HP SOA Systinet

Software Version: 2.51, 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.

Important: 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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- For the latest information about support processes and tools available for products formerly produced by Mercury, we encourage you to visit the Mercury Customer Support Web site at: **http://hp.com/go/hpsoftwaresupport**.
- For the latest information about support processes and tools available for products formerly produced by Systinet, we encourage you to visit the Systinet Online Support Web site at: **http://www.systinet.com/support/index**.
- If you have additional questions, contact your HP Sales Representative.

HP Software Support

You can visit the HP Software Support Web site at:

http://www.hp.com/go/hpsoftwaresupport

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: http://h20230.www2.hp.com/new_access_levels.jsp

To register for an HP Passport ID, go to: http://h20229.www2.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:

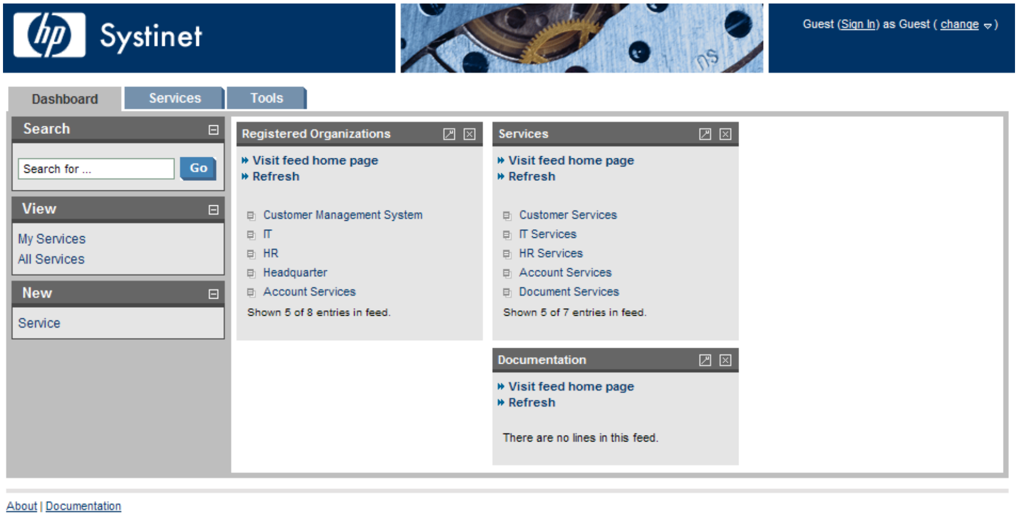
```
http://mypc:8080/soa/systinet/platform/web
```

or:

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

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

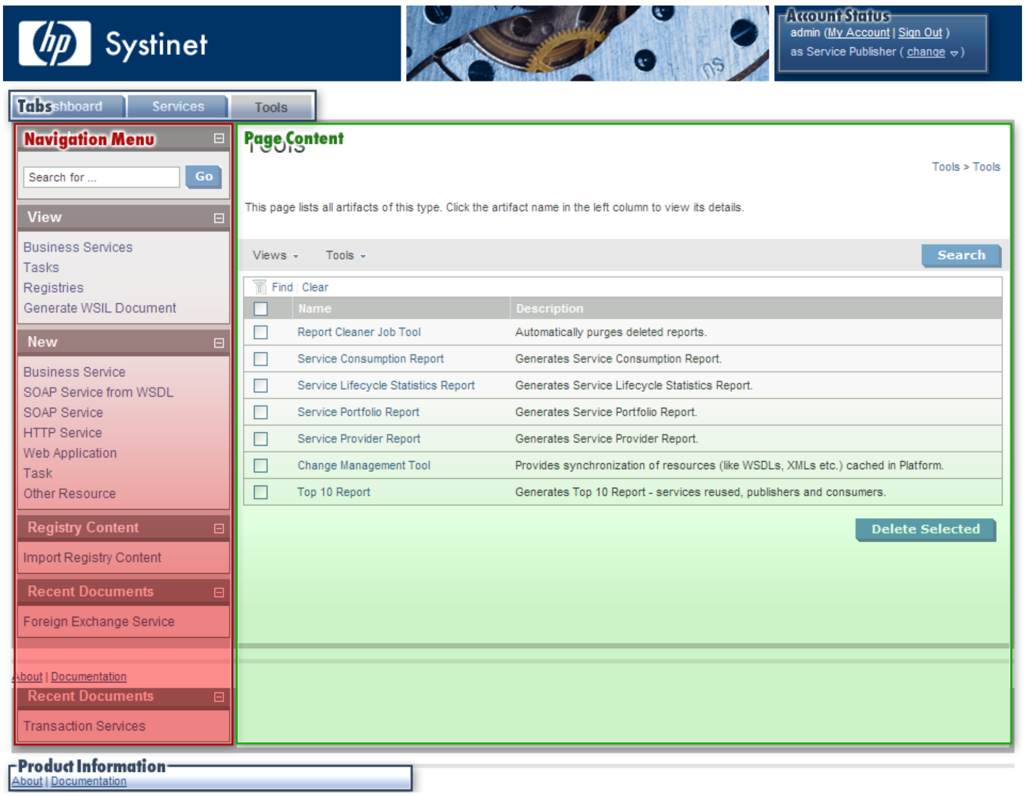
Figure 1. The Dashboard at Start-up



2 Features of the User Interface

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

Figure 2. 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 18.
- The **Menu** contains a set of component specific links described in Menus on page 18.
- **Account Status** controls sign-in, personal account management and your view of SOA Systinet described in Account Status on page 19.
- **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 3. 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.

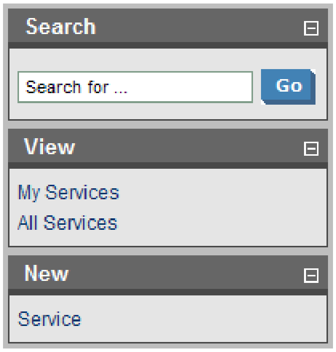
The **Services** tab is the central location which shows all information about services in one place to provide easy access and simple management. The **Services** tab is described in Features of the Services Tab on page 41.

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 65.

Menus

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

Figure 4. Menu



The search feature is described in Service Discovery on page 27.

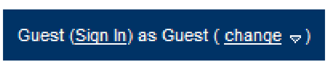
The menu is context specific for each component and each menu is described in:

- Dashboard Menu on page 34
- Services Menu on page 42
- Tools Menu on page 67

Account Status

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

Figure 5. 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 21.

Figure 6. Account Status after Sign-In

My Account. Manage your account as described in Managing Your Account on page 25.

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

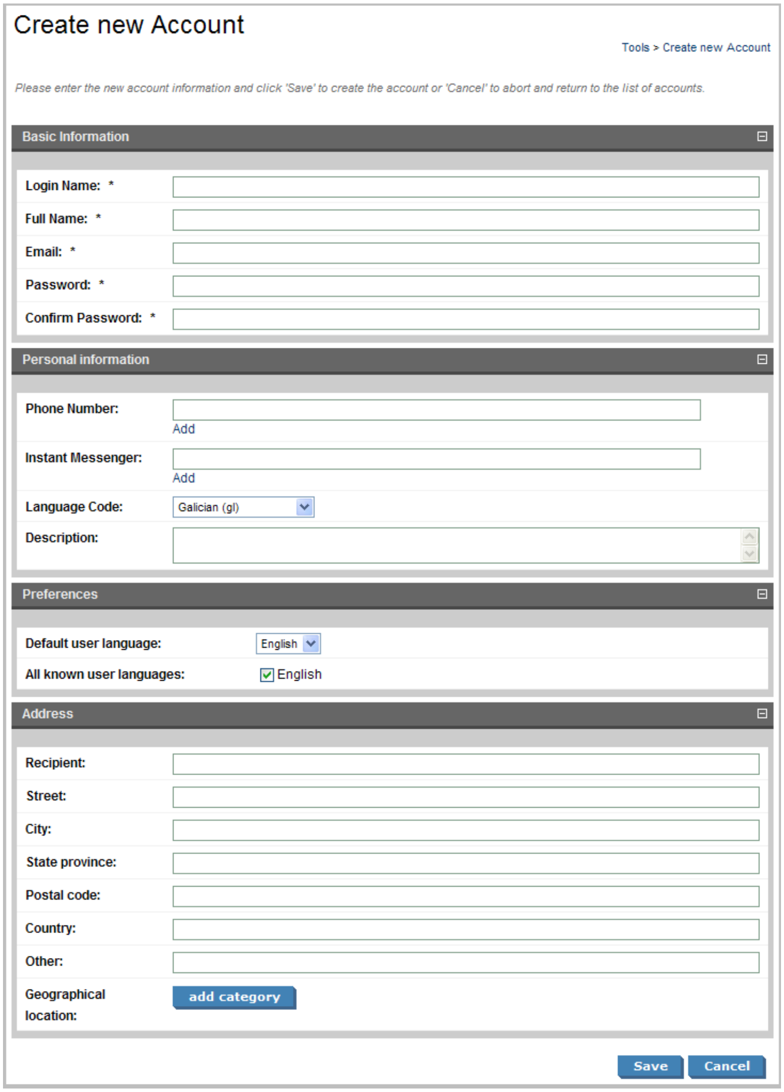
SOA Systinet provides account management features, however, if LDAP is used then the LDAP account management functions should be used instead.

To create an account:

1 Do one of the following:

- 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

Your accounts details are available to amend.

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 details:

1. Click **Edit**.
2. Change the parameters described in Creating an Account on page 21 with the exception of password.
3. Click **Save** to confirm the changes.

5 Service Discovery

SOA Systinet provides numerous ways to locate the service or artifact you need:

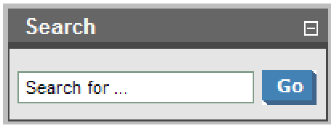
- Full text search is available in the menu on every page and is described in full in this section.
- The **Services** tab provides list views that enable you to browse and filter services by column heading, as described in List Views on page 45.
- The **Tools** tab provides browse artifact pages with more sophisticated filtering. Artifacts in a browse view can be filtered by column heading or by taxonomic categories assigned to them during artifact creation. Browse views are described in Browse Artifact Pages on page 73.
- Stored searches can be created and used to provide custom views of artifacts. This feature is described in full in Stored Searches on page 109.
- Custom RSS views can be added to the **Dashboard** to provide periodically updated views of specific artifact types. RSS portlets are described in RSS Content Feed Portlets on page 35 and the procedure to create new portlets in Adding a Content Feed on page 37.
- SOA Systinet integrates with UDDI registries giving access to the services indexed in the registry. Setting up registry integration is described in the Registry Setup and Configuration section of the HP SOA Systinet Administration Guide and importing and exporting data with the registry is described in Registry Integration on page 113.
- SOA Systinet integrates with IDEs enabling developers direct access to the SOA Systinet repository. This feature is described in the IDE Integration section of the HP SOA Systinet Developer Guide.

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

Note: Full text search must be enabled on the database and in the configuration for this feature to function. See the Configuring the Database for Full Text Search section of the HP SOA Systinet

Installation Guide and the SOA Systinet Configuration Options section of the HP SOA Systinet Administration Guide.

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 then click **Go**.

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

To search for a term including a space, enclose the search term in quotation marks (`"`).

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.

Note: The default functionality of full text search adds a `%` to the end of any input search string that does not contain wildcards. For example, searching for `acc` finds all services that begin with acc. The addition of the % can be disabled as described in the Disabling the Addition of % to Search Terms section of the HP SOA Systinet Installation Guide.

Warning: An exception can occur in the event of a wildcard resulting in excessive search terms. If this occurs then resolve the problem with one of the following methods:

- Remove unnecessary wildcards (%,*,_).

- Prevent the implicit appending of a % by enclosing your search terms with quotes.
- Remove unnecessary words from the expression.

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.

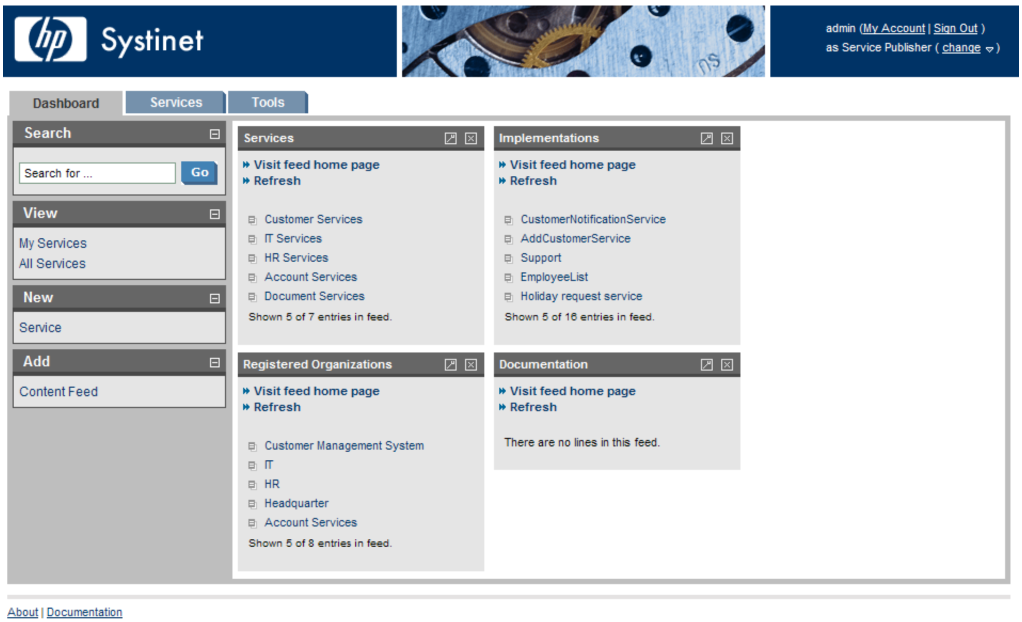
This part contains the following chapters:

- Features of the Dashboard Tab on page 33. The elements of the user interface on the **Dashboard**.
- Adding a Content Feed on page 37. 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 7. 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.

Tip: Portlets can be dragged and dropped to customize the look of your dashboard using the mouse. You can also use the keyboard to move portlets.

To move portlets on the Dashboard with the keyboard:

1. Press F9 to display the movement keypad.
2. Use the arrows keys to navigate to the portlet you want to move.
3. Press Enter to select the portlet.
4. Use the arrow keys to move the portlet into position.
5. Press Enter to fix the portlet in place.
6. Press F9 to exit portlet navigation mode.

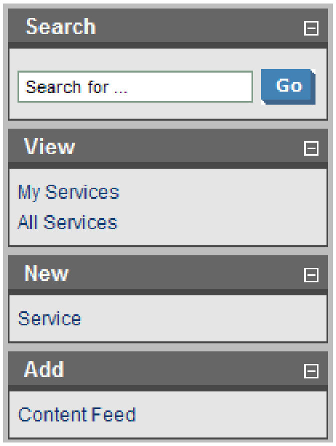
This chapter describes:

- 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 8. Dashboard Menu

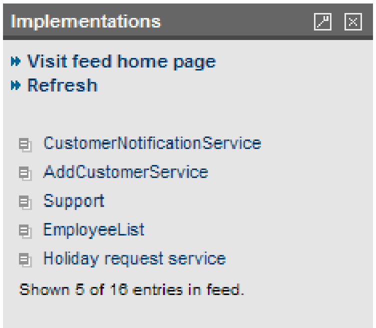


- **Search**. The full text search function described in Service Discovery on page 27.
- **View**. A set of links to **List Views** (see List Views on page 45) showing various aspects of service management.
- **New**. Create new artifacts:
    - **Service**. Create a new business service as described in Creating a New Business Service on page 51.
- **Add**. Create a new content feed to 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 that use RSS subscription to display up-to-date information from a variety of sources, including the repository:

Figure 9. 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.

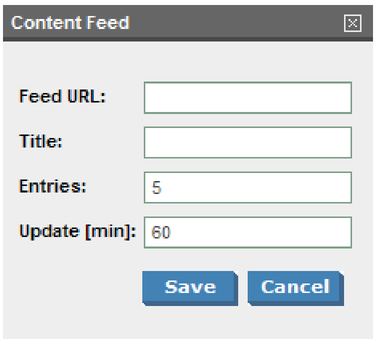
Closing a portlet in the Dashboard makes it available in the **Add** section of the Dashboard menu.

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 **Note:** 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 73 and Artifact Detail Pages on page 76) or the **RSS of Result** view accessed from the **View** context menu for a stored search.

Parameter	Definition
Title	The heading for the new feed portlet
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.

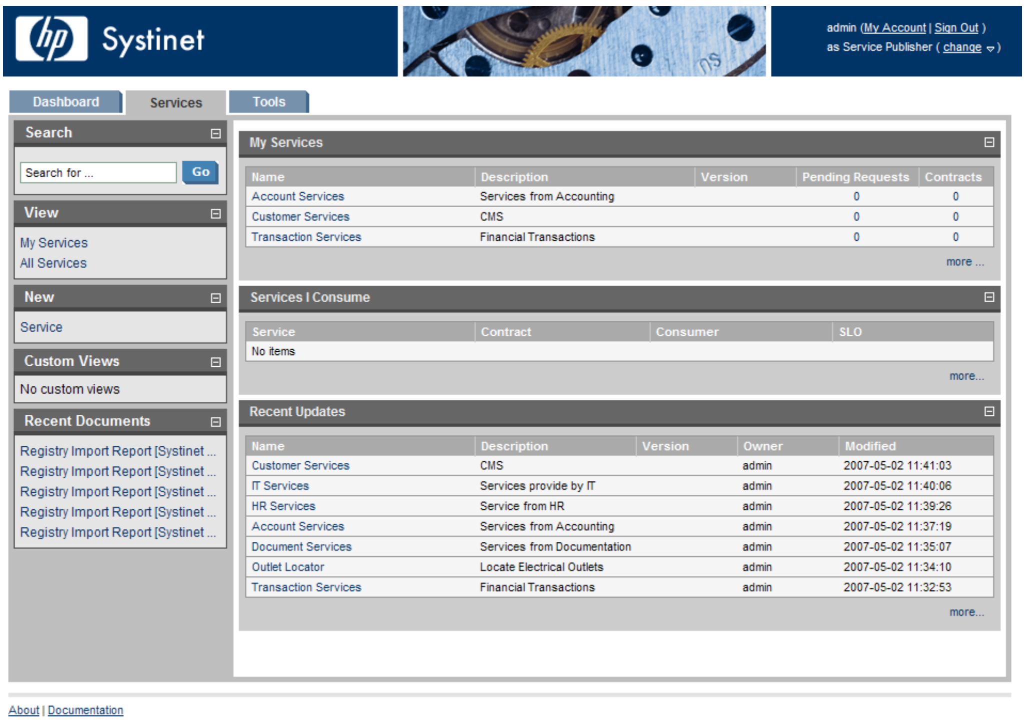
Service Pages on page 45 describes the pages for browsing and viewing services in the services tab.

Service Publication on page 51 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 that shows all information about services in one place to provide easy access and simple management:

Figure 10. 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**.

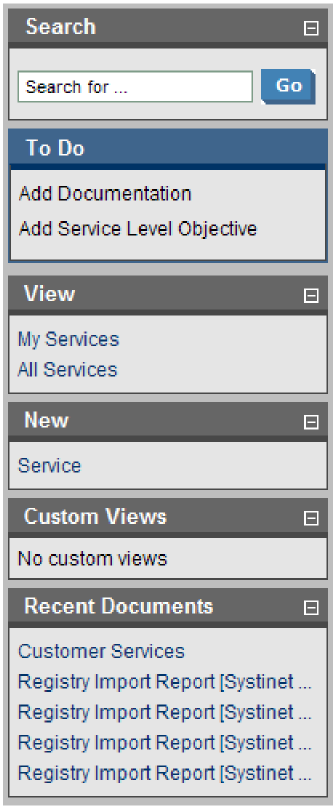
- **My Services**. Shows the services that you provide that are ready for consumption.
- **Services | Consume** displays the services that you use.
- **Recent Updates** shows services that are newly available or modified

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:

Figure 11. Services Menu



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

- **Search**. The full text search function described in Service Discovery on page 27.
- **To Do**. When viewing a service, this section shows the recommended steps to make the service ready for consumers as described in Service Publication on page 51.
- **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 51.
- **Custom Views**. Each view is the result of a user specified search as described in Stored Searches on page 109.
- **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 12. My Services List View

My Services

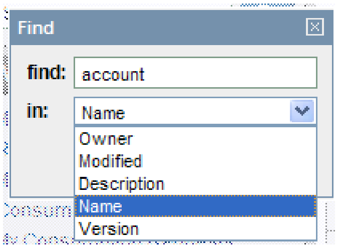
Services > View

Find | Clear

Name	Description	Version	Pending Requests	Contrac...
Account Services	Services from Accounting		0	0
Customer Services	CMS		0	0
Transaction Services	Financial Transactions		0	0
Outlet Locator	Locate Electrical Outlets		0	0
Document Services	Services from Documentation		0	0
HR Services	Service from HR		0	0
IT Services	Services provide by IT		0	0

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 13. List View Filter



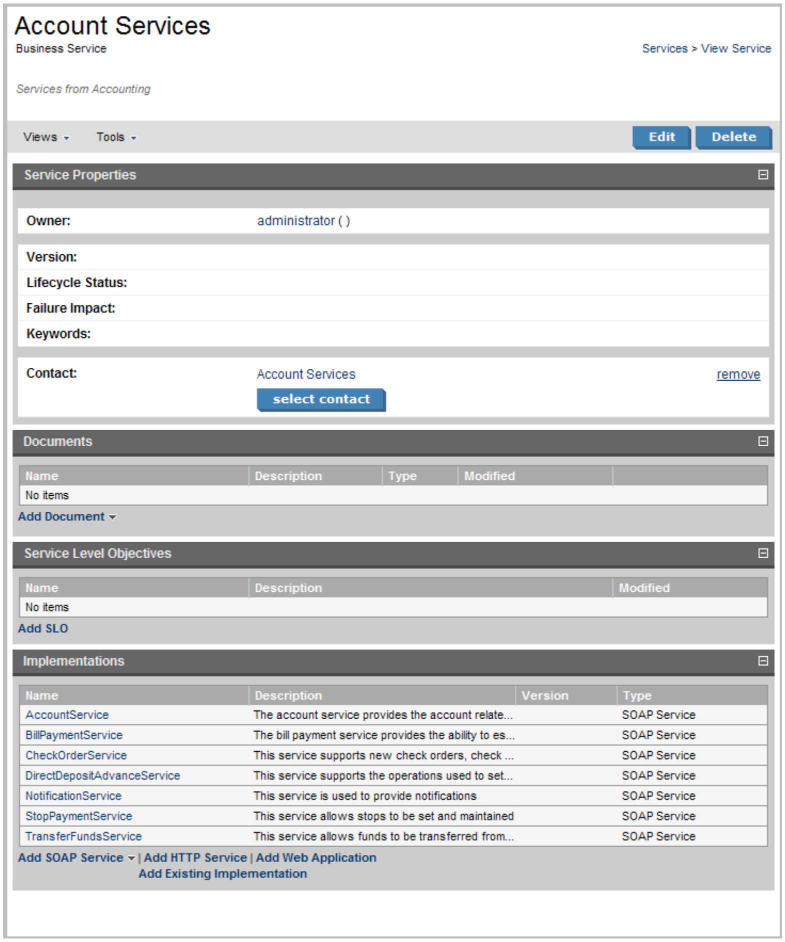
Enter your search parameter, select a column, and then click **Find** to filter the list.

Click **Clear** to remove the filter and restore the list of artifacts.

Service View

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

Figure 14. 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 76.
  - **Revision History** opens the version history of the artifact as described in Document History on page 79.
  - **Access Rights** opens a view of the access permissions for the artifact.
- **Tools**:
  - **Related Reports** opens a list of the reports related to this artifact as described in Reports on page 107.
  - **Dependency Analysis** and **Impact Analysis** execute the impact management tool on the artifact as described in Impact Tools on page 93.
  - **Change Owner** enables the administrator or owner of the artifact to transfer ownership to a different user, as described in Changing Artifact Ownership on page 84.
- **Edit** enables you to change the attributes of the service.
- **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 51.

Service Properties displays key information about the service, the service owner, version, and contact, and also the lifecycle status with any associated approval process.

Service Status displays contract information, lifecycle approval status and registry integration status (see Registry Synchronization on page 116).

SOA Manager includes a link to view the SOA Manager view of this service if it is also stored there.

The **Documents**, **Service Level Objectives**, and **Implementations** sections enable you to manage the artifacts associated with the service and add new relationships as described in Service Publication on page 51.

10 Service Publication

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

SOA Systinet makes service publication simple by breaking the process down into a set of basic procedures:

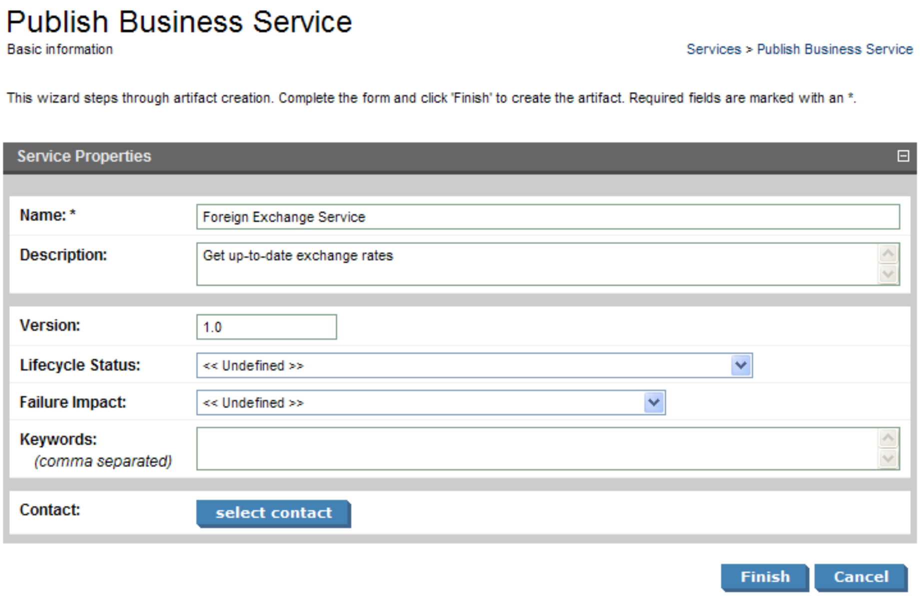
- Creating a New Business Service on page 51
- Setting a Contact on page 53
- Adding Service Documentation on page 53
- Implementing a Service on page 55
- Adding an SLO on page 59

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
Lifecycle Status	Select a status from the drop-down list
Version	The version number of the service
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 53.

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

Setting a Contact

A business service is usually associated with a particular individual.

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 the following options:

- **From Local File** – to upload a document from your local filesystem.
- **From Remote File** – to upload a document from a remote filesystem.
- **Link to a remote file** – to create a link to a document on a remote filesystem.
- **From Catalog** – to select a document from the collection in the repository.

To upload 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
Name	Input a name for the documentation artifact

Parameter	Definition
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 upload 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 link to a document on a remote filesystem:

1 Click **Link to a Remote File** to open the **Link to a 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 create a new documentation artifact with a link to the remote document and the relationships between the service and the documentation artifacts.

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

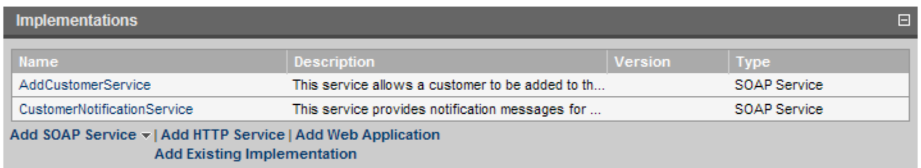
1 Click **From Catalog** to open the **Browse Catalog** dialog.

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 15. The Implementations Section



- **Add SOAP service** as described in Adding a SOAP Service on page 55.
- **Add HTTP service** as described in Adding an HTTP Service on page 57.
- **Add web application** as described in Adding a Web Application on page 57.
- **Add existing implementation** as described in Adding an Existing Implementation on page 58.

HTTP services and web applications also require the creation of an endpoint to make them functioning implementations. See Adding an Endpoint on page 58.

Adding a SOAP Service

A common implementation of a business service is 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:

- Select a SOAP service from a local filesystem.
- Select a SOAP service from a remote filesystem.

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, edit the web service name and description, and then click **Next**.
5. Click **Finish** to validate the WSDL, and then 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 100

3. Click **Upload** to start the publication process for the implementations contained in the WSDL file.
4. Optionally, edit the web service name and description, and then 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

You can also associate a business service with an HTTP service artifact.

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.

Note: This process only creates an HTTP service artifact. You must add an endpoint to the artifact in the service view of the HTTP service to make it a functioning implementation, as described in Adding an Endpoint on page 58.

Adding a Web Application

You can associate the business service with a web application artifact.

1 In the **Implementation** section of the **service view**, 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.

Note: This process only creates an web application artifact. You must add an endpoint to the artifact in the service view of the web application to make it a functioning implementation, as described in Adding an Endpoint on page 58.

Adding an Existing Implementation

The business service can be associated with an implementation artifact already existing in the repository.

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 required implementation, and click **Add** to select the implementation from the list.

Adding an Endpoint

HTTP service and web application implementations require an endpoint artifact to locate the actual implementation of the service.

To add an endpoint to an HTTP service or a web application:

1 In the **Endpoints** section of the service view of an HTTP service or web application, click **Add Endpoint** to open the **Publish Endpoint** page.

2 Complete the dialog with parameters:

Parameter	Definition
Name	The name of the new endpoint
Description	A description of the endpoint
Endpoint Address	The url for the actual implementation of the service

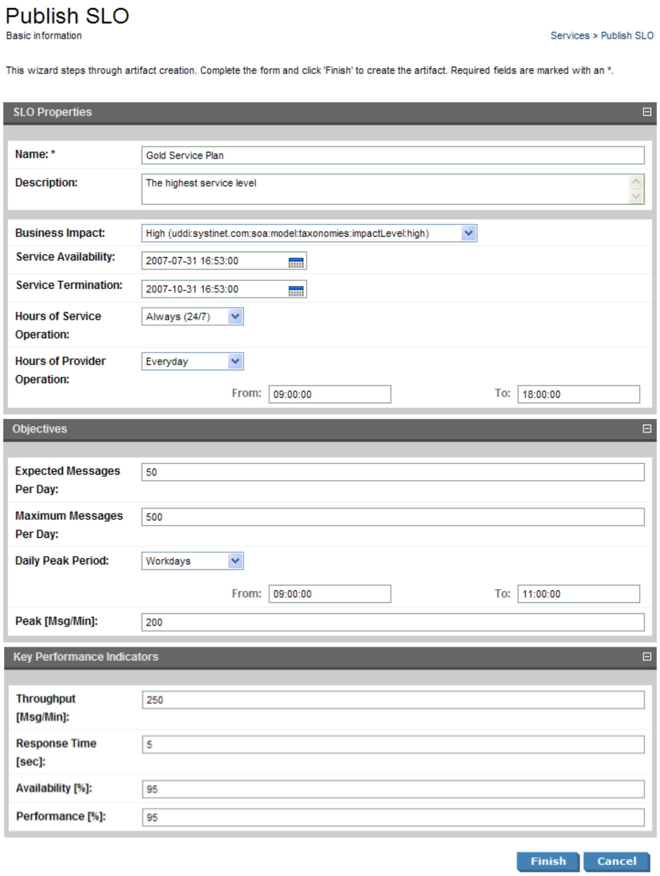
3 Click **Finish** to create the new endpoint and the relationships with the HTTP service or web application.

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**, click **add SLO** to open the **Publish SLO** page:



2 Input the following parameters which are split into sections:

SLO Properties:

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

Parameter	Definition
Service Availability	Expected time of service delivery
Service Termination	Expected time of service termination
Hours of Service Operation	Select an option from the list, and then input start and end times if required
Hours of Provider Operation	

Objectives:

Parameter	Definition
Expected Messages Per Day	Number of messages
Maximum Messages Per Day	
Daily Peak Period	Select an option from the list, and then input start and end times if required
Peak [Msg/Min]	Expected messaging capacity

Key Performance Indicators:

Parameter	Definition
Throughput [Msg/Min]	The number of calls to the service per minute
Response Time [sec]	The time for the service to respond
Availability [%]	The availability of the service in its operating hours
Performance [%]	A measure of the performance of the service

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

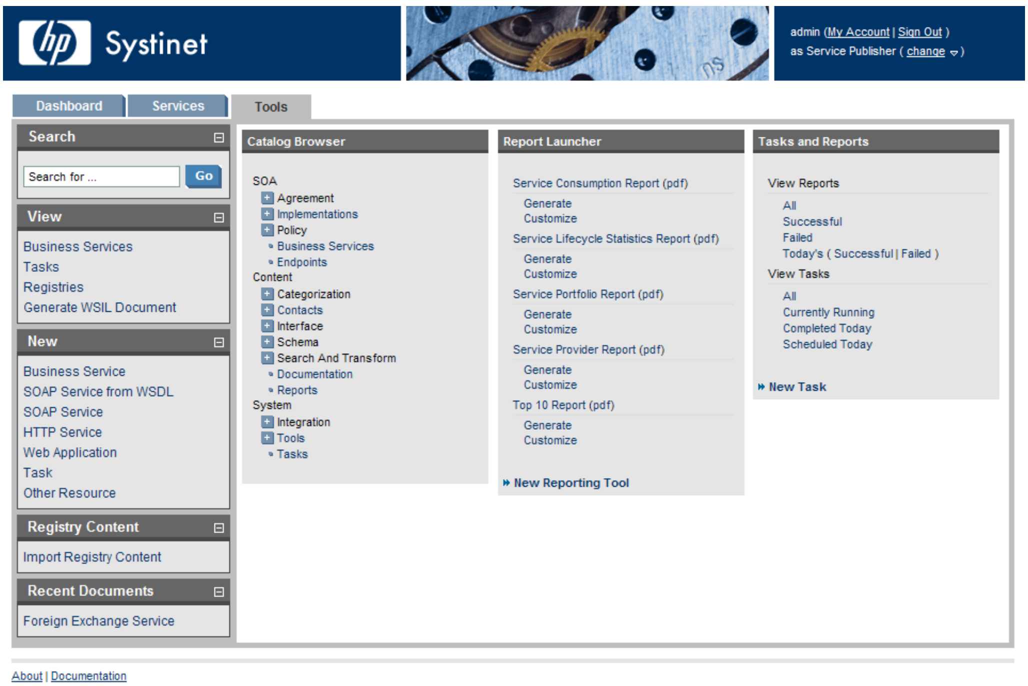
Part IV. Tools

- This part explains the features and use of the **Tools** tab, which is the place to organise and manage your SOA content. It includes the following sections:
- Features of the Tools Tab on page 65 describes the user interface elements of the **Tools** tab.
- Tools Pages on page 73 describes the pages for browsing and viewing artifacts in the **Tools** tab.
- Managing Content on page 81 explains the procedures for managing the content of SOA Systinet.
- SOA Utilities on page 93 describes the use of SOA Systinet governance tools, tasks and reports.
- Stored Searches on page 109 describes the advanced search facilities of SOA Systinet.
- Registry Integration on page 113 explains how to integrate SOA Systinet with a UDDI registry.
- Business Availability Center Integration on page 121 describes how to integrate SOA Systinet with HP Business Availability Center.

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 16. 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:

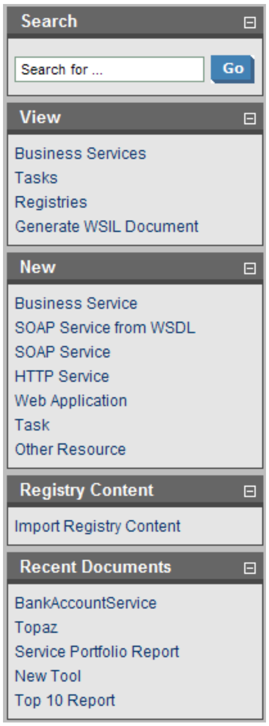
- Tools Menu on page 67. A description of the items in the **Tools Menu**.
- Catalog Browser on page 69. The index portlet of artifact types in the repository.
- Tasks and Reports Portlet on page 70. A portlet to access tasks and the reports on the results of those tasks.
- Report Launcher Portlet on page 71. An access portlet for customized reporting tools.

The portlets in the **Tools** tab can be moved in the same way as described in Features of the Dashboard Tab on page 33.

Tools Menu

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

Figure 17. Tools Menu



- **Search**. The full text search function described in Service Discovery on page 27.
- **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 51.

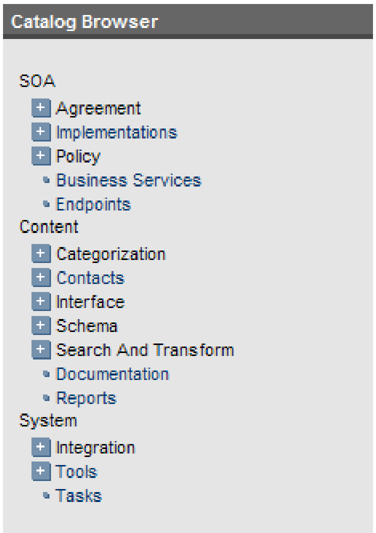
- **SOAP Service from WSDL**. Create a new SOAP implementation using a WSDL document as described in Publishing a SOAP Service with WSDL on page 90.
- **SOAP Service**. Create a new SOAP service artifact.
- **HTTP Service**. Create a new HTTP service artifact as described in Adding an HTTP Service on page 57.
- **Web Application**. Create a new web application artifact as described in Adding a Web Application on page 57.
- **Task**. Create a new governance task as described in Creating a Task on page 104
- **Other Resource**. Create a new resource artifact as described in Publishing Definition Resources on page 88.

- **Registry Content**. Import entities from a UDDI registry as described in Importing Data From a Registry on page 114.
- **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 18. 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:

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

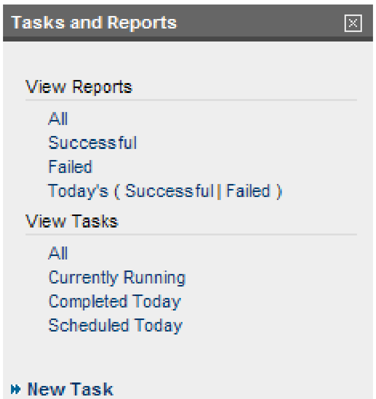
To expand branches in the browser, click **[+]**.

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

Tasks and Reports Portlet

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

Figure 19. Tasks and Reports Portlet



The portlet includes the following sections:

- **View Reports** enables you to view reports according to the following categories:
  - **All** displays all the reports in the repository, as described in Reports on page 107.
  - **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, today's successful reports, or today's failed reports.
- **View Tasks** enables you to view tasks according to the following categories:
  - **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 to create a new governance task, as described in Creating a Task on page 104.

Closing the portlet in the **Dashboard** adds a link to the **Add** section of the dashboard menu enabling you to restore the portlet to the **Dashboard** at any time.

Report Launcher Portlet

The **Tools** tab contains a portlet specifically for reporting tools. It contains default tools created by HP Systinet and user created tools with valid URIs.

Figure 20. 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 Consumption Report** generates an overview of the service consumption in the repository.
- **Service Lifecycle Statistics Report** generates a summary of how many services are at which stage in the service lifecycle.
- **Service Portfolio Report** generates an overview of the services in the repository.
- **Service Provider Report** generates an overview of the service providers 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 98.

12 Tools Pages

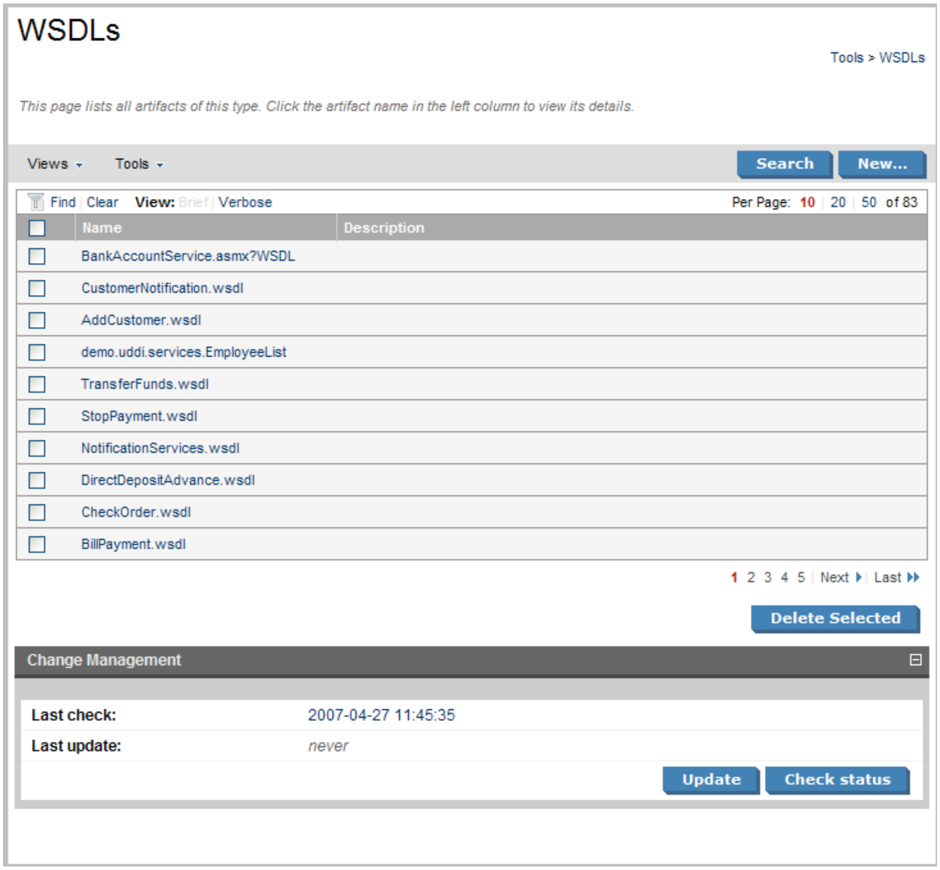
In the **Tools** tab there are a number of different pages describing the artifacts in the repository. This chapter describes:

- Browse Artifact Pages on page 73 are the index views of artifacts.
- Artifact Detail Pages on page 76 are the detailed view of artifacts in the repository.
- Document History on page 79 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 21. 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 109.

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:

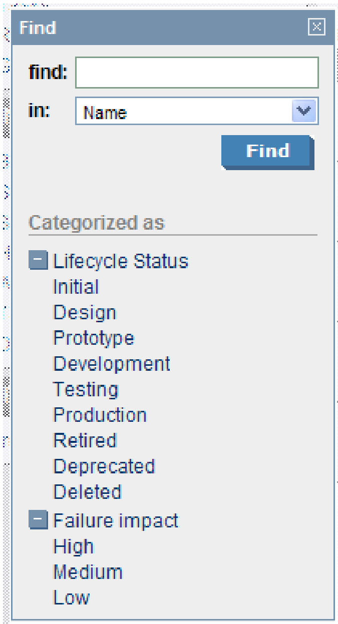
- **Views**:
  - **XML View** opens a XML view of the page in the REST interface.
  - **RSS View** opens an RSS view of the page that can be used to create an RSS content feed for the dashboard.
  - **Access Rights** opens a view of the access permissions for the artifact.
- **Tools**:
  - **Look for Deleted Artifacts** opens a browse view of deleted artifacts of this type with options to **Purge** or **Undelete** selected items.
- **Search** enables you to perform an advanced search within the artifact type, as described in Creating a Stored Search on page 109.
- **New** enables you to create a new artifact of this type as described in Creating an Artifact on page 82.

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 76).

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

Figure 22. Implementations Filter



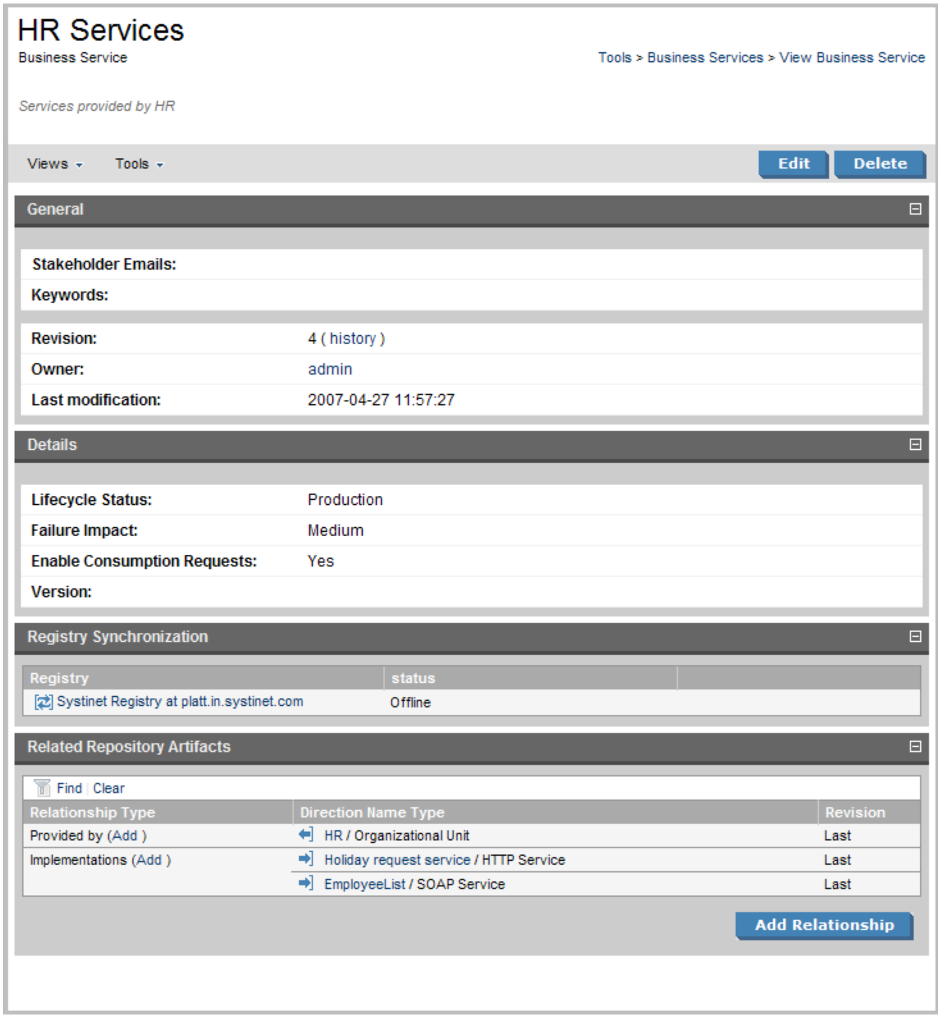
There are also clickable options to change the display settings of the page. You can switch between **Brief** or **Verbose** descriptions and change the number of artifacts to be displayed on each page.

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 101 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 23. 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**:
  - **Services View** opens a view of the artifact from the **Services** tab as described in Service View on page 46.
  - **Document History** displays a list of the previous versions of the artifact as described in Document History on page 79.
  - **Access Rights** opens a view of the access permissions for the artifact.
  - **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.
- **Tools**:
  - **Associated Reports** views the reports related to this artifact as described in Reports on page 107.
  - **Dependency Analysis** and **Impact Analysis** execute the impact management tool on the artifact as described in Impact Tools on page 93.
  - **Add Documentation** creates a document relationship as described in Attaching Documentation to Artifacts on page 87.
  - **Change Owner** enables the administrator or owner of the artifact to transfer ownership to a different user, as described in Changing Artifact Ownership on page 84.
- **Edit** opens an edit view of the artifact enabling you to change it
- **Delete** gives the option to mark the artifact as deleted or to purge it completely from the repository..

Other information on the page varies, depending on the artifact type. Information categories include:

- **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 101 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 83.

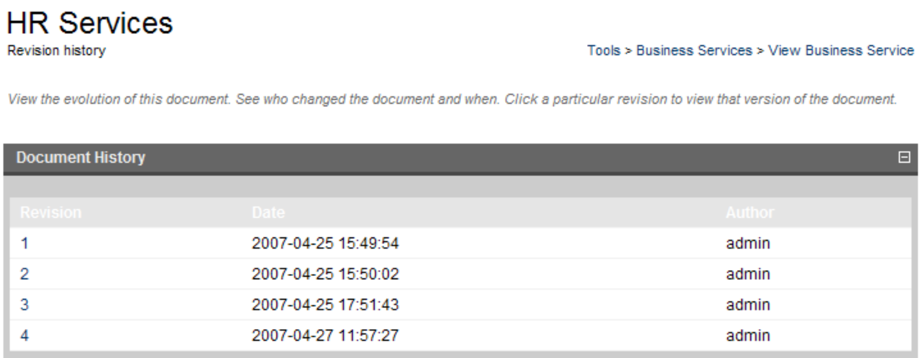
Document History

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 **Document History** in the **View** context menu.
- Alternatively, in the Service View of an artifact click **Revision History** in the **View** context menu.

Figure 24. HR Services Revision History



HR Services

Revision history

Tools > Business Services > View Business Service

View the evolution of this document. See who changed the document and when. Click a particular revision to view that version of the document.

Document History

Revision	Date	Author
1	2007-04-25 15:49:54	admin
2	2007-04-25 15:50:02	admin
3	2007-04-25 17:51:43	admin
4	2007-04-27 11:57:27	admin

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

If you need to roll back to this past revision, the context action **Rollback to this Revision** is available in the **Views** menu. A new revision of the resource will be created with the content of the old revision you have selected.

13 Managing Content

There are four 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 81.
- **Documentation**. Many artifacts require additional documents describing their purpose or use. Managing Documentation on page 85 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 Definition Data on page 88.
- **Taxonomies**. Using categorization groups allows you to further organize the content of your repository. The SOA Systinet UI can be used to manage taxonomies in the same way as other artifacts but we recommend using HP SOA Systinet Taxonomy Editor.

Publishing a SOAP Service with WSDL on page 90 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 82.
- Edit an artifact as described in Editing an Artifact on page 82.
- Delete an artifact as described in Deleting an Artifact on page 83.
- Add a relationship to another artifact as described in Adding a Relationship on page 83.
- Change the ownership of an artifact as described in Changing Artifact Ownership on page 84.

Creating an Artifact

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

To create an artifact:

1. From the browse page of any artifact type, click **New** to start the artifact creation process.
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.

   Input the artifact details, and then 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 then 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

To edit an artifact:

1. In the detail view (see Artifact Detail Pages on page 76) of an artifact, click **Edit** to open the edit view of the artifact.
2. Change any parameters and use the functionality in the **Related Repository Artifacts** section to manage relationships.
3. Click **Save** to commit your changes and create a new revision of the artifact. See Document History on page 79 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 73 or Artifact Detail Pages on page 76):

- In browse pages select the artifacts to delete 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 marks 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.

To add a relationship to an artifact:

1 Click **Add Relationship** in any **detail view** (see Artifact Detail Pages on page 76) 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.

Do one of the following:

- Select an option from the drop-down list.
- Use **Find** function to search for the required artifact. Check the box next to the artifact name to select it.
- Click **New** to create a new artifact to be the object of the relationship as described in Creating an Artifact on page 82.

Click **Next** to continue.

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

Changing Artifact Ownership

An administrator or the owner of an artifact can change the ownership to another user.

To change the owner of an artifact:

1 In the **Tools** detail view or the **Services** view of an artifact, select **Change Owner** from the **Tools** context menu.

The **Change Owner** page appears.

2 For business services there is an extra option to change the ownership of related artifacts. For other artifact types skip to Step 3. Expand the tree of artifacts and de-select any related artifacts that do not require the ownership change.

Note: Artifact owners are only shown related artifacts that they own.

Click **Next** to continue.

3 Use the search feature to generate a list of users.

4 Select a user from the list, and then click **Next**.

5 Review the details. and then click **Finish** to confirm the artifact ownership change. If **Send Notification E-Mails** is selected then you, the original owner, and the new owner are notified of the change.

Managing Documentation

The main document management procedures are:

- Add a new document to the repository as described in Adding Documentation on page 85.
- Attach documentation to an artifact as described in Attaching Documentation to Artifacts on page 87.
- Edit the source document as described in Editing Documentation on page 87.

Adding Documentation

You may want to store documents in the SOA Systinet repository or create documentation artifacts linked to external documents.

To create a new documentation artifact:

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 the following options:
    - **From Local File** – to upload a document from your local filesystem.
    - **From Remote File** – to upload a document from a remote filesystem.
    - **Link to a remote file** – to create a link to a document on a remote filesystem.
    - **Empty Documentation** – to create a documentation artifact without cached content or a link to an external document.

    Select an option and click **Next**.
4. For the local file 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

For the remote file 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 100 for more details)

For the link to remote file option complete the form with parameters:

Parameter	Definition
URL	The locations of document to link the new artifact to
Name	The name of the new artifact
Description	A description for the new artifact

The empty documentation option creates a documentation artifact without any associated external document. Complete the page 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.

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**.

Note: 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 85. 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 82.

Note: 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 53.

Editing Documentation

Both the properties and the source of a documentation artifact can be edited.

To edit a documentation artifact:

1 In the **detail view** (see Artifact Detail Pages on page 76) of the documentation artifact click **Edit**.

2 Change any artifact attributes as required.

To change the external source document:

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

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

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

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

Managing Definition Data

SOA Systinet includes extended support for SOA specific resources, 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 definition documents to the repository in Publishing Definition Resources on page 88.
- Updating definition attributes or their source in Updating Published Metadata on page 90.

Publishing Definition Resources

SOA Systinet includes functionality to make use of the definition data contained in resources such as WSDL documents.

To publish a resource 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 100 for more details)

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

The resource document publishing process then performs 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 or other referenced data) to other documents, each referenced document downloads and processes with the same sequence of steps.

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.

Note: An alternative process is to upload a metadata document in the same way as described in Adding Documentation on page 85. 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 87. In the procedure replace documentation with the relevant metadata artifact type.

Publishing a SOAP Service with WSDL

SOA Systinet enables you to uses a WSDL document to publish a SOAP service.

To publish a SOAP service from a WSDL:

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
Default Synchronization Policy	Choose a policy from the drop-down list (see Synchronization Policy on page 100 for more details)

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

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

4 Click **Next** to continue.

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

6 Confirm the items to be created, and then click **Finish**.

After confirmation SOA Systinet displays 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 93 are the basic utilities for performing governance actions.
- Tasks and Scheduling on page 104 enable the use of a tool on an artifact or set of artifacts with the option of periodic or scheduled execution.
- Reports on page 107 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 93 report the potential impact of a change to an artifact on the other artifacts it depends on or impacts.
- Job Tools on page 96 are customized tools created to perform miscellaneous tasks.
- Reporting Tools on page 97 use customized reports to query the repository.
- Sync Tools on page 99 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 on page 94
- Impact Reports on page 94
- Creating an Impact Tool on page 95

Running the Impact Management Tool

The context action for the Impact Management Tool is available in the detail view and service view of artifacts (see Artifact Detail Pages on page 76 or Service View on page 46).

To assess the impact of a change to an artifact:

- In the detail view or service view of the artifact, move the cursor over the **Tools** context menu and select **Impact Analysis** or **Dependency Analysis** depending on which tool you want to execute.

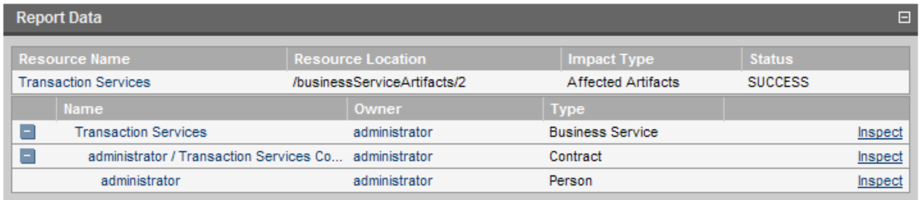
Impact Reports

Impact reports are generated by running the impact tool as described in Running the Impact Management Tool on page 94 or the result of automated tasks as described in Tasks and Scheduling on page 104.

To access impact reports, browse the reports as described in Reports on page 107 and filter for report category **Impact Management**.

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

Figure 25. 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

Impact tools enable you to assess the potential impact of a change to an artifact.

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 Input 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.

This new impact tool is now available for selection when creating a task, as described in Creating a Task on page 104.

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 96
- Report Cleaner Job Tool on page 97

Creating a Job Tool

SOA Systinet enables you to create miscellaneous tools in association with your own Java classes.

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. Input 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 (administrator only)
Job Implementation Class ID	The class ID in the server configuration

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

This new job tool is now available for selection when creating a task, as described in Creating a Task on page 104.

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 104 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 71).

This section describes:

- Running a Reporting Tool on page 97
- Reporting Tool Reports on page 98
- Creating a Reporting Tool on page 98

Running a Reporting Tool

The context action for reporting tools is available in the **Report Launcher** portlet for the default reporting tools provided with SOA Systinet and any user created tools with valid URIs.

To execute a reporting tool:

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 98.

Reporting Tool Reports

Reporting tool reports are generated by running one of the default reporting tools as described in Running a Reporting Tool on page 97 or the result of automated tasks as described in Tasks and Scheduling on page 104.

To access reporting tool reports, browse the reports as described in Reports on page 107 and filter for report category **Reporting**.

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

Figure 26. Reporting Tool Report Data

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

Creating a Reporting Tool

Reporting tools enable you to utilize custom reports deployed to the reporting server.

To create a 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 Input the following parameters which are 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 URI	The address of the documents collection of the report definition on the reporting server **Note:** Only tools with a valid URI are added to the **Report Launcher** portlet
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.

This new reporting tool is now available for selection when creating a task, as described in Creating a Task on page 104.

Sync Tools

SOA Systinet stores all resources in its repository. They can be divided into two types: representational 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 100
- Running the Change Management Tool on page 101
- Change Management Reports on page 102
- Creating a Sync Tool on page 103

Synchronization Policy

Externally sourced resources may 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 cached resources will not be updated, except by a manual update of a single resource from a context action.
- **Automatic**. The cached resource is updated automatically if the original resource is changed.

> **Note:** In order for automatic synchronization to function you must create a scheduled change management task. See Tasks and Scheduling on page 104 for details.

- **Approval Required**. The resource is marked with an out-of-sync flag and only updated after user approval. If you want to approve the change and update the document, run the change management tool as described in Running the Change Management Tool on page 101.

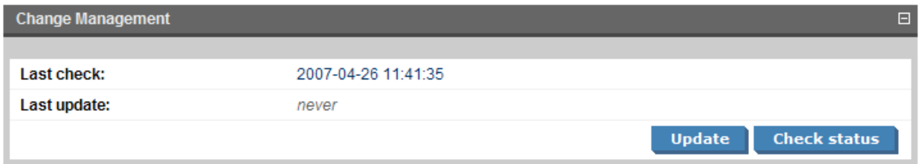
> **Note:** Resources stored in a database may (and usually do) consist of imports of other resources. For example a WSDL file may contain imports of other WSDLs and XSDs. XSDs may contain

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 27. Change Management Section



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

For a single artifact:

- **Update**. Updates a cached resource if the original has changed.
- **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.

Important: 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. Only resources for which you have write permission are checked or updated.

The dates of the last status check and last update access the latest reports as described in Change Management Reports on page 102.

Change Management Reports

Change management reports are generated by running the change management tool as described in Running the Change Management Tool on page 101 or the result of automated tasks as described in Tasks and Scheduling on page 104.

To access change management reports, browse the reports as described in Reports on page 107 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 101.

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 28. Change Management Report Data


Report Data

Name	Path	Origin URL	Status
user-guide.pdf	/documentation/user-guide2.pdf	http://buildsrv//buildlab/builds/documentation/continuous/last-successful/hpsoa-03-user-guide/user-guide.pdf	UPDATED

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:

Status	Definition
NEW	The resource is new
IDENTICAL	The cached resource was identical to the original
IDENTICAL (NO-PERMISSION)	The cached resource was identical to the original and the current user does not have permission to change it
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
UPDATED	The cached resource differed from the original and was updated
CHANGED-IGNORED	The cached resource differed from the original but was not updated
CHANGED-IGNORED (NO-PERMISSION)	The cached resource differed from the original but was not updated because the current user does not have permission
NO-PERMISSION	The current user does not have permission to change this resource
UNKNOWN	The state was unknown

Creating a Sync Tool

Sync tools enable you to track changes to external documents associated with artifacts in the repository.

To create a 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. Input the following parameters:

Parameter	Definition
Name	The name for the new sync tool

Parameter	Definition
Description	A description of the sync tool
Categories	Click **add category** to select a category from the available taxonomies (administrator only)

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

This new impact tool is now available for selection when creating a task, as described in Creating a Task on page 104.

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 104
- Setting a Schedule on page 105

Creating a Task

Tasks are the way SOA Systinet associates a particular tool with a set of artifacts to produce reports.

To create a new task:

1 Do one of the following:

- In the **Tools** menu, in the **New** section, click **Task**.
- Alternatively, in the **Tools** tab, in the **Tasks and Reports** portlet (see Tasks and Reports Portlet on page 70), click **New Task**.
- Alternatively, in the browse view (see Browse Artifact Pages on page 73) for tasks click **New**.

The **Publish Task** page appears.

2 Use **Find** to search for the tool to associate with the task. Select the tool, and then click **Next** to select the artifacts to examine.

3 The selector page includes the following 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 select **Scheduled**, complete the details as described in Setting a Schedule on page 105, and then click **Next** to set the task artifact name.

5 Optionally, edit the suggested name and description, and then click **Finish** to create the new task.

Setting a Schedule

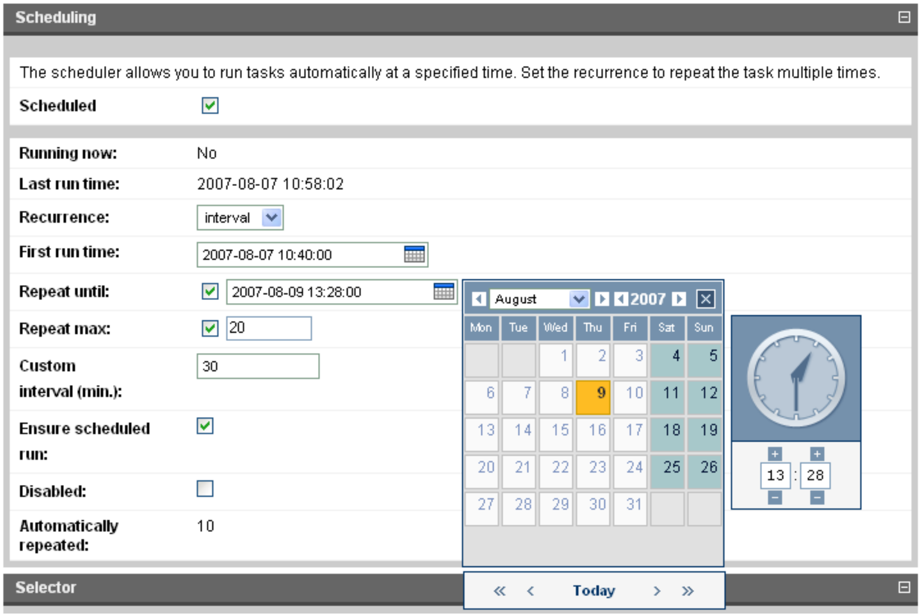
SOA Systinet enables you to execute tasks on a timed or periodic basis.

To schedule a task:

1 Do one of the following:

- In the detail view of the task click **Edit**, and then select **Scheduled**.
- Alternatively, select **Scheduled** during task creation as described in Creating a Task on page 104.

The schedule parameters appear:



2 Input 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	Use the calendar to set the date and time for the initial execution of the task
Repeat Until	If the task has a recurrence, optionally select **Repeat Until**, and use the calendar to select the date and time to stop executing the task.
Repeat max	If the task has a recurrence, optionally select **Repeat Max**, and input the number of times to execute the task. This figure is compared to the **Automatically Repeated** figure to determine whether to execute the task again.

Parameter	Definition
Custom Interval (min.)	If the task has the **Interval** recurrence, input the interval.
Ensure scheduled run	Select to prioritize scheduled execution. If for any reason the task cannot execute at the scheduled time (for example, if the server is not running), then the task executes at the at the earliest opportunity. HP Systinet recommend selecting this option for tasks with long recurrence intervals.
Disabled	Select to prevent the automatic execution of the task
Automatically repeated	Displays the number of scheduled executions (not including manual executions). To reset this figure, remove the schedule and then create a new schedule.

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 104.

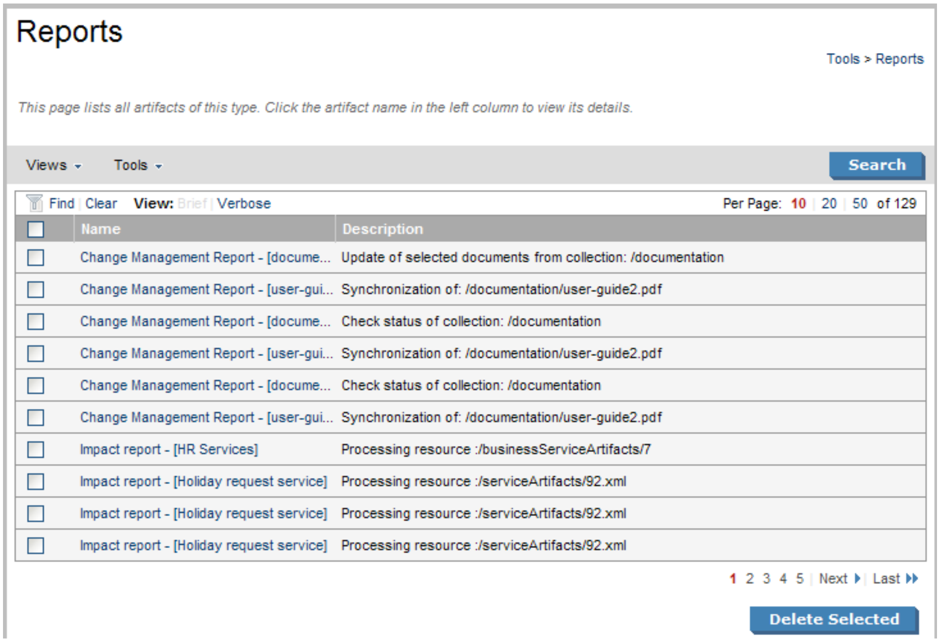
Reports

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 29. 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 93.

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.

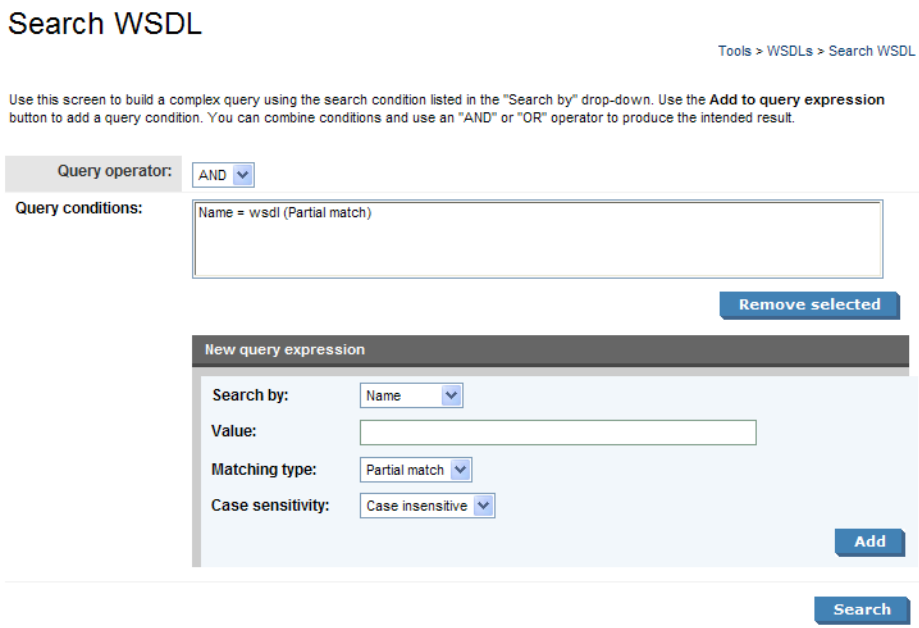
This chapter describes:

Creating a Stored Search

Each stored search is associated with 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 for that artifact type:



2 Input the search parameters in the **New query expression** section:

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

Parameter	Definition
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 **Find** to filter the results.

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

8 If you are storing the search for later use, amend the search name, description, and details, and then 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:

- Changing the name and description properties of the stored search.
- Changing the parameters of the search.

To edit the basic search properties:

1 In the detail view (see Artifact Detail Pages on page 76) of the stored search, click **Edit**.

2 Change the properties as required, and then click **Save**.

To modify the search parameters:

1 In the detail view (see Artifact Detail Pages on page 76) of the stored search, click **Redefine**.

2 Select a condition, and then click **Remove selected** to remove conditions from the query and add new conditions as described in Creating a Stored Search on page 109.

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

Running a Stored Search

To execute a stored search do one of the following:

- In the detail view (see Artifact Detail Pages on page 76) of the stored search, click **Run**.
- In the **Services** menu, **Custom Views** section, click the name of the stored search.

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.

Important: Before any data transfer takes place between SOA Systinet and a UDDI registry, a registry artifact must be created, registry certificates must be imported to SOA Systinet, and the taxonomies must be synchronized. These procedures are described in the Registry Setup and Configuration section of the HP SOA Systinet Administration Guide.

SOA Systinet artifacts correspond to registry entities as follows:

SOA Systinet Artifact	Registry Entity
Organization unit	Business entity
Business service	tModel
Implementation	Business service
Endpoint	Binding template
Custom (WS-Policy)	tModel

This chapter describes:

- Importing Data From a Registry on page 114
- Registry Synchronization on page 116
- Export To Registry on page 117

Importing Data From a Registry

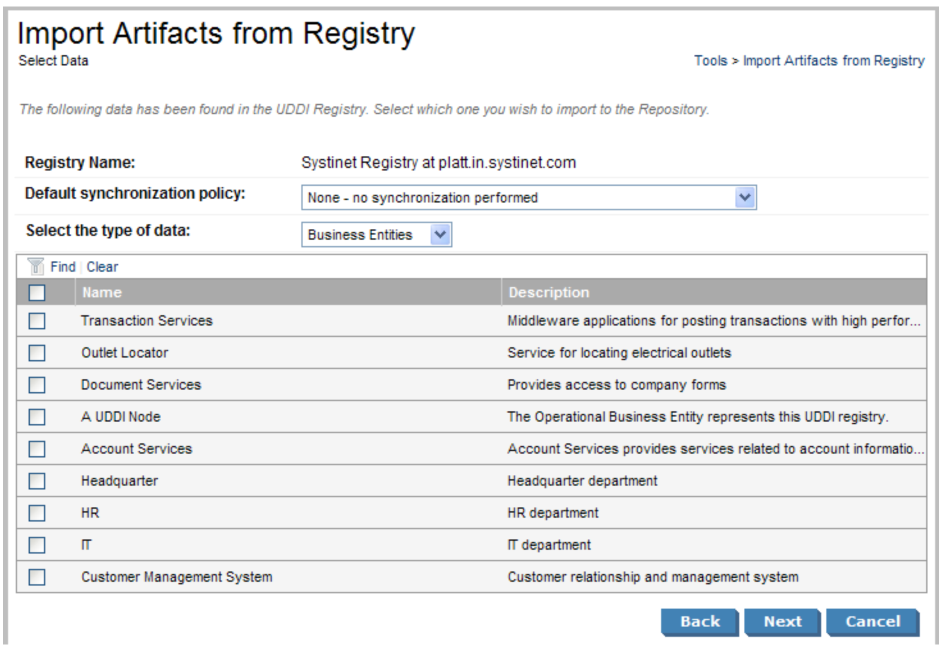
You can import services and associated entities from a registry.

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** page.

2 Select a registry from the drop-down list, or click **New** to create a new registry artifact as described in the Creating a Registry Artifact in the HP SOA Systinet Administration Guide.

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



3 Input 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 100
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, and then click **Finish**.

Note: 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.

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).

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.

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


Report Data

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

state	type	artifact name	uddi registry key	status
IMPORTED	Business Entity	Transaction Services	uddi:87899980-3420-1...	NEW
IMPORTED	Business Service	MonetaryTransactionService	uddi:c76cc620-3421-1...	NEW
IMPORTED	Binding Template	http://company.com/transactionsvc/mone...	uddi:c774b560-3421-1...	NEW

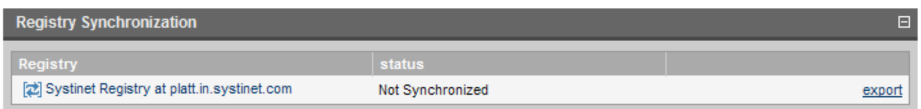
This report shows exactly what was imported, and the import status of all the imported items.

<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 76):

Figure 30. Registry Synchronization Details



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

Table 4. Synchronization Status

Synchronization Status	Description
Not Synchronized	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

You can export individual artifacts to an integrated 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 76) of the artifact, click **export** for the registry that you want to export the artifact to.

Note: 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 then click **Next**.

> **Note:** For a successful export, the credentials used for registry sign-on must have the appropriate write permissions for the registry entities being created or amended.

> **Tip:** 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. 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.

4 Click **Finish** to export the selected artifacts.

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).

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>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>artifact type</td><td>the UDDI entity type: Business Entity, Business Service, SOAP Service, etc.</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>

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.

Important: multiple BAC server artifacts can be added to SOA Systinet but only the most recently added is accessed by the features described in this chapter.

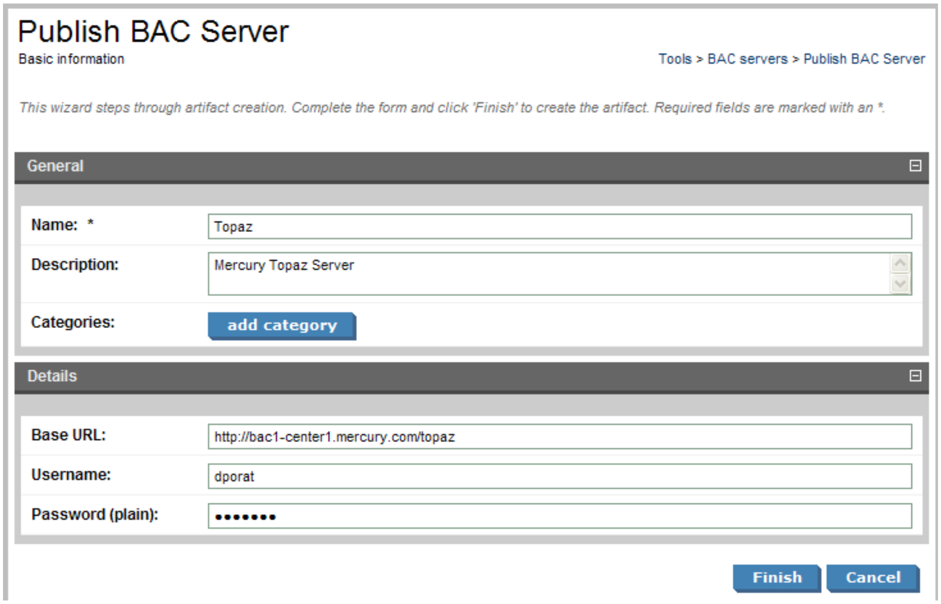
This chapter describes:

Creating a BAC Server Artifact

To receive service availability information from BAC, you must first identify the BAC server to use.

To create a BAC server artifact:

1. In the **Catalog Browser**, expand the **Integration** section, and then click **BAC Servers** to open the **browse view** of BAC server artifacts.
2. Click **New** to open the **Publish BAC Server** page:



3 Input the following parameters which are 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
Username	A login for the BAC server

Parameter	Definition
Password	A password for the BAC server

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

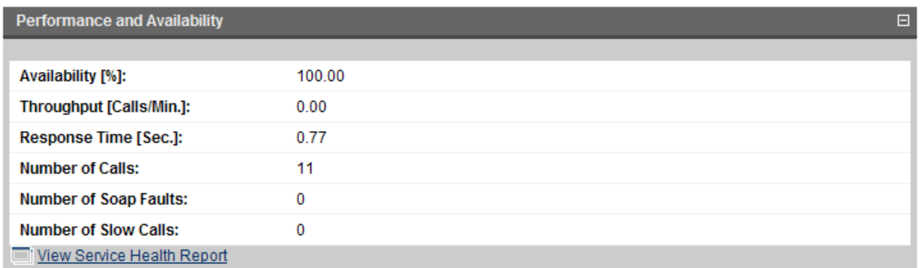
BAC Integration Features

After 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 55 or Publishing a SOAP Service with WSDL on page 90 to import a service monitored by BAC.

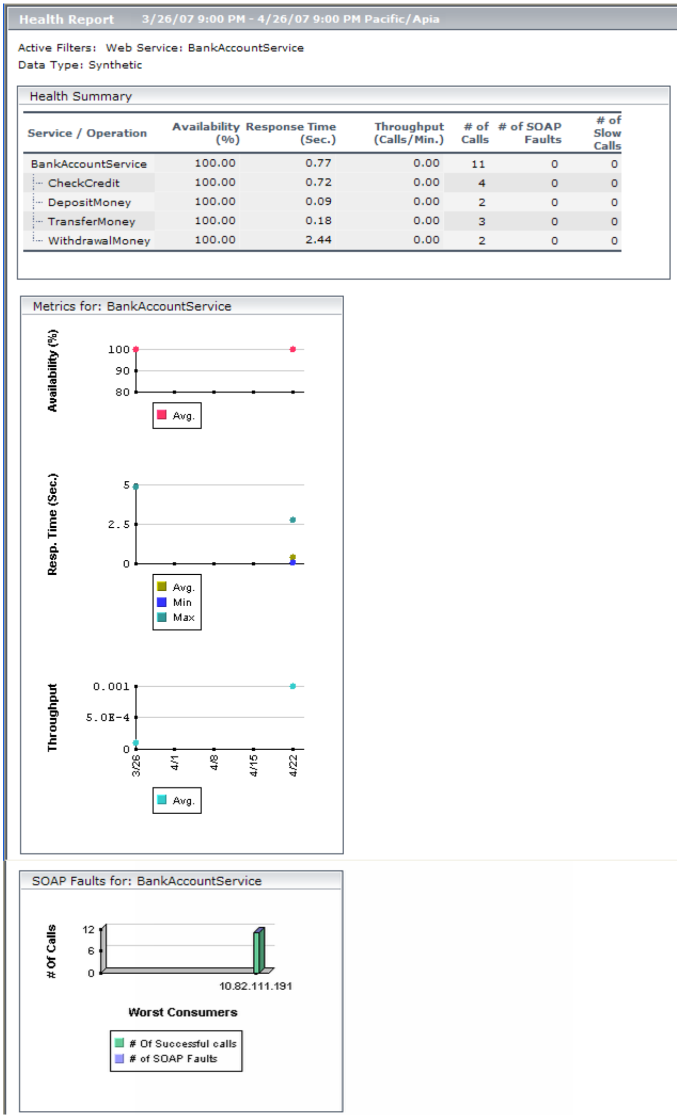
Any implementation that is monitored by BAC has an extra section in its detail view:

Figure 31. Performance and Availability Section



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

Figure 32. BAC Health Report



Health Report 3/26/07 9:00 PM - 4/26/07 9:00 PM Pacific/Apia

Active Filters: Web Service: BankAccountService
Data Type: Synthetic

Health Summary

Service / Operation	Availability (%)	Response Time (Sec.)	Throughput (Calls/Min.)	# of Calls	# of SOAP Faults	# of Slow Calls
BankAccountService	100.00	0.77	0.00	11	0	0
CheckCredit	100.00	0.72	0.00	4	0	0
DepositMoney	100.00	0.09	0.00	2	0	0
TransferMoney	100.00	0.18	0.00	3	0	0
WithdrawalMoney	100.00	2.44	0.00	2	0	0

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