HP SOA Systinet Plug-In

Software Version: 3.20

User Guide for Eclipse

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About this Guide

Welcome to the HP SOA Systinet Plug-In for Eclipse Guide. This guide explains how to use Systinet Plug-In for Eclipse with SOA Systinet.

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- Chapter 2, Getting Started

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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

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1 Systinet Plug-In for Eclipse

SOA Systinet enables your organization to manage the growth and development of your service infrastructure. HP SOA Systinet Plug-In for Eclipse bridges the gap between your development environment and SOA Systinet.

This chapter introduces Systinet Plug-In for Eclipse in the following sections:

Overview

HP SOA Systinet Plug-In for Eclipse is a set of features enabling you to integrate SOA Systinet with your IDE.

Systinet Plug-In for Eclipse contains the following features:

• **Search**

  Search the SOA Systinet repository to find the service definitions you require.

  For details, see Chapter 3, Exploring the Repository.

• **Modify**

  Download resources from SOA Systinet, modify them in your IDE, and then upload them back to SOA Systinet.

  For details, see Chapter 4, Modifying Resources.

• **Validate**

  Validate resources in your IDE against policies in the SOA Systinet repository.

For details, see Chapter 5, Validating Resources.

- **Generate**

    Generate service clients and skeletons from repository resources.

    For details, see Chapter 6, Generating Service Clients and Chapter 7, Generating Service Skeletons.

Usecases

Systinet Plug-In for Eclipse is designed to assist in the development of services for the following users:

- **Service Architects**

    - Download resources.

        Import service definition files from SOA Systinet.

        For details, see Downloading SOA Systinet Resources on page 21.

    - Edit resources.

        Edit service definitions using the standard functionality of your IDE.

    - Validate resources before publication.

        Using policies imported from SOA Systinet, validate your service definitions to ensure they meet your policy requirements.

        For details, see Chapter 5, Validating Resources.

    - Upload resources.

        Export your service definition files to SOA Systinet.

        For details, see Uploading SOA Systinet Resources on page 22.

- **Service Consumers**

    - Locate the services you want to consume.

Repository Search enables you to identify services you want to consume. You can limit the search to services that are consumable, or to a particular lifecycle stage (for example, Production).

For details, see Searching the Repository on page 17.

- Generate service clients for services you want to consume.

  Using the service definitions located in the search, generate a service client from the service definition to assist the development of your consuming service.

  For details, see Chapter 6, Generating Service Clients.

- **Service Providers**

  - Locate the service definitions you want to develop.

    Repository Search enables you to identify services you want to develop. You can limit the search to services at particular lifecycle stages (for example, Initial or Development).

    For details, see Searching the Repository on page 17.

  - Validate your local resources against policies from the SOA Systinet repository.

    Using policies imported from SOA Systinet, validate your resources to ensure they meet your policy requirements.

    For details, see Chapter 5, Validating Resources.

  - Generate service skeletons for services you want to develop.

    Using the service definitions located in the search, generate a service skeleton from the service definition to assist the development of your service.

    For details, see Chapter 7, Generating Service Skeletons.

2 Getting Started

Systinet Plug-In for Eclipse works in conjunction with your existing development platform.

This chapter contains the following sections:

- Installing Systinet Plug-In for Eclipse on page 13

- Setting Up 2-way SSL on page 16

Installing Systinet Plug-In for Eclipse

HP SOA Systinet Plug-In for Eclipse is a plug-in for Eclipse distributed as the following archive file:

```
hp-soa-systinet-eclipse-plugin-3.20.zip
```

Table 1. System Requirements

Operating System	Java JDK	IDE
Windows XP	Sun JDK 5.0	Eclipse 3.2.x
		Eclipse 3.3.x
		Eclipse 3.4.x
Windows Vista	Sun JDK 5.0	Eclipse 3.3.x
		Eclipse 3.4.x
RHEL 5.2	Sun JDK 5.0	Eclipse 3.2.x
		Eclipse 3.3.x
		Eclipse 3.4.x

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

The following versions of Eclipse can be used with Systinet Plug-In for Eclipse without any other plug-in dependencies:

- Europa for Java EE Developers (eclipse-jee-europa-winter-win32.zip)

- Ganymede for Java EE Developers (eclipse-jee-ganymede-SR2-win32.zip)

If you use another version of Eclipse, you may require a number of plug-ins. For details, see Appendix D, Eclipse Plug-in Requirements.

To install Systinet Plug-In for Eclipse to Eclipse:

1   In your current Eclipse SDK (3.2 or later), use the software updates feature to install Systinet Plug-In for Eclipse.

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

     The Install/Update dialog opens.

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

     The Install – Update Sites to Visit dialog opens.

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

     The Select Local Archive Site dialog opens.

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

     The Edit Local Site dialog opens.

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

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

     The Updates – Search Results dialog opens.

7   Select the archive, or expand the archive and select individual components, and click **Next**.

> Systinet Plug-In for Eclipse consists of the following components:
>
> • **Search and Validate**
>
> The search and validation features of Systinet Plug-In for Eclipse.
>
> • **WTP Integration**
>
> The integration points with the WTP plug-in.

The Install – Feature License dialog opens.

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

The Install – Installation dialog opens.

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

To start Systinet Plug-In for Eclipse:

•   Execute **ECLIPSE_HOME/eclipse.exe**.

The first time you start Systinet Plug-In for Eclipse, you are prompted for the connection URL and credentials for the SOA Systinet server.

Do one of the following:

• Set a connection URL and credentials and optionally select to save them, and then click **OK**.

> The SOA Systinet server must be running.

• Click **Skip** to set them later. For details, see .

Systinet Plug-In for Eclipse uses the Eclipse API to store passwords. Saved passwords are stored in a file that is difficult but not impossible for an intruder to read.

Setting Up 2-way SSL

You can set up 2-way SSL communication between Systinet Plug-In for Eclipse and SOA Systinet using the client certificate for your SSL environment.

To enable 2-way SSL:

1 Close Systinet Plug-In for Eclipse

2 Open `ECLIPSE_HOME/eclipse.ini` with a text editor.

3 Add the following properties using your certificate values:

- `-Djavax.net.ssl.keyStore=<user_keystore>`

- `-Djavax.net.ssl.keyStorePassword=<keystore_pass>`

- `-Djavax.net.ssl.keyStoreType=<keystore_format>`

- `-Djavax.net.ssl.trustStore=<user_truststore>`

- `-Djavax.net.ssl.trustStorePassword=<truststore_pass>`

- `-Djavax.net.ssl.trustStoreType=<truststore_format>`

4 Restart Eclipse using **ECLIPSE_HOME/eclipsec.exe**.

3 Exploring the Repository

Systinet Plug-In for Eclipse enables you to search and examine data in the SOA Systinet repository.

These features are described in the following sections:

  Locate specific artifacts using lifecycle, consumption, and property criteria.

  View artifacts matching your search criteria and their related artifacts.

  Examine individual artifacts in detail.

Searching the Repository

HP SOA Systinet Plug-In for Eclipse includes a Repository Search feature, enabling you to explore the content of SOA Systinet.

To search the repository:

1   Do one of the following:

  - From the menu, select **Search→Repository**.

  - Use the keyboard shortcut, **Ctrl+R**.

  The Search dialog opens displaying the Repository Search tab.

2   In the Scope section, select an artifact type to search, and if required, a specific lifecycle stage.

The Properties section refreshes showing specific details depending on the artifact type.

> Generating service clients and skeletons uses WSDL definitions to create code stubs. To find the WSDL you need, search for SOAP Services or Operations, as these artifacts contain lifecycle and contract information. The functionality for generating code stubs is available on search results for SOAP Services and Operations and utilises the WSDLs associated with them.

3   Enter your search parameters. The parameters vary depending on the artifact type.

    For parameter details, see Repository Search on page 50.

4   To display the parent artifacts search result artifacts depend on, select **Show Parent Artifacts**

5   Click **Search** to execute the search.

    Systinet Plug-In for Eclipse displays the results of the search in the Repository Search Result tab. For details, see Search Results on page 18.

Search Results

Systinet Plug-In for Eclipse displays the results of a repository search in the Repository Search Results tab.

To search the repository, see Searching the Repository on page 17.

The results show a tree of artifacts for each artifact matching the search criteria, as shown in Figure 1, "Repository Search Results View":

Figure 1. Repository Search Results View

The tree for each matching artifact contains any related child artifacts. If you select **Show Parent Artifacts** in your search, the tree also includes related parent artifacts.

Double-click an artifact name in the Repository Search Results tab to view its details in an artifact details tab. The tab name is the name of the artifact. For details, see Artifact Detail View on page 19.

For SOAP Services and Operation artifacts, the search results provide code generation functionality. Right-click the resource and select **Generate Service Client** or **Generate Service Skeleton**. For details, see Chapter 6, Generating Service Clients or Chapter 7, Generating Service Skeletons.

To download any associated service resources, right-click a result entry, and select **Save As**. For details, see Downloading SOA Systinet Resources on page 21.

> The hierarchy of artifact types and the properties displayed for each artifact type are defined in the configuration you can customize.
>
> For details, see Appendix C, Configuring Systinet Plug-In for Eclipse.

Artifact Detail View

Systinet Plug-In for Eclipse enables you to view the details for a particular artifact in its own detail view. The content of this view is similar to the Artifact Detail View in the Tools tab in SOA Systinet.

> In Eclipse, this kind of view is normally called an *Editor*. However, Systinet Plug-In for Eclipse does not provide editing features in these Artifact Views.

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The artifact details vary depending on the artifact type and your customization and configuration.

For details about customizing the detail views, see Appendix C, Configuring Systinet Plug-In for Eclipse.

The Artifact Detail view contains the following segments depending on the artifact type:

- **General**

  Displays a description, the owner of the artifact, and a URL to the XML representation of the artifact.

- **Details**

  Displays a set of properties for the artifact. These properties vary depending on the artifact type.

- **Data**

  Displays a link to the attached data in the repository for artifacts with attached data content. Click the link to view the content of the attached data.

- **Relationships**

  Displays the set of related artifacts, indicating the type of relationship, the related artifact, and the direction of the relationship.

  Double-click an artifact name to open its detail view.

4 Modifying Resources

Systinet Plug-In for Eclipse enables you to download resources from SOA Systinet, modify them, and then upload them back to SOA Systinet.

These features are described in the following sections:

  Download service definitions from SOA Systinet.

  Upload service definitions to SOA Systinet.

  Synchronize local resources with their SOA Systinet versions.

  Delete resources from the SOA Systinet repository.

Downloading SOA Systinet Resources

Systinet Plug-In for Eclipse enables you to download the service definitions associated with artifacts from SOA Systinet.

Systinet Plug-In for Eclipse supports download for the following file types:

- WSDL

- BPEL

- XSD

- DTD

- SCA

To download service definitions from SOA Systinet:

1   Perform a repository search to locate the service you want to download the definitions for.

    For details, see Searching the Repository on page 17.

2   In the Repository Search Results view, right-click a search result, and select **Save As**.

    The Download Document from SOA Systinet dialog opens.

3   In the Download Document from SOA Systinet dialog:

    Select **Resolve Dependencies** to resolve any dependencies in the service definition files and download all referenced files as well.

    Select **Open Resource after Downloading** to open an editor view of the downloaded resource after download.

    Select a location in your project to store the downloaded resources, and then click **Finish**.

    Systinet Plug-In for Eclipse downloads the relevant service definition files and copies them to the selected location. The structure of the SOA Systinet publishing location space is preserved.

    For details about the Publishing Location space, see "Publishing Locations Workspace" in the *HP SOA Systinet Developer Guide*.

Uploading SOA Systinet Resources

Systinet Plug-In for Eclipse enables you to upload service definition documents directly to SOA Systinet.

Systinet Plug-In for Eclipse supports upload for the following file types:

- WSDL

- BPEL

- XSD

- DTD

- SCA

> Unlike other supported types, Systinet Plug-In does not automatically resolve SCA style references by name between various SCA files, typically defined by elements such as <include>. You must select all interconnected SCA files explicitly for upload.

To upload service definitions to SOA Systinet:

1 In the Project Explorer, right-click the resource or folder of resources you want to upload, and select **HP SOA Systinet → Upload**.

The Upload Documents dialog opens.

2 Select resources to upload, and then click **Next**.

3 Select the publishing location folder, or input a new one.

Select from the following **Advanced Options**:

Parameter	Definition
Decomposition	Select a WSDL processing level from the following options: • **Services** Process any WSDLs, create all defined content and create business services to associate with any newly created implementations. • **Implementations** Process any WSDLs and create all defined content. Business services are not created. • **None**

Parameter	Definition
	Publish any WSDLs as artifacts with attached data content. The WSDL files are not processed.
Remove Unsynchronized	If a WSDL is republished the artifacts it references may change and previously created artifacts may no longer be required. Select artifact types to remove the relationships with these obsolete referenced artifacts.

Click **Next**.

SOA Systinet processes the content for upload and returns an Upload Overview to Systinet Plug-In for Eclipse.

4 Review the overview and click **Finish** to complete the upload and create the relevant artifacts, or **Cancel** to abort the upload.

Synchronizing Resources

After downloading resources from SOA Systinet, you may want to synchronize them with SOA Systinet.

To synchronize a local resource with SOA Systinet:

1 In the Project Explorer, right-click the resource you want to synchronize and select **HP SOA Systinet→Synchronize with Server**.

The Synchronization view opens showing any files that differ.

2 Optionally, right-click an item that differs from the server version, and select **Update** to import the latest version from SOA Systinet.

You can configure Systinet Plug-In to perform automatic synchronization. For details, see Setting Synchronization on page 66.

Deleting SOA Systinet Resources

Systinet Plug-In for Eclipse enables you to delete resources stored in the SOA Systinet repository.

To delete SOA Systinet resources:

1   In the Project Explorer, right-click the resource you want to delete, and select **HP SOA Systinet→Delete from Server**.

    The SOA Systinet UI opens requesting authentication.

2   Enter your credentials.

    The detail view of the artifact you want to delete opens.

3   Use SOA Systinet functionality to delete the artifact. For details, see the *HP SOA Systinet User Guide*.

5 Validating Resources

Systinet Plug-In for Eclipse enables you to validate local resources against policies.

This chapter contains the following sections:

- Setting Up Validation on page 27

  Explains the process of importing and updating policies from the Policy Manager.

- Ad Hoc Validation on page 31

  Explains how to run unscheduled validation and produce reports.

- Automatic Validation on page 37

  Explains how to set up automatic validation.

Setting Up Validation

Systinet Plug-In for Eclipse contains a default set of policies. You can add or delete policies, and update your local policies against versions from an SOA Systinet server. Systinet Plug-In for Eclipse also includes the default HP SOA Systinet Policy Manager extension, which contains default Policy Manager validation handlers.

Validation is introduced in the following sections:

- Setting Up Policies on page 28

- Importing Policies on page 30

- Removing Policies on page 30

- Updating Policies on page 30

• Customizing Validation Handlers on page 31

Setting Up Policies

You can add, delete, or update policies in the Systinet Plug-In for Eclipse Policies page.

To set up policies:

1   From the menu, select **Window→Preferences**.

     The Preferences dialog box opens.

2   In the tree view of the Preferences dialog box, expand **HP SOA Systinet→Policy Validation→Policies**.

     The Policies page opens, as shown in Figure 2, "Policies Page".

Figure 2. Policies Page
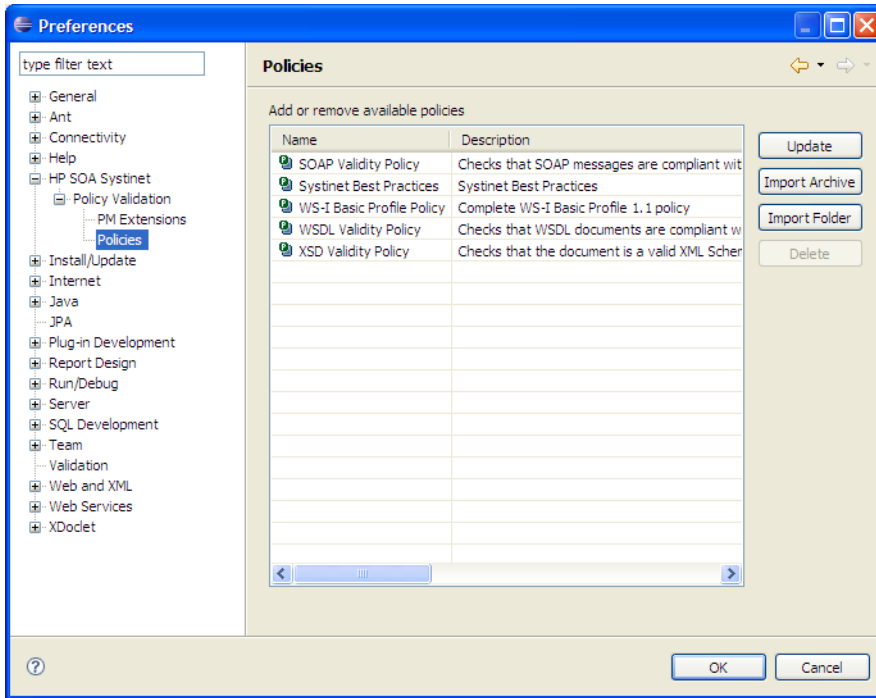
In the Policies page, do any of the following:

- Import an archive or folder.

    For details, see Importing Policies on page 30.

- Remove a policy

    For details, see Removing Policies on page 30.

- Update local policies.

    For details, see Updating Policies on page 30.

Importing Policies

You can import policies from an archive or folder from a designated HP SOA Systinet server.

To import an archive or folder from an HP SOA Systinet server:

1   In the Policies page, do one of the following:

   • Click **Import Archive** to open the Select an Archive to Import dialog box, and then go to Step 2.

   • Click **Import Folder** to open the Select a Folder to Import dialog box, and then go to Step 3.

2   Enter the required parameters and browse for the archive you need, and then click **Open**.

   The selected archive is imported to the Policies page.

3   Browse for the folder you need, and then click **OK**.

   The selected folder is imported to the Policies page.

> The Import Archive and Import Folder buttons load policies, assertions, and remote server information from the client distribution, created during the installation process in the folder *SOA_HOME*.
>
> The import of the client distribution will fail if the provided folder or archive does not follow the structure of the SOA Systinet 3.20 client distribution, which must include the bin, conf, data, extensions, and lib folders.

Removing Policies

To remove a policy:

•   Highlight the policy in the Policies page, and then click **Delete**.

Updating Policies

You can use Systinet Plug-In for Eclipse to update local policies against policies on an SOA Systinet server.

To update policies:

1 Make sure the SOA Systinet server is running.

2 Click **Update**.

The local version of the policy is updated to reflect the version on the HP SOA Systinet server.

Customizing Validation Handlers

Systinet Plug-In for Eclipse includes a set of validation handlers, contained in the standard Policy Manager extension. Custom validation handlers can be included in the Systinet Plug-In for Eclipse by adding the appropriate extensions.

To add extensions to Systinet Plug-In for Eclipse:

1 From the menu, select **Window→Preferences**.

The Preferences dialog box opens.

2 In the tree view of the Preferences dialog box, expand **HP SOA Systinet→Policy Validation→PM Extensions**.

3 Click **Add**.

The Select an Extension dialog box opens.

4 Browse for the `.jar` file you require, and then click **Open**.

The extension is now visible in the PM Extensions page.

You must restart Systinet Plug-In for Eclipse for your changes to take effect.

Ad Hoc Validation

Ad hoc validation is the unscheduled validation of documents against policies.

Ad hoc validation is described the following sections:

Running Ad Hoc Validation

To run ad hoc validation on a single resource:

1   Right-click a document in Project Explorer to open its context menu, and then scroll over **Check Policy Compliance**.

A list of available policies is displayed.

2   Select the policy you want to validate the document against.

The validation runs and the result is shown in the Validation Result tab.

For details, see Viewing Ad Hoc Validation Results on page 33.

To run ad hoc validation using multiple resources or policies:

1   Right-click a document in Project Explorer to open its context menu, and then scroll over **Check Policy Compliance**.

A list of available policies is displayed.

2   Select **More Validation Options**.

The Edit Configuration and Launch dialog box opens, as shown in Edit Configuration and Launch on page 46.

3   To add documents, do one of the following:

- Click **Add File** to browse and select documents from your Eclipse project.

- Click **Add External File** to browse and select documents from your file system.

- Click **Add External Folder** to browse and select all documents in a folder in your file system.

- Click **Add URL** to enter the endpoint URL of a remote document.

4   In the Technical Policies field, click **Add** to select from a list of available policies to use in the validation.

5   Click **Run**.

The validation runs and the result is shown in the Validation Result tab.

For details, see Viewing Ad Hoc Validation Results on page 33.

Viewing Ad Hoc Validation Results

When validation completes, the Validation Result view displays the results. For each result, you can view a detailed HTML report. You can also view a summary report for all validation results.

The default report style is similar to that of Policy Manager validation reports. For information about setting report styles, see Setting Report Style on page 36.

To view a validation report:

- Right-click a validation result in the Validation Result tab to open its context menu, and then select 🔍 **View Detail**.

An HTML report opens, as shown in Figure 3, "Validation Report".
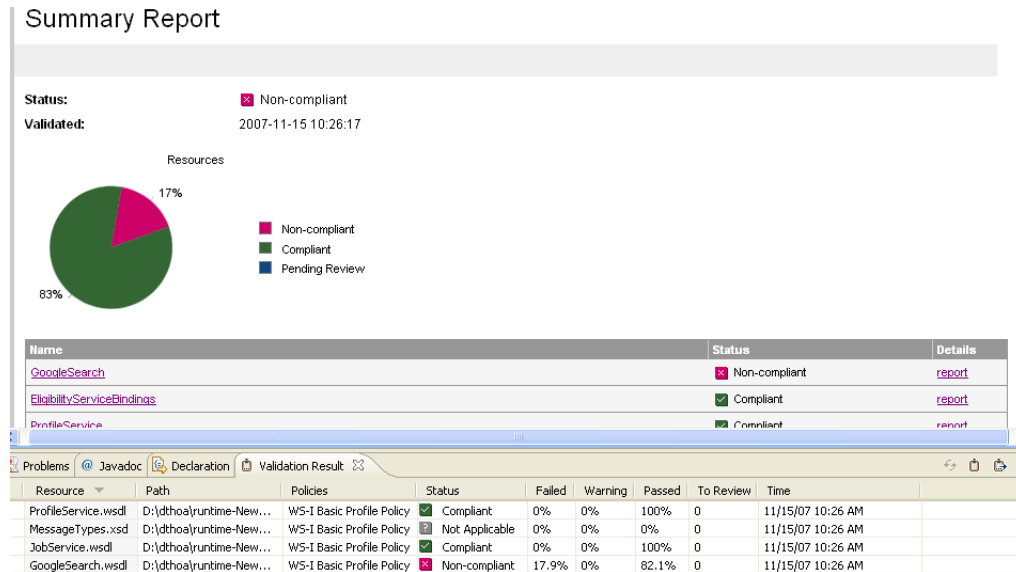
Figure 3. Validation Report
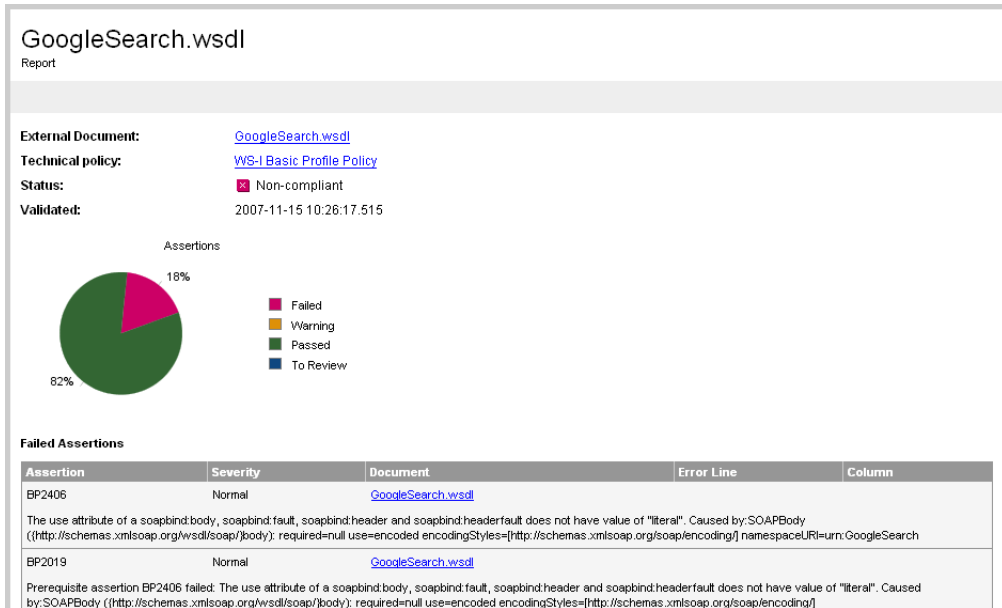
If you have more than one validation result, you can view a summary report of all the validation results.

To view a summary report, click the 🗂 **Summary Report** button on the Validation Result tab.

The Summary Report view opens, as shown in Figure 4, "Summary Report".

Figure 4. Summary Report

To view the detailed report of a document in the summary, click the **report** hyper link in the Details column.

You can set a resource in the results view to be automatically validated. Right-click the resource to open its context menu, and select **Set as Automatic Validation**. The resource is re-validated against the set of automatic policies for the project and added to the custom list of project resources to be validated. For details, see Setting Up Automatic Validation on page 37.

Revalidating a Document

If recent changes have been made to a document, you can revalidate that document.

To revalidate a document:

• Select a result in the Validation Result tab, and click ♻ **Revalidate**.

The document is revalidated against the selected policies.

Exporting Reports

You can export the report to your file system.

To export a validation report:

- Select a result in the Validation Result tab, and then click 🖨 **Export Reports**.

- Browse for the location to which you want to save the report, and click **OK**.

Both detail and summary reports are saved.

Setting Report Style

Included with Systinet Plug-In for Eclipse is the Policy Manager detail report stylesheet. If you want to change the stylesheeet, you can select from a pure text style or XML format.

To change the style of ad hoc validation reports:

1 From the menu, select **Window→Preferences**.

   The Preferences dialog box opens.

2 In the tree view of the Preferences dialog box, expand **HP SOA Systinet→Policy Validation**.

   The Policy Validation page opens. For details, see Policy Validation on page 48.

3 In the Validation Result Format pane, select one of the following options:

   - **Text Format**, then go to Step 5.

   - **XML Format**, then go to Step 4.

4 In the Stylesheet pane, select one of the following options:

   - **Associate with default stylesheet**.

   - **Custom stylesheet**, then browse for the stylesheet you need.

5   Click **OK** to produce the report in the selected format.

Automatic Validation

Systinet Plug-In for Eclipse enables the automatic validation of documents while you work on them.

After you set up automatic validation, you can see annotations to your document that change in real time.

Automatic validation is described in the following sections:

Setting Up Automatic Validation

To enable automatic validation, you must set it up for a project.

To enable automatic validation:

1   Do one of the following:

   • Right-click the project in Project Explorer to open its context menu, and select **Configure Automatic Validation**→**Set Project to be Automatically Validated**.

   • Right-click the project in Project Explorer to open its context menu, and select **Properties**.

     In the tree menu, select **Automatic Validation**.

   The Properties for [*Project Name*] dialog box opens showing thw Automatic Validation options. For details, see Properties for [Project Name] on page 49.

2   Select **Set Project to be Automatically Validated** if it is not already set.

3   In the List of Policies pane, click **Add** and select the policies you need. Click **OK**.

4   In the List of Resources pane, select one of the following:

- **Default (Entire Project)**, then go to Step 6.

- **Custom**, then go to Step 5.

5   Select any of the following:

- **Add**

  To add a folder from your project.

- **Exclude**

  To exclude individual files from the selected folder.

- **Remove**

  To remove the folder from the list.

6   In the Filtered By pane, do any of the following:

- Click **Add** to add a file extension.

- Click **Remove** to remove a file extension from the list.

7   Click **OK** to confirm automatic validation settings.

The validation runs and the results are displayed in the Automatic Validation Results view, as shown in Figure 5, "Automatic Validation Results".

Figure 5. Automatic Validation Results
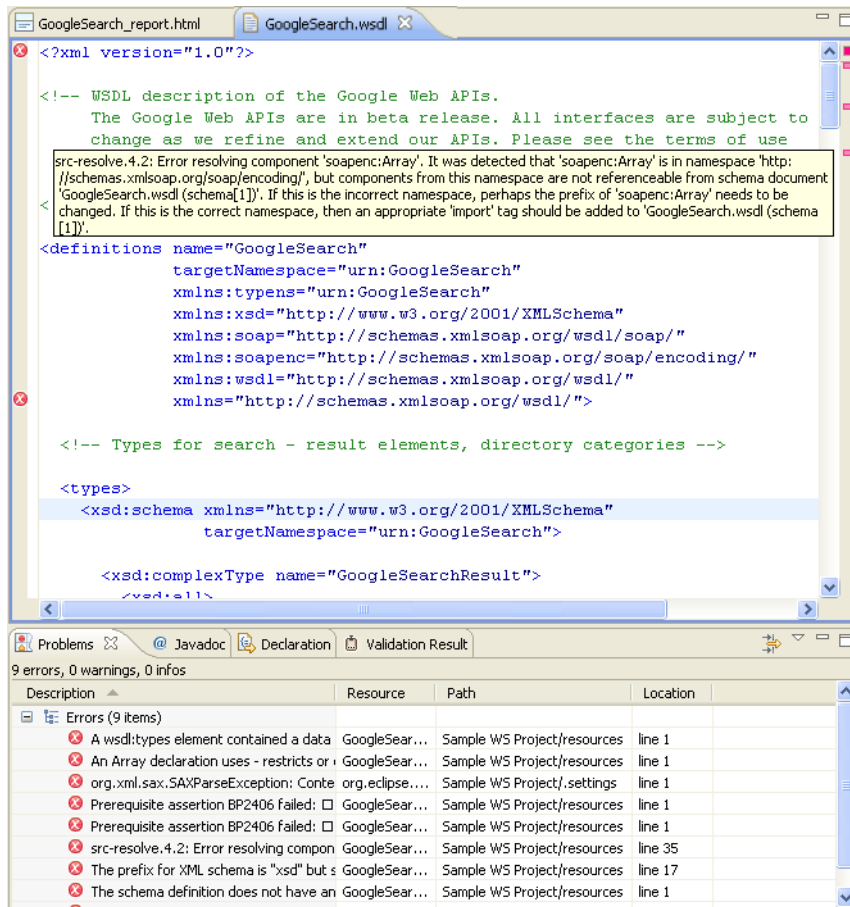
After automatic validation has been set up, you have the option to include or exclude documents for validation.

To include or exclude documents:

1   Right-click the document in Project Explorer to open its context menu.

2   Select **Configure Automatic Validation**, and do one of the following:

• Select **Exclude from Validation Path** to remove the document from the validation process.

• Select **Include in Validation Path** to add the document to the validation process.

> You can also add resources to the custom list from the Validation Results view. For details, see Viewing Ad Hoc Validation Results on page 33.

Disabling Spell Checker

In Eclipse 3.2 (or higher), the spell checker annotates documents that are open in the main view. The spell checker annotations can obscure Systinet Plug-In for Eclipse automatic validation annotations. You should disable the Eclipse spell checker.

To disable the Eclipse spell checker:

1   From the menu, select **Window→Preferences**.

   The Preferences dialog box opens.

2   In the tree menu, expand **General→Editors→Text Editors→Spelling**.

3   Deselect **Enable spell checking** and click **OK**.

Assertion Details

You can view additional details about assertions that were violated. Systinet Plug-In for Eclipse can create a special tooltip describing the assertion, with HTML links to assertion description web pages.

To view an assertion description:

•   Right-click one of the errors listed in the Problems view to open its context menu, and then click **View Assertion Description**.

   A tooltip opens with the assertion description and a link to available online resources about the assertion.

6 Generating Service Clients

Systinet Plug-In integrates with existing Eclipse Web Tools Platform (WTP) functionality, enabling you to create a client stub from resources in the repository.

To generate a service client stub:

1   Perform a repository search to locate the resource you want to use for client generation.

   For details, see Searching the Repository on page 17.

   For consumer use cases search for *Consumable* services at the *Production* lifecycle stage.

2   In the Repository Search Results view, right-click the Operation or SOAP Service to use for client generation, and select **Generate Service Client**.

   If the Environment preference is set to `Always Ask`, you are prompted to select from the available endpoint options, otherwise any endpoint uses the default setting. For details, see Setting the Environment on page 64.

   Generating a client uses the WSDL associated with SOAP Service or Operation.

   The Web Service Client dialog opens.
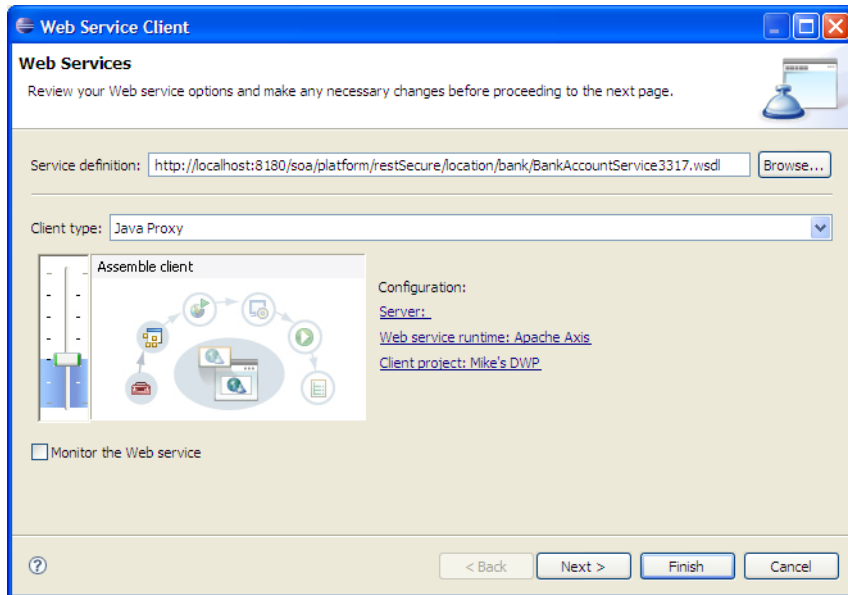
3   Use the Web Service Client dialog to select your project and environment settings.

For details, see the WTP documentation at the following location:

http://help.eclipse.org/help33/topic/org.eclipse.jst.ws.axis.ui.doc.user/tasks/tsampappa.html

> The WTP plug-in looks for a Dynamic Web Project and warns you if there is no such
> project available. It is possible to ignore the warning and select a plain Java project
> instead.
>
> Click **Client Project** and select the project you require.

The WTP plug-in uses the provided WSDL to generate source code stubs for the service client.

Use the Package Explorer to access the generated code.

7 Generating Service Skeletons

Systinet Plug-In for Eclipse integrates with existing Eclipse Web Tools Platform (WTP) functionality, enabling you to create a skeleton stub from resources in the repository.

To generate a service skeleton stub:

1   Perform a repository search to locate the resource you want to use for skeleton generation.

For details, see Searching the Repository on page 17.

> For provider use cases search for services at early lifecycle stages, such as *Initial* or *Development*.

2   In the Repository Search Results view, right-click the SOAP Service or Operation to use for client generation, and select **Generate Service Skeleton**.

> Generating a skeleton against a SOAP Service or Operation uses the WSDL associated with it.

The Web Service dialog opens.
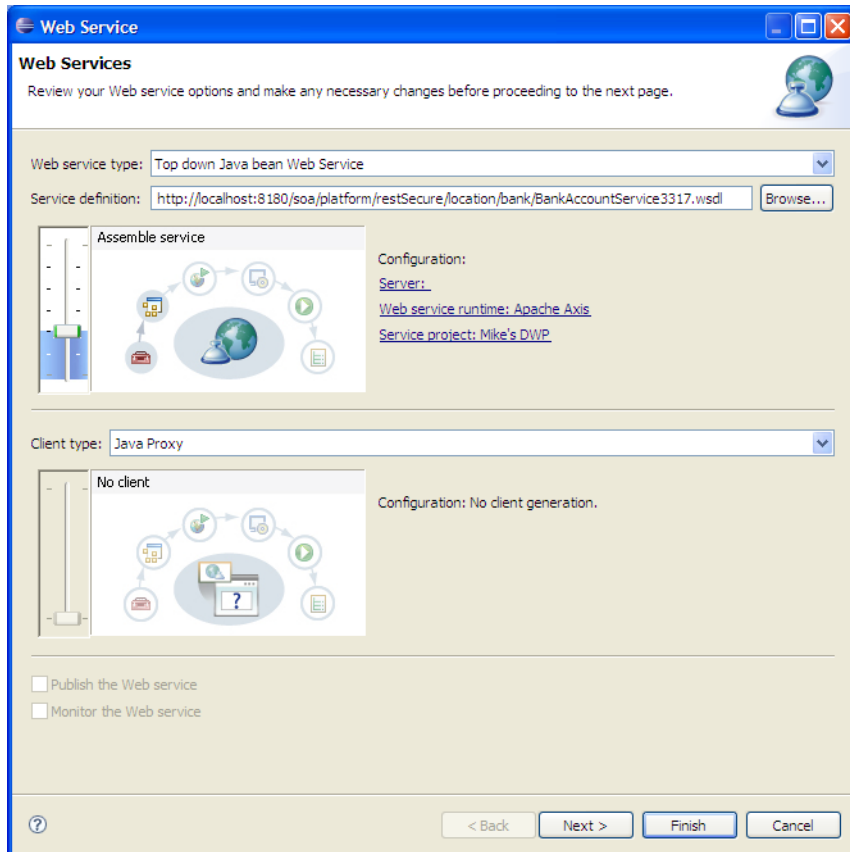
3   Use the Web Service dialog to select your project and environment settings.

For details, see the WTP documentation at the following location:

http://help.eclipse.org/help33/topic/org.eclipse.jst.ws.axis.ui.doc.user/tasks/tsklwsdla.html

The WTP plug-in requires a Dynamic Web Project for skeleton generation.

The WTP plug-in uses the provided WSDL to generate source code stubs for the service skeleton.

Use the Package Explorer to access the generated code.

A Dialog Boxes

Each Systinet Plug-In for Eclipse input dialog is described in the following sections:

- Edit Configuration and Launch on page 46 Run ad hoc validation on several documents and policies at the same time.

- Policy Validation on page 48 Set preferences for your report style.

- Properties for [Project Name] on page 49 Set up automatic validation for your project.

Edit Configuration and Launch

Run ad hoc validation on several documents and policies at the same time:
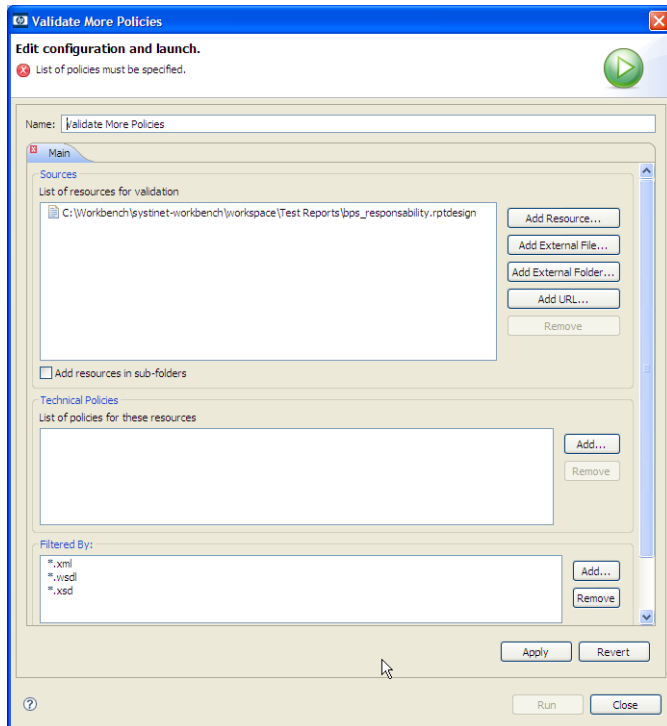
Parameter	Definition
Name	The name you want to use for the validation check.
Sources	The list of resources you want to use for validation.
Add Resource	Browse and select documents from your Eclipse project.
Add External File	Browse and select documents from your file system.
Add External Folder	Browse and select all documents in a folder in your file system.
Add URL	Enter an endpoint URL of a remote document.
Remove	Remove previously selected documents.
Technical Policies	The list of technical policies associated with the resources.
Add	Select from a list of available policies to use in the validation.

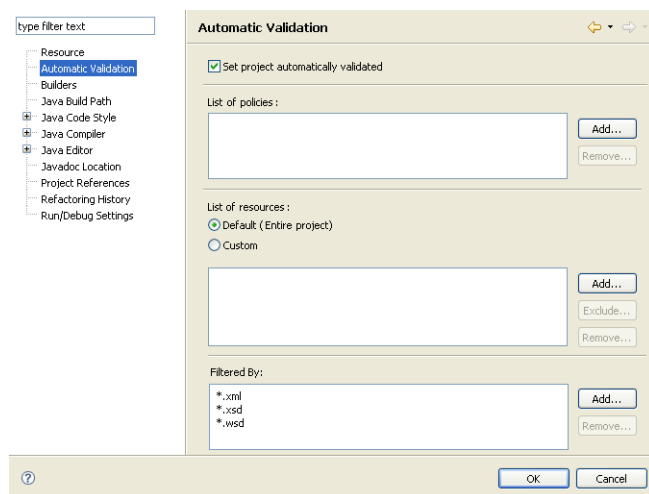| Parameter	Definition
Remove	Remove previously selected policies.
Filtered By	Filter available documents or policies by file type.
Add	Add a specific file type.
Remove	Remove a previously selected file type.
Apply	Apply the current configuration.
Revert	Restore the previous configuration.
Run	Start validation.
Close	Close the dialog box without launching validation.

Policy Validation

Set preferences for your report style:
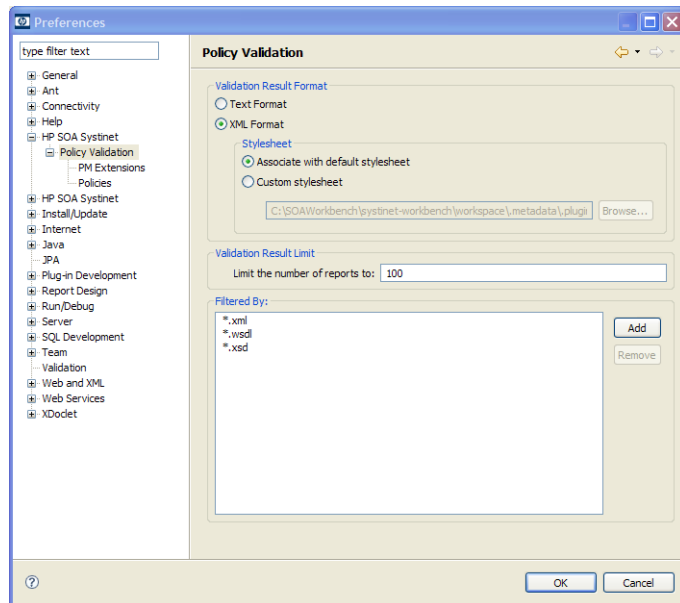
Parameter	Definition
Validation Result Format	Choose whether you want the validation results to be in Text or XML format.
Stylesheet	Choose whether to use the default or a custom stylesheet.
Browse	Browse for and select a custom stylesheet.
Validation Result Limit	Specify the maximum number of returned results.
Filtered By	Filter available stylesheets by file type.
Add	Add a specific file type.
Remove	Remove a previously selected file type.
OK	Save your preferences.
Cancel	Exit without saving your preferences.

Properties for *[Project Name]*

Set up automatic validation for your project.

Parameter	Definition
List of Policies	Available policies for use in validation.
Add	Browse for and select the policies you need.
Remove	Remove previously selected policies.
List of Resources	Choose whether you want to use resources in the entire project (default) or create a custom selection.
Add	Add custom resources.
Exclude	Exclude specific files from the selected resource.
Remove	Remove previously selected resources.
Filtered By	List of associated file types.
Add	Add a specific file type to the filter.
Remove	Remove a previously selected file type from the filter.
OK	Save your settings.
Cancel	Exit without saving your settings.

Repository Search

The property parameters available in the Repository Search dialog vary depending on the artifact. The artifacts available and their properties also vary according to your customization and configuration.

For details about customizing Systinet Plug-In for Eclipse, see Appendix C, Configuring Systinet Plug-In for Eclipse.

This section describes the default parameters for the default artifact types in the following sections:

- Repository Search: Application on page 51

- Repository Search: Business Service on page 52

- Repository Search: SOAP Service on page 52

- Repository Search: Operation on page 53

Repository Search: Application

This section describes the default property search parameters for applications.
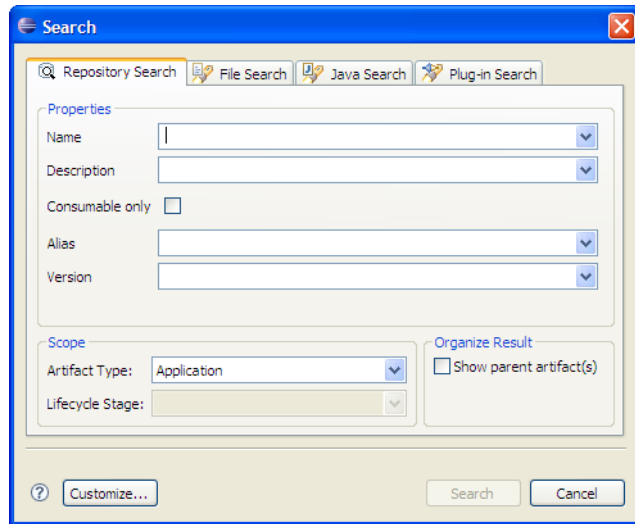
Properties	Description
Name	Name of the application.
Description	Description of the application.
Consumable Only	Select to restrict the search to consumable applications.
Alias	Alias for the application.

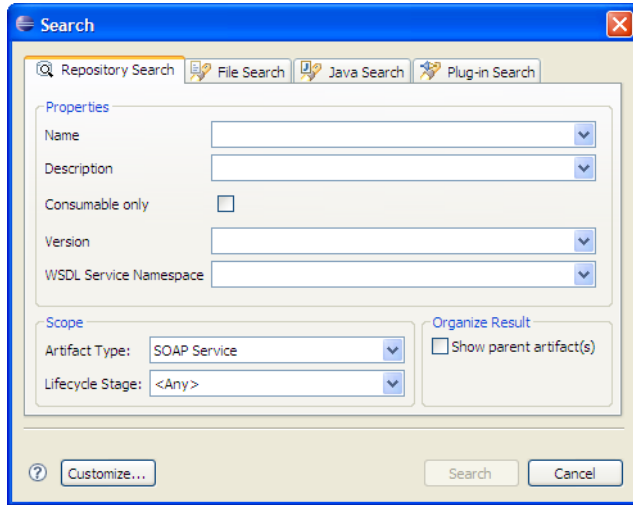| Properties	Description
Version	Version number.

Repository Search: Business Service

This section describes the default property search parameters for business services.

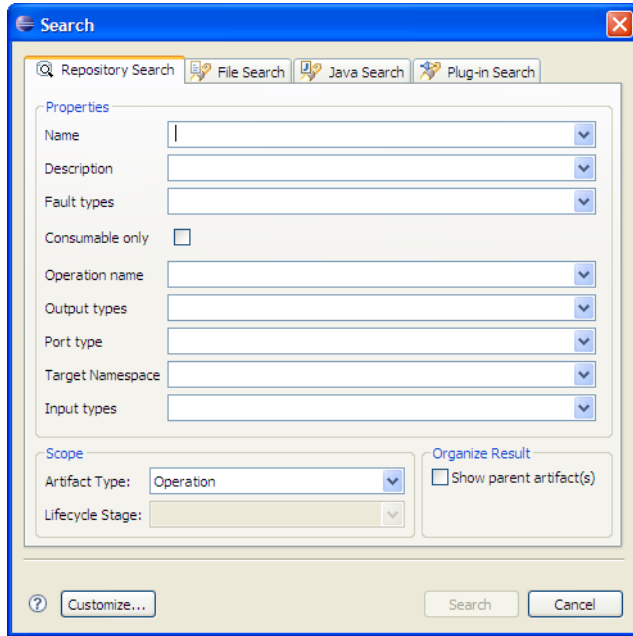| Properties	Description
Name	Name of the business service.
Description	Description of the business service.
Consumable Only	Select to restrict the search to consumable business services.
Version	Version number.
Keyword	Any keywords assigned to the business service.

Repository Search: SOAP Service

This section describes the default property search parameters for SOAP services.

Properties	Description
Name	Name of the SOAP service.
Description	Description of the SOAP Service.
Consumable Only	Select to restrict the search to consumable SOAP services.
Version	Version number.
WSDL Service Namespace	Service namespace defined in the associated WSDL.

Repository Search: Operation

This section describes the default property search parameters for Operations.

Properties	Description
Name	Name of the operation.
Description	Description of the operation.
Fault Types	XSD fault types defined for the operation.
Consumable Only	Select to restrict the search to consumable operations.
Operation Name	Operation name defined by the associated WSDL.
Output Types	XSD output types defined for the operation.
Port Type	Set of related operations defined by the associated WSDL.
Target Namespace	Namespace defined by the associated WSDL.
Input Types	XSD input types defined for the operation.

Repository Search: WSDL

This section describes the default property search parameters for WSDLs.

Properties	Description
Name	Name of the WSDL.
Description	Description of the WSDL.
Location	Server folder where the WSDL is stored in the repository.
Consumable	Select to restrict the search to consumable WSDLs.

Properties	Description
Version	Version number.

Repository Search: BPEL

This section describes the default property search parameters for BPELs.
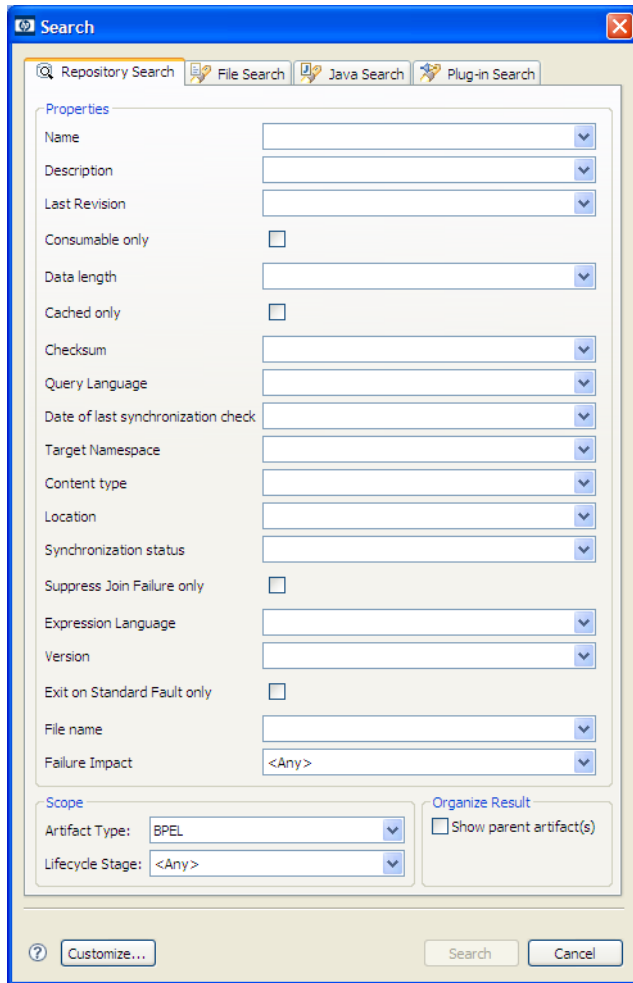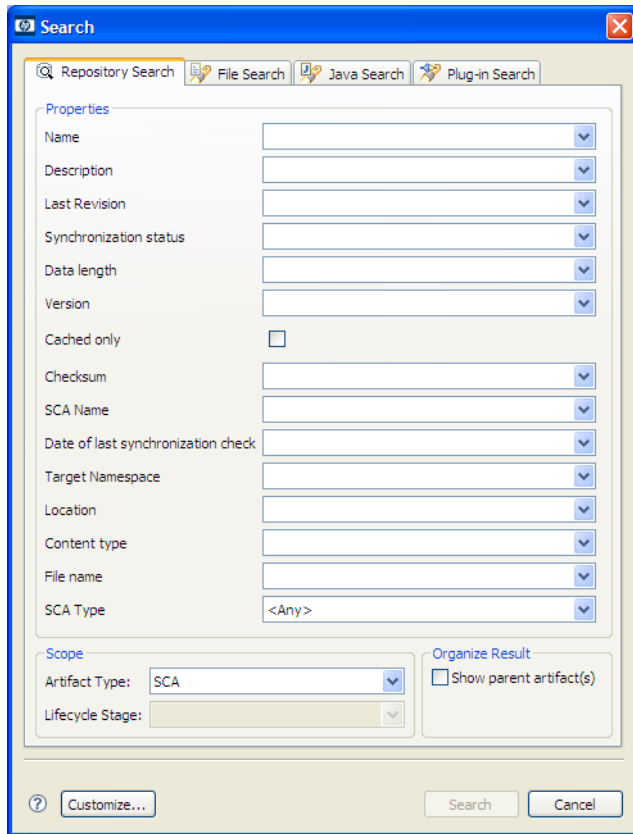
Properties	Description
Name	Name of the BPEL.
Description	Description of the BPEL.
Query Language	Query language used in the selection of nodes for assignment.

Properties	Description
Target Namespace	Namespace defined in the BPEL.
Expression Language	Language defining expressions in the BPEL.
Location	Server folder where the BPEL is stored in the repository.
Keyword	Search term identifying the BPEL.
Failure Impact	Select an impact level from the drop-down list.
Consumable	Select to restrict the search to consumable WSDLs.
Version	Version number.

Repository Search: SCA

This section describes the default property search parameters for SCAs.

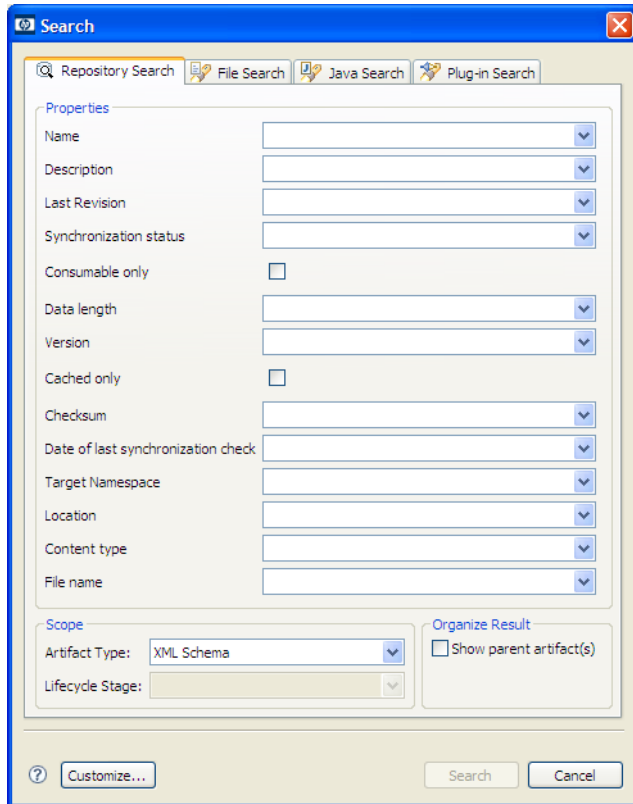| Properties	Description
Name	Name of the SCA.
Description	Description of the SCA.
Location	Server folder where the SCA is stored in the repository.
SCA Type	The type of the attached SCA file.
Version	Version number.
Target Namespace	Namespace defined in the SCA.

Repository Search: Business Process

This section describes the default property search parameters for business processes.

Properties	Description
Name	Name of the business process.
Description	Description of the business process.
Failure Impact	Select an impact level from the drop-down list.
Version	Version number.
Consumable	Select to restrict the search to consumable business processes.

Repository Search: XML Schema

This section describes the default property search parameters for XML schemas.

Properties	Description
Name	Name of the XML Schema.
Description	Description of the XML Schema.
Location	Server folder where the schema is stored in the repository.
Consumable	Select to restrict the search to consumable XMLs.

Properties	Description
Version	Version number.
Target Namespace	Namespace defined in the XML Schema.

B Preferences

Systinet Plug-In for Eclipse contains a set of preferences determining its interaction with SOA Systinet. These settings are prompted for when required, but they can also be changed from the **Tools→Options** menu.

These settings are described in the following sections:

*   Setting the Server on page 63

    Specify the installation of SOA Systinet to integrate with.

*   Setting the Environment on page 64

    Specify the environment categorization to use when obtaining endpoints.

*   Setting Synchronization on page 66

    Specify whether to automatically synchronize local resources with the equivalent resources in SOA Systinet.

Setting the Server

The develop services in conjunction with SOA Systinet you must set the credentials for the server you are working with.
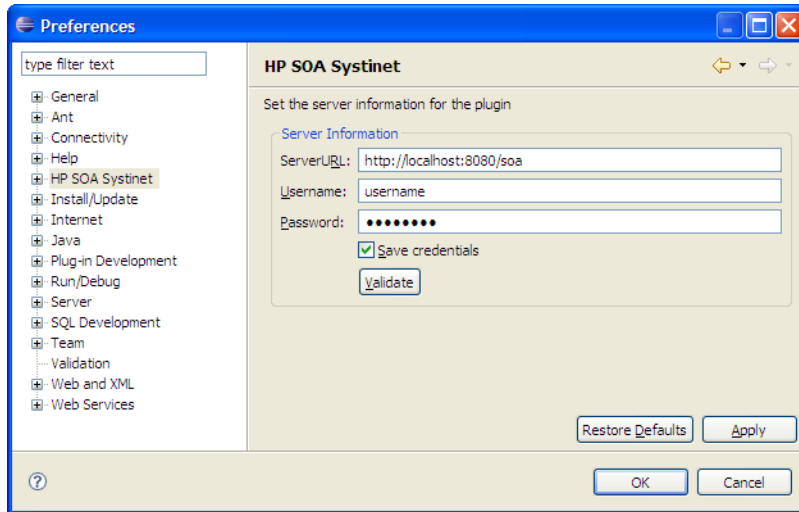
To set the SOA Systinet server:

1   From the menu, select **Window→Preferences**.

    The Preferences dialog box opens.

2   In the tree view of the Preferences dialog box, select **HP SOA Systinet**.

The HP SOA Systinet page opens, as shown in .

Figure 6. HP SOA Systinet Page

3   Set the connection details for the SOA Systinet server. Optionally, save these credentials or use **Validate** to test the connection.

4   Click **OK**.

Setting the Environment

SOA Systinet uses an Environment taxonomy to categorize endpoints enabling multiple endpoints for a single service without requiring modification of the WSDL definition.

This means that the WSDL itself does not define the environment specific endpoints that you may require for service development.

Systinet Plug-In contains an environment setting that allows you to define a default environment you are developing your services for in order to obtain the relevant endpoints associated with the service.

To set the default environment:

1 From the menu, select **Window→Preferences**.

   The Preferences dialog box opens.

2 In the tree view of the Preferences dialog box, select **HP SOA Systinet→Environment**.

   The Environments page opens, as shown in Figure 7, "Environments Page".

Figure 7. Environments Page
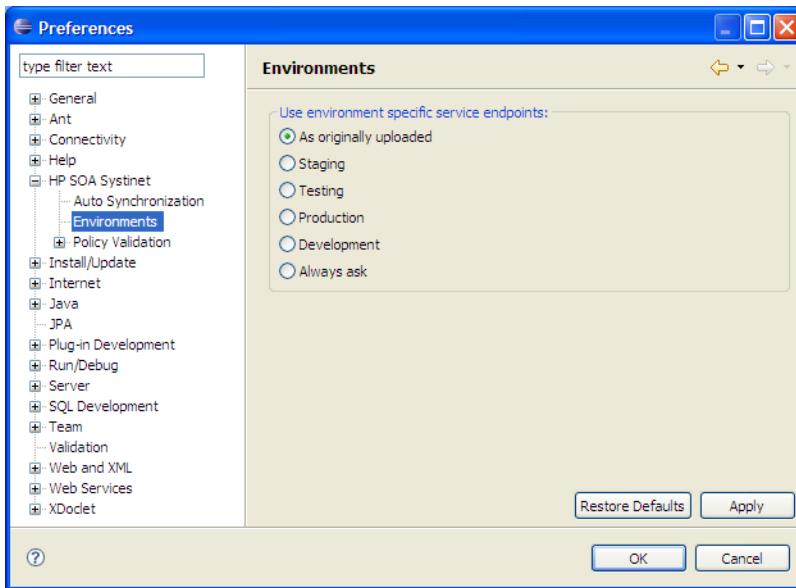
3 Set the default environment from the following options:

Environment Option	Description
As originally uploaded	Use the WSDL without any environment specific endpoints.

Environment Option	Description
Environment Categories	Use the endpoints for the service categorized as the selected environment. For example, Development or Testing.
Always Ask	Prompt for environment selection whenever it is required.

4   Click **OK**.

Setting Synchronization

Systinet Plug-In enables you to download resources from SOA Systinet. In addition, you can specify automatic synchronization between SOA Systinet resources and their local equivalents in your IDE project.

To set up automatic synchronization:
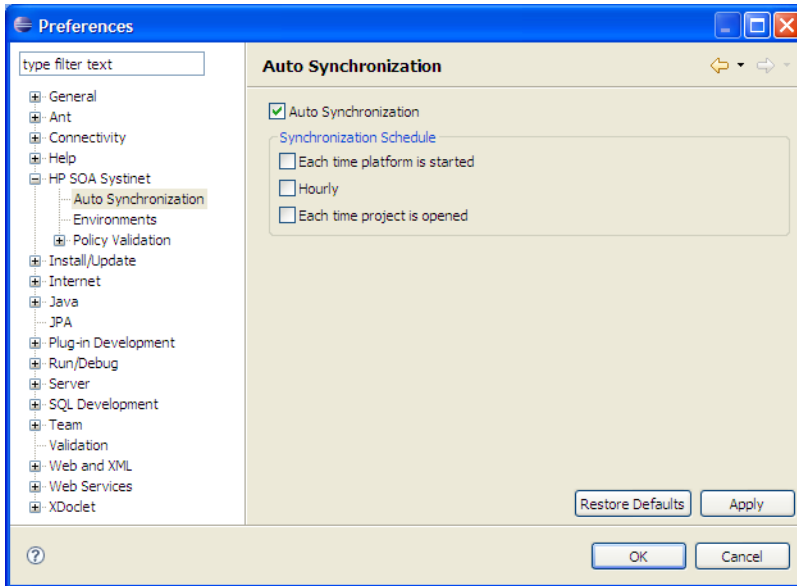
1   From the menu, select **Window→Preferences**.

The Preferences dialog box opens.

2   In the tree view of the Preferences dialog box, select **HP SOA Systinet→Auto Synchronization**.

The Auto Synchronization page opens, as shown in Figure 8, "Auto Synchronization Page".

Figure 8. Auto Synchronization Page

3 To enable automatic synchronization, select **Auto Synchronization**, and select from the following synchronization options:

Auto Synchronization Option	Description
Each Time Platform is Started	Update local versions with newer versions from SOA Systinet whenever the SOA Systinet server starts.
Hourly	Update local versions with newer versions from SOA Systinet every hour.
Each Time Project is Opened	Update local versions with newer versions from SOA Systinet whenever a project is opened.

4 Click **OK**.

C Configuring Systinet Plug-In for Eclipse

Systinet Plug-In for Eclipse uses a configuration file at the following location in the SOA Systinet repository:

`http://host:port/soa/platform/restSecure/location/hpsoa/client/search-configuration.xml`

This file is a server specific configuration that all instances of Systinet Plug-In for Eclipse access to determine the format and content of repository search for that server.

When you first use Systinet Plug-In for Eclipse in your organization you must upload this configuration to the SOA Systinet server after you make any changes to reflect your requirements.

Systinet Plug-In for Eclipse contains a default configuration defined in the following file:

`ECLIPSE_HOME/plugins/com.hp.systinet.tools.search.core_3.2.0.vBUILDTIME/config/search-configuration.xml`

To change the Systinet Plug-In for Eclipse configuration and upload it to SOA Systinet:

1 Create a working copy of `search-configuration.xml`.

2 Open `search-configuration.xml` with a text editor.

3 Edit `search-configuration.xml` to reflect your requirements.

For details, see the following sections:

4   In SOA Systinet use the **Upload Content** feature to store the configuration in the repository.

In the Upload Content page, specify the following location:

`/hpsoa/client`

For details, see "Uploading Service Infrastructure from Definition Documents" in the *HP SOA Systinet User Guide*.

Configuring Search and Detail Parameters

The artifact types in Repository Search and the property parameters displayed in Repository Search and the Artifact Detail View are defined in the `<details_view>` section of the configuration file.

For example, the application artifact is defined as follows:

```
<details_view>
  <artifact_type localName="hpsoaApplicationArtifact">
    <invisible_properties>
      <property localName="lastRevision"/>
      <property localName="revision"/>
      <property localName="identifierBag"/>
      <property localName="artifactType"/>
      <property localName="categoryBag"/>
      <property localName="stakeholderEmail"/>
      <property localName="criticality"/>
    </invisible_properties>
  </artifact_type>
  ...
</details_view>
```

To configure the Repository Search:

1   Open `search-configuration.xml` with a text editor.

2   Do any of the following:

   • Add an artifact type to search by adding an `<artifact_type>` segment using the localName of the artifact type.

   • Remove properties from the search parameters and detail view by adding a `<property>` in the `<invisible_properties>` segment of an artifact, using the localName of the property.

You can locate the localNames in your configuration at the following location:

`http://host:port/soa/systinet/platform/restBasic/repository/sdm/sdmConfig.xml`

3   Save `search-configuration.xml`.

Configuring Search Results

The property parameters displayed for artifacts in the Repository Search Results view are defined in the `<search_result>` section of the configuration file.

For example, the application artifact is defined as follows:

```
<search_result>
  <artifact_type localName="hpsoaApplicationArtifact">
    <visible_properties>
      <property localName="name"/>
      <property localName="version"/>
      <property localName="productionStage"/>
      <property localName="description"/>
    </visible_properties>
  </artifact_type>
  ...
</search_result>
```

To configure the Repository Search:

1   Open `search-configuration.xml` with a text editor.

2   Do any of the following:

   • Add an artifact type to search results by adding an `<artifact_type>` segment using the localName of the artifact type.

   • Add properties to the results for an artifact type by adding a `<property>` in the `<visible_properties>` segment of an artifact, using the localName of the property.

You can locate the localNames in your configuration at the following location:

```
http://host:port/soa/systinet/platform/restBasic/repository/sdm/sdmConfig.xml
```

3   Save `search-configuration.xml`.

Configuring Artifact Hierarchies

Service artifacts in SOA Systinet form natural hierarchies. Repository Search locates the artifacts matching your search criteria, and if requested, any related artifacts specified in the hierarchical structure defined in the configuration.

For example, the default hierarchy is defined as follows:

```
<hierarchical>
  <artifact localName="hpsoaApplicationArtifact">
    <artifact localName="businessServiceArtifact" upRef="hpsoaProvidingApplication"
      downRef="hpsoaProvidesBusinessService">
      <artifact localName="webServiceArtifact" upRef="inBusinessService" downRef="service">
        <artifact localName="wsdlArtifact" upRef="definitionOf" downRef="definition"/>
      </artifact>
    </artifact>
  </artifact>
</hierarchical>
```

You can add and modify hierarchies to match those relevant to your requirements.

To configure the Repository Search hierarchies:

1   Open `search-configuration.xml` with a text editor.

2   Do any of the following:

   • Add a hierarchy by adding the top level `<artifact>` within the `<hierarchical>` segment, defined by its local name.

   • Add artifacts to hierarchies by adding `<artifact>` within a nested structure of an artifact hierarchy. Define the artifact with a local name and directional relationship properties.

You can locate the localNames and property names in your configuration at the following location:

```
http://host:port/soa/systinet/platform/restBasic/repository/sdm/sdmConfig.xml
```

3   Save `search-configuration.xml`.

If you define multiple hierarchies, the first hierarchy defined takes precedence in the event of a conflict.

Configuring Localization

Localized text can be configured in repository search for artifact names in the `<artifact_mapping>` section of the configuration file.

For example, the application artifact is defined as follows in English, Spanish, and Vietnamese:

```
<artifact_mapping>
  <artifact_type localName="hpsoaApplicationArtifact">
    <custom_name value="Application"/>
    <custom_name locale="es" value="Aplicacion"/>
    <custom_name locale="vi" value="&#7912;ng D&#7909;ng"/>
  </artifact_type>
  ...
</artifact_mapping>
```

To configure the localized text in Repository Search:

1   Open `search-configuration.xml` with a text editor.

2   Add a new mapping rule for localization to Repository Search by adding an `<artifact_type>` segment using the localName of the artifact type.

Specify the text to be localized with a `<custom_name>` specifying the text to be localized when the artifact type is rendered.

Add location specific text for an artifact type by adding a `<custom_name>` to the artifact specifying the locale and the text to use in that location.

> You can locate the localNames in your configuration at the following location:
>
> `http://host:port/soa/systinet/platform/restBasic/repository/sdm/sdmConfig.xml`

3   Save `search-configuration.xml`.

D Eclipse Plug-in Requirements

If you use a non-packaged version of Eclipse you may require a number of plug-ins.

The following sections list the plug-ins required by Systinet Plug-In for Eclipse for each supported version of Eclipse:

Eclipse 3.2.x Plug-in Requirements

For Eclipse 3.2.x, Systinet Plug-In for Eclipse has dependencies on the following plug-ins:

- DTP SDK 0.9 (dtp-sdk_0.9.1.zip)

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

- EMF SDO Runtime 2.2.0 (emf-sdo-runtime-2.2.0.zip)

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

- GEF Runtime 3.2 (GEF-runtime-3.2.zip)

  http://archive.eclipse.org/tools/gef/downloads/drops/R-3.2-200606270816/

- WTP-R-1.5.0 (wtp-R-1.5.0-200606281455.zip)

  http://www.eclipse.org/webtools/releases/1.5/

- XSD Runtime 2.2.0 (xsd-runtime-2.2.0.zip)

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

- JEM-SDK-1.2 (JEM-SDK-1.2.zip)

  http://download.eclipse.org/tools/ve/downloads/drops/R-1.2-200606280938/

Install these plug-ins before installing Systinet Plug-In for Eclipse.

Eclipse 3.3.x Plug-in Requirements

For Eclipse 3.3.x, Systinet Plug-In for Eclipse has dependencies on the following plug-ins:

- DTP SDK 1.5 (dtp-sdk_1.5.zip)

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

- EMF SDO Runtime 2.3.0 (emf-sdo-runtime-2.3.0.zip)

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

- GEF Runtime 3.3 (GEF-runtime-3.3.zip)

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

- WTP 2.0 (wtp-R-2.0-200706260303.zip)

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

- XSD Runtime 2.3 (xsd-runtime-2.3.1.zip)

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

Install these plug-ins before installing Systinet Plug-In for Eclipse.

Eclipse 3.4.x Plug-in Requirements

For Eclipse 3.4.x, Systinet Plug-In for Eclipse has dependencies on the following plug-ins:

- DTP SDK 1.6 (dtp-sdk_1.6.0.zip)

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

- EMF SDO Runtime 2.4.0 (emf-runtime-2.4.0.zip, sdo-runtime-2.4.0.zip)

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

- GEF Runtime 3.4 (GEF-runtime-3.4.0.zip)

  http://archive.eclipse.org/tools/gef/downloads/drops/

- WTP 3.0 (wtp-R-3.0-20080616152118a.zip)

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

- XSD Runtime 2.4.0 (xsd-runtime-2.4.0.zip)

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

Install these plug-ins before installing Systinet Plug-In for Eclipse.