

HP Enterprise Integration module for SAP applications

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User's Guide

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Welcome

Welcome to HP Enterprise Integration module for SAP solutions, which integrates SAP Solution Manager with Quality Center. Using Enterprise Integration, you can export SAP Solution Manager business blueprints to the Quality Center Requirements module. You can then design and run tests in Quality Center based on these requirements and update Solution Manager with their results.

In addition, when you install Enterprise Integration, the Application Model module is installed. You can import the application entity hierarchy from your SAP application to the Application Model module, enabling you to use the Application Model module to model your SAP application within Quality Center. You can then associate entities in the Application Model module with Quality Center tests and business components, enabling you to plan your testing process based on the application entity hierarchy.

Note: This guide explains how to work with SAP Solution Manager in conjunction with Quality Center. For more information on using Quality Center, refer to the *HP Quality Center User's Guide*. For more information on using Solution Manager, refer to the Solution Manager documentation.

Using This Guide

This guide contains the following chapters:

Chapter 1 Setting Up Enterprise Integration

Describes how to install and enable Enterprise Integration.

Chapter 2 The Enterprise Integration Workflow

Describes the steps performed when using Enterprise Integration to work with Solution Manager and Quality Center.

Chapter 3 Working with Enterprise Integration

Describes how to import Solution Manager business blueprints in Quality Center and how to update Solution Manager with test results from Quality Center.

Chapter 4 Working with the Application Model Module

Describes how to import and manage application entities in the Application Model module.

Chapter 5 Customizing Enterprise Integration

Describes how to customize permissions and project entities for Enterprise Integration.

Typographical Conventions

This guide uses the following typographical conventions:

UI Elements and Function Names	This style indicates the names of interface elements on which you perform actions, file names or paths, and other items that require emphasis. For example, “Click the Save button.” It also indicates method or function names. For example, “The wait_window statement has the following parameters:”
<i>Arguments</i>	This style indicates method, property, or function arguments and book titles. For example, “Refer to the <i>HP User’s Guide</i> .”
<Replace Value>	Angle brackets enclose a part of a file path or URL address that should be replaced with an actual value. For example, <MyProduct installation folder>\bin.
Example	This style is used for examples and text that is to be typed literally. For example, “Type Hello in the edit box.”
CTRL+C	This style indicates keyboard keys. For example, “Press ENTER.”
[]	Square brackets enclose optional arguments.
{ }	Curly brackets indicate that one of the enclosed values must be assigned to the current argument.
...	In a line of syntax, an ellipsis indicates that more items of the same format may be included. In a programming example, an ellipsis is used to indicate lines of a program that were intentionally omitted.
	A vertical bar indicates that one of the options separated by the bar should be selected.

Welcome

1

Setting Up Enterprise Integration

This chapter describes the installation requirements and setup procedures for using Enterprise Integration.

This chapter describes:	On page:
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Requirements for Enterprise Integration

To use Enterprise Integration, you must have the following installed:

- ▶ Quality Center 9.2 (on your server machine)
- ▶ Quality Center 9.2 Patch 7 (on your server machine)
- ▶ SAP Solution Manager 4.0 Service Pack 12 with note ID 1065377 or later

The minimum system requirements to run Enterprise Integration are the same as for Quality Center, as described in the *HP Quality Center Installation Guide*. In addition, to push a Solution Manager business blueprint containing content in a particular language, the Quality Center server machine must be installed on an operating system that supports that language.

The Installation Process

This section describes the Enterprise Integration installation process.

To install Enterprise Integration:

1 Ensure that Quality Center 9.2 is installed on your server machine.

For more information on installing Quality Center, refer to the *HP Quality Center Installation Guide*.

2 Install Quality Center 9.2 Patch 7 on your server machine.

Quality Center 9.2 Patch 7 is provided on the Enterprise Integration installation CD. To install the patch, follow the on-screen installation instructions.

3 Install the Enterprise Integration on your server machine.

For more information on installing the Enterprise Integration, see “Installing Enterprise Integration” on page 14.

4 Load the Enterprise Integration license.

For more information, see “Loading the Enterprise Integration License” on page 25.

5 Enable the Enterprise Integration extension in Quality Center Site Administration for every project that requires Enterprise Integration.

For more information, see “Enabling the Enterprise Integration Extension” on page 26.

6 Install the SAP Application Importer Component on each client machine.

The Application Model module is installed automatically when you install Enterprise Integration. To import application entities from your SAP application to the Application Model module, the SAP Application Importer Component must be installed on each client machine from which you want to import application entities. For more information on installing the SAP Application Importer Component, see “Installing the SAP Application Importer Component” on page 28.

Installing Enterprise Integration

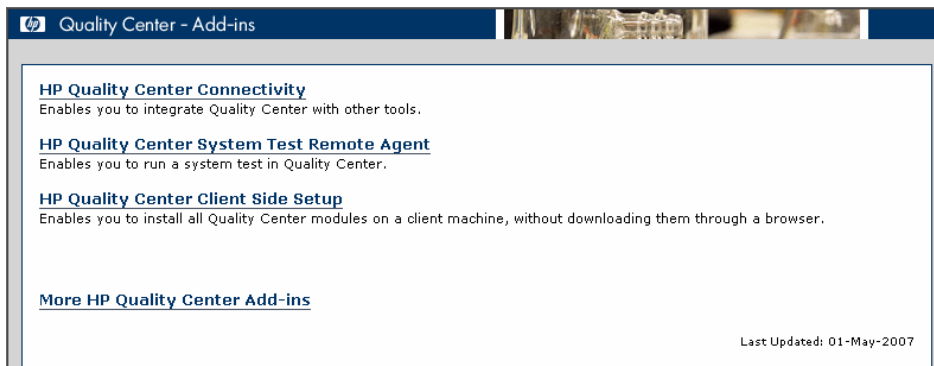
To install Enterprise Integration, you download the installation files from the HP Quality Center Add-ins page and run the installation wizard.

To install Enterprise Integration:

- 1 Open your Web browser and type your HP Quality Center URL: `http://<Quality Center server name>[:<port number>]/qcbn`. The HP Quality Center Options window opens.



- 2 Click the **Add-ins Page** link. The HP Quality Center Add-ins page opens.

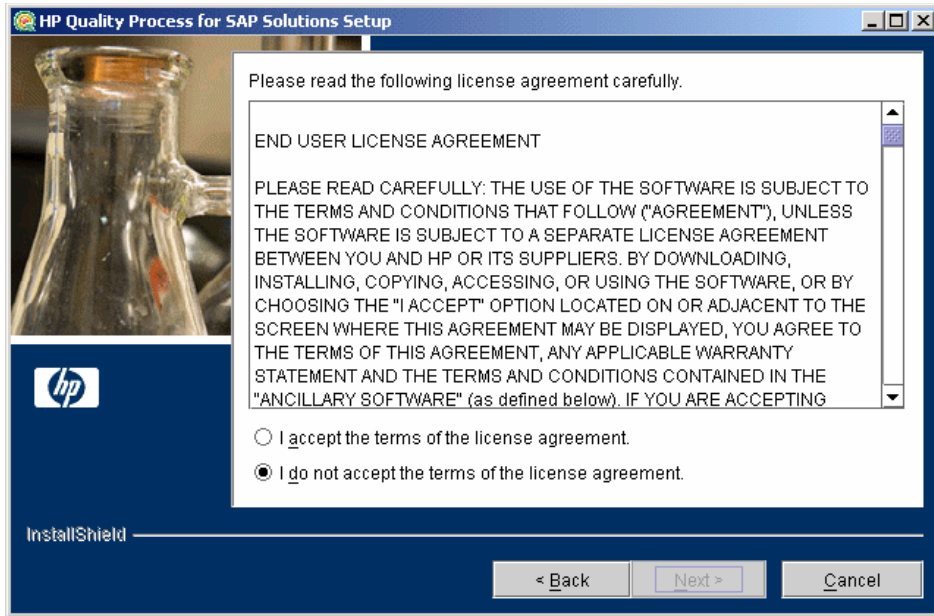


- 3 Click the **More HP Quality Center Add-ins** link. The More HP Quality Center Add-ins page opens.
- 4 Under **Quality Center Administrator Add-ins**, under **SAP Add-ins**, click the **HP Enterprise Integration module for SAP solutions** link. The HP Enterprise Integration module for SAP solutions page opens.
- 5 Right-click the **Download Enterprise Integration** link for your platform and click **Save Target As**. The Save As dialog box opens.
- 6 In the Save As dialog box, select a location on your Quality Center server machine to save the installation file and click **Save**.
- 7 From your Quality Center server machine, run the appropriate installation file.

Platform	To install:
Windows	Run the setup.exe file.
Solaris or Linux (console mode)	<ul style="list-style-type: none"> ▶ To install on a Solaris platform, type: ./solv4_setup -console ▶ To install on a Linux platform, type: ./linux_setup -console
Solaris or Linux (UI mode)	<p>Make sure that the DISPLAY environment variable is properly configured on the Quality Center host machine, and that the machine from which you are installing is running an X-server (for example, Exceed).</p> <ul style="list-style-type: none"> ▶ To install on a Solaris platform, type: ./solv4_setup.bin ▶ To install on a Linux platform, type: ./linux_setup.bin

- 8 The Welcome dialog box opens. Click **Next**.

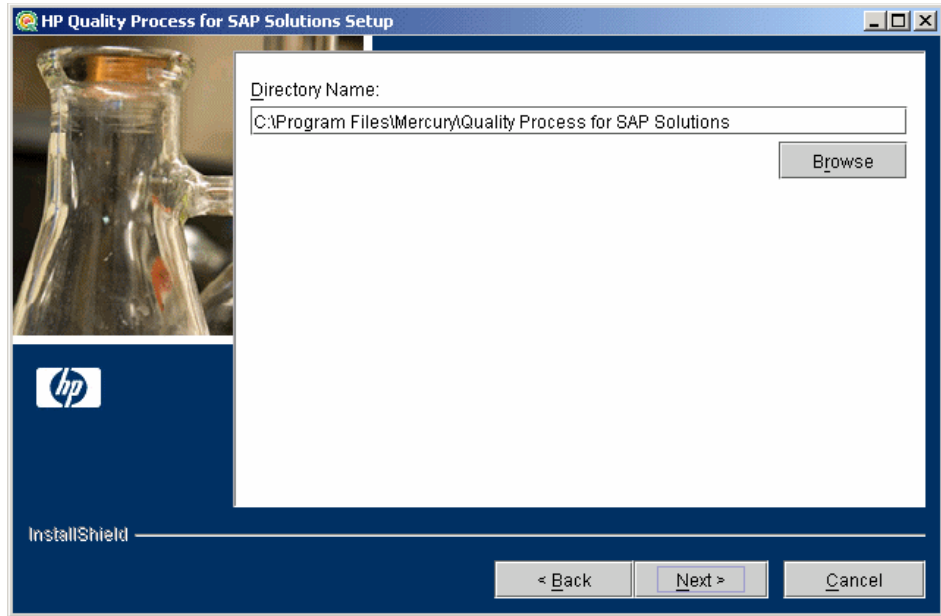
9 The License Agreement dialog box opens.



Read the license agreement. To accept the terms of the license agreement, select **I accept the terms of the license agreement**.

Click **Next**.

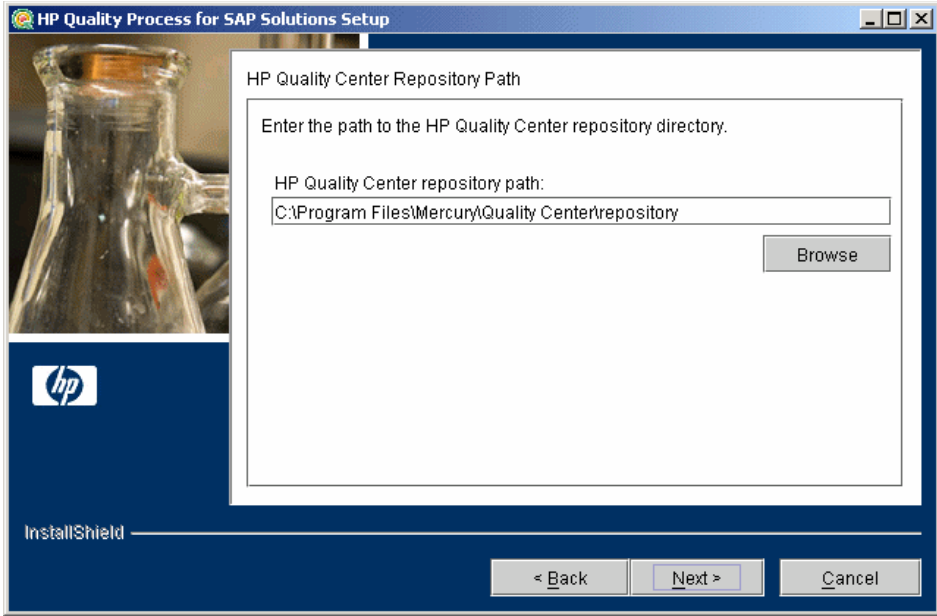
- 10 The Directory Name dialog box opens.



Accept the proposed folder for the Enterprise Integration installation or browse for an alternate folder.

Click **Next**.

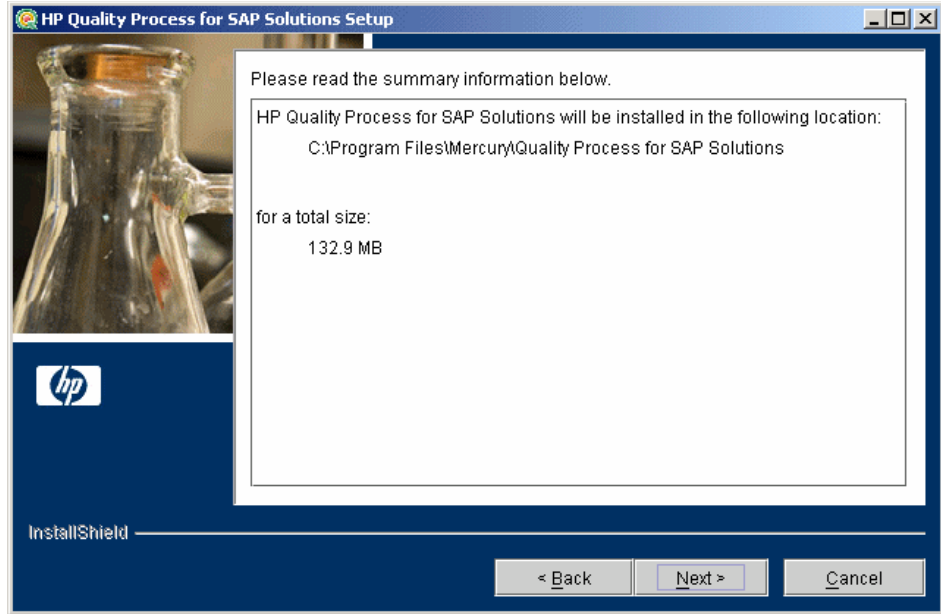
11 The HP Quality Center Repository Path dialog box opens.



Type the location of the Quality Center repository.

Click **Next**.

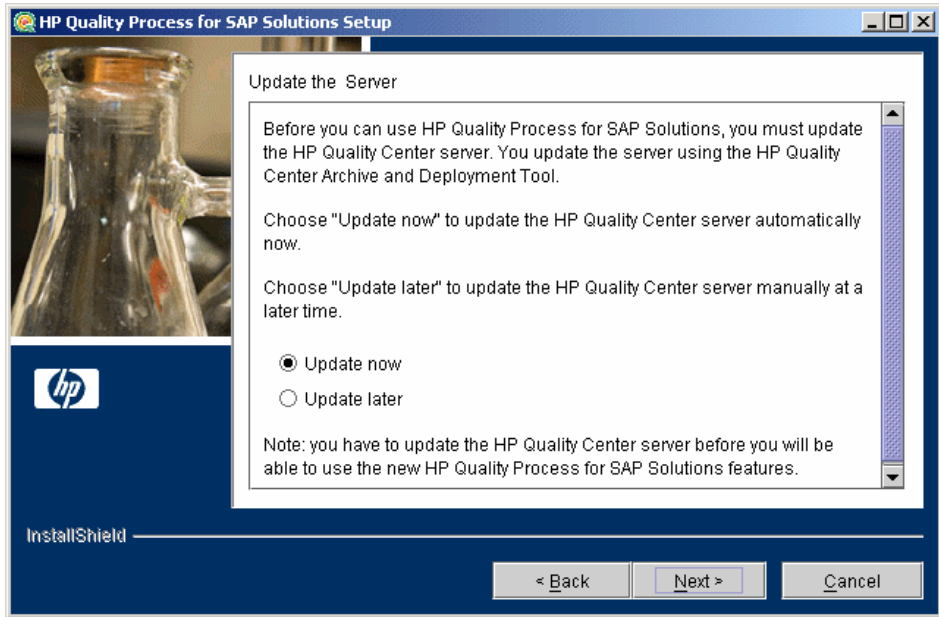
12 The Installation Summary dialog box opens.



To review or change any settings, click **Back**.

To accept the settings and start the installation, click **Next**. The installation process starts.

- 13** When the installation process completes, the Update Server dialog box opens.



When you update the Quality Center server, the Enterprise Integration files are copied into the opened archive directories (**qcbn.war** and **sabin.war**) in the <**Quality Center Installation**>\application directory. In addition, two new open archive directories are added: **30QCToSM.ear** and **40SMTtoQCIntegration.war**. The Quality Center Archive and Deployment Tool is launched. This tool enables you to update the running Quality Center Web server.

Select an update option:

- **Update now.** To update the Quality Center archive files and launch the deployment tool now.
- **Update later.** To manually update the Quality Center server at a later time. You must update the Quality Center server before you can use Enterprise Integration.

Click **Next**.

- 14** If you selected **Update now**, proceed to step 15.

If you selected **Update later**, click **Next** and then click **Finish** to close the installation setup dialog box. When you are ready to update the application server, run the **deploy.bat** script (or **deploy.sh** for Solaris or Linux) from the **<Enterprise Integration installation>** directory. When running the batch file, specify the Quality Center installation directory and the location of the Quality Center repository, using the format:

```
deploy <Quality Center installation directory> <Quality Center repository directory>
```

For example:

```
deploy "C:\Program Files\Mercury\Quality Center" "C:\Program Files\Mercury\Quality Center\repository"
```

- 15** After clicking **Update now** or manually launching the batch file, the Quality Center Archive and Deployment Tool opens.

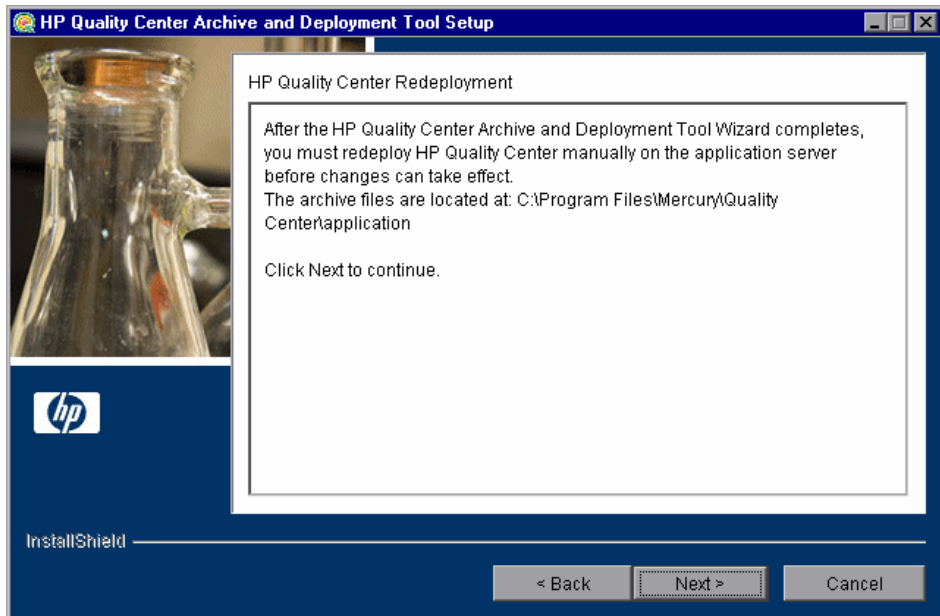


For Enterprise Integration to work with Quality Center, you need to create a new archive and redeploy the **qcbn.war**, **sabin.war**, **30QCToSM.ear**, and **40SMTtoQCIntegration.war** files on the application server. This enables changes to the archive files to take effect. Note that it takes more time to create **qcbn.war** than **sabin.war**.

Click **Next** to create the new archive files.

- 16** If your application server is JBoss, proceed to step 17.

If your application server is other than JBoss, the following dialog box opens.



You must deploy Quality Center manually on the application server after the setup process completes. The location of the archive files is shown in the dialog box.

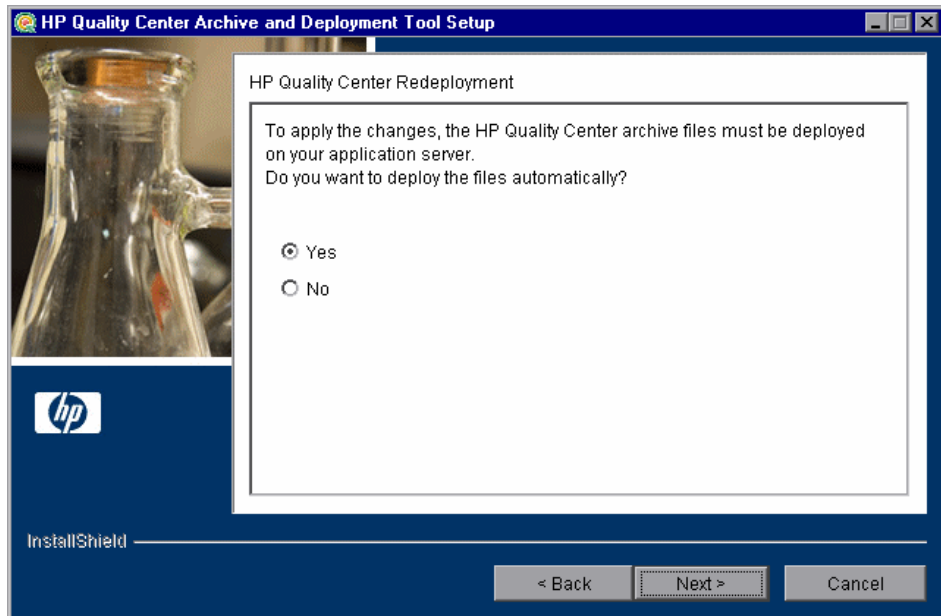
The updated archive files are stored in different formats, although the content is the same. The files are stored openly in the **10sabin.war**, **20qcbn.war**, **30QCToSM.ear**, and **40SMTToQCIntegration.war** folders, and as closed archives in **sabin.war**, **qcbn.war**, **30QCToSM.ear**, and **40SMTToQCIntegration.war**. You must also create manually a JMS queue named **mercury/spi/jms**.

Note: For more information on manually deploying Quality Center on an application server, refer to the *HP Quality Center Installation Guide*.

Click **Next** and proceed to step 19.

- 17** If your application server is other than JBoss, proceed to step 19.

If your application server is JBoss, the HP Quality Center Redeployment dialog box opens.

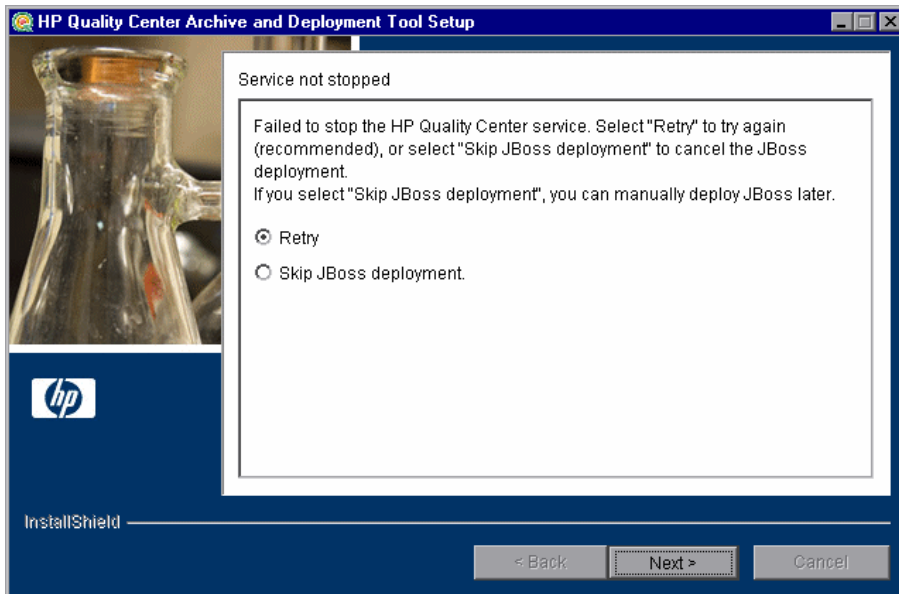


Choose one of the following options:

- **Yes.** To deploy the archive files automatically.
- **No.** To manually deploy the archive files later.

Click **Next**.

- 18** If the Quality Center service is running, the Archive and Deployment Tool automatically attempts to stop the service. If the tool is unable to stop the service, the Service not stopped dialog box opens.



Choose one of the following options:

- **Retry.** To try again to stop the JBoss service.
- **Skip JBoss deployment.** To cancel the deployment and manually deploy JBoss later.

Click **Next**.

- 19** When the deployment is complete, the Completion dialog box opens. Click **Finish** to close the Quality Center Archive and Deployment Tool.

Note: If you manually deployed the archive files on your application server, you must restart Quality Center after deployment.

- 20** Click **Finish** to close the HP Quality Process for SAP Solutions Setup dialog box.

Loading the Enterprise Integration License

To enable the Services module in Quality Center, you must load your Enterprise Integration license.

To load the Enterprise Integration license:

- 1** In Site Administration, click the **Licenses** tab.

Site Projects | Site Users | Site Connections | **Licenses** | Servers | DB Servers | Site Configuration | Site Analysis

Modify

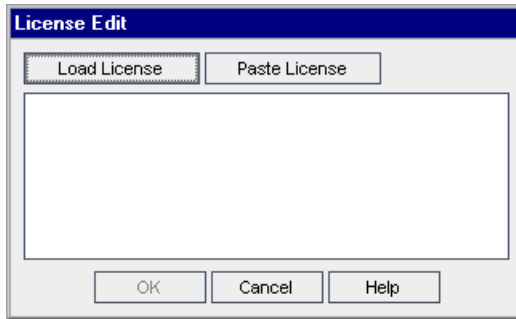
HP Quality Center License Status:

License	In Use	Max	
Defects	8	Unlimited	
TestPlan-TestLab	8	Unlimited	
Requirements	8	Unlimited	
Components	8	Unlimited	

Expiration Date : 11/30/2007 Tolerance: 0 %
 Version Control : Y Dashboard: Y



- 2 Click the **Modify License** button. The License Edit dialog box opens.



- 3 Click the **Load License** button and select the Enterprise Integration license file. Alternatively, copy the license file and click **Paste License**.
- 4 Click **OK**. The license is displayed in the list of licenses.

Enabling the Enterprise Integration Extension

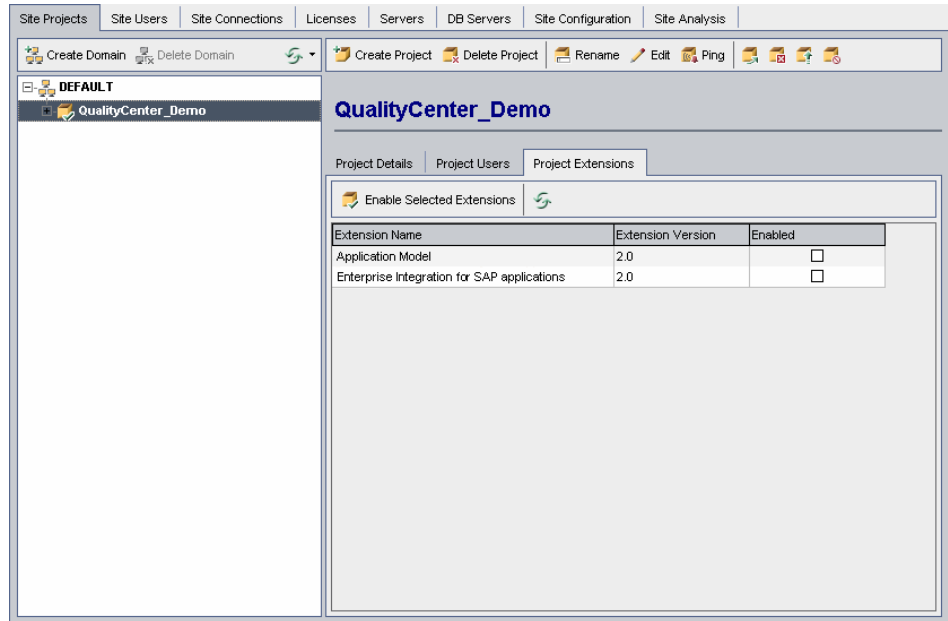
After installing Enterprise Integration on your Quality Center server, you must enable the Enterprise Integration extension for a project before you can use it with the project.

Notes:

- ▶ You cannot disable an extension for a project after you enable it.
 - ▶ When you enable a project for Enterprise Integration, the Application Model module and associated features are also enabled for the project.
 - ▶ If the project is active, you must deactivate it before enabling an extension. After the extension has been enabled, you can reactivate the project.
 - ▶ Enabling extensions for a project can take some time.
-

To enable the Enterprise Integration extension for a project:

- 1 In Quality Center Site Administration, click the **Site Projects** tab.
- 2 In the Projects list, select a project. In the right pane, click the **Project Extensions** tab. The Extensions list is displayed, listing extensions installed on the Quality Center server for which you have a license.



- 3 Select the **Enabled** check box for the **Enterprise Integration for SAP applications** extension, and click **Yes** to confirm. The **Enterprise Integration for SAP applications** and **Application Model** extensions are both enabled and a confirmation message displays.

Installing the SAP Application Importer Component

You must install the SAP Application Importer Component on each Quality Center client machine on which you want to import SAP application entity hierarchies to the Application Model module, which is installed with Enterprise Integration. The SAP Application Importer Component is the tool that communicates with the SAP server and imports application entity data from your SAP application to Quality Center.

Notes:

- ▶ To install the SAP Application Importer Component, you must have Microsoft .NET Framework 2.0 installed on the client machine. You can download these from the Microsoft Web site (<http://www.microsoft.com>).
- ▶ To install the SAP Application Importer Component, you must have administrator permissions on the client machine.

To install the SAP Application Importer Component:

- 1** From your Quality Center client machine, log in to a project for which Enterprise Integration is enabled. The SAP Application Importer Component files are downloaded to your client machine.
- 2** Locate the **APM** directory in the Quality Center installation directory (by default **C:\Program Files\Common Files\Mercury Interactive\Quality Center**).
- 3** Run the **SAPInspectorSetup.exe** file located in this folder and follow the installation instructions on your screen.

Uninstalling Enterprise Integration

This section describes how to uninstall Enterprise Integration from your Windows, Solaris, or Linux server machine. When you uninstall Enterprise Integration, the Enterprise Integration files are deleted from Quality Center.

This section includes the following topics:

- ▶ Uninstalling Enterprise Integration from Windows
- ▶ Uninstalling Enterprise Integration from Linux or Solaris

Uninstalling Enterprise Integration from Windows

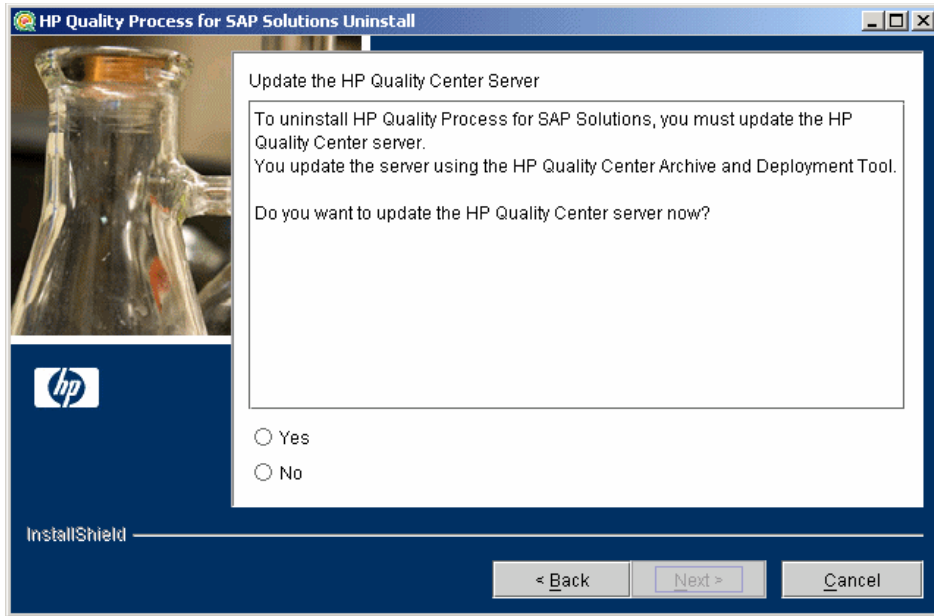
This section describes how to uninstall Enterprise Integration from Windows.

To uninstall Enterprise Integration from Windows:

- 1** Make sure that the application server is running.
- 2** To open the HP Quality Process for SAP Solutions Uninstall dialog box, you can:
 - ▶ Choose **Start > Settings > Control Panel > Add/Remove Programs**, select **HP Quality Process for SAP Solutions**, and click the **Change/Remove** button. Follow the instructions on your screen.
 - ▶ Locate the Enterprise Integration home directory. By default, the files are stored in [drive]:\Program Files\Mercury\Quality Process for SAP Solutions. In the **_uninst** subdirectory, double-click **uninstall.exe**.

The HP Quality Process for SAP Solutions Uninstall dialog box opens.

3 Click **Next**. The Update the server dialog box opens.



Select an update option:

- ▶ **Yes.** To update the archive files and launch the deployment tool now.
- ▶ **No.** To update and uninstall later.

Click **Next** to continue to uninstall, or **Cancel** to uninstall later.

4 The Quality Center Archive and Deployment Tool opens.

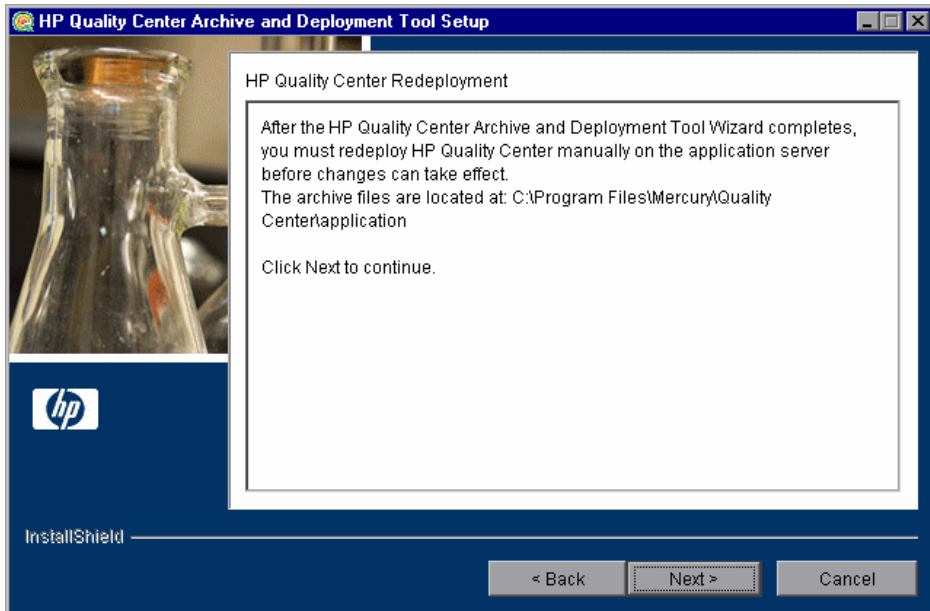
To uninstall Enterprise Integration, you need to create a new archive and redeploy the Quality Center and Site Administration war files (**qcbin.war** and **sabin.war**) on the application server. This enables changes to the .war files to take effect. If your application server is JBoss, the files are redeployed automatically. Otherwise, you must redeploy the files manually.

Click **Next** to create the new archive files.

Note: It takes more time to create **qcbin.war** than **sabin.war**.

5 If your application server is JBoss, proceed to step 6.

If your application server is other than JBoss, the following dialog box opens.



You must deploy Quality Center manually on the application server after the setup process completes. The location of the archive files is shown in the dialog box.

The updated archive files are stored in different formats, although the content is the same. The files are stored openly in the **10sabin.war** and **20qcbn.war** folders, and as closed archives in **sabin.war** and **qcbn.war**.

To update the archives and undeploy them manually, run the **undeploy.bat** script (or **undeploy.sh** for Solaris or Linux) from the **<Enterprise Integration installation>** directory. When running the batch file, specify the Quality Center installation directory and the location of the Quality Center repository, using the format:

```
undeploy <Quality Center installation directory> <Quality Center repository directory>
```


For example:

```
undeploy "C:\Program Files\Mercury\Quality Center" "C:\Program Files\Mercury\Quality Center\repository"
```

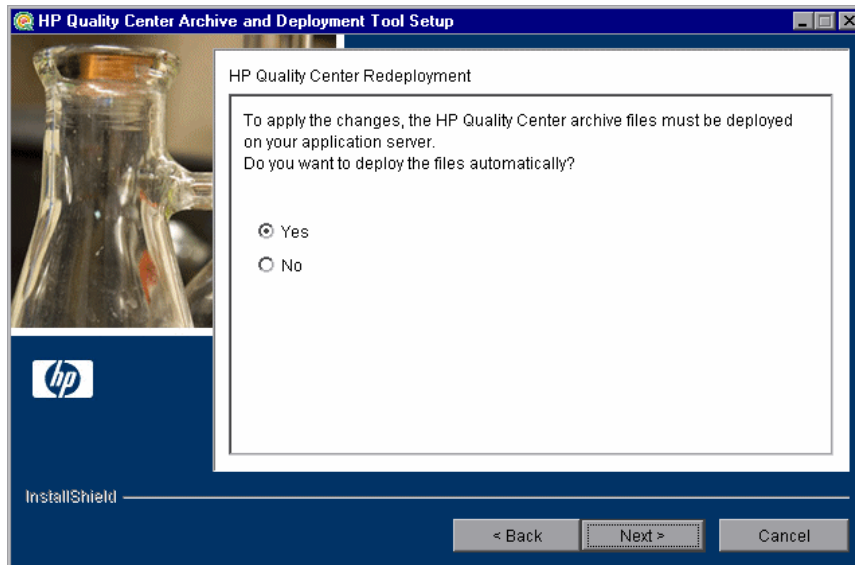
You must also manually updeploy **QCToSM.ear** and **SMTtoQCIntegration.war**.

Note: For more information on manually deploying Quality Center on an application server, refer to the *HP Quality Center Installation Guide*.

Click **Next** and proceed to step 8.

- 6 If your application server is other than JBoss, proceed to step 8.

If your application server is JBoss, the HP Quality Center Redeployment dialog box opens.

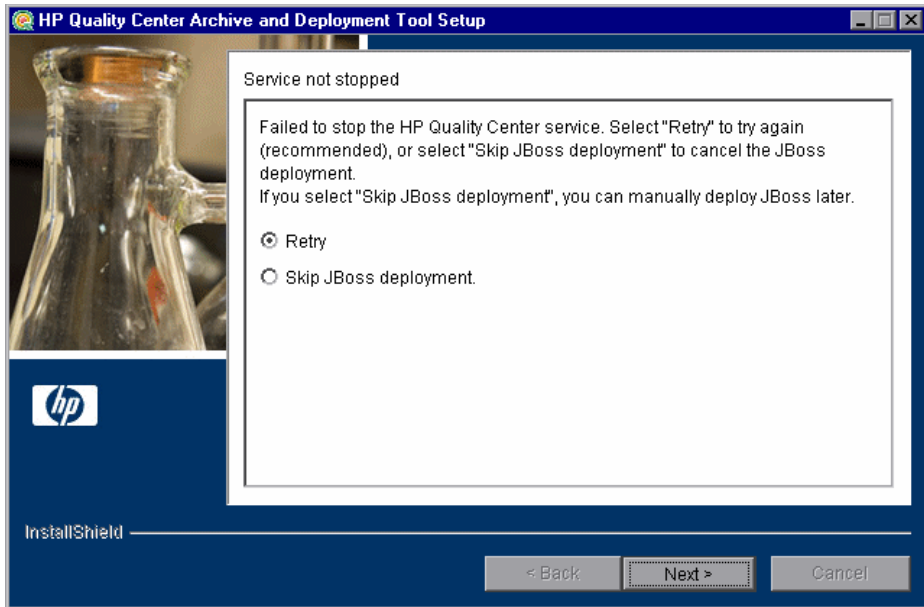


Choose one of the following options:

- **Yes.** To deploy the archive files automatically.
- **No.** To manually deploy the archive files later.

Click **Next** to continue.

- 7 If the Quality Center service is running, the Archive and Deployment Tool automatically attempts to stop the service. If the tool is unable to stop the service, the Service not stopped dialog box opens.

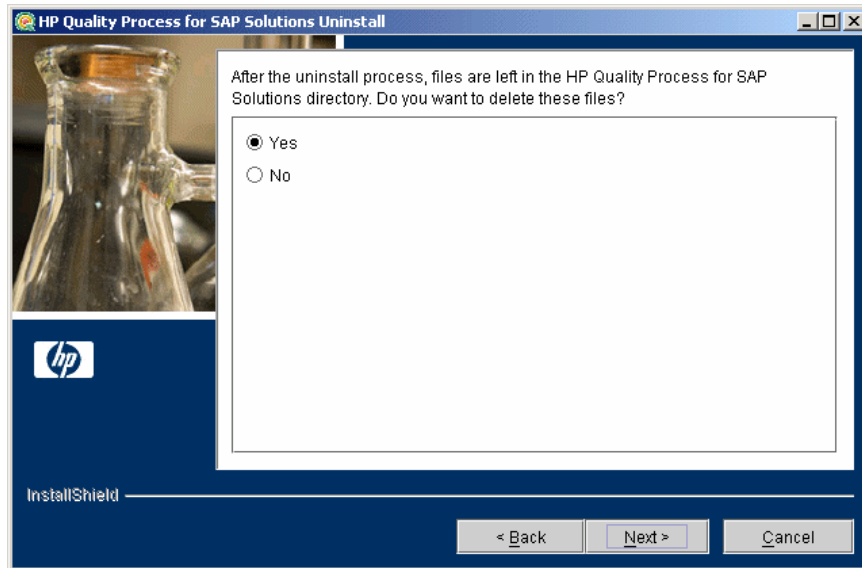


Choose one of the following options:

- **Retry.** To try again to stop the JBoss service.
- **Skip JBoss deployment.** To cancel the deployment and manually deploy JBoss later.

Click **Next**.

- 8 When the deployment is complete, the Completion dialog box opens. Click **Finish** to close the Quality Center Archive and Deployment Tool Setup. The HP Quality Process for SAP Solutions Uninstall dialog box is displayed.
- 9 Click **Next**. The Update completed dialog box opens.
- 10 Click **Next** to continue. The File Deletion dialog box opens.



It is recommended that you click **Yes** to delete the remaining uninstall files in the Enterprise Integration directory.

Click **Next**.

- 11 Click **Finish** to close the HP Quality Process for SAP Solutions Uninstall dialog box.

Uninstalling Enterprise Integration from Linux or Solaris

This section describes how to uninstall Enterprise Integration from Linux or Solaris.

To uninstall Enterprise Integration from Linux or Solaris:

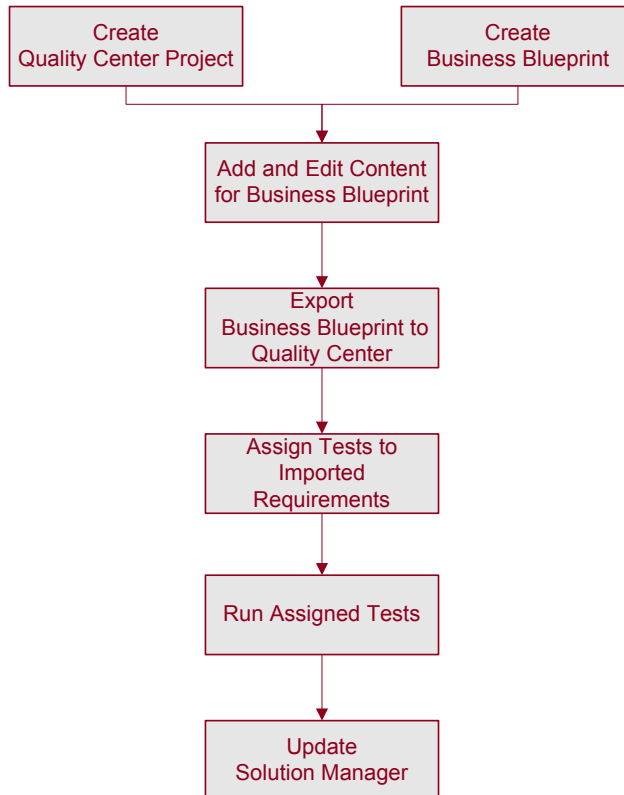
- 1 Make sure that the application server is running.
- 2 Type the following command at the system prompt:
`/[directory]/[Enterprise Integration_directory]/_uninst/uninstall.bin`
The HP Quality Process for SAP Solutions Uninstall wizard opens.
- 3 Click **Next**. Follow the on-screen instructions.
- 4 Run the Quality Center Archive and Deployment Tool to create a new archive and redeploy the Quality Center and Site Administration .war files on the application server.
- 5 When you are prompted to delete all add-in files, select **Yes**.

2

The Enterprise Integration Workflow

This chapter provides an overview of using Enterprise Integration to export SAP Solution Manager business blueprints to Quality Center and to update Solution Manager with Quality Center test results.

Working with Enterprise Integration includes the following stages.



Creating Quality Center Projects

You first create a project in Quality Center in which to test the SAP business blueprint. For more information on creating Quality Center projects, refer to the *HP Quality Center Administrator's Guide*.

You must create the project on a Quality Center server for which Enterprise Integration is installed and for which you have an Enterprise Integration license. You must also enable the project you create for working with Enterprise Integration. For more information on installing and enabling Enterprise Integration, see “Installing Solution Manager Blueprint Integration” on page 11.

Creating Business Blueprints

In addition to creating a project in Quality Center, you create a business blueprint for a Solution Manager project. You associate the Solution Manager project with the Quality Center project you created by choosing **Edit > Connection to HP Quality Center** from Solution Manager. You can associate each Solution Manager project with only one Quality Center project and must connect to Quality Center with a user that has permissions to export business blueprints. For more information on setting Quality Center permissions for Enterprise Integration, see “Customizing User Group Permissions for the Integration with Solution Manager” on page 70.

For more information on creating Solution Manager business blueprints, see the SAP Extended Help.

Adding and Editing Business Blueprint Content

After you create the business blueprint in Solution Manager, you add content as you would to a regular business blueprint, using the **SOLAR01** transaction. You must also add requirements in the **Quality Prerequisites** tab to the blueprint elements you want to be exported to Quality Center. Only blueprint elements that contain requirements are exported to Quality Center.

Note: You can also use the **SOLAR02** transaction to manage and export business blueprints.

Exporting Business Blueprints to Quality Center

After you have added content to your business blueprint, you export it to the Quality Center Requirements module. You export the content by choosing **Business Blueprint > Send data to Quality Center** in the **SOLAR01** transaction. The blueprint's data is exported to Quality Center as requirements and requirement fields. For more information on how business blueprint data is exported into Quality Center, see "Exporting the Solution Manager Business Blueprints" on page 41.

Assigning Tests to Exported Requirements

For each business requirement exported to Quality Center, you can create testing requirements for testing specific functionality of the business requirements. In the Quality Center Test Plan module, you then design tests to cover these testing requirements or to cover testing requirements created automatically as part of the blueprint export process. You can then create coverage between these tests and the testing requirements. For more information on designing tests in Quality Center and associating tests with requirements, see the *HP Quality Center User's Guide*.

Running Assigned Tests

After you design tests to cover your requirements, you create test sets folders and test sets in the Quality Center Test Lab module. You then create instances of the tests you created and assign them to these test sets. You then run the test instances in the tests sets. For more information on creating test sets and running tests, see the *HP Quality Center User's Guide*.

Update Solution Manager

After you run the test instances associated with the requirements exported from your business blueprint, you can export the results to Solution Manager. For each requirement in Solution Manager, you can view the tests instances associated with it in Quality Center and their status. For more information on exporting tests to Solution Manager, see “Updating Business Blueprints” on page 45.

You view this information from the **SOLAR_EVAL** transaction under **Analysis > Projects > Testing with SAP Quality Center by HP > Test Results for Business Test Requirements**. Alternatively, you can view the information for a specific requirement from the **SOLAR01** transaction by selecting the requirement and clicking the **Test Results** tab of the properties window. For more information on viewing exported results in Solution Manager, refer to the SAP Extended Help.

After you have updated Solution Manager, you can modify the business blueprint in accordance with your test results and repeat the integration process.

3

Working with Enterprise Integration

After you have created your Quality Center and Solution Manager projects and added content to your Solution Manager business blueprint, you can export the business blueprint to the Quality Center Requirements module. You can associate the exported requirements with tests and run the tests in Quality Center, and then update the tests and their results in Solution Manager.

This chapter describes:	On page:
Exporting the Solution Manager Business Blueprints	41
Updating Business Blueprints	45

Exporting the Solution Manager Business Blueprints

You can use Enterprise Integration to export your SAP Solution Manager business blueprints to Quality Center as requirements in the Requirements module. This is useful when you want to create and run tests based on the business blueprint structure. You export business blueprints from the **Business Blueprint** menu in the **SOLAR01** SAP transaction. For more information, see the SAP Extended Help.

Note: Only blueprint structure elements containing at least one requirement can be exported from Solution Manager.

When you export the business blueprint for an SAP Solution Manager project, elements in the blueprint are mapped to requirements and fields in the Quality Center Requirements module, according to the following rules:

- ▶ The blueprint structure is mapped to the Quality Center requirements hierarchy. The blueprint title is mapped to a requirement of type **Folder** created under the requirement **Solution Manager Blueprints**, itself created under the root requirement. The name of the requirement is the same as the title of the root element. All child elements of the root element are mapped as child requirements of this requirement of type **Folder**.
- ▶ General documentation and project documentation are mapped to attachments of type URL that link to the documentation on the Solution Manager server.
- ▶ Solution Manager requirements are mapped as Quality Center requirements of type **Business**.
- ▶ Transactions and other testing objects are mapped as child requirements of the requirement representing the blueprint element under which they are located, of type **Testing**.
- ▶ The test object ID of a blueprint element is mapped to the **Name** field of the requirement representing the element.
- ▶ Other blueprint element attributes and administrative keywords are mapped to the following Quality Center requirement fields described in the table below. These fields are created automatically when you enable the Enterprise Integration extension and are read-only.

Fields	Description
SM Keywords	A list of the keyword associated with the business blueprint element, separated by semicolons (;).
SM Logical Component	The name of the Solution Manager logical component. This field has a value only for requirements of type Business representing Solution Manager requirements.

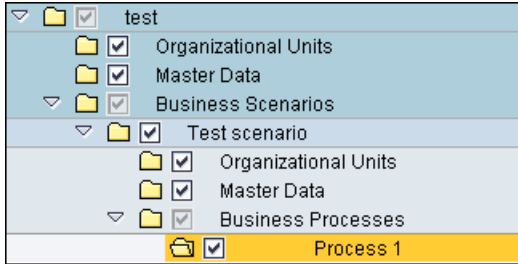
Fields	Description
SM Object Code	The Solution Manager object code. This field has a value only for requirements of type Business representing Solution Manager requirements.
SM Object Type	The type of Solution Manager object. This field has a value only for requirements of type Business representing Solution Manager requirements.

When you export a business blueprint that has already been exported, Enterprise Integration does not create new requirements in Quality Center. Instead, the existing requirements in Quality Center are updated. Note the following:

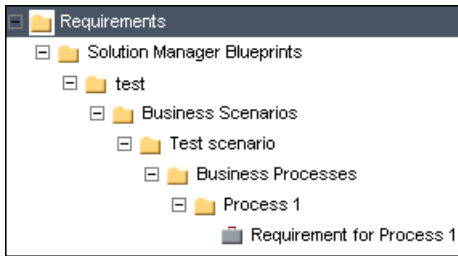
- ▶ Any changes that you made to the structure previously exported from Solution Manager are overwritten. For example, suppose you exported a business blueprint structure to Quality Center requirements and subsequently renamed and moved some of these requirements. When you export the business blueprint again, the requirements' original names and locations are restored. It is recommended that you do not make changes to data exported from Solution Manager.
- ▶ Any changes you made to requirement fields that were not exported from Solution Manager are preserved, in addition to associations with tests or child requirements. For example, if you change the **Priority** field for a requirement, the changes you made are not overwritten.
- ▶ If you export a business blueprint element to Quality Center and then delete the element in Solution Manager, when you export the business blueprint again, the requirement corresponding to the element is moved to the **Solution Manager Blueprints trash** folder. Any data under the requirement is also moved to this folder.

Business Blueprint Export Example

Consider the business blueprint structure below. Suppose the only requirement in the structure belongs to the process Process 1, and is named Requirement for Process 1.



After you export the blueprint structure to Quality Center, the requirements tree looks as follows:



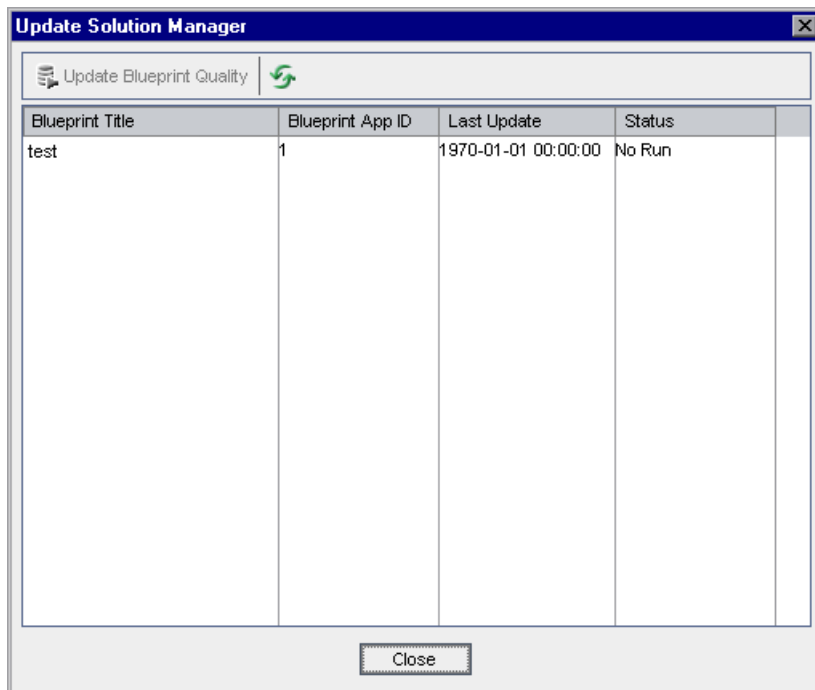
The blueprint structure root element test is exported as a child requirement of the requirement Solution Manager Blueprints. The elements Business Scenarios, Test scenario, Business Processes, and Process 1 are exported as child requirements of the requirement test. All these requirements are of type **Folder**. The Solution Manager requirement Requirement for Process 1 is exported as a Quality Center requirement of the same name and of type **Business**. Note that the elements Organizational Units and Master Data are not exported as they do not contain any requirements.

Updating Business Blueprints

You can update your Solution Manager business blueprints from Quality Center. When you update a business blueprint, Quality Center sends information about runs of tests associated with requirements that represent business blueprint elements.

To update a business blueprint:

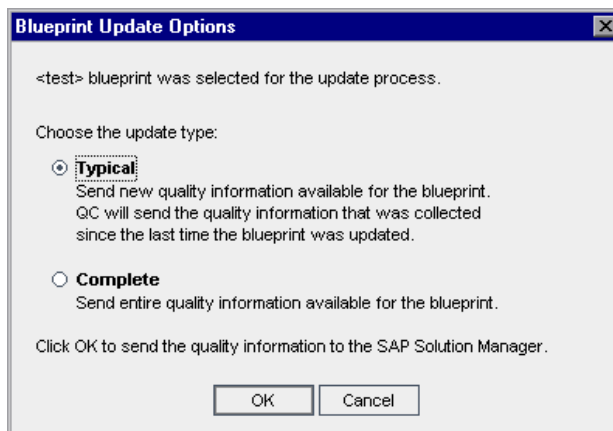
- 1 Click the **Tools** button located on the upper right side of the Quality Center window and choose **SPI Tools > Update Solution Manager**. The Update Solution Manager dialog box opens.



The Update Solution Manager dialog box displays the business blueprints previously exported to Quality Center. For each business blueprint, the following columns are displayed:

Fields	Description
Blueprint Title	The title of the business blueprint.
Blueprint App ID	The SAP application ID of the business blueprint.
Last Update	The time the business blueprint was last successfully updated from Quality Center.
Status	<p>The Solution Manager update status. Can have one of the following values:</p> <ul style="list-style-type: none"> ▶ New. The business blueprint was not previously updated from Quality Center. ▶ In Progress. Enterprise Integration is currently updating the business blueprint. ▶ No Run. No changes were made in the previous business blueprint update. ▶ Passed. The business blueprint was successfully updated with changes. ▶ Failed. Errors occurred during the previous business blueprint update.

- 2 Select the blueprint you want to update and click the **Update Blueprint Quality** button. The Blueprint Update Options dialog box opens.

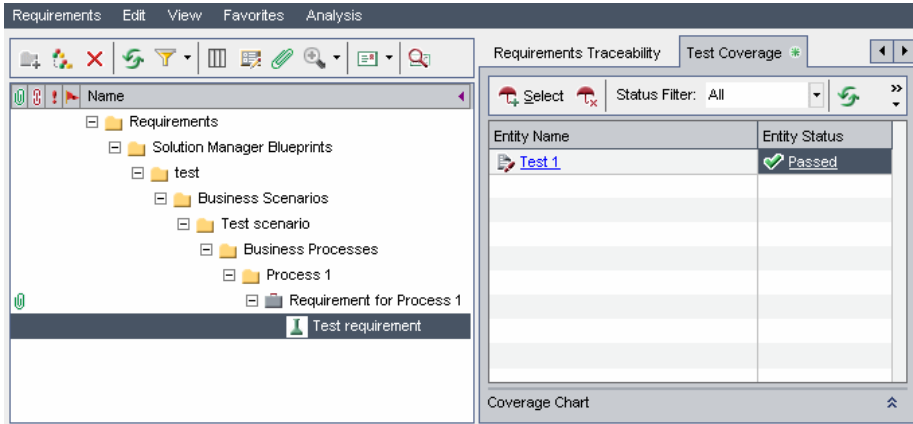


- 3 Select one of the following options for updating the business blueprint:
 - ▶ **Typical.** Sends to Solution Manager only information related to the blueprint that you are updating and that was added or updated since the previous successful update.
 - ▶ **Complete.** Sends to Solution Manager all the test coverage and test execution information related to the blueprint you are updating. If you choose this option, updating the business blueprint may take some time. It is recommended that you do not use this option on a regular basis.
- 4 Click **OK**. Enterprise Integration sends the test results to Solution Manager according the option you specified.

You can view this information from the **SOLAR_EVAL** transaction under **Analysis > Projects > Testing with SAP Quality Center by HP > Test Results for Business Test Requirements**. Alternatively, you can view the information for a specific requirement from the **SOLAR01** transaction by selecting the requirement and clicking the **Test Results** tab of the properties window. For more information, refer to the SAP Extended Help.

Blueprint Update Example

Consider the business blueprint exported in “Business Blueprint Export Example” on page 44. Suppose you create a requirement of type **Testing** to test the requirement of type **Business Requirement** for Process 1. You create a test Test 1 to test this requirement and assign it to the requirement. You then assign an instance of this test to a test set and run the test, which passes successfully.



When you update the business blueprint, the test associated with the requirement is displayed in Solution Manager. You can see the status of the test in the **Test State** column.

Project Structure	Document Name	Testcase Name	TestSet	Test Instance	Test State
test [OCS]					
Business Scenarios					
Test scenario					
Business Processes					
Process 1					
	Requirement for Process 1	Test 1	Test set 1		Passed

4

Working with the Application Model Module

The Application Model module enables you to manage a hierarchical representation of the entities in your SAP application. You can import entities from your SAP application, and add and modify application entities and folders. You can also associate application entities with tests or business components. The Application Model module is automatically enabled when you enable Enterprise Integration for a Quality Center project.

This chapter describes:	On page:
About Working with the Application Model Module	50
Viewing Application Entities	51
Importing the SAP Application Hierarchy	53
Adding Folders and Application Entities Manually	56
Modifying Folders and Application Entities	58
Associating Application Entities with Tests	60
Associating Application Entities with Business Components	64

About Working with the Application Model Module

You use the Application Model module to manage a representation of your SAP application components and entities. For example, if you link your SAP application components and application entities to tests, you can see which tests you need to run when changes affecting these components and entities are made in your application.

You can import SAP components and application entities from your SAP application. When you import directly from your SAP application, the hierarchy of the components in the application and the basic data for each business entity are preserved. If you want to extend the scope at any stage, you can import the application hierarchy again, without overwriting existing entities in the Application Model module.

You can also manually add and modify application entities in the Application Model module. Note that this does not affect corresponding application entities in your SAP application.

After you develop your application model tree, you can associate each application entity with tests in the Test Plan module. If your Quality Center server is licensed for Business Process Testing, you can also associate an application entity with a business component. Each business process test containing that business component is then associated with all of the application entities associated with that component.

Viewing Application Entities

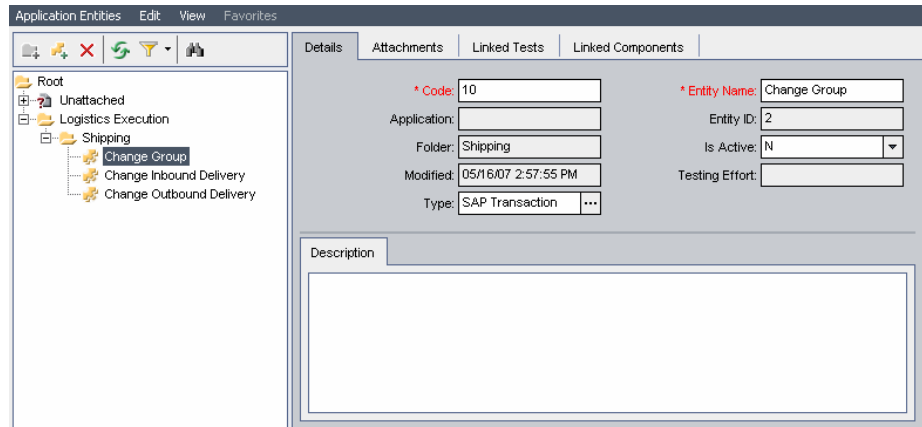




You import, add, and modify application entities using the Application Model module. To open the Application Model module, click the **Application Model** button on the sidebar.

You can view your application entities in the application model tree or the Application Model Grid.

The Application Model Tree

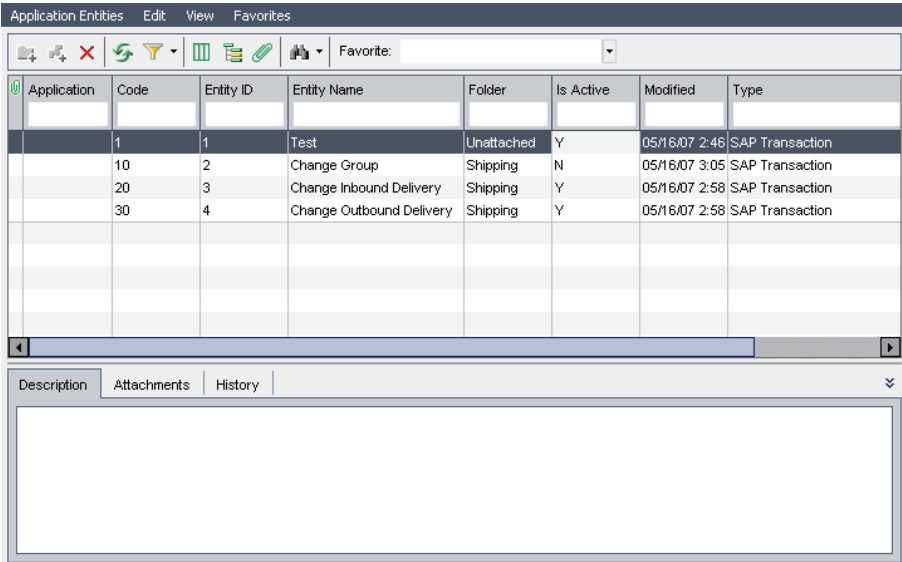
You can view a hierarchical representation of your application entities in the application model tree. To view the application model tree, choose **View > Application Model Tree**.



Each folder  in the application model tree represents an SAP application component in your SAP application. Each application entity  represents an application entity in your SAP application.

The Application Model Grid

You can view all the application entities in a Quality Center project from the Application Model Grid. Each row displays a separate application entity. Each column represents a separate data item. To view the Application Model Grid, choose **View > Application Model Grid**.



The following columns are displayed for each entity:

Column	Description
Application	The SAP application in which the application entity is located.
Code	The code of the entity in the SAP application.
Description	The description of the entity in the SAP application.
Entity ID	A unique numerical ID assigned by Quality Center to the application entity. This ID cannot be modified.
Entity Name	The name of the entity in the SAP application.
Folder	The folder in the application model tree in which the application entity is located. Each folder represents an SAP application component.

Column	Description
Is Active	This column is relevant only for change impact testing.
Modified	The date and time when the application entity was last modified.
Type	The type of SAP application entity, for example, SAP Transaction.

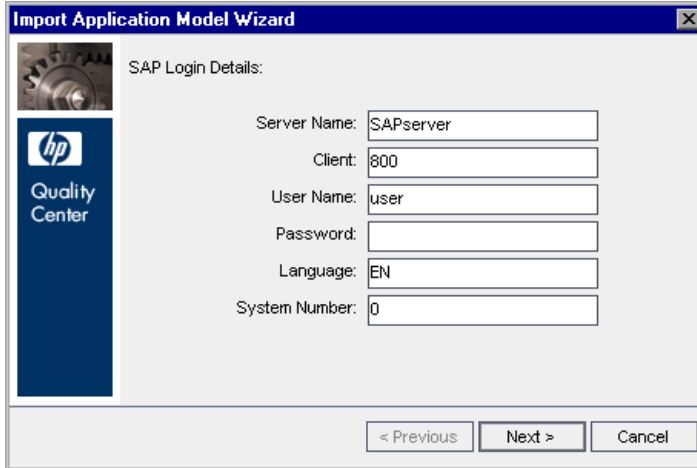
Importing the SAP Application Hierarchy

You can import the application hierarchy to the Application Model module. This maps the entities in your SAP application to application entities in the Application Model module, reproducing the same hierarchical structure. Each SAP application component is represented as a folder. Each folder contains representations of the application entities that are included in the SAP application component in your SAP application.

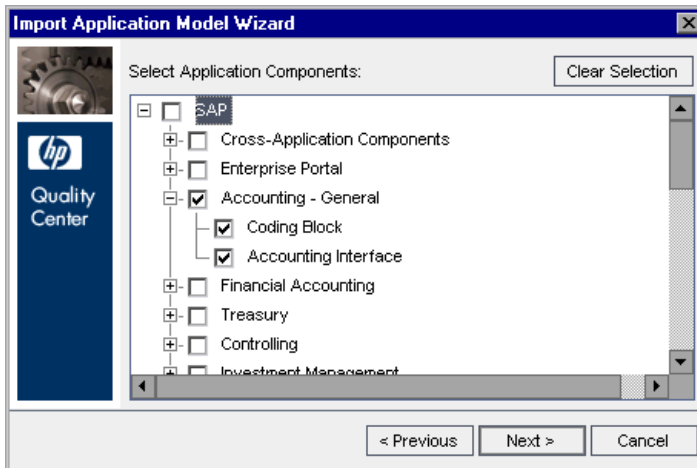
You can import the application hierarchy more than once. For example, if you add new entities to your SAP application, you may want to include them in the application hierarchy, or you may decide to include application entities that were previously out of scope. When you import application entities that are already in the Application Model module, the data that you entered for each application entity is preserved. Any associations you created with tests and business components are also preserved.

To import the application hierarchy:

- 1 In the Application Model module, display the application model tree and choose **Application Entities > Import Application Model**. The SAP Login Details dialog box opens.



- 2 Type the login details for your SAP application and click **Next**. Quality Center connects to your SAP application and the Select Application Components dialog box opens, displaying the SAP components in your SAP application. (You can view the same hierarchy in your SAP application using the **SE81** transaction.)



- 3 Select the SAP application components you want to import to the Application Model module. When these application components are imported, all child application entities are also imported. Click **Next**.

Note: You can also import user transactions that are not assigned to any application component. To import these transactions, select the **User Transactions (Unassigned)** node in the Select Application Components dialog box.

- 4 Click **Import** to import the SAP components and application entities to the Application Model module. Note that this process may take some time. When the import process is finished, a confirmation message displays. Click **OK**.
- 5 Click **Close** to close the Import Application Model Wizard.

The application components you selected are imported to the Application Model module. The hierarchical structure of the SAP application components is reproduced in the Application Model module, with the top level components located under the **SAP** folder.

When you import application entities to the Application Model module, a default values are assigned to various fields for each imported application entity. These default values are based on the properties of the entity in the SAP application.

Adding Folders and Application Entities Manually

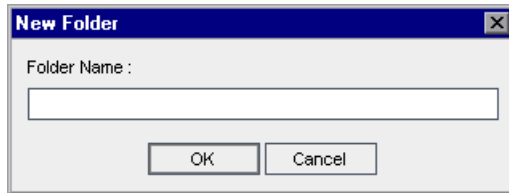
You can add folder and application entities manually.

Tip: You can also import folders and application entities using the SAP Import wizard. For more information, see “Importing the SAP Application Hierarchy” on page 53.

To add a folder:



- 1** In the application model tree, select a folder and click the **New Folder** button, or choose **Application Entities > New Folder**. The New Folder dialog box opens.



- 2** In the **Folder Name** box, type a name for the folder and click **OK**. The new folder is added to the application model tree under the folder you selected in step 1.
- 3** You can add a description for the new folder in the Description tab in the right pane.
- 4** You can add an attachment to the new folder in the Attachments tab. For more information on adding attachments, see the *HP Quality Center User's Guide*.

To add an application entity:

- 1 In the application model tree, select a folder and click the **New Entity** button, or choose **Application Entities > New Entity**. The New Application Entity dialog box opens.

The screenshot shows a dialog box titled "New Application Entity". It has a blue title bar with a close button (X) on the right. The dialog contains the following fields:

- Application Entity Folder:** A text box containing the word "Test".
- Application Entity Name:** An empty text box.
- Application Entity Code:** An empty text box.
- Description:** A large, empty text area.

At the bottom of the dialog, there are two buttons: "Ok" and "Cancel".

- 2 In the **Application Entity Name** box, type the name of the application entity. This is a required field.
- 3 In the **Application Entity Code** box, type the unique code of the application entity. This is a required field.
- 4 In the **Description** box, type a description of the application entity.
- 5 Click **OK**. The new application entity is added to the application model tree under the folder you selected in step 1.

Modifying Folders and Application Entities

You can rename and delete folders and application entities in the Application Model module.

Renaming Folders and Application Entities

You can rename a folder or application entity in the Application Model module.

To rename a folder or application entity:

- ▶ To rename a folder or application entity in the application model tree, select a folder or application entity and choose **Edit > Rename**. Alternatively, right-click the folder or application entity and choose **Rename**. Edit the name and press **ENTER**.
- ▶ To rename an application entity in the Application Model Grid, click the name of the application entity and type the new name.

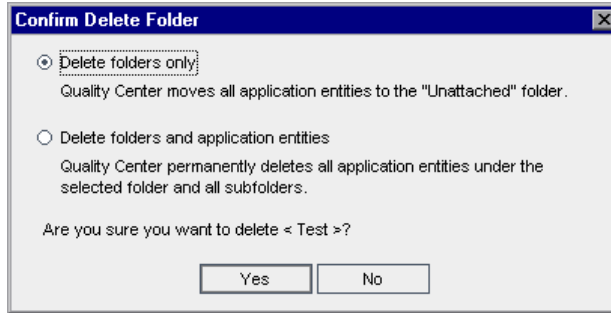
Deleting Folders and Application Entities

You can delete a folder or application entity from the application model tree. When you delete a folder, you can choose to delete the folder and its subfolders, or you can choose to delete the folder, its subfolders, and application entities.

- ▶ If you delete a folder with its subfolders, all of the application entities are moved to the **Unattached** folder in the application model tree.
- ▶ If you delete a folder with its subfolders and application entities, all subfolders and application entities under the selected folder are deleted permanently.

To delete a folder:

- 1 Select a folder from the application model tree.
- 2 Click the **Delete** button, or choose **Edit > Delete**. Alternatively, right-click the folder and choose **Delete**. The Confirm Delete Folder dialog box opens.



- 3 Select **Delete folders only** or **Delete folders and application entities**.
- 4 Click **Yes**.

To delete an application entity:

- 1 Select an application entity from the application model tree or Application Model Grid.
- 2 Click the **Delete** button, or choose **Edit > Delete**. Alternatively, right-click the application entity and choose **Delete**.
- 3 Click **Yes** to confirm.



Associating Application Entities with Tests

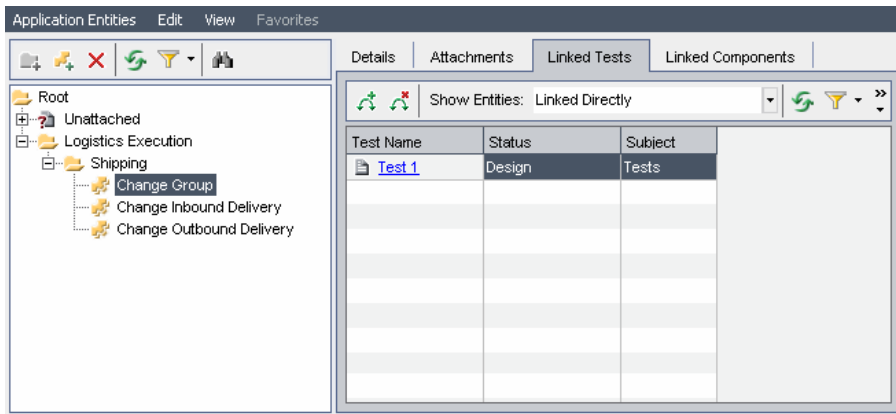
You can associate the application entities you created in the Application Model module with tests from the Test Plan module. You can perform this task from the Application Model module or from the Test Plan module.

Associating Application Entities with Tests Using the Application Model Module

You can associate application entities with tests using the Application Model module.

To associate application entities with tests using the Application Model module:

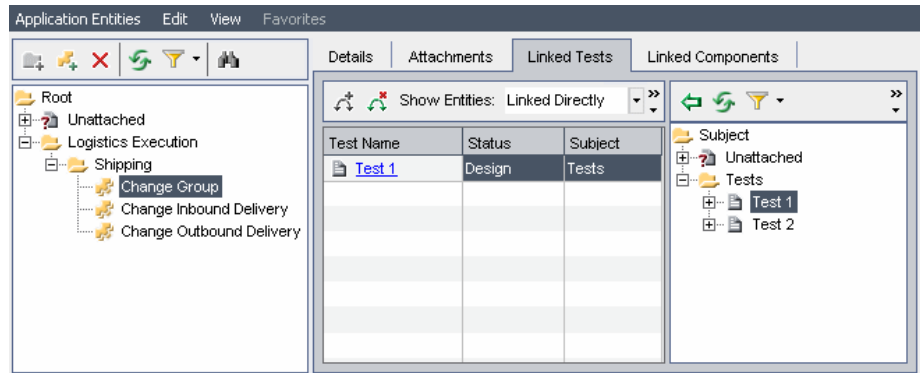
- 1 In the application model tree, select an application entity and click the **Linked Tests** tab. The Linked Tests tab displays the coverage grid for the selected application entity.



For information on the columns in the Linked Tests tab, see the *HP Quality Center User's Guide*.



- In the Linked Tests tab, click the **Select Tests** button to show the test plan tree on the right.



- To search for a specific test in the tree, type the name (or part of the name) of the test in the **Find** box and click the **Find** button. If the search is successful, the test is highlighted in the tree.



- To refresh all of the tests in the test plan tree, click the **Refresh All** button.



- Select a test or test folder to add to the application entity's test coverage. Click the **Link Tests To Application Entity** button. The test is added to the coverage grid.



- To refresh the application entities in the coverage grid, click the **Refresh All** button.

- To filter the application entities displayed in the coverage grid, choose one of the following options from the **Show Entities** box:

- ▶ **Linked Directly.** Displays only those tests that are associated directly with the application entity.
- ▶ **Linked Through Other Assets.** Displays only those tests that are associated with the application entity via business components.
- ▶ **All.** Displays all of the application entities that are associated with the test.



- 8 Click the **Close** button to hide the test plan tree.

Notes:

- ▶ To modify the data in the coverage grid columns or to remove tests from the coverage grid, you must first select **Linked Directly** in the **Show Entities** box.



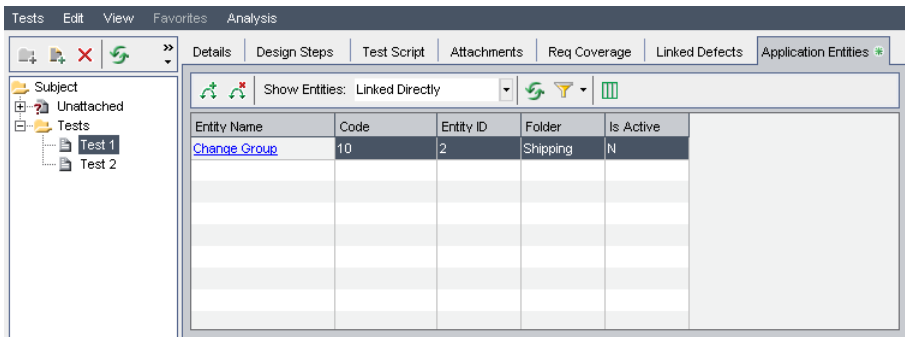
- ▶ To remove test coverage from the Application Model module, verify that **Linked Directly** is displayed in the **Show Entities** box. Then select the test you want to remove from coverage and click the **Remove Link** button. Click **Yes** to confirm.

Associating Application Entities with Tests Using the Test Plan Module

You can associate application entities with tests using the Test Plan module.

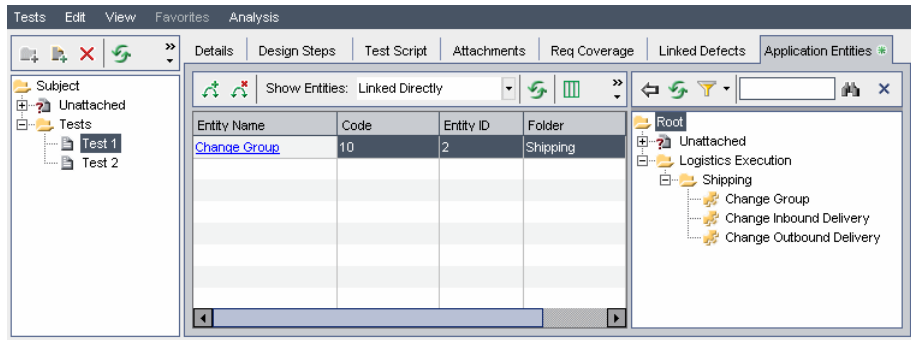
To associate application entities with tests using the Test Plan module:

- 1 In the test plan tree, select the test you want to associate with one or more entities, and click the **Application Entities** tab. The application entities associated with the selected test are displayed.





- 2 In the Application Entities tab, click the **Select Application Entities** button to show the application model tree on the right.



- 3 To search for a specific application entity in the tree, type the name (or part of the name) of the application entity in the **Find** box and click the **Find** button. If the search is successful, the application entity is highlighted in the tree.



- 4 To refresh all of the application entities in the application model tree, click the **Refresh All** button.



- 5 Select an application entity or application folder to add to the test's application entity coverage. Click the **Add Entity to Linkage** button. The application entity is added to the coverage grid.



- 6 To refresh the application entities in the coverage grid, click the **Refresh All** button.

- 7 To filter the application entities displayed in the coverage grid, choose one of the following options from the **Show Entities** box:

- **Linked Directly.** Displays only those application entities that are associated directly with the test.
- **Linked Through Other Assets.** Displays only those application entities that are associated with business components via business process tests.
- **All.** Displays all of the application entities that are associated with the test.



- 8 Click the **Close** button to hide the application model tree.

Notes:

- ▶ To modify the data in the coverage grid columns or to remove application entities from the coverage grid, you must first select **Linked Directly** in the **Show Entities** box.



- ▶ To remove application entity coverage from the Test Plan module, verify that **Linked Directly** is displayed in the **Show Entities** box. Then select the application entity you want to remove from coverage and click the **Remove Link** button. Click **Yes** to confirm.
-

Associating Application Entities with Business Components

You can associate an SAP entity with any type of test, including a business process test. To associate an entity with a business process test, you first associate the entity with one or more business components. Then, when you include these business components in a business process test, the test is automatically associated with the entities that are a part of the business process test's business components. For details on adding business components to a business process test, see the *HP Business Process Testing User's Guide*.

You associate application entities with business components using the Business Components module. After they are associated, you can manage your associated application entities either from the Application Model module or from the Business Components module.

To associate application entities with business components:

- 1 In the component tree, select the component you want to associate with one or more application entities, and click the **Application Entities** tab. The application entities associated with the selected business component are displayed. For a description of each column displayed, see "The Application Model Grid" on page 52.



2 In the Application Entities tab, click the **Select Application Entities** button to show the application model tree on the right.



3 To search for a specific application entity in the tree, type the name (or part of the name) of the application entity in the **Find** box and click the **Find** button. If the search is successful, the application entity is highlighted in the tree.



4 To refresh all of the application entities in the application model tree, click the **Refresh All** button.



5 Select an application entity or application folder to add to the business component's application entity coverage. Click the **Add Entity to Linkage** button. The test is added to the coverage grid.



6 Click the **Close** button to hide the application model tree.



Note: To remove application entity associations from the Business Components module, select the application entity for which you want to remove an association, click the **Remove Link** button, and click **Yes** to confirm.

5

Customizing Enterprise Integration

You can customize user group permissions, hide data for a user group and customize project entities for Enterprise Integration.

This chapter describes:	On page:
About Customizing Enterprise Integration	67
Customizing User Group Permissions	68
Hiding Data for a User Group	71
Customizing Project Entities	72

About Customizing Enterprise Integration

You can customize entities in the Application Model module, which is enabled automatically when you enable Enterprise Integration. You customize these entities in the same way as you customize other entities in your Quality Center projects. You can restrict which user groups can add, delete and modify folders and application entities. You can also determine which application entities and application entity fields each user group can view. In addition, you can add and customize Application Model fields.

You can also customize which Quality Center user groups can export business blueprints from Solution manager, and which user groups can update business blueprints.

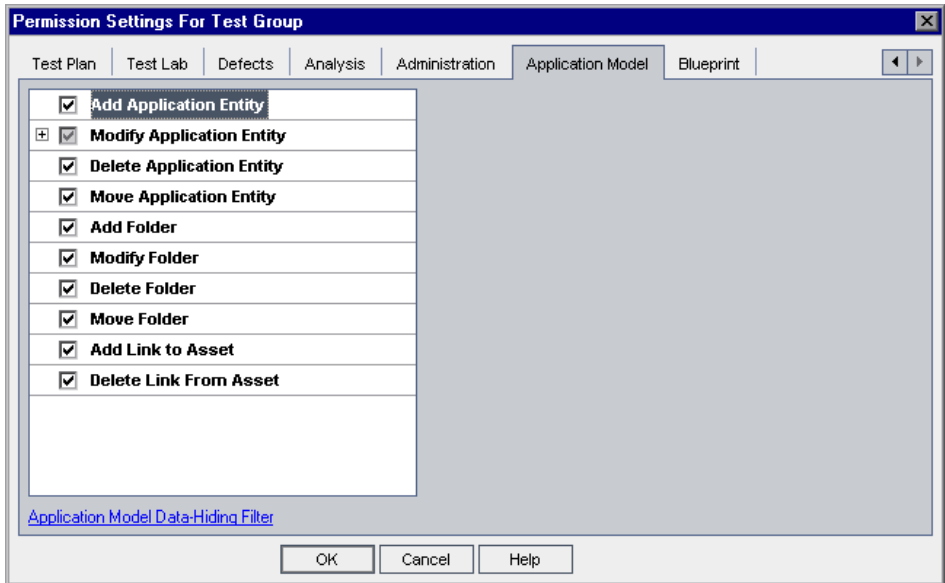
This chapter describes the additional customization options available with Enterprise Integration. For more information on project customization, refer to the *HP Quality Center Administrator's Guide*.

Customizing User Group Permissions

You can customize the permission settings for the Application Model module and for the integration with Solution Manager in the Permission Settings dialog box in Project Customization. For more information on user group permissions, refer to the *HP Quality Center Administrator's Guide*.

Customizing User Group Permissions for the Application Model Module

The Application Model tab displays the tasks available in the Application Model module.

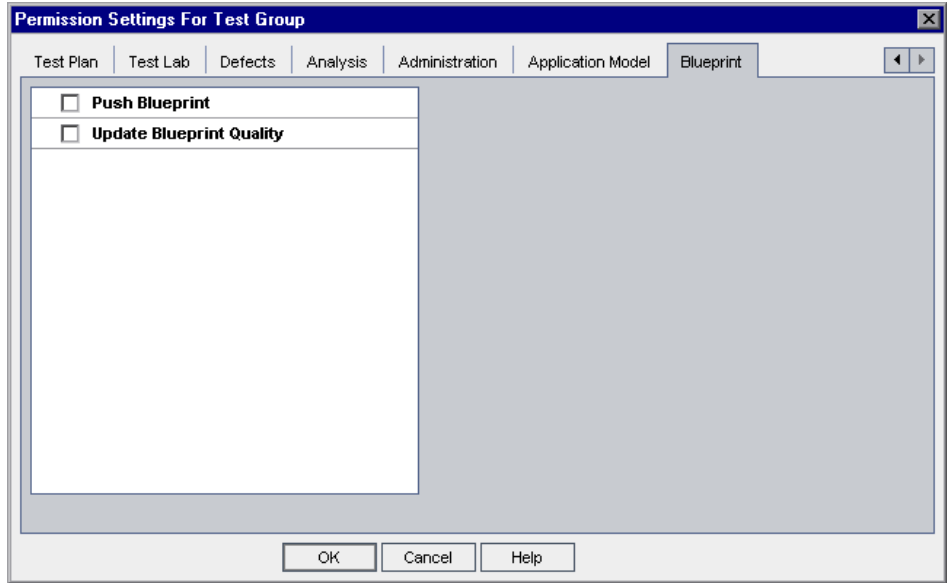


The Application Model tab includes the following tasks:

Task	Description
Add Application Entity	User group can add application entities to the Application Model module. A user group must have permissions for this task and for the Modify Application Entity task to import SAP application entities.
Modify Application Entity	User group can modify application entities in the Application Model module. Note that this task enables you to specify the fields that the selected user group can modify. A user group must have permissions for this task and for the Add Application Entity task to import SAP application entities.
Delete Application Entity	User group can delete application entities from the Application Model module.
Move Application Entity	User group can move application entities in the Application Model module.
Add Folder	User group can add folders to the Application Model Tree.
Modify Folder	User group can modify folders in the Application Model Tree. Note that this task enables you to specify the fields that the selected user group can modify.
Delete Folder	User group can delete folders from the Application Model Tree.
Move Folder	User group can move folders in the Application Model Tree.
Add Link to Asset	User group can associate application entities with tests and business components.
Delete Link from Asset	User group can remove association of application entities with tests and business components.

Customizing User Group Permissions for the Integration with Solution Manager

The Blueprint tab displays the tasks available for the integration with Solution Manager.



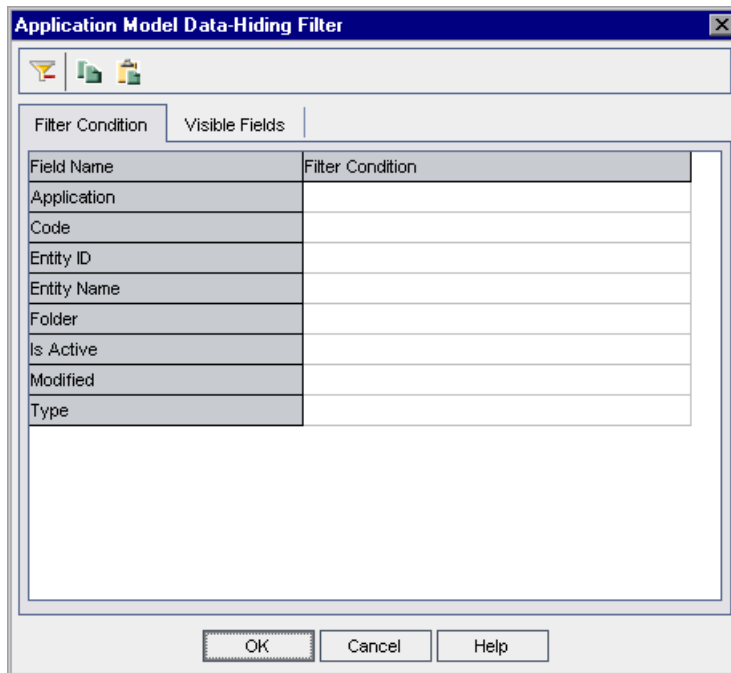
The Blueprint tab includes the following tasks:

Task	Description
Push Blueprint	User group can connect to Quality Center from Solution Manager and export business blueprints.
Update Blueprint Quality	User group can update Solution Manager with Quality Center test results.

Hiding Data for a User Group

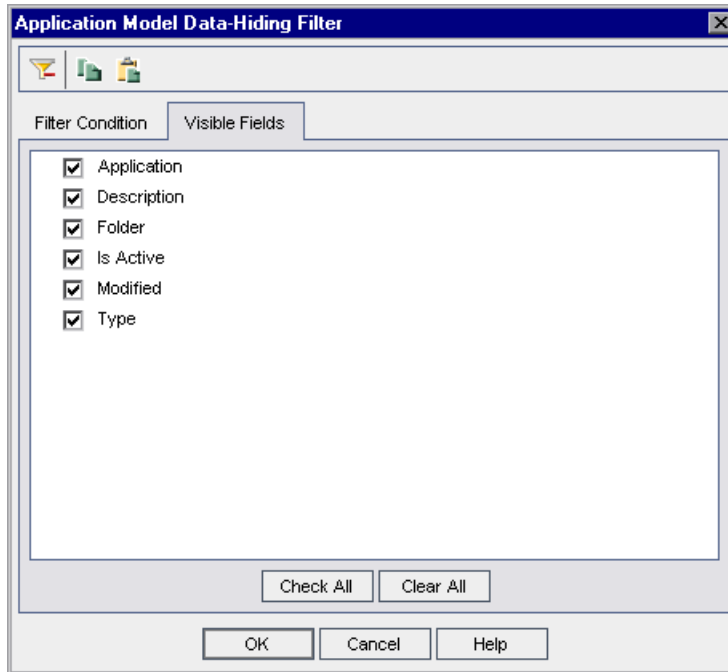
You can instruct Quality Center to hide specific application entities and application entity fields that a user group can view in the Application Model module.

You can set filters for specific fields, limiting the application entities that the user group can view. For example, you can set the filter for the field **Type** to **SAP Batch Job**. This instructs Quality Center to allow users belonging to the user group to view only application entities that are SAP batch jobs. You set filters in the Filter Condition tab in the Application Model Data-Hiding Filter dialog box. For more information on hiding data for a user group, refer to the *HP Quality Center Administrator's Guide*.



You can filter by the following fields: **Application**, **Code**, **Entity ID**, **Entity Name**, **Folder**, **Is Active**, **Modified**, and **Type**. For more details on these fields, see “The Application Model Grid” on page 52.

You can also select which fields in the Application Model module the user group can see and which should be hidden. You select these fields in the Visible Fields tab in the Application Model Data-Hiding Filter dialog box.



You can choose to hide the following fields: **Application**, **Description**, **Folder**, **Is Active**, **Modified**, and **Type**. For more details on these fields, see “The Application Model Grid” on page 52.

Customizing Project Entities

You can customize the system fields and add new user-defined fields for the Application Model module from the Customize Project Entities dialog box. You customize these fields under the **Application Entity** entity. For more information on customizing project entities, refer to the *HP Quality Center Administrator's Guide*.