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Software version: 12.50 and later

ALM Importing External Tests User Guide

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Import External Tests

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	Note: This solution is no longer updated. We recommend you use the new solution as described in Integrate with external tests.	

Overview

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

When synchronizing externally executed test results, ALM creates entities in the following modules:

Test Plan module

ALM creates an external type test (EXTERNAL-TEST 4) for each test case specified in the result file. The test details in ALM are created from the test case details defined in the result file.

Notes:

- Each external type test links to its counterpart test in the external repository.
- External type tests cannot be added manually to the Test Plan Tree.

You can create requirements coverage by linking the tests to requirements in your project.

Test Lab module

ALM creates external type test sets for each test suite defined in the result file. Test instances are created for each test case defined in the test suite. The status of each test instance is updated according to the status in the result file.

Note: External type test sets are read-only. You cannot create, modify, or run test sets directly from ALM.

Test Runs module

ALM creates run entities for each test case run specified in the result file. Errors and details specified in the result file, can be viewed from the Report tab.

ALM provides two methods for synchronizing external results with your ALM project:

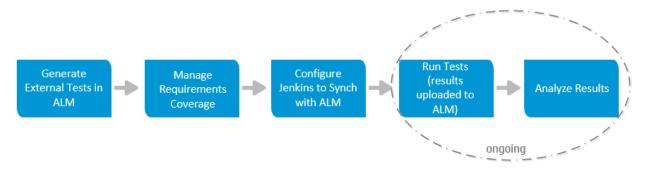
Synchronizing results from Jenkins	After you configure Jenkins to synch results with ALM, each time you run a job from Jenkins, the external results are synchronized automatically with ALM.
Synchronizing results by external testing tools	When working with external testing tools, you synchronize an external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

Workflow for importing results to ALM

The section describes the flow for importing external results to ALM.

Import results from Jenkins:

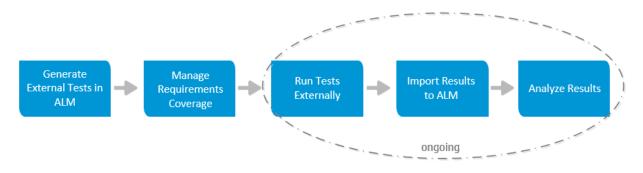
The following diagrams illustrates how to integrate Jenkins results with ALM:



Generate External Tests in ALM	Import tests from your external result file to ALM's Test Plan module. ALM generates tests (EXTERNAL-TEST test type 4) and adds them to your Test Plan Tree.
Manage Requirements Coverage	Create coverage by linking the external tests to requirements in your project.
Configure Jenkins to synch results with ALM	Configure Jenkins to automatically synch the external result with ALM.
Run Tests	Run a Jenkins job. When the job completes, it uploads the result file automatically to ALM.
	When running subsequent jobs, if the test entities already exist in ALM, then it will only upload the new run entities.
Analyze Results	Review and analyze test results from ALM.
	ALM displays the uploaded test sets, test runs, and tests. ALM also updates coverage created between the external tests and your requirements.

Import results from other tools

The following diagrams illustrates how to import external results to ALM:



Generate External Tests in ALM	Import tests from your external result file to ALM's Test Plan module. ALM generates tests (EXTERNAL-TEST test type 4) and adds them to your Test Plan Tree.
Manage Requirements Coverage	Create coverage by linking the external tests to requirements in your project.
Run Tests Externally	Run tests using your external tool.
Import Results to ALM	When the test run completes, you import the result file to ALM's Test Lab module.
	When importing subsequent result files, if the test entities already exist in ALM, then it will only import the new run entities.
Analyze	Review and analyze test results from ALM.
Results	ALM displays the uploaded test sets, test runs, and tests. ALM also updates coverage created between the external tests and your requirements.

For task details about integrating test results with ALM, see:

- "Import tests from Jenkins" on the next page
- "Import tests from an external tool" on page 8
- "How to view external results in ALM" on page 10

Import tests from Jenkins

This task describes how to import test results from Jenkins to ALM.

- 1. Import result file from Jenkins to the Test Plan module.
 - a. On the ALM sidebar, under **Testing**, select **Test Plan**.
 - b. Right-click a folder in the Test Plan Tree and select Generate Tests from External Test Results. For user interface details, see "Generate Tests from External Test Results dialog box" on page 12
 - **Note:** ALM supports the following XML formats: JUnit/XUnit, Nunit, and TestNG.
 - c. ALM adds the imported tests (EXTERNAL-TEST test type 4) to your Test Plan Tree.
- 2. Create coverage between your imported tests and the requirements in your project.

You can create coverage from the Test Plan module or from the Requirements module. For task details, see How to Create Coverage.

3. Configure Jenkins to work with ALM.

For information on how to configure Jenkins to synch results with ALM, see this KB article.

4. Run the Jenkins job.

Run your job from Jenkins. When the job completes, the results are synchronized automatically with ALM.

5. View external test results in ALM.

For details, see "How to view external results in ALM" on page 10.

Import tests from an external tool

This task describes how to import test results from an external tool to ALM.

Note: If you are working with Jenkins, see "Import tests from Jenkins" on the previous page.

- 1. Import result file from your external tool to the Test Plan module.
 - a. On the ALM sidebar, under **Testing**, select **Test Plan**.
 - b. Right-click a folder in the Test Plan Tree and select Generate Tests from External Test Results. For user interface details, see "Generate Tests from External Test Results dialog box" on page 12.
 - **Note:** ALM supports the following XML formats: JUnit/XUnit, Nunit, and TestNG.
 - c. ALM adds the tests (EXTERNAL-TEST test type 4) to your Test Plan Tree.
- 2. Create coverage between your imported tests and the requirements in your project.

You can create coverage from the Test Plan module or from the Requirements module. For task details, see How to Create Coverage.

- 3. Run tests using your external tool.
- 4. Synchronize external results with ALM.

When the test run completes, perform the following steps:

- a. On the ALM sidebar, under Testing, select Test Lab.
- b. Under the **Root** folder, select or create a folder.
- c. Right-click the folder and select **Import External Test Results**. For user interface details, see "Import External Test Results dialog box" on page 13.

Tip: Instead of synchronizing your results manually, you can use ALM REST API to automate this process. For information on how to configure

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Jenkins to synch results with ALM, see this KB article.

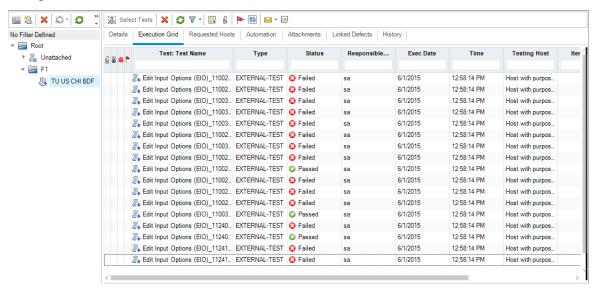
5. View external test results in ALM.

For task details, see "How to view external results in ALM" on the next page.

How to view external results in ALM

This task describes how to view external test results in ALM.

- View results in the Test Lab module.
 - a. On the ALM sidebar, under **Testing**, select **Test Lab**. Select a test set and click the **Execution Grid** tab.
 - b. Select the relevant test set folder to displays the associated test instances in the grid.



- View results in the Test Runs module.
 - a. On the ALM sidebar, under **Testing**, select **Test Runs**. For more details on the Test Runs module, see Test Runs Module Window.
 - b. View the results of all the test runs in the Test Runs grid. The Report tab displays detailed messages of a selected run.

When working with Jenkins, you can click



to view the run results from Jenkins.

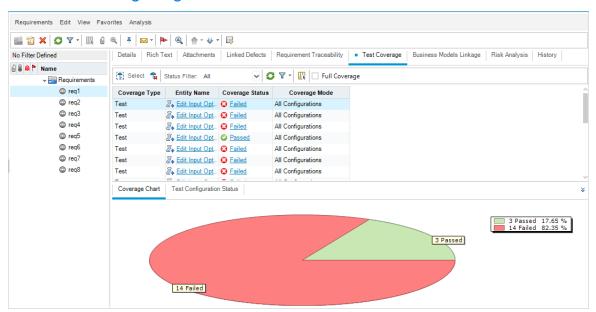
When working with tools other than Jenkins, you can click



to open the file system and

display the run results and additional test data (for example, snapshots). This path is defined in the Importing External Test Results dialog box. For details, see Import External Tests.

- View coverage of external test runs in the Requirements module.
 - a. In the **Requirements** module, select the **Requirement Details** view. Select a requirement and click the **Test Coverage** tab.
 - b. View the external tests that are covering a selected requirement in the requirements tree. You can also view a graphical representation of the run status of the tests in the coverage grid. For more details on test coverage, see Test Coverage Page.



User interface

This section includes:

•	Generate Tests from External Test Results dialog box	1:	2
•	Import External Test Results dialog box	1:	3

Generate Tests from External Test Results dialog box

This dialog box enables you to import your tests from an external file to your Test Plan Tree.

To access	 On the ALM sidebar, under Testing, select Test Plan. Right-click a folder in the Test Plan Tree and select Generate Tests from External Test Results.
Relevant tasks	 "Import tests from Jenkins" on page 7 "Import tests from an external tool" on page 8
See also	"Overview" on page 3

User interface elements are described below:

UI Element	Description
Upload Results File	Select a results file.
	Note: ALM supports the following XML formats: XUnit, JUnit, NUnit, and TestNG.
Define Test Plan Target	Specify a Test Plan folder for the imported tests.
Define Testing Environments	Testing Framework . Select the testing framework used for creating your tests.
	Testing Tool. Select the testing tool used for running your tests.

Import External Test Results dialog box

This dialog box enables you to import a results file generate from an external tool to ALM.

To access	 On the ALM sidebar, under Testing, select Test Lab. Right-click a folder in the Test Set Tree and select Importing External Test Results.
Important information	If you are working with Jenkins, the results file is imported automatically to ALM. For details, see "Import tests from Jenkins" on page 7.
Relevant tasks	"Import tests from an external tool" on page 8
See also	"Overview" on page 3

User interface elements are described below:

UI Element	Description
Upload Results File	Select a results file.
	Note: ALM supports the following XML formats: JUnit/XUnit, Nunit, and TestNG.
Define ALM	Test Lab. Specify a Test Lab folder for the imported test
Targets	Test Plan. Specify a Test Plan folder for the imported tests.
Define Testing Environments	Testing Framework . Select the testing framework used for running your tests.
	Testing Tool. Select the testing tool used for running your tests.
Optional Settings	External Results Network Path . Specify a network path where additional test data is stored (for example, snapshots).
	External Build / Version Number. Specify a unique identifier for the imported test runs. For example, a build number of the application that was tested.