libraries root folder. On the toolbar, click the New Folder  button. The New Library Folder dialog box is displayed.
 - a. In the Name field, enter **My Library** and click OK.

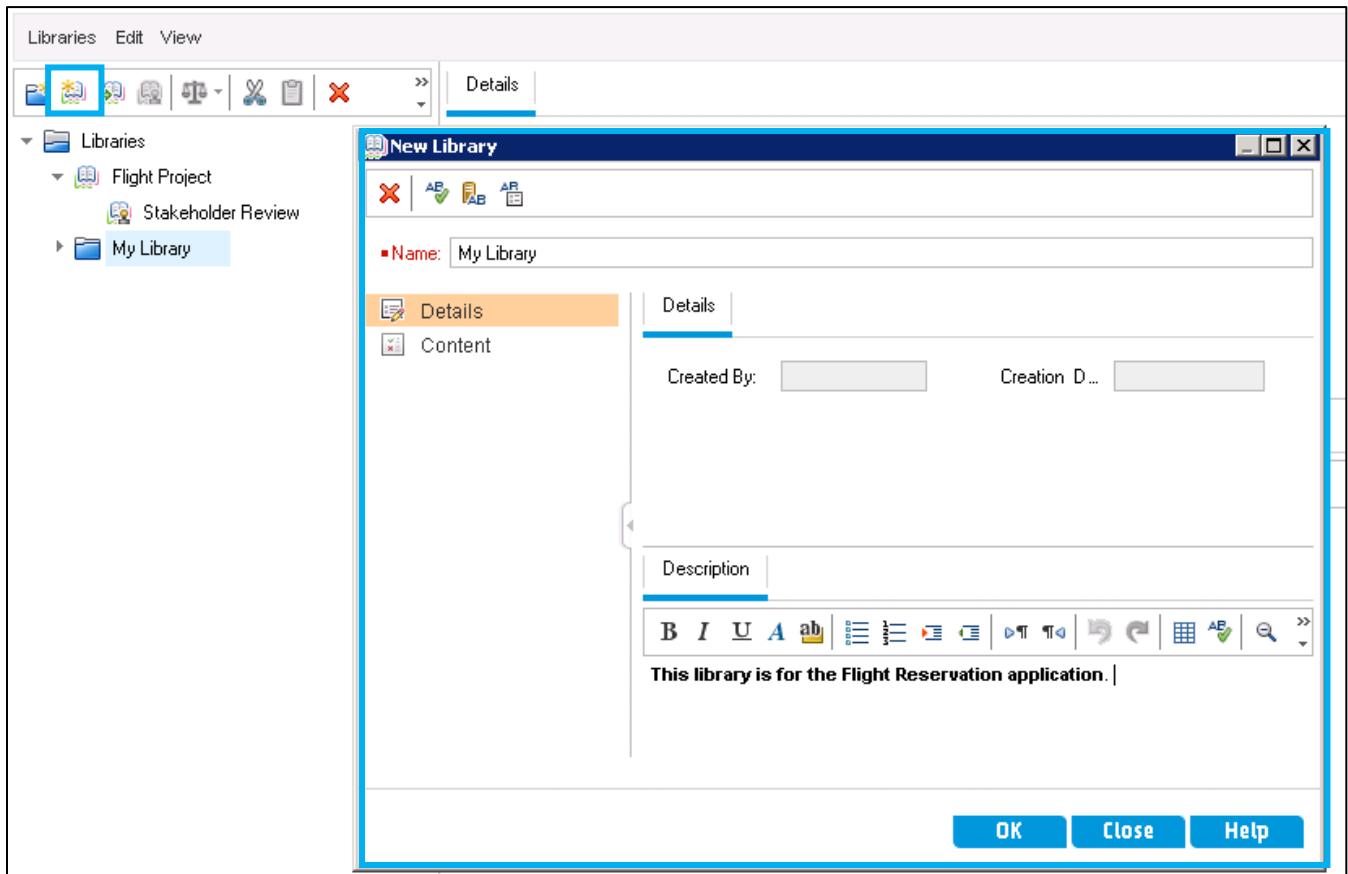


- b. Click the  tab and in the Description field, enter **This folder is used to track changes**.



2. To create the library, complete the following steps:

- On the toolbar, click the Create Library  button. The New Library dialog box is displayed, as shown in the following screenshot.



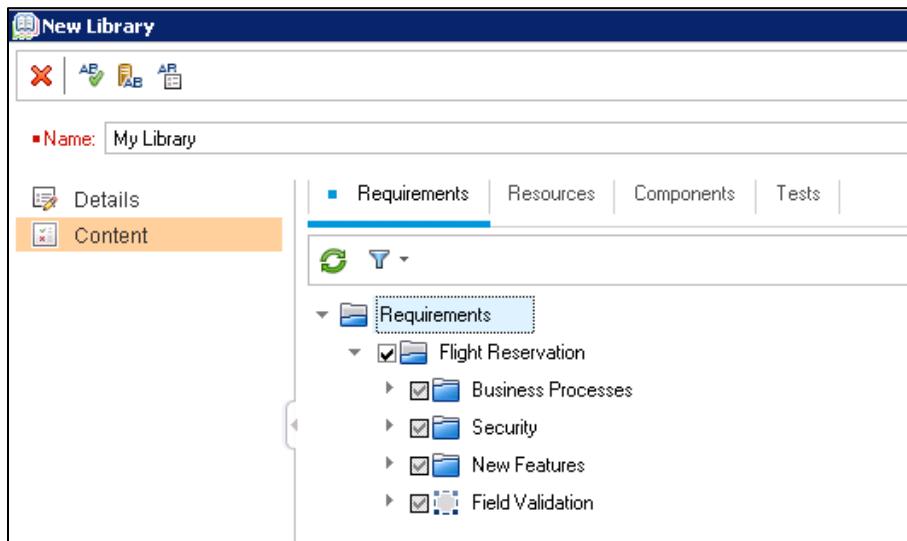
- Enter the following details, in the relevant boxes:

- In the Name field, enter **My Library**.

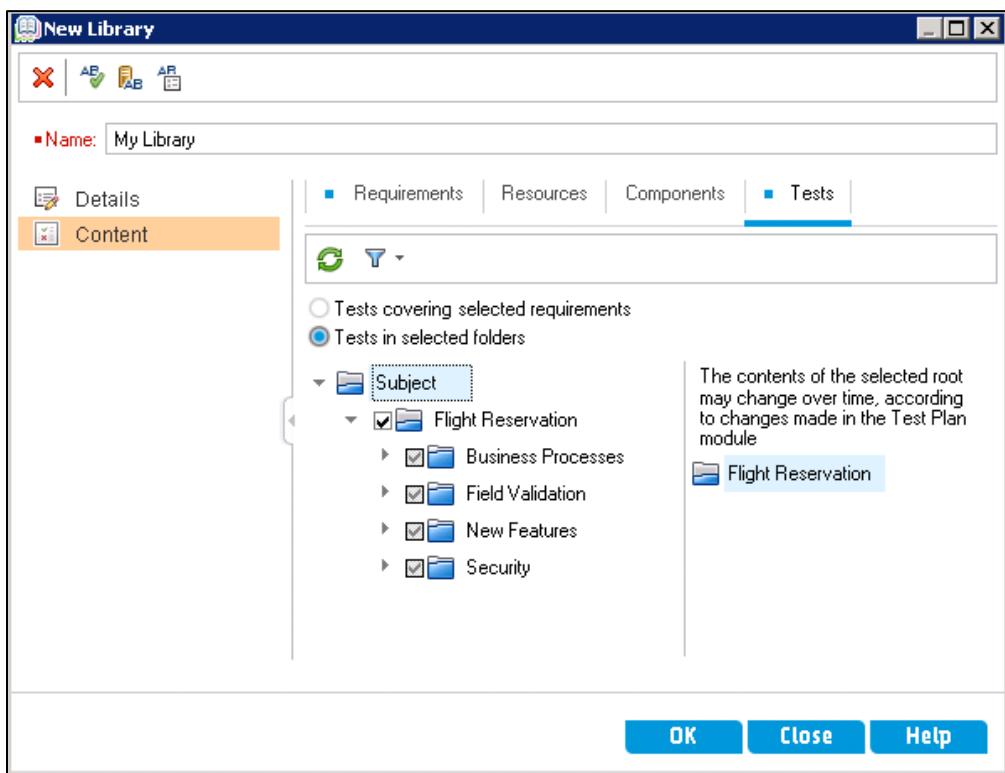
Note: A library name cannot include the following characters: \ / : * ? " <> | .

- Click the Details link in the left pane and enter the following description: **This library is for the Flight Reservation application.**
- Click the content link in the left pane and then click the Requirements tab.

- Expand the Requirements root folder and then check the Flight Reservation checkbox, as shown in the following screenshot.



- Click the tab. Click the Tests in selected folders radio button.
- Expand the Subject root folder and then click the Flight Reservation checkbox, as shown in the following screenshot.



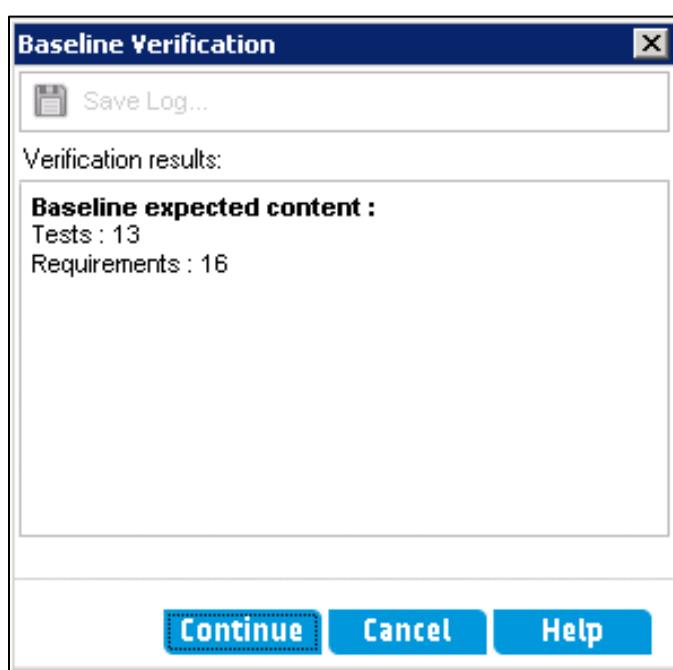


- Click the tab. Expand the Resources sub-folder, but do not make any selections at this time.
- c. Click the OK button. The new library is added to the library tree.

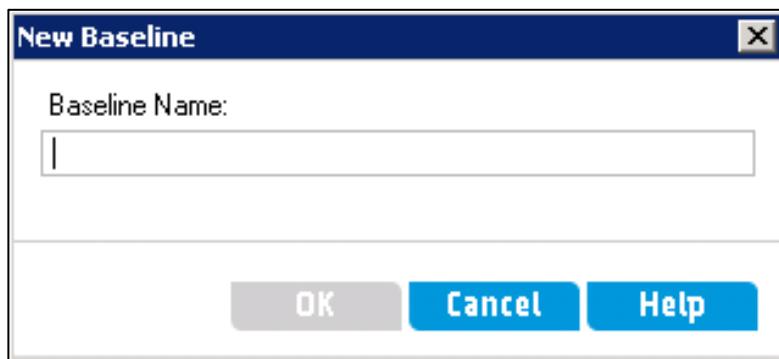
Exercise 3 – Defining a Baseline

In this task, you define a baseline that reflects the current status of the project. To define a baseline, perform the following steps:

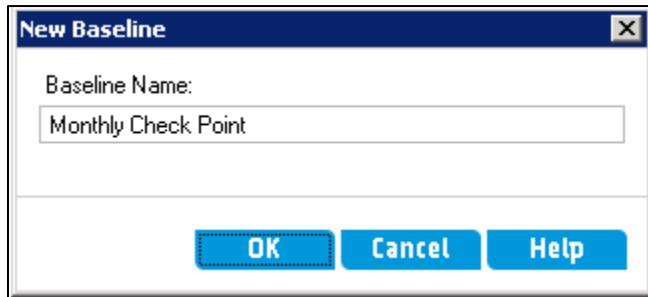
1. In the libraries tree, select the Flight Project library which already contains a baseline. (Do not select My Library because it does not contain any baselines at this time.)
2. Click the Create Baseline button  or select Libraries → Create Baseline. The verification process begins.



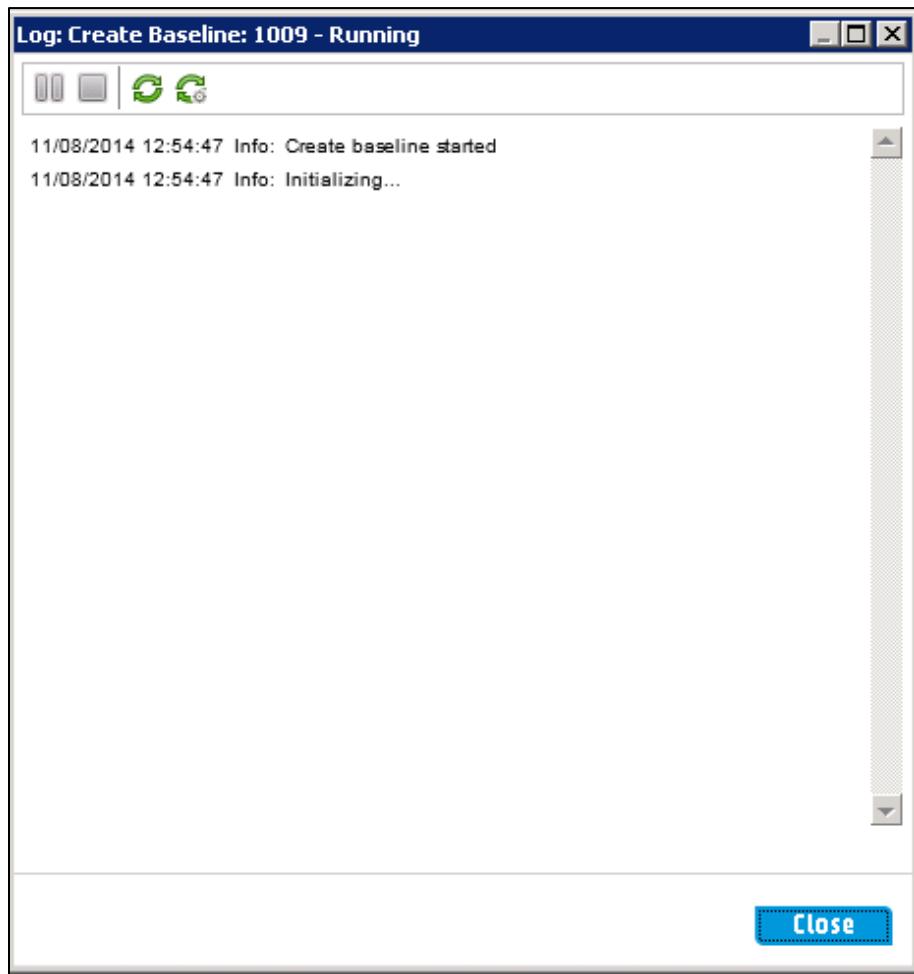
3. Click the  button.
4. The New Baseline dialog box opens after the verification, as shown in the following screenshot.



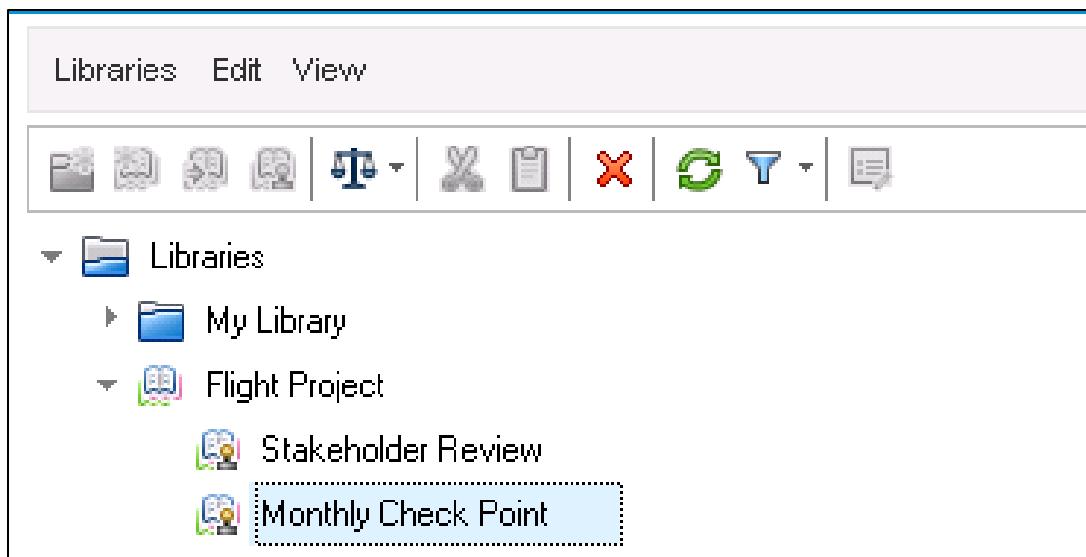
5. In the Baseline Name field, type **Monthly Check Point**, as shown in the following screenshot.



6. Click the **OK** button. The baseline is added to the libraries tree.
7. Click the **View log..** button in the Details tab. The Log: Create Baseline dialog box is displayed showing the progress.



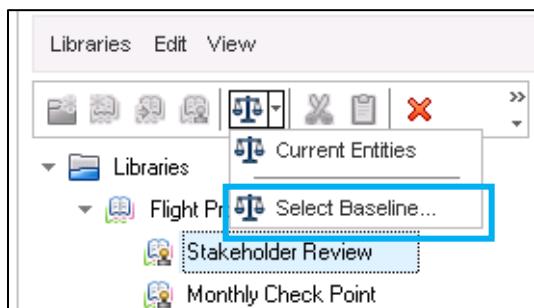
8. Click the Close  button to close the dialog box.
9. Click the Refresh  button on the module toolbar to refresh the display. The baseline details are displayed in the Details tab, as shown in the following screenshot.



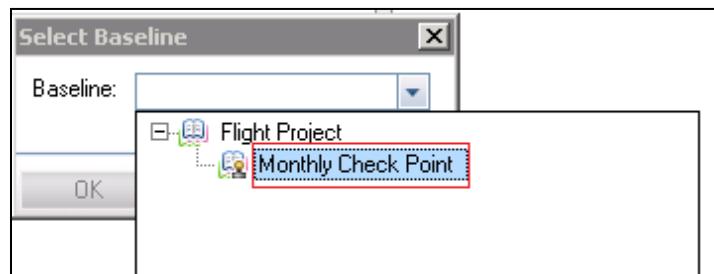
Exercise 4 – Comparing Baselines

In this exercise, you compare the old baseline with the new baseline you just created. To compare baselines, perform the following steps:

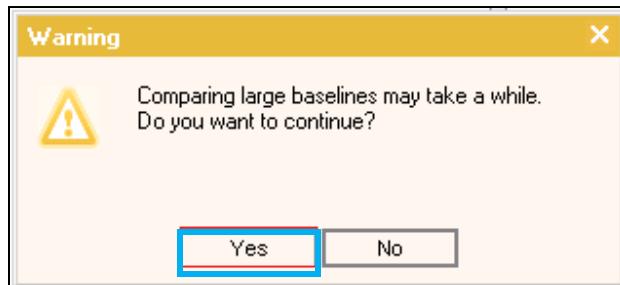
1. Specify which baselines to compare:
 - a. In the libraries tree, expand the library and select the Stakeholder Review baseline. Click the Compare To  drop-down.
 - b. Choose Select Baseline... to compare the baseline you selected with another baseline in the library. The Select Baseline dialog box is displayed, as shown in the following screenshot.



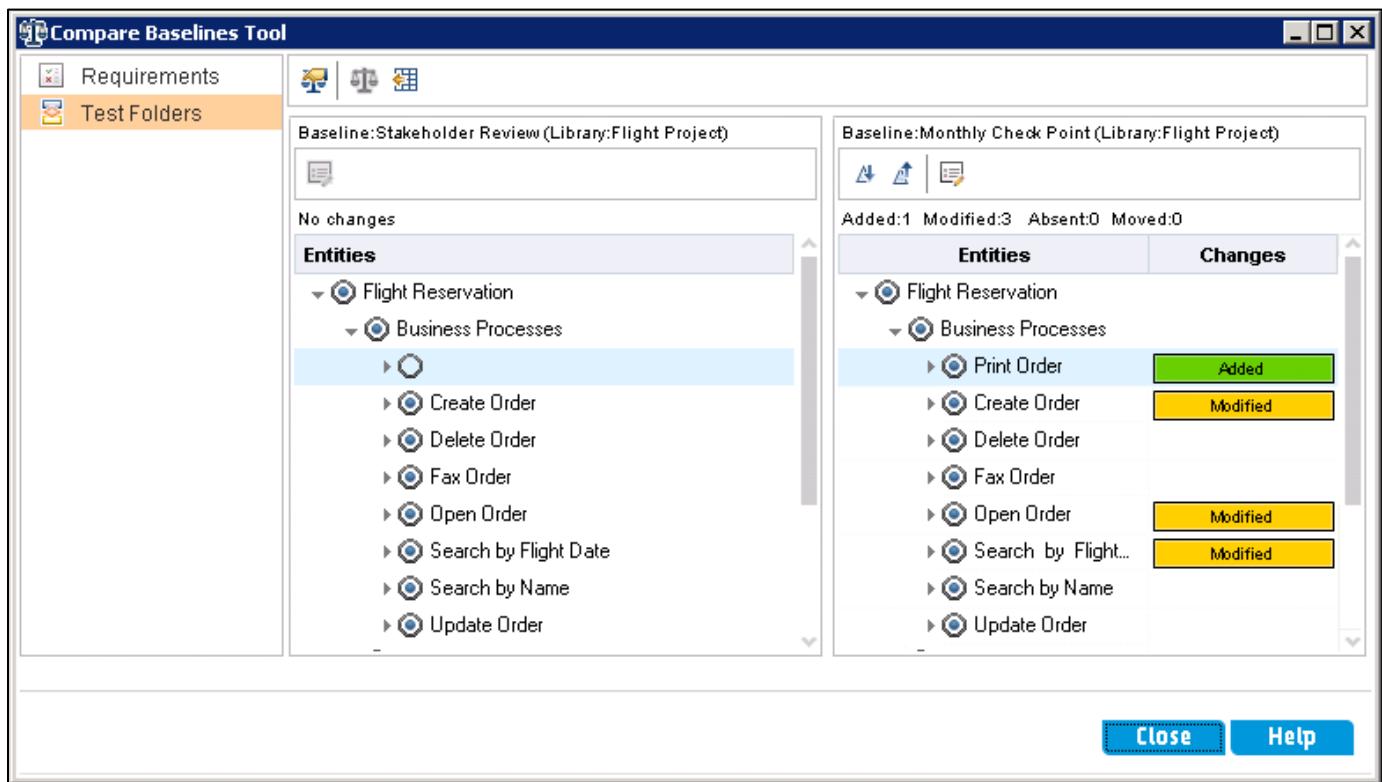
- c. Click the drop-down, select the Monthly Check Point baseline from the list, and click the OK button.



- d. Click the  button to close the Select Baseline dialog box. A message box opens with a warning.



- e. Click the Yes button in the warning dialog box.



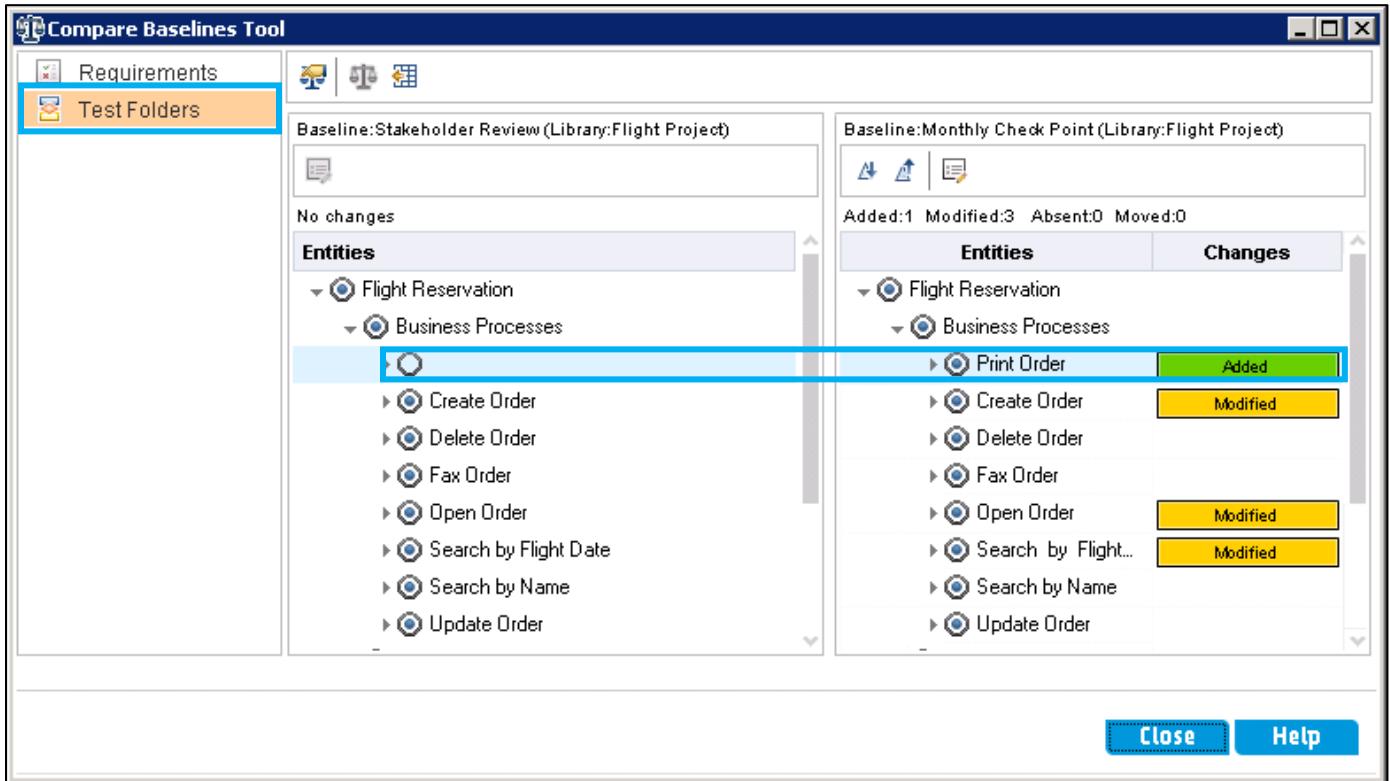
2. Examine the changes in the baselines:

- a. Ensure that the Requirements link is selected in the left pane.

- b. Note that the right-most baseline—Monthly Check Point—shows that a file has been added.

The screenshot shows the 'Compare Baselines Tool' interface. On the left, there's a navigation pane with 'Requirements' selected and 'Test Folders'. The main area is split into two panes: 'Baseline:Stakeholder Review (Library:Flight Project)' on the left and 'Baseline:Monthly Check Point (Library:Flight Project)' on the right. The left pane shows a tree view with 'Flight Reservation' expanded, containing items like 'Create Order', 'Delete Order', etc. The right pane shows a similar tree view with additional items: 'Print Order' (highlighted in green with the label 'Added') and 'Create Order' (highlighted in yellow with the label 'Modified'). A status bar at the bottom indicates 'Added:1 Modified:1 Absent:0 Moved:0'. At the bottom right are 'Close' and 'Help' buttons.

- c. Click the Tests Folders link in the left pane of the window to observe the changes to the tests.

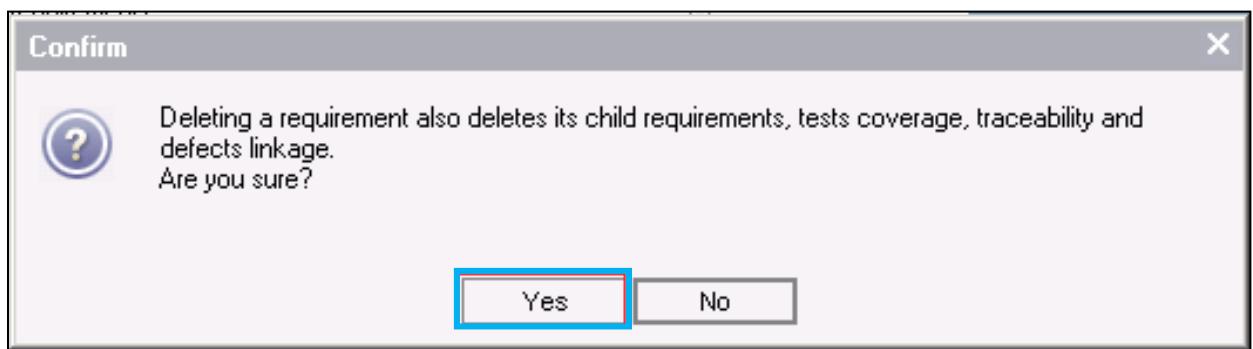


- d. Click the Go To Next Change button in the right pane to move to the next change, or Go To Previous Change to move to the previous change. Be sure to click through all the changes.
- e. Click the button.
3. To make a change to the project and make another comparison, complete the following steps:
- Select the Requirements module within the Requirements section.

- b. Expand the Flight Reservation Requirements tree and select the Print Order requirement under Business Processes.

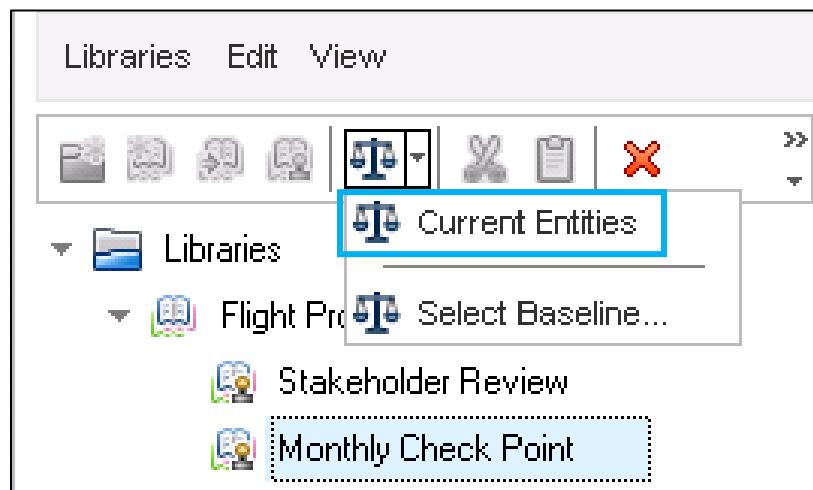
The screenshot shows the HP ALM Requirements module interface. The top menu bar includes Requirements, Edit, View, Versions, Favorites, and Analysis. The toolbar contains various icons for file operations like New, Open, Save, and Print. A status bar at the top right indicates "0 Requirements are checked out by alex_alm" and a "Check In..." button. Below the toolbar is a navigation bar with links for Details, Rich Text, Attachments, Linked Defects, Requirement Traceability, and Test Coverage. The main area has a title "No Filter Defined" and a section titled "Name". The requirement tree on the left shows categories like Requirements, Flight Reservation, Business Processes, Security, New Features, and Field Validation. Under Business Processes, several requirements are listed: Create Order, Delete Order, Update Order, Fax Order, Open Order, and Print Order. The "Print Order" requirement is highlighted with a blue selection bar. On the right, the "Details" tab is active, displaying the requirement's properties. The "Name" field is set to "Print Order", "Requirement Type" is "Functional", "Author" is "admin", "Creation Date" is "05/07/2014", "Creation Time" is "05:20:16", "Modified" is "11/08/2014 13:17:39", "Product" is listed in a dropdown, "Priority" is listed in a dropdown, "Reviewed" is "Not Reviewed", "Req ID" is "16", "Target Cycle" is listed in a dropdown, "Target Release" is listed in a dropdown, and "Version Number" is "3". The "Description" field contains the text: "User must be able to print details of an order". At the bottom of the details panel are rich text editor buttons (B, I, U, A, ab) and search/filter buttons.

- c. Delete the requirement by clicking the Delete button in the toolbar. Click the Yes button in the confirmation message box.



- d. Return to Libraries under Management.
- e. Select the Monthly Check Point baseline.

- f. Click the Compare Baselines  button, and then select Current Entities, as shown in the following screenshot.



- g. Click the Yes button in the Warning dialog that is displayed.
 h. Note that the Current Entities window shows that the Print Order requirement has been deleted, as shown in the following screenshot.

The screenshot shows the 'Compare Baselines Tool' window. On the left, there's a sidebar with 'Requirements' and 'Test Folders' options. The main area has two panes: 'Baseline:Monthly Check Point (Library:Flight Project)' on the left and 'Baseline:Current Entities (Library:Flight Project)' on the right. Both panes show a tree view of entities under 'Entities'. In the 'Changes' pane, the 'Print Order' requirement is listed under 'Absent'.

| Entities | Changes |
|--------------------|---------------|
| Flight Reservation | |
| Business Processes | |
| Create Order | |
| Delete Order | |
| Fax Order | |
| Open Order | Absent |
| Print Order | |
| Update Order | |
| Field Validation | |
| New Features | |

- i. Click the  button, to close the Compare Baselines tool.
 - j. What does the Compare Entities option allow you to do?
-

Exercise 5 – Pinning a Test Set to a Baseline

In this task, you learn to pin a test set to a baseline and see the results. To do this, you start by making a duplicate copy of the orders test set. To pin a test set to a baseline, perform the following steps:

1. Go to the Test Lab module within Testing.
2. Select the Orders test set under Flight Reservation → Integrated System Testing.
3. Go to the Execution Grid on the right tab.
4. Click the Select Tests button, as shown in the following screenshot.

| | Name | Test: Test Name | Type | Status | Iterations |
|-----|-----------------|-----------------|-----------------|--------|------------|
| [1] | [1]Login | Login | MANUAL | Failed | |
| | [1]Create Order | Create Order | QUICKTEST_TE... | Passed | |
| | [1]Open Order 3 | Open Order | MANUAL | Passed | |
| | [1]Open Order 1 | Open Order | MANUAL | Passed | |
| | [1]Print Order | Print Order | MANUAL | No Run | |

| Step Name | Status | Exec Date | Steps Details |
|----------------------|--------|-----------|--|
| 1 - Enter Agent Name | Passed | 05/08/201 | Description: Enter <training> in the Agent Name field. |
| 2 - Enter Password | Passed | 05/08/201 | |
| 3 - Click OK | Failed | 05/08/201 | |

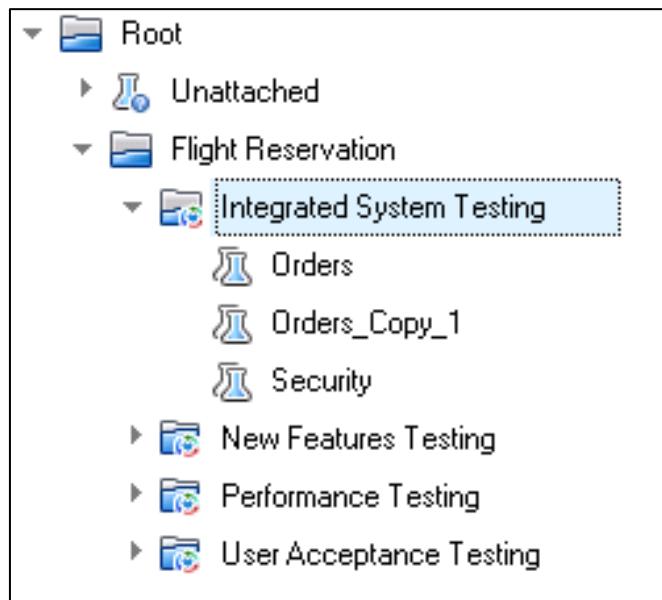
Expected:
Name visible in Agent Name field.

5. Expand the Test Plan tree and double-click the Print Order test from the Test Plan tree in the right-most pane, as shown in the following screenshot.

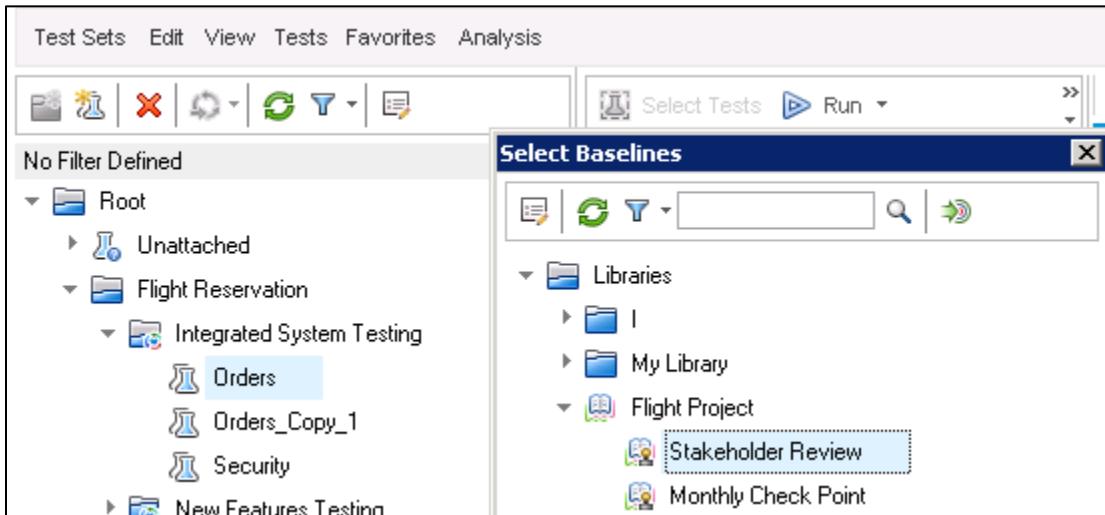
The screenshot shows the HP ALM interface. On the left is the 'Test Plan Tree' pane, which displays a hierarchical structure of test sets and cases. A dotted line connects the 'Print Order' node under 'Flight Reservation / Business Processes' to the 'Execution Grid' on the right. The 'Execution Grid' pane shows a table of test cases with columns: Name, Test: Test Name, Type, Status, and Iteration. The table contains four rows of data:

| | Name | Test: Test Name | Type | Status | Iteration |
|--|-----------------|-----------------|-----------------|--------|-----------|
| | [1]Login | Login | MANUAL | No Run | |
| | [1]Create Order | Create Order | QUICKTEST_TE... | No Run | |
| | [1]Open Order 3 | Open Order | MANUAL | No Run | |
| | [1]Open Order 1 | Open Order | MANUAL | No Run | |

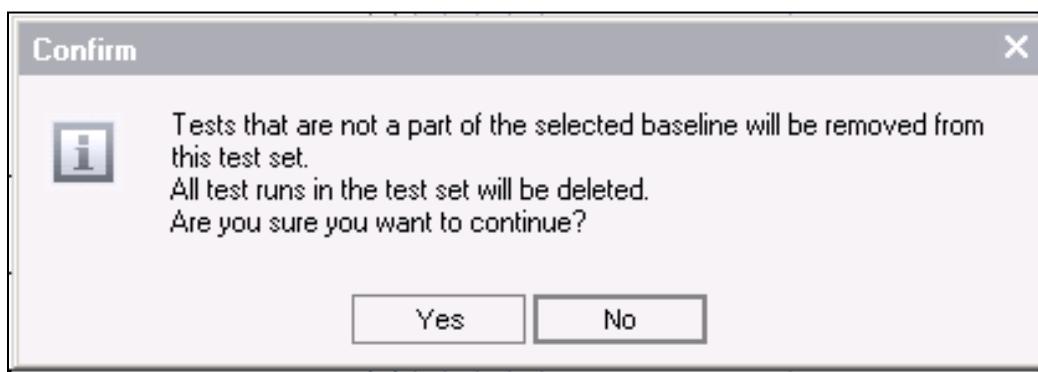
6. The Print Order test instance is added in the Execution Grid for the orders test set. To make a duplicate copy of the orders test set, complete the following steps:
- In the Test Lab module, expand the Integrated System Testing folder and select the Orders test set from the test sets tree.
 - Select Edit → Copy, then select the Integrated System Testing folder and choose Edit → Paste. The Test Set tree should look similar to the following:



- c. Click the OK button to confirm that the test set was renamed to Orders_Copy_1.
7. To pin the first test set to a baseline, complete the following steps:
- Select the first Orders test set from the test sets tree.
 - Select Test Sets → Pin to Baseline  or right-click and select Pin to Baseline. The Select Baseline dialog box displays the Libraries tree.
 - Select the baseline Stakeholder Review within the Flight Project library and click the  button.



- d. A confirmation message is displayed, as shown in the following screenshot.



- e. Click the  button to confirm.

8. To pin the second test set to a later baseline, complete the following steps:
 - a. Select the Orders_Copy_1 test set from the Test Sets tree.
 - b. Select Tests Sets → Pin to Baseline or right-click and select the  icon.
 - c. Select the Monthly Check Point baseline within the Flight Project library and click the OK button. A confirmation message is displayed. Click the Yes button to confirm.
9. Observe the differences between test sets:
 - a. Select the Orders test set. Note in the execution grid that Print Order test instance is missing because the Print Order test did not exist when the baseline Stakeholder Review was created.
 - b. Select the Orders_Copy_1 test set and observe that the Print Order test is present because it is a part of the Monthly Check Point baseline.

Because the first Orders test set is pinned to the baseline that was created prior to multiple changes, its steps reflect the old test name.

Note: To clear a pinned test set, select the test set and select Tests Sets → Clear Pinned Baseline. A confirmation message displays. If the test set includes tests that do not exist in the Test Plan module, ALM deletes the tests from the test set. In addition, all test runs in the test set are deleted. Click the Yes button to confirm. The tests in the test set are associated with the current tests in the Test Plan module.
10. Log out from ALM.

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Lab 16 – Asset Sharing (Libraries)

Objectives

After completing this lab, you should be able to:

- Import an asset library
- Compare imported assets from the source
- Compare imported assets from the target
- Export the baseline results

Scenario

Importing a library lets you share or reuse an existing set of entities in projects across your organization. You can import a project from a different project, bring it into your project, and reuse it.

In this lab, you import an asset library, compare the imported assets from the source and the target, and then export the baseline results.

Exercise 1 – Importing an Asset Library

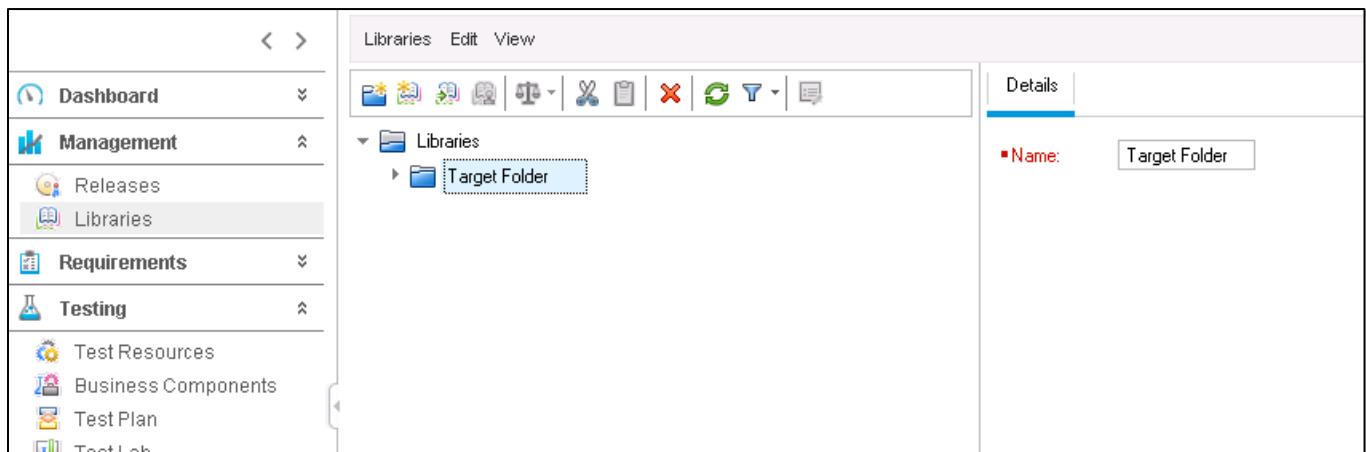
In this exercise, you import a library from another project into the current project.

Complete the following steps:

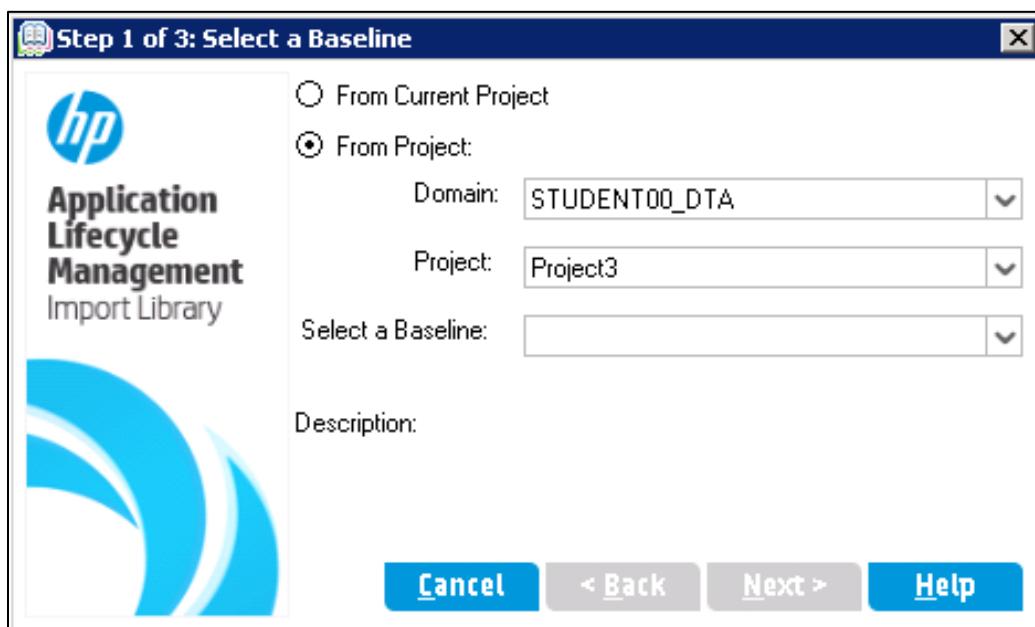
1. Open Internet Explorer and access <http://almserver:8080/qcbin>.
2. Log in to ALM Desktop Client:
 - a. In the Login Name and Password fields, type **training** and **welcome**, respectively.
 - b. Click the Authenticate button.
 - c. From the Domain and Project lists, select STUDENT00_DTA and Project4, respectively.
 - d. Click the Login button.
3. Select the Management option and click the Libraries module tab, as shown in the following screenshot:

The screenshot shows the ALM Desktop Client interface. On the left is a navigation sidebar with icons for Dashboard, Management (selected), Requirements, Testing, and Defects. The Management section has sub-options for Releases and Libraries, with Libraries highlighted. The main workspace has a toolbar with various icons. Below the toolbar, a tab bar shows 'Libraries' is selected. To the right, there's a 'Details' panel with a 'Name:' field containing 'Libraries'. At the bottom, there's a 'Description' field. The overall layout is clean and professional, typical of enterprise software.

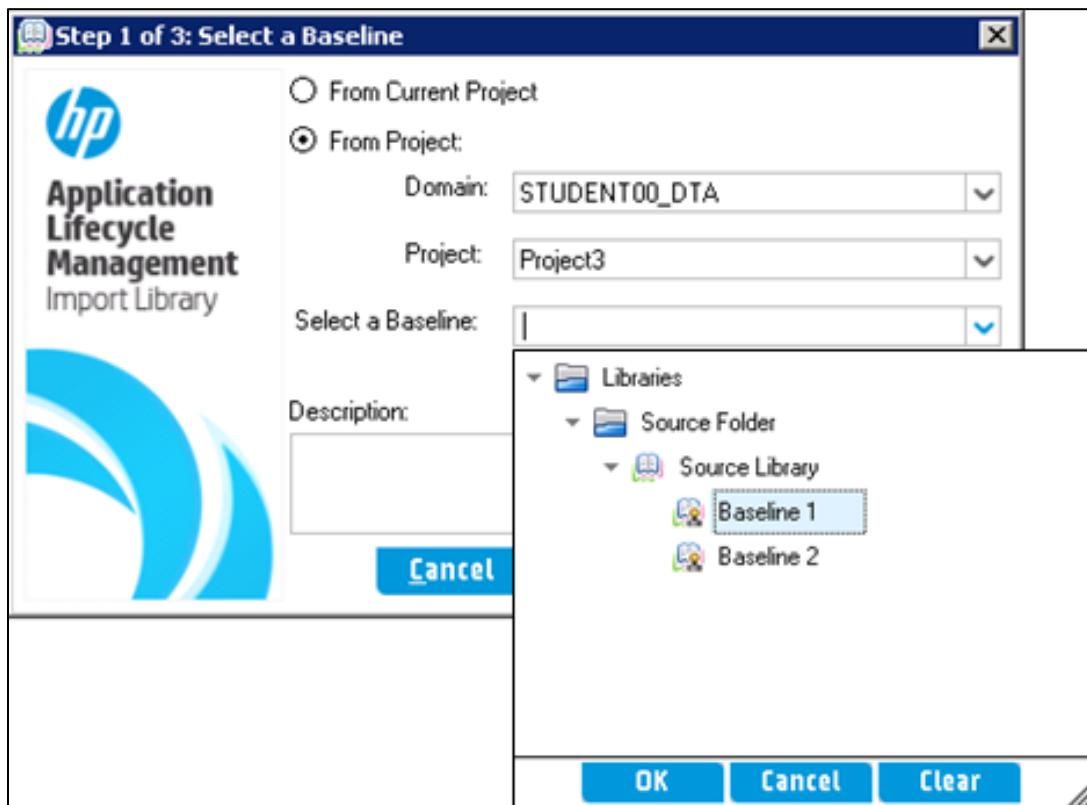
4. Expand the Libraries tree, and select the Target folder under Libraries folder, as shown in the following screenshot.



5. Click the Import Library button. The Step 1 of 3: Select a Baseline dialog box is displayed, as shown in the following screenshot:

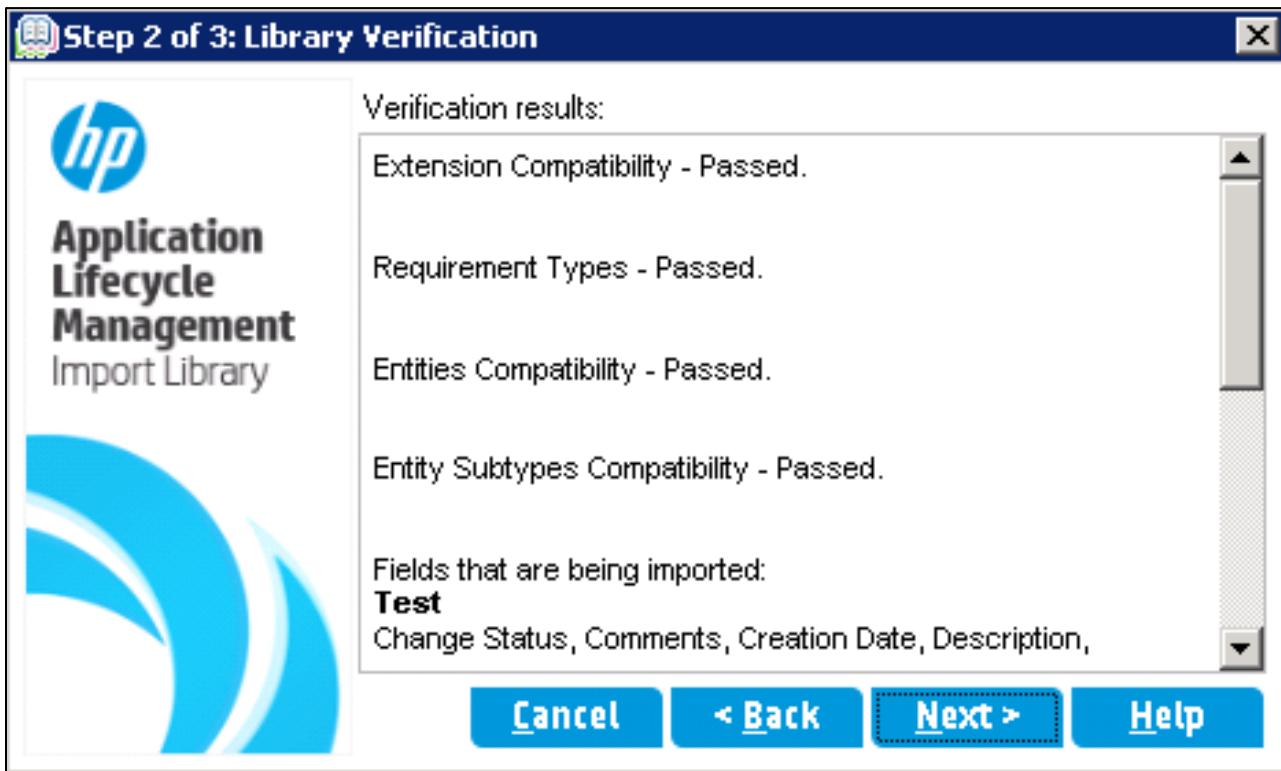


6. Select the From Project radio button.
7. Select the STUDENT00_DTA domain and the Project3 as shown in the screenshot.



8. In the Select a Baseline combo box, click the drop-down arrow. The Libraries tree for the project you selected opens and displays the libraries that can be imported. Expand the source library, select Baseline 1, and click the **OK** button.

9. Click the  button. The Step 2 of 3: Library Verification dialog opens, as shown in the following screenshot, displaying verification results and the list of fields to be imported.



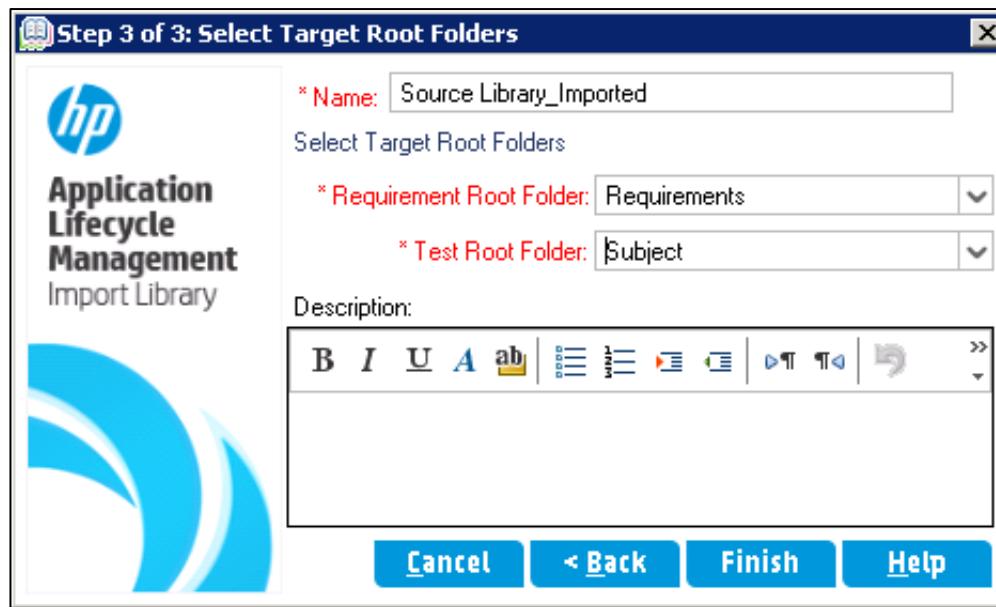
10. Click the  button.

11. The Step 3 of 3: Select Target Root Folders dialog box opens. By default, the name of the library from which you are importing is displayed with the suffix _Imported.

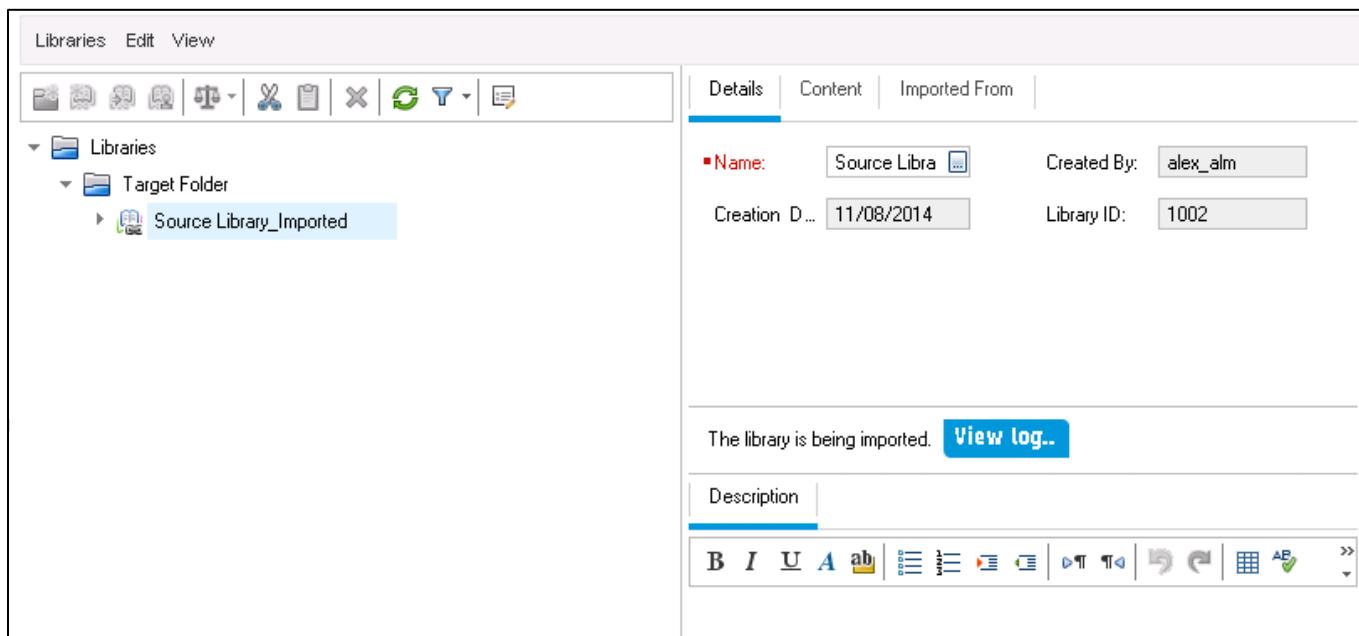
12. Under Select Target Root Folders, Requirement Root Folder, click the drop-down arrow to display the Requirements tree in your project.

13. Select the Requirements folder.

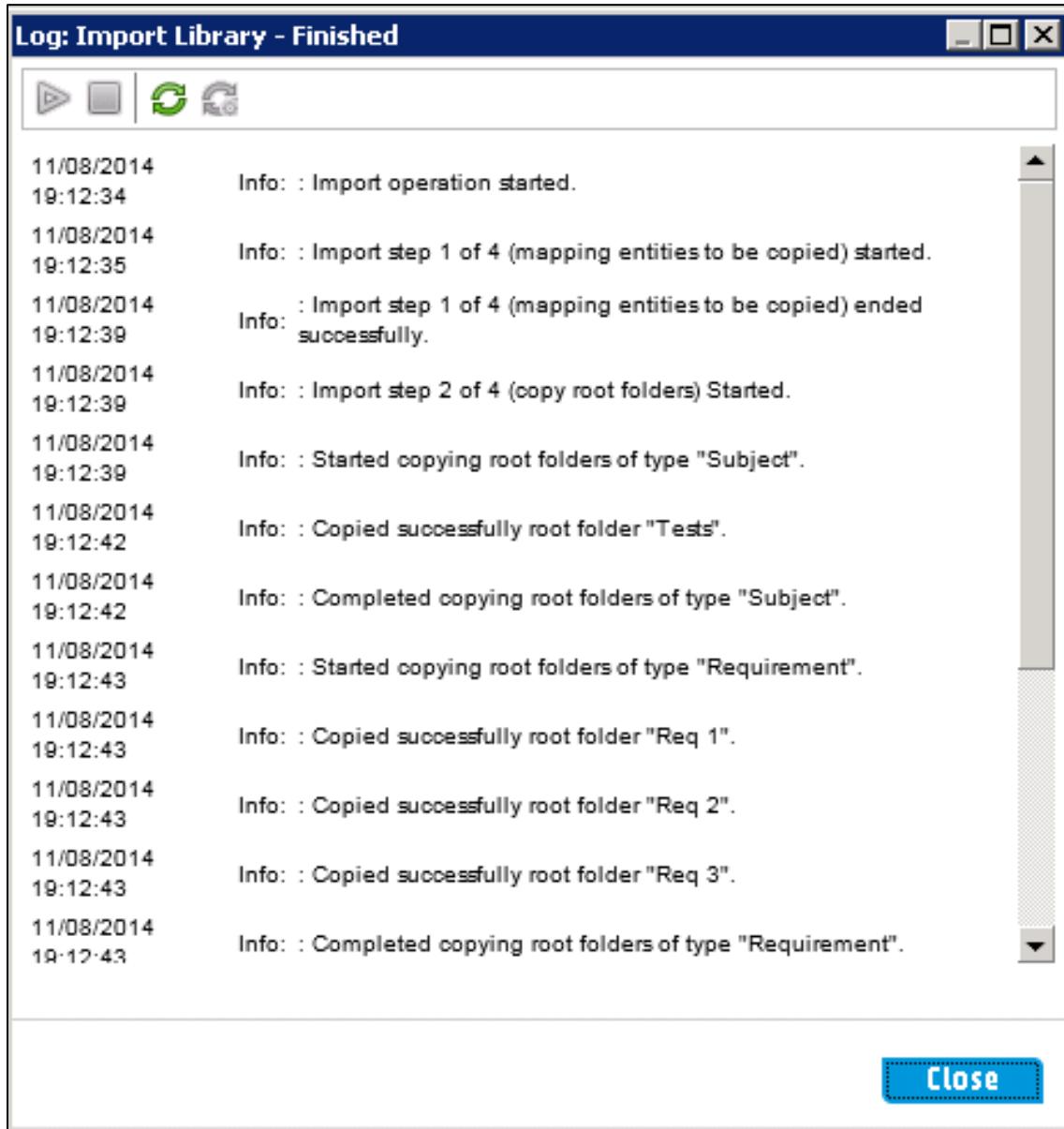
14. In the Test Root Folder field, select the location Subject, as shown in the following screenshot:



15. Click the Finish button to import the library. The imported library is added to the libraries tree, and the import process begins, as shown in the following screenshot:



16. Click the View Log button in the Details tab. The Log: Import Library - Finished dialog box opens and displays progress, as shown in the following screenshot:



17. Click the Close button to close the dialog box.

18. Click the Refresh button on the module toolbar to refresh the display. The library details are displayed in the Details tab.

19. In the Details tab, click the Description pane to add the description, Imported Library, to the library.

20. In the Libraries tree, select the imported library Source Library_Imported and click the Imported From tab, as shown in the following screenshot:

The screenshot shows the 'Libraries' interface. On the left, the tree view shows 'Libraries' expanded, with 'Target Folder' selected, and 'Source Library_Imported' listed under it. On the right, the 'Imported From' tab is active in a details panel. The panel includes fields for Domain (STUDENT00_DTA), Project (Project3), Library Name (Source Library), Baseline Name (Baseline 1), Last Synchronization (11/08/2014), and Source Library Owner (training). There are also icons for envelope and scale.

21. Click the Content tab. Review the changes to the project, as shown in the following screenshot:

The screenshot shows the 'Libraries' interface. The tree view is identical to the previous screenshot. The 'Content' tab is active in the details panel. Under the 'Requirements' section, there is a list of three requirements: 'Req 1', 'Req 2', and 'Req 3', each marked with a checkmark and a yellow lightbulb icon. Other tabs like 'Resources', 'Components', and 'Tests' are visible but inactive.

22. Select the Requirements module. Observe that the requirements have been imported, as shown in the following screenshot:

The screenshot shows the Requirements module interface. The left sidebar has 'Requirements' selected. The main area displays a requirement named 'Requirements' with three sub-items: 'Req 1', 'Req 2', and 'Req 3'. A detailed form on the right shows fields like Name, Requirement Type (Folder), Author, Creation Date (05/10/2006), and Priority.

23. Select the Test Plan module. Observe that the tests have been imported. You add a test to this project, so that you can see the changes to each project as the libraries are imported and synchronized.

The screenshot shows the Test Plan module interface. The left sidebar has 'Test Plan' selected. The main area displays a folder named 'Subject' containing 'Unattached' and 'Tests' sub-folders, with three test files: 'Test 1', 'Test 2', and 'Test 3'.

24. Select the Tests folder and then click the New Test button to create a test. Name the test New Test and click the button to close the New Test dialog box.

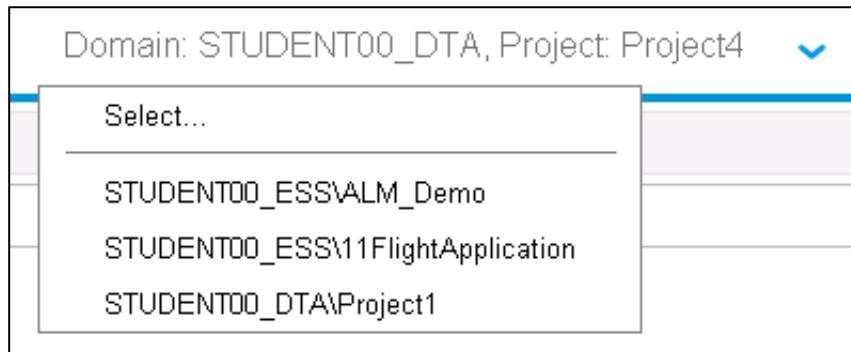
25. Go to the  Libraries module. Click the Refresh button .
26. Add a new baseline to the imported library. Click the Create Baseline button .
- Name the new baseline **Baseline_in_Imported**. Wait until the baseline capture is finished. Click the refresh button  until the text The Baseline is being created and the View Log button  are no longer shown.

Exercise 2 – Comparing Imported Assets from the Source

In this exercise, you log in to the project file that was the source of the imported library and compare it to the target library.

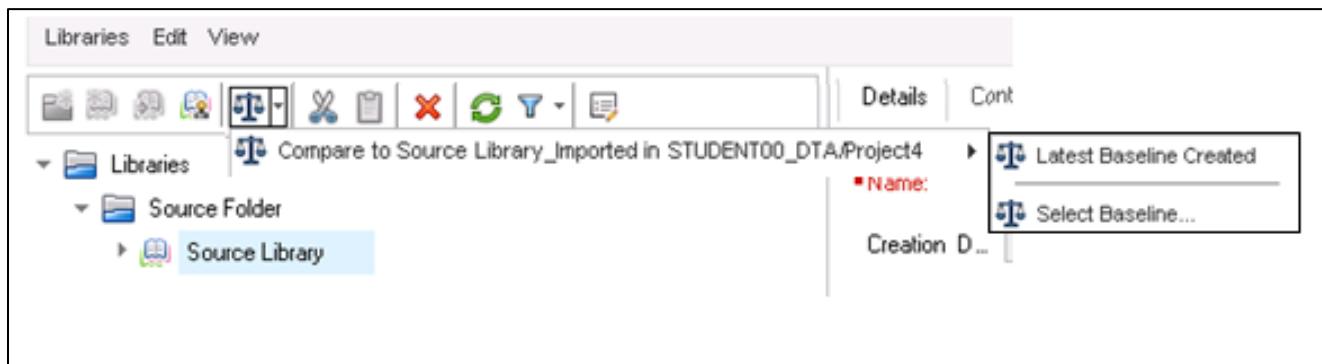
Complete the following steps:

1. Use the down arrow and Select to switch over to Project3.
From the Domain and Project lists, select STUDENT00_DTA and Project3, respectively.



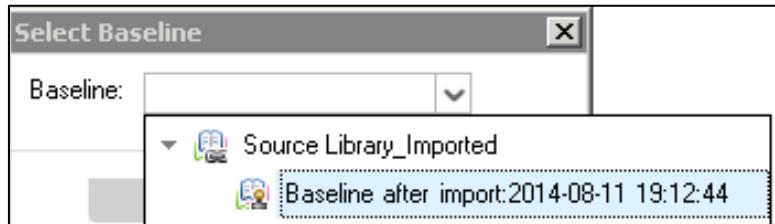
Note: If the project does not appear, click Select... and on the login screen select Domain: STUDENT00_DTA and Project: Project3.

2. Select the Management module and click the Libraries tab.
3. Expand the libraries tree and select the library, Source Library. Click the Compare To button.
4. Select Compare to Source Library_Imported in STUDENT00_DTA/Project4, as shown in the following screenshot:

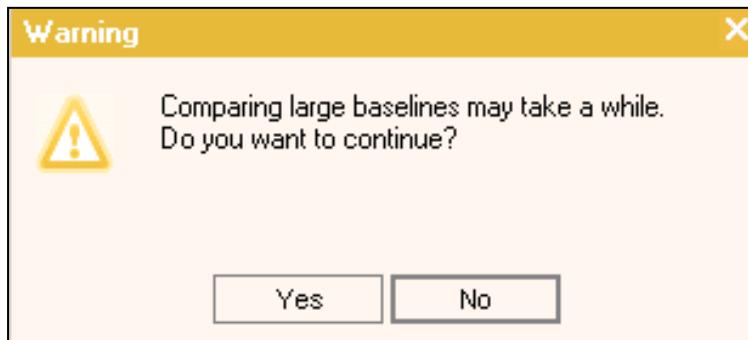


5. Click Select Baseline....

6. Click the drop-down arrow. In the Baseline field, select Baseline after import YYYYMM-DD HH:MI:SS (where YYYY-MM-DD stands for date and HH:MI:SS stands for time). Click the **OK** button.

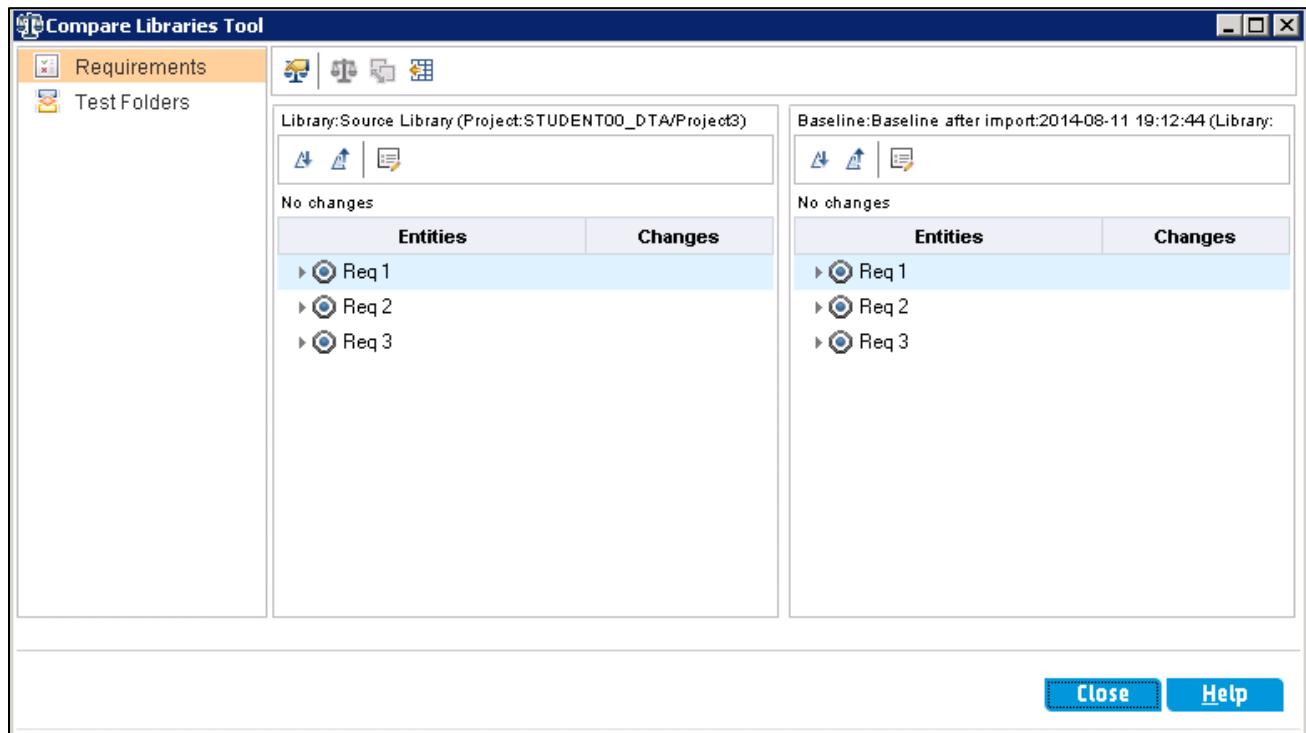


7. Click the **OK** button in the Select Baseline dialog box. A Warning message is displayed, as shown in the following screenshot:



8. Click the Yes button to close it.

9. The Compare Libraries Tool is displayed showing the comparison, as shown in the following screenshot:



10. Click the Test Folders button in the left pane. Examine Test Cases differences between the two projects.

11. Click the **Close** button.

12. Select the Management module and click the **Libraries** tab.

13. Expand the Libraries tree and select the library, Source Library. Click the Compare To **button**.

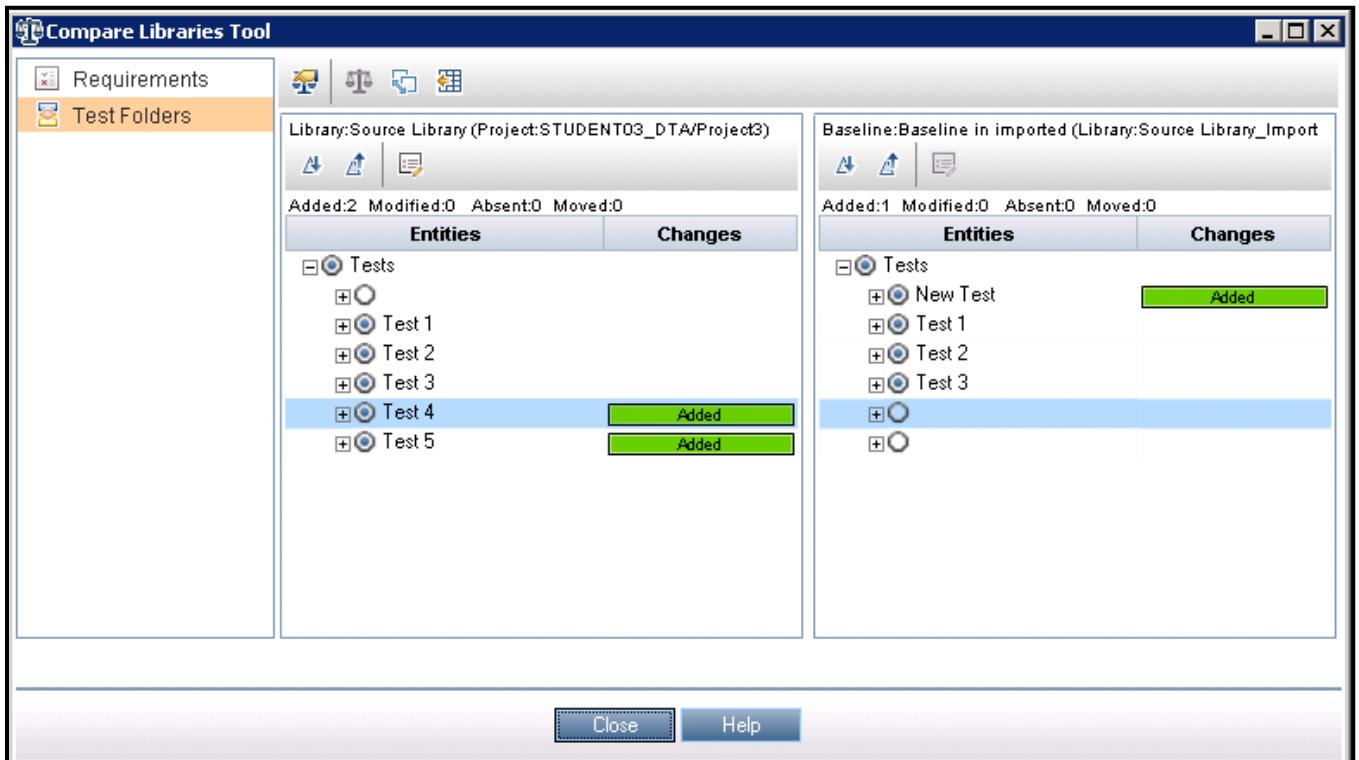
14. Select Compare to Source Library_Imported in STUDENT00_DTA/Project4, as shown in the following screenshot:



15. Select Latest Baseline Created.

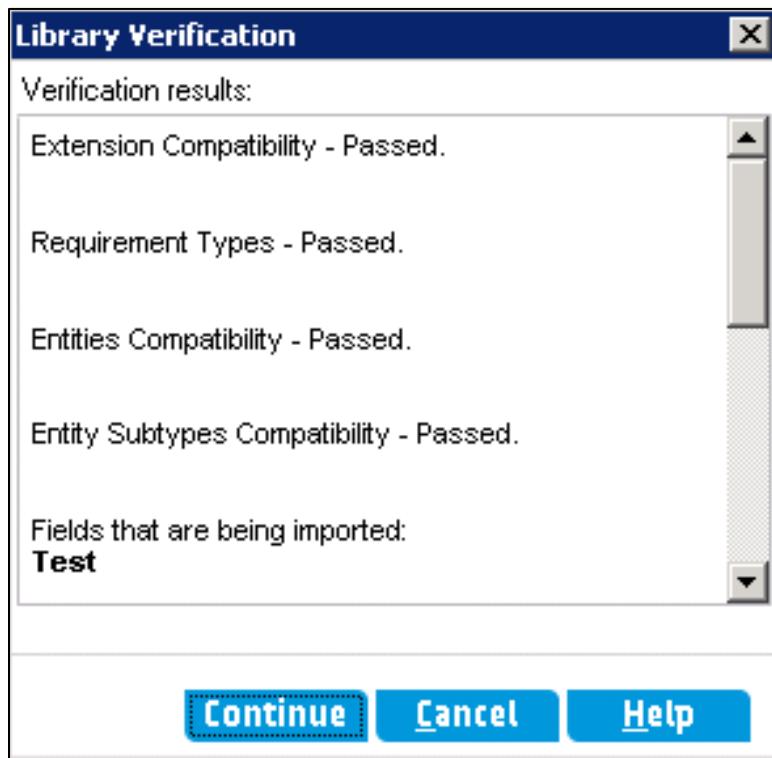
16. Click Yes in the Warning dialog that is displayed.

17. The Compare Libraries Tool window is displayed.
18. Select Test Folders in the left pane and click the Go to Next Change button.
The following screenshot is displayed.



19. Click the synchronize button .

20.The Library Verification Window is displayed. Click the **Continue** button.



21.Click the **Close** button to close the Compare Libraries Tool window.

22.Refresh the libraries module view until the View Log button disappears after synchronization is complete. The new baseline, Baseline after synchronization:<Date Time Stamp>, is captured.

23. Select the Testing module and click the **Test Plan** tab. Expand the Test Plan tree and ensure that New Test, which was originally created in Project4, is available here as well. Similarly, switch to Project4 and observe changes that have been sent from Project3.

The screenshot shows the HP ALM application interface. On the left, there is a vertical navigation bar with the following items:

- Dashboard
- Management
- Requirements
- Testing (selected)
- Test Resources
- Business Components
- Test Plan (selected)
- Test Lab
- Test Runs
- Defects

The main workspace on the right has the following structure:

- Toolbar with various icons (refresh, search, etc.)
- Filter bar: No Filter Defined
- Search bar: Name
- Tree view:
 - Unattached
 - Tests
 - New Test
 - Test 1
 - Test 2
 - Test 3
 - Test 4
 - Test 5

Exercise 3 – Comparing Imported Assets from the Target

In this exercise, you open Project3 and compare the imported library to a different baseline in Project3.

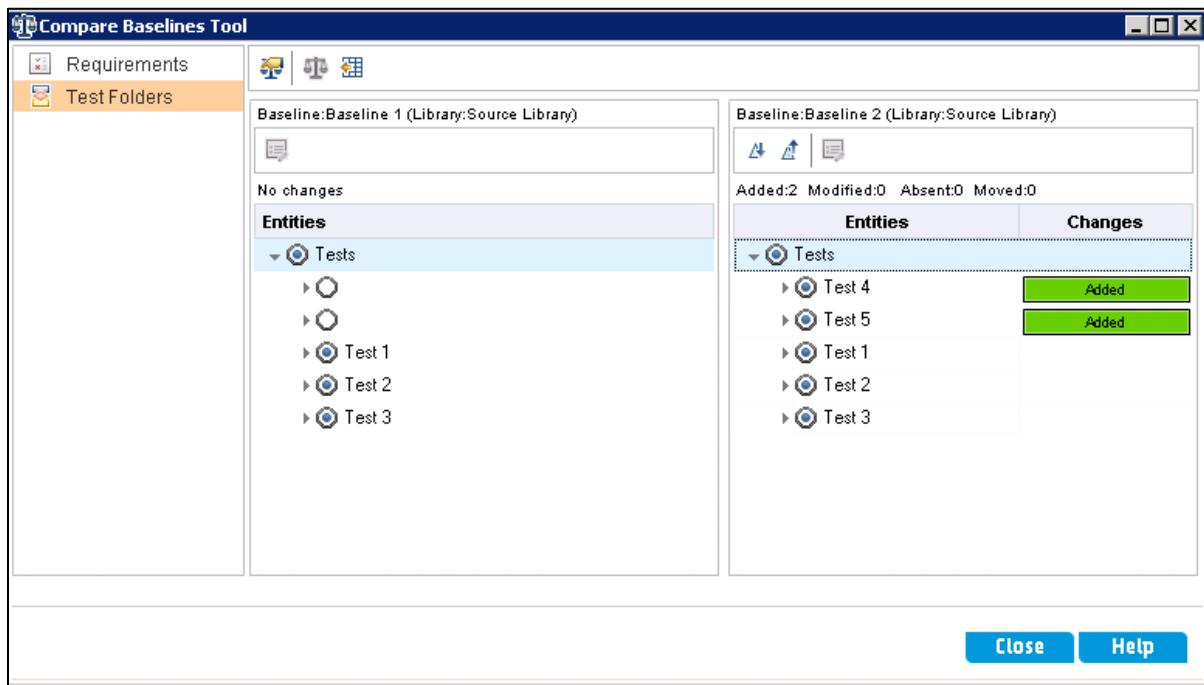
Complete the following steps:

1. Log in to ALM (if you are already logged in, you can skip this step):
 - a. In the Login Name and Password fields, type **training** and **welcome**, respectively.
 - b. Click the Authenticate button.
 - c. From the Domain and Project lists, select STUDENT00_DTA and Project3, respectively.
 - d. Click the Login button.
2. Select the Management module and click the  Libraries tab.
3. Expand the libraries tree, select the library Source Library. Select Baseline1 and click the Compare To  button.
4. Click .
5. Use the drop-down arrow and select Baseline2. Click the  button.



6. Click the  button in the Select Baseline dialog box. Click the  Yes button in the Warning dialog box. The Compare Baselines Tool window is displayed.

7. Click the Tests Folders button and expand the test tree. Observe the differences between the two baselines captured at different points in time in this project. Notice that the synchronize button is not available for changes within the same project.



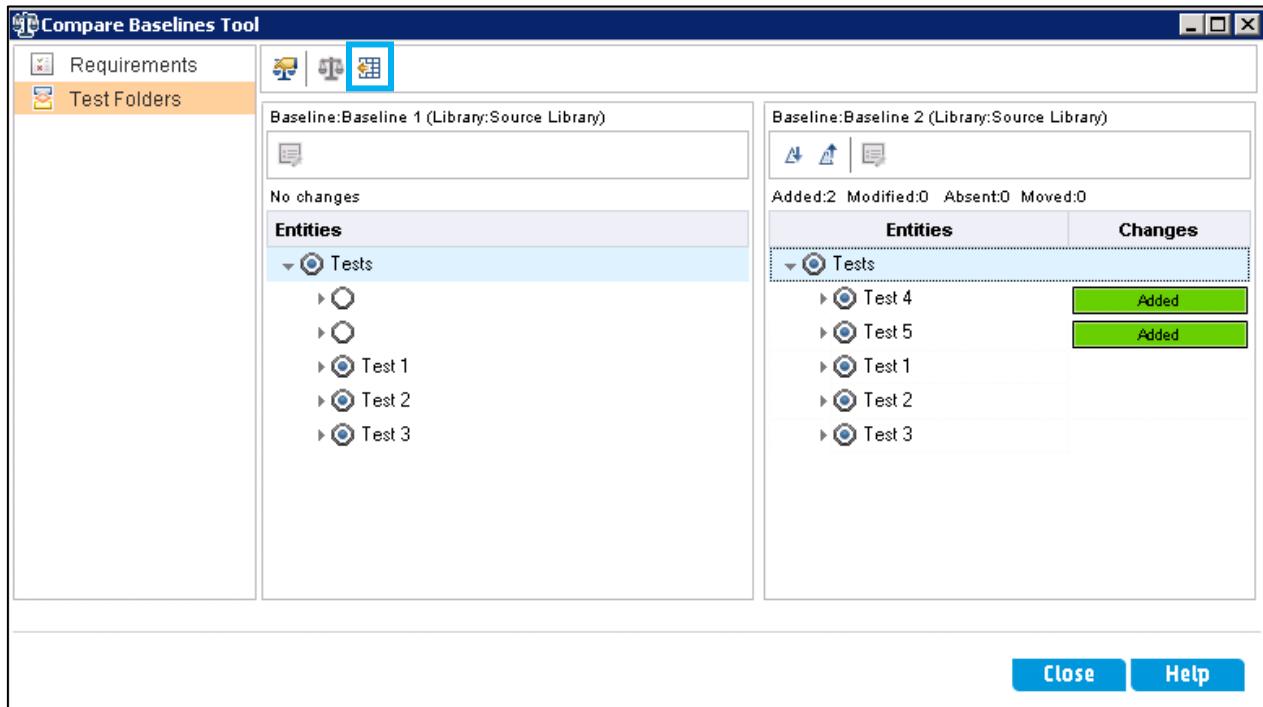
8. Leave the Compare Baselines Tool window open.

Exercise 4 – Exporting the Baseline Results

You can now save the baseline and library comparison results in a CSV file format.

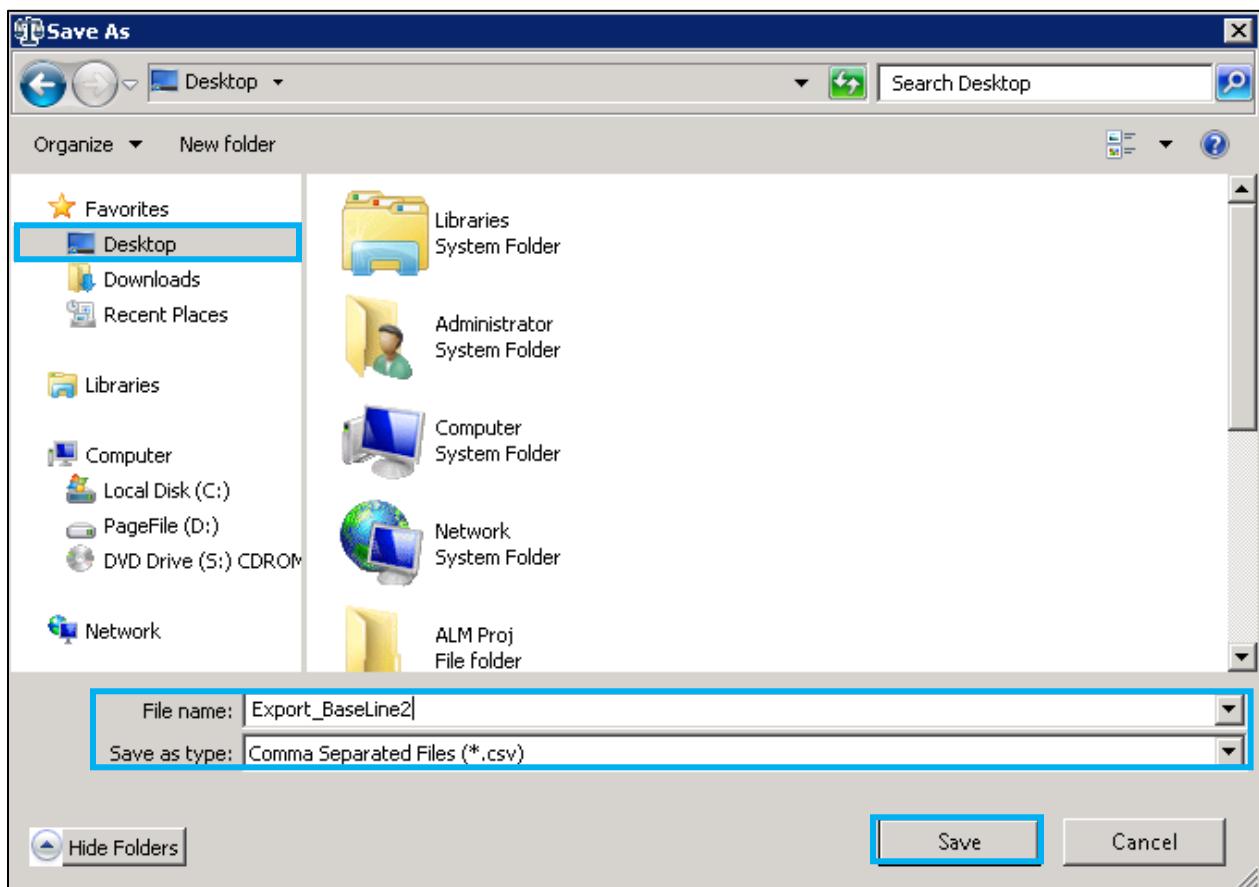
Complete the following steps:

1. In the Compare Libraries tool, click the Export Comparison Results button, as shown in the following screenshot:



2. The Save As dialog box is displayed. Select the Desktop location and enter the file name **Export_BaseLine2**. Click the Save button. The library comparison results are saved in the CSV file format.

Excel opens automatically to display the resulting file content. Close Excel after reviewing the report produced.



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Lab 17 – Exporting from Excel to ALM

Objectives

After completing this lab, you should be able to:

- Install the Microsoft Excel add-in
- Format and select the data in Excel
- Export Excel data to ALM

Scenario

Your company is converting from its previous practice of logging test data in third-party software, such as Microsoft Excel, to using ALM as its testing coordinator. Your job is to convert the old testing data from Excel to a format that ALM recognizes, and then export that data from Excel to a project in ALM.

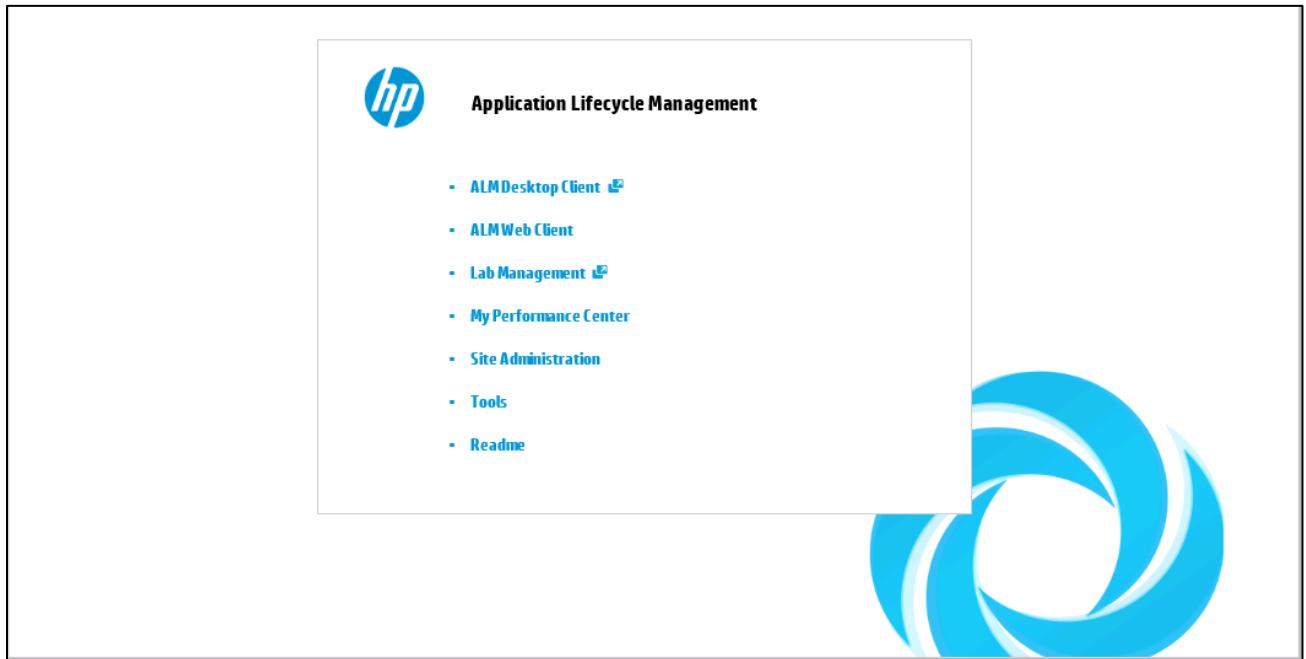
In this lab, you download and use the HP ALM Microsoft Excel add-in to export your data from Excel into ALM.

Exercise 1 – Installing the Microsoft Excel Add-In (already installed in your lab environment)

Please review this task as a future job aid at your work place.

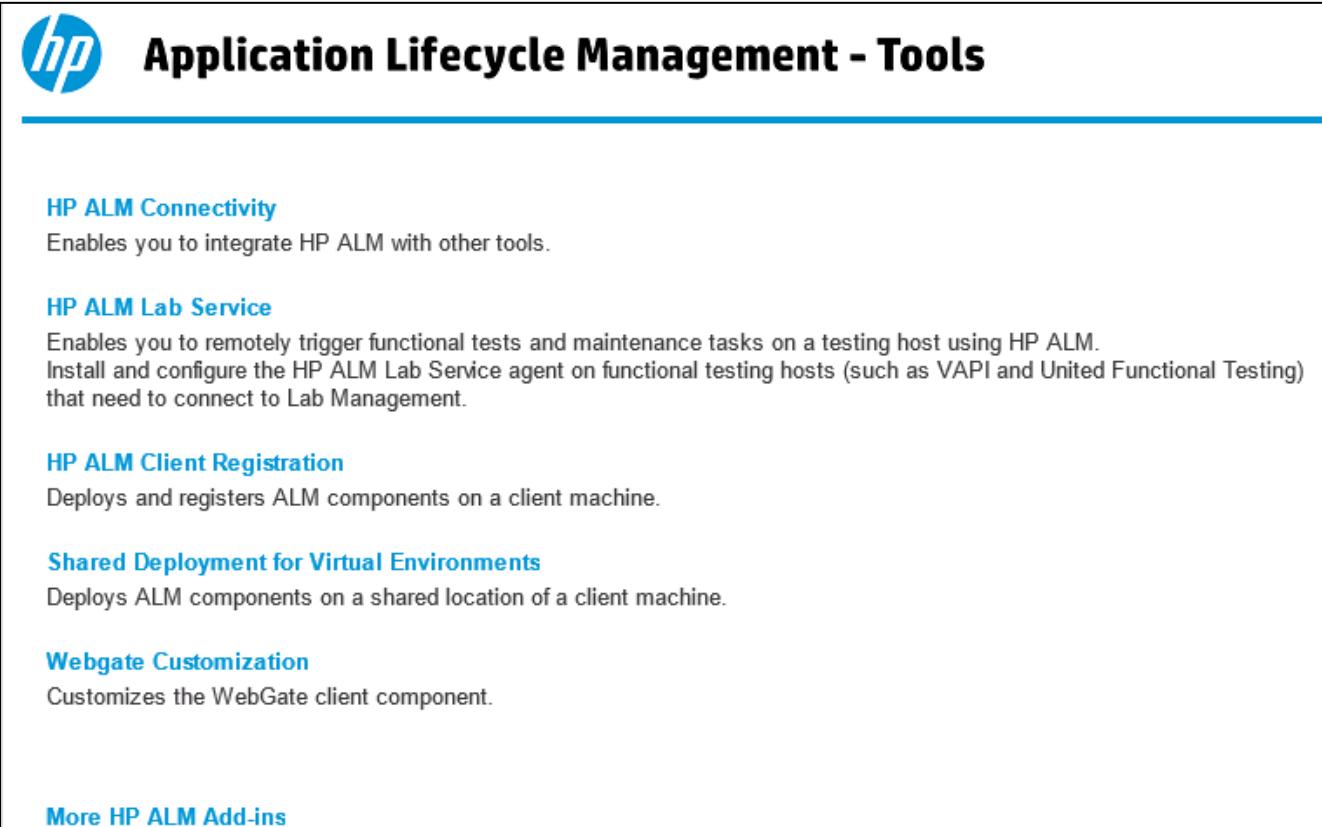
When you need to install the Excel add-in, complete the following steps:

1. Start at the ALM home page.



2. To navigate to the Tools page and install the Excel add-in, complete the following steps:

- a. From the ALM home page, click the Tools Page link . The ALM Tools page is displayed.



The screenshot shows the 'Application Lifecycle Management - Tools' page. At the top left is the HP logo. The main title is 'Application Lifecycle Management - Tools'. Below the title, there are several sections with blue links: 'HP ALM Connectivity', 'HP ALM Lab Service', 'HP ALM Client Registration', 'Shared Deployment for Virtual Environments', 'Webgate Customization', and 'More HP ALM Add-ins'. Each section has a brief description below it.

HP ALM Connectivity
Enables you to integrate HP ALM with other tools.

HP ALM Lab Service
Enables you to remotely trigger functional tests and maintenance tasks on a testing host using HP ALM. Install and configure the HP ALM Lab Service agent on functional testing hosts (such as VAPI and United Functional Testing) that need to connect to Lab Management.

HP ALM Client Registration
Deploys and registers ALM components on a client machine.

Shared Deployment for Virtual Environments
Deploys ALM components on a shared location of a client machine.

Webgate Customization
Customizes the WebGate client component.

More HP ALM Add-ins

- b. Click the **More HP ALM Add-ins** link. The HP ALM Resources page is displayed.

The screenshot shows the HP Application Lifecycle Management Resources page. At the top, there is a navigation bar with icons for 'What's New', 'Add-Ins' (which is highlighted in blue), and 'Movies'. Below this, a section titled 'Add-ins' is shown with the following content:

HP ALM provides a unified platform for managing and automating processes, activities, and assets that organizations use to build, test, deliver, and maintain applications.

To enhance the overall, end-to-end experience and collaboration between business analysts, development and testing teams, HP Application Lifecycle Management (ALM) offers integration and synchronization solutions with HP and third-party tools. Add-ins provide solutions for driving consistent processes, incorporating shared best-practices, and sharing assets across projects and products.

| | |
|--|--|
| Add-ins for HP Applications (11) | Add-ins for Microsoft Applications |
| Add-ins for Microsoft Applications (3) | Microsoft Word ► Enables you to export your existing test plan data or requirement data stored in Microsoft Word directly to HP ALM. |
| Utility Add-ins (13) | Microsoft Excel ► Enables you to export your existing tests, requirements, or defects stored in Microsoft Excel directly to HP ALM. |

- c. Click the Add-ins for Microsoft Applications link and then click the Microsoft Excel link. The Microsoft Excel Add-in page is displayed.

- d. Click the HP ALM Microsoft Excel Add-in Download link as shown in the following screenshot. Click Run in the dialog box that is displayed.

HP ALM Microsoft Excel Add-in for ALM 12.00 and Later

Installation Instructions

1. Install Microsoft Excel on your HP ALM client machine.
2. Uninstall any previous versions of this add-in.
3. Refer to the *HP ALM Microsoft Excel Add-in Guide* to review additional important installation instructions.
4. Click the relevant download link to download and install this add-in on your HP ALM client machine.

Note: To install this add-in for all users, you must log in with administrator privileges. To install this add-in for the current user, administrator privileges are not required.

Excel Versions Supported

- Microsoft Excel 2010 (32 bit) SP1 (with MS12-060)
- Microsoft Excel 2013 (32 bit)

Downloads for ALM 12.01

- [HP ALM 12.01 Microsoft Excel Add-in Readme](#)
- [HP ALM 12.01 Microsoft Excel Add-in Guide](#)
- [HP ALM 12.01 Microsoft Excel Add-in Download \(Build 12.01.8.0\)](#)

Downloads for ALM 12.00

- [HP ALM 12.00 Microsoft Excel Add-in Readme](#)
- [HP ALM 12.00 Microsoft Excel Add-in Guide](#)
- [HP ALM 12.00 Microsoft Excel Add-in Download \(Build 12.00.40.0\)](#)

- e. Complete the installation wizard instructions to install the add-in.
3. Close all browser windows.

Exercise 2 – Formatting and Selecting the Data in Excel

To format and select data in Excel, perform the following steps:

1. Open Microsoft Excel and ensure that the Export to HP ALM command is available in the Add-Ins tab, indicating that the Excel add-in is installed, as shown in the following screenshot.



2. Open Frs_Requirements.xlsx from the C:\Training\ALM_QC 12 Essentials directory. A sample requirements file is shown in the screenshot below.

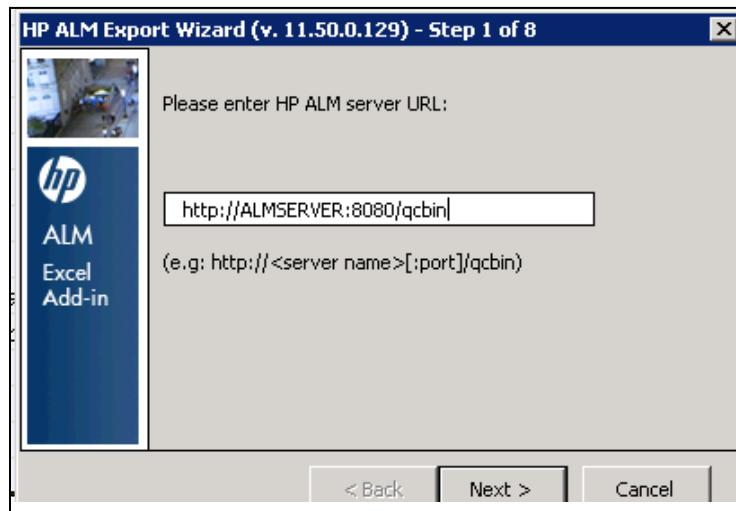
| | A | B | C | D |
|----|--------------------|---|------------------|------------------------|
| 1 | Name | Description | Requirement Type | Path |
| 2 | Flight Reservation | FlightReservation | Folder | |
| 3 | Business Processes | This folder contains business processes of FRS | Folder | Flight Reservation |
| 4 | Security | Application must allow access to authorized users only | Folder | Flight Reservation |
| 5 | New Features | This folder contains new features | Folder | Flight Reservation |
| 6 | Create Order | User must be able to create an order | Functional | Flight Reservation\Bus |
| 7 | Delete Order | User must be able to delete an order | Functional | Flight Reservation\Bus |
| 8 | Update Order | User must be able to update an order with a valid set of data | Functional | Flight Reservation\Bus |
| 9 | Fax Order | User must be able to fax an order | Functional | Flight Reservation\Bus |
| 10 | Open Order | User must be able to open an order by number, name and date | Functional | Flight Reservation\Bus |
| 11 | Login | User must be able to login with password "mercury". Password must be case sensitive | Functional | Flight Reservation\Se |
| 12 | Version | Application version shall be displayed in menu Help->About | Functional | Flight Reservation\Ne |
| 13 | Graph | Application must allow to create a graph | Functional | Flight Reservation\Ne |
| 14 | Report | Application must allow to create a report | Functional | Flight Reservation\Ne |

3. The data in this file enable you to export a Requirements tree. Highlight all rows containing data. Do not include the first row containing column headers.

Exercise 3 – Exporting Excel Data to ALM

To export Excel data to ALM, perform the following steps:

1. To start the ALM Export wizard:
 - a. Click the Add-Ins menu item in Excel and then click the Export to ALM button. The ALM Export Wizard dialog box is displayed. (This might be in a different location depending on the version of Microsoft Excel that you have installed.)

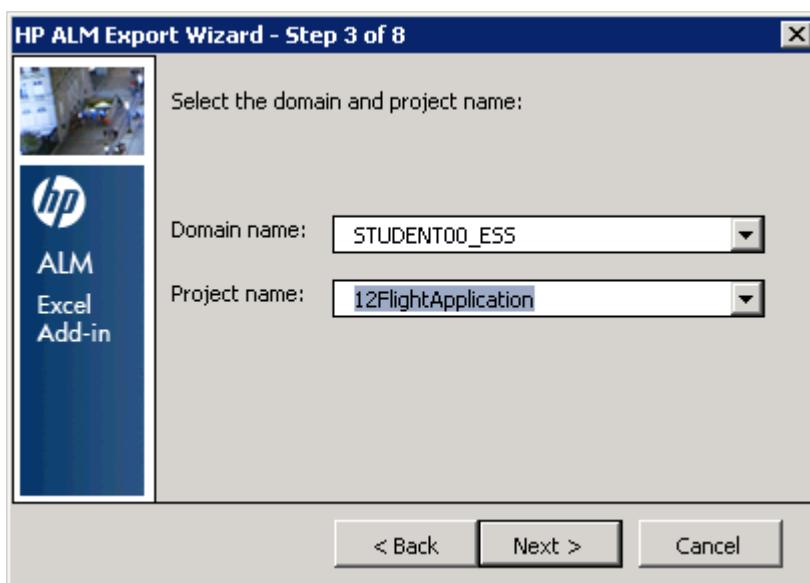


- b. Enter the path to the ALM server that you are using in this class. If you do not have this information, ask your instructor.
- c. Click the Next button to continue.

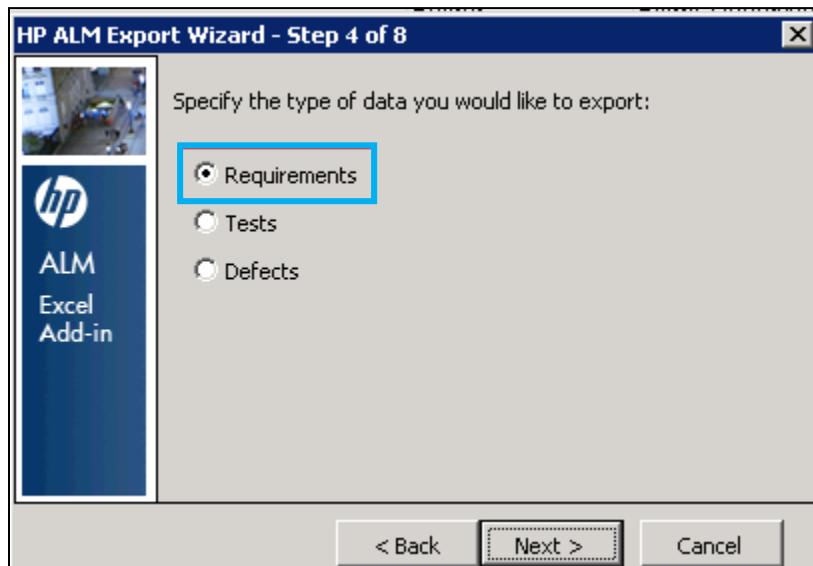
- d. For the User Name and User Password fields, type **training** and **welcome**, respectively. This is the same user name and password that you use to log in to the ALM project that will receive the exported data, as shown in the following screenshot.



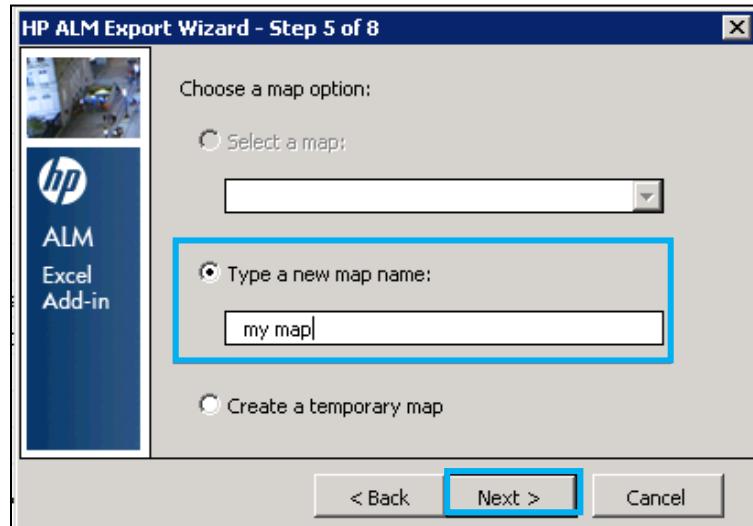
- e. Click the Next button to continue.
- f. In the Domain name and Project name fields, select STUDENT00_ESS and 12FlightApplication, respectively. This is the project you use to complete the exercises in this course.



- g. Click the Next button to continue.
- h. The Excel file contains requirements, so select the Requirements option, as shown in the following screenshot.

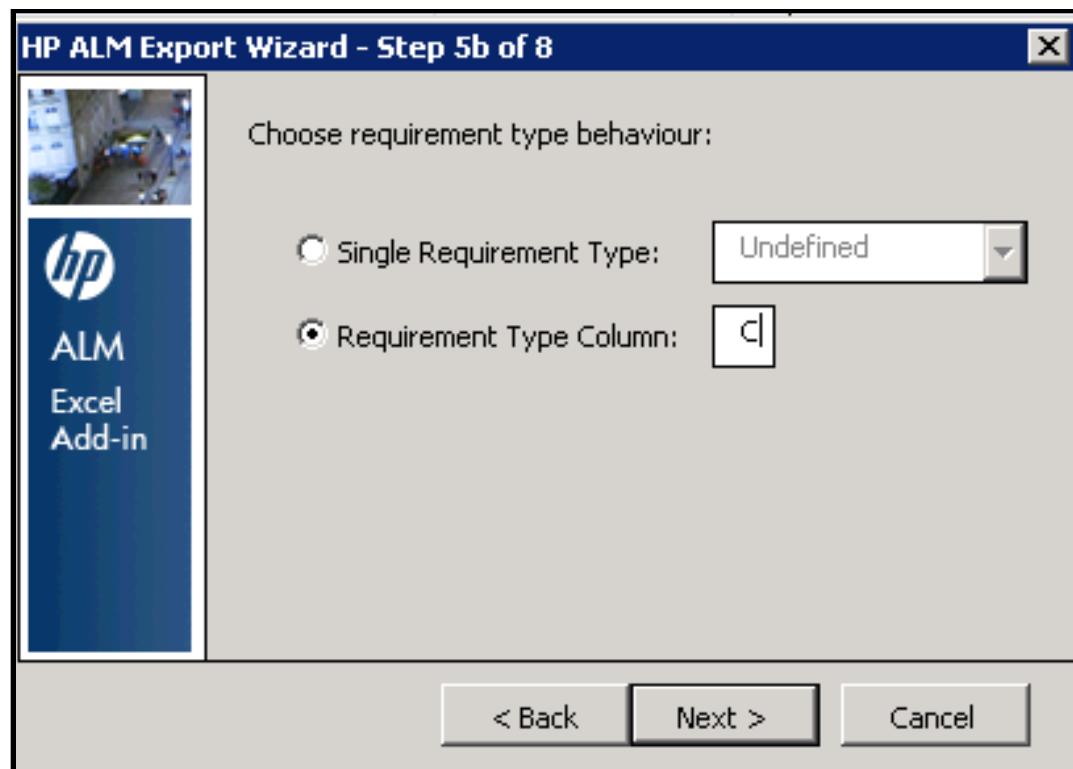


- i. Click the Next button to continue.
- j. Verify that the Type a new map name radio button is selected and enter **my map**. This name identifies the relationship between the Excel columns and the ALM fields that you define in the next steps.



- k. Click the Next button to continue.

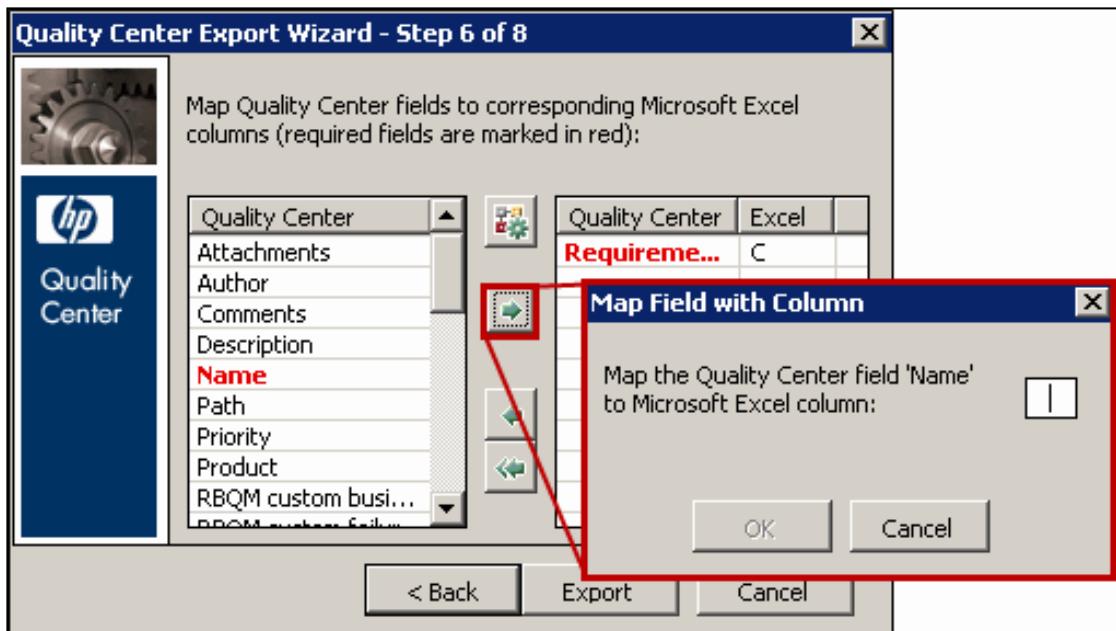
- I. In the HP ALM Export wizard Step 5b of 8, select the Requirement Type Column radio button and enter C in the box.



- ...- m. Click the Next button to continue.

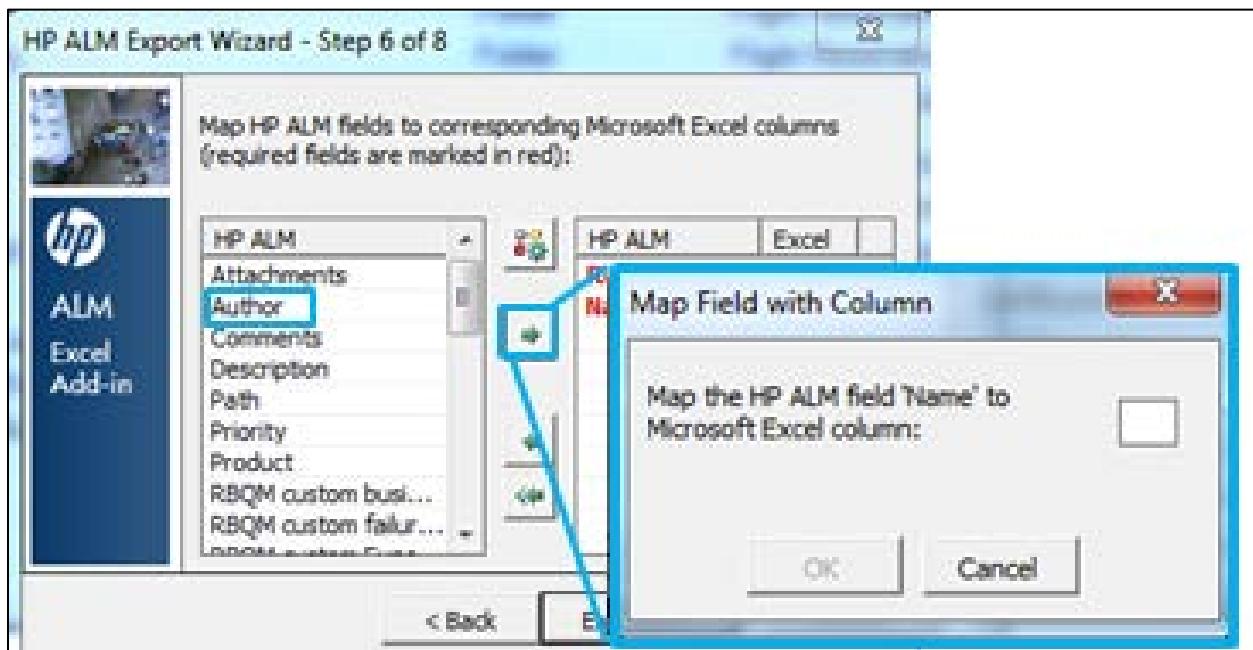
2. To map Excel columns that you want to export to ALM fields, complete the following steps:

- a. From the left box, select the Name field, then click the right arrow button to move it to the right box. The Map Field with Column dialog box is displayed.

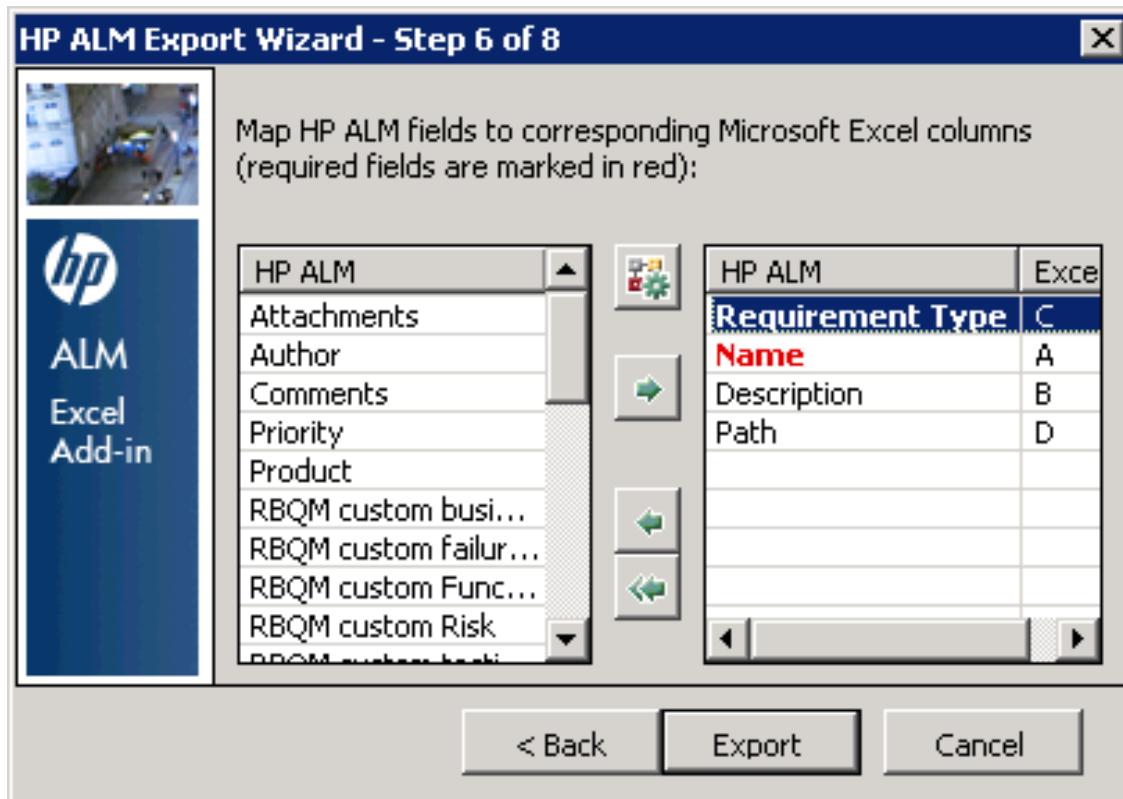


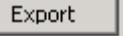
- b. In the Map Field with Column dialog box, specify the Excel column letter A that corresponds to the data for the Name field and then click the OK button.

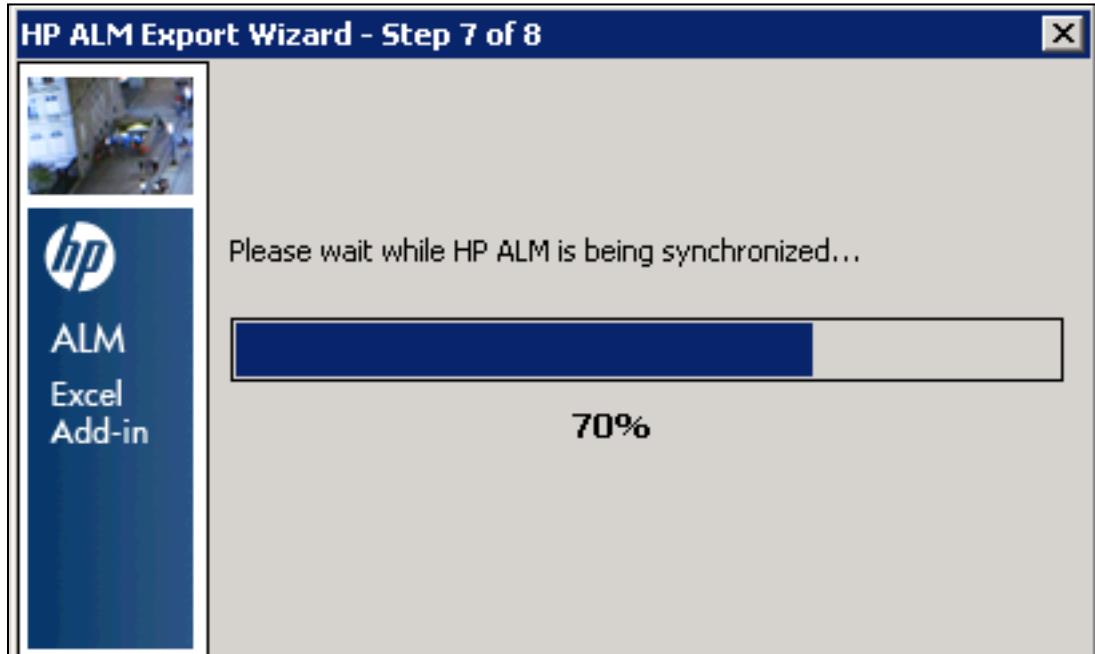
- c. Repeat these steps to map the Description (letter B) and Path (letter D) fields to the corresponding Excel columns.

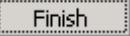


Your end result of mapping should look similar to the following:



- d. Click the Export  button to continue. The ALM Export wizard exports the data from Excel to ALM and displays the confirmation message You have successfully exported the Microsoft Excel worksheet to ALM.



- e. Click the  button to close the wizard.

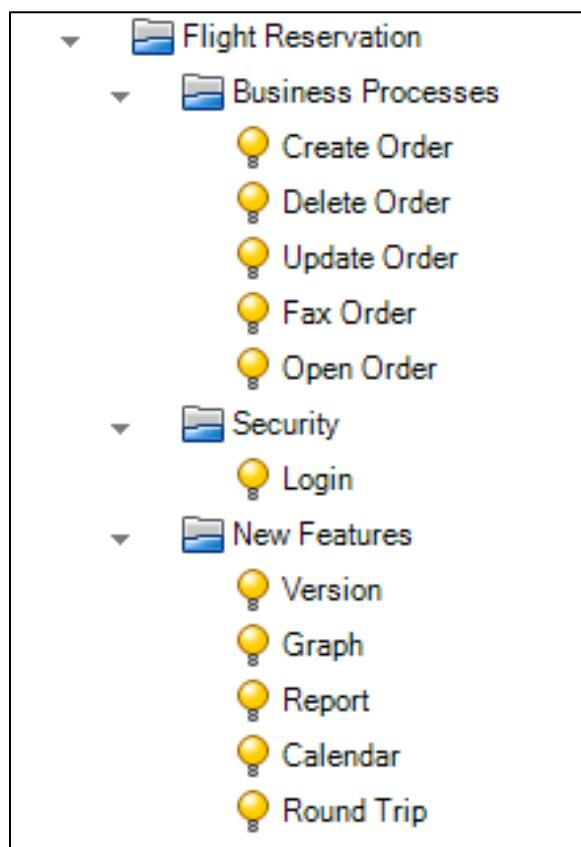


- f. Exit Excel.

3. To verify that the export from Excel to ALM was successful, complete the following steps:
 - a. Log in to ALM using **training** as the User name and **welcome** as the Password. Select the **Student00_ESS** domain and the **12FlightApplication** project.
 - b. On the ALM sidebar, click the Requirements module.
 - c. From the ALM menu bar, select **View → Requirements Tree**.

Note: The ALM menu bar and your browser's menu bar might have some common choices. Be sure to select the View menu on the ALM menu bar.

- d. If necessary, click the Refresh All button to display the requirements exported from Excel.
- e. Expand the Requirements root folder to see the **Flight Reservation** folder. Select the **Flight Reservation** folder, click **View → Expand All** to see the items that were exported from the Excel spreadsheet, as shown in the following screenshot.



The screenshot above shows the complete Requirements tree.

- f. Log off from ALM.

This page is intentionally left blank.

Lab 18 – Reporting and Analysis

Objectives

After completing this lab, you should be able to:

- Generate analysis reports and graphs
- Generate a project report
- Use the dashboard
- Use the dashboard configuration view

Scenario

After you complete the testing of the Flight Reservation application, you must generate various reports and graphs to analyze the following information:

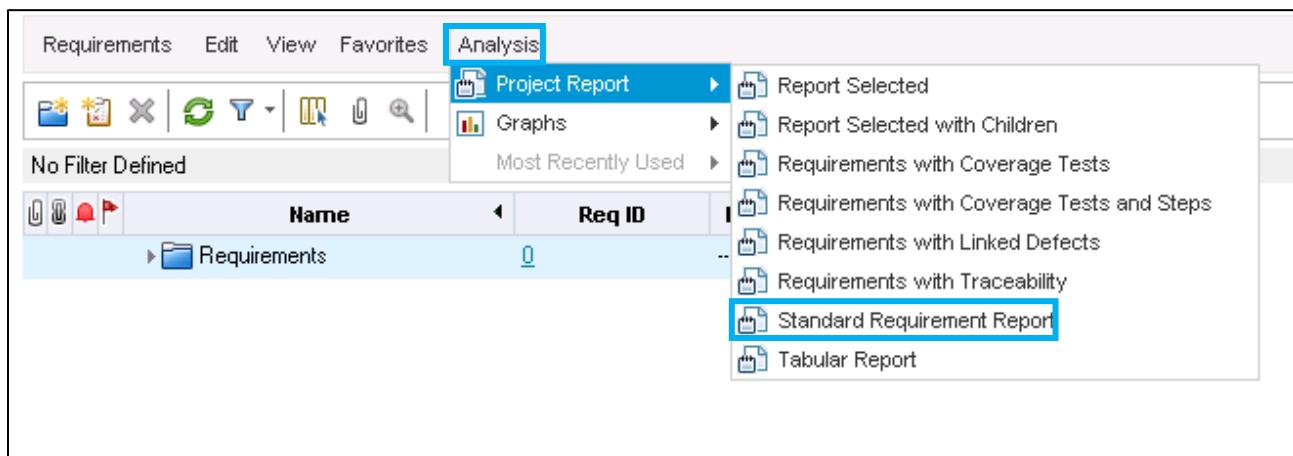
- The total number of requirements that you created for the project
- The number of requirements that you reviewed
- The status of the tests that you created
- The current status of the project
- The requirements coverage data

Exercise 1 – Generating Analysis Reports and Graphs

To generate analysis reports and graphs, perform the following steps:

1. Use the following steps to generate a Standard Requirements Report for the 13FlightApplication project:
 - a. Log in to ALM Desktop Client using **training** as the User name and **welcome** as the Password. Select the STUDENT00_ESS domain and 13FlightApplication project.
 - b. On the sidebar, select the Requirements  module.

- c. From the menu bar, select Analysis → Project Reports → Standard Requirement Report, as shown in the following screenshot.



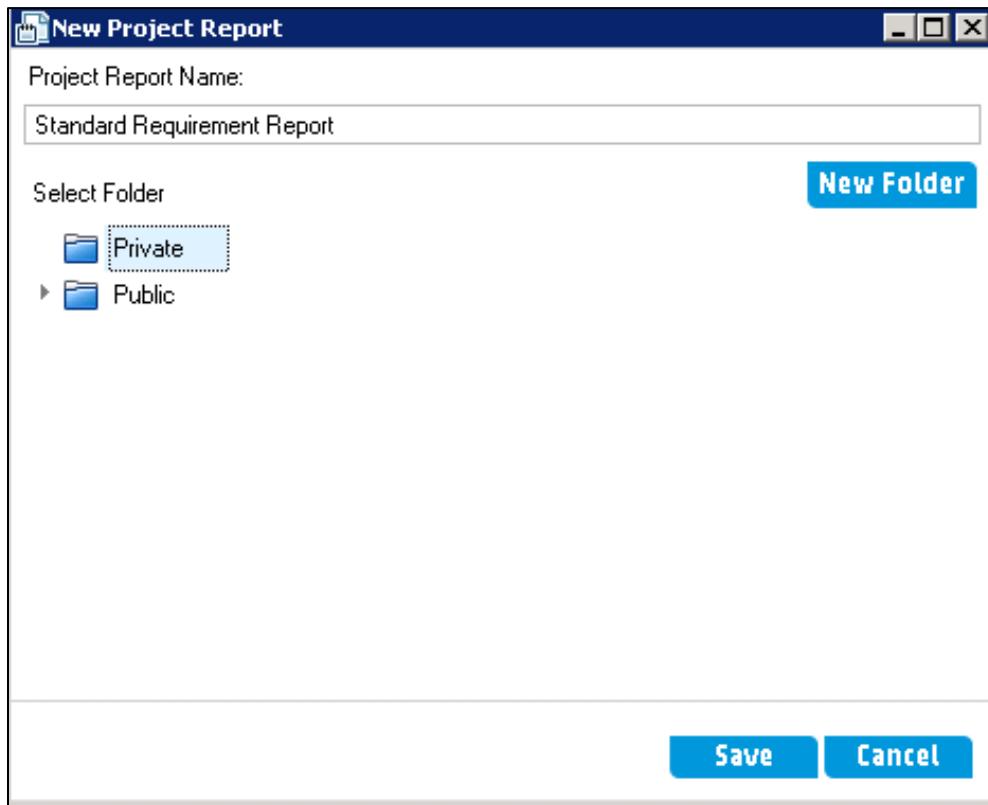
The Requirements Report Preview is displayed, as shown in the following screenshot.

A screenshot of the 'Standard Requirement Report' preview window. The window title is 'Standard Requirement Report' and it has a 'Generate' button. The main content area displays the word 'Preview' in large, light gray letters. Below it, the section '1 Requirements' is visible. Under '1 Requirements', the sub-section '1.1 Req ID : 0 - Requirements' is shown. A table lists various fields and their values:

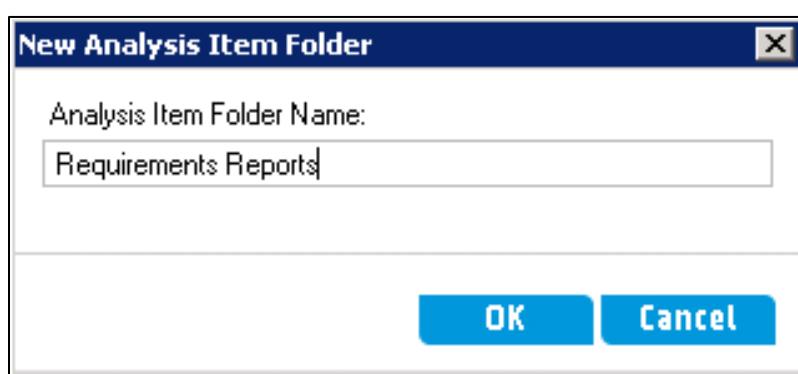
| Field Label | Field Value | Field Label | Field Value |
|----------------------|-------------|---------------------------------------|-------------|
| Author: | | RBQM effective Risk: | |
| Creation Date: | 10/5/06 | upgrade.RQ_RBT_EFFECTIVE_BSNS_IMPACT: | |
| Creation Time: | 14:34:58 | RBQM effective failure probability: | |
| Direct Cover Status: | N/A | RBQM estimated RnD effort: | |

At the bottom of the preview window, there are buttons for 'Add to Analysis Tree', 'Cancel', and 'Help'.

- d. Click the Add to Analysis tree... **Add to Analysis Tree** button at the bottom of the report. The new project Report dialog box is displayed, as shown in the following screenshot.



- e. To create a new folder to store the report in the dashboard, select the Private folder and click the New Folder **New Folder** button. The New Analysis Item Folder dialog box is displayed.
- f. In the Analysis Item Folder Name field, enter Requirements Reports and click the **OK** button.



- g. To save the report in this newly created folder, click the **Save** button. In the left pane, the report is displayed under the Requirements Report folder in the Private folder.

- h. In the right pane, go to the **Configuration** tab and click the **Generate** button. This displays your report in the browser.

Your Requirements Report should look similar to the following screenshot.

The screenshot shows the HP Application Lifecycle Management interface. The title bar says "Application Lifecycle Management". Below it, a section titled "1 Requirements" is shown. Under "1 Requirements", there is a sub-section "1.1 Req ID : 0 - Requirements". A table displays various requirements fields and their values:

| Field Label | Field Value | Field Label | Field Value |
|-----------------------------|------------------|---------------------------------------|--------------|
| Author: | | RBQM effective Risk: | |
| Creation Date: | 10/5/06 | upgrade.RQ_RBT_EFFECTIVE_BSNS_IMPACT: | |
| Creation Time: | 14:34:58 | RBQM effective failure probability: | |
| Direct Cover Status: | N/A | RBQM estimated RnD effort: | |
| Modified: | 12/20/10 5:11 PM | RBQM testing hours: | |
| Name: | Requirements | RBQM testing level: | |
| Priority: | | Req ID: | 0 |
| Product: | | Req Parent: | |
| RBQM Date of last Analysis: | | Requirement Type: | Folder |
| RBQM custom testing hours: | | Reviewed: | Not Reviewed |

2. To generate a bar graph that displays the total count of requirements that you created and configure this chart to group the requirements by their review status, complete the following steps:

- Select the Requirements **Requirements** module.
- From the menu bar, select Analysis → Graphs → Graph Wizard.

The screenshot shows the Requirements module interface. The menu bar has "Analysis" selected. Under the "Analysis" menu, the "Graphs" option is chosen, and "Graph Wizard" is highlighted. A sidebar on the right lists several graph options:

- Project Report
- Graphs
 - Graph Wizard
 - Requirements Coverage Graph
 - Requirements Progress - Group by 'Direct Cover Status'
 - Requirements Summary - Group by 'Priority'
 - Requirements Trend - Group by 'Direct Cover Status'

On the step 1 OF 5: Select Entity Type dialog box is displayed. The Entity field displays Requirements by default and is not editable.

- c. Under Graph Type, ensure that Summary Graph is selected

| |
|--|
| Graph Type |
| <input checked="" type="radio"/> Summary Graph |

and click the  button.

| |
|--|
| Project Selection |
| <input checked="" type="radio"/> Use Current Project |

- d. Under Project Selection, select Use Current Project



and click the  button.

| |
|--|
| Filter Selection |
| <input checked="" type="radio"/> Do not use a filter |

- e. Under Filter Selection, ensure that Do not use filter  is selected and click the  button.

- f. In Select a coverage option, select the Do Not Show 'Not Covered' Parents

| |
|--|
| Select a coverage option |
| <input checked="" type="radio"/> Do not show 'Not Covered' Parents |

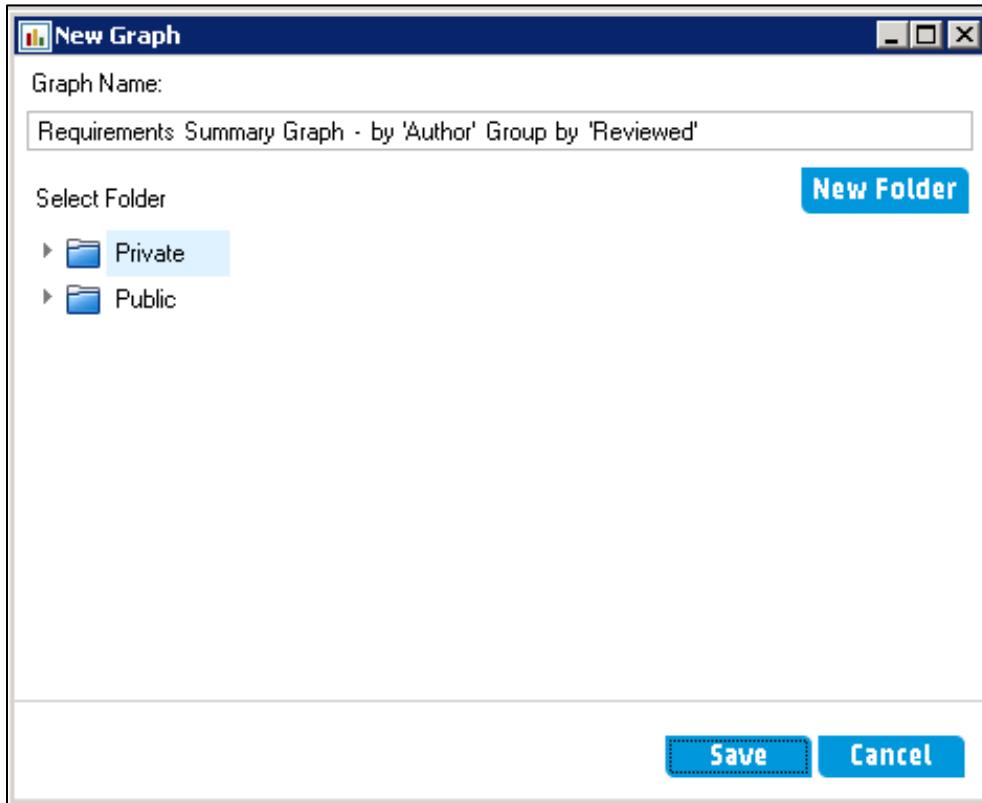
option and click the  button.

- g. For the Group By field, select Reviewed and for the X-Axis Field list, ensure that Author is selected.

| |
|---|
| Group By field: |
| <input checked="" type="radio"/> Reviewed |
| X-axis field: |
| Author |

- h. Click the Finish **Finish** button. Click the Add to Analysis Tree **Add to Analysis Tree** button at the bottom of the report.

The New Graph dialog box is displayed.

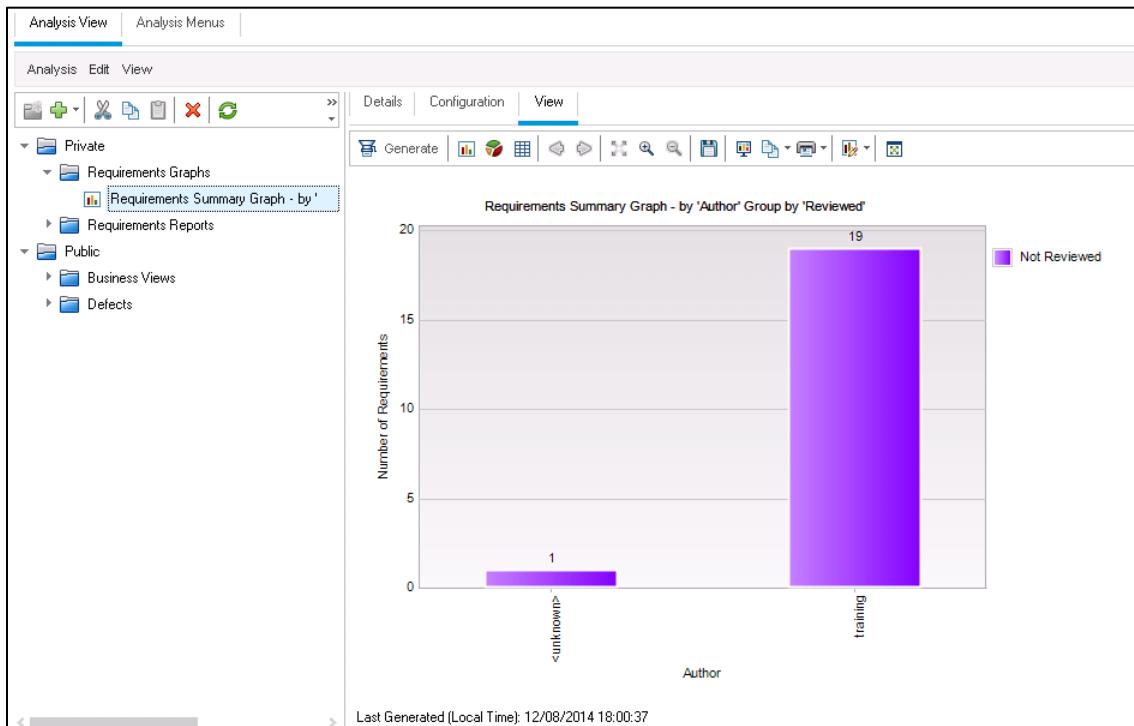


- i. To create a new folder to store the report in the dashboard, select the Public folder and click the New Folder **New Folder** button. The New Analysis Item Folder dialog box is displayed.
- j. Enter **Requirements Graphs** in the new Analysis Item Folder Name field and click the **OK** button.



- k. Retain the default graph name, and click the **Save** button. The Requirements Summary Graph is displayed in View tab of the Analysis View module of the Dashboard.

Your Requirements Summary Graph should be similar to screenshot below.

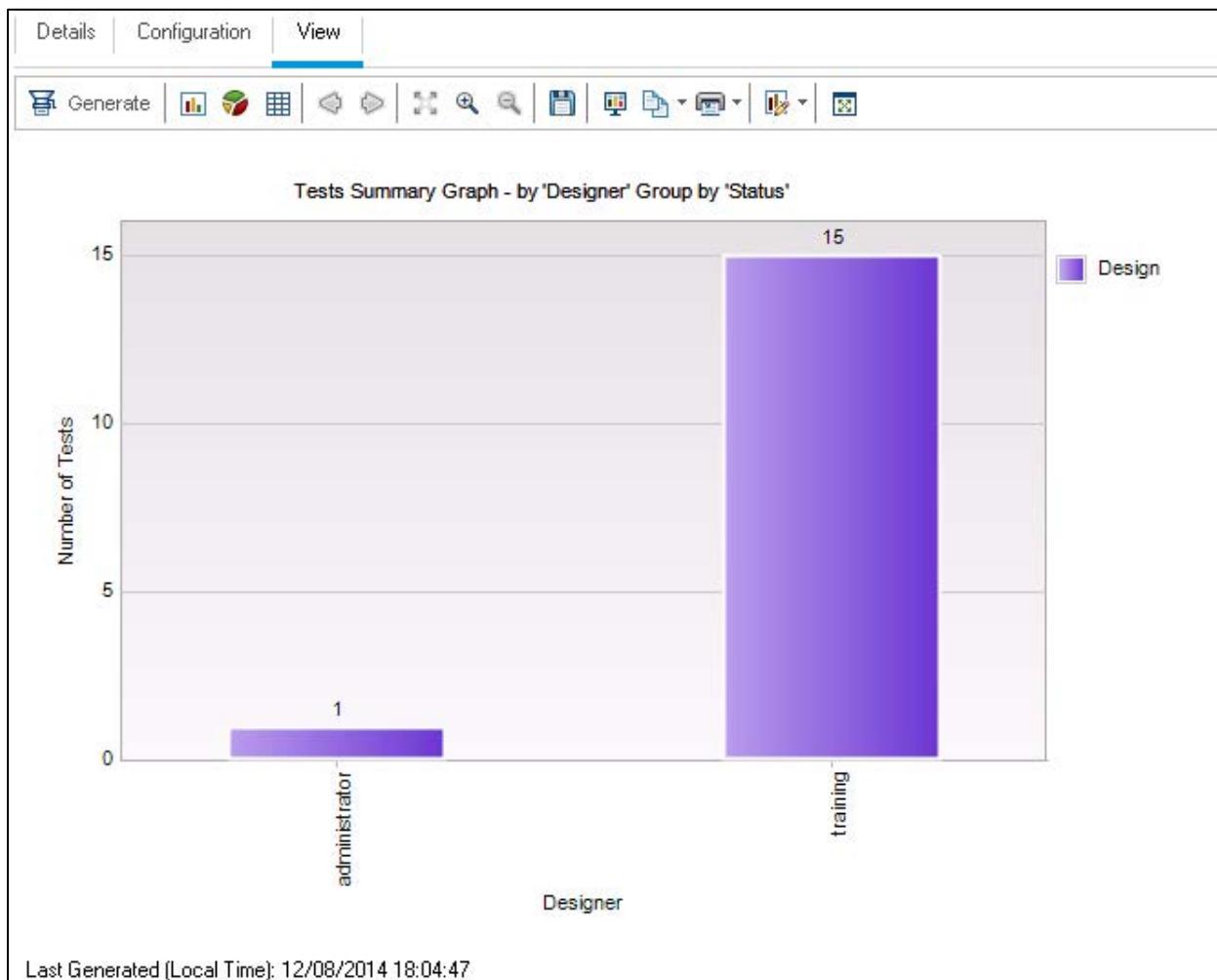


3. To generate a bar graph that displays the level of each test in the Test Plan tree, complete the following steps:
- Open the **Test Plan** module within Testing.
 - From the menu bar, select Analysis → Graphs → Graph wizard. The Step 1 of 5: Select Graph Type dialog box is displayed.
 - Under Graph Type, verify that Summary is selected and click the **Next >** button.
 - Under Project Selection, select Use Current Project and click the **Next >** button.
 - Under Filter Selection, select Do Not Use Filter and click the **Next >** button.

f. In the Group By field, select Status. In the X-Axis field, select

Designer and click the **Finish** button.

g. Use the same steps as above to save the graph in the Analysis folder within a new folder called Test Graphs. Test Summary Graph should look similar to following screenshot.

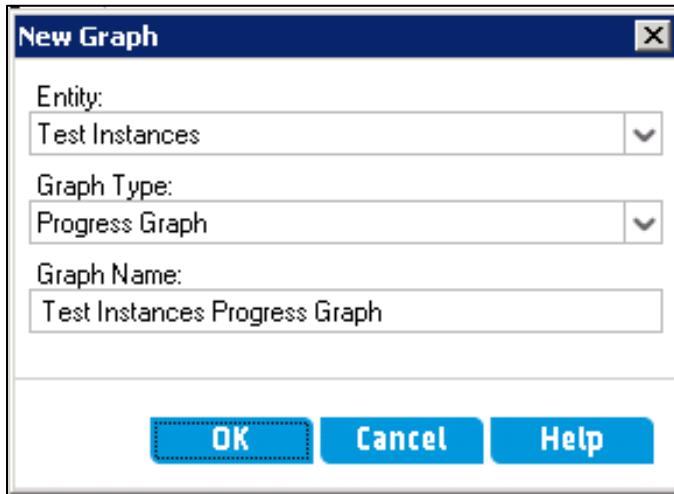


4. To generate a progress graph that displays the progress of test instances over time, complete the following steps:

- In the Dashboard, select the **Analysis View** module. Select the Public folder.
- Click the Analysis Menu item and select New Graph.

- c. In the Entity field, select Test Instance. In the Graph Type field, enter Progress Graph. In the Graph Name field, enter Test

Instances Progress Graph. Click the **OK** button.



Configuration

- d. Ensure that the **Configuration** tab is open.
- e. In the Period field, select Last, use the up/down arrows to make the count 2 in the second dropdown, and select Year(s) from the third dropdown.
- f. In the Resolution field, select Auto Select. For Display Options, select the Raw Data radio button, and in the Grouped By field, select Status.

| Details | Configuration | View |
|------------------|---|----------------|
| Period: | Last | 2 Year(s) |
| Resolution: | Auto Select | |
| Display Options: | <input checked="" type="radio"/> Raw Data <input type="radio"/> Changes Over Time | |
| Y-Axis: | Count | Test Instances |
| Grouped By: | Status | |

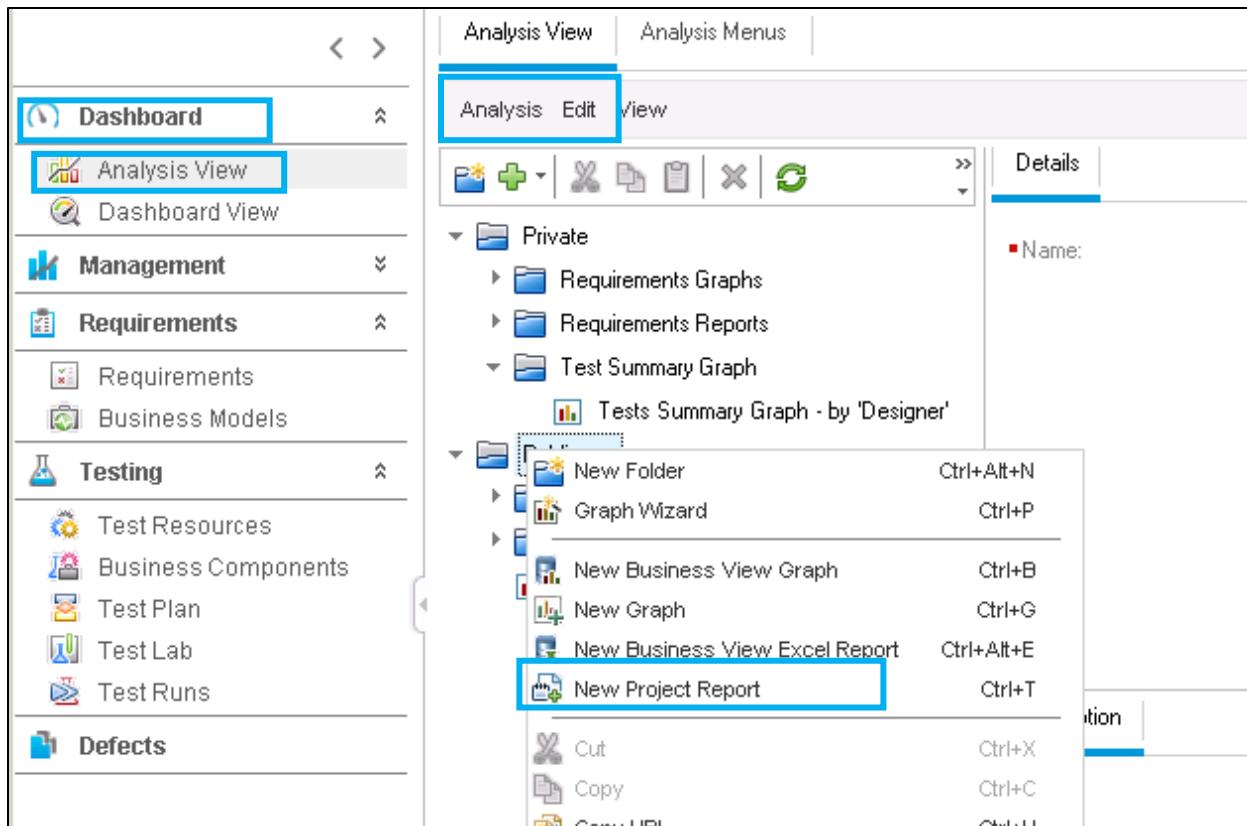
View

- g. Click the **View** tab to view the graph.

Exercise 2 – Generating a Project Report

To generate a project report, perform the following steps:

1. On the ALM sidebar, under Dashboard, select **Analysis View**.
2. Right-click the Public folder and select New Project Report.

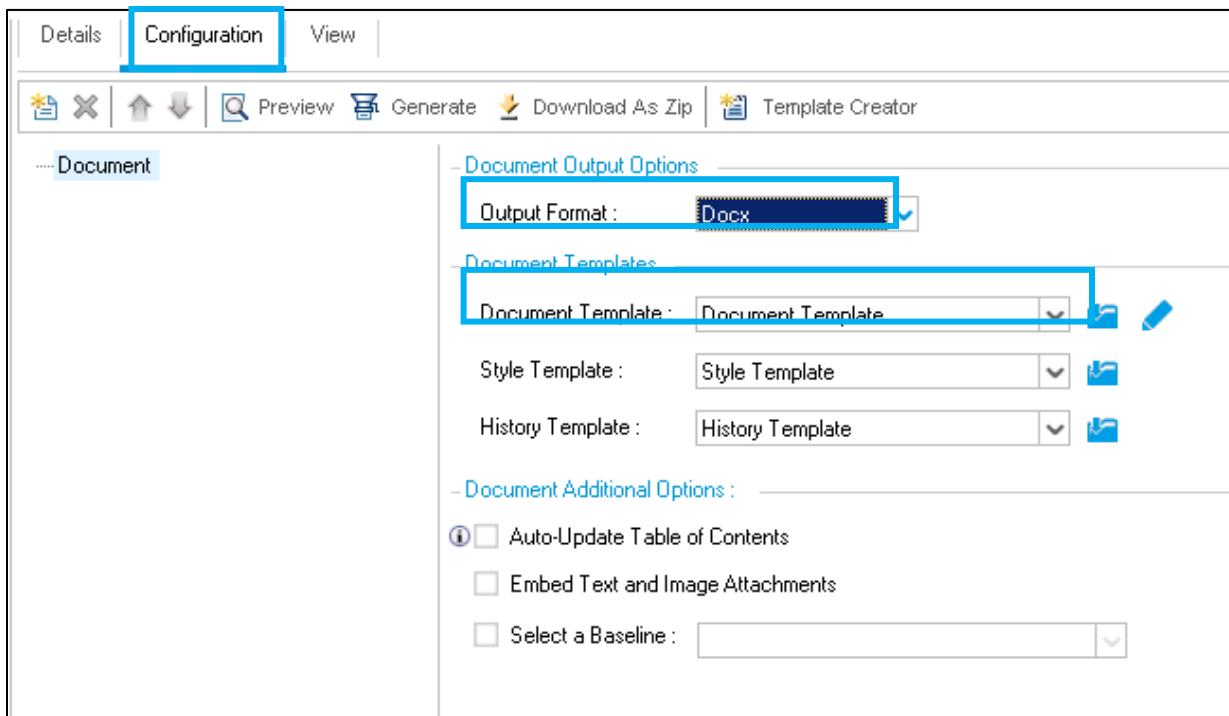


The New Project Report dialog box is displayed.

3. In the Project Report Name field, enter **Flight Application Report** for the Project Report Name and click the **OK** button.

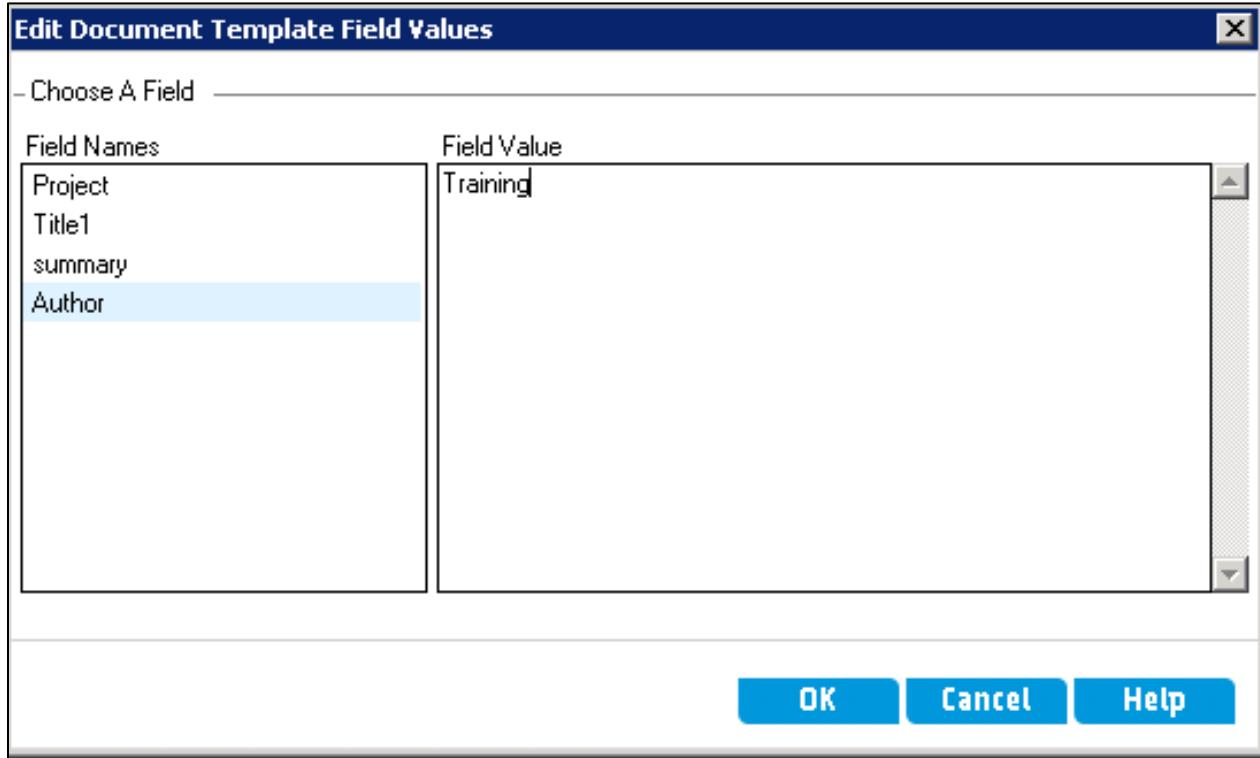


4. Ensure that the **Configuration** tab is selected.
5. In the Document Output Options section, select Docx in the Output Format field and click the Edit Document Field Values  button for Document Template, as shown in the following screenshot.



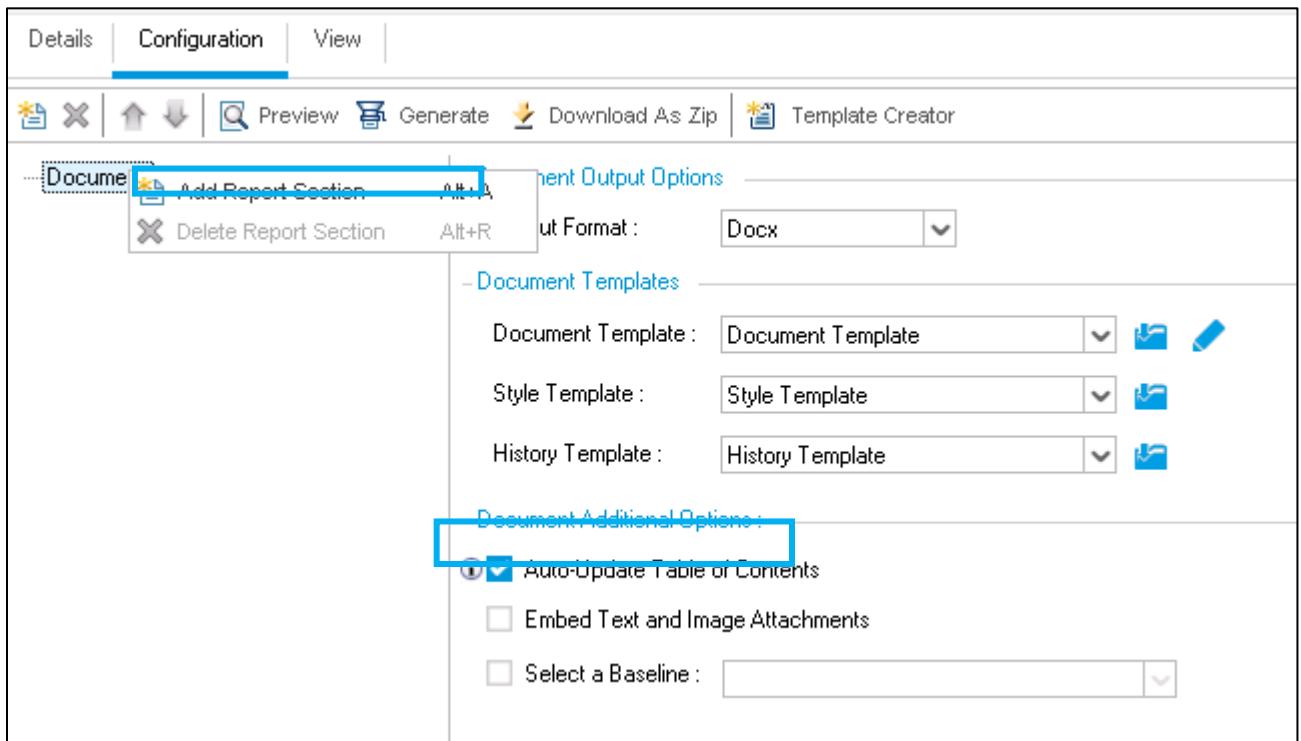
6. The Edit Document Template Field Values dialog box is displayed. Perform the following steps:
- Click Project under Field Names and enter **Flight Application** as the field value.
 - Click Title1 under Field Names and enter **Project Report** as the field value.

- c. Click summary under Field Names and enter **This document provides the features of FlightApplication** for the field value.
- d. Click Author under Field Names and enter **Training** for the field value.



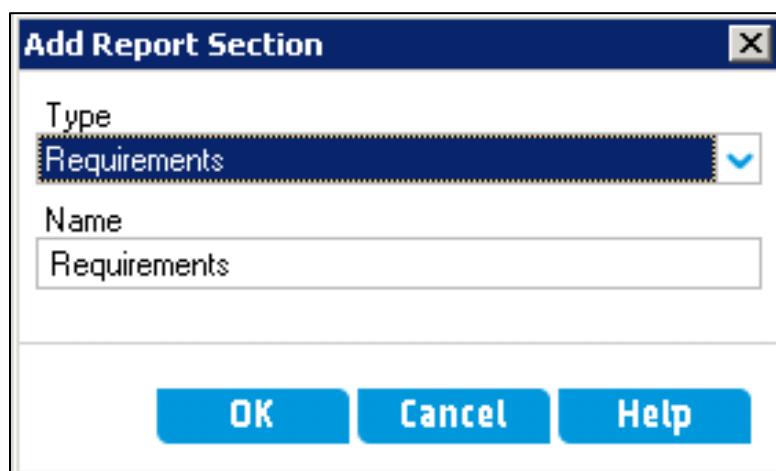
- e. Click the **OK** button.
7. In the Document Additional options, select the Auto-Update Table of Contents checkbox to instruct ALM to update the table of contents entries in the report output.

8. Right-click the Document root node and select Add Report Section, as shown in the following screenshot.



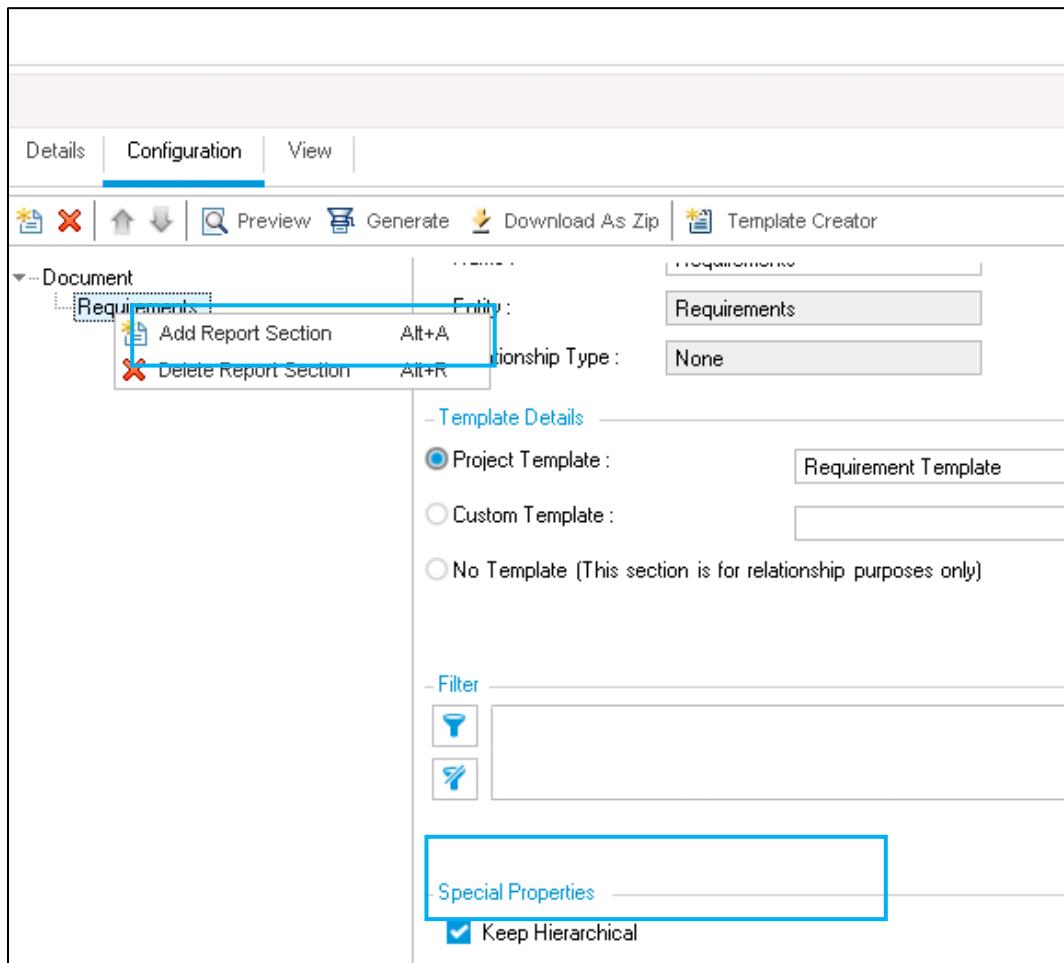
The Add Report Section dialog box is displayed. In the Type field, select

Requirements and click the **OK** button.



9. Under the Special Properties section in the right-side pane, select Keep Hierarchical to have the records ordered hierarchically in the report.

10. To add a sub-section, right-click Requirements in the Report tree, and select Add Report Section.



11. The Add Report Section dialog box is displayed. In the Type field, select Coverages

and click the button.



12. Click the  **Preview** button to display a preview of your report. Close the Word document.
13. Click the  **Generate** button. The report is opened in Word format. Close the Word document.

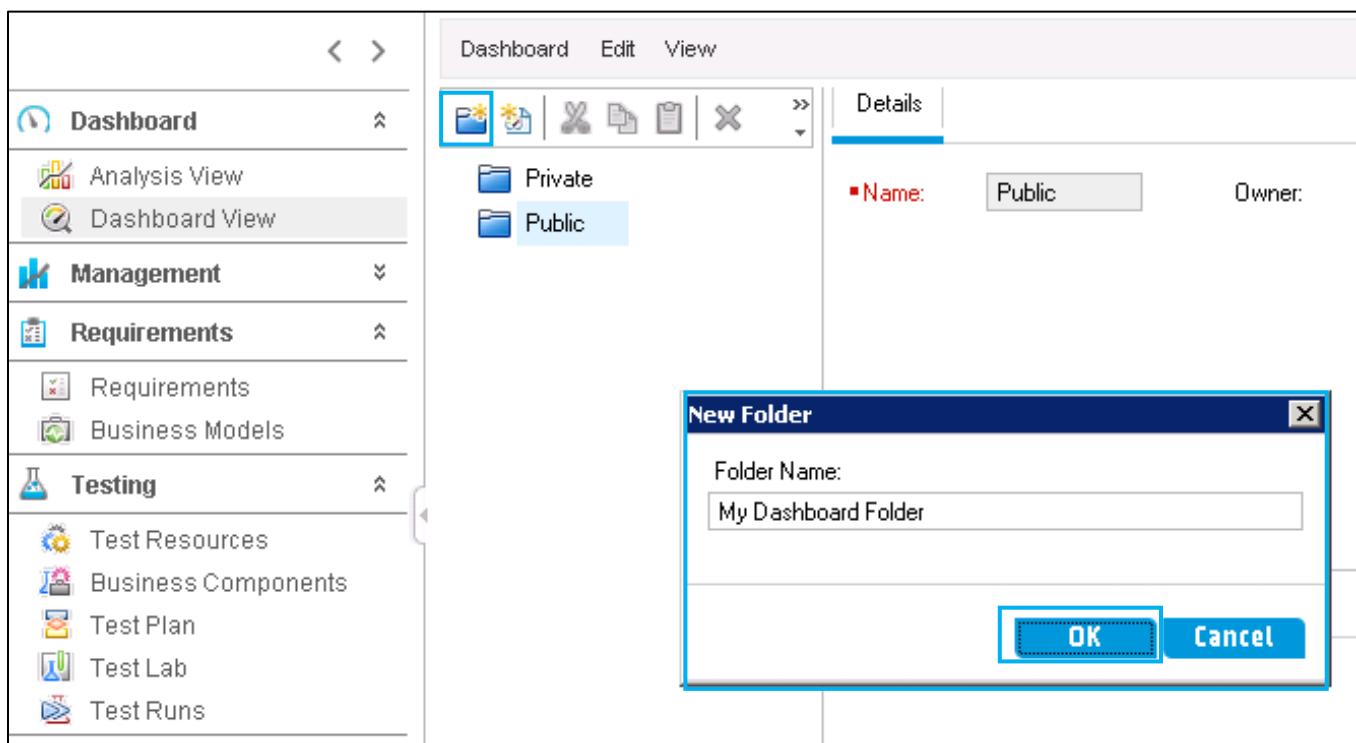
Exercise 3 – Using the Dashboard

In this exercise, you use the Dashboard to set up folders and pages and generate graphs.

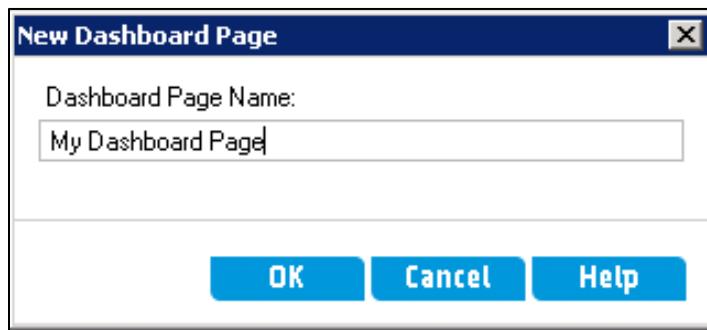
Complete the following steps:

1. To create a Dashboard folder:

- a. Click the  Dashboard View module under the Dashboard.
- b. Select the Public folder.
- c. On the Dashboard View toolbar, click the New Folder  icon.
- d. In the Folder Name field, enter **My Dashboard Folder** and click the  button.

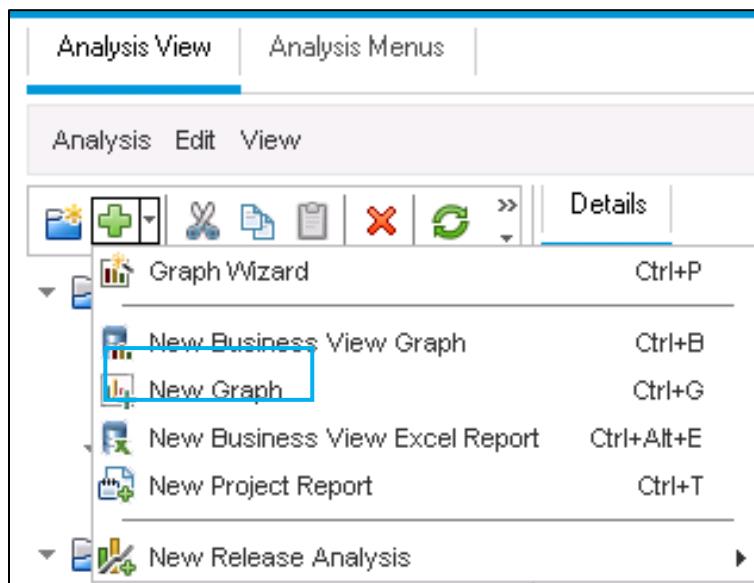


2. To create a Dashboard page, complete the following steps:
- Select the newly created **My Dashboard** Folder.
 - Click the New Page  icon or Ctrl+P short-cut key on the Dashboard View toolbar.
 - In the Dashboard Page Name field, enter **My Dashboard Page** and click the **OK** button.

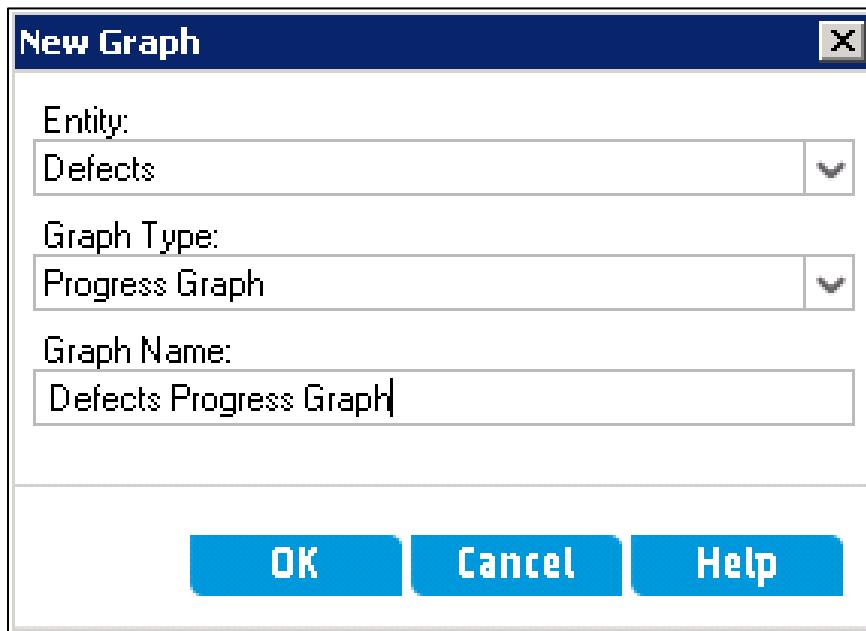


3. To generate graphs, complete the following steps:

- Select the  **Analysis View** in the Dashboard module.
- Select the Public folder.
- Create a new Folder and name it **Graphs**.
- On the Analysis View toolbar, click the New Item icon.
- Select New Graph from the New Item drop-down menu.



- f. In the New Graph dialog box, in the Entity field, select Defects. In the Graph Type field, select Progress Graph. In the Graph Name field, enter **Defects Progress Graph**.

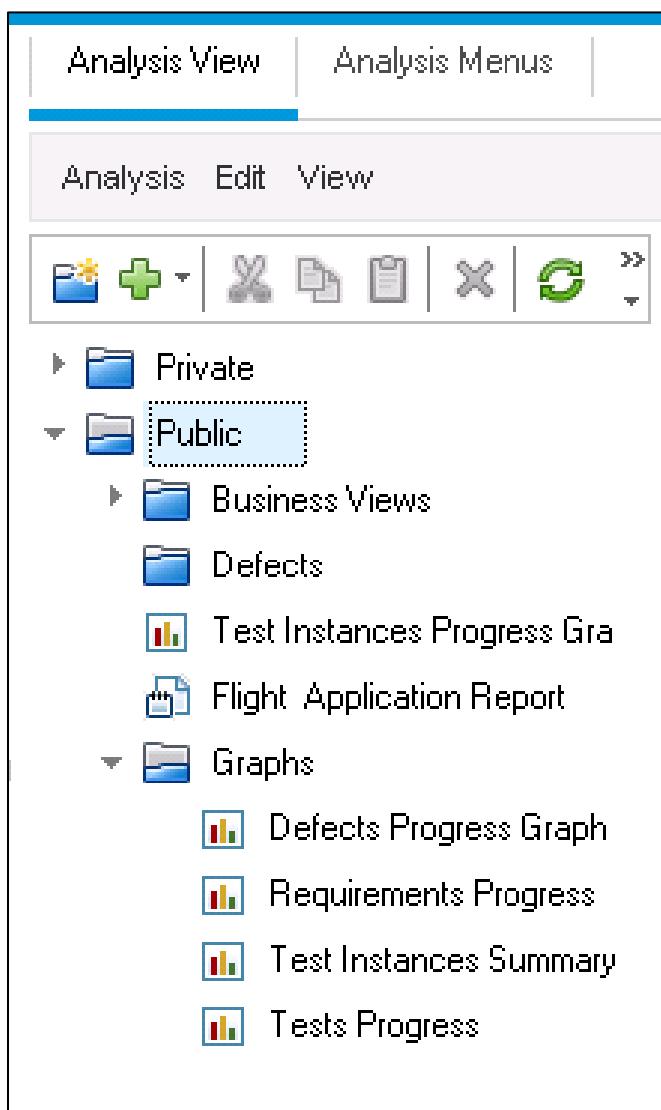


- g. Click the **OK** button.

h. Repeat Steps 3e to 3g with the following data:

| Entity | Graph Tree | Graph Name |
|----------------|-------------------|------------------------|
| Requirements | Progress graph | Requirements Progress |
| Test instances | Summary graph | Test Instances Summary |
| Tests | Progress graph | Tests Progress |

The following is an example of the Analysis tree.



i. Select the **View** tab and select each graph to view the data.

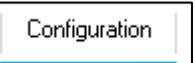
Exercise 4 – Using the Dashboard Configuration View

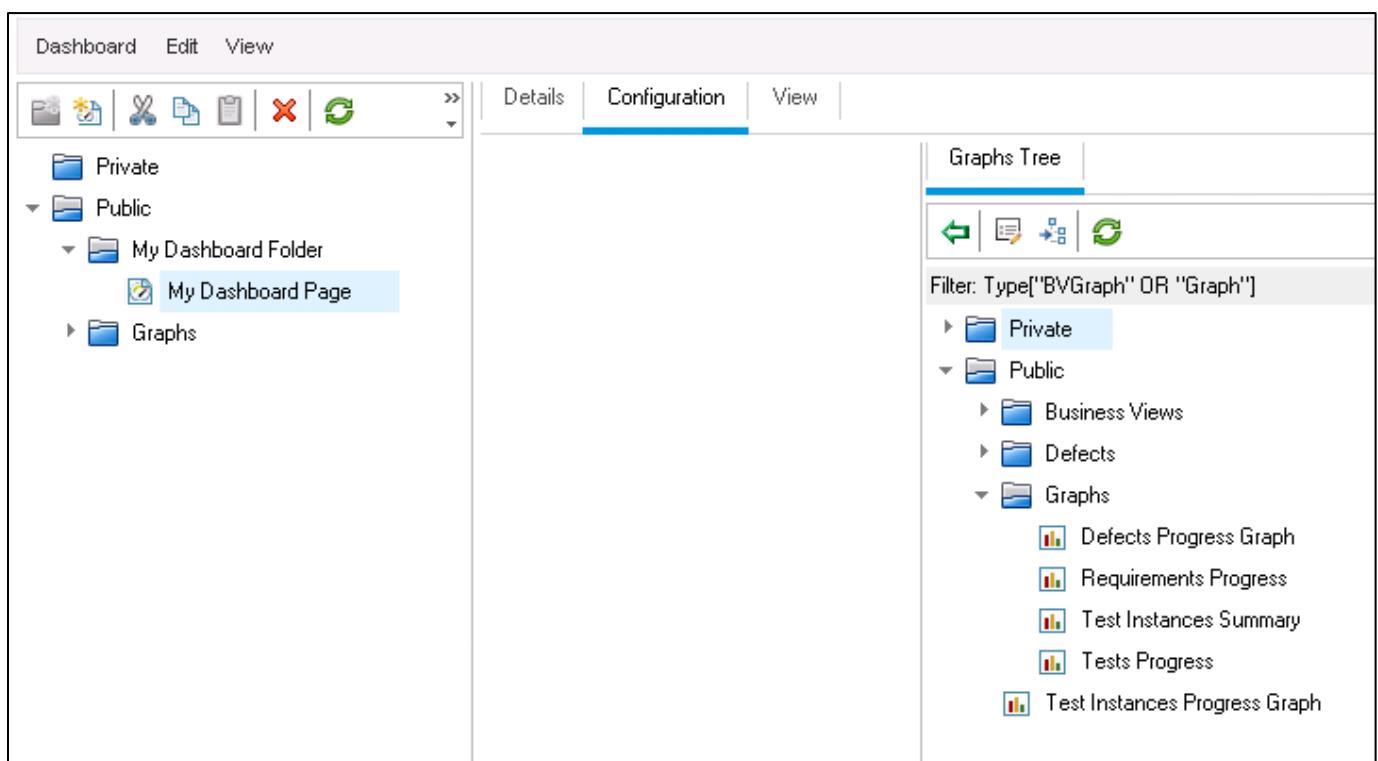
In this exercise, you add your analysis items to the Dashboard page.

Complete the following steps:

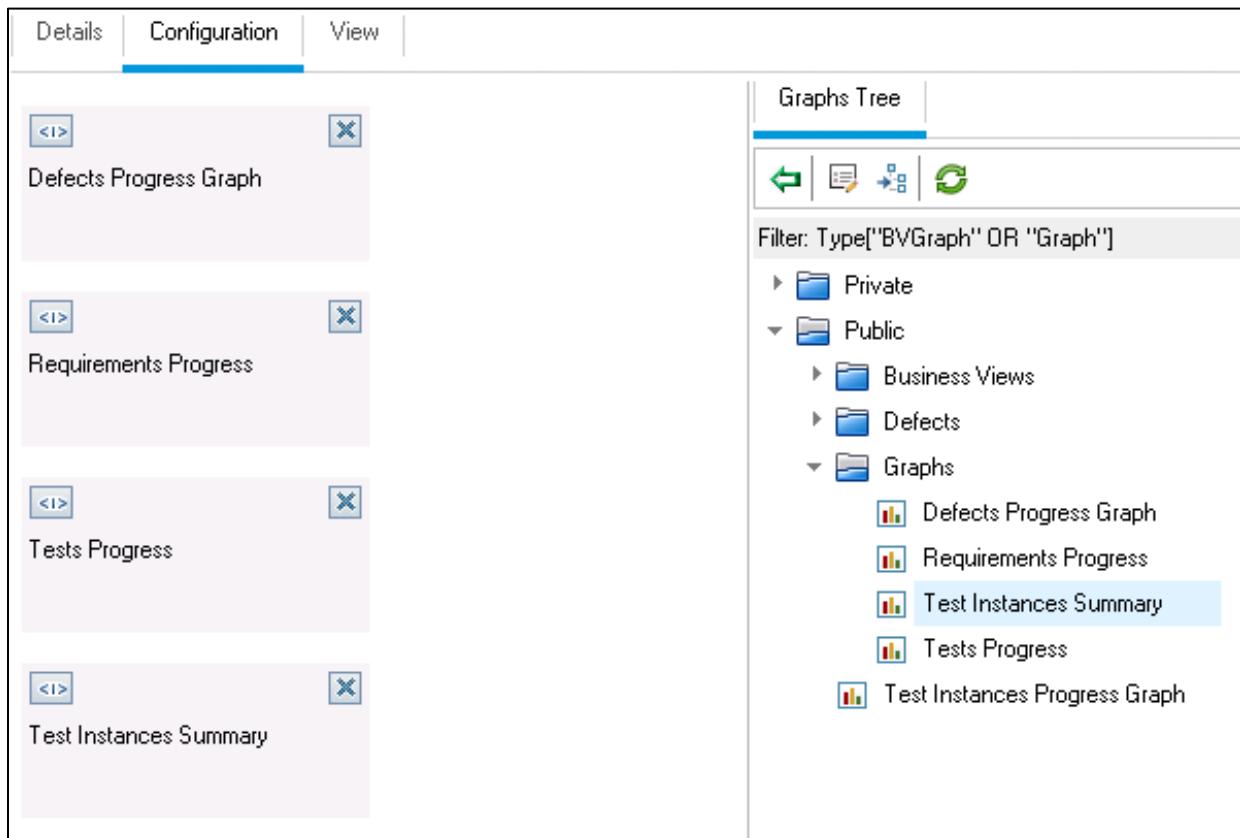
1. Add analysis items to your Dashboard page:

a. Click the  and select the newly created My Dashboard Page.

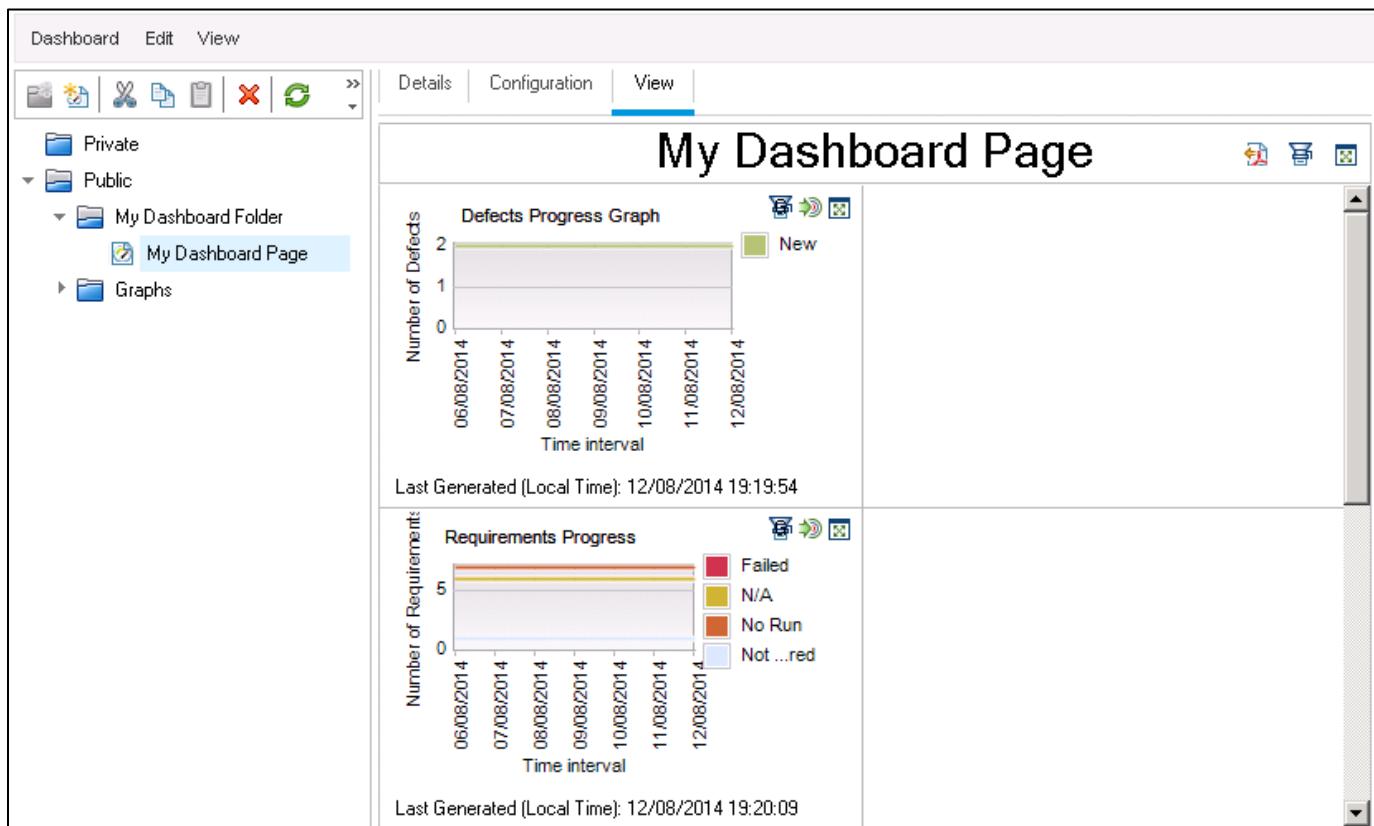
b. Click the  tab. The Graph Tree shows up at the right corner of the page.



- c. Select the Defects Progress Graph under the Public → Graphs folder and click the Add Graph to Dashboard Page icon under the Graphs Tree tab.
- d. Select the Requirements Progress Graph, right click, and select Add Graph to Dashboard Page from the popup menu, as shown in the following screenshot.



- e. Similarly, drag and drop the Tests Progress Graph on to the Dashboard page layout area.
 - f. Double-click the Test Instances Summary Graph to add it to the Dashboard page layout.
2. To view the Dashboard page, complete the following steps:
- a. Click the View tab to generate the My Dashboard Page.



- b. Click the View Graph In Full Screen icon either to view the entire page or to view an individual graph.
3. Click the Go To Graph In Analysis Tree icon to go to the modify view of the graph.
4. Click the Generate Graph icon to generate the graph with the latest data.
5. Log out from ALM.

Lab 19 – Cross-Project Reporting

Objective

After completing this lab, you should be able to:

- Create cross-project graphs
- Drill down to graph records
- Create a Dashboard page

Scenario

Using cross-project reporting allows you to report across various projects and get a complete and accurate picture of the release readiness of the entire organization.

In this lab, you create a defect summary graph, review the graph that is created, and use the drill-down capabilities that the graphs in ALM have to see specific data that the graph represents.

Exercise 1 – Creating a Cross-Project Graph

In this exercise, you create a defect summary graph using the information in two different projects.

Complete the following steps:

1. Log in to ALM Desktop Client using the following credentials:

User Name: **training**

Password: **welcome**

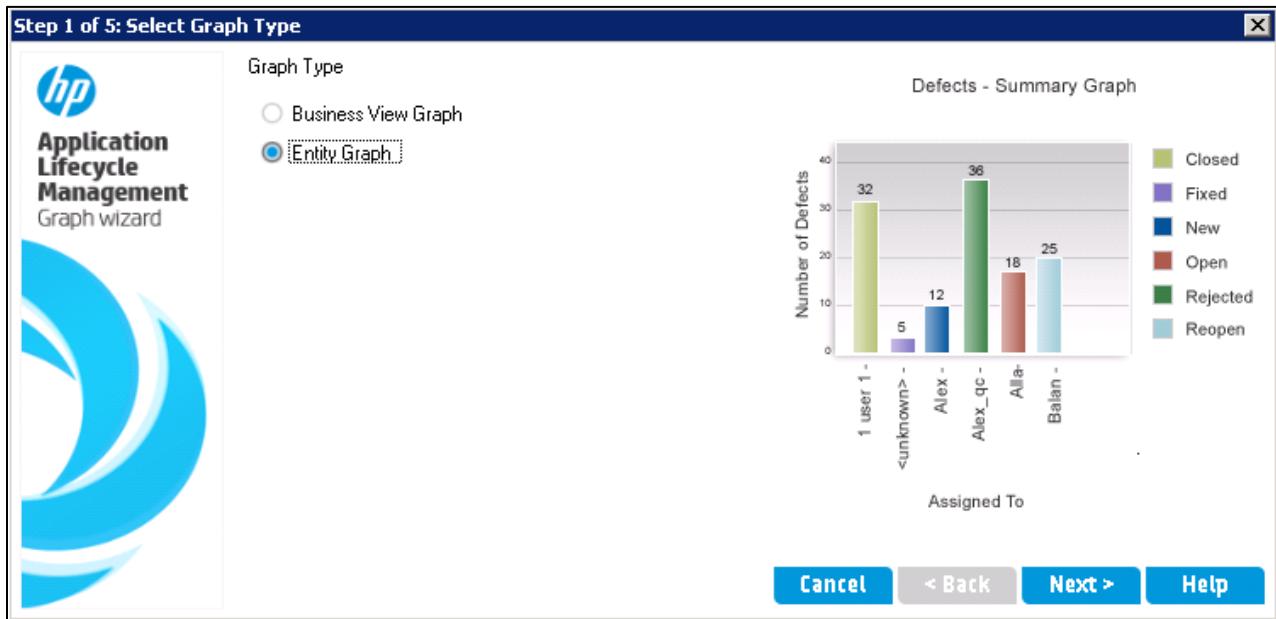
Domain: **STUDENT00_ESS**

Project: **ALM_Demo**

2. Click the Dashboard module. Select the Analysis View module.

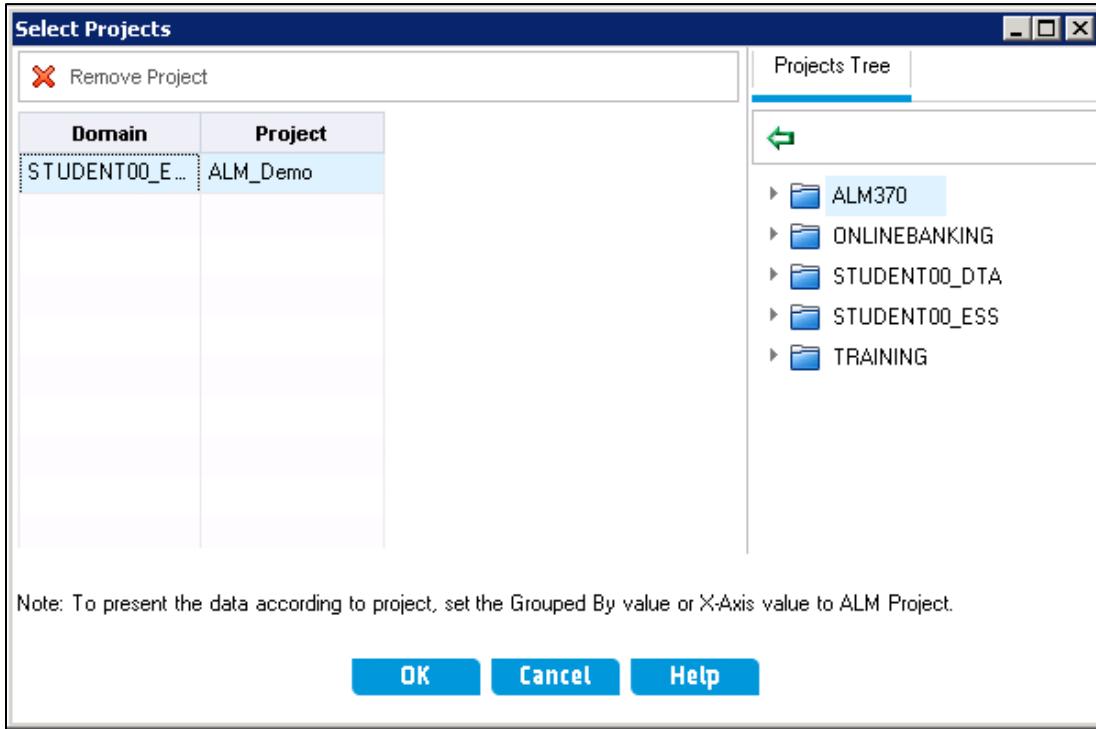
3. Select the Public folder. Click the New Item button , and then select Graph Wizard.

4. Select the Entity Graph radio button and click the  button, as shown in the following screenshot.



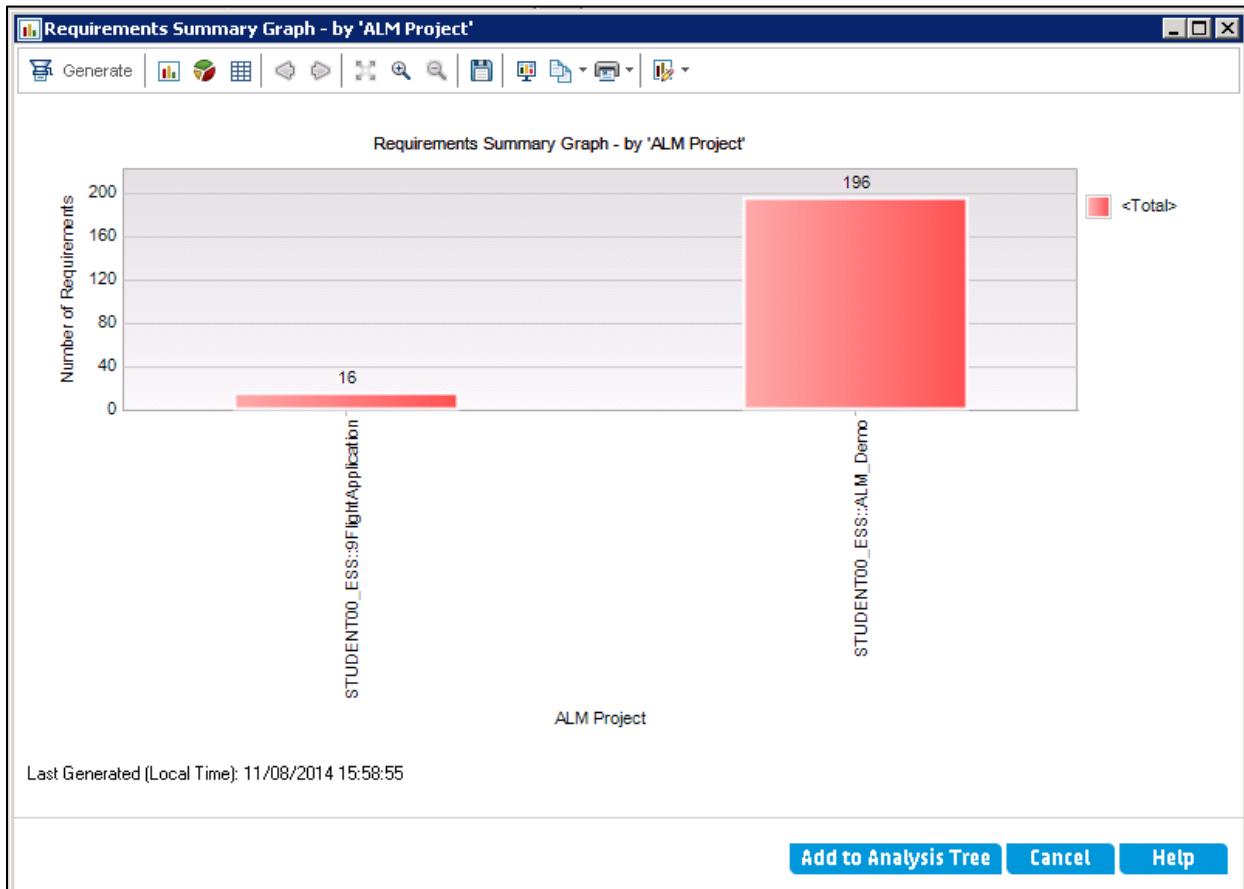
- a. Select Requirements for Entity and Summary for Graph Type. Click the  button.

- b. Under Project Selection, choose the Use Selected Projects option and click the **Select...** button. The Select Projects dialog box is displayed, as shown in the following screenshot.



- c. In the Projects tree, expand the domain Student00_ESS, select the project 9FlightApplication, and click the Add button to move the project to the left pane.
- d. Click the **OK** button to close the Select Projects dialog box. Click the **Next >** button.
- e. Choose the Do Not Use a Filter for Filter Selection option. Click the **Next >** button.
- f. For Select a Coverage, leave the Do not show 'Not Covered' Parent option. Click the **Next >** button.
- g. For the Group By field, leave the default option <None>. In the X-Axis field, select ALM Project, and then click the **Finish** button.

- h. The Requirement Summary graph is displayed. Click the **Add to Analysis Tree** button, as shown in the following screenshot.



- i. Save it in the **Public** folder retaining the default name.
5. To create a Defects Summary graph, complete the following steps:
- Select the **Public** folder. Click the New Item button and then select **Graph Wizard**.
 - Select the Entity Graph radio button and click the **Next >** button.
 - In the **Entity** field, select **Defects**. In the **Graph Type** field, select **Summary**. Click the **Next >** button.
 - Under Project Selection, choose the **Use selected projects** option and click the **Select...** button. The Select Projects dialog box is displayed.

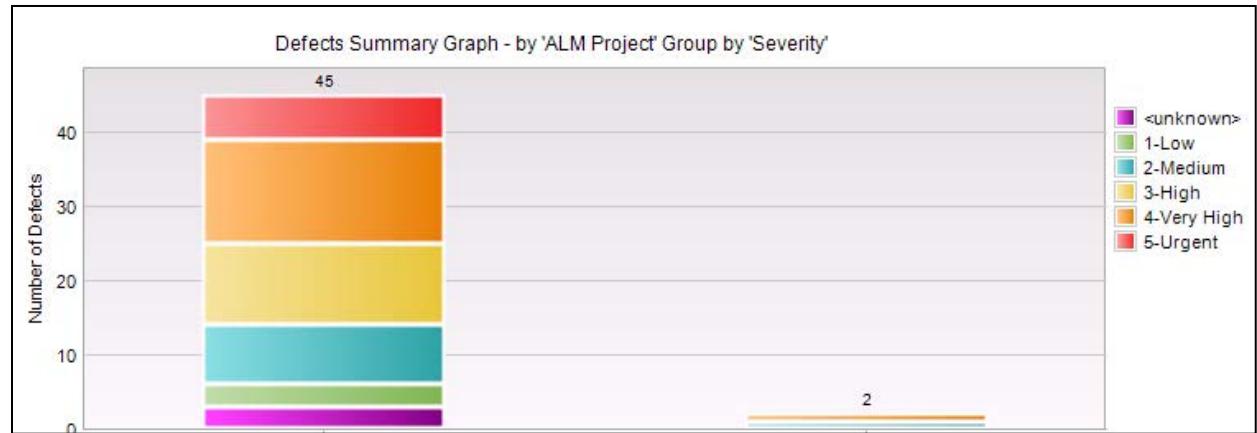
- e. In the Projects tree, expand the domain Student00_ESS, select the project 9FlightApplication, and click the Add button to move the project over to the left pane.
- f. Click the button to close the Select Projects dialog box. Click the button.
- g. Choose the Do not use a filter for filter selection option. Click the Next button.
- j. In the Group By field, select Severity. In the X-Axis field, select ALM Project and then click the button.
- k. The Defect Summary graph is displayed. Click the button.
- h. Save it in the Public folder retaining the default name.

Exercise 2 – Drilling Down to Graph Records

In this exercise, you drill down to see the graph's records.

Complete the following steps:

1. Select Defect Summary Graph – by 'ALM Project' Group by 'Severity' under the Public folder in the Analysis view and go to the View tab in the right pane, as shown in the following screenshot.



2. Click one of the bars in the graph. This opens the Drill Down Results dialog box showing the records that represent that particular bar, as shown in the following screenshot.

The Drill Down Results dialog box shows the following details:

Defects Summary Graph - by 'ALM Project' Group by 'Severity' Chart Drill-Down. X-Axis: STUDENT00_ESS::ALM_Defects, 4-Very High, Number of items: 14

| Defect ID | Actual Fix Time | Assigned To | Browser | Category | Closed in... |
|-----------|-----------------|-------------|---------|----------|--------------|
| 8 | | | | Defect | |
| 13 | | mary_alm | | Defect | |
| 17 | | peter_alm | | Defect | |

Description: Test Set: Mercury Tours Functionality
Test: [1]First & Last Name (Contact Information)
Run: Run_9-2_14-48-21
Step: Step 3: Empty First Name

Comments: R&D Manager <robert_alm, 09/04/14: This is the correct behavior. These fields are not mandatory for the Registration.

Description: 1. Skip the First Name field.
2. Complete the Last Name field with valid values.
3. Click the Submit button.

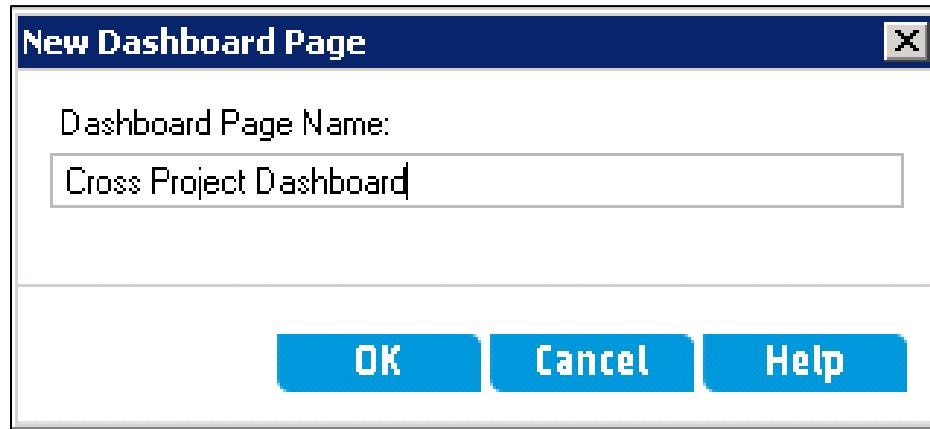
3. Close the Drill Down Results dialog box.

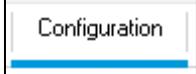
Exercise 3 – Creating a Dashboard Page

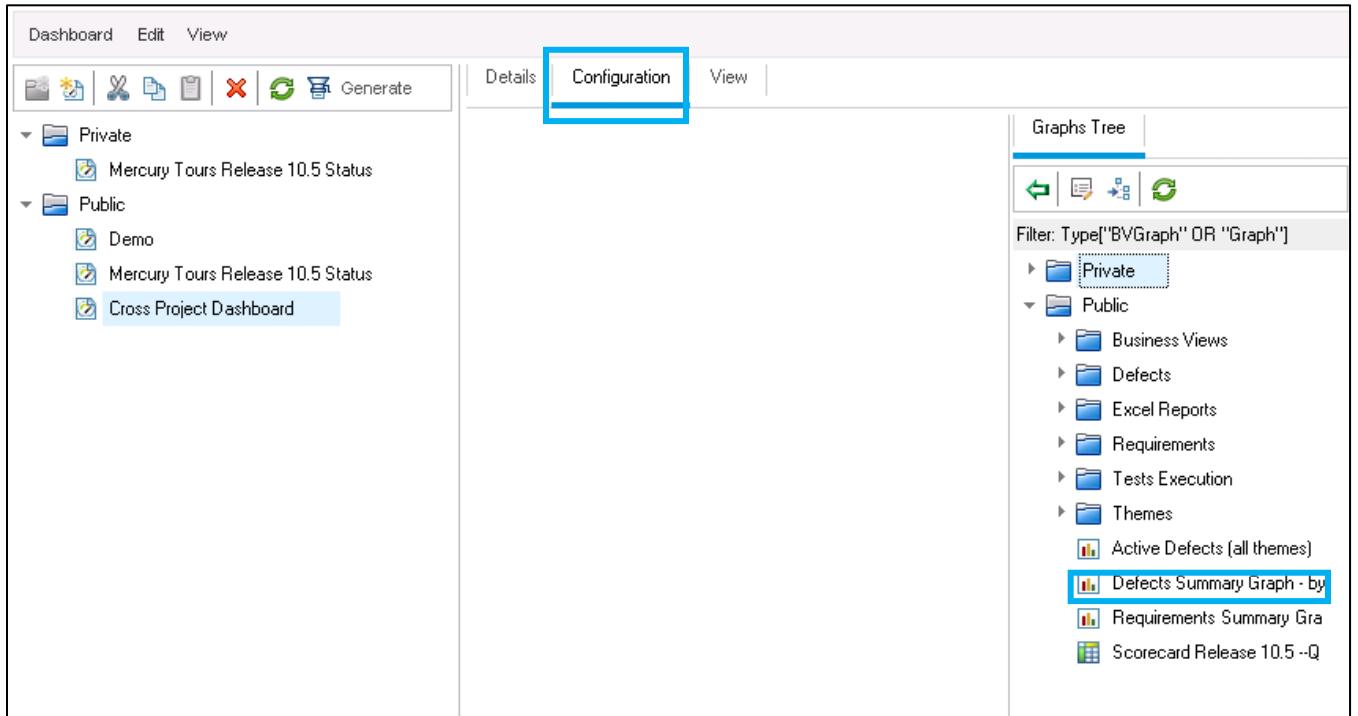
In this exercise, you create a new Dashboard page to which you add some cross-project graphs.

Complete the following steps:

1. Click the Dashboard module and select the Dashboard View module.
2. Ensure that you have the Public folder selected.
3. Click The New Page button 
4. In the Dashboard Page Name field, enter **Cross Project Dashboard**. Click the  button, as shown in the following screenshot.



5. Click the  tab, and then expand the Public folder in the Graphs tree. From the Graphs tree, select the Defect Summary graph – by that you created. Click the Add Graph to Dashboard Page  button.



6. Select the Requirements Summary Graph from the Graphs tree. Click the Add Graph to Dashboard Page  button.

7. Click the  tab and then click the View Page in Full Screen button .

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Lab 20 – End-to-End Lab

Objectives

After completing this lab, you should be able to use ALM 12.0 from A to Z to:

- Define a release and cycles
- Create Project Planning and Tracking milestones, scope items and KPIs
- Create and import requirements
- Convert requirements to tests
- Create a library and a baseline
- Edit and add design steps
- Compare baselines
- Define test parameters
- Define test configurations
- Create test sets
- Execute tests
- Manage defects
- Author a test in Sprinter
- Create reports, graphs, dashboard pages and a cross project graph
- Use the ALM Web client to add a defect

Overview and Detailed Instructions

You can approach this lab in two different ways. The Overview section gives you some general directions, and the Detailed Instructions section gives you the step-by-step procedure to complete the lab. If you use the Overview section and get stuck, you can refer to the Detailed Instructions for help.

Opening the Project

To open the project that you created and used in the labs, complete the following steps:

1. Open ALM 12.0.
2. Log in to the ALM Desktop Client.
3. In the **Login** field, enter **training**.
4. In the **Password** field, enter **welcome**.
5. Select the **LabProject** project from the **Student00_ESS** domain.

Exercise 1 – Defining a Release and a Cycle

In this exercise, you review the Releases module process by defining a release and two cycles.

Overview

Use the table below to create a Release tree.

| Object | Name | Other |
|----------------|--------------------|---|
| Release Folder | Flight Reservation | |
| Release | Release 1.1 | Start date: today End Date: 30 days from today |
| Cycle | Cycle 1 | Start Date: today End Date: 15 days from today |
| Cycle | Cycle 2 | Start Date: 16 days from today End Date: End date of release |

Detailed Instructions

To define a release and a cycle, in the Management module, under the Releases tab, complete the following steps:

1. Select the Releases folder. Click the New Release Folder button. The New Release Folder dialog box is displayed. Enter the name as **Flight Reservation** and click the OK button. A folder is added under the Releases folder.
2. Select the newly created folder, **Flight Reservation**. Click the New Release button. The New Release dialog box is displayed. In the Name field, enter **Release 1.1**.
3. For the Start Date, enter today's date. For the End Date enter 30 days from today, and then click the OK button.
4. Select the newly created release, **Release 1.1**. Click the New Cycle button. The New Cycle dialog box is displayed. In the Name field, enter **Cycle 1**. For the Start Date, enter today's date. For the End Date enter a date 15 days from today. Click the OK button. A new cycle is added under the newly created release.
5. To create a second cycle, select **Release 1.1** and click the New Cycle button. The New Cycle dialog box is displayed. In the Name field, enter **Cycle 2** with a Start Date of 16 days from today and enter the End Date as the end date of the release.
6. Click the OK button. A new cycle is added under the newly created release.

Exercise 2 – Creating Project Planning and Tracking Milestones, Scope Items, and KPIs

In this exercise, you define milestones, scope items, and KPIs for a new release.

Overview

In this exercise, you:

- Create a new release folder named Mercury Tours and a new release named Release 5.0, with a start date 30 days earlier than today and an end date a week from today.
- Create a new release scope item named Go Green.
- Define and configure a milestone for Initiation Complete with a start tracking date of 30 days ago and a due date of today.
- Select Go Green as a new milestone scope item and add the Reviewed Requirements KPI.

Detailed Instructions

To create a new release and define the milestone, scope items, and KPI, in the Management module, under the Releases tab, complete the following steps:

1. Select the Releases folder. Click the New Release Folder button. The New Release Folder dialog box is displayed. In the Name field, enter **Mercury Tours** and click the OK button. A folder is added under the Releases folder.
2. Select the newly created **Mercury Tours** folder. Click the New Release button. The New Release dialog box is displayed. In the Name field, enter **Release 5.0** with a start date 30 days earlier than today and an end date a week from today.
3. Select the Release 5.0 you just created and click the Release Scope tab.
4. Click the New Scope Item icon to add a new item.
5. In the Name field, enter **Go Green**. In the Priority field, enter **2-Medium**. Click OK.
6. Ensure that Release 5.0 is selected and click the New Milestone button. The New Milestone box is displayed. In the Name field, enter **Initiation Complete** with a Start Tracking Date 30 days earlier and a Due Date of today. Click OK.
7. Select the newly created Initiation Complete milestone and click the Milestone Scope tab. Click the Select Scope Items button and add the Go Green Scope Item.
8. Ensure that the Initiation Complete milestone is selected and click the KPIs tab. Use the Add KPI button to add the Reviewed Requirements KPI.

Exercise 3 – Creating and Importing Requirements

In this exercise, you review the Requirements module process and features.

First, you export requirements from a Microsoft Excel file. Use Excel because business analysts often write project requirements in Excel and then provide them to the project manager or lead to add to ALM.

After importing the requirement, you will add several new requirements that were not included in the spreadsheet.

Overview

In this exercise, you:

- Use the Microsoft Excel Add-in feature to select and import requirements into ALM from the `Lab_Reqs` file:
Training → ALM_QC 12 Essentials → `Lab_Reqs.xlsx`
- Map the columns in Excel using the table below. (**Hint:** Select the rows you want to import. Ensure that the header row is not selected.)

| Field | Column |
|-------------|--------|
| Name | A |
| Description | B |
| Priority | C |
| Type | D |
| Path | E |

- Assign all the Flight Reservation requirements to Cycle 1.
- Assign the New Features requirements to Cycle 1 and Cycle 2.
- Add the following requirements to the Flight Reservation folder:

| Requirement | Type |
|------------------|------------|
| Field Validation | Group |
| Customer Name | Functional |
| Departure Date | Functional |

Detailed Instructions

To import requirements into your ALM project from Microsoft Word, Excel, or other third-party requirement management tools, you must have the appropriate HP ALM add-in installed.

1. To export requirements from Microsoft Excel to ALM, complete the following steps:
 - a. Open the Excel file `Lab_Reqs.xlsx` in the following folder:
`Desktop\Training\ALM_QC 12 Essentials\`
Note that design steps have been added to some of the requirements.
 - b. Select all the rows except the heading row. Click the Add-in tab.
 - c. Click the Export to HP ALM button. The HP ALM Export Wizard – Step 1 of 8 dialog box is displayed.
 - d. Type your ALM URL: `http://almserver:8080/qcbin` (or check with your instructor for the correct location). Click the Next button.
 - e. Click the Next button. The HP ALM Export Wizard – Step 2 of 8 dialog box is displayed. Enter your ALM User Name, `training` and Password, `welcome`. Click the Next button.
 - f. Click the Next button. The HP ALM Export Wizard – Step 3 of 8 dialog box is displayed. Select a Student00_ESS domain and the LabProject, project. Click the Next button.
 - g. On Step 4 of 8, select Requirements as the type of data that you would like to export. Click the Next button.
 - h. On Step 5 of 8, choose Type a new map name: and enter `map1` in the map name field. Click the Next button.
 - i. The HP ALM Export Wizard – Step 5b of 8 dialog box is displayed. Select the Choose the Requirement Type Column option and then enter D for the column. Click the Next button.

- j. The HP ALM Export Wizard – Step 6 of 8 dialog box is displayed. Ensure that the following columns are included:

| Field | Column |
|-------------|--------|
| Name | A |
| Description | B |
| Priority | C |
| Path | E |

- k. Click Export. The HP ALM Export Wizard – Step 7 of 8 dialog box is displayed.
- l. If the requirements are exported successfully to ALM, the HP ALM Export Wizard – Step 8 of 8 dialog box is displayed. Click Finish. Close the Excel document LAB_REQS .XLSX.
- m. Click the Requirements module. Select View → Requirements Tree. Refresh the view.
- All the folders and requirements have been added to the Requirements tree.
Note that under Security, the test steps are displayed.
2. To assign the imported requirements to a release and cycles, complete the following steps:
- Select View → Requirement Details.
 - Click the Refresh button.
 - Right-click the requirement folder Flight Reservation. Click on Assign to Cycle. Expand the Release tree and select Cycle 1 within Flight Reservation → Release 1.1. Click the OK button.
 - In the Confirm dialog box, click the Yes button to assign the cycle to all subfolders. Note that all the imported requirements have been assigned both to Release 1.1 and to Cycle 1.
 - To assign the New Features requirements to an additional cycle, right-click the requirement folder New Features. Click Assign to Cycle. Expand the Release tree and select Cycle 2. Click the OK button.

Now that you have imported the requirements developed by the business analysts, you decide you need some additional verification requirements.

3. To add requirements to the Requirements module, complete the following steps:
 - a. Select the **Flight Reservation** folder, and then click the New Requirement button. Name the new requirement **Field Validation**. Select Group for the requirement type and enter a description, then click the Submit button. Click the Close button.
 - b. Select the new Group requirement, **Field Validation** and then click the New Requirement button. Name the new requirement **Customer Name**. Select Functional for the requirement type and enter a description, then click the Submit button. Click the Close button.
 - c. Select the **Field Validation** requirement, and then click the New Requirement button. Name the new requirement **Departure Date**. Select Functional for the requirement type, enter a description, and then click the Submit button. Click the Close button.

Exercise 4 – Converting Requirements to Tests

In this exercise, you review how to convert requirements to tests in the Test Plan module.

Overview

In this exercise, you

- Convert all the requirements to tests.
- In Step 2 of the auto conversion, uncheck auto-complete children, change the Field Validation requirement to a subject folder, and the Departure Date and Customer Name fields to tests.
- Review the results in the Test Plan module.

Detailed Instructions

Complete the following steps:

1. To convert the requirements to tests:
 - a. Select the Requirements module. Select View → Requirements Tree. Select the Flight Reservation requirement folder in the requirements tree.
 - b. Choose Requirements → Convert To Tests. The Step 1 of 3: Choose an Automatic Conversion Method dialog box is displayed. Select Convert Lowest Child Requirements to Design Steps to convert all lowest-level child requirements to design steps, the next level up, to tests, and all levels above, to subjects.
 - c. Click the Next button to begin converting the requirements. When the conversion process is complete, the results display in the Step 2 of 3 dialog box.
 - d. To view the wizard legend, click the Legend link.
 - e. Upon examination, a couple of the tests have been mislabeled. Uncheck the Auto-Complete Children option to edit the labels
 - f. Select the Field Validation requirement and change to a subject folder, and the Departure Date and Customer Name fields to tests by right clicking the item or by using the icons.

- g. Click the Next button. The Step 3 of 3: Select Destination Path dialog box is displayed. Click the dropdown for Destination Subject Path.
 - h. Click the Finish button. A progress bar is displayed and closes when the conversion is over. Click the OK button on the message box to close the Convert to Tests wizard.
2. Verify the results:
- a. Select the Test Plan module. Select View → Test Plan Tree, click the Refresh button, and expand the Subject folder. Note the folders and tests.
 - b. Click the Login test under Security, and then click the Design Steps tab. Note that the Step Name and Description design steps have been imported.

Exercise 5 – Creating a Library and a Baseline

In this exercise, you review how to create a library and baselines in the Libraries module, to compare the project's status at different points in time.

Overview

In this exercise, you:

- Create a new library (select any appropriate name):
 - Select the Flight Reservation folder for the requirements.
 - Select the Subject folder for the tests.
- Create a new baseline (select any appropriate name).

Detailed Instructions

Complete the following steps:

1. To create a library:
 - a. Select the Management → Libraries module.
 - b. Click the Libraries folder and click the New Folder button. The New Library Folder dialog box is displayed.
 - c. In the Library Folder Name field, enter **Flight Project Folder**. Click OK.
 - d. Click the Create Library button. The New Library dialog box is displayed.
 - e. In the Name field, enter **Flight Project**.
 - f. Click the Requirements tab, expand the Requirements tree, and select the Flight Reservation folder.
 - g. Click the Tests tab, expand the Subject folder, and select the Flight Reservation checkbox. Click OK.
 - h. Click the OK button in the New Library dialog box. The Library Flight Project is created.
2. To create a baseline:
 - a. Click the Create Baseline button. The Baseline Verification dialog is displayed. Click Continue. The New Baseline dialog box is displayed.
 - b. In the Baseline Name field, enter **Baseline1**. Click the OK button. The baseline is created. Click the Refresh button to refresh the view.

A little later in the lesson, you create another baseline and compare the two.

Exercise 6 – Editing and Adding Design Steps

In this exercise, you continue to review the Test Plan module.

Imagine that your colleagues had entered some of the design steps into the spreadsheet you imported, but you need to review the steps, add information where needed, and write additional steps if required.

Overview

In this exercise, you:

- Add the following Expected Results to the Test Plan → Subject → Flight Reservation → Security → Login test:

| Step | Expected Results |
|--------|----------------------------------|
| Step 1 | Agent name appears. |
| Step 2 | Password is masked. |
| Step 3 | Flight application is activated. |

- Create design steps for the Fax Order test. You must open an order prior to sending a fax and copy the Open Order design steps into the Fax Order test.
 - Begin by copying/pasting the three Open Order steps into the Test Plan → Subject → Flight Reservation → Business Processes → Fax Order design steps.
 - Add the following steps:

| Step | Description | Expected Results |
|--------|------------------------------|----------------------------------|
| Step 4 | Select File > Fax Order. | Fax Order dialog appears. |
| Step 5 | Enter fax number 4255550150. | Fax number appears in the field. |
| Step 6 | Click Send. | Fax is sent. |

Detailed Instructions

In this section, you edit the login design steps to complete the Expected Results field.

1. To edit the steps:
 - a. With the Test Plan → Subject → Flight Reservation → Security → Login test selected, and the Design Steps tab activated, click in the Expected Results column and enter, **Agent name appears**.

- b. Repeat the previous step for the Step 2 and Step 3 items, entering **Password is masked** and **Flight application is activated**, respectively.
2. Add design steps to the Fax Order test within the Business Processes folder. To add design steps to a test, complete the following steps:
 - a. Sending a fax requires that you open an order, so copy the open order steps into the Fax Order test.
 - b. Select the open order test under Flight Reservation → Business Processes and ensure that the Design Steps tab is activated.
 - c. Select the three steps and then click the Copy Steps button.
 - d. Select the Fax Order test. Click the Paste Steps button. The design steps are pasted into the Fax Order test.
 - e. To add additional steps, click the New Step button. Leave the name Step 4 as the Step Name.
 - f. In the Description field, enter **Select File → Fax Order**.
 - g. In the Expected Results field, enter **Fax Order dialog appears**.
 - h. Click the New Step button. Leave the name Step 5. In the Description field, type **Enter fax number 4255550150**.
 - i. In the Expected Results field, enter **Fax number appears**.
 - j. Click the New Step button. Leave the name Step 6. In the Description field, enter **Click Send**.
 - k. In the Expected Results field, enter **Fax is sent**. Click OK.

Exercise 7 – Comparing Baselines

In this exercise, you continue to review how to use baselines to compare the project at different points in time. In this section, you create a second baseline and compare it to the first.

Overview

In this exercise, you:

- Create a second baseline named Baseline 2.
- Compare Baseline 1 to Baseline 2.

Detailed Instructions

Complete the following steps:

1. To create a second baseline:
 - a. Select the Management → Libraries module.
 - b. Click the Library → Flight Project Folder → Flight project.
 - c. Click the Create Baseline button. The Baseline Verification dialog is displayed, click Continue. The New Baseline dialog box is displayed.
 - d. In the Baseline Name field, enter **Baseline2**. Click the OK button. The baseline is created.
 - e. Click the Refresh button to refresh the view.
2. To compare the two baselines:
 - a. Click Refresh. Select Baseline1.
 - b. Click the dropdown for Compare to button and choose Select Baseline. The Select Baseline dialog box is displayed.
 - c. Click the dropdown for Select Baseline, expand the Libraries tree and select Baseline2. Click the OK button. Click the OK button in the Select Baseline dialog box. A warning message is displayed indicating that comparing two large baselines can take a long time appears. Click the Yes button in the warning dialog. The Compare Baselines tool is displayed.

- d. Click Test Folders on the left side. Expand the entities in the Baseline1 window. The entities in Baseline2 are also shown expanded. Continue expanding the entities to view the modified changes between Baseline1 and Baseline2.
- e. Click the Close button to close the Compare Baselines tool.

Exercise 8 – Defining Test Parameters

In this exercise, you review how to define test parameters in the Test Plan module. In this section, you define test parameters for the login test.

Overview

In the exercise, you:

- Select the Login test in the Security folder.
- Add a `paramAgentName` parameter to Step 1.
- Add a `paramPassword` parameter to Step 2.

Detailed Instructions

To define test parameters, complete the following steps:

1. To add parameters, start by selecting the Login test in the Test Plan → Subject → Flight Reservation → Security folder and then click the Design Steps tab.
2. Select Step 1 and then click the Edit Step button.
3. In the Edit Step dialog box, insert your cursor after the phrase Agent Name and then click the Insert Parameter button.
4. Click the New Parameter button. In the Parameter Name field, enter `paramAgentName`. Click the OK button. Click the OK button in the Parameters dialog box.
5. Go to the next step by clicking the Next Entity button.
6. In the Edit Step dialog box, insert your cursor after the phrase Password and then click the Insert Parameter button.
7. Click the New Parameter button. In the Parameter Name field, enter `paramPassword`. Click the OK button. Click the OK button in the Parameters dialog box. Click OK in the Design Step Details dialog box.

Exercise 9 – Defining Test Configurations

In this exercise, you review how to define test configurations in the Test Plan module. You edit the current test configuration and define an additional configuration of the Login test so you can test using different parameters.

Overview

In this exercise, you:

- Rename the Login test `Login_Correct`.
- Add a new Login test configuration named `Login_Incorrect`.
- Add the following actual values to the parameters for each configuration:
 - `Login_Correct`:
 - `paramAgentName`: **training**
 - `paramPassword`: **mercury**
 - `Login_Incorrect`
 - `paramAgentName`: **your name**
 - `paramPassword`: **welcome**

Detailed Instructions

Complete the following steps:

1. To edit a test configuration:
 - a. Select the Login test in the Test Plan tree. Click the Test Configuration tab.
 - b. Select the Login test, and then click the Test Configuration Details button.
 - c. In the Name field, enter `Login_Correct`. Click OK.
2. To specify the parameters for the first test configuration:
 - a. Click the Data link in the left pane.
 - b. For the `ParamAgentname`, click the Actual Value dropdown and type **training** into the box. Click the OK button.
 - c. For `Parampassword`, click the Actual Value dropdown and type **mercury** into the box. Click the OK button.

3. To add a second configuration:
 - a. With `Login_Correct` selected, click the Add New Test Configuration button. Name the new configuration `Login_Incorrect` and click the OK button.
 - b. Click the Test Configuration Details button. Click the Data link in the left pane.
 - c. For the `ParamAgentname`, click the Actual Value dropdown and type your name into the box. Click the OK button.
 - d. For `Parampassword`, click the Actual Value drop-down and type `welcome` into the box. Click the OK button.

You now have two test configurations, one to test the correct password and one to test an incorrect password.

Exercise 10 – Creating Test Sets

In this exercise, you review how to create test sets in the Test Labs module. You create test sets in preparation for running your tests on the Flight Reservation AUT.

Overview

In this exercise, you:

- Create a Release 1.1 folder and a Cycle 1 sub-folder in the Test Set tree of the Test Labs module.
- Create an Orders test set that contains the tests in the Business Processes folder.
- Create a Security test set that contains the login tests.

Detailed Instructions

Complete the following steps:

1. Create an Orders test set:
 - a. Click the Test Lab module.
 - b. Click the Root folder. Click the New Folder button. The New Folder dialog box is displayed.
 - c. In the Folder Name field, enter **Release 1.1** and click the OK button.
 - d. Click the Release 1.1 folder. Click the New Folder button. The New Folder dialog box is displayed.
 - e. In the Folder Name field, enter **Cycle 1** and click OK.
 - f. Right-click the Cycle 1 folder. Click the Assign to Cycle button. The Release tree is displayed.
 - g. Expand the Release tree and select Cycle 1 within Flight Reservation → Release 1.1. Click the OK button.
 - h. Select the Cycle 1 folder. Click the New Test Set button. The New Test Set dialog box is displayed.
 - i. In the Test Set Name field, enter **Orders**. Click the OK button.
 - j. Click the Execution Grid tab and then click Select Tests.
 - k. Expand the Flight Reservation folder, and then select the Business Processes folder.
 - l. Use the left arrow button to move the tests to the Orders test set.
 - m. Click Yes to confirm that you want to add all the tests.

2. Create a Security test set:
 - a. Click the Cycle 1 folder in the Test Set tree.
 - b. Click the New Test Set button. The New Test Set dialog box is displayed.
 - c. In the Name field, enter **Security**.
 - d. Click the Execution Grid tab and then click Select Tests.
 - e. Expand the Flight Reservation folder, and then select the Security folder.
 - f. Use the left arrow button to move the test to the Security test set.
 - g. Click Yes to confirm that you want to add the tests.

Exercise 11 – Executing Tests

In this exercise, you review how to execute tests using Sprinter. You run the tests from the Test Lab module.

Overview

In this exercise, you:

- Run the test against the Flight desktop application. Use subtitles and pass the first step.
- Type **MERCURY** (all caps) in the Password field. The password should be case-sensitive and it is not, so you record the actual result and submit a defect.
- Record the actual result.
- Create a defect reminder.
- View your results.

Detailed Instructions

Complete the following steps:

1. To run the tests using Sprinter:
 - a. Select the Security test set.
 - b. Click the Run Test Set button. The Manual Test Run dialog box is displayed.
 - c. Choose Sprinter and click the OK button. The Sprinter interface is displayed and both test configurations appear in the Tests list.
 - d. Ensure that Power Mode is turned on.
 - e. Select the tests and click the Run button.
2. Proceed through the test steps using the Flight desktop application:
 - a. If the Flight application is open, close it, then open it but do not log in.
 - b. Click the View Subtitles button in the Steps tab.
 - c. Follow the instructions for the first test step. In this example, you enter the Agent Name.
 - d. Evaluate whether the application is responding as expected, then select either Pass or Fail from the tool bar.
 - e. In the Password field, enter **MERCURY** (all caps).

The password should be case-sensitive and it is not, so you record the actual result and submit a defect.

3. To record the actual result:
 - a. Click the Actual Result button. The Actual Result dialog box is displayed. Enter the text to describe the actual result.
 - b. To add an image to the actual results, click the Save Screen Capture as Actual Result button and click the OK button in the Actual Result dialog box.
4. To add a defect reminder:
 - a. Click the dropdown for the Tools → Smart Defect button. Select the Add defect reminder option.
 - b. In the Defect Reminder dialog, type the description of the defect and click the OK button.
5. To stop the run and review test results:
 - a. Expand the Run Control sidebar and click the End Run button to stop test execution. The Sprinter main window restores.
 - b. Review your test results in the Run Summary area of the Sprinter main window.
(Do not close Sprinter.)

Exercise 12 – Managing Defects

In this exercise, you review how to manage defects using the Defect module.

The test run summary in Sprinter includes the number of defects you submitted and the number of defect reminders you created. You review your defect reminders and convert them into defects that get submitted into ALM.

Complete the following steps:

1. To convert a defect reminder into a defect:
 - a. Click the Defect Reminders node from the Results area.
 - b. Click the Submit Defect button on Defect Reminders toolbar.
 - c. In the Smart Defect Setting dialog, select the following options:
 - i. Check “Current Step”.
 - ii. Check “Include Last Step’s Actual Result Information”.
 - iii. Uncheck “Current Screen Capture”.
 - d. Click the Submit Defect button.
 - e. In the New Defect window, enter the following in the Summary field: **Login worked in all caps**.
 - f. Enter Severity for the new defect, and then click OK to submit the defect into HP ALM.
2. View your defect in the Defects module.
 - a. Switch your application to ALM.
 - b. Click Defects. Observe the newly created defect in the Defects module.

Exercise 13 – Authoring a Test in Sprinter

In this exercise, you author a new test in Sprinter and save it to HP ALM.

Overview

In this exercise, you:

- Choose a Plan option in Sprinter.
- Create a new test with the following steps:

| Step | Description | Expected Results |
|-------------|---|---|
| Step 1 | Enter Date of Flight as today | Date appears in Date of Flight |
| Step 2 | Select Denver from the Fly From drop down list | Denver appears in the Fly From window |
| Step 3 | Select London from the Fly To drop down list | London appears in the Fly To window |
| Step 4 | Click the Flights button | The Flights Table dialog box opens |
| Step 5 | Click the OK button in the Flights Table dialog box | The Order Information section populates |

- Save the test as Book Flight in the Business Processes → Flight Reservation folder.

Detailed Instructions

Complete the following steps:

1. In the Sprinter Application, click the Plan tab and click the New Test button.
2. Click the Add a step button and enter Description and Expected Results information for each of the steps listed below:

| Step | Description | Expected Results |
|-------------|--|---------------------------------------|
| Step 1 | Enter Date of Flight as today | Date appears in Date of Flight |
| Step 2 | Select Denver from the Fly From drop down list | Denver appears in the Fly From window |

| Step | Description | Expected Results |
|--------|---|---|
| Step 3 | Select London from the Fly To drop down list | London appears in the Fly To window |
| Step 4 | Click the Flights button | The Flights Table dialog box opens |
| Step 5 | Click the OK button in the Flights Table dialog box | The Order Information section populates |

3. Click the down arrow of the Save button and choose Save As.
4. In the Name field, enter **Test Book Flight**. Expand the Flight Reservations folder and highlight the Business Processes folder. Click the OK button to save the test.
5. Switch to the ALM application and verify that the Test Book Flight test was created on the required folder in Test Plan module.

Exercise 14 – Generating Reports, Graphs, and Dashboard Pages

In this exercise, you review the Dashboard module. You generate reports and graphs, create a dashboard page, and add the graphs to the dashboard.

Overview

In this exercise, you:

- Create a Test Plan report in Dashboard → Analysis View.
- Create several graphs with the data of your choice.
- Create a Dashboard page.
- Add your graphs to your Dashboard page.
- Use the Graph wizard to create a Cross Project Defects Summary graph for the LabProject and the ALM_Demo project.

Detailed Instructions

Complete the following steps:

1. Create several reports:
 - a. Select the Test Plan module.
 - b. Go to Analysis → Project Report → Standard Test Planning Report.
 - c. Click the Add to Analysis tree button. Retain the default name of the Standard Test Planning Report and save it under the Public Folder.
2. Create several graphs:
 - a. Select Analysis view in the Dashboard module.
 - b. Click the New Item button and then select Graph Wizard.
 - c. Select Entity Graph and click the Next button.
 - d. Select any entity and any graph type and click the Next button.
 - e. Select Use Current Project and click the Next button.
 - f. Select Do not use filter and click the Next button.
 - g. Set Group By field with <None> value and x-axis field with Assigned to value.
 - h. Click the Finish button.

- i. Click the Add to Analysis Tree button to save the graph in the Public folder
 - j. Continue to use the Graph Wizard to try several different graph types.
3. Create a Dashboard page:
 - a. Select the Dashboard View module.
 - b. Select Public folder and click the New Page button
 - c. Name the new page **Flight Graphs** and press the OK button.
 - d. With the Flight Graphs page selected, click the Configuration tab.
 - e. Expand the Public folder in the Graphs tree on the right side.
 - f. Select a graph and drag and drop or double-click to add to the Configuration area.
 - g. Click on View tab to view your Dashboard page.
 - h. Click the Export to PDF button and save the page with a desired name in the desktop
 4. Create a Cross Project report:
 - a. Select the Analysis View module.
 - b. Click the New item button and choose Graph Wizard.
 - c. Choose the Entity Graph radio button and click the Next button.
 - d. Choose Defects for the Entity and the Summary Graph radio button. Click the Next button.
 - e. Choose the Use Selected Projects radio button and then click the Select button.
 - f. Expand the STUDENT00_ESS folder, choose ALM_Demo, and click the Add button. Two projects should be listed on the left pane. Click the OK button and then the Next button.
 - g. Ensure that the Do not use a filter radio button is checked and click the Next button.
 - h. Leave default options in the Group By and X-axis fields and click the Finish button
 - i. Click the Add to Analysis Tree button and save the graph in the Public folder by using a different name for the graph.
 - j. Log out from ALM Desktop client.

Exercise 15 – Using the ALM Web Client to Add a Defect

In this exercise, you add a new defect to the Defects module using the ALM Web client.

Overview

In this exercise, you:

- Log in to ALM using the HP ALM Web client with the username **training** and the password **welcome**.
- Choose the LabProject project from the STUDENT00_ESS domain.
- Use the table below to create a new defect.

| | |
|--------------|---|
| Summary: | Flights button does not generate flight information |
| Status: | Open |
| Assigned to: | alex_alm |
| Severity: | 3-High |
| Priority: | 2-Medium |
| Description: | When the flights button is clicked the flight information is not generated or displayed |

- Click the Add button and log out of ALM.

Detailed Instructions

To create a new defect using ALM Web Client, complete the following steps:

1. Double-click the IE icon on the desktop to open ALM.
2. Click the ALM Web Client option of the HP ALM login screen.
3. In the Name field, enter **training**, and in the Password field, enter **welcome**. Click the Authenticate button.
4. From the Domain and Project lists, select STUDENT00_ESS and LabProject. Click the Login button.

5. Click the down arrow next to the word Home in the upper-left corner of the screen and choose Defects from the dropdown list.
6. Click the Add defect button and use the following information to create a new defect:

| | |
|--------------|---|
| Summary: | Flights button does not generate flight information |
| Status: | Open |
| Assigned to: | alex_alm |
| Severity: | 3-High |
| Priority: | 2-Medium |
| Description: | When the flights button is clicked the flight information is not generated or displayed |

7. Click the Add button to add the defect to ALM.
8. Click the Logout button in the upper-right corner of the screen to log out of ALM.

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