HP SOA Systinet Workbench

Software Version: 3.20

Taxonomy Editor Guide

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About This Guide

Welcome to the Taxonomy Editor Guide. This guide describes how to use Taxonomy Editor as part of HP SOA Systinet.

This guide contains the following chapters:

- Chapter 1, Taxonomy Editor

  Provides an overview of the main features of Taxonomy Editor.

- Chapter 2, Getting Started

  Describes the installation of the main features and shows you how to create a taxonomy project.

- Chapter 3, Manipulating Taxonomies

  Explains how to create, download, edit, and compare assertions.

- Chapter 4, Publishing Taxonomies

  Explains how to publish taxonomies to a server.

- Chapter 5, Deploying Taxonomies

  Shows how to build a Taxonomy Extension project using Taxonomy Editor.

- Chapter 6, Conflicts and Validation Issues

  Shows how to resolve conflicts with taxonomies.

- Appendix A, Keyboard Shortcuts

  Keyboard shortcuts reference.

- Appendix B, Dialog Boxes

Dialog box reference.

- Appendix C, Troubleshooting

  Troubleshooting tips.

- Appendix D, Eclipse Plug-in Requirements

  Required plug-ins when installing Workbench as an update.

Document Conventions

This document uses the following typographical conventions:

run.bat make	Script name or other executable command plus mandatory arguments.
[--help]	Command-line option.
either | or	Choice of arguments.
`replace_value`	Command-line argument that should be replaced with an actual value.
{arg1 | arg2}	Choice between two command-line arguments where one or the other is mandatory.
`java -jar hpsystinet.jar`	User input.
`C:\System.ini`	File names, directory names, paths, and package names.
`a.append(b);`	Program source code.
`server.Version`	Inline Java class name.
`getVersion()`	Inline Java method name.
Shift+N	Combination of keystrokes.
Service View	Label, word, or phrase in a GUI window, often clickable.
OK	Button in a user interface.
New→Service	Menu option.

Documentation Updates

This guide's title page contains the following identifying information:

- Software version number, which indicates the software version
- Document release date, which changes each time the document is updated
- Software release date, which indicates the release date of this version of the software

To check for recent updates, or to verify that you are using the most recent edition of a document, go to:

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1 Taxonomy Editor

HP SOA Systinet Taxonomy Editor is a set of Workbench features that enable you to manage taxonomies in SOA Systinet.

You can use HP SOA Systinet Taxonomy Editor to create, modify, and delete taxonomies. You can also download taxonomies from, or upload them to, any number of SOA Systinet servers.

This chapter introduces Taxonomy Editor in the following sections:

- Workbench Suite on page 11
- Overview on page 12
- User Interface on page 13

Workbench Suite

HP SOA Systinet Workbench is a suite of editor tools enabling you to customize your deployment of SOA Systinet.

Workbench consists of the following editor tools, distributed as a single Eclipse development platform:

- **Customization Editor**

  Customizes the underlying SOA Definition Model (SDM) and the appearance of these artifacts within SOA Systinet.

- **Taxonomy Editor**

  Customizes the taxonomies used to categorize artifacts in SOA Systinet.

- **Assertion Editor**

  Customizes the conditions applied by your business policies within SOA Systinet.

- **Report Editor**

  Customizes report definitions for use with SOA Systinet.

Overview

Taxonomies are, in their simplest form, a visual representation of what your organization actually knows. A well-constructed, meaningful taxonomy enables users in your organization to quickly find the information they need to achieve their goals.

Taxonomy Editor enables you to organize and reorganize content easily, giving more flexibility for knowledge sharing in your organization

Use Taxonomy Editor to do the following:

1. **Create a Taxonomy Project**.

   For details, see the following sections:

   - Creating a Taxonomy Project on page 31
   - Downloading Taxonomies from a Server on page 33
   - Searching for Taxonomies on page 33

2. **Create and manage taxonomies**.

   For details, see the following sections:

   - Creating Taxonomies on page 37
   - Modifying Taxonomies on page 38
   - Cutting, Copying, and Pasting Taxonomies on page 39
   - Deleting and Restoring Taxonomies on page 39
   - Updating, Importing, and Exporting Taxonomies on page 40

3. **Publish taxonomies to an SOA Systinet server**.

For details, see the following sections:

- Publishing Changes on page 47
- Example: Creating and Publishing a Department Taxonomy on page 48

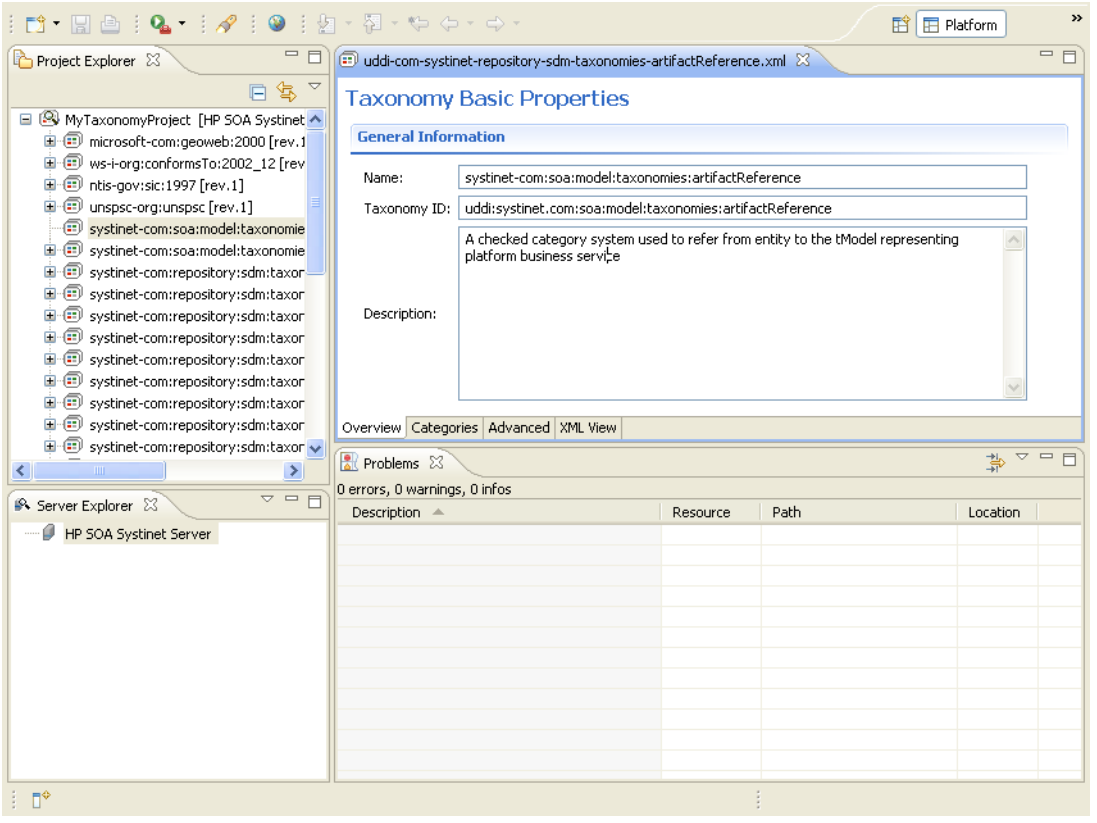
4 **Check local validity and manage conflicts**.

For details, see Chapter 6, Conflicts and Validation Issues.

User Interface

The default perspective is split into a number of sections, with menu options across the top, as shown in Figure 1, “Taxonomy Editor UI”.

Figure 1. Taxonomy Editor UI



The platform perspective consists of the following views:

- **Project Explorer**

  The tree view of your taxonomy projects. For details, see Project Explorer on page 15.

- **Server Explorer**

  The view listing SOA Systinet server connections to the Workbench. For details, see Server Explorer on page 17.

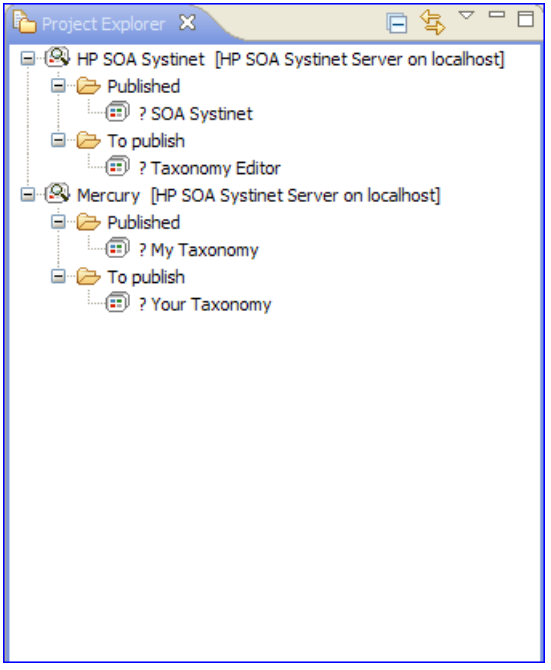
- **Editor**

  The view showing the components of the taxonomy. For details, see Editor Pane on page 18.

Project Explorer

Project Explorer contains a hierarchical list of projects, the taxonomies in each project, and the categories and subcategories of each taxonomy, as shown in Figure 2, “Taxonomy Editor UI: Project Explorer”.

Figure 2. Taxonomy Editor UI: Project Explorer



Right-click elements in the project to view their context menus, as described in Table 1, "Project Explorer Context Menu Options".

Table 1. Project Explorer Context Menu Options

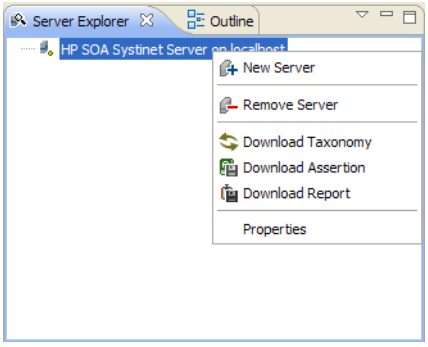
Option	Description
New	Opens a new project, file, or folder. You can also create a new taxonomy.
Open	Opens the taxonomy in the default Editor.
Open With	Opens the taxonomy in editors other than the default Editor.
Copy	Copies the selected item to the clipboard.
Paste	Pastes a copied item from the clipboard into Project Explorer.
Delete	Deletes the selected item.
Move	Moves the selected item to a different location.
Rename	Renames the selected item.
Import	Imports a taxonomy from a local file into the project.
Export	Exports a project or taxonomy to a file or Team Project Set.
Refresh	Reflects changes made outside the workspace. The local version does not change. This is the standard Eclipse Refresh action.
Open Project	Opens the project to users.
Close Project	Closes the project to users.
Validate	Runs a compliance check on the selected item.
Run As	Opens the **Run** dialog box.
Debug As	Opens the **Debug** dialog box.
Profile Aa	Opens the **Profile** dialog box.
Team	Applies a Patch from a team project, or shares your project with a team.
Compare with	Compares the current version of the taxonomy with the history of its local changes.
Restore from Local History	Restores deleted resources from local history.
Source→Format	Formats the documents source code.

Option	Description
HP SOA Systinet	Does one of the following: • Downloads a taxonomy from the server. • Publishes the taxonomy to an SOA Systinet server. • Updates the taxonomy with the version on the server. • Removes the taxonomy from the server. • Publishes the taxonomy to a different server. • Validates data consistency. • Compares the selected taxonomy with the latest version on the server. • Shows artifacts using the taxonomy.
PDE Tools	Converts projects to plug-in projects.
Properties	General properties of the project, taxonomy, or implementation. Here you can set read-only status.

Server Explorer

The Server Explorer displays the SOA Systinet servers connected to Workbench, as shown in Figure 3, “Server Explorer View”. The functionality is shared by all the Workbench editors.

Figure 3. Server Explorer View



Right-click a server in the Server Explorer to open the context menu described in Table 2, "Server Explorer Context Menu Options".

Table 2. Server Explorer Context Menu Options

Option	Function
New Server	Add a server for downloading assertions and taxonomies (Assertion Editor, Taxonomy Editor, and Customization Editor).
Remove Server	Delete a server from the Server Explorer.
Download Taxonomy	Download a taxonomy from a platform server (Taxonomy Editor and Customization Editor).
Download Assertion	Download assertions from a platform server (Assertion Editor).
Download Report	Download reports from a reporting server (Report Editor).
Properties	View and edit the server name, URL, username, and password.

Editor Pane

The Editor pane is the main feature of the Taxonomy Editor UI.

It has four tabs, described in the following sections:

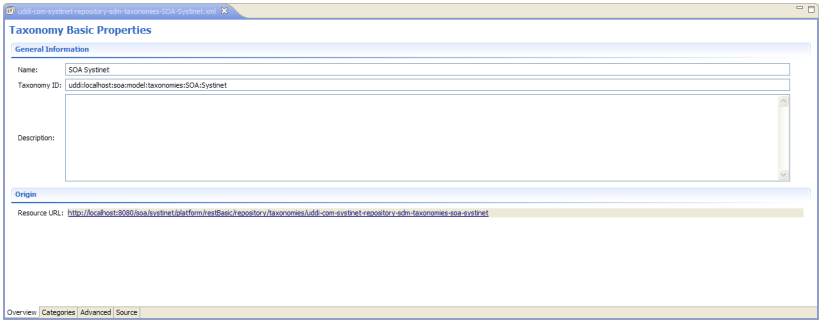
- Overview Tab on page 19

- Categories Tab on page 20
- Advanced Tab on page 22
- Source Tab on page 25

Overview Tab

The Overview tab shows the components of the taxonomy, as shown in Figure 4, “Taxonomy Editor UI: Overview Tab”.

Figure 4. Taxonomy Editor UI: Overview Tab



The first section is General Information, where you can view and edit the following properties:

- **Name**

  Name for the taxonomy. The content of the `name` element in the taxonomy's XML representation.

- **Taxonomy ID**

  Identifier for the taxonomy, with the preceding `uddi:`. The value of `tModelKey` attribute in the taxonomy's XML representation.

- **Description**

  Description of the taxonomy (optional).

The second section is Origin, which shows:

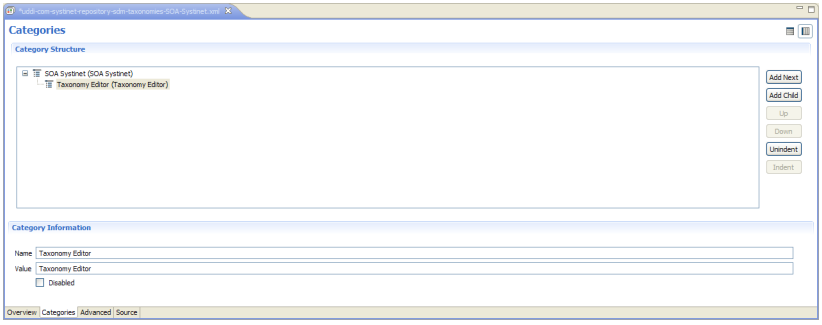
- **Resource URL**

  REST interface URL enabling the published taxonomy to be viewed on the server.

Categories Tab

The Categories tab enables you to change the structure and properties of taxonomy categories, as shown in Figure 5, “Taxonomy Editor UI: Categories Tab”.

Figure 5. Taxonomy Editor UI: Categories Tab



You can use the Categories tab to do the following:

- Add a New Category on page 20
- Remove a Category on page 21
- Copy, Cut, and Paste Categories on page 21
- Move Categories on page 22

Add a New Category

To add a new category to a taxonomy:

1 Open the required taxonomy in the Editor pane and click the **Categories** tab.

2 Do one of the following:

- Click **Add Next** to add a new category at the same level.
- Click **Add Child** to add a new sub-category.

The New Category wizard opens.

3 Enter the category properties, as follows:

- **Name**

  Name for the category. This represents the value of the `keyName` attribute in the taxonomy's XML representation.

- **Value**

  Identifier for the category. This represents the value of the `keyValue` attribute in the taxonomy's XML representation.

- **Disabled**

  Select this check box to make sure the category **cannot** be used in an artifact.

4 Click **Finish**.

The new category is displayed in **Category Structure**.

Remove a Category

To remove a category:

- Right-click the category in the Category Structure pane to open its context menu, and select **Delete**.

The deleted category is no longer visible in the Category Structure pane.

Copy, Cut, and Paste Categories

To copy, cut, or paste a category:

1 Right-click the required source category in the Category Structure pane to open its context menu, and then select **Copy** or **Cut**.

2 Right-click the required destination category in the Category Structure pane to open its context menu.

3 Do one of the following:

- Select **Paste** to add the category as a sub-category.
- Select **Paste as Sibling** to add the category at the same level.

Move Categories

To move a category:

1 Select the required category in the Category Structure pane.

2 Do one of the following:

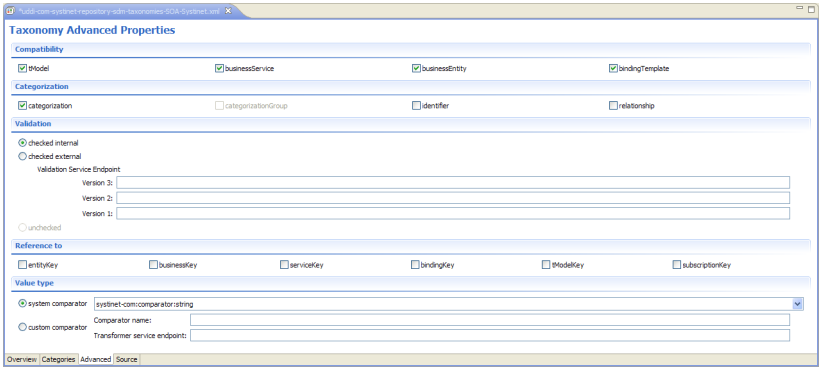
- Click **Up**, to move a category up.
- Click **Down**, to move a category down.
- Click **Unindent**, to move a category to the left.
- Click **Indent**, to move a category to the right.

To move multiple categories at the same time, you must select categories that are consecutive.

Advanced Tab

The Advanced tab enables you to set properties used with UDDI, as shown in Figure 6, “Taxonomy Editor UI: Advanced Tab”.

Figure 6. Taxonomy Editor UI: Advanced Tab



It is divided into the following sections:

- Compatibility on page 23
- Categorization on page 23
- Validation on page 24
- Reference on page 24
- Value Type on page 24

Compatibility

Enables you to select one or more of the main UDDI structures for the taxonomy. For example, businessEntity, businessService, bindingTemplate, and tModel.

All structure types are selected by default.

Categorization

Enables you to select from the following taxonomy types:

- **categorization**

Tags the UDDI structure with additional information, such as identity, location, and description.

- **categorizationGroup**

  Groups several categorizations into one logical category. For example, a `categorizationGroup` could be a geographical location comprised of two categorizations: longitude and latitude.

  The `categorizationGroup` option is disabled if the taxonomy has any categories.

- **Identifiers**

  Reference published information in businessEntities and tModels.

- **Relationships**

  Defines the relationship between two businessEntities in Publisher Assertions.

Validation

Sets whether or not the values in `keyedReferences` within the taxonomy are checked. The validation service can check the expected syntax of values. For example, a credit card number or an ISBN number.

Validation can be against Taxonomy Editor's internal validation service or against an external service.

To select an external validation service, do one of the following:

- Enter the endpoint URL.
- Leave `keyedReferences` unvalidated.

Reference

Enables you to add a reference to a key type.

Value Type

Enables you to Select a Value type for `keyValues`, using one of the following comparators:

- **systinet-com.comparator.string**

keyValues are treated as string values. The maximum length is 255 characters.

- **systinet-com.comparator.numeric**

  keyValues are treated as decimal numbers. The value can have a maximum of 19 digits before the decimal point and a maximum of 6 digits after the decimal point.

- **systinet-com.comparator.date**

  keyValues are treated as dates.

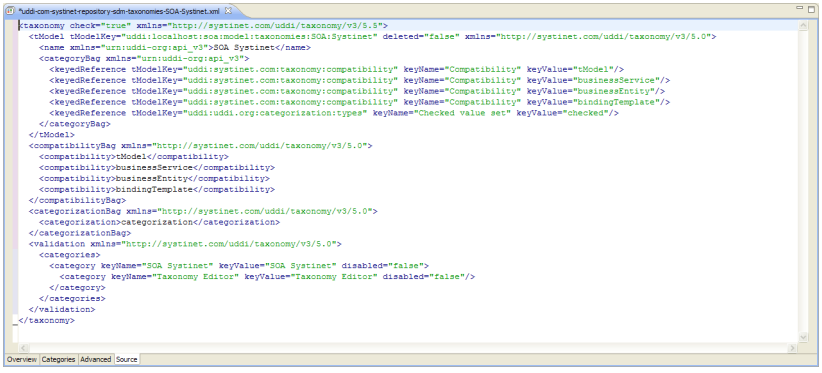
- **custom**

  Endpoint URL of a custom comparator.

Source Tab

The Source tab enables you to view and directly edit the XML representation of the taxonomy, as shown in Figure 7, “Taxonomy Editor UI: Source Tab”.

Figure 7. Taxonomy Editor UI: Source Tab



Customization

Some settings are customizable in Workbench for Taxonomy Editor.

To change Taxonomy Editor preferences:

1. Select **Window→Preferences**.

   The Preferences dialog box opens.

2. In the tree menu, select **HP SOA Systinet→Taxonomy Editor**.

3. You can change the following:

   - **Default taxonomy namespace**

     The default namespace setting is 5.5. However, version 5.5 taxonomies cannot be used in HP SOA Registry Foundation 5.0. Make sure you select the appropriate setting.

   - **Data consistency**

     Select **Validate before publishing taxonomies** to validate changes before publishing them to the server.

2 Getting Started

This chapter describes the prerequisites for working with taxonomies in HP SOA Systinet Taxonomy Editor. It contains the following sections:

- Installing Workbench on page 27
- Installing Workbench on page 27
- Creating a Taxonomy Project on page 31
- Downloading Taxonomies from a Server on page 33
- Searching for Taxonomies on page 33

Installing Workbench

HP SOA Systinet Workbench is an Eclipse development platform distributed as a zip file, `hp-soa-systinet-workbench-3.20-win32.zip` or as a plugin for an existing Eclipse environment, `hp-soa-systinet-workbench-3.20-plugin.zip`.

For supported platforms and known issues, see `readme.txt` alongside the archive.

To install HP SOA Systinet Workbench as a new Eclipse platform:

- Extract the archive to your required location, referred to in this document as `WB_HOME`.

The path must not be longer than 18 characters.

To install HP SOA Systinet Workbench to an existing Eclipse platform:

1. Ensure that your Eclipse platform contains the necessary plug-ins. For details, see Appendix D, Eclipse Plug-in Requirements.

2. In your current Eclipse SDK (3.3 or later), use the software updates feature to install HP SOA Systinet Workbench.

   Select **Help→Software Updates→Find and Install...**.

   The Install/Update dialog opens.

3. In the Install/Update dialog, select **Search for new features to install**, and click **Next**.

   The Install – Update Sites to Visit dialog opens.

4. In the Update Sites to Visit dialog, click **New Archived Site**.

   The Select Local Archive Site dialog opens.

5. Locate and select `hp-soa-systinet-workbench-3.20-plugin.zip`, and then click **Open**.

   The Edit Local Site dialog opens.

6. In the Edit Local Site dialog, if required, rename the local archive name, and click **OK**.

7. In the Install – Update Sites to Visit dialog, select the new local archive, and then click **Finish**.

   The Updates – Search Results dialog opens.

8. Select the modules from the archive that you want to install:

   - **Workbench Extra 3.20**

     HP SOA Systinet Workbench splash screen.

   - **Taxonomy Editor 3.20**

Required for Customization Editor.

- **Customization Editor 3.20**
- **Assertion Editor 3.20**
- **Report Editor 3.20**
- **Common Plugin 3.20**

  Shared components used by the editors.

Click **Next**.

The Install – Feature License dialog opens.

9 In the Feature License dialog, select **I accept the terms in the license agreements**, and click **Next**.

The Install – Installation dialog opens.

10 In the Installation dialog, if required, change the installation location, and then click **Finish**.

11 If you install `Workbench Extra 3.20` make the following configuration changes:

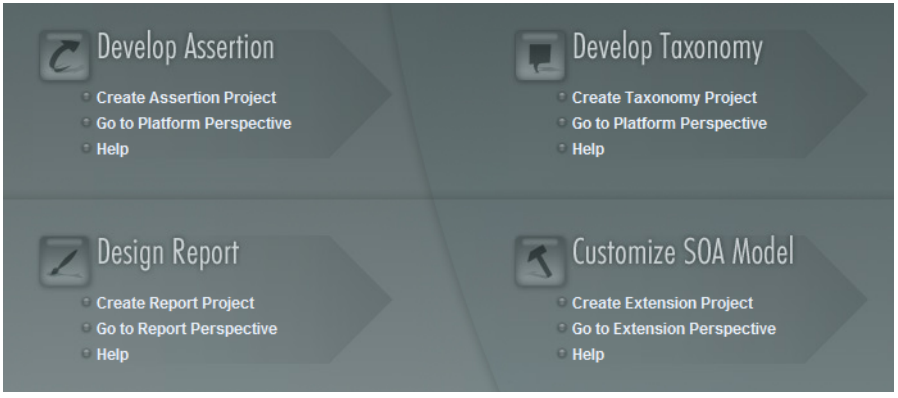
- Remove `-showsplash org.eclipse.platform` from `ECLIPSE_HOME/eclipse.ini`.
- Edit ECLIPSE_HOME/configuration/config.ini and make the following changes:
  - Set `osgi.splashPath=platform:/base/plugins/com.systinet.tools.workbench .`
  - Set `eclipse.product=com.systinet.tools.workbench.ide`

To start HP SOA Systinet Workbench:

- Execute **WB_HOME/systinet-workbench/start.exe**.

The first time you start Workbench, the welcome screen opens, as shown in Figure 8, “Workbench Welcome Screen”.

Figure 8. Workbench Welcome Screen



Select one of the options to open one of the editor tools, start a new editing project, or view the documentation set.

You can return to the welcome screen from any of the editor tools by selecting **Help→Welcome** from the menu options.

HP SOA Systinet Workbench requires Java SE Development Kit (JDK) 1.5.0 or higher. You must include the path to this version of the JDK in the *JAVA_HOME* environment variable.

HP SOA Systinet Workbench is memory-intensive. If you experience performance issues, HP recommends increasing the memory allocation.

To increase the memory allocation for HP SOA Systinet Workbench:

1. Open `WB_HOME/start.ini` for editing.
2. Set these new values:

- `-Xms128m`
- `-Xmx1024m`

3. Save your changes.
4. Restart Workbench.

SSL Configuration

By default, Workbench trusts all SOA Systinet server certificates. You may want Workbench to verify SOA Systinet certificates.

To verify SOA Systinet server certificates:

- Add the following options to `WB_HOME/start.ini`:

```
-Dcom.hp.systinet.security.ssl.verifyCert=true
-Djavax.net.ssl.trustStore=USER_TRUSTSTORE
-Djavax.net.ssl.trustStorePassword=TRUSTSTORE_PASS
-Djavax.net.ssl.trustStoreType=TRUSTSTORE_FORMAT
```

If SOA Systinet is configured for 2-way SSL, you must provide Workbench certificates to SOA Systinet.

To provide Workbench client certificates to SOA Systinet:

- Add the following options to `WB_HOME/start.ini`:

```
-Djavax.net.ssl.keyStore=USER_KEYSTORE
-Djavax.net.ssl.keyStorePassword=KEYSTORE_PASS
-Djavax.net.ssl.keyStoreType=KEYSTORE_FORMAT
```

Creating a Taxonomy Project

To work with taxonomies, you need a Taxonomy Project. You can create any number of Taxonomy Projects to help organize your work.

To create a Taxonomy Project:

1 Do one of the following:

- In the Workbench Welcome page, click **Create Taxonomy Project**.
- Click **New** to open the Select a Wizard window, and then select **SOA Systinet→Taxonomy Project**.
- Select **File→New→Taxonomy Project**.
- Press **Alt+Shift+N**, and then, press **R** to open the Select a Wizard window. Then select **SOA Systinet→Taxonomy Project**.

The New Taxonomy dialog box opens.

2 In the New Taxonomy Project dialog box, enter the required parameters.

3 Click **Next** to select or create a server.

If no servers are currently defined, the dialog box continues to Step 5.

4 Do one of the following:

- Select **Create a New Server**, and then click **Next**.

  Continue to Step 5.

- Select **Use an Existing Server**, select the server from the list and input its credentials, and then click **Next**.

  Continue to Step 6.

5 In the New Server dialog box, enter the required parameters, and then click **Next**.

6 Select taxonomies to download from the server, as described in Updating, Importing, and Exporting Taxonomies on page 40.

7 Click **Finish**.

Downloading Taxonomies from a Server

Initially, Taxonomy Editor does not contain any taxonomies. To edit SOA Systinet taxonomies, you must download them from a server.

To download taxonomies from a server:

1 In Server Explorer, right-click the server containing the taxonomies you need to open its context menu, and select **Download taxonomy**.

The Download Taxonomies wizard opens.

2 Select the taxonomies to download and click **Next**.

The Choose Location dialog box opens.

3 Select the project to add the taxonomies to, and then click **Finish**.

Taxonomy Editor displays the download progress. When the download is complete, the taxonomies are visible in Project Explorer.

Searching for Taxonomies

This section describes the search facilities provided by Taxonomy Editor. It includes the following sub-sections:

- Quick Find Taxonomy on page 33
- Advanced Searching on page 34

Quick Find Taxonomy

Quick Find is the easiest way to find a taxonomy.

To use Quick Find:

1 Do one of the following:

- Click **Search**, and then select **Quick Jump**.
- Press **Ctrl+J**.

The Find Taxonomy dialog box opens. For details, see Find Taxonomy on page 68.

2 In the input field, enter a search string.

3 Click **View Menu**, and then select one of the following options:

- **Show in the tree without opening detail**

  Shows the taxonomy in the tree but does not open its details page.

- **Case-sensitive**

  Enables a case-sensitive or case-insensitive search.

4 In the **in project** field, select in which project to search for the taxonomy.

Taxonomies that match your search criteria are displayed in the **Matching taxonomies** pane.

5 Select the required taxonomy and click **Open taxonomy**.

The taxonomy opens in the Editor pane.

Advanced Searching

For a more detailed search, you can use Taxonomy Editor Advanced Search to do the following:

- Search for a specific property type.
- Search according to a specific value of a property.
- Search different text strings: full text, regular expression, or whole word.

To use advanced search:

1 Do one of the following:

- Select **Search→Search**.
- Press **Ctrl+H**.

The Search dialog box opens.

2 Select the **Taxonomy Search** tab to open the dialog box. For details, see Search Taxonomy on page 68.

3 In the **Containing text** field, do one of the following:

- Enter the text to search.
- Select text used in a previous search by using the drop-down list.

4 In **Search only in**, choose the taxonomy properties or categories to search.

5 In **Search controls**, select one or more of the following:

- **Case-sensitive**

  To perform a case-sensitive search.

- **Whole words only**

  To search for whole word matches.

- **Regular expression**

  To search using regular expressions.

6 In **Scope**, select one of the following:

- **Workspace**

To search the Eclipse workspace.

- **Selected resources**

  To search all entities selected in Project Explorer.

- **Working set**

  To customized resources from Project Explorer.

7 Click **Choose**.

The Select Working Sets wizard opens.

Do one of the following:

- Select from existing working sets.
- Create new working sets.

8 Click **Search**.

The results are displayed in the **Search** view of the UI.

3 Manipulating Taxonomies

This chapter describes how to work with taxonomies, as detailed in the following sections:

- Creating Taxonomies on page 37
- Modifying Taxonomies on page 38
- Deleting and Restoring Taxonomies on page 39
- Updating, Importing, and Exporting Taxonomies on page 40

Creating Taxonomies

In Creating a Taxonomy Project on page 31, you created a Taxonomy Project and looked at how to download taxonomies. The following section describes how to create new taxonomies.

To create a new taxonomy:

1 Do one of the following:

- Click **New** to open the Select a Wizard dialog box, and select **HP SOA Systinet→Taxonomy**, and then click **Next**.
- Select **File→New→Taxonomy**.
- Press **Alt+Shift+N** to open the context menu, and then select **Taxonomy**.

  The New Taxonomy wizard opens.

2 In the New Taxonomy wizard, enter the required parameters.

A default Taxonomy ID and Filename are assigned according to the Taxonomy Name entered. The **Source Folder** is assigned by default, according to whether there is an active extension project. You can change these parameters to meet your requirements.

3 Open the **Categories** tab and add the categories you need. For details, see Categories Tab on page 20.

4 Open the **Advanced** tab and enter the required parameters, as described in Advanced Tab on page 22.

5 Click **Finish** to create the taxonomy.

The taxonomy is now visible in Project Explorer.

Modifying Taxonomies

A taxonomy can be modified in the following ways:

- Editing Taxonomy Properties on page 38
- Refreshing Taxonomies to Reflect External Changes on page 38
- Cutting, Copying, and Pasting Taxonomies on page 39

Editing Taxonomy Properties

To edit a taxonomy's properties:

1 Double-click the taxonomy in **Project Explorer** to open the Editor pane.

2 Edit properties as required in the tabs of the Editor pane. For details, see Editor Pane on page 18.

3 Click **Save**.

The changed status of the taxonomy is displayed in Project Explorer.

Refreshing Taxonomies to Reflect External Changes

If you want the Editor to reflect changes made outside of Taxonomy Editor, you can refresh the taxonomy.

To refresh a taxonomy, do one of the following:

- Right-click the individual taxonomies or the project in Project Explorer to open the context menu, and then select **Refresh**.
- Select the individual taxonomies or the project in Project Explorer, and then press **F5**.

The selected taxonomies are then updated to reflect external changes.

Cutting, Copying, and Pasting Taxonomies

You can copy or move taxonomies from one project to another using cut, copy, or paste.

To copy or move a taxonomy to a different project:

1. Right-click the taxonomy in Project Explorer and select **Copy** or **Cut**.
2. Right-click the project to which you want to copy or move the taxonomies and select **Paste**.

   The taxonomies are then either copied or moved to the other project.

A pasted taxonomy has the status:

- **New**

  If a taxonomy of that name is new to that location.

- **Modified**

  If an existing taxonomy is overwritten.

Deleting and Restoring Taxonomies

You can also delete taxonomies and restore them from your local history.

To delete a local taxonomy:

1. Right-click the taxonomy in Project Explorer to open its context menu, and then select **Delete**.

2 Confirm deletion of the taxonomy when prompted.

To restore a deleted taxonomy:

1 Right-click the project in Project Explorer to open its context menu and select **Restore from Local History**.

The Restore from Local History dialog box opens.

2 Select the check box of the required taxonomy and click **Restore**.

3 Download the published taxonomy from the server, as described in Downloading Taxonomies from a Server on page 33.

To delete a taxonomy from the server:

1 Right-click the taxonomy in Project Explorer to open its context menu and select **HP SOA Systinet→Remove Taxonomy from Server**.

2 Choose if you also want to delete the local copy.

3 Confirm deletion of the taxonomy when prompted.

HP SOA Systinet Taxonomy Editor automatically performs a data consistency check before removing the taxonomy from the server. For details, see Conflict With Server on page 59.

Updating, Importing, and Exporting Taxonomies

You can create taxonomies, download them from an SOA Systinet server, or import them from a file. After you download taxonomies, you can update, export, or compare them.

The following sections describe these procedures:

- Updating Taxonomies From the Server on page 41
- Importing and Exporting Taxonomy Files on page 41
- Comparing Taxonomies on page 42

Updating Taxonomies From the Server

If the most current version of a taxonomy exists on a server, you can update your local copy to reflect any changes.

To update a local taxonomy:

- Right-click the taxonomy in Project Explorer to open the context menu, and then select **HP SOA Systinet→Update Taxonomy**.

Confirmation is required to overwrite existing taxonomies.

Importing and Exporting Taxonomy Files

You can import and export taxonomies between your projects and your local file system.

To import a taxonomy from your file system:

1. In Project Explorer, right-click the taxonomy project to which you want to import taxonomies to open its context menu, and then select **Import→Taxonomy**.

   The Import Taxonomies wizard opens. For details, see Import Taxonomies on page 64.

2. Browse for the folder from which you want to export taxonomies in the **Folder** field.

   The selected folder is displayed in the left pane.

3. Click the check box of the chosen folder.

   Compatible file types are displayed in the right pane.

4. Click the check box of the files you want to import and, and then browse for the required import folder in the **Into folder** field.

5. Click **Finish**.

6 Publish the taxonomies to an SOA Systinet repository, as described in Publishing Changes on page 47.

When importing a taxonomy from a file whose file name already exists in the local folder, Taxonomy Editor asks if you want to overwrite the taxonomy. If you click **Yes** or **Yes To All**, the current taxonomy is updated by attributes and *categories* from the XML file and its status is changed to modified.

To export a taxonomy:

1 Right-click the taxonomy in Project Explorer to open its context menu, and then select **Export** to open the **Export** wizard. For details, see Export Wizard on page 65 and Export Wizard: Select files on page 66.

2 Select the required file type and click **Next** to open the corresponding wizard.

3 Browse for the required destination and enter the required parameters.

4 Select whether to overwrite existing files.

5 Click **Finish**

You can export a taxonomy to any file type supported by Eclipse. For example:

- XML file
- JAR archive
- EAR-deployable or JAR-deployable archive

Comparing Taxonomies

If you are importing or exporting taxonomies between servers, it is essential to compare taxonomies to keep track of changes.

Taxonomy Editor enables you to compare the following taxonomies:

- Local taxonomy against the server taxonomy.
- Server taxonomy against a local history taxonomy.

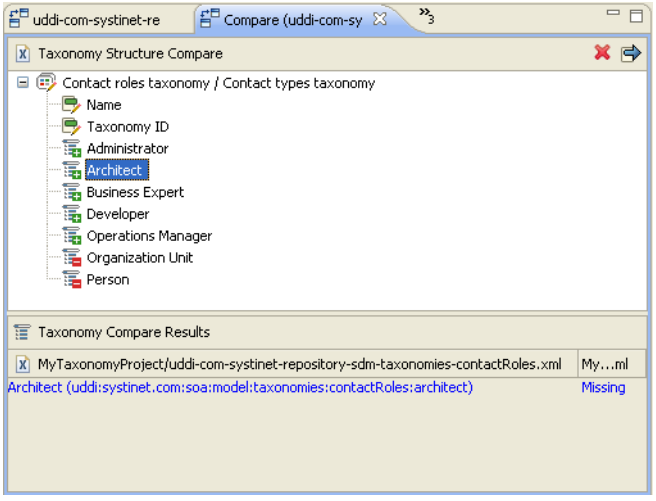
To compare taxonomies:

Right-click the taxonomies you want to compare in Project Explorer to open a context menu, and then select one of the following:

- **Compare With→Each Other**
- **HP SOA Systinet→Compare with the latest on server**
- **Compare With→Local History**

Results are displayed in the Compare view of the UI, as shown in Figure 9, “Compare Taxonomies: Results”.

Figure 9. Compare Taxonomies: Results



The Compare view lists differences in the categories and properties of two taxonomies. Click a difference to display details in the **Taxonomy Compare Results** section.

Each difference is prefixed by an icon, as shown in Table 3, "Comparing Taxonomies".

Table 3. Comparing Taxonomies

Icon	Description	Resolution
	The categories exist in the first taxonomy but not in the second.	To resolve this issue, do one of the following: • Right-click the first taxonomy to open its context menu, and then select **Remove from**. The differing categories are removed from the taxonomy. • Right-click the first taxonomy to open its context menu, and then select **Copy from**. The differing categories are copied from the first taxonomy to the second taxonomy.
	The properties in the two taxonomies or categories are different.	To resolve this issue, do the following: • Right-click the first taxonomy to open its context menu, and then select **Copy from**. Select whether you want copy from the first taxonomy to the second, or from the second to the first. The properties of the taxonomy that you copied to are overwritten by those of the taxonomy you copied from.
	The categories exist in the second taxonomy but not in the first.	To resolve this issue, do one of the following: • Right-click the second taxonomy to open its context menu, and then select **Remove from**. The differing categories are removed from the taxonomy.

		• Right-click the second taxonomy to open its context menu, and then select **Copy from**. The differing categories are copied from the second taxonomy to the first taxonomy.

4 Publishing Taxonomies

This chapter describes how to publish taxonomies, as detailed in the following sections:

- Publishing Changes on page 47
- Example: Creating and Publishing a Department Taxonomy on page 48

Publishing Changes

Publishing is the process of storing changes on an SOA Systinet server.

To publish a taxonomy:

- Right-click the taxonomy in the Project Explorer to open its context menu, and then select **HP SOA Systinet→Publish Taxonomy**. Multiple taxonomies may be selected by holding **CTRL** and selecting them.

  The taxonomy is published to the defined SOA Systinet server.

You cannot publish a System taxonomy to a remote repository.

The status of a taxonomy is explained in Table 4, "Taxonomy Status After Publication".

Table 4. Taxonomy Status After Publication

Status	Description	Impact
UP-TO-DATE	Local and server versions are identical.	Publication was successful, including any modifications.

Status	Description	Impact
NEW ?	Local version of the taxonomy has not been published to the server.	Publication was unsuccessful and the status is unchanged. Possibly due to one of the following: • Exception error. • Breach of server data integrity.
MODIFIED >	Changes have been made to a local version of a taxonomy after it has been published.	
SYSTEM 	Taxonomies automatically generated by the SOA Systinet Platform. For system use only.	Changes to these taxonomies cannot be published.

Example: Creating and Publishing a Department Taxonomy

In this example, you create and deploy a new taxonomy containing the identities of departments in your organization.

Before proceeding, you must do the following:

- Define your SOA Systinet server.
- Update the local taxonomies, as described in Updating Taxonomies From the Server on page 41.

To create a department taxonomy:

1. Create a new taxonomy, entering **Departments** as the Taxonomy Name.

   For details of the procedure, see Creating Taxonomies on page 37.

2. Open the **Departments Editor** and select the **Categories** tab.

3. Add the following categories:

   - HR
   - IT

- Payroll
- Finance
- Sales
- Development
- QA

For details of the procedure, see Add a New Category on page 20.

4 Press **Ctrl+S** to save the taxonomy.

The **Departments** taxonomy is now visible in Project Explorer.

5 Right-click the **Departments** taxonomy to open its context menu, and then select one of the following:

- **HP SOA Systinet→Publish Taxonomy**

  To publish the taxonomy to the defined SOA Systinet server.

- **HP SOA Systinet→Publish To Other Server**

  To publish the taxonomy to a different server. For details, see Creating a Taxonomy Project on page 31.

To view the published taxonomies in the repository:

1 Open the **Tools** tab to view the **Catalog Browser**.

2 Expand **Categories**, and then click **Taxonomies**.

5 Deploying Taxonomies

This chapter explains how to deploy a set of taxonomies as an Extension Project.

This process consists of the following steps:

- Building a Taxonomy Extension on page 51
- Applying Extensions on page 51
- Redeploying the EAR File on page 56

Building a Taxonomy Extension

After publishing taxonomies, you can copy them to a Taxonomy Extension.

To build a Taxonomy Extension:

1. Right-click the taxonomy project in Project Explorer to open its context menu, and expand **HP SOA Systinet→Build Extension** to open the location browser.
2. Enter a name for the extension project and browse for the location you want to save the project to, and click **Save**.

   All taxonomies from the selected taxonomy project are copied to the Taxonomy Extension.

Applying Extensions

You can extend SOA Systinet by adding libraries or JSPs to the deployed EAR files, by modifying the data model, by configuring the appearance of the UI, and by importing prepackaged data.

Extensions to SOA Systinet come from the following sources:

- **Customization Editor**

Typical extensions created by Customization Editor contain modifications to the data model and artifact appearance, and possibly data required by the customization (taxonomies). They may also contain new web components, which may include custom JSP and Java code.

- **Assertion Editor, Report Editor, and Taxonomy Editor**

  These extensions contain assertion, reporting, and taxonomy data only. They do not involve changes to the data model.

The Setup Tool opens the EAR files, applies the extensions, and then repacks the EAR files.

Apply extensions according to one of the following scenarios:

- Single-Step Scenario on page 53

  The Setup Tool performs all the processes involved in applying extensions, including any database alterations, as a single step.

- Decoupled DB Scenario on page 55

  Database SQL scripts are run manually. The Setup Tool performs the other processes as individual steps that are executable on demand. This scenario is useful in organizations where the user applying extensions does not have the right to alter the database, which is done by a database administrator.

In some specific circumstances (underscores and numbers in property names), extension application may fail because SOA Systinet cannot create short enough database table names (31 character maximum for most databases).

The error in `setup.log` resembles the following:

```
[java] --- Nested Exception ---
[java] java.lang.RuntimeException: cannot reduce length of identifier
  'ry_c_es_Artifact02s_c_priEspPty01Group_c_priEspPty01',
  rename identifier elements or improve the squeezing algorithm
[java] at com.systinet.platform.rdbms.design.decomposition.naming.impl.
  BlizzardNameProviderImpl.getUniqueLimitedLengthName(BlizzardNameProviderImpl.java:432)
[java] at com.systinet.platform.rdbms.design.decomposition.naming.impl.
  BlizzardNameProviderImpl.filterTableName(BlizzardNameProviderImpl.java:374)
```

This is due to SOA Systinet using an older table naming algorithm in order to preserve backward compatibility with SOA Systinet 3.00 and older versions.

If you do not require backwards compatibility with these older versions, you can change the table naming algorithm.

To change the table naming algorithm:

1 Open `SOA_HOME/lib/pl-repository-old.jar#META-INF/rdbPlatformContext.xml` with a text editor.

2 In the `rdb-nameProvider` bean element, edit the following property element:

<property name="platform250Compatible" value="false"/>

3 Save `rdbPlatformContext.xml`

This solution only impacts properties with multiple cardinality. If the problem persists or you need to preserve backwards compatibility, then review the property naming conventions in your extension.

Single-Step Scenario

Follow this scenario if you have permission to alter the database used for SOA Systinet.

To apply extensions to SOA Systinet in a single step:

1 Make sure that all extensions are in the following directory:

```
SOA_HOME/extensions
```

The Setup Tool automatically applies all extensions in that directory.

If you are applying extensions to another server, substitute the relevant home directory for `SOA_HOME`.

2 Stop the server.

3 Start the Setup Tool by executing the following command:

SOA_HOME/bin/setup.bat(sh)

4 Select the **Apply Extensions** scenario, and click **Next**.

The Setup Tool automatically validates the step by connecting to the server, copying the extensions, and merging the SDM configuration.

If your extension does not contain data model changes, select **Apply Extensions Don't Touch DB**.

5 Click **Next** for each of the validation steps and the setup execution.

This process takes some time.

6 Click **Finish** to end the process.

7 Deploy the EAR file:

- **JBoss**

  The Setup Tool deploys the EAR file automatically.

  If you need to deploy the EAR file to JBoss manually, see Redeploying the EAR File on page 56.

- **Other Application Servers**

  You must deploy the EAR file manually.

  For application server-specific details, see "Deploying the EAR File" in the *HP SOA Systinet Installation and Deployment Guide*.

8 Restart the server.

Applying an extension that modifies the SDM model may drop your full text indices.

`SOA_HOME/log/setup.log` contains the following line in these cases:

```
Could not apply alteration scripts, application will continue with slower DB drop/create/restore scenario. ... .
```

In these cases, reapply full text indices as described in the "Enabling Full Text Search" section of the *HP SOA Systinet Installation and Deployment Guide*.

Decoupled DB Scenario

Follow this scenario if the user who applies extensions does not have permission to modify the database.

To apply extensions and modify the database separately:

1 Make sure that all extensions are in the following directory:

`SOA_HOME/extensions`

The Setup Tool automatically applies all extensions in that directory.

2 Stop the server.

3 Start the Setup Tool by executing the following command:

SOA_HOME/bin/setup -a.

4 Select the **Apply Extensions** scenario, and click **Next**.

5 Click **Next**, to execute the extension application, and exit the Setup Tool.

6 Provide the scripts from `SOA_HOME/sql` to the database administrator.

The database administrator can use `all.sql` to execute the scripts that drop and recreate the database schema.

7 Execute the Setup Tool in command-line mode to finish the extension application:

SOA_HOME/bin/setup -c

8 Redeploy the EAR file:

- **JBoss**

  The Setup Tool deploys the EAR file automatically.

  If you need to deploy the EAR file to JBoss manually, see Redeploying the EAR File on page 56.

- **Other Application Servers**

  You must deploy the EAR file manually.

  For application server-specific details, see "Deploying the EAR File" in the *HP SOA Systinet Installation and Deployment Guide*.

Redeploying the EAR File

After using the Setup Tool to apply extensions or updates, you must redeploy the EAR file to the application server. For JBoss, you can do this using the Setup Tool.

For other application servers, follow the EAR deployment procedures described in the "Deploying the EAR File" in the *HP SOA Systinet Installation and Deployment Guide*.

To redeploy the EAR file to JBoss:

1 Stop the application server.

2 Start the Setup Tool by executing the following command:

SOA_HOME/bin/setup.bat(sh).

3 Select the **Advanced** scenario, and click **Next**.

4 Scroll down, select **Deployment**, and then click **Next**.

When the Setup Tool validates the existence of the JBoss Deployment folder, click **Next**.

5 Click **Finish** to close the Setup Tool.

6 Restart the application server.

6 Conflicts and Validation Issues

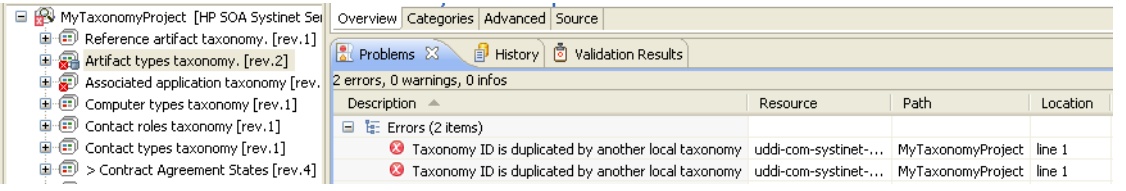
Editing taxonomies can result in validation and conflict issues, as described in the following sections:

- Local Validity on page 59
- Conflict With Server on page 59
- Repair Action on page 60

Local Validity

By default, the validity of local taxonomies is constantly checked as you modify them.. Invalid taxonomies are marked in Project Explorer and the associated errors are listed in the Problems view. For example, errors for two taxonomies with the same ID can be seen in Figure 10, “Invalid Local Taxonomies”.

Figure 10. Invalid Local Taxonomies



To disable validation, from the menu, deselect **Build automatically**.

Conflict With Server

A local taxonomy and the version on a server can come into conflict either when the version on the server is changed or when changes to the local version affect artifacts on the server.

Conflicts are displayed when you try to publish the taxonomy. An error message is displayed, stating that the taxonomy could not be published.

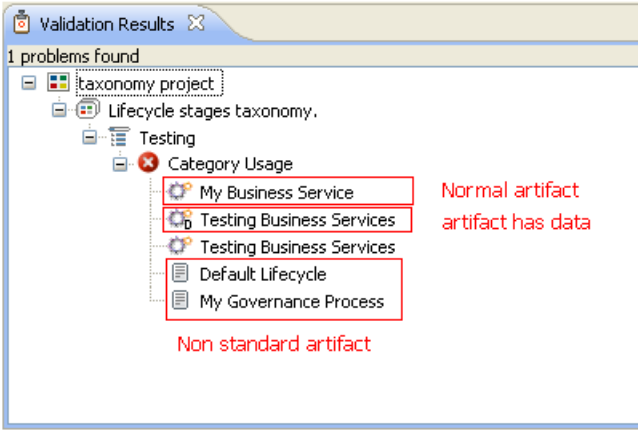
To help prevent conflicts, you can do the following:

- Right-click the taxonomy in Project Explorer to open its context menu, and then select one of the following:
  - **HP SOA Systinet→Show Taxonomy Usage**

    All artifacts categorized by the taxonomy are displayed in the **Taxonomy Usage** pane of the UI.
  - Right-click the taxonomy in Project Explorer to open its context menu, and then select **HP SOA Systinet→Validate Data Consistency**

    Conflicts are displayed in the **Validation Results** pane of the UI, as shown in Figure 11, "Validation Results".

Figure 11. Validation Results



Repair Action

The Data Consistency Check reports artifacts that use categories which no longer exist in the taxonomy project.

Taxonomy Editor features a Repair Action which enables you to resolve these inconsistencies.

To repair an inconsistency:

1. In the **Validation Results** view, expand the problem category, and right-click an artifact to open its context menu, then select one of the following:

   - **Remove Referenced Category From Artifact**
   - **Change Category**

2. Re-run validation.

Some conflicts relate to the validity of policy and lifecycle data (non-standard artifacts). The repair actions cannot resolve these conflicts.

A Keyboard Shortcuts

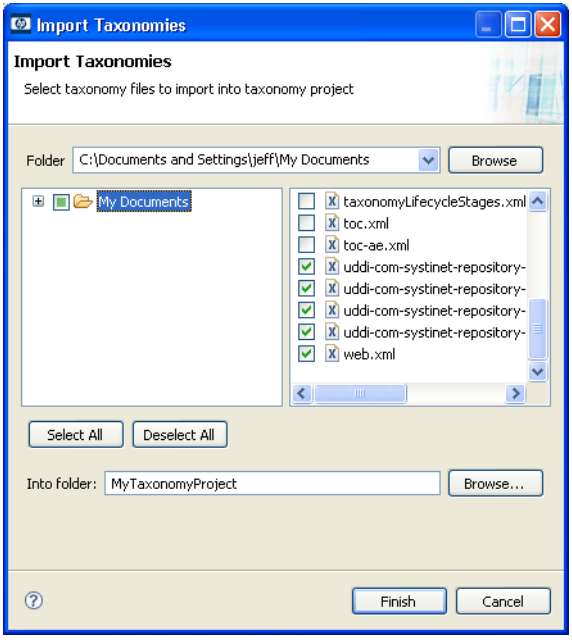
Shortcut	Action	Context
Ctrl+Alt+S	Add SOA Systinet server	Global
Ctrl+N	New taxonomy	Global
Alt+A, Insert	Add next category	Categories tab
Alt+C	Add child category	Categories tab
Alt+U, Ctrl+ArrowUp	Move category up	Categories tab
Alt+D, Ctrl+ArrowDown	Move category down	Categories tab
Alt+E, Ctrl+ArrowLeft	Move category left (unindent)	Categories tab
Alt+I, Ctrl+ArrowRight	Move category right (indent)	Categories tab
F2	Navigate to Category Name field	Categories tab
Esc	Forget changes in current text field and navigate to Category Structure	Categories tab
Ctrl+PgDn	Switch to Next Editor tab	Taxonomy Editor
Ctrl+PgUp	Switch to Previous Editor tab	Taxonomy Editor
F12	Activate editor	Global
Ctrl+W, Ctrl+F4	Close current editor	Global
Ctrl+Shift+W, Ctrl+Shift+F4	Close all editors	Global
Ctrl+F6	Go to next editor	Global
Ctrl+Shift+F6	Go to previous editor	Global
Ctrl+Shift+E	Switch to editor	Global

Shortcut	Action	Context
Ctrl+J	Quick find taxonomy	Global
Ctrl+H	Search taxonomy or category	Global
Alt+Shift+W	Show editing resource in Taxonomy Explorer	Global
F5	Refresh items	Global
Ctrl+S	Save changes for active editor	Global
Ctrl+Shift+S	Save changes for all editors	Global
Ctrl+C, Ctrl+Insert	Copy	Global
Ctrl+X, Shift+Delete	Cut	Global
Delete	Delete	Global
Ctrl+V, Shift+Insert	Paste	Global
Ctrl+Shift+L	Show key assist	Global

B Dialog Boxes

Import Taxonomies

Select taxonomy files to import into your taxonomy project:

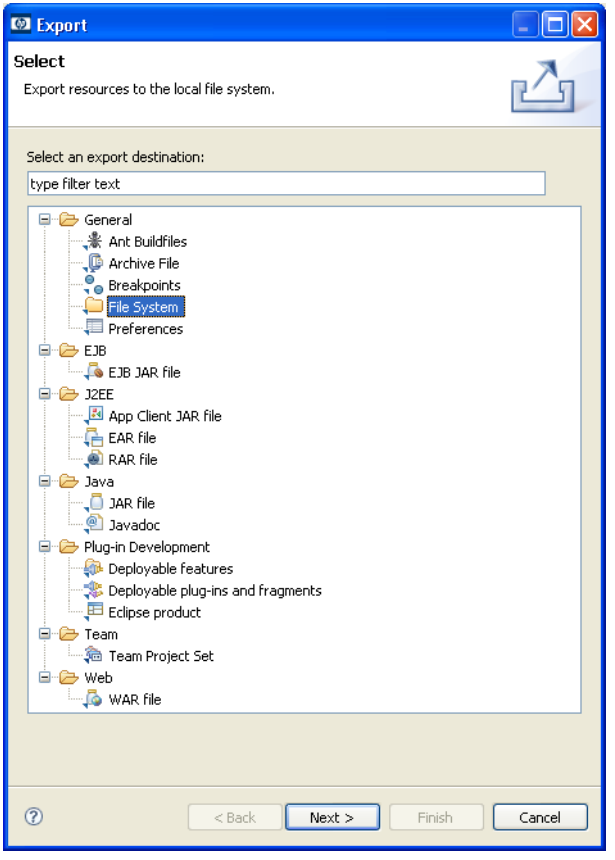


Parameter	Definition
Folder	Browse for the source folder containing the taxonomy files you want to import.
Left Pane	Select the source folder containing the taxonomy files you want to import.
Right Pane	Select the individual taxonomy files you want to import.

Parameter	Definition
Into Folder	Browse for the destination folder into which you want to import the selected taxonomies.

Export Wizard

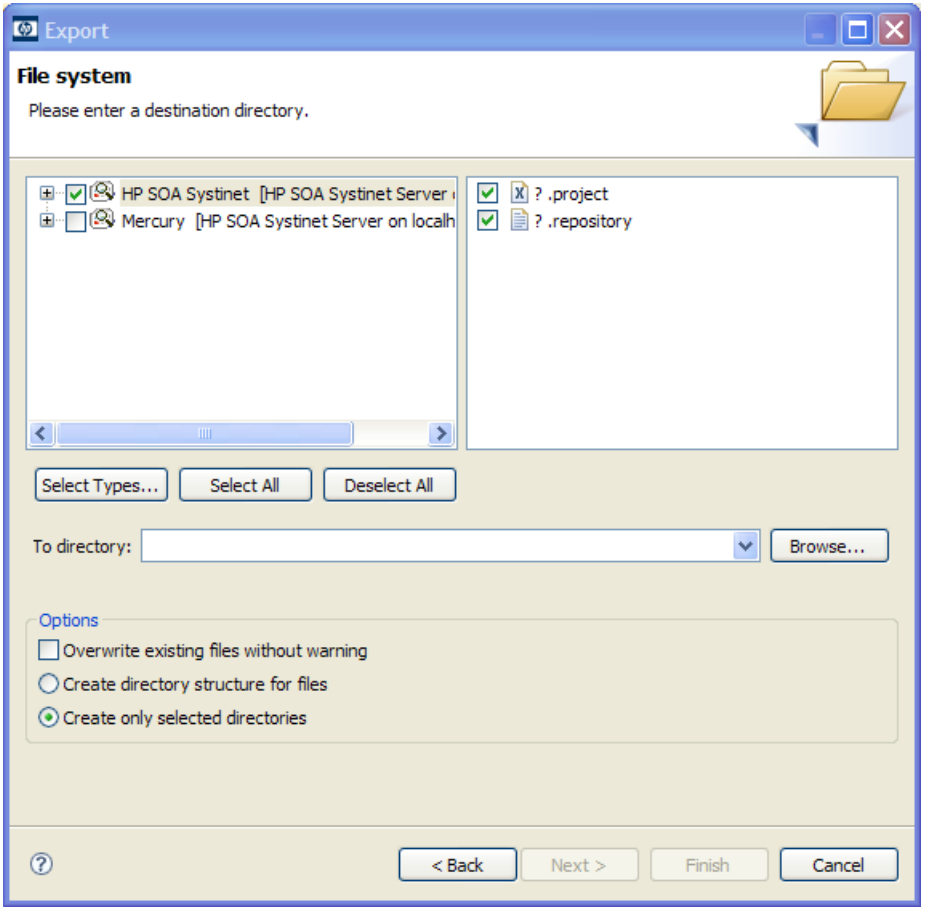
Select a destination for the taxonomies you wish to export:



Parameter	Definition
Select an export destination	Enter text to filter your search.
Tree View	Select File System as your destination folder.

Export Wizard: Select files

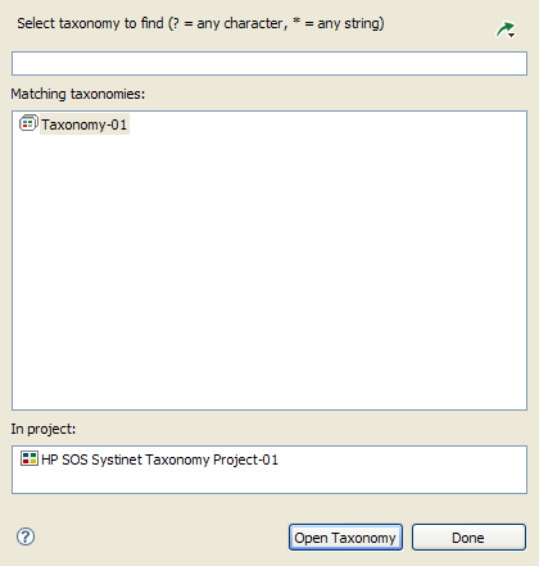
Select the taxonomies you want to export, then browse for the destination directory:



Parameter	Definition
Left Pane	Select the project from which you want to export taxonomies.
Right Pane	Select the individual taxonomies you want to export.
To Directory	Browse for and select the directory into which you want to export the selected taxonomies.

Find Taxonomy

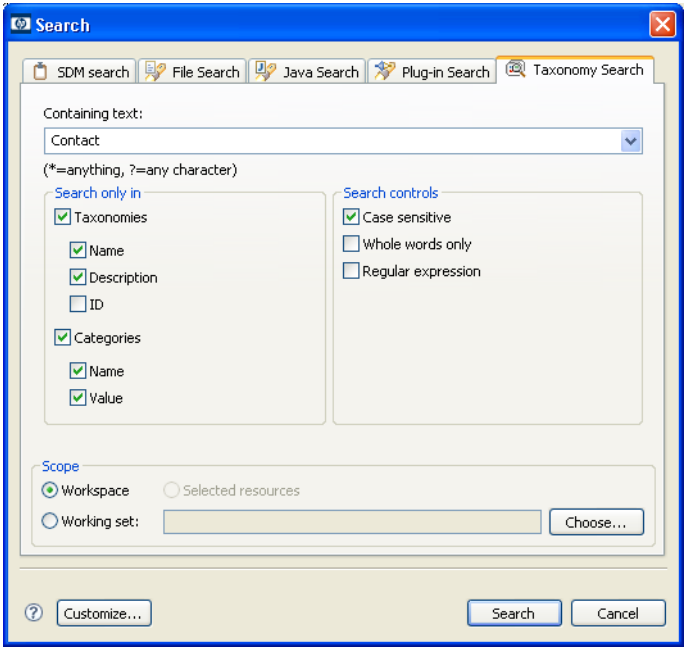
A quick search for matching taxonomies:



Parameter	Definition
Top Field	Enter text to filter your search results.
Matching Taxonomies	A list of taxonomies matching your search request.
In Project	Select the project in which you want to search for taxonomies.

Search Taxonomy

An advanced search for matching taxonomies:



Parameter	Definition
Containing Text	Enter text to search or use the drop-down menu to select a previous search parameter.
Working Set	Browse for and select a working set as a scope for your search.

C Troubleshooting

Issues and Resolutions

Case	Indications	Resolution	Type	Severity
A taxonomy was changed on the remote server while you were modifying your local version.	Your local taxonomy is CONFLICTING. The local version cannot be published and its modifications are kept.	To replace the local taxonomy with the server version, use the taxonomy context action **SOA Systinet→Update Taxonomy.** You might want to first copy your local version to a temporary location.	Conflict	Error
A taxonomy was published that has the same file name as a new taxonomy you are trying to publish to the remote server.	Taxonomy is CONFLICTING. The local version cannot be published. Changes to the local taxonomy and server remain in **Project Explorer**.	To replace the local taxonomy with the remote server version, use the taxonomy context action **SOA Systinet→Update Taxonomy.** You might want to first make a backup copy your local version.	Conflict	Error
The taxonomy you have created has the same ID as an existing taxonomy on the remote server	The local taxonomy cannot be published. Changes to the local taxonomy and server remain in **Project Explorer**. The **Validation Results** include a node giving the taxonomy ID.	Change the ID of the new taxonomy.	Validation Results	Error

Case	Indications	Resolution	Type	Severity
You have changed the ID of a taxonomy used by artifacts.	The local taxonomy cannot be published and remains MODIFIED. The **Validation Results** list artifacts that use the taxonomy.	To restore the original taxonomy, use the taxonomy context action **SOA Systinet→Update Taxonomy.**	Validation Results	Error
A category that you modified is used by other artifacts.	The local taxonomy cannot be published and remains MODIFIED. **Validation Results** lists artifacts that use the category.	To restore the original taxonomy, use the taxonomy context action **SOA Systinet→Update Taxonomy.**	Validation Results	Error
A new taxonomy ID is identical to that of another local taxonomy.	An error message for this taxonomy is shown.	Change taxonomy ID to another value.	Local Inconsistency	Error
Taxonomy ID format is invalid.	A warning message for this taxonomy is shown.	Change taxonomy ID to valid format.	Local Inconsistency	Warning
Category value is duplicated by another category in the same taxonomy.	An error message for this taxonomy is shown.	Change the category value.	Local Inconsistency	Error
Taxonomy file name contains invalid character for REST URL.	An error message for this taxonomy is shown.	Change file name so that it does not contain invalid character.	Local Inconsistency	Error

D Eclipse Plug-in Requirements

Ensure that the following prerequisite plug-ins are added to your Eclipse development platform based on the required Workbench components:

- DTP SDK 1.5

  Required for Customization Editor and Report Editor.

  http://www.eclipse.org/datatools/downloads.php

- EMF SDO Runtime 2.3.0

  Required for Customization Editor and Report Editor.

  http://www.eclipse.org/modeling/emf/downloads/

- GEF Runtime 3.3

  Required for Customization Editor and Report Editor.

  http://archive.eclipse.org/tools/gef/downloads/drops/R-3.3-200706281000/index.php

- WTP 2.0

  Required for Customization Editor and Report Editor.

  http://www.eclipse.org/webtools/releases/2.0/

- XSD Runtime 2.3

  Required for Customization Editor and Report Editor

  http://www.eclipse.org/modeling/mdt/downloads/?project=xsd

- BIRT 2.2.0

  Required for Report Editor.

  http://download.eclipse.org/birt/downloads/build_list.php