HP SOA Systinet

Software Version: 2.50, Visibility Edition

User Guide

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Contents

Welcome to This Guide

Welcome to HP SOA Systinet, the foundation of Service Oriented Architecture, providing an enterprise with a single place to organize, understand, and manage information in its SOA. The standards-based architecture of SOA Systinet maximizes interoperability with other SOA products.

How This Guide is Organized

SOA Systinet User Guide describes the features and functionality of the product for normal users. It is organized according to the UI – a part for the common UI features and then a part for the features and functionality of each tab.

This guide describes the default installation of SOA Systinet. The format and content of each tab can be modified using HP SOA Systinet Customization Editor. All screenshots in this guide are from the **Service Publisher** perspective. The **Administrator** perspective displays additional functionality described in HP SOA Systinet Administrator Guide and the **General** perspective may not display all the functionality described in this guide.

This guide contains the following parts:

Part I, “Getting Started”. An introduction to the features of the user interface and the common tasks that can be accessed from all pages.

Part II, “Dashboard”. The features of the **Dashboard** and the tasks performed there.

Part III, “Services”. A guide to the **Services** tab and the creation and management of services.

Part IV, “Tools”. A guide to the **Tools** tab and the governance and repository content management features accessed from it.

Document Conventions

The typographic conventions used in this document are:

run.bat make	Script name or other executable command plus mandatory arguments.
[--help]	A command-line option.
either | or	A choice of arguments.
replace_value	A command-line argument that should be replaced with an actual value.
{arg1 | arg2}	A choice between two command-line arguments where one or the other is mandatory.
`rmdir /S /Q System32`	Operating system commands and other user input that you can type on the command line and press **Enter** to invoke. Items in *italics* should be replaced by actual values.
`C:\System.ini`	Filenames, directory names, paths and package names.
`a.append(b);`	Program source code.
`server.Version`	An inline Java or C++ class name.
`getVersion()`	An inline Java method name.
Shift-N	A combination of keystrokes.
Service View	A label, word or phrase in a GUI window, often clickable.
New->Service	Menu choice.

Documentation Updates

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

- Software version number
- 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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HP Software Support

You can visit the HP Software Support Web site at:

www.hp.com/managementsoftware/services

HP Software online support provides an efficient way to access interactive technical support tools. As a valued support customer, you can benefit by using the support site to:

- Search for knowledge documents of interest
- Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts

- Look up HP support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract. To find more information about access levels, go to: www.hp.-com/managementsoftware/access_level

To register for an HP Passport ID, go to: www.managementsoftware.hp.com/passport-registration.html

Part I. Getting Started

This part explains how to access SOA Systinet, the features of the user interface, and the common functions accessible from every page.

This part contains the following chapters:

1 Accessing the User Interface

Before attempting to use SOA Systinet, ensure that it is running on the server you wish to access.

To access the web UI use one of the web browsers listed in the Supported Platforms section in the HP SOA Systinet Installation Guide.

Enter the URL into your browser in the form:

```
protocol://server:port/context/systinet/platform/web
```

where:

- *protocol* is either http, or https if you want to create a secure connection using SSL
- *server* and *port* and *context* are determined during installation

The default port is 8080 for HTTP and 8843 to use SSO. For example:

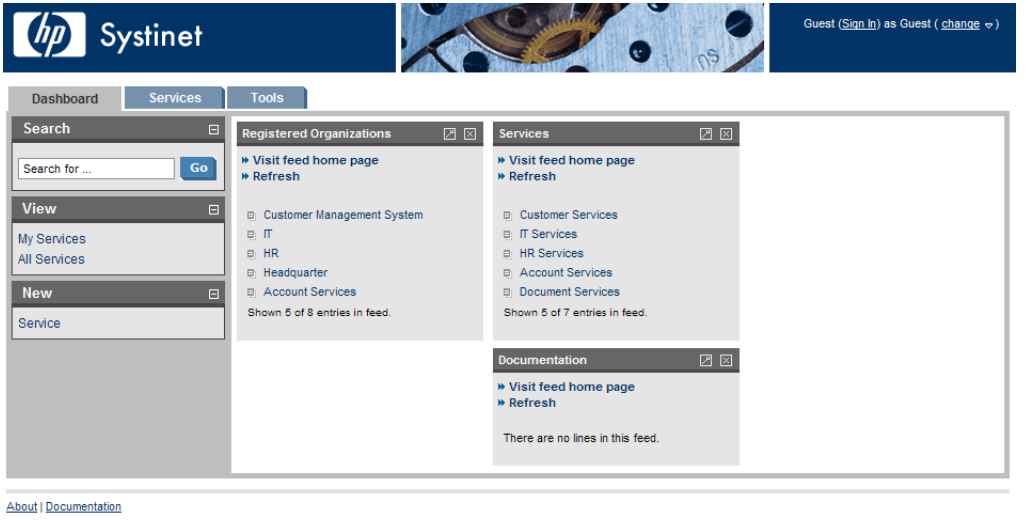
```
http://mypc:8080/soa/systinet/platform/web
```

or:

```
https://ourserver:8843/soa/systinet/platform/web
```

This should display the **Dashboard** in your browser:

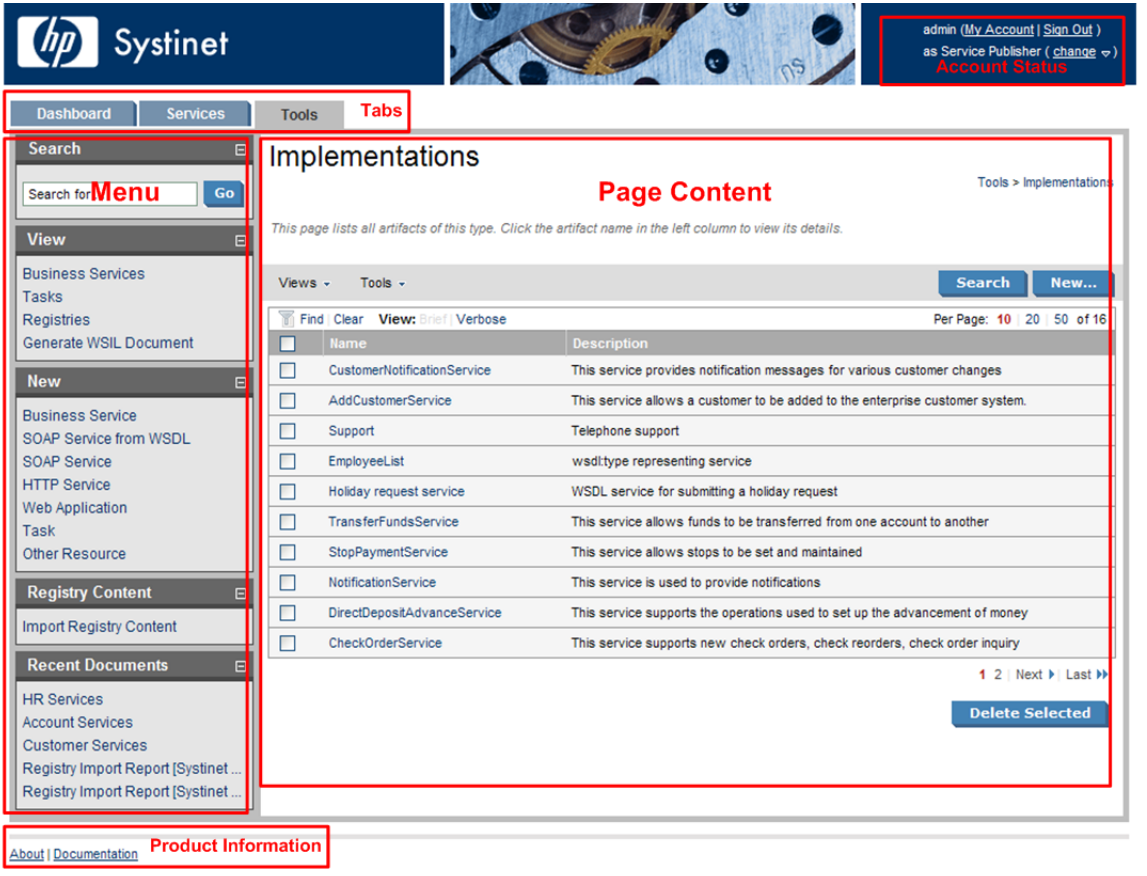
Figure 1. The Dashboard at Start-up



2 Features of the User Interface

The SOA Systinet user interface has the same look and feel throughout:

Figure 1. A Typical SOA Systinet Page



Every page contains the following common elements:

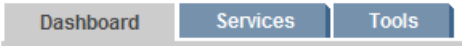
- **Tabs** are the access to the main components of SOA Systinet described in Tabs on page 19.
- The **Menu** contains a set of component specific links described in Menu on page 19.
- **Account Status** controls sign-in, personal account management and your view of SOA Systinet described in Account Status on page 20.

- **Product Information** gives access to product and documentation information.

Tabs

The UI is split into functional components. At the top of every page the tabs access these components.

Figure 2. SOA Systinet Tabs



Clicking a tab opens the main page of that component:

The **Dashboard** is the first page you see when you start SOA Systinet. It contains portlets showing a customizable real-time view of your SOA. The Dashboard is described in Features of the Dashboard Tab on page 33.

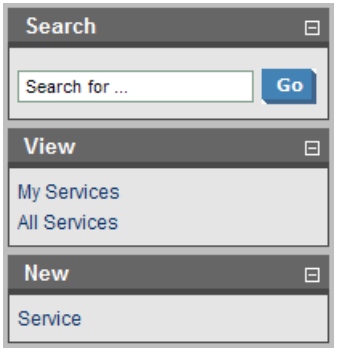
The **Services** tab is the central location which shows all information about services in one place to provide easy access and simple management. The **Services** tab is described in Features of the Services Tab on page 41.

The **Tools** tab gives access to Information Management offering a generic low level view of the content of SOA Systinet and access to administration and governance tools. The **Tools** tab is described in Features of the Tools Tab on page 61.

Menu

On the left of each page is a section containing a menu of links and a search box.

Figure 3. Menu



The search feature is described in Full Text Search on page 29.

The menu is context specific for each component and each menu is described in:

- Dashboard Menu on page 34
- Services Menu on page 42
- Tools Menu on page 62

Account Status

In the top-right of each page is a section allowing you to sign-in, manage your account and change your role in SOA Systinet.

Figure 4. Account Status before Sign-In

Click **Sign In** and enter the credentials provided by your administrator. If permitted by the administrator you can also create a new account from the sign-in page as described in Creating an Account on page 23.

Figure 5. Account Status after Sign-In

My Account. Manage your account as described in Managing Your Account on page 27.

Sign Out. Sign out of SOA Systinet and become a guest user again.

Change. Move the cursor over **change** and select the perspective to alter your view of SOA Systinet.

3 Creating an Account

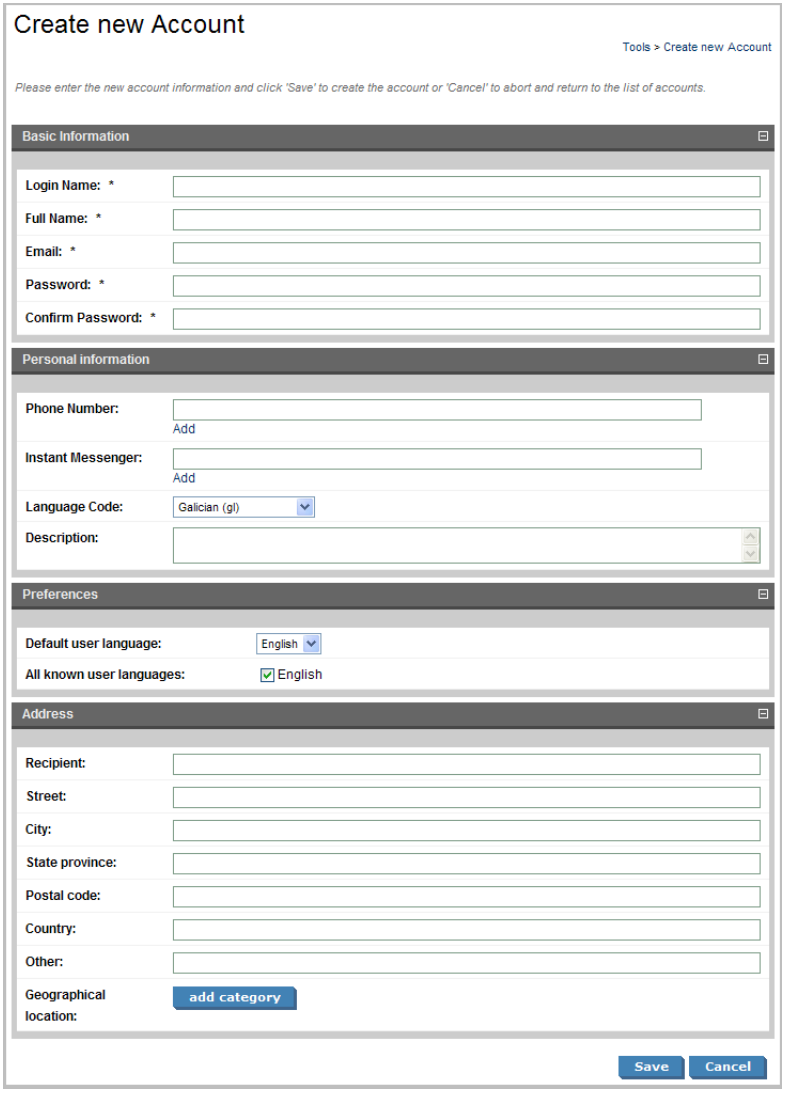
SOA Systinet provides account management features, however, if LDAP is used then the LDAP account management functions should be used instead.

To create a new account:

1. To start the **Create New Account** dialog:

   - As the administrator, in Tools->User Accounts click **New Account**
   - Alternatively, you may be permitted to register as a new user from **Sign In**. Click **Sign In** and then **register as a new user**.

   The **Create New Account** dialog appears:



2 Complete the account details with the following parameters:

Table 1. Basic Information

Parameter	Definition
Login Name	The user id used to sign in
Full Name	The name of the user
Email	The email address for notifications
Password	The password used to sign in
Confirm Password	The password used to sign in

Table 2. Personal Information

Parameter	Definition
Phone Number	A contact telephone number – use **Add** to create multiple entries
Instant Messenger	A messenger id – use **Add** to create multiple entries
Language Code	The language spoken by the new user
Description	A description for the new user

Table 3. Preferences

Parameter	Definition
Default User Language	Select a language from the drop-down list
All known user languages	Check the boxes to select spoken languages
Platform Administrator	The administrator can check this box if the new user has administrator privileges (this box is not visible for new registrations)

The address section allows you to input a mailing address for the user with **Geographical Location** selection.

3 Click **Save** to create the new user.

4 Managing Your Account

To change your account details:

1. Click **My Account** to display your account information.
2. You can change your general account details and your password.
   - To change your password:
     1. Click **Change Password**.
     2. Enter your old and new passwords.
     3. Click **Save** to confirm the change.
   - To edit your account:
     1. Click **Edit**.
     2. Change the parameters described in Creating an Account on page 23 with the exception of password.
     3. Click **Save** to confirm the changes.

5 Full Text Search

Full text search is the simplest way to find an item in the repository.

Full text search must be enabled on the database for this feature to function.

The search input is located at the top of the menu on every page in SOA Systinet:

To perform a full text search of data in SOA Systinet repository:

Type your full text search query in the input field and click **Go**.

Multiple search terms can be separated with a space to search for repository artifacts containing all the specified terms.

SOA Systinet allows the following wildcards:

- `_` can be used to represent any character.
- `%` or `*` can be used to represent any text string.

For example, the search string: `C_st% service` finds both Customer Service and Cost Pricing Service if they exist in the repository.

The default functionality of the full text search adds a `%` to the end of any input search string that does not contain wildcards or logical operators. For example, searching for `acc` finds all services that begin with acc.

More advanced search facilities are provided in the **Tools** tab. See Stored Searches on page 103 for more details.

Part II. Dashboard

This part explains the features and use of the **Dashboard** which is the initial page that opens when you start SOA Systinet.

This part contains:

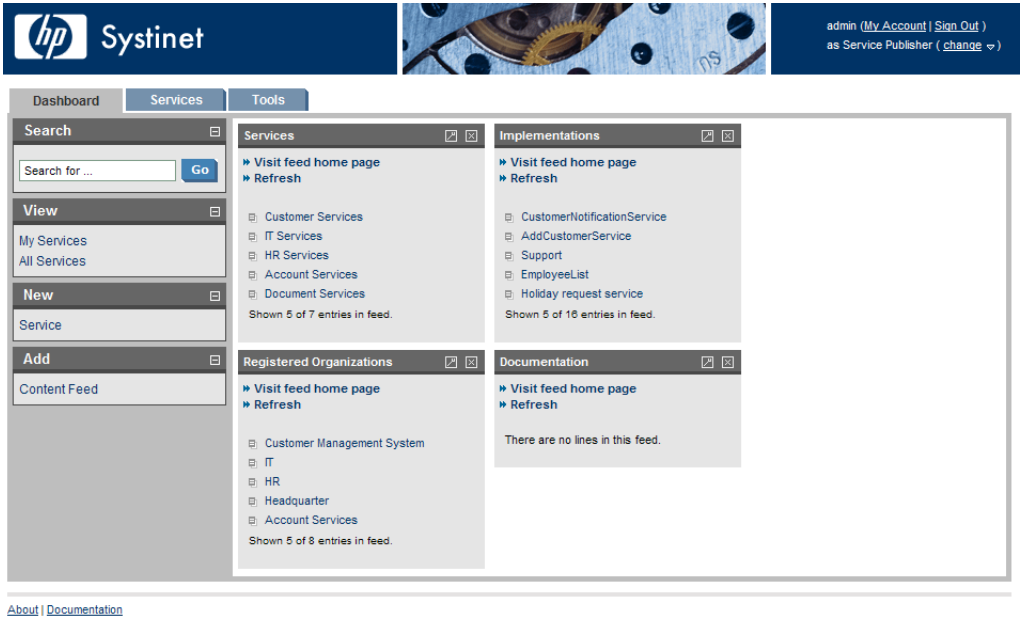
Features of the Dashboard Tab on page 33 describes the user interface elements of the dashboard.

Adding a Content Feed on page 37 explains how to add a new RSS feed to the dashboard.

6 Features of the Dashboard Tab

The **Dashboard** contains a customizable real-time view of your SOA data:

Figure 1. The Dashboard Tab



The Dashboard is split into the menu on the left and a number of **Portlets** in the main section of the page.

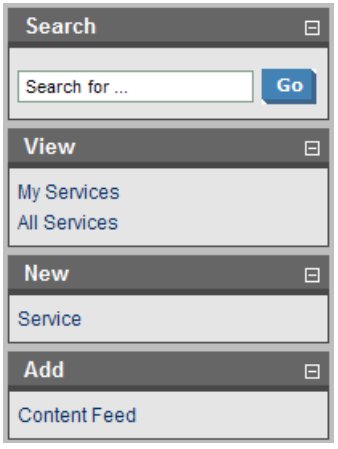
This chapter describes:

- Dashboard Menu on page 34. The items in the dashboard menu.
- RSS Content Feed Portlets on page 35. The RSS content feed portlets on the dashboard.

Dashboard Menu

The **Dashboard** menu is split into collapsible sections:

Figure 2. Dashboard Menu

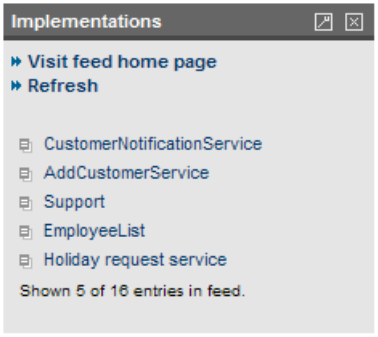


- **Search**. The full text search function described in Full Text Search on page 29.
- **View**. A set of links to **List Views** (see List Views on page 45) showing various aspects of service management.
- **New**. Create new artifacts:
  - **Service**. Create a new business service as described in Creating a New Business Service on page 49.
- **Add**. Create a new content feed on the dashboard as described in Adding a Content Feed on page 37 or restore a portlet to the dashboard.

RSS Content Feed Portlets

The dashboard contains a number of content feeds which use RSS subscription to display up-to-date information from a variety of sources including the repository:

Figure 3. Implementations RSS Feed Portlet



Visit feed home page takes you to the source of the content in the portlet.

Refresh reloads the content list.

Clicking one of the links in the list takes you to the page showing that item.

The tool icon accesses the feed portlet configuration where you can change the number of list items and the update frequency.

The portlet can be removed from the dashboard by clicking **[X]** and new portlets can be added as described in Adding a Content Feed on page 37.

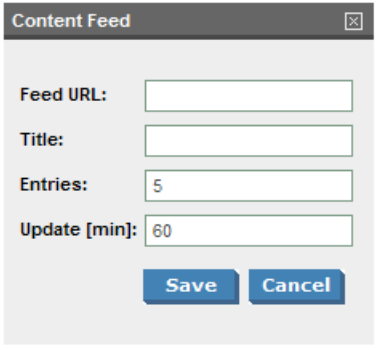
Closing a portlet in the dashboard adds it to the **Add** section of the dashboard menu.

7 Adding a Content Feed

The dashboard can display up-to-date information from external sources and from SOA Systinet.

To add a new RSS feed to the Dashboard:

1 In the **Add** section of the dashboard menu click **Content Feed** to open a new content feed in the dashboard:



2 Complete the form with parameters:

Parameter	Definition
Feed URL	The address of the RSS feed To add a feed for repository content use the url from the RSS view accessed from the **Common** context menu in **Browse Artifact** and **detail view** pages (see Browse Artifact Pages on page 69 and Artifact Detail Pages on page 72) or the **RSS of Result** view accessed from the **View** context menu for a stored search.
Title	The heading for the new feed portlet

Parameter	Definition
Entries	The number of items to list
Update [min]	The interval between feed updates

3 Click **Save** to access the feed and load the initial content.

Part III. Services

This part explains the features and use of the **Services** tab which is the place to organize and manage your SOA services.

This part contains:

Features of the Services Tab on page 41 describes the user interface elements of the services tab.

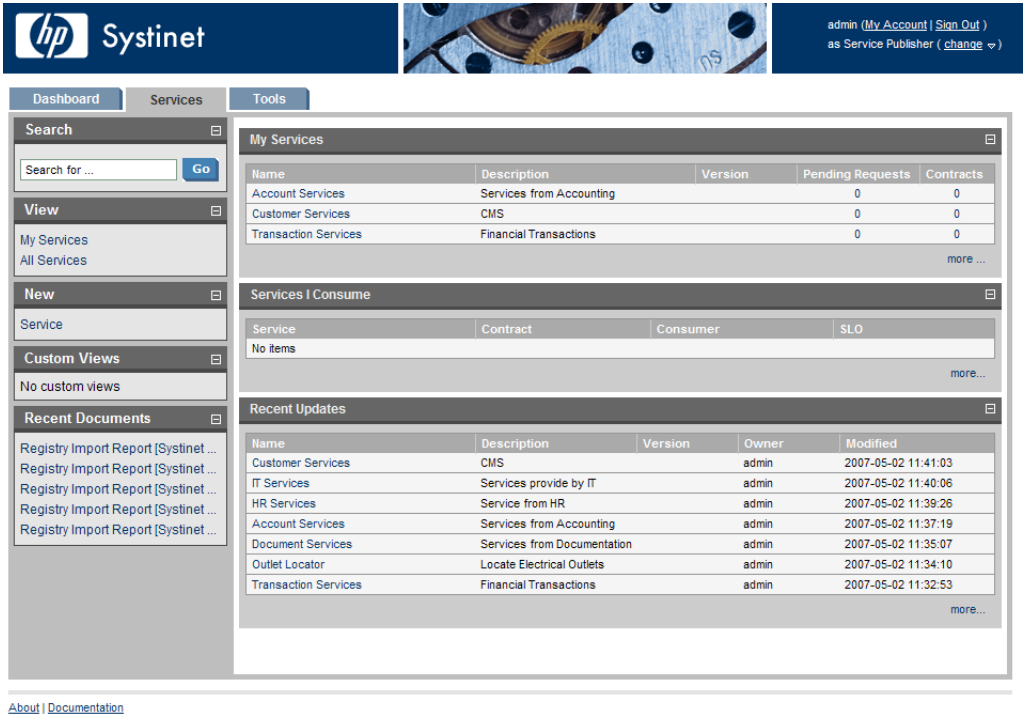
Service Pages on page 45 describes the pages for browsing and viewing services in the services tab.

Service Publication on page 49 explains the process of creating services, their implementation, and making them available for use.

8 Features of the Services Tab

The **Services** tab is the central location which shows all information about services in one place to provide easy access and simple management:

Figure 1. The Services Tab



The Services tab is split into the menu on the left and a number of collapsible sections:

- Services Menu on page 42. A description of the items in the **Services Menu**.

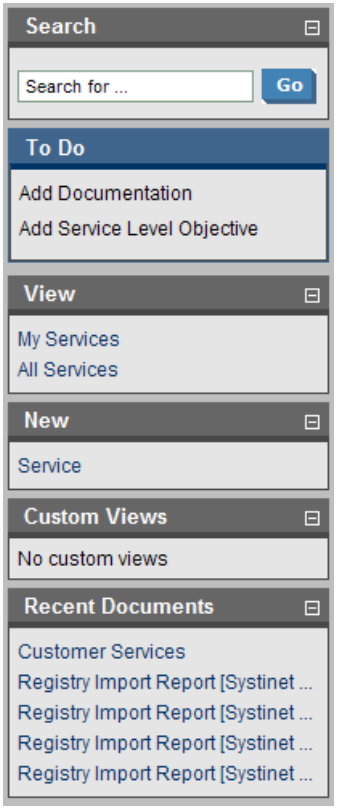
- **My Services**. Shows the services that you provide that are ready for consumption.
- **Services | Consume** displays the services that you use.
- **Recent Updates** shows services that are newly available or modified

Click a service name in these lists to view its details in the **View Service** page or **more...** to open the **List View** for that type of item (see Service View on page 46 or List Views on page 45).

Services Menu

All pages in the **Services** tab include a menu of links on the left side, such as that in Figure 2.

Figure 2. Services Menu



The **Services** menu is split into sections:

- **Search**. The full text search function described in Full Text Search on page 29.
- **To Do**. When viewing a service, this section shows the recommended steps to making the service ready for consumers as described in Service Publication on page 49.
- **View**. A set of links to **List Views** (see List Views on page 45) showing various aspects of service management.

- **New**. Create new artifacts:
  - **Service**. Create a new business service as described in Creating a New Business Service on page 49.
- **Custom Views**. Each view is the result of a user specified search as described in Stored Searches on page 103.
- **Recent Documents** displays the last few artifacts you have viewed.

9 Service Pages

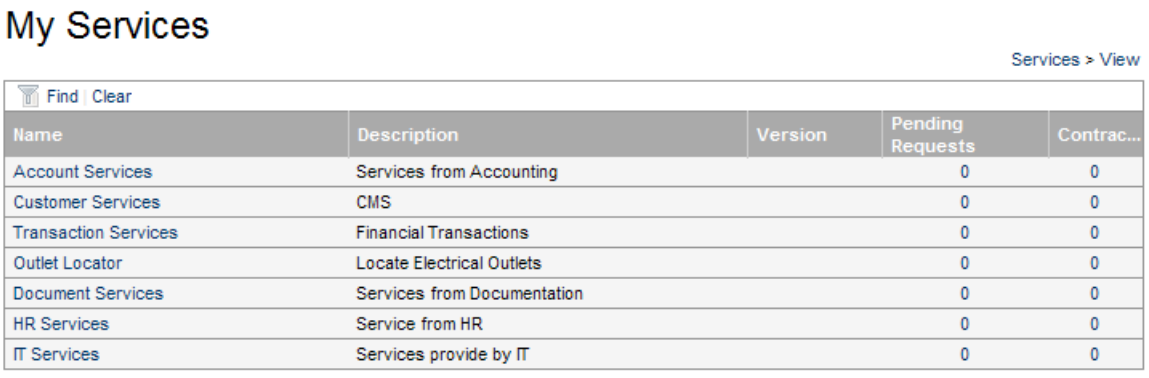
The **Services** tab contains two types of view pages, described in the following sections:

- List Views on page 45 describes the index views of service artifacts.
- Service View on page 46 describes the detailed view of service related artifacts in the Service Catalog.

List Views

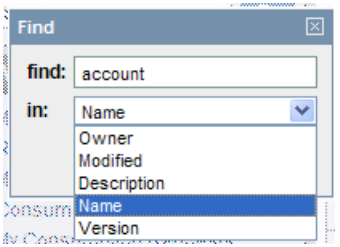
Click one of the links under **View** in the services menu to open a list view of that type of artifact:

Figure 1. My Services List View



These pages have the same functionality as search result pages with the addition of **Find** immediately below the page heading. Click **Find** to open a query window:

Figure 2. List View Filter



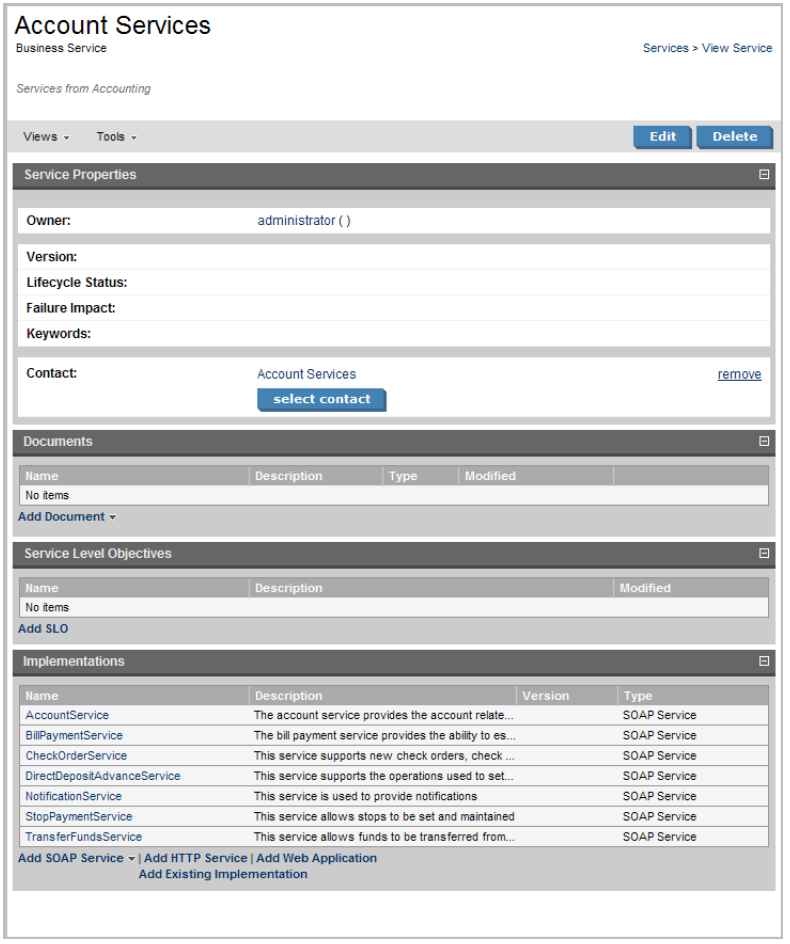
Enter your search parameter, select a column and click **Find** to filter the list.

Clear removes the filter and restores the list of artifacts.

Service View

Clicking on a service name in **Services** opens a service view:

Figure 3. View Service Page



This is the central location for information about the service.

The grey bar contains a set of context action menus containing sets of actions that can alter the view of the service or perform governance actions on the service.

The actions vary depending on the artifact but they include:

- **Views**:
  - **Advanced View** opens the detailed view of the artifact from the **Tools** tab as described in Artifact Detail Pages on page 72.
  - **Revision History** opens the version history of the artifact as described in Revision History on page 75.
  - **Access Rights** opens a view of the access permissions for the artifact.
- **Tools**:
  - **Related Reports** opens a list of the reports related to this artifactas described in Reports on page 100.
  - **Impact and Dependencies** executes the impact management tool on the artifact as described in Impact Tools on page 87.

Edit allows you to change the attributes of the service and **Delete** removes the service from the repository after confirmation.

The **To Do** section of the menu shows the recommended set of steps to make the service complete with appropriate accompanying documentation, an implementation and any service level objectives. Completing these steps is described in Service Publication on page 49.

Service Status displays contract information and registry integration status (see Registry Synchronization on page 117).

The **Documents**, **Service Level Objectives** and **Implementations** allow you to manage the artifacts associated with the service and add new relationships as described in Service Publication on page 49.

10 Service Publication

Service publication is one of the most important aspects of SOA Systinet.

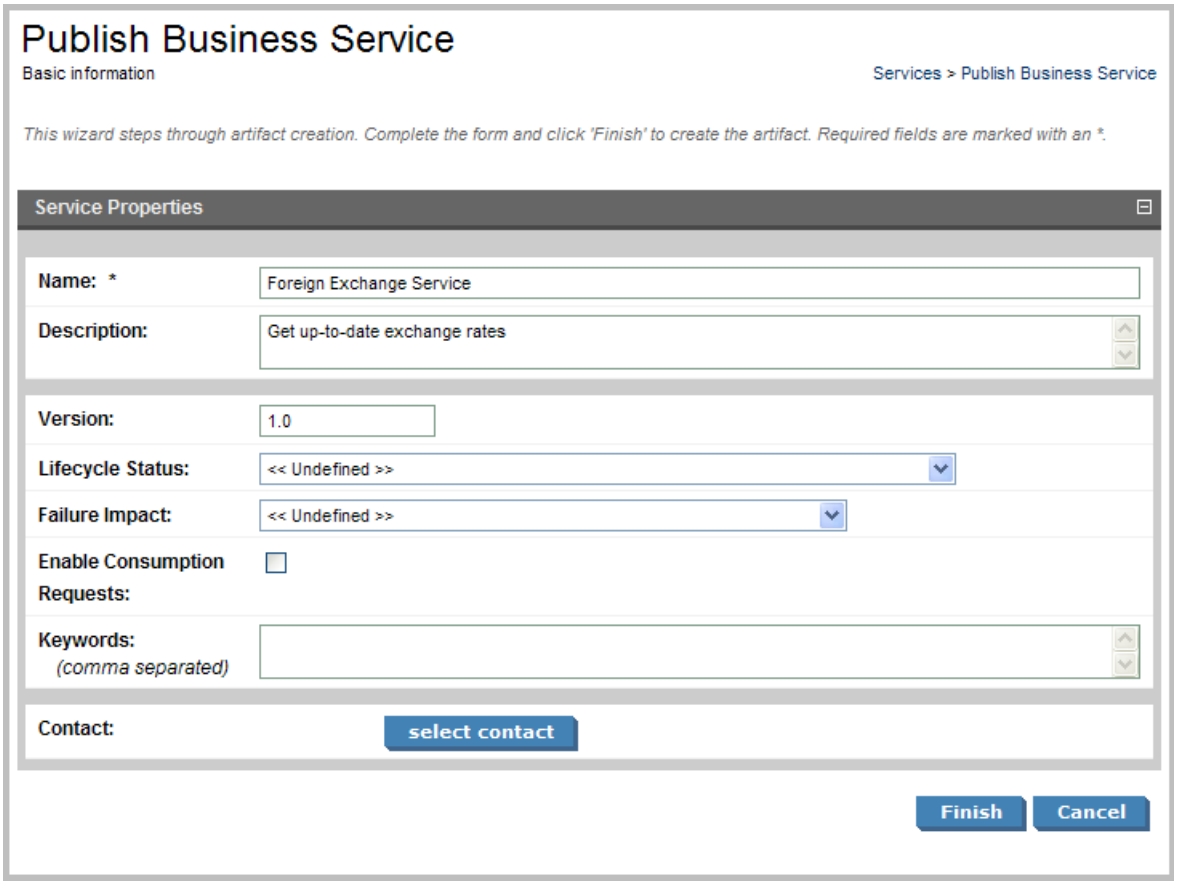
This is made simple in SOA Systinet by breaking the process down into a set of basic procedures:

Creating a New Business Service

You can publish new business services from the **Services** tab.

To publish a new service:

1 In the **New** section of the services tab menu click **Service** to open the **Publish Business Service** page:



2 Complete the form with parameters:

Parameter	Definition
Name	The name of the new business service
Description	A description of the new service
Version	The version number of the service
Lifecycle Status	Select a status from the drop-down list

Parameter	Definition
Failure Impact	Select an impact from the drop-down list
Enable Consumption Requests	Check this box to make the service available to consumers (not visible in the **General** perspective)
Keywords	Optionally, add search terms for the service
Contact	Optionally, click **select contact** to select a contact from the list of available users as described in Setting a Contact on page 51.

3 Click **Finish** to create the new business service artifact.

Setting a Contact

To make a particular user responsible for a service:

1 In the **Service View** (see Service View on page 46) expand the contact section by clicking **select contact**.

2 Use the **Find** function to search for the required contact and click **select** to set the contact from the list.

Adding Service Documentation

To add documentation to a service:

In the **service view** place the cursor over **add document** to view three options:

- To select a document from your local filesystem:

  1 Click **From Local File** to open the **Local File** dialog.

  2 Complete the dialog with parameters:

Parameter	Definition
File	Use **Browse** to locate the file on your local filesystem

Parameter	Definition
Name	Input a name for the documentation artifact
Description	Input a description of the documentation artifact

3 Click **Save** to import the document, create a new documentation artifact and the relationships between the service and the documentation artifacts.

- To select a document from a remote filesystem:

  1 Click **From Remote File** to open the **Remote File** dialog.

  2 Complete the dialog with parameters:

Parameter	Definition
URL	Input the url of the remote document
Name	Input a name for the documentation artifact
Description	Input a description of the documentation artifact

  3 Click **Save** to import the document, create a new documentation artifact and the relationships between the service and the documentation artifacts.

- To select from the list of the documentation artifacts in the repository:

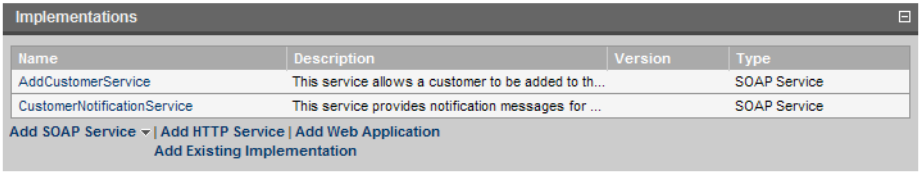
  1 Click **From Catalog** to open the **Browse Catalog** dialog.

  2 Use **Find** to search for the required documentation artifact and click **add** to select the document from the list.

Implementing a Service

Business services are implemented in the **Services** tab. The **Service View** (see Service View on page 46) contains an **Implementation** section with four options:

Figure 1. The Implementations Section



- **Add SOAP service** as described in Adding a SOAP Service on page 53.
- **Add HTTP service** as described in Adding an HTTP Service on page 54.
- **Add web application** as described in Adding a Web Application on page 55.
- **Add existing implementation** as described in Adding an Existing Implementation on page 55.

Adding a SOAP Service

To add a SOAP service to a business service:

In the **Implementation** section of the **service view** place the cursor over **add SOAP service** to view two options:

- To select a SOAP service from your local filesystem:

  1. Click **From Local File** to open the **Local File** dialog.
  2. Use **Browse** to locate the WSDL file on your local filesystem.
  3. Click **Save** to start the publication process for the implementations contained in the WSDL file.
  4. Optionally amend the web service name and description and click **Next**.
  5. Click **Finish** to create the new WSDL and SOAP service artifacts and create the relationships with the business service.

- To select a SOAP service from a remote filesystem:

1 Click **From Remote File** to open the **Remote File** dialog.

2 Complete the dialog with parameters:

Parameter	Definition
WSDL File	Input the url of the remote WSDL file
Default Synchronization Policy	Select a policy from the drop-down list. For more details see Synchronization Policy on page 94

3 Click **Upload** to start the publication process for the implementations contained in the WSDL file.

4 Optionally amend the web service name and description and click **Next**.

5 Click **Finish** to create the new WSDL and SOAP service artifacts and create the relationships with the business service.

Adding an HTTP Service

To add an HTTP service to a business service:

1 In the **Implementation** section of the **service view** click **add HTTP service** to open the **Create HTTP Service** dialog.

2 Complete the dialog with parameters:

Parameter	Definition
Name	The name of the new HTTP service artifact
Description	A description of the HTTP service artifact
Version	A version number for the HTTP service artifact

3 Click **Finish** to create the new HTTP service artifact and the relationships with the business service.

This process only creates an HTTP service artifact. It is necessary to add an endpoint to the artifact in the **detail view** of the HTTP service to make it a functioning implementation.

Adding a Web Application

To add a web application to a business service:

1 In the **Implementation** section of the **Service View** (see Service View on page 46) click **add web application** to open the **Create Web Application** dialog.

2 Complete the dialog with parameters:

Parameter	Definition
Name	The name of the new web application artifact
Description	A description of the web application artifact
Version	A version number for the web application artifact

3 Click **Finish** to create the new web application and the relationships with the business service.

This process only creates an web application artifact. It is necessary to add an endpoint to the artifact in the **detail view** of the HTTP service to make it a functioning implementation.

Adding an Existing Implementation

To add an existing service implementation to a business service:

1 In the **Implementation** section of the **Service View** (see Service View on page 46) click **add existing implementation** to browse the catalog.

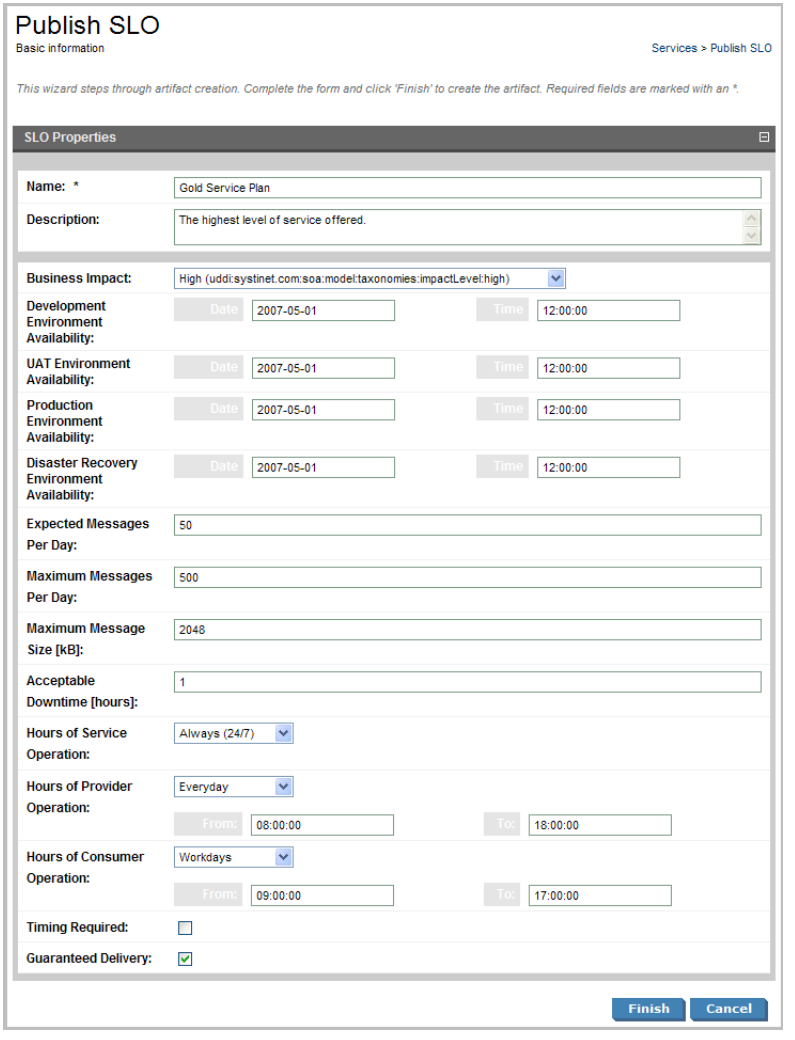
2 Use **Find** to locate the implementation required and click **Add** to select the implementation from the list.

Adding an SLO

Most services are offered with a set of terms describing the levels of performance the service provider expects to meet.

To add a service level objective to a service:

1 In the **Service Level Objectives** section of the **Service View** (seeService View on page 46) click **add SLO** to open the **Create SLO** dialog:



2 Complete the form with parameters:

Parameter	Definition
Name	The name of the new SLO artifact
Description	A description of the SLO artifact
Business Impact	Select an impact from the list
Development Environment Availability	Expected time of service delivery to these environments
UAT Environment Availability	
Production Environment Availability	
Disaster Recovery Environment Availability	
Expected Messages Per Day	Number of messages
Maximum Messages Per Day	
Maximum Message Size [kB]	Maximum size of any message
Hours of Service Operation	Expected operating hours
Hours of Provider Operation	
Hours of Consumer Operation	
Timing Required	Check the box to indicate that timing is required
Guaranteed Delivery	Check the box to indicate guaranteed delivery

3 Click **Finish** to create the new service level objective and the relationships to the business service.

Making the Service Available

To make the service available to consumers:

1 In the **service view** click **Edit** to open the **Edit Service** page.

2 Check the **Enable Consumption Requests** box.

3 Click **Save** to make the service available for consumption.

Part IV. Tools

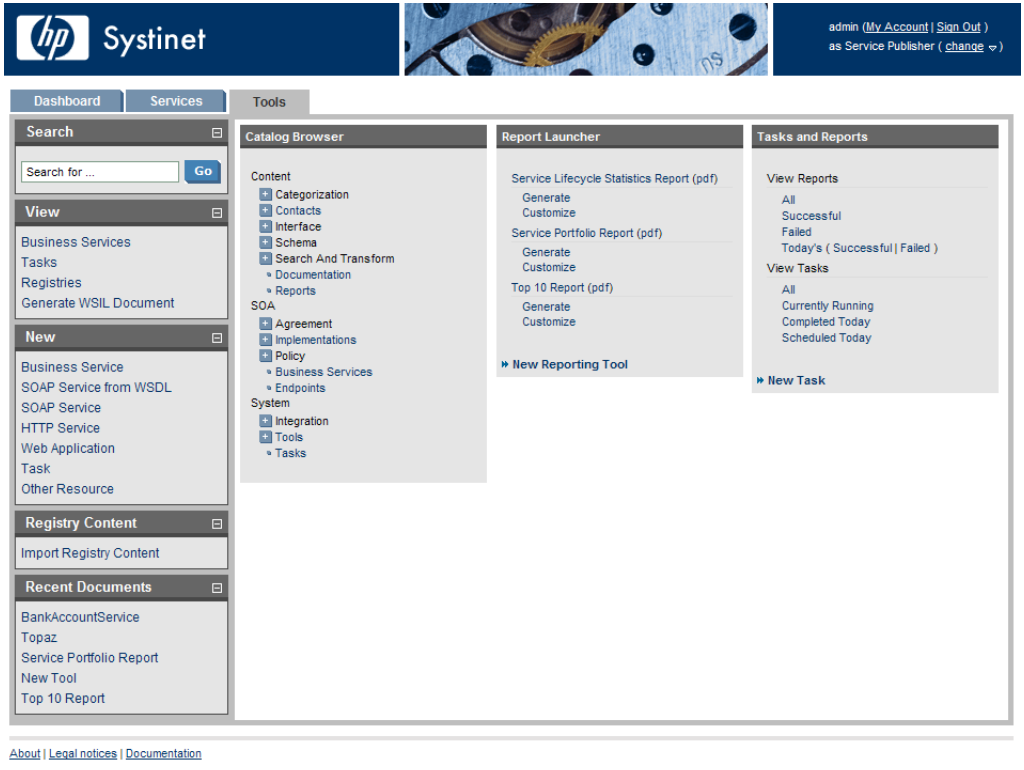
This part explains the features and use of the Tools Tab which is the place to organise and manage your SOA content.

This part contains:

11 Features of the Tools Tab

The **Tools** tab gives access to Information Management offering a generic view of the content of SOA Systinet and access to administration and governance tools:

Figure 1. The Tools Tab



The tools tab is split into the menu on the left, the **Catalog Browser** and a number of portlets in the main section of the page.

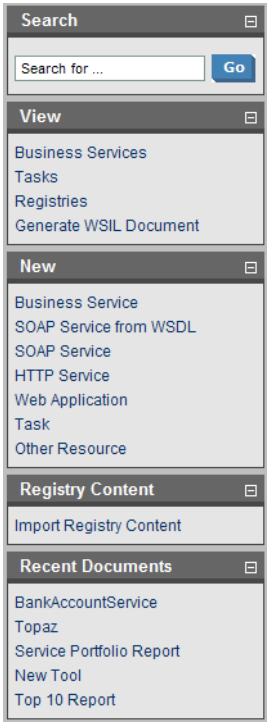
Each feature is explained in detail in the following sections:

- Tools Menu on page 62. A description of the items in the **Tools Menu**.
- Catalog Browser on page 64. The index portlet of artifact types in the repository.
- Tasks and Reports Portlet on page 65. A portlet to access tasks and the reports on the results of those tasks.
- Report Launcher Portlet on page 67. An access portlet for customized reporting tools.

Tools Menu

The **Tools** menu is split into sections:

Figure 2. Tools Menu



- **Search**. The full text search function described in Full Text Search on page 29.

  View. A set of links to Browse Views showing an index of the artifacts in the repository.

  New. A set of links to create new artifacts:

  - **Business Service**. Create a new business service as described in Creating a New Business Service on page 49.
  - **SOAP Service from WSDL**. Create a new SOAP implementation using a WSDL document as described in Publishing a SOAP Service with WSDL on page 84.
  - **SOAP Service**. Create a new SOAP service artifact.

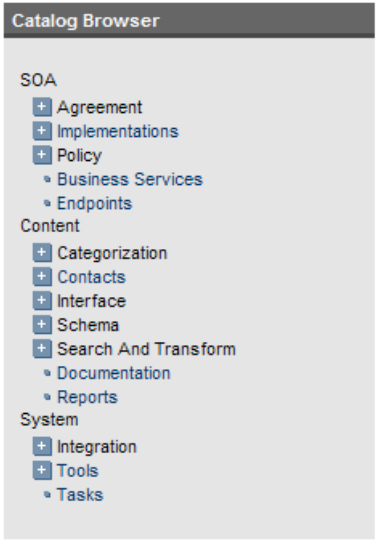
    - **HTTP Service**. Create a new HTTP service artifact as described in Adding an HTTP Service on page 54.
    - **Web Application**. Create a new web application artifact as described in Adding a Web Application on page 55.
    - **Task**. Create a new governance task as described in Creating a Task on page 97
    - **Other Resource**. Create a new resource artifact as described in Publishing Metadata on page 83.

- **Registry Content**. Import entities from a UDDI registry as described in Importing Data From a Registry on page 115.
- **Recent Documents**. Links to the last few viewed artifacts.

Catalog Browser

The Catalog Browser is the entry point to the repository. From here all artifacts in the repository can be viewed:

Figure 3. Catalog Browser Portlet



The browser is split into the following sections matching the structure of the SDM described in the Artifacts Taxonomy section in the HP SOA Systinet Reference Guide:

- **Content** contains the artifact types normally associated with services such as documentation and metadata.
- **SOA** contains the artifact types for business services, their implementation and policies.
- **System** contains the artifact types related to integration and governance tools and tasks.

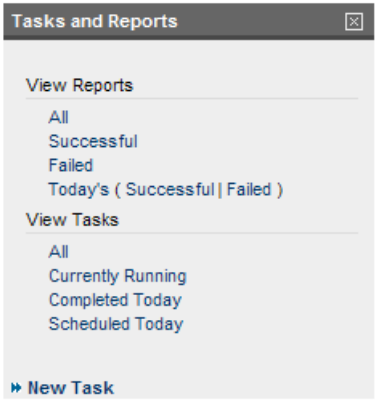
The branches in the browser are expanded by clicking **[+]**.

Double-click an artifact type to open its **browse page**.

Tasks and Reports Portlet

The **Tasks and Reports** portlet on the and **Tools** and **Dashboard** (administrator perspective only) tabs is the quickest access point to your SOA governance tasks and the results of their execution:

Figure 4. Tasks and Reports Portlet



The portlet is split into three sections:

- **View Reports**. Click these links to view a list of the reports in the category:
  - **All** displays all the reports in the repository as described in Reports on page 100.
  - **Successful** opens a Browse View of all successful reports.
  - **Failed** opens a Browse View of all failed reports.
  - **Today's** opens a Browse View of all reports created today or just today's successful or failed reports.
- **View Tasks**. Click these links to view a list of the tasks in the category:
  - **All** opens a Browse View of all tasks in the repository.
  - **Currently Running** opens a Browse View of tasks currently being executed.
  - **Completed Today** opens a Browse View of all tasks completed today.
  - **Scheduled Today** opens a Browse View of all tasks scheduled today.

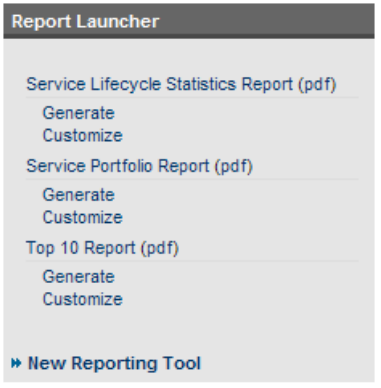
- **New Task**. Click this link to create a new governance task as described in Creating a Task on page 97.

Closing the portlet in the dashboard adds it to the **Add** section of the dashboard menu.

Report Launcher Portlet

The tools tab contains a portlet specifically for reporting tools:

Figure 5. Report Launcher Portlet



Click the report name to open the last report of its execution.

Generate executes the tool and **Customize** opens the **Edit View** page of the reporting tool.

The default reporting tools are:

- **Service Lifecycle Statistics Report** generates a summary of how many services are at which stage in the service lifecycle.
- **Service Portfolio Report** generates a overview of the services in the repository.
- **Top 10 Report** generates a summary of the top consumers and publishers of services and the services with the most users.

Click **New Reporting Tool** to create a new reporting tool as described in Creating a Reporting Tool on page 92.

12 Tools Pages

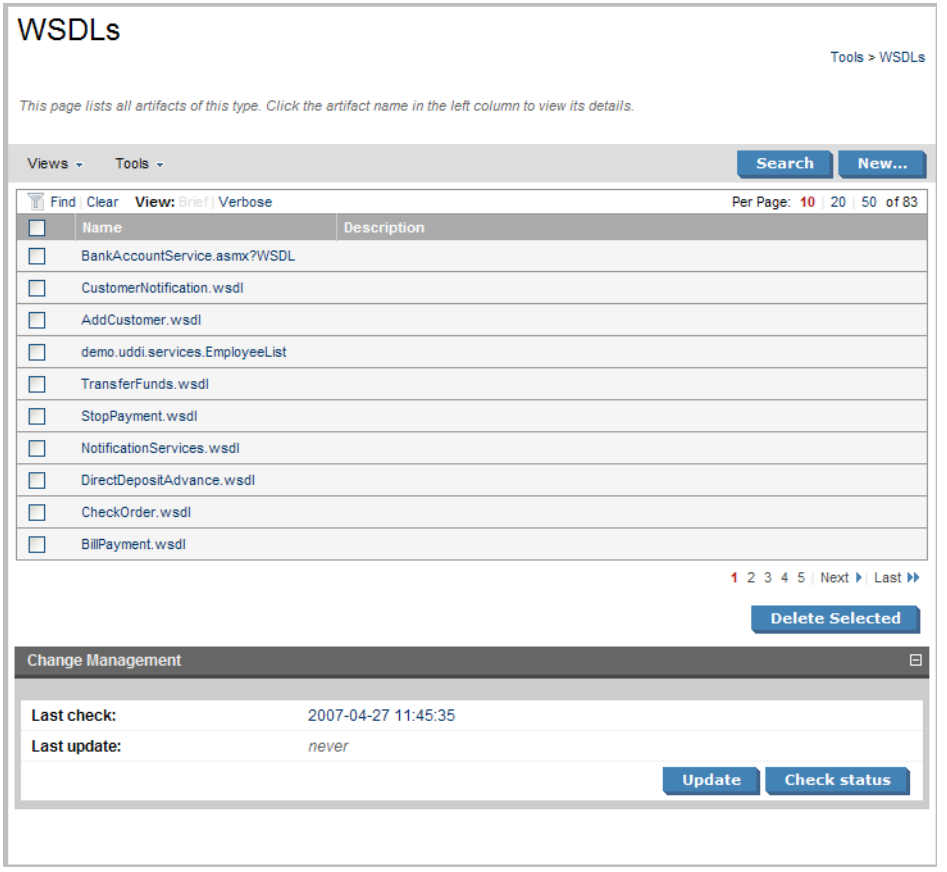
In the Tools tab there are a number of different pages describing the artifacts in the repository. This chapter describes:

- Browse Artifact Pages on page 69 are the index views of artifacts.
- Artifact Detail Pages on page 72 are the detailed view of artifacts in the repository.
- Revision History on page 75 display previous revisions of artifacts.

Browse Artifact Pages

Clicking an artifact type in the **Catalog Browser** in the **Tools** tab opens a **browse artifact** page:

Figure 1. Browse WSDLs Page



These pages list all the artifacts of the selected artifact type.

Click **New** to open a page allowing the creation of a new artifact or **Search** to start the advanced search page described in Stored Searches on page 103.

The grey bar contains a set of context action menus containing sets of actions that can alter the view of the collection or perform actions on the collection.

The actions may vary depending on the artifact but they include:

- **Views**:
  - **XML View** opens a XML view of the page in the REST interface.
  - **RSS View** opens an RSS view of the page that can be used to create an RSS content feed for the dashboard.
  - **Access Rights** opens a view of the access permissions for the artifact.
- **Tools**:
  - **Look for Deleted Artifacts** opens a browse view of deleted artifacts of this type with options to **Purge** or **Undelete** selected items.

Each artifact has a checkbox which is used to select services for deletion using **Delete Selected**.

Click an artifact to open its **detail view** (see Artifact Detail Pages on page 72).

Click **Find** to filter the list by column headings or artifact categories:

Figure 2. Implementations Filter

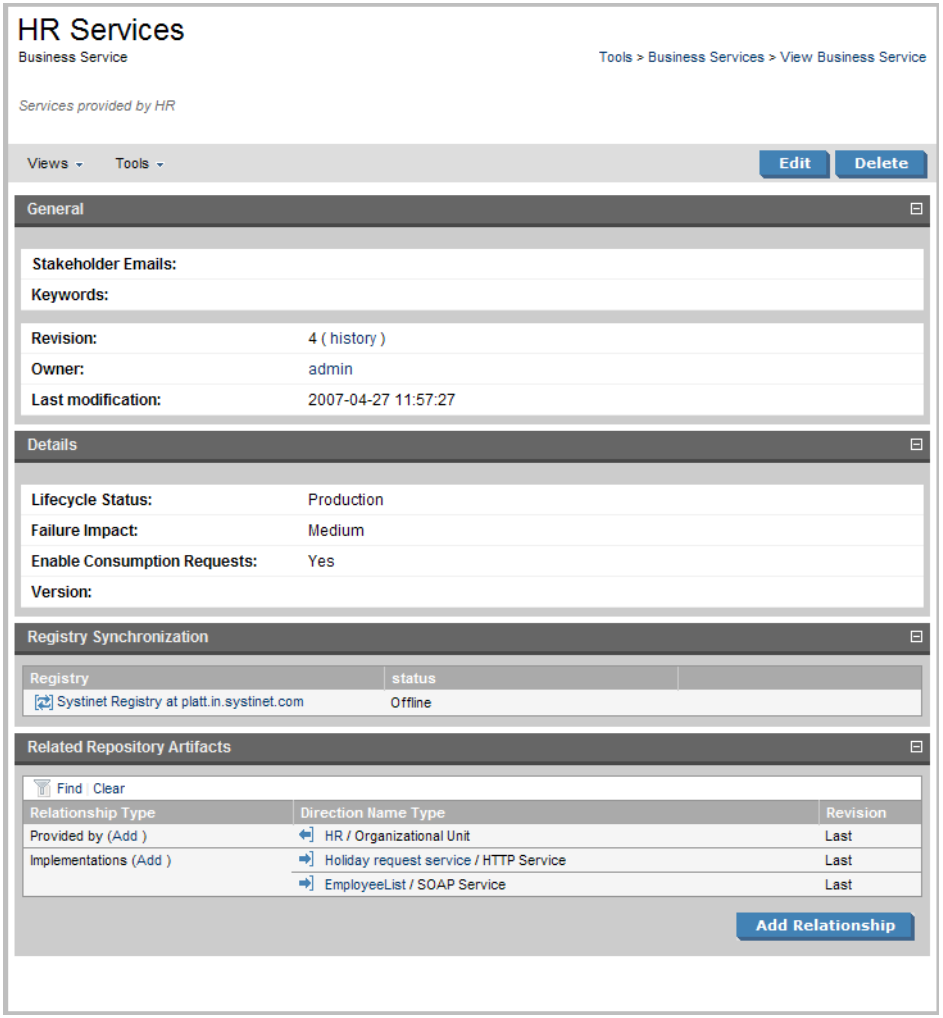
There are also clickable options to change the display settings of the page. Brief or verbose descriptions and the number of artifacts to be displayed on each page.

Pages for artifacts linked to external documents have a **Change Management** section allowing you to synchronize your repository artifacts with the external documents. See Running the Change Management Tool on page 94 for more details.

Artifact Detail Pages

Clicking an artifact name opens a detailed artifact view containing all the information about that artifact with options to edit, delete and add relationships:

Figure 3. HR Services Details



The grey bar contains a set of context action menus containing sets of actions that can alter the view of the artifact or perform governance actions.

The actions may vary depending on the artifact but they include:

- **Views**:
  - **XML View** opens a XML view of the page in the REST interface.
  - **RSS View** opens an RSS view of the page that can be used to create an RSS content feed for the dashboard.
  - **Access Rights** opens a view of the access permissions for the artifact.
  - **Revision History** displays a list of the previous versions of the artifact as described in Revision History on page 75.
  - **Services View** opens a view of the artifact from the **Services** tab as described in Service View on page 46.
- **Tools**:
  - **Associated Reports** views the reports related to this artifact as described in Reports on page 100.
  - **Impact Management** executes the impact management tool on the artifact as described in Impact Tools on page 87.
  - **Add Documentation** creates a document relationship as described in Attaching Documentation to Artifacts on page 81.

The **Edit** and **Delete** buttons each start new dialogs to act on the artifact.

The rest of the page is split into sections which vary depending on the artifact:

- **General** displays the taxonomic categories of the artifact, the version with a link to the revision history, the owner of the artifact and its last modified date.
- **Details** contains lifecycle and failure impact information for service artifacts.
- **Data** is an extra section for artifacts associated with external documents. It contains a cached version of the external document and can be viewed by clicking the name of the external document.

- **Change Management** is an extra section for artifacts associated with external documents allowing you to synchronize the artifact with the external document. See Running the Change Management Tool on page 94 for more details.
- **Performance and Availability** is an extra section for service implementations showing service statistics from HP Business Availability Center and is described in BAC Integration Features on page 123.
- **Related Repository Artifacts** shows the relationships that the artifact has with other repository content. **Add Relationship** allows you to associate the artifact with another in the repository as described in Adding a Relationship on page 79.

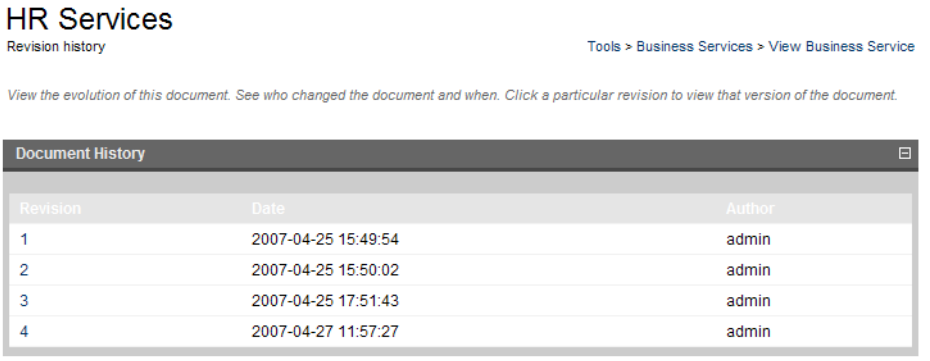
Revision History

During the lifecycle of resources and artifacts stored in the database, their properties or content may change. SOA Systinet supports revisions. Any update of a resource automatically increments its revision number. A resource may be updated by the Change Management Tool or by a user changing any property such as the name, description, etc.

To view the revision history of an artifact:

- In the detail view of an artifact click **history**, next to the revision number, in the **General** section or **Revision History** in the **Common** context menu.
- Alternatively, in the Service View of an artifact click **Revision History** in the **Basic Actions** context menu.

Figure 4. HR Services Revision History



To view the content of a past revision, click the revision number.

If you need to rollback to this past revision, the context action **Rollback to this revision** is available in the **Views** menu. Note that a new revision of the resource will be created with the content of the old revision you have selected.

13 Managing Content

There are three main types of content in SOA Systinet

- **Artifacts**. All entities in the repository are artifacts and there are generic procedures for most artifacts described in Managing Artifacts on page 77.
- **Documentation**. Many artifacts require additional documents describing their purpose or use. Managing Documentation on page 80 describes the procedures for adding and using documentation.
- **Metadata**. Information about the structure and format of the data in your repository can also be published as described in Managing SOA Metadata on page 82.

Publishing a SOAP Service with WSDL on page 84 is a procedure describing the creation of a service implementation using a WSDL specification document.

Managing Artifacts

The main artifact management procedures are:

- Create a new artifact as described in Creating an Artifact on page 77.
- Edit an artifact as described in Editing an Artifact on page 78.
- Delete an artifact as described in Deleting an Artifact on page 78.
- Add a relationship to another artifact as described in Adding a Relationship on page 79.

Creating an Artifact

The process of creating an artifact is very similar for most artifact types:

1 From the **browse page** of any artifact type click **New** to open a dialog to create that particular kind of artifact.

2 The exact details for each artifact type will differ, but in general, there are two types of artifact:

- Representational artifacts are those that are created for the purpose of managing your SOA such as the business service artifact.
- Imported artifacts are those created with an association with an external document such as WSDL artifacts.

Click **Finish** to create a representational artifact or **Next** to create an imported artifact with an associated external document.

3 Choose the data attachment method and click **Next**.

4
- For **Upload file from your local filesystem** use **Browse** to select the file from your system.
- For **Download the file from a URL** input the URL location of the file.

5 Click **Finish** to create the new artifact and upload the external document.

Editing an Artifact

In the **detail view** (see Artifact Detail Pages on page 72) of an artifact click **Edit** to open a dialog allowing you to edit the artifact.

Change any parameters and use the functionality in the **Related Repository Artifacts** section to manage relationships.

Click **Save** to commit your changes and create a new revision of the artifact. See Revision History on page 75 for details.

Deleting an Artifact

Artifacts can be deleted either from the **Browse Page** or from the **detail view** (see Browse Artifact Pages on page 69 or Artifact Detail Pages on page 72):

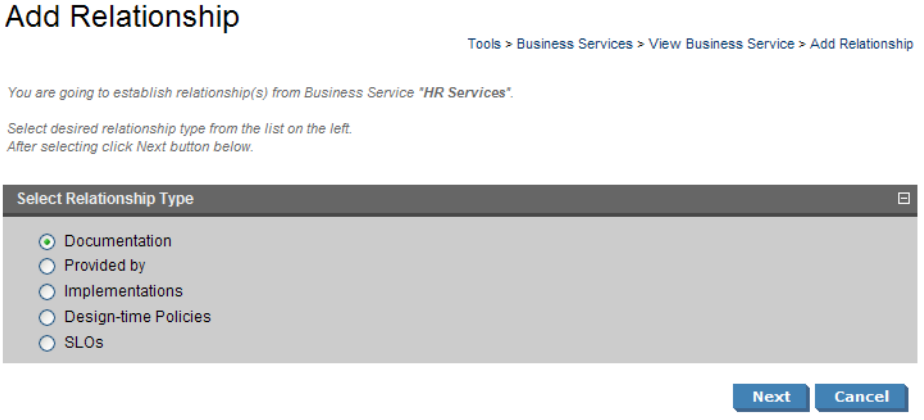
- In **Browse Pages** check the box next to the artifact name and click **Delete Selected**.
- In **detail views** click **Delete**.

Both options open a confirmation page with options to **Delete** or **Purge** the artifact. Purge removes the artifact from the repository whereas delete makes the artifact as deleted allowing you to restore it at a later date.

Adding a Relationship

At the heart of SOA Systinet is the ability to link artifacts together with relationships:

1 Click **Add Relationship** in any **detail view** (see Artifact Detail Pages on page 72) to open the **Add Relationship** page:



There are numerous types of relationships, the choices available depend on the particular artifact type.

2 Select the relationship type and click **Next**.

3 The format of this choice will depend on the artifact and relationship type.

- Use **Find** function to search for the required artifact. Check the box next to the artifact name to select it.
- Alternatively, click **New** to create a new artifact to be the object of the relationship as described in Creating an Artifact on page 77.

Click **Next** to continue.

4 Review the details and click **Finish** to create both the relationship and the inverse relationship.

Managing Documentation

The main document management procedures are:

- Add a new document to the repository as described in Adding Documentation on page 80.
- Attach documentation to an artifact as described in Attaching Documentation to Artifacts on page 81.
- Edit the source document as described in Editing Documentation on page 82.

Adding Documentation

To store a new document in the repository:

1 In the **Catalog Browser** click **Documentation** to open the **Browse Documentation** page.

2 Click **New** to start the publish documentation dialog.

3 There are three options:

- Publish existing Documentation on known URL
- Upload Documentation file from your local filesystem
- Enter description of Documentation only

Select an option and click **Next**.

4 • For the URL option complete the form with parameters:

Parameter	Definition
URLs	A list of locations of documents to add to the repository
Synchronize with origin URL	Check the box if you want to set a synchronization policy
Default Synchronization Policy	Choose a policy from the drop-down list (see Synchronization Policy on page 94 for more details)

- For the local filesystem option complete the form with parameters:

Parameter	Definition
File	Use **Browse** to specify the document on your local system
Write Access	Select public or private access

- The description only option creates a documentation artifact without any associated external document complete the form with parameters:

Parameter	Definition
Name	The name for the new documentation artifact
Description	A description of the new documentation artifact
Categories	Click **add category** to select a category from the available taxonomies (administrator perspective only)

5 Click **Finish** to create the new documentation artifact and upload its source.

Attaching Documentation to Artifacts

Once a documentation item is stored in the repository it can be attached to other repository resources with a documentation relationship.

To attach a document to an artifact:

1 In the **detail view** of the artifact click **Add New Relationship**.

2 Select **Documentation** and click **Next**.

Not all artifacts have **Documentation** as an available relationship type.

3 Use **Find** to search for the required document or click **New** to import a new document as described in Adding Documentation on page 80. Select the document and click **Next**.

4 Review the relationship and click **Finish** to create it.

If you later want to detach documentation from the artifact, edit the artifact and remove the relationship as described in Editing an Artifact on page 78.

This procedure can be used to add documentation to a business service but an alternative is provided in the **Services** tab as described in Adding Service Documentation on page 51.

Editing Documentation

To change the properties or source of a documentation artifact:

1 In the **detail view** (see Artifact Detail Pages on page 72) of the documentation artifact click **Edit**.

2 Change any artifact attributes as required.

To change the external source document:

a In the **Data** section click **change**.

b Use **Browse** to select a new source document.

c Click **Finish** to upload the new document.

3 Click **Save** to confirm your changes.

Managing SOA Metadata

SOA Systinet contains extended support for SOA specific metadata, such as WSDL documents and XML schemas. This support includes features such as automatic import resolution during publishing and updates, and change management support based on synchronization policies.

Supported metadata formats are:

- WSDL documents
- XML schema documents
- DTD documents

- XSLT stylesheets

This section describes:

- Adding metadata documents to the repository in Publishing Metadata on page 83.
- Updating metadata attributes or their source in Updating Published Metadata on page 84.

Publishing Metadata

To publish a metadata artifact:

1. In the **New** section of the tools menu click **Other Resource** to open the **Publish WSDL, XSLT, XSD or DTD documents** dialog.
2. Complete the dialog with parameters:

Parameter	Definition
URLs	A list of locations of documents to add to the repository
Synchronize with origin URL	Check the box if you want to set a synchronization policy
Default Synchronization Policy	Choose a policy from the drop-down list (see Synchronization Policy on page 94 for more details)

3. Click **Finish** to start the publishing process for each resource in the list.

The process consists of the following steps:

1. Each document downloads from its original location URL.
2. The type of document is assessed based on the content of the document and the appropriate type of artifact is created.
3. The repository is searched for a document of the same type with the same value origin URL, if such a document is found it is checked for changes and if changed it is updated.

4 The content of the document is searched for possible references (WSDL & schema includes/imports etc.) to other documents, each referenced document downloads and processes with the same sequence of steps (i.e. the publishing processed is recursively applied to referenced documents).

5 Finally the document is stored in the repository, and a relationship is created for each referenced resource.

The name of the stored document is set to the last part of its URL and the origin URL attribute is populated.

An alternative process is to upload a metadata document in the same way as described in Adding Documentation on page 80. In the procedure replace documentation with the relevant metadata artifact type.

Updating Published Metadata

Metadata documents are updated and edited in the same way as documents as described in Editing Documentation on page 82. In the procedure replace documentation with the relevant metadata artifact type.

Publishing a SOAP Service with WSDL

This section describes how to publish a web service from a definition contained in an external WSDL document:

1 In the **New** section of the tools tab click **SOAP Service from WSDL**.

2 There are two options:

- Use WSDL residing on a known URL
- Upload WSDL from your local filesystem

Select an option and click **Next**.

3 • For the URL option complete the form with parameters:

Parameter	Definition
WSDL URL	The location of the WSDL document to add to the repository

Parameter	Definition
Default Synchronization Policy	Choose a policy from the drop-down list (see Synchronization Policy on page 94 for more details)

- For the local filesystem option use **Browse** to specify the WSDL on your local system.

  You can specify a `.zip` folder containing multiple files. Publication resolves and uploads all WSDLs and related files.

  Click **Next** to continue.

4 Optionally amend the new service name and description and click **Next**.

5 Confirm the items to be created and click **Finish**.

After confirmation a screen shows a list of the newly created artifacts. Click an artifact name to view its details.

14 SOA Utilities

SOA utilities in the Tools tab consist of three elements:

- Tools on page 87 are the basic utilities for performing governance actions.
- Tasks and Scheduling on page 97 enable the use of a tool on an artifact or set of artifacts with the option of periodic or scheduled execution.
- Reports on page 100 are the result of a task or tool execution.

Tools

SOA Systinet provides the following types of utility in the tools tab:

- Impact Tools on page 87 report the potential impact of a change to an artifact on the other artifacts it depends on or impacts.
- Job Tools on page 90 are customized tools created to perform miscellaneous tasks.
- Reporting Tools on page 91 use customized reports to query the repository.
- Sync Tools on page 93 update the repository with the latest versions of externally sourced documents.

Impact Tools

Impact tools enable you to report on all the related artifacts that may be impacted by a change to a specific artifact. Using impact tools, you can check the dependency trees or impact trees of an artifact.

In SOA Systinet, a dependency between artifacts is represented by a relationship. Each relationship represents a dependency between two related artifacts: a source artifact and a target artifact. A relationship is a unidirectional concept. Each relationship contains references to the source artifact, target artifact, type of relationship and several other attributes. For example, consider relationship R which has references to source artifact A and target artifact B. This would mean that artifact A depends on artifact B and that artifact B

has impact on artifact A. Accordingly, there are two types of relationship tree: the impact tree and the dependency tree. The impact tree of an artifact shows the artifacts that it has impact on. The dependency tree shows the artifacts on which this artifact depends.

You can create new impact tools or use the **Impact Management** tool provided with SOA Systinet.

This section describes:

Running the Impact Management Tool

The context action for the Impact Management Tool is only available in the **Detail View** or **Service View** of artifacts (see Artifact Detail Pages on page 72 or Service View on page 46).

To assess the impact of a change to an artifact:

1. In the **detail view** or **service view**of the artifact, move the cursor over the **Tools** context menu and select **Impact and Dependencies**.
2. Select one of the impact types to execute the tool and generate an impact report.

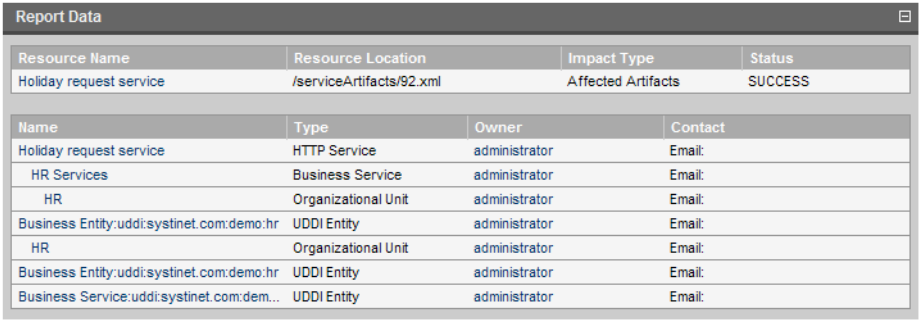
Impact Reports

Impact reports are generated by running the impact tool as described in Running the Impact Management Tool on page 88 or the result of automated tasks as described in Tasks and Scheduling on page 97.

To access impact reports, browse the reports as described in Reports on page 100 and filter for report category **Impact Management**.

The most important part of the impact report is the **Report Data** section:

Figure 1. Impact Report Data



The first part of the report data section displays the source resource of the impact report, the location of the raw report data, the type of report and the report status.

The second part of the report displays a hierarchy of affected artifacts, either impacted or dependent artifacts according to the report type.

Creating an Impact Tool

To create a new impact tool artifact:

1. In the **Catalog Browser** click **[+]** next to **Tools** to expand it and show the list of tool types.
2. Click **Impact Tools** to open the **Browse Impact Tools** page.
3. Click **New** to open the **Publish Impact Tool** dialog.
4. Complete the page which contains the following parameters:

Parameter	Definition
Name	The name for the new impact tool
Description	A description of the impact tool
Choose impact type	Select one of the available impact types

5 Click **Finish** to create the new impact tool.

Job Tools

Job tools enable you to use customized Java class implementations to perform a variety of actions.

You can create new job tools or use the **Report Cleaner Job Tool** provided with SOA Systinet.

This section describes:

- Creating a Job Tool on page 90
- Report Cleaner Job Tool on page 91

Creating a Job Tool

To create a new Job Tool artifact:

1 In the **Catalog Browser** click **[+]** next to **Tools** to expand it and show the list of tool types.

2 Click **Job Tools** to open the **Browse Job Tools** page.

3 Click **New** to open the **Publish Job Tool** dialog.

4 Complete the page which contains the following parameters:

Parameter	Definition
Name	The name for the new job tool
Description	A description of the job tool
Categories	Click **add category** to select a category from the available taxonomies
Job Implementation Class ID	The class ID in the server configuration

5 Click **Finish** to create the new job tool.

Report Cleaner Job Tool

SOA Systinet is installed with the report cleaner tool. This tool is a utility for purging the repository of deleted and orphaned reports. HP Systinet recommend that a task be created to run this tool on a periodic basis to ensure that the repository does not fill up with obsolete reports. See Tasks and Scheduling on page 97 for details.

Reporting Tools

Reporting tools enable you to access customized reports stored on the reporting server for the purpose of periodic or timed execution using tasks.

SOA Systinet comes provided with preinstalled reporting tools which are available in the **Report Launcher** portlet (see Report Launcher Portlet on page 67).

This section describes:

- Running the Impact Management Tool on page 91
- Reporting Tool Reports on page 92

This section also describes:

- Creating a Reporting Tool on page 92

Running the Impact Management Tool

The context action for the reporting tools is only available in the **Report Launcher** portlet for the default reporting tools provided with SOA Systinet.

To execute one of the default reporting tools:

1. In the **Report Launcher** portlet click **Generate** for the required reporting tool.
2. The view switches to the resulting report as described in Reporting Tool Reports on page 92.

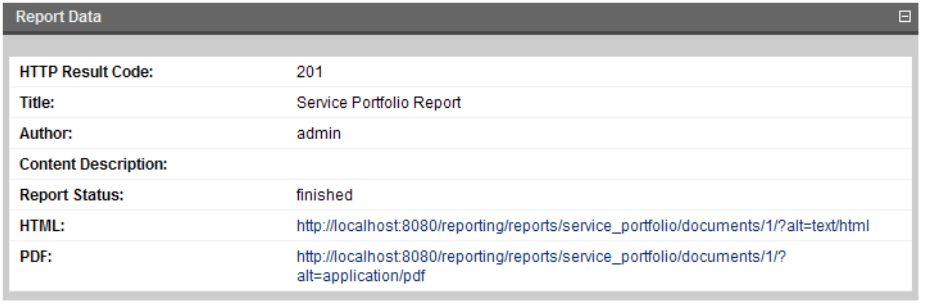
Reporting Tool Reports

Reporting tool reports are generated by running one of the default reporting tools as described in Running the Impact Management Tool on page 91 or the result of automated tasks as described in Tasks and Scheduling on page 97.

To access reporting tool reports, browse the reports as described in Reports on page 100 and filter for report category **Reporting**.

The most important part of the impact report is the **Report Data** section:

Figure 2. Reporting Tool Report Data



This section provides details of the report and most importantly links to rendered versions of the report on the reporting server.

Creating a Reporting Tool

To create a new Reporting Tool artifact:

1. In the **Catalog Browser** click **[+]** next to **Tools** to expand it and show the list of tool types.
2. Click **Reporting Tools** to open the **Browse Reporting Tools** page.
3. Click **New** to open the **Publish Reporting Tool** dialog
4. Complete the page which is split into two sections:

- General parameters:

Parameter	Definition
Name	The name for the new reporting tool
Description	A description of the reporting tool
Categories	Click **add category** to select a category from the available taxonomies)administrator perspective only)

- Details parameters:

Parameter	Definition
Target URL	The address of the documents collection of the report definition on the reporting server
Request Content Type	The content-type of the request (only `application/atom+xml` is currently supported)
Request Content	The actual request sent to the reporting server containing optional parameters

5 Click **Finish** to create the new reporting tool.

Sync Tools

SOA Systinet stores all resources in its repository. They can be divided into two types: original artifacts and local copies of imported resources. Sync Tools focus on these imported resources. Such resources have a `cached` flag set and the origin URL associated with them. Sync tools are a powerful feature that make it possible to keep track of original resources, notifying the user about changes to them and maintaining up-to-date copies.

You can create new sync tools or use the **Change Management** tool provided with SOA Systinet.

This section describes:

- Synchronization Policy on page 94

Synchronization Policy

Externally sourced resources have an associated synchronization policy. Automatic change management uses this policy to determine the action that should be performed during synchronization.

The following options are available:

- **None**. The resources will not be updated, except by a manual update of a single resource from a context action.
- **Automatic**. The resource is updated automatically if the original resource is changed.

  In order for automatic synchronization to function you must create a scheduled change management task. See Tasks and Scheduling on page 97 for details.

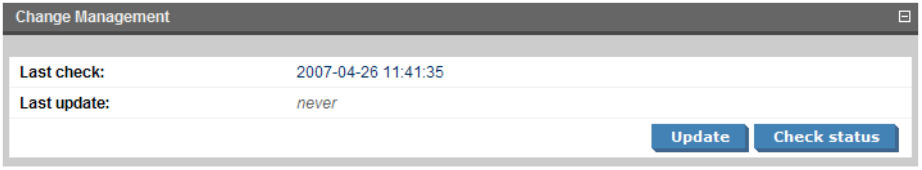
- **Approval Required**. The resource is only marked with an `out-of-sync` flag and updated after user approval.

Resources stored in a database may (and usually do) consist of imports of other resources. For example a WSDL file may contain imports of other WSDLs and XSDs. XSDs may contain imports of other XSDs or DTDs, etc. The result is a dependency tree with the WSDL that the user wants to publish or update at its root. The synchronization policy is usually associated with the root resource, but it is also applied to the other dependent resources in the tree.

Running the Change Management Tool

All artifacts that can be checked or updated have an associated change management section in their **browse artifact** and **detail view** pages. These include WSDLs, XSDs, DTDs and documentation. Change management context actions are available for single artifacts or for whole collections.

Figure 3. Change Management Section



Two actions can be performed on artifacts associated with external documents. Their behavior is:

- For a single artifact:
  - **Update**. Updates if a resource has the `out-of-sync` flag set.
  - **Check Status**. Only checks the resource status and sets the `out-of-sync` flag if the resource has been changed or is currently unreachable.
- For a collection:
  - **Update**. Shows all `out-of-sync` resources in a collection. You may approve synchronization for some resources and click **Finish** to complete the update.
  - **Check Status**. Checks all resources with an associated synchronization policy. All resources that are found to be changed or unreachable are marked with the `out-of-sync` flag.

When performing change management on a collection, only resources with an associated synchronization policy are checked or updated. If change management is performed on a single resource, the synchronization policy is not taken into account.

The dates of the last status check and last update access the latest reports as described in Change Management Reports on page 95.

Change Management Reports

Change management reports are generated by running the change management tool as described in Running the Change Management Tool on page 94 or the result of automated tasks as described in Tasks and Scheduling on page 97.

To access change management reports, browse the reports as described in Reports on page 100 and filter for report category **Change Management** or from the **Change Management** section of **browse view** or **detail view** pages as described in Running the Change Management Tool on page 94.

Select one of these by clicking the name to view the index report for that change management execution.

To view the result for a particular artifact, in the **Sub reports** section click the **Change Management Report** link for the artifact you are interested in.

The most important part of the change management report for an artifact is the **Report Data** section:

Figure 4. Change Management Report Data

This section displays the name of the artifact, its location in the repository and the location of the external document it represents and the status of the update or status check.

The possible statuses are:

- **NEW**. The resource is new
- **IDENTICAL**. The cached resource was identical to the original.
- **UNREACHABLE**. The original resource is unreachable, possibly due to a network error, or because the server is not running
- **OUT-OF-SYNC**. The cached resource differed from the original and was not updated. Root resources with imports (complex resources) are also set to `out-of-sync` if any of the imported resources is new, out-of-sync or unreachable, etc.
- **UPDATED**. The cached resource differed from the original and was updated
- **CHANGED-IGNORED**. The cached resource differed from the original but was not updated

- **UNKNOWN**. The state was unknown

Creating a Sync Tool

To create a new Sync Tool artifact:

1 In the **Catalog Browser** click **[+]** next to **Tools** to expand it and show the list of tool types.

2 Click **Sync Tools** to open the **Browse Sync Tools** page.

3 Click **New** to open the **Publish Sync Tool** dialog.

4 Complete the page which contains the following parameters:

Parameter	Definition
Name	The name for the new sync tool
Description	A description of the sync tool
Categories	Click **add category** to select a category from the available taxonomies

5 Click **Finish** to create the new sync tool.

Tasks and Scheduling

A *task* is an artifact which associates other artifacts or resources with a tool. You can imagine it as a tool prepared for execution. A task is powerful way of performing an action on the same set of resources repeatedly. The specified resources are used as input when the tool is run. A task can be run manually but it is more usual to schedule automatic execution.

This section describes:

- Creating a Task on page 97
- Setting a Schedule on page 98

Creating a Task

To create a new task:

1
- In the **New** section of the tools menu click **Task**.
- Alternatively, in the **Tasks and Reports** portlet (see Tasks and Reports Portlet on page 65), on the dashboard or tools tab, click **New Task**.
- Alternatively, in the **Browse View** (see Browse Artifact Pages on page 69) for tasks click **New**.

Any of these actions opens the **Publish Task** dialog.

2 Use **Find** to search for the tool to associate with the task. Check the radio button to select the tool and click **Next** to select the artifacts to examine.

3 The selector page contains three options:

- For collections select an artifact type collection from the drop-down list.
- For documents use **Find** to locate the documentation artifacts to associate with the task and check the radio button to select them.
- For stored searches use **Find** to locate the stored search containing the artifacts to associate with the task and check the radio button to select it.

Click **Next** to set scheduling.

4 If you want this task to be executed at a set time or repeated on a periodic basis check the **Scheduled** box, complete the details as described in Setting a Schedule on page 98 and click **Next** to set the task artifact name.

5 Optionally amend the suggested name and description and click **Finish** to create the new task.

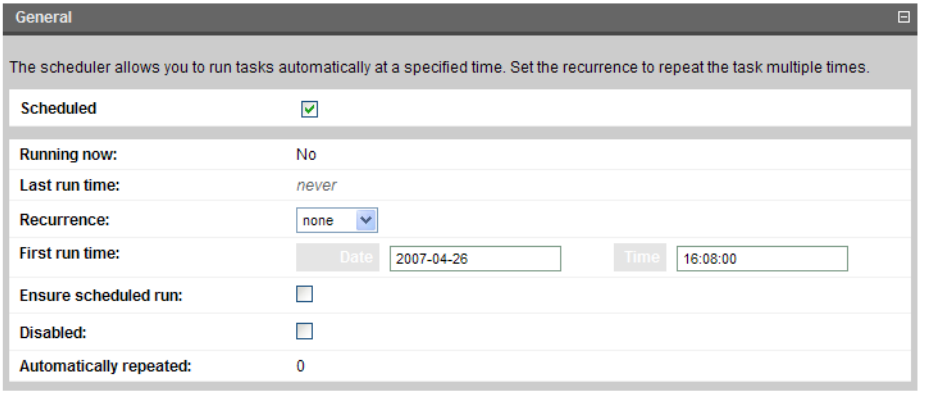
Setting a Schedule

To schedule a task for periodic or timed execution:

1 To open the schedule dialog:

- In the **detail view** of the task click **Edit** and check the **Scheduled** box.
- Alternatively, check the **Scheduled box** during task creation as described in Creating a Task on page 97.

The schedule dialog appears:



2 Complete the dialog which contains the following parameters:

Parameter	Definition
Running now	A non-input field indicating whether the task is currently being executed
Last run time	The last execution time of the task
Recurrence	Select the frequency of execution if the task is to run periodically or **none** if the task is to be executed once
First run time	Set the date and time foe the initial execution of the task
Ensure scheduled run	Check the box to prioritize scheduled execution
Disabled	Check the box to prevent the execution of the task
Automatically repeated	Displays the number of scheduled executions

3 Do one of the following:

- If you are editing a task click **Save**.
- If you are creating a task click **Next** and continue as described in Creating a Task on page 97.

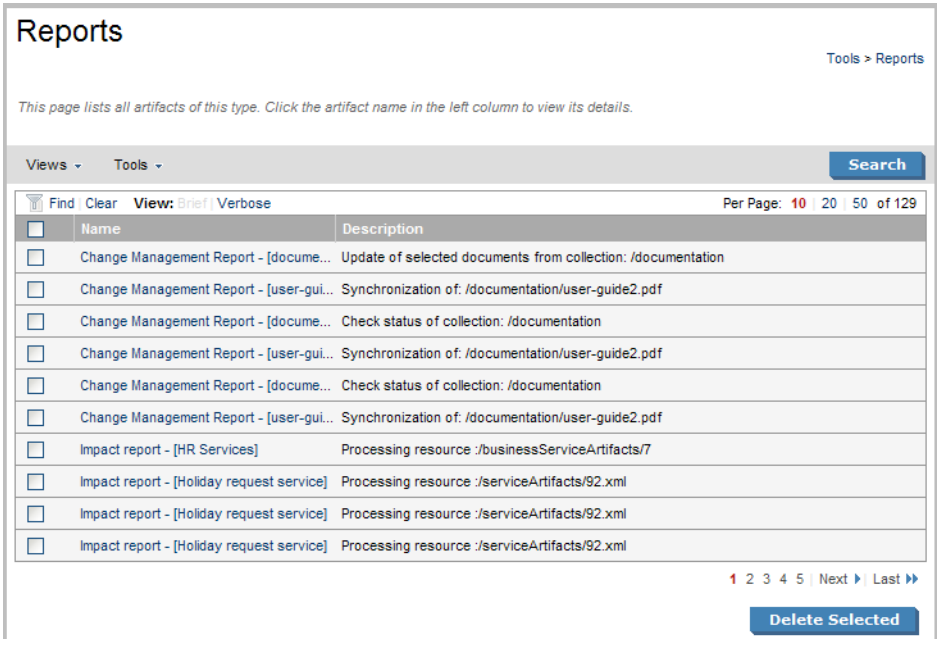
Reports

The result of a tool execution is a report. Reports are accessible from:

- The **Reports** link in the **Catalog Browser**.
- The **Tasks and Reports** portlet in the **Dashboard** and **Tools** tabs
- The **Tools** context menu in the **detail view** and **service view** of an artifact.

Clicking any of these links opens a report list view:

Figure 5. Reports List View



Find allows reports to be filtered according to various categories. Simply select the category and the browser only shows the reports which fulfill the given criteria.

The **Report Data** section contains output specific to each type of tool and is described in the report section of each tool in Tools on page 87.

15 Stored Searches

You can use SOA Systinet to create customized queries that search the repository. These searches can be stored and then reused. Stored searches can also be used to define a set of artifacts associated with a task or used to create an RSS feed for the dashboard.

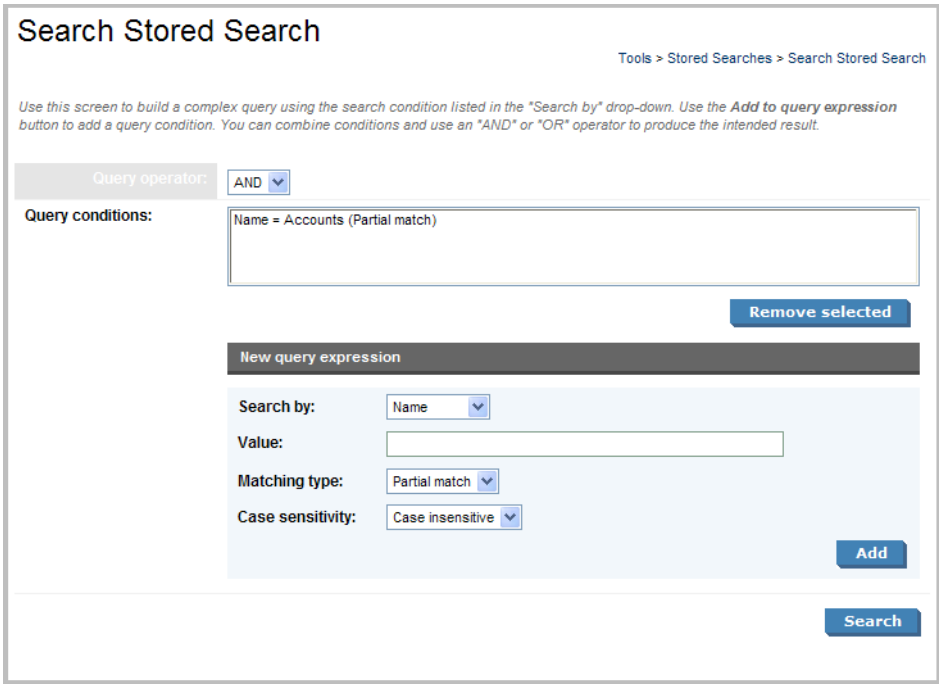
This chapter describes:

Creating a Stored Search

Each stored search is bound to one type of artifact.

To create a stored search:

1 In the **browse view** of an artifact type click **Search** to open the **search page**:



2 Complete the **New query expression** section with parameters:

Parameter	Definition
Search by	Select the artifact property to search from the drop-down list ➤ The options available depend on the artifact type.
Value	Input the value to search for

Parameter	Definition
Matching type	Select the search type from the drop-down list with options: • **Partial Match.** Search for items containing the search string • **Equals.** Search for items identical to the search string
Case sensitivity	Select whether the search is case sensitive or insensitive

3 Click **Add** to add the expression to **Query conditions**.

4 Optionally, select a **Query operator** and add more query expressions.

5 Click **Search** to run your query and view the results.

6 Optionally, use **Search** filter the results.

7 Optionally, to store the search for later use click **Store** to open the **Publish Stored Search** page.

8 Optionally, amend the search details and click **Finish** to create the new stored search artifact.

Stored search artifacts are displayed in the **Custom Views** section of the services menu.

Editing a Stored Search

Although the stored search is persisted it can be modified again. There are two kinds of modification:

- To edit the basic search properties:
  1 In the **detail view** (see Artifact Detail Pages on page 72) of the stored search, click **Edit**.
  2 Change the properties as required and click **Save**.

- To modify the search parameters:
  1 In the **detail view** (see Artifact Detail Pages on page 72) of the stored search, click **Redefine**.

2 Select a condition and click **Remove selected** to remove conditions from the query and add new conditions as described in Creating a Stored Search on page 103.

3 Click **Save** to confirm your changes.

Running a Stored Search

To execute a stored search:

In the **detail view** (see Artifact Detail Pages on page 72) of the stored search, click **Run**.

16 Registry Integration

SOA Systinet provides customizable mapping between UDDI entities and SDM artifacts. Mapping of the basic structures (types) is predefined, but several aspects can be significantly changed by mapping additional artifact properties to UDDI keyed references and vice versa.

The UDDI specification (see www.uddi.org [http://www.uddi.org]) defines interoperable standards for the exchange of data about web services, their interfaces, implementations, deployments and responsible contacts. A UDDI registry is an implementation of the UDDI specification, e.g. HP SOA Systinet Registry. The UDDI specification has three major versions, commonly named v1, v2 and v3. SOA Systinet is interoperable with UDDI v3 compliant registries.

The UDDI specification defines four major structures:

- Business Entity - represents a business unit, company, department, etc. It contains company name(s), contacts and provided Business Services. It corresponds to Organizational Unit in the HP SOA Systinet SDM model.
- Business Service - represents a logical service. Business Service can not standalone, it must always be part of a superior Business Entity. It corresponds to Business Service in the HP SOA Systinet SDM model.
- Binding Template - represents technical services. It includes information needed to create and run client applications. It corresponds to SOAP Service, XML Service or Web Application in the HP SOA Systinet SDM model.
- tModel - represents an arbitrary resource, that can not be described by the structures above. For example; specification, documentation, (part of) WSDL document, policy or taxonomy. Therefore there is not a common map of tModel to an SDM model artifact.

The mapping for certain types of tModel can be defined in PLATFORM_HOME/conf/registryconf.xml.

Further description is beyond the scope of this document, see www.uddi.org [http://www.uddi.org] for more details.

This chapter describes:

- Registry Setup and Configuration on page 108
- Importing Data From a Registry on page 115
- Registry Synchronization on page 117
- Export To Registry on page 118

Registry Setup and Configuration

Before you can perform any registry synchronization, you must configure at least one UDDI Registry Artifact. SOA Systinet can be integrated with both V2 and V3 UDDI API registries. For HP Systinet V3 registries there is extra functionality: taxonomy synchronization and Single Sign On (if enabled on the remote Registry).

The UDDI API version can not be changed after creating a UDDI registry artifact. Be aware that the version protocol should not be changed. Once an artifact is synchronized (exported/imported) with a UDDI registry V2 entity it should not be synchronized with other UDDI registry V3 entities and vice versa.

It is not possible to export a WSDL SOAP service to a non-Systinet UDDI registry unless it complies with technical note Using WSDL in a UDDI Registry, Version 2.0.2 [http://www.oasis-open.org/committees/uddi-spec/doc/tn/uddi-spec-tc-tn-wsdl-v202-20040631.htm], specifically the V2 tModel Structure [http://www.oasis-open.org/committees/uddi-spec/doc/tn/uddi-spec-tc-tn-wsdl-v202-20040631.htm#_Toc76437813]. The registry must have available tModels (XML Namespace, XML local name, WSDL portType Reference).

Registry setup consists of the following:

- Creating a Registry Artifact on page 109
- Import Registry Certificate on page 111
- Taxonomy Synchronization on page 112

Creating a Registry Artifact

To establish synchronization with a UDDI registry you must create a registry artifact that contains important data about the registry configuration such as the API version and API URLs.

To create a registry artifact:

1 To open the **Create New UDDI Registry** dialog:

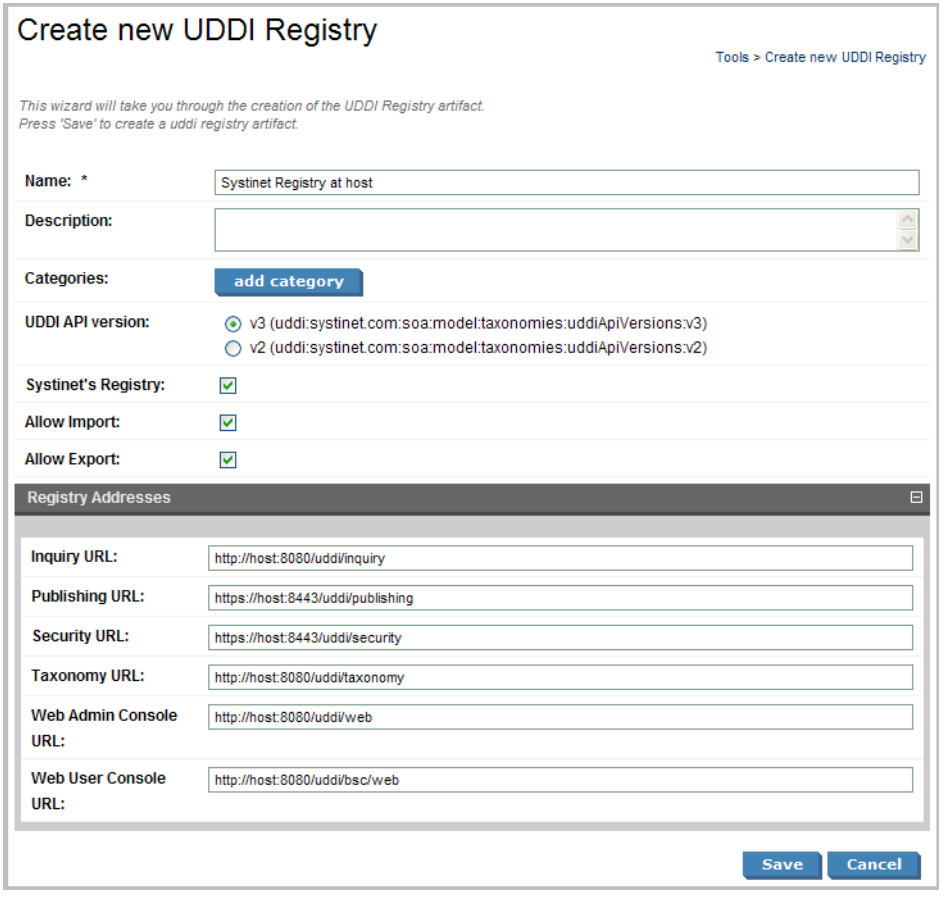
- In the **Browse View** of registries (see Artifact Detail Pages on page 72) click **New**.
- Alternatively, in the **Registry Content** section of the tools menu click **Import Registry Content** to open the **Import Artifacts from Registry** page and then click **New Registry**.

Both options open the **Create New UDDI Registry** page.

2 Complete the page which contains the following parameters:

Parameter	Definition
Hostname	The name of the server where the registry is running
HTTP Port	The port for non-secure access to the registry
SSL (HTTPS) Port	The port for secure access to the registry
Application Server Context	If the registry is ported to a J2EE server then input the context name
Systinet's registry	Check the box if the registry is a HP HP SOA Systinet Registry

3 Click **Next** to set the registry details:



4 Complete the page which is split into two sections:

- Enter the general details for the registry:

Parameter	Definition
Name	The name of the registry artifact
Description	A description for the new registry

Parameter	Definition
Categories	Click **add category** to select a category from the available taxonomies
UDDI API Version	Select v3 or v2  It is possible to create a UDDI v2 registry but the integration features are only fully compliant with UDDI v3.
Systinet's Registry	Check the box if the registry is a HP HP SOA Systinet Registry
Allow Import	Check this box if the registry is a source of data import
Allow Export	Check this box if the registry is a target for data export

- If the registry is a HP HP SOA Systinet Registry the **Registry Addresses** section is populated with addresses based on the input from the previous page in the form `http://<hostname>:<port>/<app_server_context>/inquiry .....`

Parameter	Definition
Inquiry URL	The addresses of the components of HP SOA Systinet Registry
Publishing URL	
Security URL	
Taxonomy URL	
Web Admin Console URL	
Web User Console URL	

5 Click **Save** to create the new registry artifact.

Import Registry Certificate

If HTTPS is used for SOA Systinet—HP SOA Systinet Registry communication then it is necessary to import the registry certificates into the application server certificate store.

To import registry certificates execute the command:

keytool -import -alias registry -file "REGISTRY_HOME\doc\registry.crt" -keystore "PLATFORM_HOME\conf\client.truststore"

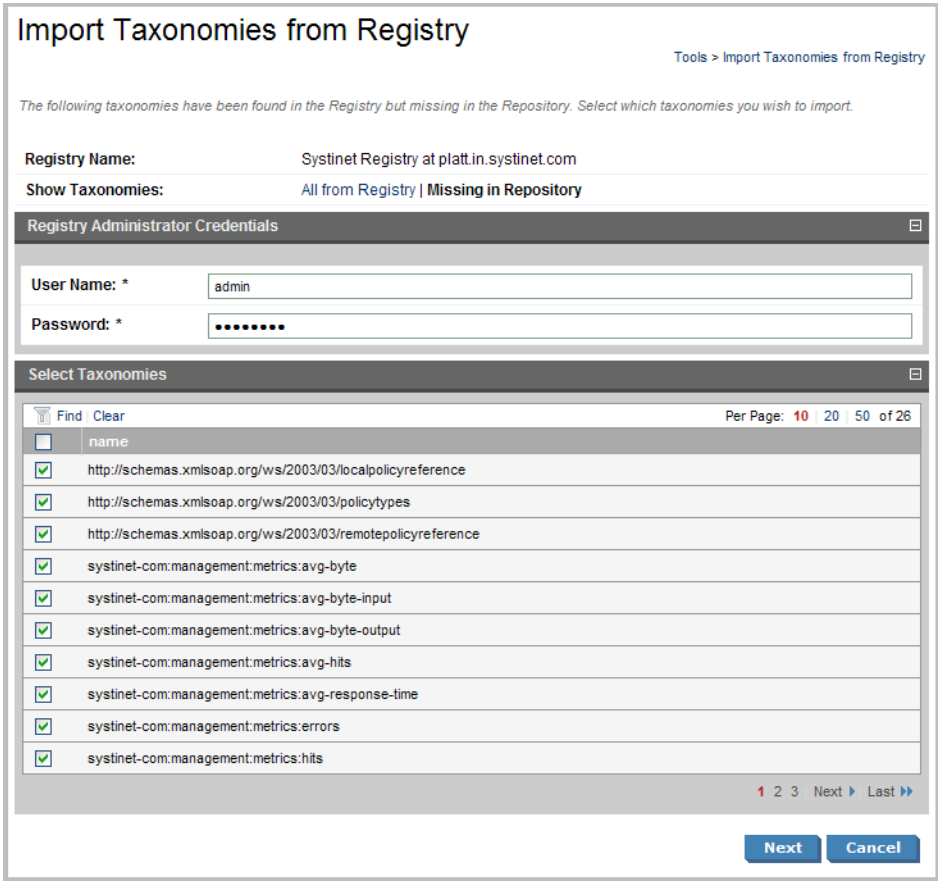
Taxonomy Synchronization

A general precondition must be fulfilled before registry import/export. Taxonomies with the taxonomic values referenced by the imported/exported data must be present in both the source and target environment. The easiest way is to synchronize the taxonomies between the registry; and SOA Systinet. In the case of missing taxonomies during import/export, SOA Systinet outputs an error message about the missing taxonomies and prevents the import/export. If the registry is a HP registry taxonomy synchronization can be done directly from SOA Systinet console.

Only a user with administrator permissions is allowed to perform taxonomy synchronization.

To import taxonomies from a registry:

1. In the **detail view** of the registry click **Import Taxonomies** in the **Tools** context menu to open the **Import Taxonomies from Registry** page:

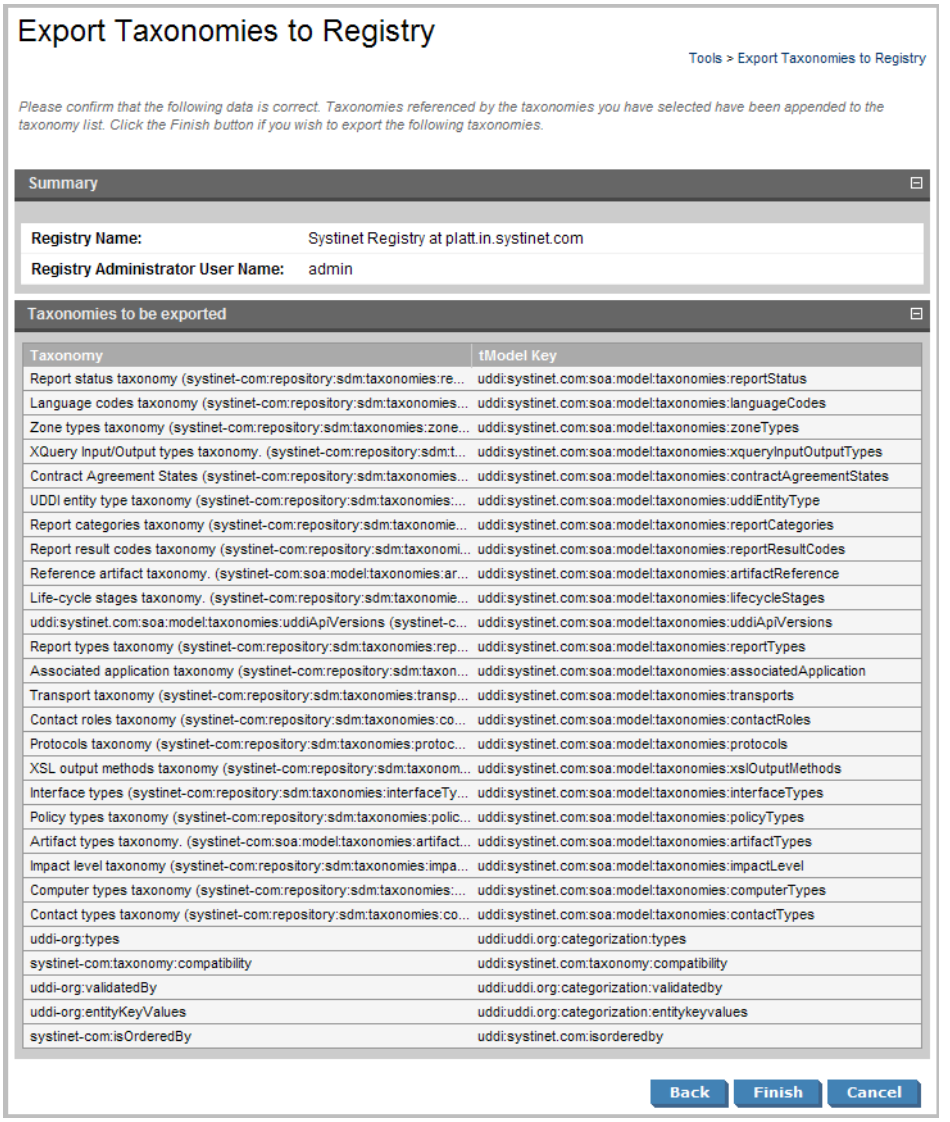


2 Input the registry credentials, de-select any taxonomies that are not required and click **Next**.

3 Review the export report which displays a list of imported taxonomies.

To export taxonomies to a registry:

1 In the **detail view** of the registry click **Export Taxonomies** in the **Tools** context menu to open the **Export Taxonomies to Registry** page:



Export Taxonomies to Registry

Tools > Export Taxonomies to Registry

Please confirm that the following data is correct. Taxonomies referenced by the taxonomies you have selected have been appended to the taxonomy list. Click the Finish button if you wish to export the following taxonomies.

Summary

Registry Name:	Systinet Registry at platt.in.systinet.com
Registry Administrator User Name:	admin

Taxonomies to be exported

Taxonomy	tModel Key
Report status taxonomy (systinet-com:repository:sdm:taxonomies:re...	uddi:systinet.com:soa:model:taxonomies:reportStatus
Language codes taxonomy (systinet-com:repository:sdm:taxonomies...	uddi:systinet.com:soa:model:taxonomies:languageCodes
Zone types taxonomy (systinet-com:repository:sdm:taxonomies:zone...	uddi:systinet.com:soa:model:taxonomies:zoneTypes
XQuery Input/Output types taxonomy. (systinet-com:repository:sdm:t...	uddi:systinet.com:soa:model:taxonomies:xqueryInputOutputTypes
Contract Agreement States (systinet-com:repository:sdm:taxonomies...	uddi:systinet.com:soa:model:taxonomies:contractAgreementStates
UDDI entity type taxonomy (systinet-com:repository:sdm:taxonomies:...	uddi:systinet.com:soa:model:taxonomies:uddiEntityType
Report categories taxonomy (systinet-com:repository:sdm:taxonomie...	uddi:systinet.com:soa:model:taxonomies:reportCategories
Report result codes taxonomy (systinet-com:repository:sdm:taxonomi...	uddi:systinet.com:soa:model:taxonomies:reportResultCodes
Reference artifact taxonomy. (systinet-com:soa:model:taxonomies:ar...	uddi:systinet.com:soa:model:taxonomies:artifactReference
Life-cycle stages taxonomy. (systinet-com:repository:sdm:taxonomie...	uddi:systinet.com:soa:model:taxonomies:lifecycleStages
uddi:systinet.com:soa:model:taxonomies:uddiApiVersions (systinet-c...	uddi:systinet.com:soa:model:taxonomies:uddiApiVersions
Report types taxonomy (systinet-com:repository:sdm:taxonomies:rep...	uddi:systinet.com:soa:model:taxonomies:reportTypes
Associated application taxonomy (systinet-com:repository:sdm:taxon...	uddi:systinet.com:soa:model:taxonomies:associatedApplication
Transport taxonomy (systinet-com:repository:sdm:taxonomies:transp...	uddi:systinet.com:soa:model:taxonomies:transports
Contact roles taxonomy (systinet-com:repository:sdm:taxonomies:co...	uddi:systinet.com:soa:model:taxonomies:contactRoles
Protocols taxonomy (systinet-com:repository:sdm:taxonomies:protoc...	uddi:systinet.com:soa:model:taxonomies:protocols
XSL output methods taxonomy (systinet-com:repository:sdm:taxonom...	uddi:systinet.com:soa:model:taxonomies:xslOutputMethods
Interface types (systinet-com:repository:sdm:taxonomies:interfaceTy...	uddi:systinet.com:soa:model:taxonomies:interfaceTypes
Policy types taxonomy (systinet-com:repository:sdm:taxonomies:polic...	uddi:systinet.com:soa:model:taxonomies:policyTypes
Artifact types taxonomy. (systinet-com:soa:model:taxonomies:artifact...	uddi:systinet.com:soa:model:taxonomies:artifactTypes
Impact level taxonomy (systinet-com:repository:sdm:taxonomies:impa...	uddi:systinet.com:soa:model:taxonomies:impactLevel
Computer types taxonomy (systinet-com:repository:sdm:taxonomies:...	uddi:systinet.com:soa:model:taxonomies:computerTypes
Contact types taxonomy (systinet-com:repository:sdm:taxonomies:co...	uddi:systinet.com:soa:model:taxonomies:contactTypes
uddi-org:types	uddi:uddi.org:categorization:types
systinet-com:taxonomy:compatibility	uddi:systinet.com:taxonomy:compatibility
uddi-org:validatedBy	uddi:uddi.org:categorization:validatedby
uddi-org:entityKeyValues	uddi:uddi.org:categorization:entitykeyvalues
systinet-com:isOrderedBy	uddi:systinet.com:isorderedby

Back Finish Cancel

2 Input the registry credentials, review the taxonomy list and click **Finish**.

3 Review the export report which displays the list of exported taxonomies.

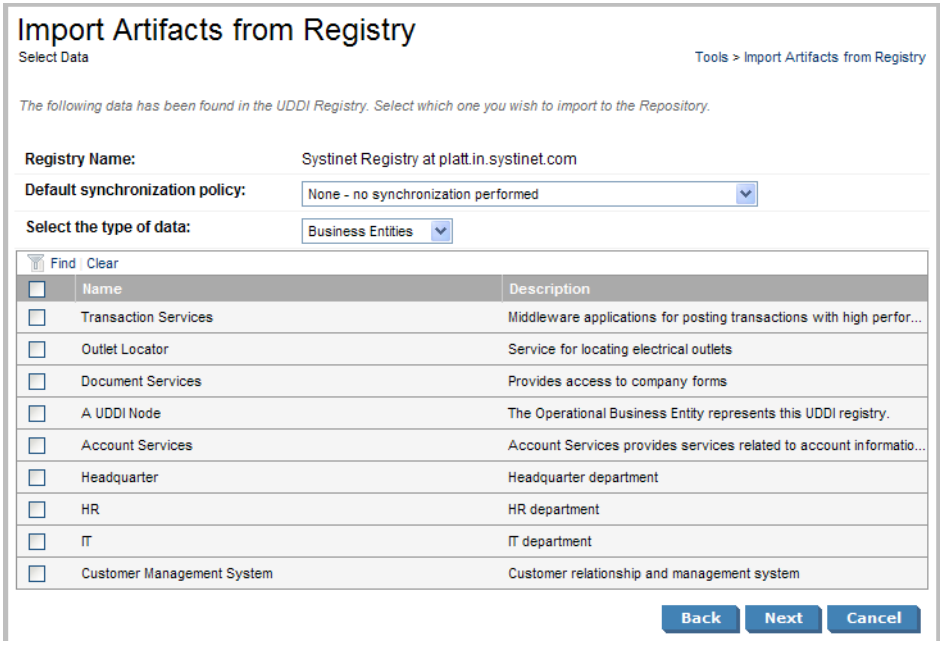
Importing Data From a Registry

To import data from a UDDI registry:

1 In the **Registry Content** section of the tools menu, click **Import Registry Content** to open the **Import Artifacts from Registry** dialog.

2 Select a registry from the drop-down list or click **New** to create a new registry artifact as described in Creating a Registry Artifact on page 109.

Click **Next** to set the import details:



3 Complete the dialog which contains the following parameters:

Parameter	Definition
Registry Name	The target registry to import data from
Default synchronization policy	Select a policy from the drop-down list. For more details see Synchronization Policy on page 94
Select the type of data	Select **Business Entities** or **Business Services** to populate the table

4 Select data from the registry to import and click **Next**.

5 Verify the data to be imported on the summary page.

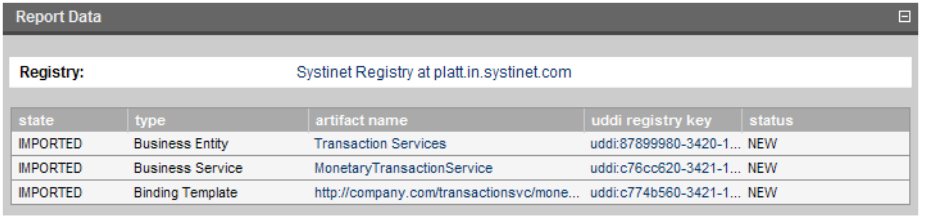
> If you are importing a business entity, all its business services are imported as well, and if you are importing a business service, all its binding templates are also be imported. If a single business entity is imported then input a service name and description for the new business service artifact to associate with the imported items.

Click **Finish**.

6 When the import process begins, an import report is created. This process takes some time so click **Refresh** every so often - you may have do this several times until the report is complete (and **Refresh** disappears).

7 When the import is complete, click one of the **Registry Import Reports** in the **Sub report** section to view the import report details for that entity.

8 The most important part of the report is the **Report Data** section:



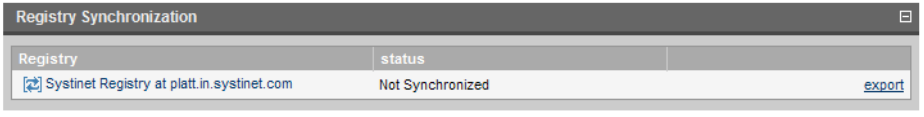
This report shows exactly what was imported, and the import status of all the imported items.

<table>
<tr><th>Parameter</th><th>Definition</th></tr>
<tr><td>state</td><td>
<table>
<tr><th>State</th><th>Description</th></tr>
<tr><td>IMPORTED</td><td>The item was successfully imported.</td></tr>
<tr><td>EXPORTED</td><td>The item was successfully exported.</td></tr>
<tr><td>DELETED</td><td>The item (Business Service or Binding Template) was deleted from the UDDI registry during export because the corresponding artifact had been deleted in HP SOA Systinet.</td></tr>
<tr><td>FAILED</td><td>An error occurred during the export/import of the item.</td></tr>
</table>
</td></tr>
<tr><td>type</td><td>The UDDI entity type: Business Entity, Business Service or Binding Template</td></tr>
<tr><td>artifact name</td><td>The SOA Systinet artifact name</td></tr>
<tr><td>uddi registry key</td><td>The unique id of the corresponding UDDI entity</td></tr>
<tr><td>status</td><td>The synchronization status before the import/export was performed</td></tr>
</table>

Registry Synchronization

Each artifact that corresponds to a UDDI entity contains a **Registry Synchronization** section in its **detail view** (see Artifact Detail Pages on page 72):

Figure 1. Registry Synchronization Details



Its synchronization status is shown and synchronization actions (export/import) are offered for each known UDDI Registry.

Table 1. Synchronization Status

Synchronization Status	Description
Not Exported	HP SOA Systinet artifact does not correspond to any UDDI entity. It is not exported to UDDI or imported from UDDI. This synchronization status corresponds to the NEW resource status.
Synchronized	HP SOA Systinet artifact and corresponding UDDI entity are semantically the same, both are the same since the last synchronization. This synchronization status corresponds to the IDENTICAL resource status.
Local change	HP SOA Systinet artifact has changed (while the corresponding UDDI entity has not) since the last synchronization. This synchronization status corresponds to the LOCAL CHANGE resource status.
Remote change	The corresponding UDDI entity has changed since the last synchronization. This synchronization status corresponds to the REMOTE CHANGE resource status.
Local+Remote change	Both the HP SOA Systinet artifact and the corresponding UDDI entity have changed since the last synchronization. This synchronization status corresponds to the NEEDS MERGE resource status.
Unreachable	The UDDI registry is unreachable to check the synchronization status. This synchronization status corresponds to the UNREACHABLE resource status.

Export To Registry

To export an artifact to a UDDI registry:

1 In the **Registry Synchronization** section of the **Detail View** (see Artifact Detail Pages on page 72) of the artifact click **export** for the registry that you want to export the artifact to.

Only organizational unit, business service, implementation and endpoint artifacts can be exported directly.

2 Provide the login name and password of the UDDI registry account where the data will be exported and click **Next**.

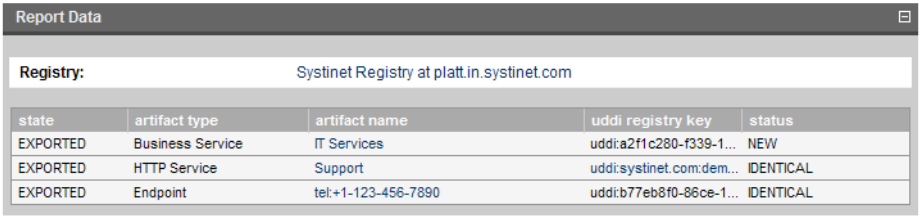
If the UDDI registry shares user identities via SSO (Single Sign On), this step is not necessary. Data will be exported to the UDDI registry under the account of the current user.

3 Select the associated artifacts to export on the summary page. Note that if you are exporting a business service, all its web services will be exported as well and if you are exporting an organizational unit, all its business services are also exported.

Click **Finish**.

4 When the export process begins, an export report is created. This process may take some time, so click **Refresh**. You may have do this several times until the report is complete (and **Refresh** disappears).

5 The most important part of the report is the **Report Data** section:


Report Data

Registry: Systinet Registry at platt.in.systinet.com

state	artifact type	artifact name	uddi registry key	status
EXPORTED	Business Service	IT Services	uddi:a2f1c280-f339-1...	NEW
EXPORTED	HTTP Service	Support	uddi:systinet.com:dem...	IDENTICAL
EXPORTED	Endpoint	tel:+1-123-456-7890	uddi:b77eb8f0-86ce-1...	IDENTICAL

It shows exactly what was exported, and the export status of all the exported items.

<table>
<tr><th>Parameter</th><th colspan="2">Definition</th></tr>
<tr><td>state</td><td>State</td><td>Description</td></tr>
<tr><td></td><td>IMPORTED</td><td>The item was successfully imported.</td></tr>
<tr><td></td><td>EXPORTED</td><td>The item was successfully exported.</td></tr>
<tr><td></td><td>DELETED</td><td>The item (Business Service or Binding Template) was deleted from the UDDI registry during export because the corresponding artifact had been deleted in HP SOA Systinet.</td></tr>
<tr><td></td><td>FAILED</td><td>An error occurred during the export/import of the item.</td></tr>
<tr><td>artifact type</td><td colspan="2">the UDDI entity type: Business Entity, Business Service, SOAP Service, etc.</td></tr>
<tr><td>artifact name</td><td colspan="2">the SOA Systinet artifact name</td></tr>
</table>

Parameter	Definition
uddi registry key	the unique id of the corresponding UDDI entity
status	the synchronization status before the import/export was performed

17 Business Availability Center Integration

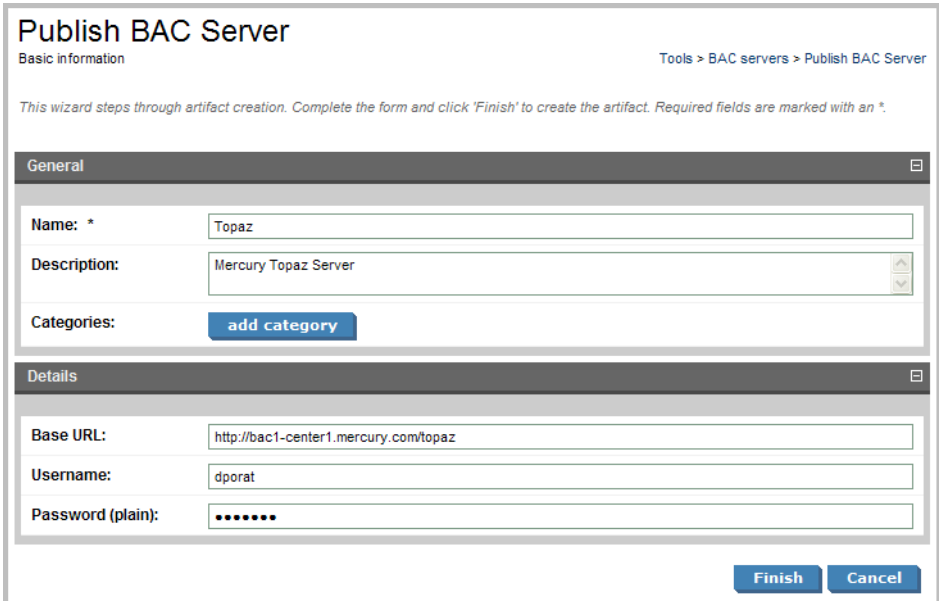
HP Business Availability Center can access and generate statistics about the services in SOA Systinet. In turn SOA Systinet can access this information.

This chapter describes:

Creating a BAC Server Artifact

To integrate SOA Systinet with a BAC Server:

1. Expand the **Integration** section of the **Catalog Browser** and click **BAC Servers** to open the **browse view** of BAC server artifacts.
2. Click **New** to start the **Publish BAC Server** dialog:



3 Complete the page which is split into two sections:

- **General**:

Parameter	Definition
Name	The name for the BAC server
Description	A description of the new BAC server
Categories	Click **add category** to select a category from the available taxonomies (administrator perspective only)

- **Details**:

Parameter	Definition
Base URL	The address of the BAC server

Parameter	Definition
Username	A login for the BAC server
Password	A password for the BAC server

4 Click **Finish** to create the new BAC server artifact.

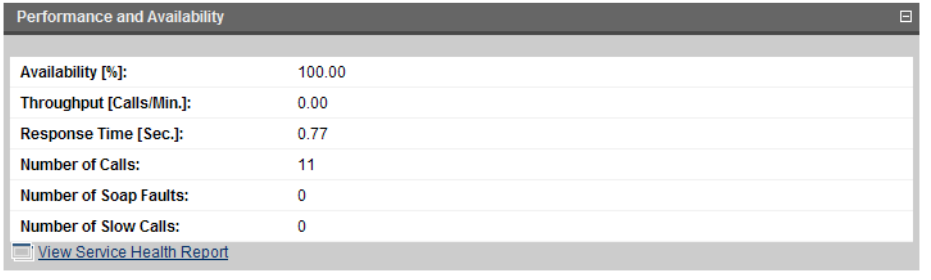
BAC Integration Features

Once a BAC server has been integrated with SOA Systinet the service implementations shared by SOA Systinet and BAC are monitored and the analysis and statistics are returned to SOA Systinet.

Use the procedure described in Implementing a Service on page 52 or Publishing a SOAP Service with WSDL on page 84 to import a service monitored by BAC.

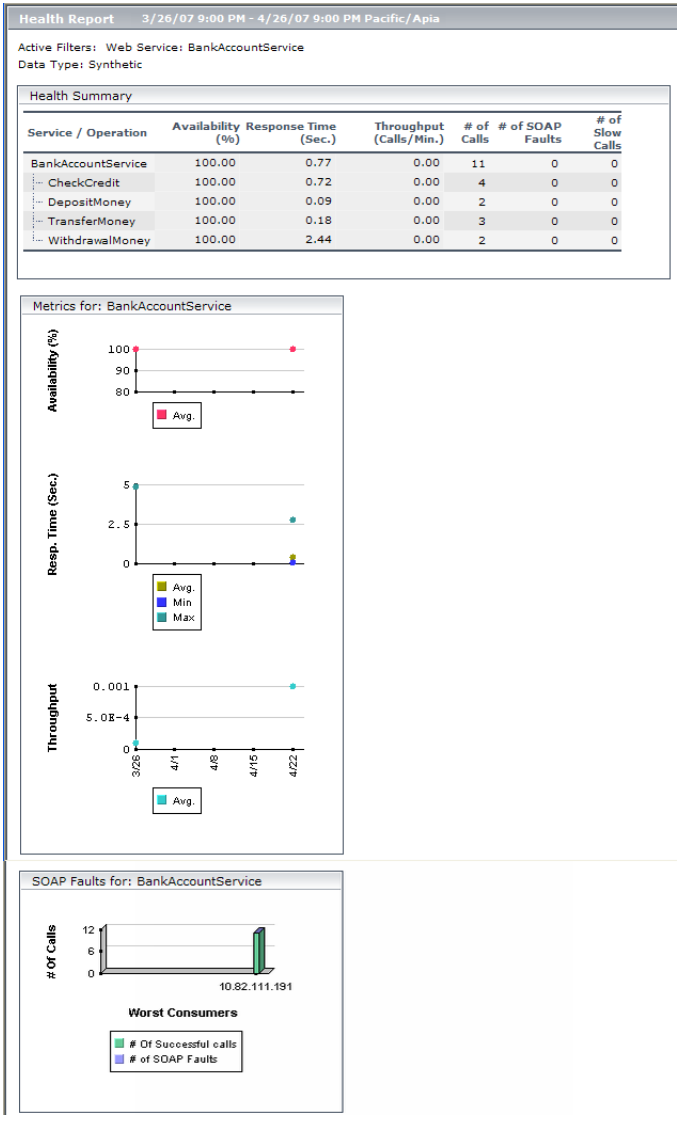
Any implementation that is monitored by BAC has an extra section in its **detail view**:

Figure 1. Performance and Availability Section



This sections contains statistics generated by BAC and clicking **View Service Health Report** displays the full report from BAC.

Figure 2. BAC Health Report



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