CentraSite

Using the Asset Catalog

Version 9.6

April 2014

This document applies to CentraSite Version 9.6.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

Document ID: IINM-UG-ASSETS-96-20140318

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Using the Asset Catalog

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1 Introduction

The asset catalog enables CentraSite users to view and manage assets such as the Web services, XML schemas, XML services and REST services.

- Provider users use the **Asset Catalog** to view and manage their organization's assets, publish assets, edit asset details and assign permissions to assets.
- Consumer and guest users use the **Asset Catalog** tab to browse the catalog and search for assets.

The catalog functions as the central registry of reusable assets within a development environment. When initially installed, the CentraSite catalog supports several types of assets, such as Web services, XML schemas, XML services, REST services and application servers. However, an administrator can configure the catalog to hold additional assets that are customized for your environment. For example, the catalog at your site might be configured to hold items such as reusable Java libraries or portlets in addition to the basic set of assets that CentraSite supports.

Not all operations are allowed for all users. A user's role and the instance-level permissions on an asset determine which assets a user is allowed to see and what operations the user is allowed to perform on the asset.

What an Asset Catalog Contains

As a consumer, provider or guest user, you can use the **Asset Catalog** tab to browse or search for assets in the catalog by name, description, attribute values, asset types and/or taxonomy groups. You can also use this tab to view and edit the attributes for an asset.

You can browse or search for assets by using a keyword or by performing an advanced search that sorts and filters the results.

Each entry in the asset catalog represents a single asset. An entry is composed of a set of profiles. Each profile is a visual grouping of a set of attributes. An attribute provides information about an individual characteristic or property of an asset. The set of profiles that display for an asset, as well as the specific attributes that appear within the profiles, vary by asset type.

Browsing

You can obtain a hierarchical view of assets, organized and filtered according to a selected taxonomy. Additionally, you can search for assets whose attributes contain a certain keyword (character string).

Searching Using a Keyword

You can search for assets whose attributes contain a certain keyword (character string).

Searching Using an Advanced Search

You can search for assets and supporting documents on the basis of several search criteria using logical AND/OR combinations.

Who Can View the Asset Catalog?

All CentraSite users, including guests, have permission to browse the asset catalog. You do not need any explicit permissions to use the Asset Catalog area in the CentraSite Control user interface.

The set of assets available to you when you browse the Asset Catalog are the assets on which you have View permission. You can obtain View permission on an asset in the following ways:

- By belonging to a role that includes any of the following permissions.

This permission...	Allows you to...
View Assets	View all assets within a specified organization.
Modify Assets	View and edit all assets within a specified organization.
Manage Assets	View, edit and delete all assets within a specified organization, and set instance-level permissions on those assets. This permission also allows you to create assets.
Create Assets	Add new assets to a specified organization. You automatically receive Full permission (which implies Modify and View permission) on all assets that you create.

- By having View, Modify or Full instance-level permissions on a particular asset.

By default, all CentraSite users belong to the Asset Consumer role. This role includes the "View Assets" permission for the organization to which a user belongs.

Having the Asset Consumer role gives you implicit view permission on all the assets in your organization. You can view assets from other organizations only if you are given permission to do so through the assignment of additional role-based or instance-level permissions.

Note: In rare instances, an administrator might not grant view permissions to all of the users in an organization. If the administrator of your organization has done this, you will need instance-level permissions on an asset in order to view it.

For more information about the permissions that affect assets, see the section *About Roles and Permissions* in the document *Users, Groups, Roles and Permissions*.

2 What a Catalog Entry Contains

Each entry in the catalog represents a single asset such as a Web service, XML schema, XML service, REST service or an application server. Each entry is composed of a set of *attributes* and optionally one or more associated files.

Attributes

An *attribute* represents a specified characteristic or property of an asset. All assets have the basic set of attributes shown in the table below.

Attribute	Description
Name	The name under which the asset is cataloged. **Note:** An asset name does not need to be unique within the catalog. However, to reduce ambiguity, we suggest that you avoid giving multiple assets of the same type the same name. As a best practice, you should adopt appropriate naming conventions within your organization to ensure that the assets in its catalog are distinctly named.
Description	*Optional*. A descriptive comment that provides additional information about an asset.
Version	An identifier that indicates which version of an asset the catalog entry represents. This attribute is specified by the user who creates the asset.
Created	The date on which the asset was added to the catalog. CentraSite automatically sets this attribute when a user adds the asset to the catalog. Once it is set, it cannot be modified.
Last Modified	The date on which the catalog entry for the asset was last modified. CentraSite automatically updates this attribute when you modify any of the asset's attributes.
Owner	The ID of the user to whom this asset currently belongs. Also, the name of the organization to which the user belongs is displayed. Ownership of an asset is given to the user who adds the asset to the catalog. The owner has all access rights to the object, regardless of roles or permissions.

Extended Attributes

An asset can also have any number of extended attributes that are specific to the asset's type. For example, a Web service asset includes attributes that identify the service's endpoints, provide links to additional documentation, and indicate whether the service is stateful or stateless. The specific set of extended attributes an asset has depends on how your administrator has configured the asset's type.

Attribute Data Types

Every attribute has a data type, which determines the type of information it can hold. When you edit an attribute, CentraSite only allows you to enter a value that matches the attribute's data type.

Data Type	Description
Boolean	Holds a “Yes” or “No” value. You can define an empty default value if this attribute is not required.
Classification	Holds references to categories in specified taxonomies. You use this type of attribute to classify assets according to taxonomies that are defined in CentraSite. You can also define a default value for this attribute.
Date/Time	Holds a timestamp that represents a specific date and time, or date only, or time only. For a time only, specify the default value that represents a period of time as expressed in Hours, Minutes and Seconds.
Duration	Holds a value that represents a period of time as expressed in Years, Months, Days, Hours, Minutes and Seconds.
Email	Holds an email address. This data type only accepts values in the format <*anyString*>@<*anyString*>. **Note:** When you enter a value for an Email attribute, CentraSite verifies that the entered value conforms to the format above, but it does not attempt to validate the address itself.
File	Holds references to documents that resides in your organization's supporting document library. You can use this type of attribute to attach documents such as programming guides, sample code and other types of files to an asset.
IP Address	Holds a numeric IP address in the v4 or v6 format.
Multiline String	Holds a string of text that extends over several lines when displayed in the UI. (Compare this with the String data type described below) The value of a **Multiline String** field is always rendered as plain text in the CentraSite UI. When you add a Multiline String attribute, you will be able to select the **Internationalized** option. The **Internationalized** option allows you to store the text in internationalized string format.
Number	Holds a numeric value. Select the **Maximum Precision** checkbox to specify the attribute as a double. The underlying data type for this kind of attribute is a Java Double. You can optionally assign a unit such as “Seconds,” “tps,” “KB”, “EUR” or “$” to attributes of this type. When you do, the specified unit appears as a prefix or suffix label beside the attribute's value in the CentraSite Control.
String	Holds a string of text, up to 4000 characters. The value of a **String** field is always rendered as plain text in CentraSite Control. See Rich Text attribute, below.

Data Type	Description
	When you add an attribute to a "String" data type, you will be able to select the **Enumeration** option in order to define a list of possible values for the attribute.
URL/URI	Holds a URL or URI. This data type only accepts values in the form <*protocol*>://<*host*>/<*path*>, where <*protocol*> is any protocol that java.net.URL supports, <*host*> is the name or IP address of a host machine and <*path*> (optional) is the path to the requested resource on that host. **Note:** When you enter a value for a URL attribute, CentraSite Control verifies that the value conforms to the format described above and that <*protocol*> is a java.net.URL-recognized protocol. However, it does not attempt to validate the address itself.
Relationship	Holds references to other registry objects. You use this type of attribute to form relationships between the assets and the organizations, users, groups, application assets, policies or, report templates.

3 Browsing the Asset Catalog

This section describes how to browse the contents of the catalog. When you browse the catalog, CentraSite shows you a list of asset types and asset instances belonging to these asset types. The asset types shown are the predefined asset types as well as your custom-defined asset types. For a list of the predefined asset types, refer to the document *Object Type Management*.

You can select the following options:

- View the complete list of assets.
- View a list of assets that belong to certain asset types.
- View a list of assets whose name attribute contains a certain keyword (character string).
- View a list of assets that have been classified according to a specific taxonomy or a category within a taxonomy.

The result view shows various attributes of the assets, such as the name of the asset, the asset type and the description.

You can add or remove asset attributes from the view by choosing the column selection icon that is located above the scroll bar in the view area.

This section describes how to use CentraSite's Browse feature to locate assets using keyword searches and taxonomy searches.

Browse by Name

The name search is an easy to use keyword-based search facility.

You can search for all assets that contain one or more specified keywords (i.e., text strings) in the asset's name attribute. You may use the **Types** panel to restrict the types on which the search is conducted.

- Using Keywords
- Using Wildcards

- Browsing by Asset Name

Using Keywords

You can define the input for the name search in the following ways:

- A keyword is treated as partial text which can occur at the beginning of the searched strings. The "contains" semantics are implied.

  Example: If the keyword is "customer", then the following matches are returned: "A sample svc for customers" as well as "customerservice".
- The search is neither case nor accent sensitive. Example: A search for "abc" will return the same results as a search for "ABC" or "Abc".
- If the name search input field is empty when the search is executed, the search returns all available assets.
- The name search can include wildcard characters. See ***Using Wildcards*** for details.

Using Wildcards

The available wildcard characters are as follows:

Character	Usage
* or %	If you use the percent symbol ("%") or the asterisk ("*"), CentraSite replaces the wildcard symbol with as many characters as necessary to find a match. For example, an entry of "A%n" returns both "Amazon" and "American". If you enter "*al", then "CalcService", "Calendar" and "AustralianPostCode" all fit the search criteria.

You can use a wildcard character at any point in the keyword text, and multiple times throughout the keyword text. If you enter a wildcard character in the middle of a string, for example "cat*dog", then at least one of the searched attributes must contain the string in order for the asset to be included in the result set.

If a wildcard character between two words is surrounded by spaces, such as "word1 * word2", the wildcard will match one word.

Notes:

1. Certain non-alphanumeric characters that can appear in the name of an asset are currently ignored by CentraSite's wildcard mechanism when you include them in a keyword search. In particular, the hyphen ("-") is ignored. Thus, if you have created the assets "asset-1" and "asset_1", the wildcard search for "asset?1" will find "asset_1" but not "asset-1".
2. The percent (%) character acts as a word delimiter when it appears in the text to be searched. Thus, for example, if the name of an asset contains the text "abc%def" (the characters a, b, c, %, d, e, f), this is treated by the search mechanism as two adjacent words "abc" and "def". A wildcard

search such as "abc*def" looks for a single word beginning with "abc" and ending with "def", so the search will not find this asset.

Browsing by Asset Name

To browse the asset catalog by asset's name attribute

1 In CentraSite Control, go to **Asset Catalog > Browse**.

2 In the list of asset types shown in **Types** panel, select the asset types that you want to include in the view. The list of asset types consists of predefined asset types and custom (i.e. customer-defined) asset types.

If new asset types have been added since the last screen update, you may need to click **Update** to see them in the list.

Note: Use the arrow icons in the **Types** panel to extend or retract the asset types list as necessary.

3 In the text box, type the keyword to search for. You can use one or more wildcards to specify the keyword.

If you leave the text box blank, or enter just a wildcard, assets based on the asset type that you select is returned.

CentraSite returns the assets that match the search criteria.

For assets, the search looks for the keyword in the asset's name attribute.

Browse by Taxonomy

The taxonomy search capability allows you to search assets that have been classified according to a specific taxonomy or a category within a taxonomy.

There are several generic entries in the **Browse by** dialog. These are:

- **[None]**
  This lists the currently registered asset instances, according to the asset types that you have selected.
- **[By Type]**
  This lists all of the currently registered object and asset instances, sorted according to object/asset type.

[By Type][By Organization]
This lists all currently registered object and asset instances, sorted according to the owning organization.

Browsing by Taxonomy

To browse the asset catalog by taxonomy

1 In CentraSite Control, go to **Asset Catalog > Browse**.

2 In the list of asset types shown in **Types** panel, select the asset types that you want to include in the view. The list of asset types consists of predefined asset types and custom (i.e. customer-defined) asset types.

If new asset types have been added since the last screen update, you may need to click **Update** to see them in the list.

Note: Use the arrow icons in the **Types** panel to extend or retract the asset types list as necessary.

3 Choose the **Browse By** icon on the right side of the page.

4 In the **Browse By** dialog, select a taxonomy. As a result, only assets that are classified with this taxonomy will be displayed.

- If you do not specify a taxonomy in the **Browse By** dialog, CentraSite Control displays a list of all assets belonging to the selected asset types. The list can be ordered alphabetically by asset name or by asset type. Use the arrow icons in the column header fields to order the list as necessary.
- If you specify a taxonomy in the **Browse By** dialog, the display changes to a hierarchical display, showing all assets that belong to the specified category and all of its subcategories. To expand or contract the category or a subcategory, use the plus or minus buttons accordingly.

Note: The list of taxonomies displayed contains only the taxonomies that are currently browsable. Refer to the section *Creating a Taxonomy* in document *Taxonomies* for information about how to make a taxonomy browsable or non-browsable.

4 Searching the Asset Catalog

This section describes how to use CentraSite's Search feature to locate assets and stored documents using keyword searches, advanced searches and XQuery searches.

Keyword Search

The keyword search is an easy to use search facility in which you can specify arbitrary search patterns.

You can search for all assets that contain one or more specified keywords (i.e., text strings) in the asset's string attributes (asset name, description, etc.). The contents of the supporting documents are not searched. It is not possible to restrict the types on which the search is conducted.

The number of search results is displayed in brackets in the title line of the results area, for example "Assets (43)". If no results are found, this is displayed as (0).

Upon switching from keyword search to XQuery search, a default XQuery statement is displayed (i.e., the displayed XQuery does not correspond to the keyword search.)

Using Search Metacharacters in the Keyword Search

Certain characters have a special function when used in the keyword search:

- Wildcard characters allow you to search for keywords that match a string pattern. See ***Using Wildcards***.
- The quote character (") is used to group keywords into phrases, as described in ***Using Keywords***.
- To force the keyword search to treat these metacharacters as normal characters, precede the character with a backslash (\). If you want to include the backslash character itself in the search, type two backslashes.

Using Keywords

You can define the input for the keyword search in the following ways:

- A keyword search consists of 1-n search keywords. Multiple keywords are space separated. If multiple keywords are given, a logical disjunction (OR) is implied.
- A keyword is treated as partial text which can occur at the beginning of the searched strings. The "starts with" semantics are implied.

  Example: If the keyword is "customer", then the following matches are returned: "A sample svc for customers" as well as "customerservice".
- As multiple keywords are OR combined, the keywords can match a single phrase (e.g. in the description) or individual keywords can occur in different attributes. Example: If a search is conducted for "customer service", then "customer" could be matched in the description and "service" in an object specific attribute.
- If quotes (" ") exist around a phrase, then a search is performed on the exact phrase within the quotes. A space within a quoted phrase is considered as a space character and not as a logical operation.
- You can mix and match any number of words and quoted phrases within the keyword field.
- The search is neither case nor accent sensitive, even within a quoted phrase. Example: A search for "abc" will return the same results as a search for "ABC" or "Abc".
- If you enter a string that contains an odd number of double-quote characters, then the last double-quote character is ignored when the search is performed.
- If the keyword search input field is empty when the search is executed, the search returns all available assets.
- The keyword search can include wildcard characters. See ***Using Wildcards*** for details.

Using Wildcards

The available wildcard characters are as follows:

Character	Usage
* or %	If you use the percent symbol ("%") or the asterisk ("*"), CentraSite replaces the wildcard symbol with as many characters as necessary to find a match. For example, an entry of "A%n" returns both "Amazon" and "American". If you enter "*al", then "CalcService", "Calendar" and "AustralianPostCode" all fit the search criteria.
? or _	If you use the question mark ("?") or the underscore ("_"), CentraSite replaces the wildcard symbol with a single character in order to find a match. Example: "CustomerSVC?Request" matches any character for "?".

You can use a wildcard character at any point in the keyword text, and multiple times throughout the keyword text. If you enter a wildcard character in the middle of a string, for example "cat*dog",

then at least one of the searched attributes must contain the string in order for the asset or supporting document to be included in the result set.

If a wildcard character between two words is surrounded by spaces, such as "word1 * word2", the wildcard will match one word.

Notes:

1. Certain non-alphanumeric characters that can appear in the name of an asset are currently ignored by CentraSite's wildcard mechanism when you include them in a keyword search. In particular, the hyphen ("-") is ignored. Thus, if you have created the assets "asset-1" and "asset_1", the wildcard search for "asset?1" will find "asset_1" but not "asset-1".
2. The percent (%) character acts as a word delimiter when it appears in the text to be searched. Thus, for example, if the description field of an asset contains the text "abc%def" (the characters a, b, c, %, d, e, f), this is treated by the search mechanism as two adjacent words "abc" and "def". A wildcard search such as "abc*def" looks for a single word beginning with "abc" and ending with "def", so the search will not find this asset.

Performing a Keyword Search

To search by keyword

1 In CentraSite Control, go to **Asset Catalog > Search**.

2 On the Search page, open the **Keyword** profile.

3 In the text box, type the keyword(s) to search for. You can use one or more wildcards to specify the keywords.

If you leave the text box blank, or enter just a wildcard, the entire set of stored assets and supporting documents is returned.

4 Click **Search**.

CentraSite returns the assets that match the search criteria.

For assets, the search looks for the keyword(s) in the asset's name, type and description attributes.

By default the result set is ordered by relevance. Relevance is decided as follows:

- If the search criteria contain more than one keyword, the assets that match the most keywords are ranked higher.
- Assets where one or more search criteria match the Name or Description are rated higher than those where other attributes match.

Advanced Search

CentraSite's advanced search capabilities allow you to build sophisticated search clauses to search for assets on the basis of asset types and attribute values. The search criteria can be combined by a logical conjunction (AND) or disjunction (OR) operation.

The number of search results is displayed in brackets in the title line of the results area, for example "Assets (43)". If no results are found, this is displayed as (0).

On switching from advanced search to XQuery search the XQuery statement represented by the advanced search is displayed.

Searching by Asset Type

To search for an asset using the asset type

1 In CentraSite Control, go to **Asset Catalog > Search**.

2 On the Search page, select the **Advanced** tab.

3 In the section **Types**, select an asset type from the drop-down box.

If you want to include an additional asset type in the search, use the plus button beside the asset type that you have already chosen. This opens a new drop-down box, in which you can specify the additional asset type. When you specify several asset types in this way, the search result will include asset types from all of the chosen asset types.

If you want to search across all asset types, select **All Asset Types** from the list.

If you want to remove an asset type from the search, use the minus button beside the asset type.

4 Click **Search**.

Now, CentraSite Control lists the assets that match the search criteria. By default the result set is ordered by relevance.

Searching by Attribute Values

You can refine your search by specifying asset attributes to search for.

If you specify a single asset type for the search, the set of attributes that you can use for the search is the set of attributes for that asset type. If you have specified several asset types for the search, the set of attributes available for the search is restricted to the general, non-type-specific attributes.

To search for an asset by attribute values

1 In CentraSite Control, go to **Asset Catalog > Search**.

2 On the Search page, select the **Advanced** tab.

3 In the **Types** section, select the asset type or types to be searched for, as described above.

4 In the **Criteria** section, there is a drop-down list that allows you to specify the asset attribute to search for.

Select the required asset attribute from the list.

5 Depending on the asset type you select, new drop-down lists or text fields appear that allow you to refine the search.

Some criteria such as `Organization` and `Classification` offer a **Browse** button, which you can select to see a list of the known objects of this type.

Other asset types allow you to use search predicates such as "equals" and "not equals" to find assets. If your chosen asset type allows the use of search predicates, specify the required search string in the text box beside the search predicate. Any text you type in is case insensitive

6 Use the plus button to add an entry to the list. Use the minus button beside an entry to remove it from the list.

7 Click **Search**.

Now, CentraSite Control lists the assets that match the search criteria. By default the result set is ordered by relevance.

Searchable Attributes

You can specify generic attributes (i.e. attributes common to all asset types) and type-specific attributes as search criteria.

- Generic Attributes

- Type-Specific Attributes

Generic Attributes

The generic attributes that can be used as search criteria are described in the following table:

Search Attribute	Usage
Name	Use this attribute to search for assets whose name matches a specified text string. You can specify a substring or expression that can be combined with a "contains word" (default option), "starts with", "equals" or "not equals" expression. The search is neither case nor accent sensitive. If "starts with" is used, no wildcard is necessary as a postfix. If "contains word" is used, the word given is treated as a partial string with implicit wildcards. If "equals" or "not equals" is used, no wildcards are supported. If multiple substrings have been given the parameters are implicitly quoted. Explicit quotations and wildcards can be used, and behave in the same way as for keyword searches.
Description	Use this attribute to search for assets whose description matches a specified text string. Usage is the same as for the `Name` attribute.
Internal Classification	Use this attribute to search for assets that are classified with the selected classification and the optional category or subtree. The selection of a category is optional to allow searching for all assets where a taxonomy was applied irrespective of the category. If a subtree was selected, then all categories contained in the subtree are considered for search.
External Classification	Use this attribute to search for assets that are classified with the selected classification and the optional category or subtree. Searches for all objects that are classified with the selected taxonomy and the optional value. The input of a value is optional, and allows you to search for all assets where a taxonomy was applied irrespective of the category. For the value, wildcards are also allowed and the behavior is the same as for name searches.
LifeCycle State	Use this attribute to search for assets that are in a specified lifecycle state.
Created	Use this attribute to search for assets with a specified creation date. You can select a date and apply a before/after/on/between criterion. If "between" is used, a second input field allows you to specify the end date. The date input parameters allow year, month and day input as well as hour and minute. Hour and minute default to 0. The data format is used as specified in the account preferences of a user (defaults to "yyyy-mm-dd"). No wildcards are supported.
Modified	Use this attribute to search for assets with a specified modification date. Usage is the same as for the `Creation Date` attribute.
Owner	Use this attribute to search for assets belonging to a specified user.

Search Attribute	Usage
	Choose the user via a Browse selection list.
Organization	Use this attribute to search for assets provided by a specified organization. Choose the organization via a Browse selection list.
UDDI Key	Use this attribute to search for an asset that exactly matches the given UDDI V3 key. If no prefix "uddi:" is given, this is implied automatically. No wildcards are supported.
Object-specific property	Use this attribute to search for assets that match the specified object-specific property. You can specify one or more of the local name, namespace and value of the attribute. You can for example search just by local name (without value or namespace) to retrieve assets that use the same object specific attribute name. Wildcards are allowed for name and value, and they can be used in the same way as for keyword searches.
Type-specific property	Use this to search for assets, based on the values of type-specific attributes. When you select this criterion, the dialog presents two related fields: one for specifying the name of the type-specific attribute and one for specifying the value to be searched for. For more information, see ***Type-Specific Attributes***.
Association	Use this attribute to search for assets that match the specified association. This allows you to retrieve all assets that participate in an association or as a relationship attribute. You can select an association type and choose if the assets to be found are: target, source or either case. In addition you can optionally specify the asset types that are the source/target of the association. (Example: find all services that have an outgoing <uses> association to an XML Schema).
Custom Condition	Use this attribute to enter a custom XQuery condition to be combined with other given criteria.
Version	Use this attribute to select required versions of assets. If you choose "show all", the result list contains all versions of an object in which other criteria matched. If you choose "newest only", only the latest version of an asset is displayed. If you choose "exact match", you need to enter an additional parameter which is treated as version information. The search is conducted across system and user versions.
Revision	Use this attribute to search by checkpoint label or checkpoint range (time interval). Use this attribute to search by revision label (user version) and/or revision range (time interval). You can enter a string value as the revision label. For the label "startsWith", "equals", "notEquals" and "containsWord", operators are available as in search by name, with the same handling of wildcards. In addition a user can select date range to retrieve all revision created in the given data interval. A date based search does not require that a label is given. As search results the revision instances are retrieved (not the objects having that revision in history).
Extension Point Search	Use this attribute to specify a search criterion via a user-defined pluggable UI extension.

Search Attribute	Usage
	When you select this criterion, a field appears with a drop-down menu that shows all of the available extension points for a search. Select the required extension point. Then click the **Modify** button. This invokes the user-defined Adapter (layout) screen for entering custom search-related settings. For information on defining an extension point for a search, see the section *Customizing Content Pages* in the document *CentraSite Control Pluggable Architecture*.

Type-Specific Attributes

In addition to the generic attributes listed in the table above, each asset type can have its own type-specific search criteria, based on the type-specific attributes of the asset type. See the section *What an Asset Type Contains > Attributes* in the *Object Type Management* document for general information about type-specific attributes and their data types.

The type-specific attributes can be selected in two ways in the dialog. The first way is to select the entry **Type-specific property** in the drop-down list of generic search criteria, as described in the table above. The second way is to select one of the additional entries in the drop-down list as follows:

The type-specific search criteria are shown in the **Criteria** drop-down list in the form `<AttributeName>` (`<DataType>`), where `<AttributeName>` is the name of the type-specific attribute and `<DataType>` is the data type of the attribute.

For example, if you select the asset type *Service* in the **Types** field, the **Criteria** drop-down list contains search criteria like "SOAP-Version (String)", which refers to the service's type-specific attribute `SOAP-Version` which has the data type `String`.

Depending on the data type of the type-specific attribute you choose, the **Criteria** section of the dialog changes to reflect the search possibilities for that data type.

Combining Search Criteria

You can specify in which way the search criteria should be combined:

To specify how the search criteria should be combined

- From the **Search Uses** box, select one of the following:
  - To specify that an asset must meet all criteria to be considered a match, select **AND**.
  - To specify that an asset must meet at least one of the criteria to be considered a match, select **OR**.

Performing an XQuery Search

You can search for assets and supporting documents using an XQuery search. There are two general approaches you can use to specify an XQuery search:

- Write the query from scratch. This requires a good knowledge of the XQuery language.
- Use first an advanced search, then switch to the XQuery tab. In this case, the equivalent XQuery code is displayed, and you can adapt it to your requirements.

Note: The results are displayed in XML format, rather than as a list of matching assets and supporting documents.

To perform an XQuery search

1. In CentraSite Control, go to **Asset Catalog > Search**.
2. To base your XQuery search on an advanced search, perform the advanced search as described above.
3. Open the **XQuery** profile.
4. Edit the displayed XQuery code, or enter your new XQuery code.
5. Click **Search**.

The results of the search are displayed below the XQuery code. The results are shown as a single XML document that contains the definitions of the assets that met the search criteria.

Using the Search Result List

The **Keyword** and **Advanced** searches return a list of assets that match the search criteria.

You can perform various actions on the displayed list of assets. If you want to perform an action on just one of the displayed assets, you can open the context menu of the asset (for example, by right-clicking on the asset's name) and select an action. If you want to perform an action on several of the displayed assets, you can mark the checkboxes of all of the required assets, then select an action from the **Actions** menu.

Here is a sample of the available actions:

- View details for one or more of the displayed assets.
- Register as a consumer of one or more of the displayed assets.
- Delete one or more of the displayed assets.

Note: If you have selected multiple assets where one or more of them are predefined assets (such as *UDDI ... Services*, for example), you can use the `Delete` button to delete the assets. However, as you are not allowed to delete predefined assets, only assets you have permission for will be deleted. The same applies to any other assets for which you do not have the required permission.

- Change the lifecycle state of one or more of the displayed assets.
- Add one or more of the displayed assets to the Favorites list.

Saving and Re-Executing Searches

When you define a keyword search, an advanced search or an XQuery search, you might want to save the search definition, so that you can execute the same search again at a later stage.

Note: Saved search can only be executed by the user who created the saved search.

To save a search definition

1. Define a keyword search, an advanced search or an XQuery search, as described above.
2. Click the **Save** button.
3. Specify a name for the saved search, then click **OK**.

   The search is stored under this name in your **My Favorites** list.

To re-execute a saved search

1. Open your **My Favorites** list under **Home > My CentraSite**.
2. Choose the entry for the search in your **My Favorites** list. This starts the search directly.

   CentraSite runs the search and displays the results.

If you want to create a new search based on an existing saved search, proceed as follows:

To create a new search based on an existing saved search

1. Create the saved search as described above.
2. Run the saved search from the **My Favorites** list, then click the **Refine** button that is displayed at the top of the result list.

   This opens the appropriate search definition page that was used to create the saved search. The page shows all of the search parameters of the saved search.

3 Adapt the search definition as required.

4 If you want to save the modified search also as a saved search, click **Save** and specify a name for the new saved search. Note that you cannot overwrite an existing saved search with a modified saved search.

5 Viewing Details for an Asset

Use the following procedure to view the details for an asset.

Each tab on an asset's details page represents a collection of attributes called a profile. You will only see the profiles for which you have View permission. Each asset type has a unique set of profiles. However, your administrator can configure these asset types to display a customized set of profiles and attributes.

To view details for an asset

1 In CentraSite Control, go to **Asset Catalog > Browse**.

2 On the Browse page, perform a keyword or advanced search to display the assets. For procedures, see *Searching the Asset Catalog*.

3 Locate the asset whose details you want to view and, from its context menu, select **Details**.

CentraSite will display the attributes for the selected asset. If you have Modify permission on the asset, you can edit the asset's attributes.

You can view a tooltip text for any attribute in a profile of the asset's details by moving the cursor to the attribute name. The tooltip text gives a summary of the attribute's purpose. The tooltip text shown is the content of the attribute's `Description` field, as defined for the asset in the asset type definition. See the section *Creating a New Type* in the document *Object Type Management* for information on defining attributes for asset types.

You can also view the detail pages of multiple assets. To do this, proceed as follows:

To view the detail pages of multiple assets

1 In CentraSite Control, go to **Asset Catalog > Browse**.

2 On the Browse page, perform a keyword or advanced search to display the assets. For procedures, see *Searching the Asset Catalog*.

3 Mark the checkboxes of all of the assets whose detail page you wish to display.

4 In the **Actions** menu, click **Details**.

The detail page for each of the selected assets is now displayed

6 Displaying Run-Time Information for Assets

You can use the **Performance**, **Events** and **Policies** profiles to display run-time information for any asset.

Virtual service assets contain these profiles by default. An administrator can optionally choose to display these profiles for any other asset type. For example, if your site uses Insight or some other run-time monitoring device (such as Layer 7) to capture performance metrics, events or rogue WS-Policy assets, an administrator might want to display these profiles for additional assets.

Displaying Performance Metrics

Use the following procedure to display performance metrics for assets.

Note: For more information about the key performance indicator (KPI) metrics that webMethods Mediator publishes for virtual services, see the section *Run-Time Events* in the document *Managing Targets and Run-Time Events*.

To display performance metrics for an asset

1 Display the details page for the asset whose performance metrics you want to display. If you need procedures for this step, see ***Viewing Details for an Asset***.

2 Open the **Performance** profile.

3 Use the **Switch to** button to switch between a tabular view of the metrics or a graphical view.

4 When viewing metrics in Tabular View, specify the following fields:

In this field...	Specify...
Select Target	A target of the asset, or select **All** to view the metrics of all targets to which the virtual service is deployed.
Start Date/End Date	The time period from which to view the metrics.

5 Click **Search**.

The table displays metrics for all performance categories (e.g., Success Request Count, Total Request Count, Fault Count, etc.).

Displaying Event Information

Use the following procedure to display event information for assets.

Note: CentraSite provides predefined event types for use with any supported policy-enforcement point (PEP) or run-time monitoring component such as Insight. In addition, you can create custom event types, using the CentraSite Control user interface. For more information, see the section *Run-Time Events* in the document *Managing Targets and Run-Time Events*.

To display event information for an asset

1 Display the details page for the asset whose event information you want to display. If you need procedures for this step, see ***Viewing Details for an Asset***.

2 Open the **Events** profile.

3 Use the following fields to filter the event list you want to view:

In this field...	Specify...
Target Type	The target type (e.g., Mediator or a run-time monitoring component such as Insight).
Target	The target name.
Event Type	A particular event type, or select **All** to view all event types. For descriptions of the predefined event types, see the section *Run-Time Events* in the document *Managing Targets and Run-Time Events*.
Date Range	A range of dates from which to view the events.
Start Date	Alternatively, select the check box next to this field and click the calendar and select a starting date and time.
End Date	Click the calendar and select an ending date and time.

4 Click the **Search** button.

5 The generated event list displays the following information:

Field	Description
Date/Time	The date/time that the event occurred. Click this hyperlinked value to view the **Event Detail** page, which will contain the event's SOAP request or response name in the Attribute column. Click the hyperlinked request or response name to display the full SOAP request or response.
Session ID	(Read-only.) The session ID that generated the event.
Event Type	(Read-only.) The type of event (e.g., Monitoring, Policy Violation, Error, etc.).
Service Name	(Read-only.) The name of the service that caused the event.
Service Type	(Read-only.) The service's type.

Field	Description
Target	(Read only.) The target on which the event occurred.
Target Type	(Read only.) The type of the target on which the event occurred.

Displaying Policy Information

The **Policies** profile displays the following information:

- For virtual services, the **Policies** profile will display a list of all design-time and run-time policies that apply to a particular virtual service.
- If your site uses Insight or some other run-time monitoring device (such as Layer 7) to capture rogue assets, this profile will display the rogue WS-Policy assets.

To display policy information for an asset

1 Display the details page for the asset whose policy information you want to display. If you need procedures for this step, see *Viewing Details for an Asset*.

2 Open the **Policies** profile.

3 Click the hyperlinked policy name to view the policy details.

7 Impact Analysis

Objects in the registry can be linked via associations. For example, when you create a new version of an asset, CentraSite generates a unidirectional "supersedes" association between the new and old version.

CentraSite offers the possibility of viewing associations between the registry objects and hence identifying the impact when updating or deleting an asset in the catalog. This is called *impact analysis*.

The impact analysis feature enables you to easily navigate and visualize the associations between the catalog assets and registry objects. This feature helps you to:

- Understand asset-to-objects associations by displaying the associations that exist between the catalog assets and other registry objects.
- Check that existing associations between the assets and objects are not violated when you make changes in the registry. Also, check the external links from registry objects to supporting documents.
- Determine the impact that updating or deleting an asset would have on its related objects.

You can visualize the currently defined associations for an asset with other registry objects, either in graphical or tabular form. The graphical representation is enabled via a Flash-based web browser.

Note that apart from the assets, you can also view the impact analysis for other CentraSite objects like organizations, users, groups and roles through the object's context menu.

The content is organized under the following sections:

Graphical Visualization

To visualize the impact of an asset in graphical form

- Choose **Impact Analysis** from the context menu of the asset's link.

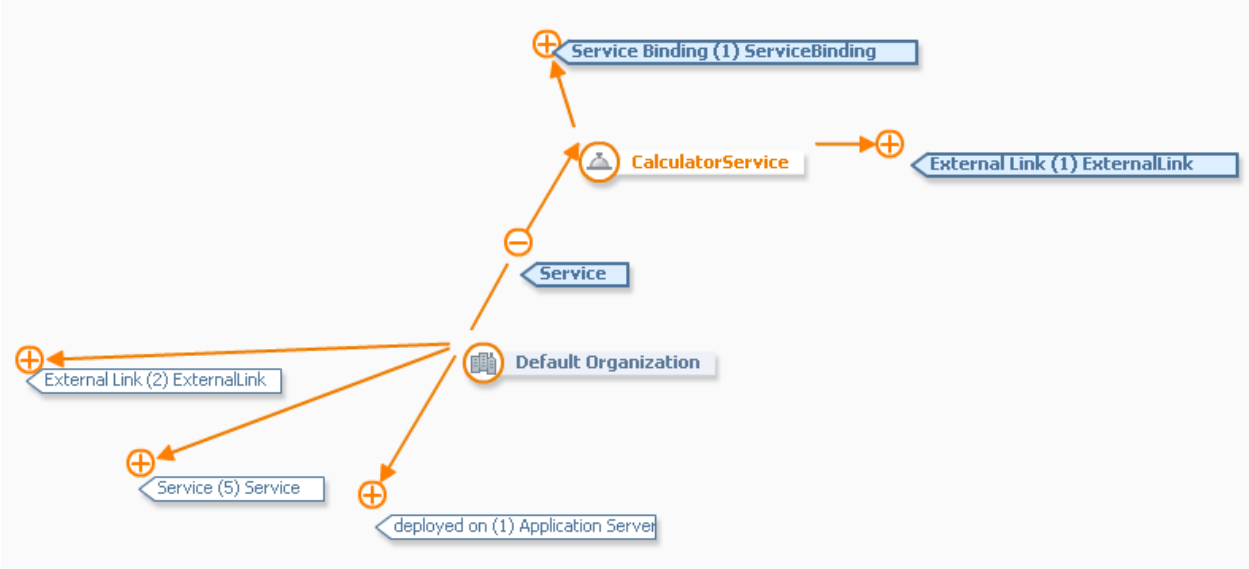
  Or:

  Choose **Impact Analysis** from the **Actions** menu in the asset's detail page.

By default, the impact analysis is show in graphical form. You can switch to the tabular view using the link **Switch to Tabular View**. When you are using the tabular view, you can switch to the graphical view using the link **Switch to Graphical View**.

The graphical view shows a visual representation of the selected asset, the objects referred to by the selected asset, the objects that refer to the selected asset and the associations.

Here is an example of the impact analysis diagram for the asset "CalculatorService", which is an asset of type "Service":



The asset for which the impact analysis is being displayed is shown in a box with orange colored text (in the example, "CalculatorService"). The objects that are associated with the central asset are displayed initially in boxes with dark blue text on a lighter background (for example, the node "Default Organization").

Associations between assets are represented by orange-colored arrows. Each association has a name and a direction (indicated by the arrowhead). For example, the diagram shows the association with the name "Service" that connects the "Default Organization" node to the "CalculatorService" node. This indicates that an association of type "Service" connects the two nodes. The arrowhead points to the "CalculatorService" node, indicating that "Default Organization" contains a service "CalculatorService".

The display of the associations can be expanded or collapsed as required. If an association is shown with an orange plus sign, you can click on the plus sign to expand the association; this reveals the node or nodes at the other end of the association, and the plus sign changes to a minus sign. To collapse the association, i.e. to hide the other end of the association, click on the minus sign, and the display reverts to its original state.

When you expand an association, the association's background color changes to blue. If you collapse a previously expanded association, its color remains blue; this way you can identify the associations that you have already visited. Associations that have not yet been expanded are displayed with a neutral background (i.e. the same background color as the drawing canvas).

The text in the box for any collapsed association shows three items of information:

- The type of the association;

- The number of currently invisible target nodes that are attached to the visible source node;
- The object type of the invisible target node(s).

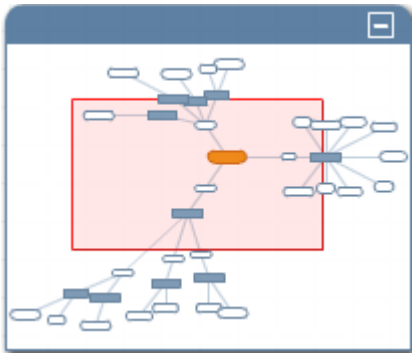
So, for example, the association labeled "deployed on (1) Application Server" in the diagram indicates an association of type "deployed on" between the visible source node "Default Organization" and a currently invisible node of type "Application Server".

If you click on an object (as opposed to an association), a window appears with a short summary of the object's definition.

You can move the whole diagram within the web browser display by moving the cursor to an empty part of the diagram and dragging the diagram in the required direction.

You can rearrange the position of any node in the diagram by clicking on the node and dragging it to a new location on the canvas.

The display also contains a bird's eye view of the impact analysis diagram, for example:



The shaded central part is the part that is shown in detail in the full display. You can drag the shaded central part to any location in the bird's eye view, and the focus of the full display will move accordingly. You can minimize the bird's eye view by choosing the "-" icon. The minimized view shows just a menu bar with a "+" icon. To restore the view, click the "+" icon.

Configuration Settings

You can use a filter to restrict the type of objects and associations displayed, and to specify the maximum depth of nesting for the displayed associations.

Note: Customizations that you make for the graphical view apply only for the graphical view, not for the tabular view.

Built-In Filter Configurations

CentraSite provides the following built-in filter configurations that you can use to visualize the impact analysis for the various objects:

- **Asset Dependencies**
  This shows associations that are of particular relevance for assets.
- **Schema Usage**
  This shows associations that are of particular relevance for schema objects.
- **Organization Details**
  This shows associations that are of particular relevance for organization objects.
- **Service Details**
  This shows associations that are of particular relevance for service assets.
- **webMethods Assets**
  This shows associations between services and webMethods Suite types like CAF and web applications.

By default, CentraSite displays the "Asset Dependencies" filter configuration. You can select the configuration you require by choosing its radio button from the **Configuration** tab. After a few moments, the display is updated according to this configuration.

If necessary, you can choose the filter configuration that you want to customize, and change the filter settings accordingly. If you change any of the filter configurations and click the **Refresh Canvas** icon in the appropriate configuration menu, the display will be updated using your new settings. Any such changes you make apply also in subsequent login sessions. If you want to return to the original settings, delete the filter configuration; this deletes the current settings and restores the configuration to its original state.

Custom Filter Configurations

You may want to have various display scenarios for your graphical impact analysis. For example, in one case you might want to restrict the depth of the association tree to two levels, but in another case you might want to have no such restriction. You can save these configuration scenarios for recall at a later stage by opening the **Configuration** tab and entering a new name in the appropriate text field. This lets you save your current configuration scenario under a name of your choice. If you have defined several scenarios, you can select the one you require by choosing it from the **Configuration** tab.

In the graphical view, there are four tabs (**Types**, **Associations**, **Controls** and **Configuration**) to allow you to set configuration parameters that control how the impact analysis is displayed.

Use the following procedure to define your own filter configuration.

To specify the filter settings

1 Choose **Impact Analysis** from the context menu of an asset's link.

Or:

Choose **Impact Analysis** from the **Actions** menu in asset detail page.

2 Ensure that you are using the graphical view rather than the tabular view.

3 If you want to display or hide specific object types, make appropriate selections from the **Types** tab.

You can choose a predefined entry such as **Types > Assets > Assets** to restrict the display to show just assets rather than all objects.

You can further refine the filter settings by choosing the **Custom** entry for the chosen type. For example, for the **Asset** type, choose **Types > Assets > Custom**. In the ensuing menu, select the asset types you want to display.

4 If you want to display or hide specific association types, make appropriate selections from the **Associations** tab.

You can choose a predefined entry such as **Associations > Relationship Attributes > Relationship Attributes** to restrict the display to show just relationship associations rather than all associations.

You can further refine the filter settings by choosing the **Custom** entry for the chosen type. For example, for the **Relationship Attributes** type, choose **Associations > Relationship Attributes > Custom**. In the ensuing menu, select the association types you want to display.

5 If you want to control the nesting depth of the associations displayed, make the appropriate selection from the **Controls** tab.

For a nesting depth of 1, 2, 3, 4 or 5, choose the appropriate numbered icon. For a level deeper than 5, enter the required value in the **Custom** field.

In certain cases, when the text area of the label exceeds the width of the text box, the excess characters are simply not displayed. In such cases, for labels that you know will contain a certain amount of text, then it is recommended that you use the **Label Width** entry and specify the desired width of the label (although it may take some trial-and-error to get the result you want).

6 Expand the **Configuration** tab and enter a new name in the text field at the end of the panel. Then click **Save**.

Deleting a Filter Configuration

Use the following procedure to delete a filter configuration.

To delete a filter configuration

1 Open the **Configuration** profile.

2 Click the **Delete** icon for the filter configuration you want to delete.

Note that you cannot permanently delete any of the predefined filter configurations. Deleting a predefined filter configuration just deletes the current settings and restores the configuration to its original settings.

Zooming the Display

You can zoom the display between 40% and 100% of the default display size. You can do this in several ways:

To zoom the display

- In the menu bar, locate the panel marked "- 100% +", then click "-" to zoom out and "+" to zoom in.

  Or:

  Type over the "100%" with the value you require, then click the mouse on a neutral part of the display.

  Or:

  Rotate the mouse wheel to change the zoom factor directly. (Not supported on all browsers).

Printing the Graphical Impact Analysis

If you want to print the graphical impact analysis, you have the following options:

- Print the graphical impact analysis using the current zoom setting. With this option, the output is printed using the current zoom setting, so multiple pages will be printed if the diagram is too large to fit onto one printed page.
- Print the graphical impact analysis on one page. With this option, the output is scaled to fit onto one printer page.

To print the graphical analysis using the current zoom setting

1 Open the **Controls** tab.

2 In the **Print** section of the expanded **Controls** tab, click the icon to print the impact analysis.

To print the graphical analysis on one page

1 Expand the **Controls** tab.

2 In the **Print** section of the expanded **Controls** tab, click the icon to print the impact analysis on one page.

Full-Screen Display

You can increase the physical display area of the graphical impact analysis on your monitor by activating full-screen mode. In this mode, all menus and task bars belonging to your web browser and operating system are suppressed.

To activate full-screen mode

1 Expand the **Controls** tab.

2 In the **Full Screen** section of the expanded **Controls** tab, click the **Toggle full screen** icon to switch the display to full-screen mode.

To exit from full-screen mode, press the Escape key.

Tabular Visualization

The tabular view displays a table containing the selected asset, the objects that refer to or are referred to by the selected asset and the associations between the objects.

To visualize the impact of an asset in tabular form

1 Choose **Impact Analysis** from the context menu of an asset's link.

Or:

Select the **Impact Analysis** item from the **Actions** menu in asset detail page.

By default, the graphical view is displayed.

2 In the graphical view, click **Switch to Tabular View**.

The objects and associations listed in the table depend on your current filter configuration settings. You can change these settings by choosing the **Customize** button. This opens the **Customize** dialog, in which you can select the required object types to display, the required association types and the nesting depth of the associations.

Note: Customizations that you make for the tabular view apply only for the tabular view, not for the graphical view.

If you want to return to the graphical view, click **Switch to Graphical View**.

8 Publishing a New Asset into the Catalog

Details on how to publish an asset are described in the following sections.

Ways in Which You Can Publish an Asset

You can publish an asset (i.e., add an asset) to the catalog in one of the following ways:

- *You can use an importer*, which is a utility that generates a catalog entry from an input file. CentraSite includes importers for many of the asset types that it supports out-of-the-box. For information about using an importer, see ***Adding an Asset to the Catalog Using an Importer***.
- *You can publish an asset from scratch*, meaning that you create the asset (and set its attributes) manually. For information about manually adding an asset to the catalog, see ***Adding an Asset to the Catalog from Scratch***.

Who Can Publish Assets to the Catalog?

To add assets to an organization's asset catalog, you must belong to a role that has the "Create Assets" or "Manage Assets" permission for that organization. To see a list of the predefined roles that include the "Create Assets" or "Manage Assets" permission, see the section *About Roles and Permissions* in the document *Users, Groups, Roles and Permissions*.

Who Can Access the Assets that You Publish?

By default, everyone in your organization is permitted to view the assets that you publish to your organization's catalog. However, only you (as the asset owner) and users that belong to a role that has the "Manage Assets" permission for your organization can view, edit and delete the assets that you add to the catalog.

To enable other users to view, edit and/or delete an asset that you have published, you must modify the asset's instance-level permission settings. For more information about allowing other users to access an asset, see ***Setting Permissions on an Asset***.

Adding an Asset to the Catalog Using an Importer

Overview

An importer generates a catalog entry for an asset from a particular type of input file. For example, the Web service importer installed with CentraSite reads a WSDL file and from it, generates a catalog entry for the service that the WSDL describes. In most cases, the importer also uploads the input file to the CentraSite repository and links the file to the catalog entry. When you import a Web service from a WSDL file, for example, the importer copies the WSDL file into the repository and then links the file to the catalog entry for the Web service.

If during import of a service or schema the importer detects that the asset with the given identification already exists in the catalog, you can either *overwrite the existing version* or *create a new version*. If you decide to create a new version, the imported file will be applied to the new version.

You can also choose the option **Interactive resolution of Import/Includes**, which will allow you to specify how an already existing imported/included file (further WSDL or schema) is handled. For each of the imported/included files you have one of these options:

- Overwrite the importing file (WSDL or schema) with new content.
- Create a new version of the file with the new content (if, for example, you want to modify a schema but want to retain its previous version).
- Reuse any version of the file (if, for example, an intermediate version of a schema is currently referred to by a WSDL, you can redirect it to the newest version).

The following table lists the importers installed with CentraSite and identifies the types of files they require as input.

To import this asset...	You must supply this type of file...
Web Service (including Abstract Service)	Web Service Definition Language (WSDL) file.
XML Schema	XML Schema Definition (XSD) file.
XML Service	XML Schema Definition (XSD) file.
REST Service	XML Schema Definition (XSD) file.
BPEL	Business Process Execution Language for Web Services (BPEL) file.
Process	XML Process Definition Language (XPDL) file.
Archive	A file that was previously exported from CentraSite Control.

Note: The following sections describe how to use CentraSite's predefined importers from the CentraSite Control user interface. You can also call these importers using the Java-based import API, the SOAP API, or a command-line utility. For information, see the document *Importing Objects Using the API*.

An administrator can add custom asset types to CentraSite and install custom importers for those types. If your CentraSite is equipped with custom importers, consult your administrator to determine which types of files those importers expect as input.

Importing Web Services (including Abstract Services)

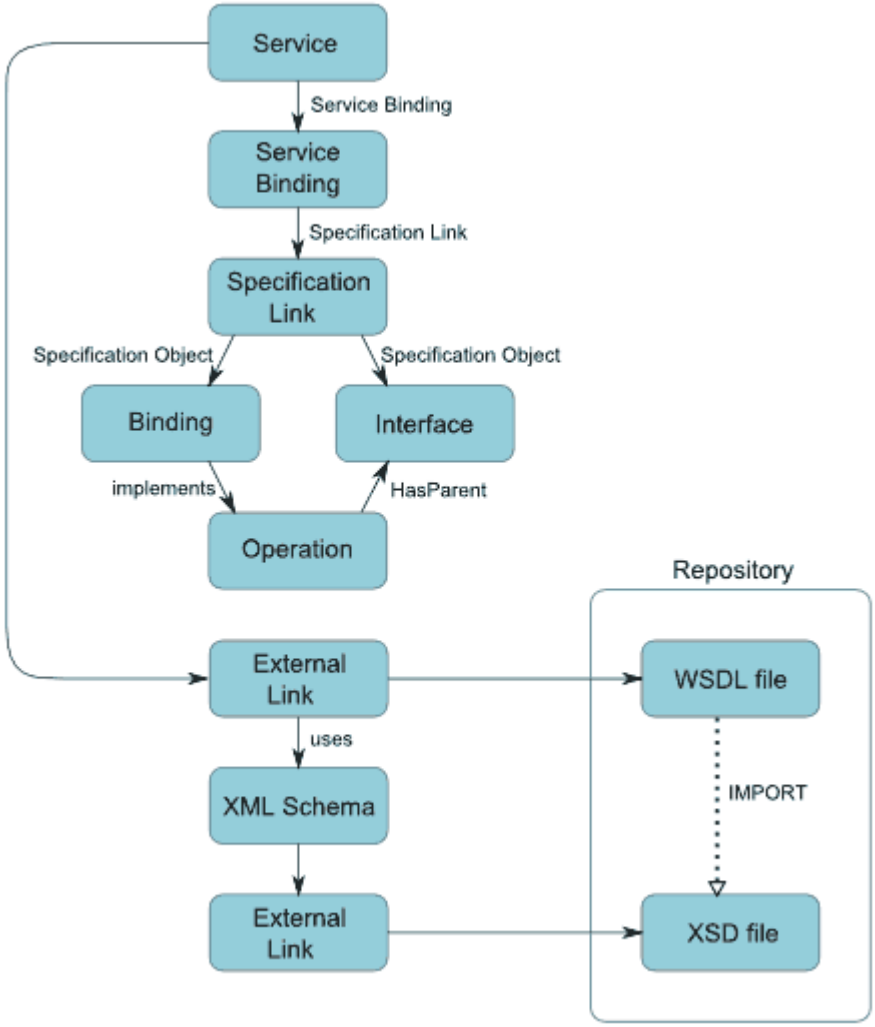
General

A Web service is represented in CentraSite by a set of related entries in the registry and in the repository. When a Web service is imported, the appropriate entries are created. Some of the entries are visible in the detail pages of the Web service asset, others are not displayed in the detail pages but are displayed when you use the impact analysis feature.

If you import a Web service for which registry entries already exist (for example, from a previous import), the existing set of entries is extended as appropriate. Thus, for example, if you had previously imported a Web service, and now you import the web service again with an additional web service operation in the WSDL file, a new Operation object will be added to the existing set of entries for the Web service in the registry.

Registry and repository entries for a web service

The registry entries created are summarized in the following diagram:



The registry entries are as follows:

- An asset of type *Service*.
- An object of type *Service Binding*, representing the binding defined in the WSDL file. This object contains the access URI of the launchable Web service. The Web service asset contains an internal reference to the service binding, i.e., there is no explicit association.
- An object of type *Specification Link*. The service binding object contains an internal reference to the specification link, i.e., there is no explicit association.
- An object of type *Binding*. The Web service object contains an internal reference to the binding, i.e., there is no explicit association object.

- One or more objects of the type *Operation*. The operation objects represent the operations of the Web service, as defined in the Web service's WSDL. For each operation, there is an association link `Implements` from the binding object and an association link `HasParent` to the interface object.
- An object of type *Interface*. This object contains the port type elements of the WSDL definition.
- An object of the type *External Link*. This object contains a link to the Web service's WSDL file stored in the CentraSite repository.

The repository entries are as follows:

- The WSDL file of the Web service.

A WSDL definition can be spread across several physical files that contain IMPORT statements to refer to each other. Also, a WSDL definition can contain an XML schema definition, which can also be spread across several physical files. In such cases, each of the WSDL and schema files is stored in the repository, and appropriate references are created in the registry as follows:

- An *External Link* object in the registry refers to the top-level WSDL file of the Web service in the repository, as described above.
- Each WSDL file in the repository that is referred to by a higher-level WSDL file for the same Web service has an *External Link* object in the registry that is referred to by the *External Link* object of the higher-level WSDL file. The reference is implemented as an association of the type `uses`.
- Each schema file in the repository that is referred to by a WSDL file in the repository has an *XML Schema* object in the registry that is referred to by the *External Link* object of the higher-level WSDL file. The reference is implemented as an association of the type `uses`. The XML Schema object in the registry contains an External Link to the schema file in the repository.
- Each schema file in the repository that is referred to by a higher-level schema file in the repository has an *XML Schema* object in the registry that is referred to by the XML Schema object of the higher-level schema file. The reference is implemented as an association of the type `uses`. The XML Schema object in the registry contains an External Link to the schema file in the repository.

If the importer detects an equivalent service within CentraSite during the import of a Web service, the import dialog will prompt you to specify either **Overwrite latest version** or **Create new version**. If you decide to create a new version, the importing WSDL will be applied to the new version.

Importing Abstract Services

You can use abstract services to support a top-down service development. An abstract service asset just contains abstract definitions like interface, operation or message definitions. But, in contrast to a normal service asset, it does not contain the complete information that is necessary to call the web service that it represents. This means the required definitions are missing or not complete. You can supply the concrete definitions of an abstract service at a later time in order to turn the abstract service into a normal service. An abstract service is represented in the CentraSite registry by a normal service asset.

You can define abstract services by creating them from scratch or by importing WSDLs that comply with the WSDL 1.1 specification.

According to the WSDL 1.1 specification, a WSDL file does not need to contain any service or binding element. This kind of WSDL is called an abstract WSDL. Importing an abstract WSDL to CentraSite results in an abstract service. The name and the targetNamespace of the abstract service are taken from the `name` and the `targetNamespace` attributes of the WSDL's `definition` element. If the attributes are missing, the import is rejected.

To enable the import of name-less abstract WSDLs, the import dialog in CentraSite Control allows you to specify a name.

The minimal abstract WSDL that is supported just contains a `definitions` element with a `name` and a `targetNamespace` attribute.

An abstract service does not contain concrete definitions that refer to the registry objects for the abstract definitions. Instead the abstract service is linked to the abstract definitions via a `HasParent` relationship attribute. The relationship attribute points from the Interface objects to the Service object. Operation objects are not referred to directly since they are always part of an Interface. Types or messages do not need to be considered, since they are not represented in the registry. The `HasParent` relationship is classified as an aggregation relationship to ensure that the abstract definitions are considered properly when deleting, moving or exporting the abstract service. The abstract WSDL is linked to the abstract service via an externalLink.

You can update an abstract service's definitions by attaching a WSDL to it. Attaching a WSDL overwrites all the registry objects that can be defined via a WSDL. This ensures that the attached WSDL reflects correctly the registry objects representing the service and its components. This also affects the service object itself. Objects that cannot be added by attaching a WSDL are not overwritten. The service object's name is not overwritten automatically when you attach a WSDL. This makes the name provided by the WSDL a technical name of a service. By default, the technical name is reflected by the local-name classification of the service object. You can align the service name with the technical name by marking the appropriate checkbox in the **Attach WSDL** dialog. For more information about attaching a WSDL to an abstract service, see the section **Editing an Asset in the Catalog**.

To show the technical name in the CentraSite Control, a computed read-only attribute is needed.

Permissions required for performing the import

When importing a web service that refers to XML Schema, keep the following points in mind:

- When you have at least a Modify permission on the referenced XML Schema, both the web service and the XML Schema are imported automatically.
- When you have only View permission on the referenced XML Schema, the web service is imported and the XML Schema implicitly reused.
- When you do not have any permission on the referenced XML Schema, the web service is imported and a warning message logged.

How to Import a Web Service

To import a Web Service asset to the catalog

Before you begin, you must have the WSDL file that you want to import. This file can reside on the file system of the computer where your browser is running, or it can reside anywhere on the network, as long as its location is addressable via a URL.

1 In CentraSite Control, go to **Asset Catalog > Browse**.

2 Click the **Import** icon.

3 In the Import dialog, specify the following attributes:

In this field...	Do the following...
Organization	Choose the organization to which the asset will be added. (The drop-down list will contain the list of organizations to which you are permitted to add assets.) If you select an organization other than your own organization, you will nevertheless be the owner of the asset. **Note:** Choose the organization with care. You cannot change the organization assignment after the asset is added to the catalog. You can, however, export an asset from one organization and import it to another.
Import as	Choose **Web Service**.
Initial Version	Enter an identifier for the initial version of the asset. This is the user-defined version, as opposed to the automatically assigned system version. You can enter any string in this field, i.e. the version identifier does not need to be numeric. You can also leave the field blank. You can later create new versions of the asset (see *Optional.Versioning an Asset*). If the versioning feature is disabled for this asset type, the field is nevertheless displayed, thus allowing you to assign an identifier for this first version. If the import of the asset also causes other related objects to be imported (for example, if the WSDL definition for a Web service includes references to other WSDL or schema definition files), the initial version is only assigned to the main

In this field...	Do the following...
	asset identified in this dialog, and the initial version of the other imported objects is not assigned.
Name	*Optional.* Enter a the name for the service. If you do not specify a name, the name is set automatically to the value of the `name` attribute in the `definitions` element of the WSDL. If the `name` attribute is not specified in the WSDL, a dialog opens in which you can specify the name.
Import from	Specify whether the input file will be read from a URL-addressable location on the network (the **URL** option) or from your local file system (the **File** option).
URL or **File**	If the file you are importing resides on the network, specify its URL. If the file resides in your local file system, specify the file name. You can use the **Browse** button to navigate to the required folder.
URL Authentication	If you have specified a URL, and the site you want to access via the URL requires user authentication, check this box. This opens an **Authentication** sub-dialog in which you can enter a username and password for authentication at the URL site.
Interactive resolution of Import/Includes	This option determines how referenced WSDLs/schemas are handled when the WSDL/schema that is referred to already exists in the registry. When this option is enabled, you will be prompted during import to specify whether you want to reuse any WSDL/schema files referred to in the main file or upload new files.

4 Click **Finish**.

CentraSite retrieves the specified file and generates the catalog entry. The Web service asset's details page is displayed.

What Happens When You Import a New WSDL File?

CentraSite retrieves the specified file and generates the catalog entry. If you have specified **Interactive resolution of Import/Includes**, you will be prompted to specify whether you wish to reuse any of the WSDL/schema files referred to in the main WSDL file or upload new files.

What Happens When You Import an Existing WSDL File?

If the importer detects that the service you are trying to import already exists within CentraSite, the import dialog will prompt you to specify whether you want to **Overwrite latest version** or **Create new version**. If you have specified **Interactive resolution of Import/Includes**, you will be prompted to specify whether you wish to reuse any of the WSDL/schema files referred to in the main WSDL file via IMPORT or INCLUDE statements or upload new files.

5 During import of a Web Service asset, CentraSite will not allow you to add the service to the asset catalog unless you have specified all "required" attributes in the Web Service type definition and all referenced objects to which the WSDL file has an association. The value for the "required" attribute must be specified in the Web service's profile. Additionally, if the Web service asset has internally referenced objects, the value for the "required" attributes of all such referenced objects should be specified by choosing the **Next** button at the top right

side of the details page in order to add the Web Service asset to the asset catalog. Thus, for example, if the WSDL/XML schema files that are referenced in the main WSDL file have "required" attributes, then you will be prompted to specify a value for the required attributes in order to save the asset.

6 After you specify the value for all of the required attributes, click **Save** to save the Web Service asset.

7 Review the import log that CentraSite displays after the import process. If errors occur while reading and processing the file, they will be reported in this log.

8 Configure the asset's extended attributes as described in *Editing an Asset in the Catalog*.

Note:

Tip: If you have previously imported a WSDL that has an associated schema file, and you now re-import the same WSDL with a modified schema file, your browser might not display the updated contents of the schema file when you click on the external link for the schema file. This can happen if the browser cache is not being updated automatically. To rectify the problem, you can change your browser settings so that pages are always updated on every visit.

Restrictions for abstract services

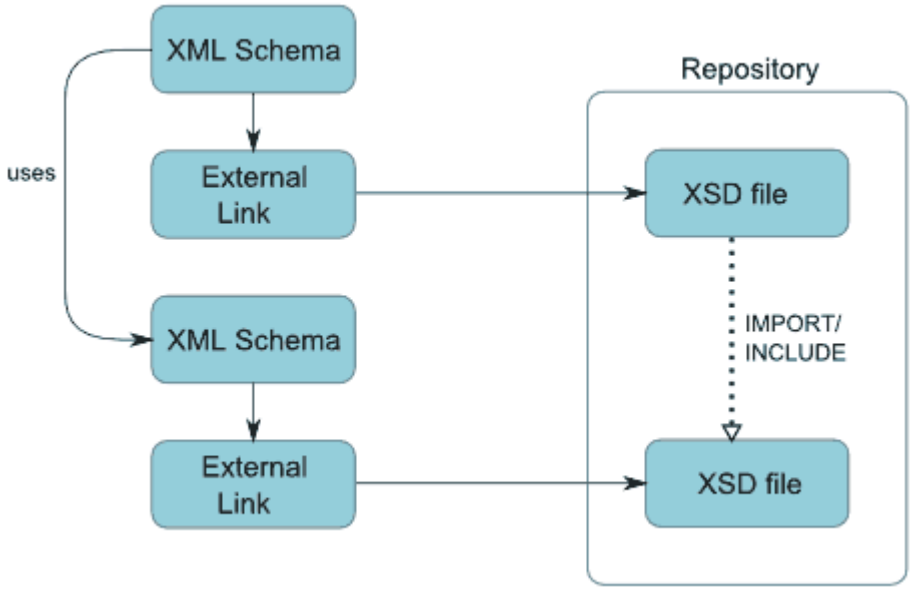
The following restrictions apply for abstract services:

- WSDL 2.0 is not supported for importing abstract services.
- An abstract service cannot be virtualized.

Importing XML Schemas

When an XML Schema is imported, the schema file is copied to the repository, and an *XML Schema* asset is created in the registry. The asset contains an External Link to the schema file in the repository.

The entries created are summarized in the following diagram:



A schema definition can consist of several physical files that refer to each other using IMPORT or INCLUDE statements. In such cases, each of the schema files is stored in the repository, and appropriate references are created in the registry as follows:

Each schema file in the repository that is referred to by a higher-level schema file in the repository has an *XML Schema* object in the registry that is referred to by the XML Schema object of the higher-level schema file. The reference is implemented as an association of the type `uses`. The XML Schema object in the registry contains an External Link to the schema file in the repository.

If the importer detects an equivalent schema within CentraSite during the import of a schema, the import dialog will prompt you to specify either **Overwrite latest version** or **Create new version**.

You can also choose the option **Interactive resolution of Import/Includes**, which will allow you to specify how an already existing imported/included file is handled. For each of the imported/included files you have one of these options:

- Overwrite the importing file with new content.
- Create a new version of the file with the new content (if, for example, you want to modify a schema but want to retain its previous version).
- Reuse any version of the file (if, for example, an intermediate version of a schema is currently referred to by a WSDL, you can redirect it to the newest version).

  If you choose the Reuse option, and there is more than one schema with the same name and namespace, you can choose between these. To allow you to select the required schema, the tab **Reuse Existing** lists the available schemas that match the given name, and also their available versions. You can view the contents of any schema in the list by clicking **view link** in the column **Content**; this is useful if you want to check that you have selected the correct file from the list.

Additionally, when importing an XML Schema that refers to other XML Schemas, keep the following points in mind:

- When you have at least a Modify permission on the referenced XML Schema, both the asset's schema and referenced schema are imported automatically.
- When you have only View permission on the referenced XML Schema, the asset's schema is imported and the referenced XML Schema implicitly reused.
- When you do not have any permission on the referenced XML Schema, the asset's schema is imported and a warning message logged.

To import a new XML Schema asset to the catalog

Before you begin, you must have the XML schema file that you want to import. This file can reside on the file system of the computer where your browser is running, or it can reside anywhere on the network, as long as its location is addressable via a URL.

1 In CentraSite Control, go to **Asset Catalog > Browse**.

2 Click the **Import** icon.

3 In the Import dialog, specify the following attributes:

In this field...	Do the following...
Organization	Choose the organization to which the asset will be added. (The drop-down list will contain the list of organizations to which you are permitted to add assets.) If you select an organization other than your own organization, you will nevertheless be the owner of the asset. **Note:** Choose the organization with care. You cannot change the organization assignment after the asset is added to the catalog. You can, however, export an asset from one organization and import it to another.
Import as	Choose **Schema**.
Initial Version	*Optional.* Enter an identifier for the initial version of the asset. See the description of the import dialog for Web service described above in the section **Importing Web Services** for details of usage.
Name	*Optional.* Enter a the name for the asset. If you do not specify a name for the asset, it is set automatically to the schema's file name.
Import from	Specify whether the input file will be read from your local file system (the **File** option) or from a URL-addressable location on the network (the **URL** option).
URL or **File**	If the file you are importing resides on the network, specify its URL. If the file resides in your local file system, specify the file name. You can use the **Browse** button to navigate to the required folder.
URL Authentication	If you have specified a URL, and the site you want to access via the URL requires user authentication, check this box. This opens an **Authentication** sub-dialog

In this field...	Do the following...
	in which you can enter a username and password for authentication at the URL site.
Interactive resolution of Import/Includes	This option determines how referenced schemas are handled when the schema that is referred to already exists in the registry. When this option is enabled, you will be prompted during import to specify whether you want to reuse any schema files referred to in the main file or upload new files.

4 Click **Finish**.

CentraSite retrieves the specified file and generates the catalog entry. The XML schema asset's details page is displayed.

What Happens When You Import a New Schema File?

CentraSite retrieves the specified file and generates the catalog entry. If you have specified **Interactive resolution of Import/Includes**, you will also be prompted to specify whether you wish to reuse any of the schema files that might be referred to in the main schema file via IMPORT or INCLUDE statements or upload new files.

What Happens When You Import an Existing Schema File?

If the importer detects that the schema you are trying to import already exists within CentraSite, the import dialog will prompt you to specify whether you want to **Overwrite latest version** or **Create new version**. If you have specified **Interactive resolution of Import/Includes**, you will be prompted to specify whether you wish to reuse any of the schema files referred to in the main schema file via IMPORT or INCLUDE statements or upload new files.

5 Click **OK**.

CentraSite retrieves the specified file and generates the catalog entry.

6 During import of an XML Schema asset, CentraSite will not allow you to add the schema to the asset catalog unless you have specified all "required" attributes in the Schema type definition and all referenced objects to which the XML file has an association. The value for the "required" attribute must be specified in the schema's profile. Additionally, if the schema asset has internally referenced objects, the value for the "required" attributes of all such referenced objects should be specified by choosing the **Next** button at the top right side of the details page in order to add the XML schema asset to the asset catalog. Thus, for example, if the XML schema file that is referenced in the main XML file have "required" attributes, then you will be prompted to specify a value for the required attributes in order to save the asset.

7 After you specify the value for all of the required attributes, click **Save** to save the XML Schema asset.

8 Review the import log that CentraSite generates for the import process. If errors occur while reading and processing the file, they will be reported in this log.

9 Configure the asset's extended attributes as described in *Editing an Asset in the Catalog*.

Tip: If you had previously imported a WSDL that has an associated schema file, and you now re-import just the schema file with modifications, your browser might not display the updated contents of the schema file. This can happen if the browser cache is not being updated automatically. To rectify the problem, you can change your browser settings so that pages are always updated on every visit.

Restriction

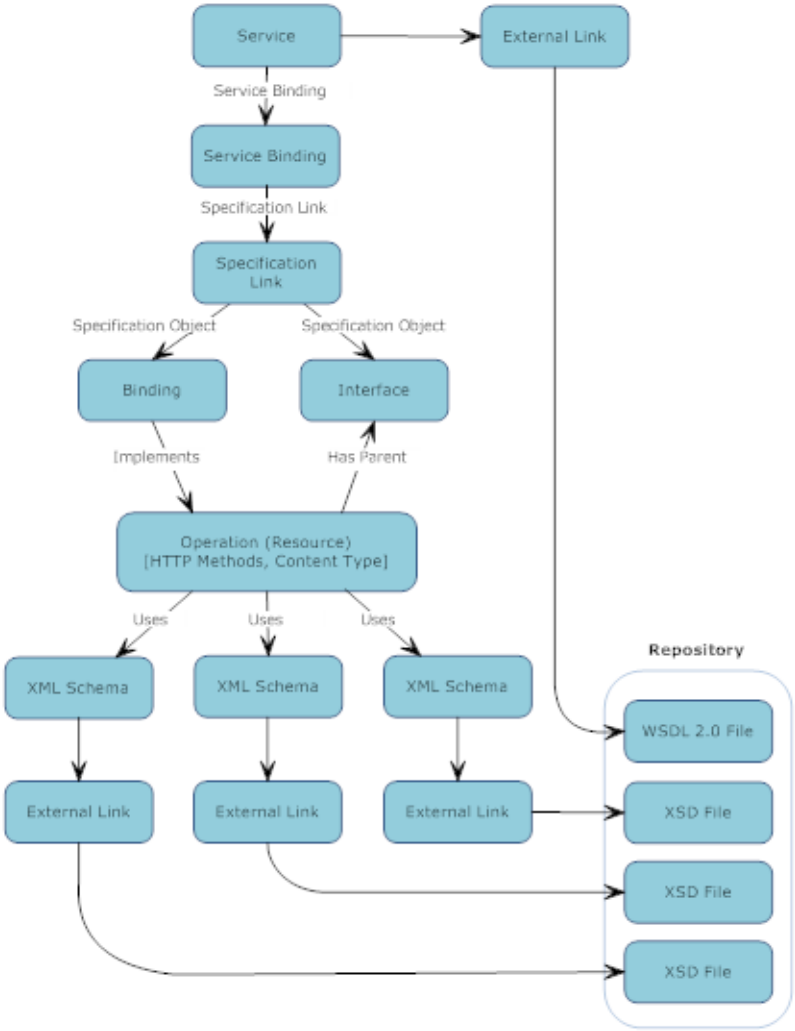
XML Schema files can contain references to DTD (Document Type Definition) files. If you import such an XML schema file, the referenced DTD files are not imported to CentraSite.

Importing XML Services

An XML service is represented in CentraSite by a set of related entries in the registry and in the repository. When an XML service is imported, the schema file is copied to the repository, and a set of entries (for example, the XML service asset with links) is created in the registry representing the schema definition. Some of the entries are visible in the detail pages of the XML service asset, others are not displayed in the detail pages but are displayed when you use the impact analysis feature.

If you import an XML service for which registry entries already exist (for example, from a previous import), the existing set of entries is extended as appropriate. Thus, for example, if you had previously imported an XML service, and now you import the service again with an additional schema file, a new link to the XML service's additional schema will be added to the existing set of entries for the XML service in the registry.

The entries created are summarized in the following diagram:



The registry entries are as follows:

- An asset of type *Service*.
- An object of type *Service Binding*, representing the binding defined in the schema file. This object contains the access URI of the launchable XML service. The XML service object contains an internal reference to the service binding, i.e., there is no explicit association.
- An object of type *Specification Link*. The service binding object contains an internal reference to the specification link, i.e., there is no explicit association.
- An object of type *Binding*. The XML service object contains an internal reference to the binding, i.e., there is no explicit association object.
- An object of type *Interface*. This object contains the port type elements of the schema and HTTP methods. The specification link object contains an internal reference to the interface, i.e. there is no explicit association.
- An object of the type *Operation (Resource)*. This object contains the HTTP methods and content type of the XML service that an importer auto-generates. The object is represented in CentraSite

by <invoke>. The resource object contains an association link Implements from the binding object and an association link HasParent to the interface object.

- An object of the type *External Link*. This object contains a link to the schema file stored in the CentraSite repository. The reference is implemented as an association of the type uses.

The repository entries are as follows:

- The schema file of the XML service.
- Each schema file in the repository has an *XML Schema* object in the registry that is referred to by the *External Link* object. The reference is implemented as an association of the type uses. The XML Schema object in the registry contains an External Link to the schema file in the repository.

A schema file can be spread across several physical files that contain IMPORT statements to refer to each other. Also, a schema file can contain a WSDL 2.0 representation, which can also be spread across several physical files. In such cases, each of the schema and WSDL files is stored in the repository, and appropriate references are created in the registry as follows:

- An *External Link* object in the registry refers to the schema file of the XML service in the repository, as described above.
- Each WSDL file in the repository that is referred to by a schema file in the repository has an *External Link* object. The reference is implemented as an association of the type uses.

When you import an XML service, the import dialog offers you the option **Overwrite existing imported schema files**. This option is of particular relevance if you are importing a schema that you have already previously imported, and it allows you to import just the main schema file without any of the schema files referred to by the main schema file via IMPORT or INCLUDE statements. If only the main schema file has changed since the previous import, but none of the referenced schema files, do not select this option; this avoids creating new versions of objects that have not changed.

Additionally, when importing an XML Schema that refers to other XML Schemas, keep the following points in mind:

- When you have at least a Modify permission on the referenced XML Schema, both the asset's schema and referenced schema are imported automatically.
- When you have only View permission on the referenced XML Schema, the asset's schema is imported and the referenced XML Schema implicitly reused.
- When you do not have any permission on the referenced XML Schema, the asset's schema is imported and a warning message logged.

To import an XML Service asset to the catalog

Before you begin, you must have the file that you want to import and the service's endpoint. This file can reside on the file system of the computer where your browser is running, or it can reside anywhere on the network, as long as its location is addressable via a URL.

1 In CentraSite Control, go to **Asset Catalog > Browse**.

2 Click the **Import** icon to open the **Import** dialog.

3 In panel 1, specify the following attributes:

In this field...	Do the following...
Organization	Choose the organization to which the asset will be added. (The drop-down list will contain the list of organizations to which you are permitted to add assets.) If you select an organization other than your own organization, you will nevertheless be the owner of the asset. **Note:** Choose the organization with care. You cannot change the organization assignment after the asset is added to the catalog. You can, however, export an asset from one organization and import it to another.
Import as	Choose **XML Service**.
Name	*Optional.* Enter a name for the asset. An asset name can contain any character (including spaces).
Initial Version	*Optional.* Enter an identifier for the initial version of the asset. This is the user-defined version, as opposed to the automatically assigned system version. You can enter any string in this field, i.e. the version identifier does not need to be numeric. You can also leave the field blank. You can later create new versions of the asset (see ***Versioning an Asset***). If the versioning feature is disabled for this asset type, the field is nevertheless displayed, thus allowing you to assign an identifier for this first version. If the import of the asset also causes other related objects to be imported (for example, if the schema definition for an XML service includes references to other schema definition files), the initial version is only assigned to the main asset identified in this dialog, and the initial version of the other imported objects is not assigned.
Endpoint	Enter the service endpoint URL in a valid format.
HTTP Method	Choose the HTTP request method(s) for bridging the protocols (e.g., GET, POST, PUT, DELETE).

4 Click **Next**.

5 In panel 2, specify the following attributes to associate schema(s) for this service.

In this field...	Do the following...
Import from	Specify whether the input file will be read from a URL-addressable location on the network (the **URL** option) or from your local file system (the **File** option).
URL or **File**	If the file you are importing resides on the network, specify its URL. If the file resides in your local file system, specify the file name. You can use the **Browse** button to navigate to the required folder. If you want to specify multiple schemas, use the plus button to add additional rows.
URL Authentication	If you have specified a URL, and the site you want to access via the URL requires user authentication, check this box. This opens an **Authentication** sub-dialog in which you can enter a username and password for authentication at the URL site.
Overwrite existing imported schema files	This option determines how referenced schemas are handled when the schema that is referred to already exists in the registry. When this option is enabled, the existing schemas in the registry are replaced with the new ones specified by the input schema file(s). When this option is disabled, the importer simply references the schema that already exists in the registry.

6 Click **Finish**.

Be aware that if the XML file references another asset, CentraSite will automatically check whether the referenced asset exists in the catalog. If not, CentraSite will attempt to locate the required file and add it to the catalog. If CentraSite cannot locate the file, it will prompt you for the file's location.

CentraSite retrieves the specified file and generates the catalog entry. The XML Service asset's details page is displayed.

7 During import of an XML Service asset, CentraSite will not allow you to add the service to the asset catalog unless you have specified all "required" attributes in the XML Service type definition and all referenced objects to which the XML file has an association. The value for the "required" attribute must be specified in the XML service's profile. Additionally, if the XML Service asset has internally referenced objects, the value for the "required" attributes of all such referenced objects should be specified by choosing the **Next** button at the top right side of the details page in order to add the XML service to the asset catalog. Thus, for example, if the schema file that is referenced in the main XML file have "required" attributes, then you will be prompted to specify a value for the required attributes in order to save the asset.

8 After you specify the value for all of the required attributes, click **Save** to save the XML Service asset.

9 Review the import log that CentraSite generates for the import process. If errors occur while reading and processing the file, they will be reported in this log.

10 Configure the asset's extended attributes as described in *Editing an Asset in the Catalog*.

Restriction

XML Schema files can contain references to DTD (Document Type Definition) files. If you import such an XML Schema file, the referenced DTD files are not imported to CentraSite.

An imported XML service cannot contain any of the custom profiles that were included in the "Service" type.

Tip: If you have previously imported a schema that has an associated schema file, and you now re-import the same schema with a modified schema file, your browser might not display the updated contents of the schema file when you click on the external link for the schema file. This can happen if the browser cache is not being updated automatically. To rectify the problem, you can change your browser settings so that pages are always updated on every visit.

Importing REST Services

- General
- Registry and Repository Entries for a REST Service
- webMethods IS REST Services
- Permissions required for performing the import
- How to Import a REST Service
- Restrictions for REST Services

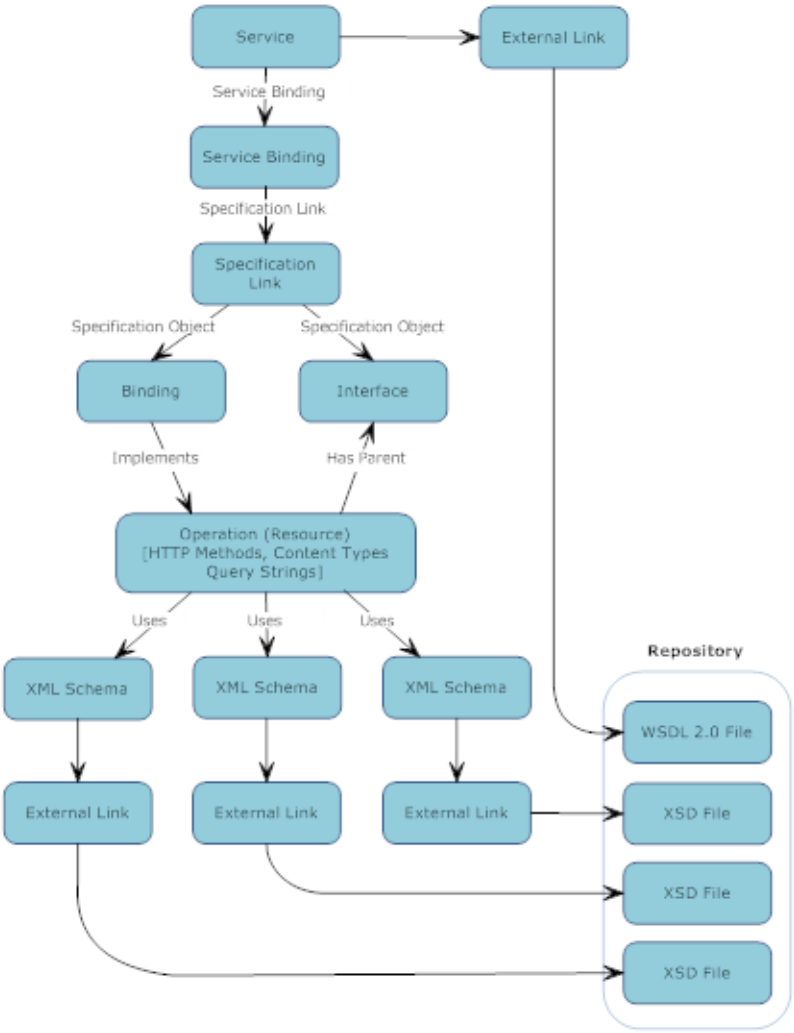
General

A REST service is represented in CentraSite by a set of related entries in the registry and in the repository. When a REST service is imported, the appropriate entries are created. Some of the entries are visible in the detail pages of the REST service asset, others are not displayed in the detail pages but are displayed when you use the impact analysis feature.

If you import a REST service for which registry entries already exist (for example, from a previous import), the existing set of entries is extended as appropriate. Thus, for example, if you had previously imported a REST service, and now you import the REST service again with an additional REST service operation in the XML Schema file, a new Operation object will be added to the existing set of entries for the REST service in the registry.

Registry and Repository Entries for a REST Service

The registry entries created are summarized in the following diagram:



The registry entries are as follows:

- An asset of type *Service*.
- An object of type *Service Binding*, representing the binding defined in the schema file. This object contains the access URI of the launchable REST service. The REST service object contains an internal reference to the service binding, i.e., there is no explicit association.
- An object of type *Specification Link*. The service binding object contains an internal reference to the specification link, i.e., there is no explicit association.
- An object of type *Binding*. The REST service object contains an internal reference to the binding, i.e., there is no explicit association object.

- An object of type *Interface*. This object contains the port type elements of the schema and HTTP methods. The specification link object contains an internal reference to the interface, i.e. there is no explicit association.
- An object of the type *Operation (Resource)*. This object contains the HTTP methods, content type and query strings of the REST service that an importer auto-generates. The object is represented in CentraSite by `<invoke>`. The resource object contains an association link `Implements` from the binding object and an association link `HasParent` to the interface object.
- An object of the type *External Link*. This object contains a link to the schema file stored in the CentraSite repository. The reference is implemented as an association of the type `uses`.

The repository entries are as follows:

- The schema file of the REST service.

A schema file can be spread across several physical files that contain IMPORT statements to refer to each other. Also, a schema file can contain a WSDL 2.0 representation, which can also be spread across several physical files. In such cases, each of the schema and WSDL files is stored in the repository, and appropriate references are created in the registry as follows:

- An *External Link* object in the registry refers to the schema file of the REST service in the repository, as described above.
- Each WSDL file in the repository that is referred to by a schema file in the repository has an *External Link* object. The reference is implemented as an association of the type `uses`.

If the importer detects an equivalent service within CentraSite during the import of a REST service, the import dialog will prompt you to specify either **Overwrite latest version** or **Create new version**.

You can also choose the option **Interactive resolution of Import/Includes**, which will allow you to specify how an already existing imported/included file is handled. For each of the imported/included files you have one of these options:

- Overwrite the importing file with new content.
- Create a new version of the file with the new content (if, for example, you want to modify a schema but want to retain its previous version).
- Reuse any version of the file (if, for example, an intermediate version of a schema is currently referred to by another schema, you can redirect it to the newest version).

webMethods IS REST Services

You can define webMethods Integration Server (IS) REST services in CentraSite by using the webM REST Publish action. You use this action in the pre-defined webM REST Publish policy to automatically create a webMethods IS REST Service in CentraSite. The service is created using the webMethods IS Service Interface object that is published by the webMethods Designer during any of the following events:

- Post-Create
- Pre-Update

Important: To implement the capability to create webMethods IS REST Services in CentraSite, you must activate the webM REST Publish policy manually.

For more information about using the webM REST Publish action, see the document *Built-In Actions for Design/Change-Time Policies*.

Permissions required for performing the import

Additionally, when importing an XML Schema that refers to other XML Schemas, keep the following points in mind:

- When you have at least a Modify permission on the referenced XML Schema, both the asset's schema and referenced schema are imported automatically.
- When you have only View permission on the referenced XML Schema, the asset's schema is imported and the referenced XML Schema implicitly reused.
- When you do not have any permission on the referenced XML Schema, the asset's schema is imported and a warning message logged.

How to Import a REST Service

Before you begin, you must have the XML Schema file that you want to import. This file can reside on the file system of the computer where your browser is running, or it can reside anywhere on the network, as long as its location is addressable via a URL.

To import a REST service asset to the catalog

1 In CentraSite Control, go to **Asset Catalog > Browse**.

2 Click the **Import** icon to open the **Import** dialog.

3 In panel 1, specify the following attributes:

In this field...	Do the following...
Organization	Choose the organization to which the asset will be added. (The drop-down list will contain the list of organizations to which you are permitted to add assets.) If you select an organization other than your own organization, you will nevertheless be the owner of the asset. **Note:** Choose the organization with care. You cannot change the organization assignment after the asset is added to the catalog. You can, however, export an asset from one organization and import it to another.
Import as	Choose **REST Service**.
Name	Enter a name for the asset. An asset name can contain any character (including spaces).
Initial Version	*Optional*. Enter an identifier for the initial version of the asset. This is the user-defined version, as opposed to the automatically assigned system version. You can enter any string in this field, i.e. the version identifier does not need to be numeric. You can also leave the field blank. You can later create new versions of the asset (see ***Versioning an Asset***). If the versioning feature is disabled for this asset type, the field is nevertheless displayed, thus allowing you to assign an identifier for this first version. If the import of the asset also causes other related objects to be imported (for example, if the schema definition for a REST service includes references to other schema definition files), the initial version is only assigned to the main asset identified in this dialog, and the initial version of the other imported objects is not assigned.
Endpoint	Enter the service endpoint URL in a valid format.
HTTP Method	Choose the HTTP request method(s) for bridging the protocols (e.g., GET, POST, PUT, DELETE).

4 Click **Next**.

5 In panel 2, specify the following attributes to associate schema(s) for this service.

In this field...	Do the following...
Import from	Specify whether the input file will be read from a URL-addressable location on the network (the **URL** option) or from your local file system (the **File** option).
URL or **File**	If the file you are importing resides on the network, specify its URL. If the file resides in your local file system, specify the file name. You can use the **Browse** button to navigate to the required folder. If you want to specify multiple schemas, use the plus button to add additional rows.
URL Authentication	If you have specified a URL, and the site you want to access via the URL requires user authentication, check this box. This opens an **Authentication** sub-dialog in which you can enter a username and password for authentication at the URL site.

In this field...	Do the following...
Overwrite existing imported schema files	This option determines how referenced schemas are handled when the schema that is referred to already exists in the registry. When this option is enabled, the existing schemas in the registry are replaced with the new ones specified by the input schema file(s). When this option is disabled, the importer simply refers to the schema that already exists in the registry.

6 Click **Finish**.

Be aware that if the XML schema file references another asset, CentraSite will automatically check whether the referenced asset exists in the catalog. If not, CentraSite will attempt to locate the required file and add it to the catalog. If CentraSite cannot locate the file, it will prompt you for the file's location.

CentraSite retrieves the specified file and generates the catalog entry. The REST service asset's details page is displayed.

7 During import of a REST service asset, CentraSite will not allow you to add the service to the asset catalog unless you have specified all "required" attributes in the REST Service type definition and all referenced objects to which the XML file has an association. The value for the "required" attribute must be specified in the REST service's profile. Additionally, if the REST service asset has internally referenced objects, the value for the "required" attributes of all such referenced objects should be specified by choosing the **Next** button at the top right side of the details page in order to add the REST service to the asset catalog. Thus, for example, if the XML schema file that is referenced in the main XML file have "required" attributes, then you will be prompted to specify a value for the required attributes in order to save the asset.

8 After you specify the value for all of the required attributes, click **Save** to save the REST Service asset.

9 Review the import log that CentraSite generates for the import process. If errors occur while reading and processing the file, they will be reported in this log.

10 Configure the asset's extended attributes as described in *Editing an Asset in the Catalog*.

Restrictions for REST Services

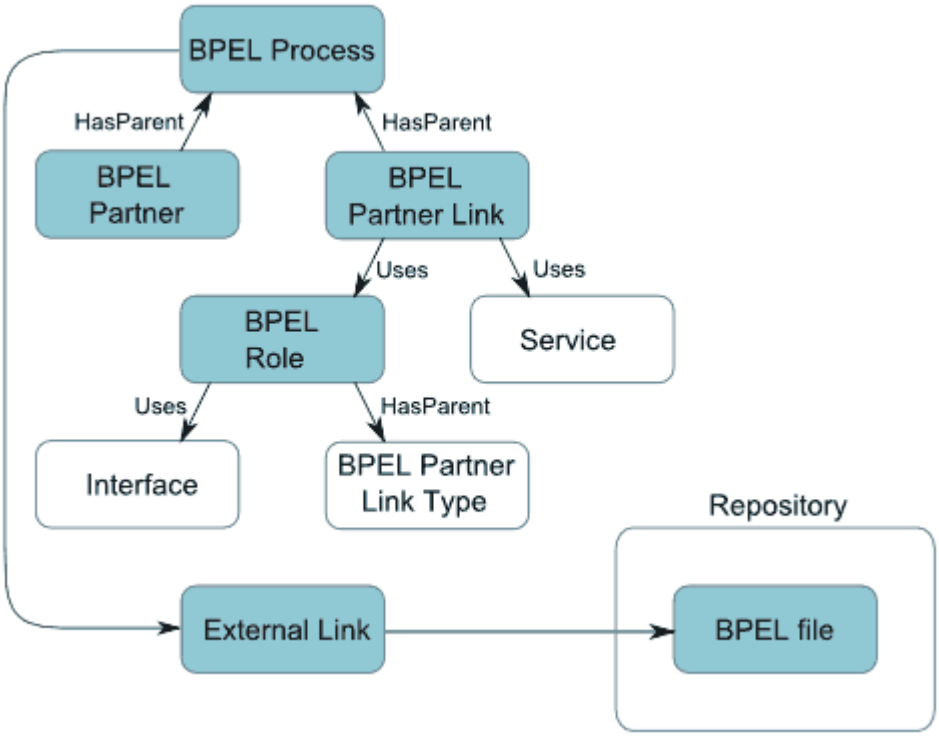
The following restrictions apply for REST services:

- XML Schema files can contain references to DTD (Document Type Definition) files. If you import such an XML schema file, the referenced DTD files are not imported to CentraSite.
- An imported REST service will not contain any of the custom profiles that were included in the "Service" type.

Importing BPEL Files

The BPEL Process importer copies a BPEL file to the repository, and creates a set of objects in the registry that represent the BPEL process definition.

The entries created are summarized in the following diagram:



The registry objects are as follows:

- A *BPEL Process* asset. This asset has an External Link that points to the BPEL definition file in the repository.
- A *BPEL Partner* object that refers to the *BPEL Process* asset using an association.
- A *BPEL Partner Link* object that refers to the *BPEL Process* asset using an association.
- A *BPEL Role* object that is referred to by the *BPEL Partner Link* object. If the BPEL Process definition contains the activation of a Web service interface, a reference is created from the *BPEL Role* object to a Web service's *Interface* object. The Web service's *Interface* object must already exist in the repository, otherwise the import of the BPEL process will fail.
- A *BPEL Partner Link Type* object that is referred to by the *BPEL Role* object.

The *Service*, *Interface* and *BPEL Partner Link Type* objects are objects that already exist from a previous import of a Web service.

Additionally, when importing a BPEL asset that refers to other XML Schemas, keep the following points in mind:

- When you have at least a Modify permission on the referenced XML Schema, both the BPEL file and XML schema are imported automatically.
- When you have only View permission on the referenced XML Schema, the BPEL file is imported and the referenced XML Schema implicitly reused.
- When you do not have any permission on the referenced XML Schema, the BPEL file is imported and a warning message logged.

To import a new BPEL asset to the catalog

Before you begin, you must have the BPEL file that you want to import. This file must reside on the file system of the computer where your browser is running.

1 In CentraSite Control, go to **Asset Catalog > Browse**.

2 Click the **Import** icon.

3 In the Import dialog, specify the following attributes:

In this field...	Do the following...
Organization	Choose the organization to which the asset will be added. (The drop-down list will contain the list of organizations to which you are permitted to add assets.) If you select an organization other than your own organization, you will nevertheless be the owner of the asset. **Note:** Choose the organization with care. You cannot change the organization assignment after the asset is added to the catalog. You can, however, export an asset from one organization and import it to another.
Import as	Choose **BPEL**.
Initial Version	*Optional.* Enter an identifier for the initial version of the asset. See the description of the import dialog for Web service described above in the section **Importing Web Services** for details of usage.
File	The input file's fully qualified name.
Product	*Optional.* This option allows the user to assign a category from the Products taxonomy to the BPEL asset.

4 Click **Finish**.

Be aware that if the BPEL file references another asset, CentraSite will automatically check whether the referenced asset exists in the catalog. If not, CentraSite will attempt to locate the required file and add it to the catalog. If CentraSite cannot locate the file, it will prompt you for the file's location.

CentraSite retrieves the specified file and generates the catalog entry. The BPEL asset's details page is displayed.

5 During import of a BPEL process asset, CentraSite will not allow you to add the asset to the asset catalog unless you have specified all "required" attributes in the BPEL process type definition and all referenced objects to which the BPEL file has an association. The value for the "required" attribute must be specified in the BPEL asset's profile. Additionally, if the BPEL asset has internally referenced objects, the value for the "required" attributes of all such referenced objects should be specified by choosing the **Next** button at the top right side of the details page in order to add the BPEL process asset to the asset catalog. Thus, for example, if the XML schema file that is referenced in the main XML file have "required" attributes, then you will be prompted to specify a value for the required attributes in order to save the asset.

6 After you specify the value for all of the required attributes, click **Save** to save the BPEL asset.

7 Review the import log that CentraSite generates for the import process. If errors occur while reading and processing the file, they will be reported in this log.

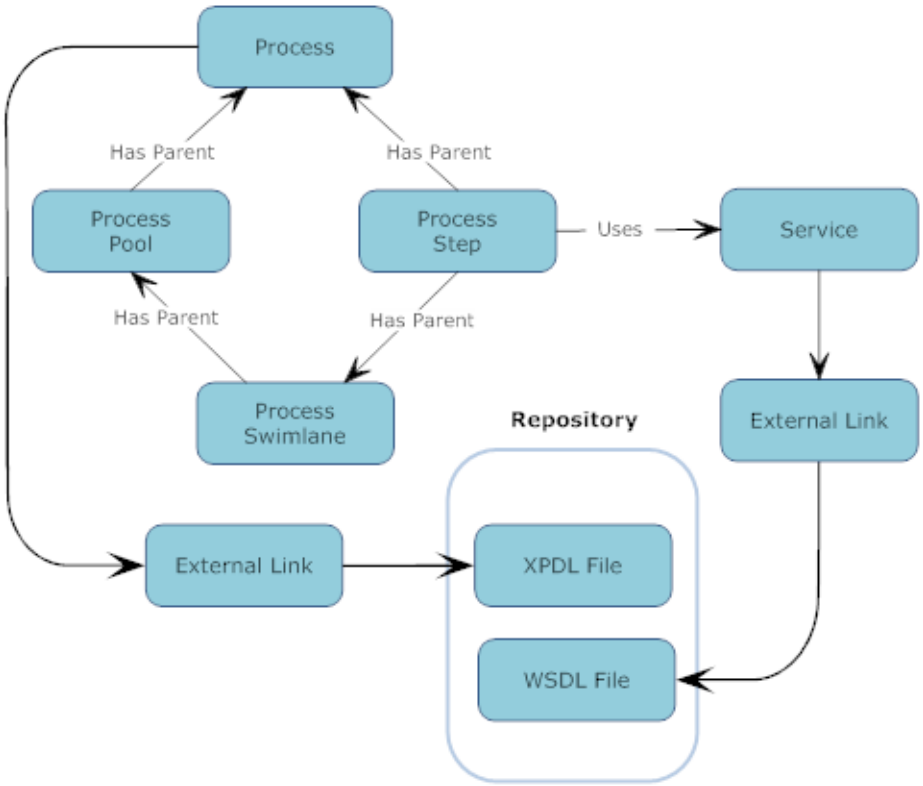
8 Configure the asset's extended attributes as described in *Editing an Asset in the Catalog*.

Importing XPDL Files

The XML Process Definition Language (XPDL) is a standard language that is used to represent workflow and business processes. It is generally used to exchange process definitions between different business processing systems. CentraSite provides an importer for XPDL files. This importer reads an XPDL 2.x file and adds the process that it defines to the registry as a Process object. It stores the XPDL file itself in CentraSite's repository.

What Happens When You Import an XPDL File?

The following diagram illustrates the registry and repository items that the importer generates when it imports an XPDL file.



The following registry objects and repository items are created by the import of an XPDL file:

- A Process object is created for each Workflow process element defined in the XPDL file.
  - The "Name" attribute for this element determines the name of the Process object.
  - The "Id" attribute for this element is assigned to an attribute called **UniqueID** in the Process object.
- A Process Step object is created for each Activity element defined in the XPDL file. Associations are generated to represent the transitions between Process Step objects.
- A Process Pool object is created for each Pool element defined in the XPDL file, and a Process Swim Lane object is created for each Lane element defined in the XPDL file.
- The XPDL file is added to the CentraSite repository. The Process object will include an attribute called **ProcessDefinitionURL**, which will contain a link to this file.
- If the XPDL file refers to a WSDL document, the importer will prompt you to provide the specified WSDL file. When you provide the file, the importer will check whether the service described in the WSDL already exists in the registry. If it does, the importer will associate the Process object with that service. If it does not, the importer will import the WSDL file, add the service to the registry, and associate the service with the Process object. If the imported WSDL file refers to other WSDL files and/or XML Schemas, the importer will add those assets to the registry as described in *Importing Web Services*.

If the process in the XPDL file has a workflow Id that matches the **UniqueID** attribute of a Process object that already exists in the registry, the importer will handle the import in the following way:

- If the Process object in the registry is not associated with a lifecycle model *or* if it is in the initial state of its lifecycle, the importer will replace the Process object in the registry with the process from the XPDL file. (If you do not have Modify permission on the Process object in the registry, the import of the XPDL file will fail.)
- If the Process object is in any state other than the initial state of its lifecycle, the XPDL file will be imported as a *new version* of the existing Process object.

The Lifecycle Model for a Process Object

CentraSite is installed with a predefined lifecycle model for Process objects. If you want to apply lifecycle governance to the Process objects in your registry, you can use the predefined lifecycle provided by CentraSite or you can define a custom lifecycle. If you want to use the predefined lifecycle model, you must activate it first. (It is installed in the inactive state.) You may customize the predefined lifecycle as you choose.

For more information about working with lifecycle models, see the document *Customizing Lifecycle Management*.

How to Import an XPDL File

Use the following procedure to import an XPDL file into CentraSite.

Note: If you are using ARIS Architect to create process definitions to share with webMethods BPMS, *do not* use this procedure to add them to the registry. Use the publishing tools provided with ARIS Architect instead. Using the ARIS Architect ensures that the appropriate metadata is included in the Process object.

To import an XPDL File

Before you begin, you must have the XPDL file that you want to import. This file must reside on the file system of the computer where your browser is running.

1 In CentraSite Control, go to **Asset Catalog > Browse**.

2 Click the **Import** icon.

3 In the **Import** dialog, specify the following attributes:

In this field...	Do the following...
Organization	Choose the organization to which the asset will be added. (The drop-down list will contain the list of organizations to which you are permitted to add assets.) If you select an organization other than your own organization, you will nevertheless be the owner of the asset. **Note:** Choose the organization with care. You cannot easily change the organization assignment after the asset is added to the catalog. Only an administrator can do this.
Import as	Choose **XPDL**.
Initial Version	*Optional.* Enter an identifier for the initial version of the asset. For information about version identifiers, see the description of the **Initial Version** field provided in the ***Importing Web Services* section**.
File	The fully qualified name of the XPDL file that you want to import.
Product	*Optional.* The product with which this XPDL file is associated.

4 Click **Finish**.

Be aware that if the XPDL file references another asset, CentraSite will automatically check whether the referenced asset exists in the catalog. If not, CentraSite will attempt to locate the required file and add it to the catalog. If CentraSite cannot locate the file, it will prompt you for the file's location.

CentraSite retrieves the specified file and generates the catalog entry. The XPDL asset's details page is displayed.

5 During import of an XPDL asset, CentraSite will not allow you to add the asset to the asset catalog unless you have specified all "required" attributes in the XPDL type definition and all referenced objects to which the XPDL file has an association. The value for the "required" attribute must be specified in the XPDL asset's profile. Additionally, if the XPDL asset has internally referenced objects, the value for the "required" attributes of all such referenced objects should be specified by choosing the **Next** button at the top right side of the details page in order to add the XPDL asset to the asset catalog. Thus, for example, if the XML schema file that is referenced in the main XML file have "required" attributes, then you will be prompted to specify a value for the required attributes in order to save the asset.

6 After you specify the value for all of the required attributes, click **Save** to save the XPDL asset.

7 Review the import log that CentraSite generates for the import process. If errors occur while reading and processing the XPDL file, they will be reported in this log.

8 Configure the process model's additional attributes as necessary. For information about setting attributes for an asset, see ***Editing an Asset in the Catalog***.

Importing Archived Assets

The Export and Import features of CentraSite allow you to export a set of assets and other objects from a source CentraSite registry to an archive file on the file system, then to import the contents of the archive file to a target CentraSite registry. The target registry can be the same registry as the source registry.

The Export and Import features are described in detail in the document *Importing/Exporting Registry Objects*.

Adding an Asset to the Catalog From Scratch

Some asset types, such as Application Servers, do not have importers. To add this type of asset to the catalog, you must define it *from scratch*, meaning that you must create the asset and set its attributes manually.

Note that CentraSite allows you to add any type of asset to the catalog manually, even those that you can create using importers. Be aware, however, that you might not be able to manually set all of the attributes for these types of assets. Certain attributes can only be set by an importer. For example, CentraSite allows you to add a Web service to the catalog from scratch, but attributes such as the list of operations and the service endpoints cannot be specified manually. To set these attributes, you must attach the WSDL file to the catalog entry using the **Attach WSDL** command in the asset's **Actions** menu. Similarly, CentraSite allows you to add a REST service or an XML service to the catalog from scratch, but attributes such as the HTTP methods, content type and service endpoints cannot be specified manually. To set these attributes, you must specify the HTTP methods, content type and schema files to the catalog entry using the **Add** resource command in the asset's **Technical Details** profile.

To add a new asset to the catalog from scratch

1 In CentraSite Control, go to **Asset Catalog > Browse**.

2 Click the **Add Asset** button.

3 In the Add Asset dialog, specify the following attributes:

In this field...	Do the following...
Type	Choose the type of asset that you want to add to the catalog. All top-level asset types are shown in the drop-down list. The asset types that are supported out-of-the-box are: Application, Web service, REST service, XML Service, BPEL Process, XML Schema, Virtualized Services etc.). (For information about creating and managing virtual services, see the document *Working with Virtualized Services*.)

In this field...	Do the following...
Name	Enter a name for the asset. An asset name can contain any character (including spaces). An asset name does not need to be unique within the catalog. However, to reduce ambiguity, you should avoid giving multiple assets of the same type the same name. As a best practice, we recommend that you adopt appropriate naming conventions to ensure that assets are distinctly named within an organization.
Description	*Optional*. Enter a comment or descriptive information about the new asset.
Organization	Choose the organization to which the asset will be added. (The drop-down list will contain the list of organizations to which you are permitted to add assets.) If you select an organization other than your own organization, you will nevertheless be the owner of the asset. **Note:** Choose the organization with care. You cannot change the organization assignment after the asset is added to the catalog. You can, however, export an asset from one organization and import it to another.
Initial Version	*Optional*. Enter an identifier for the initial version of the asset. The version identifier does not need to be numeric. You can later create new versions of the asset (see ***Versioning an Asset***). If the versioning feature is disabled for an asset type, the field is nevertheless displayed, thus allowing you to assign an identifier for this first version.

4 Click **OK**

5 Configure the asset's extended attributes as described in ***Editing an Asset in the Catalog***.

9 Creating an Application Asset

You create an application asset to specify the consumer applications that are authorized to consume a particular service, BPEL process or XML schema. Then, you include the application asset in the Consumers profile of the service, BPEL process or XML schema.

The Application asset type is one of the predefined asset types installed with CentraSite. Application assets are used by the policy-enforcement point (PEP) to determine from which consumer application a request for an asset originated. An application asset defines the precise characteristics by which the PEP can identify or authenticate messages from a specific consumer application at run time.

To create and configure an application asset, see the sections *Creating a Consumer Application* and *Configuring the Profiles of a Consumer Application* in the document *Working with Consumer Applications*.

10 Editing an Asset in the Catalog

General

Use the following procedure to edit the attributes associated with an asset.

When editing attributes, keep the following general points in mind:

- If you are not the owner of the asset, you cannot edit the asset unless you have Modify permission on the asset (granted though either a role-based permission or an instance-level permission).
- When you view the details for the asset, you will only see profiles for which you have View permission. You will only be able to edit the profiles on which you have Modify permission.
- Some attributes accept only specific types of information. For example, if the asset type includes a URL type attribute, you must supply a URL when you edit that attribute. Other attribute types that require a specific type of value include Date attributes and Email attributes. For a list of the attributes types that an asset in the catalog can include, see *Attribute Data Types*.
- Some attributes are designed to be read-only and cannot be edited even if they appear in an asset on which you have Modify permission.

To edit the attributes of an asset

1 In CentraSite Control, display the detail page of the asset whose attributes you want to edit. If you need procedures for this step, see *Viewing Details for an Asset*.

2 To edit an asset's **Name**, **Description** or user-defined version number, place the cursor in the appropriate field and modify the text as required.

3 To modify the extended attributes associated with the asset, do the following:

1. Select the profile that contains the attribute(s) that you want to modify.
2. Edit the attributes on the profile as necessary.

Editing an Asset File

Certain assets contain one or more associated files. For example, the Web service includes a WSDL file and the XML service includes a schema file. You can upload a new file or update an existing file for the asset accordingly.

- **For an instance of a Web service or abstract service only:**
  Attach the WSDL file to the catalog entry using the **Attach WSDL** command in the asset's **Actions** menu.

  If you are attaching a WSDL file to a service which already has a WSDL, the service name in the new WSDL must be identical to the service name in the existing one or the process will fail.

If you are attaching an abstract WSDL file to an abstract service which already has a WSDL, the service name in the new WSDL does not need to be identical to the service name in the existing one. If you mark the checkbox **Overwrite Service name**, the name of the new attached WSDL will overwrite the name of the existing attached WSDL.

If you select the option **Interactive resolution of Imports/Includes**, and the attached WSDL contains an Import or Include reference to a WSDL or schema that already exists in the registry, the dialog allows you to choose whether to retain the existing WSDL or schema, or to replace the existing WSDL or schema by a uploading a new one. If you choose to use upload a new WSDL or schema, you can specify whether the new WSDL or schema should overwrite the existing one, or whether a new version of the WSDL or schema should be created. Regardless of whether you overwrite the existing version or create a new version, you can specify a user-defined version number of the uploaded WSDL or schema in the **User version** field.

If you select the option **Interactive resolution of Imports/Includes**, and the attached WSDL contains an Import or Include reference to a WSDL or schema that does not already exist in the registry, the dialog allows you to upload the WSDL or schema. You can also specify a user-defined version number of the uploaded WSDL or schema in the **User version** field.

- **For an instance of an XML schema only:**
  Attach the schema file to the catalog entry using the **Attach** button in the asset's **Details** profile. For additional information about attaching a schema file to an XML schema catalog entry, see *Attaching a Schema File to an XML Schema Asset*.
- **For an instance of a REST service or XML service only:**
  Attach the schema file to the catalog entry using the **Add** (resource) button in the asset's **Technical Details** profile. For additional information about attaching a schema file to a REST service or XML service, see *Resourcing a REST Service or XML Service*

Editing a Service Endpoint

Assets such as the REST services and webMethods IS REST services can contain one or more service endpoints. You can specify multiple endpoints or modify existing endpoints as required.

3. Repeat steps 3.a and 3.b for each profile that you want to edit.

Note: If at any time you want to abandon your unsaved edits, click **Close**. CentraSite will ask you if you want to save your edits. Click **No** to abandon your edits and return the asset's attributes to their previous settings.

4 When you have finished making your edits, click **Save**.

Note: An attribute can be a required attribute (i.e. you must supply a value for it) and have a default value. If you do not supply a value for an attribute that is required and has a default value, the default value is automatically assigned to this attribute.

Attaching a Schema File to an XML Schema Asset

General

Each XML Schema asset normally has an attached schema file. If you use the schema importer to create the asset, the schema file is attached automatically. If you create the asset by hand, using the **Add Asset** button on the Browse page, you can attach a schema file to the asset by using the **Attach** button in the **Details** profile of the asset.

When you attach a schema file, the following situations are possible:

- **The XML Schema asset has no schema already attached**
  In this case, the schema will just be attached to the asset. The asset name will be changed to the schema's file name. The schema can only be attached if no schema with the same name and namespace already exists.
- **The XML Schema asset already has an attached schema file**
  In this case, you can attach any schema file to it, even with a different file name and/or different namespace (the `targetNamespace` attribute from the schema element).

  Moreover you have the choice between just overwriting the schema asset or creating a new version.

  - **Overwrite latest version**
    The schema content in the repository gets replaced by the new content. The asset's name and the classifications `localName` and `namespace` are modified according to the new information.
  - **Create new version**
    A new asset will be established with the information from the schema file which will be a new version of the attached one. The original schema asset will not be modified.

See the section **Adding an Asset to the Catalog Using an Importer** for a general description of the mechanisms used when a schema file is attached to an XML Schema asset.

Restrictions

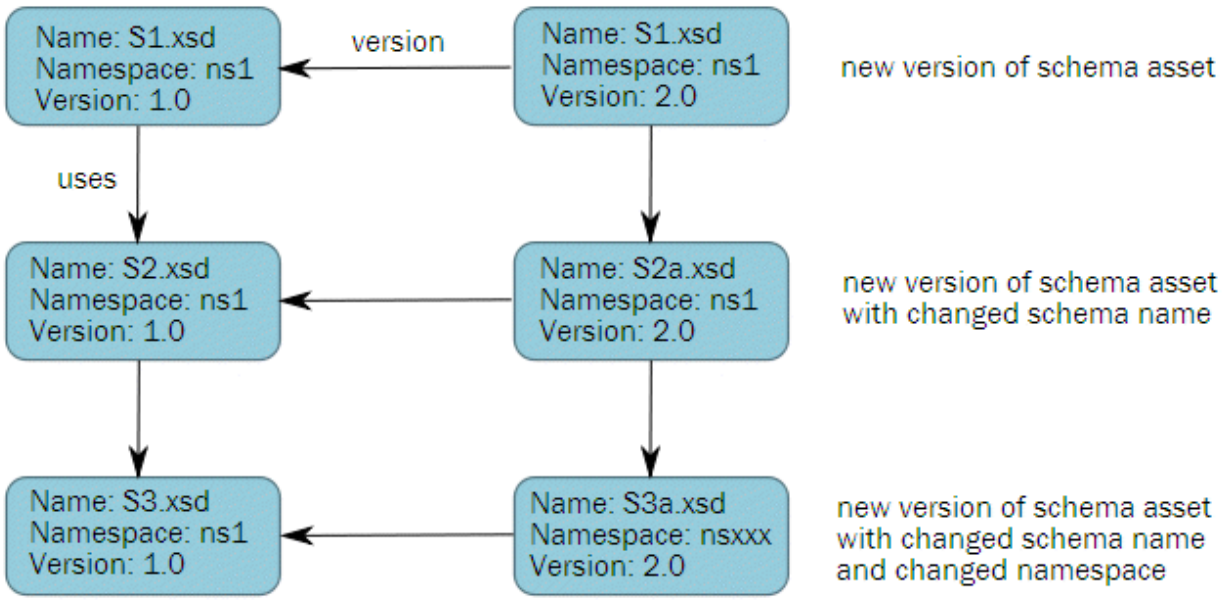
The following restrictions apply for attaching a schema file to an XML Schema asset:

- If a schema S1 is already referred to by another schema S2, schema S1 cannot be replaced by a new schema that has a modified file name or a modified namespace. This restriction does not apply if the create version option is used.
- When you use the **Attach** button, you can only attach a schema file to the most recent version of an XML Schema asset.
- If you attach a schema with a different file name and/or a different namespace, then there must not be another existing schema with same name and namespace.

Changing an Entire Schema Graph

When you attach a schema file to a schema asset, it is possible to change the entire graph of imported/included schema files. In this case, you can select the **Interactive resolution of Import/Includes** option. Then for each imported/included schema asset, a modified schema file can be attached, or a new version can be created or the current schema asset can just be reused. If you reuse a schema asset, then all of its dependent schema assets can be reused as well.

Example: Create a new version of a complete schema graph (illustrated with XML Schema objects):



Resourcing an XML Service or REST Service

General

An instance of the XML service or REST service has the "Resource" object internally representing an "Operation" object in the CentraSite registry. When adding or importing an XML service or REST service, CentraSite by means of an *invoke* operation automatically sets the **Resource:invoke** entry in the **Technical Details** profile of the new service. Based upon the type of asset (that is, XML service or REST service), it populates the basic attributes, namely **HTTP Method**, **Content Type**, **Query String** and **Schema Name** fetched from the service's schema file. You can add or modify these attributes as required.

Important Considerations When Resourcing an XML Service or REST Service

When resourcing an XML service or REST service, keep the following points in mind:

- An XML service can contain only one resource object. However, if you want to specify a new resource or modify an existing resource object, you can delete the existing resource and add the new resource details as required.
- For REST services only. If chosen the content type as **application/xml**, specifying the HTTP method and schema are *mandatory*. However, if chosen the content type as **application/json**, specifying the HTTP method and schema are *optional*.

How to Resource an XML Service or REST Service

To resource an XML service or XML service

1 In CentraSite Control, display the details page for the XML service or REST service to which you want to add a resource. If you need procedures for this step, see the section *Viewing Details for an Asset* in the document *Using the Asset Catalog*.

2 Choose the **Technical Details** profile that allows you to associate a resource object to the service.

3 Click the **Add** button.

The **Add Resource** dialog is displayed.

4 In panel 1, specify the following attributes:

In this field...	Do the following...
Resource	*Mandatory*. Enter a name for the resource. A resource name can contain any character (including spaces).
HTTP Method	*Mandatory for application/xml type*. Choose the HTTP request method(s) for bridging protocols (e.g., GET, POST, PUT, DELETE).
Content Type	Specify the MIME type of the data supported by the service. **Note:** For a REST service, this is often application/xml or application/json type but can be any other valid MIME type. For an XML service, this is only application/xml type.
Query String	*For REST services only*. Specify the search string as required. Any text you type in is case insensitive.

5 If you have chosen the content type **application/xml**, click **Next**.

-OR-

If you have chosen the content type **application/json**, click **Finish**.

6 In panel 2, specify the following attributes to associate the schema(s) with this service.

In this field...	Do the following...
Import from	Specify whether the input file will be read from a URL-addressable location on the network (the **URL** option) or from your local file system (the **File** option).
URL or **File**	If the file you are importing resides on the network, specify its URL. If the file resides in your local file system, specify the file name. You can use the **Browse** button to navigate to the required folder. If you want to specify multiple schemas, use the **Add** button to add additional rows.
URL Authentication	If you have specified a URL, and the site you want to access via the URL requires user authentication, check this box. This opens an **Authentication** sub-dialog in which you can enter a username and password for authentication at the URL site.
Overwrite existing imported schema files	This option determines how referenced schemas are handled when the schema that is referred to already exists in the registry. When this option is enabled, the existing schemas in the registry are replaced with the new ones specified by the input schema file(s). When this option is disabled, the importer simply references the schema that already exists in the registry.

7 Click **Finish**.

Deleting Resource from an XML Service or REST Service

Use the following procedure to delete a resource from an XML service or REST service.

To delete a resource from an XML service or REST service

1 In CentraSite Control, display the details page for the XML service or REST service whose resource you want to delete. If you need procedures for this step, see *Viewing Details for an Asset* in the document *Using the Asset Catalog*.

2 On the **Technical Details** profile, select the resource(s) that you want to delete.

3 Click **Delete**.

11 Attaching a Supporting Document to an Asset

Overview

Some assets include attributes that allow you to associate supporting documents such as programming guides, sample code, script files and project plan with the asset.

For example, Service assets include the **Specification** profile. This profile contains several file-related attributes representing external documents such as Functional Requirements, Error Messages , Release Notes and so forth.

You can attach a document to an asset instance in the following ways:

- You can attach a document from your organization's *supporting document library*. The supporting document library is a collection of shareable documents that members of your organization have uploaded to CentraSite's document repository. For more information about the supporting document library, see ***Managing the Supporting Document Library***.
- You can attach any document on the network that is accessible via a URL (permitted protocols are http, https, file and ftp).

When attaching a document to an asset, keep the following points in mind:

- A document in the supporting document library can be shared by multiple assets in the catalog. For example, if you have two Web service assets that refer to the same programming guide, you can upload one copy of the programming guide to the supporting document library and attach it to both assets.
- If the document that you want to attach to an asset is not already in the supporting document library, you can upload it to the library when you set the file-related attribute. (To use this feature, you must belong to a role that has the "Create Assets" permission for the organization into whose library you want place the document.)
- If you attach a document to an asset that will be viewed by users in other organizations, those users will only be able to view the attached document if they have the "View Supporting Documents" permission.
- CentraSite relies on file extensions to determine a file's type. When you upload a file from your local machine to the supporting document library, be sure the name of the file on your local machine includes a file extension so that CentraSite can determine the file's type and mark it correctly in the supporting document library.
- When you attach a document to an attribute using a URL, be aware that the attribute simply creates a reference to the document at that URL. CentraSite does not retrieve the document from the URL and place it in its document repository. If the referenced document is subsequently modified, renamed or deleted, the reference may become invalid.

Attaching Documents from a URL or the Supporting Document Library

To attach a document using a URL

1 In CentraSite Control, display the details page for the asset to which you want to attach a document. If you need procedures for this step, see *Viewing Details for an Asset*

2 Choose the profile that contains the attribute to which you want to attach the document.

3 Locate the attribute and click its **Attach** button. (If the attribute has existing attachments, be sure to click the *bottom-most* **Attach** button. If you click an **Attach** button that belongs to an existing attachment, you will *replace* that attachment. If you do not see an available **Attach** button, use the plus button to display one.)

The **Add External Link** dialog is displayed.

4 Enable the **Point to URL** option and type the document's URL into the adjacent text box. (Supported protocols are http, https, file and ftp.)

5 Click **OK**.

6 Repeat steps 3 to 5 for each URL that you want to attach to the attribute.

7 Click **Save** to save your changes.

To attach a document from the supporting document library

1 In CentraSite Control, display the details page for the asset to which you want to attach a document. If you need procedures for this step, see *Viewing Details for an Asset*.

2 Click the profile that contains the attribute to which you want to attach the document.

3 Locate the attribute and click its **Attach** button. (If the attribute has existing attachments, be sure to click the *bottom-most* **Attach** button. If you click an **Attach** button that belongs to an existing attachment, you will *replace* that attachment. If you do not see an available **Attach** button, use the plus button to display one.)

The **Add External Link** dialog is displayed.

4 Enable the **Add a document from the Supporting Document Library** option.

5 If the document that you want to attach to the asset is not already in the supporting document library, use the following steps to upload it to the library.

1. Click **Upload New Document to Selected Folder**.
2. In the **Add Document** dialog box, specify the following fields.

In this field...	Specify...
Folder	The name of the target folder in the supporting document library. Click **Browse** to select the folder.
File	The full pathname within your operating system environment of the file that you want to upload to the supporting document library. Click **Browse** to select the file. To ensure that CentraSite sets the file type correctly in the supporting document library, the name of the file should include an extension that indicates the type of data it contains.
Name	The name by which the document will be identified in the library. This is also the name that users will see when the document is attached to a File attribute.
Description	*Optional*. A descriptive comment that provides users with more information about the document. **Description** cannot exceed 4000 characters.

6 In the **Supporting Documents** list, select the document that you want to attach to the asset.

7 Click **OK**.

8 Repeat steps 3 to 7 for each document that you want to attach to the attribute.

9 Click **Save** to save your changes.

Removing a Supporting Document From an Asset

Use the following procedure to remove an attachment from a File attribute.

To remove an supporting document from an asset

1 In CentraSite Control, display the details page for the asset from which you want to remove an attached document. If you need procedures for this step, see *Viewing Details for an Asset*.

2 Select the profile that contains the attribute to which the document is attached.

3 Locate the supporting document that you want to delete and click its minus button. Repeat for each document that you want to delete.

4 Click **Save** to save your changes.

12 Changing the Lifecycle State of an Asset

If an asset has an associated lifecycle model, you can use the following procedure to switch the asset's lifecycle state.

To change the lifecycle state of an asset

1 In CentraSite Control, display the details page for the asset whose lifecycle state you want to change. If you need procedures for this step, see *Viewing Details for an Asset*.

2 On the asset detail page, click the **Actions** button and then click **Change Lifecycle State**.

If there are pending changes for the asset, you will receive a prompt asking you if you wish to save or reject the changes before the lifecycle state is changed.

3 Select the state to which you want to switch the asset and click **OK**. (The list will contain only the states that you are permitted to assign to the asset.)

If the state change requires approval, CentraSite Control will initiate an approval workflow and your request for a state change will be submitted to the appropriate approvers. While the request is awaiting approval, the asset will appear in the "pending" mode.

You can also change the lifecycle state of multiple assets in a single operation. To do this, proceed as follows:

Important: If you have selected several assets where one or more of them are predefined assets (such as UDDI ... Services, for example), you can use the **Change Lifecycle State** button to switch the lifecycle state of the assets. However, as you are not allowed to change lifecycle state of predefined assets, only assets you have permission for will be changed. The same applies to any other assets for which you do not have the required permission.

To change the lifecycle state of multiple assets in a single operation

1 In CentraSite Control, use either the Browse or the Search feature in the asset catalog to select a list of the assets whose lifecycle state you want to change. If you need information on how to browse or search the asset catalog, refer to the section **Browsing the Asset Catalog** or **Searching the Asset Catalog**.

2 Mark the checkbox of each asset whose lifecycle state you want to change.

3 In the **Actions** menu, click **Change Lifecycle State**, then continue as described above for changing the lifecycle state of a single asset.

For any given lifecycle model, a list of names of users and/or groups who are allowed to move assets to new states is maintained within the definition of the lifecycle model. For each user or group, the permission to move assets to new states can be restricted to a subset of the available states in the model. When the lifecycle model is assigned to an asset, and a state has users or groups defined for it, only a user who is one of the defined users or groups can make the transition of the asset into that state. If no users or groups are defined for a particular state, any user who has Modify permission on the asset can change the lifecycle state for that asset.

Users with the "Manage Lifecycle Models" permission can define the list of users and groups who are allowed to enter new states in a lifecycle model. See the section *Who Can Create and Manage Lifecycle Models* in the document *Customizing Lifecycle Management* for details concerning permissions.

13 Setting Permissions on an Asset

By default, everyone in your organization is permitted to view the assets that you publish. However, only you (as the owner of the asset) and users who belong to a role with the "Manage Assets" permission for your organization are allowed to view, edit and delete these assets. To enable other users to view, edit and/or delete an asset that you have published, you must modify the asset's permission settings.

The following sections describe how to set permissions on an asset.

Who Can Set Permissions on an Asset?

When setting permissions on assets, keep the following points in mind:

- To set permissions on an asset, you must belong to a role that has the "Manage Assets" permission or have the Full instance-level permission on the asset itself.
- You can assign permissions to any individual user or group defined in CentraSite.
- The groups to which you can assign permissions include the following system-defined groups:

Group Name	Description
Users	All users within a specified organization.
Members	All users within a specified organization and its child organizations.
Everyone	All users of CentraSite *including guest users* (if your CentraSite permits access by guests).

- If a user is affected by multiple permission assignments, the user receives the union of all the assignments. For example, if group ABC has Modify permission on an asset and group XYZ has Full permission on the same asset, users that belong to both groups will, in effect, receive Full permission on the asset.

  The same principle applies to users who have both role-based permissions and instance-level permissions on the same asset. In this case, users receive the union of the role-based permission and the instance-level permission on the asset.
- If you intend to give users in other organizations access to the asset, and the asset includes supporting documents that you want those users to be able to view, make sure you give those users permission to view the supporting documents as well as the asset itself.

Restricting Access to Specific Profiles

CentraSite allows you to set permissions on individual profiles within an asset. This feature enables you to specify which of the available profiles can be viewed or edited by users when they display the asset in CentraSite Control. For any given asset, you can define different profile permissions for different users. For example, if an asset includes a profile called Source Control that displays links to your source control systems, you might want to restrict the visibility of that profile to authorized developers.

You define the user-specific or group-specific profile permissions of an asset via the asset's the **Permissions** profile. See the instructions in the section **Assigning Permissions Using the CentraSite Control User Interface** for details.

The profile permissions that can be set on a given asset for any user or group are:

Permission	Description
View	Enables the specified user or group to see the profile when they view the asset.
Modify	Enables the specified user or group to modify the attribute settings in the profile when they view the asset.

Note that the individual profiles do not include the Full permission because users cannot delete a profile from an individual asset.

Important: Be aware that profile permissions can be used to prevent users from viewing and/or accessing a particular set of attributes through CentraSite's graphical user interfaces. However, they do not restrict access to the attributes themselves at the API level.

Restricting Guest Access to the Summary Tab

By default, if a user with the Guest role has permission to view the details of an asset, CentraSite Control includes the asset's **Summary** profile in the set of profiles displayed to this user. If you wish to suppress the display of this profile for users with the Guest role, you can do this as follows:

To suppress the display of the Summary tab for users with the Guest role

1 On the file system, locate the configuration file *plugin.xml* in the folder `<RuntimeDir>\workspace\webapps\PluggableUI\CentraSiteControl` .

2 In this file, locate the following `<extension>` element:

```
<extension point="com.softwareag.cis.plugin.parameter" ↩
id="guestAllowSummaryProfileVisible" value="true" /> ↩
```

3 Change the value "true" to "false".

4 Save the file and restart Software AG Runtime.

If you wish to reactivate the **Summary** profile for users with the Guest role, replace "false" by "true" in the `<extension>` element and restart Software AG Runtime.

Ways in Which You Can Set Permissions

You can set the permissions on an asset in two ways:

- **Using the Permissions profile in the user interface**
  You can use the **Permissions** profile in the user interface as described in ***Assigning Permissions Using the CentraSite Control User Interface***.
- **Using the "Set Instance and Profile Permissions "policy action**
  You can use the "Set Instance and Profile Permissions" policy action in a design/change-time policy to automatically assign permissions to an asset during any of the following events:
  - PostCreate
  - PreStateChange
  - PostStateChange
  - OnTrigger

  For more information about creating policies, see the document *Working with Design/Change Time Policies*. For more information about using the "Set Instance and Profile Permissions" action, see the section *Set Instance and Profile Permissions* in the document *Built-In Design/Change-Time Actions Reference*.

Assigning Permissions Using the CentraSite Control User Interface

Setting Instance Level Permissions on an Asset

Use the following procedure to set instance-level permissions on an asset using CentraSite Control.

To assign permissions to an asset

1 Display the details page for the asset whose permissions you want to edit. If you need procedures for this step, see *Viewing Details for an Asset*.

2 Open the **Permissions** profile.

3 To add users or groups to the **Users and Groups** list, do the following:

1. Click **Add Users and Groups**.

Note: This button is only selectable if you have the Modify permission on the asset and also the Modify permission on the asset's **Permission** profile. See the sections **Who Can Set Permissions on an Asset?** and **Restricting Access to Specific Profiles** above for details.

2. Select the users and groups to which you want to assign permissions.

   If you want to filter the list, type a partial string in the **Search** field. CentraSite applies the filter to the **Users/Groups** column.

String	Description
b	Displays names that contain "b"
bar	Displays names that contain "bar"
%	Displays all users and groups

3. Click **OK**.

4 Use the **View**, **Modify** and **Full** check boxes to assign specific permissions to each user and/or group in the **Users and Groups** list as follows:

Permission	Allows the selected user or group to...
View	View the asset.
Modify	View and edit the asset.
Full	View, edit and delete the asset. This permission also allows the selected user or group to assign instance-level permissions to the asset.

5 When you assign instance-level permissions on an asset, the related objects (for example, bindings, operations, interfaces etc.) receive the same permissions that are assigned on the asset.

6 If you want to ensure that the asset's dependent objects (for example, a WSDL or schema) receive the same permissions, mark the checkbox **Propagate permissions to dependent objects**. If you do not mark this checkbox, the permissions of the dependent objects will not be modified.

In addition, you can ensure that the dependent objects of the same object type receive the same profile permissions. To do this, mark the checkbox **Propagate profile permissions**.

See the section **Propagation of Permissions** below for more information concerning propagation of permissions and propagation of profile permissions.

7 Click **Save** to save the new permission settings.

Setting Instance Level Profile Permissions on an Asset

Use the following procedure to set instance-level permissions on an asset's profiles.

To assign instance-level permissions on an asset's profiles

1 Open the asset's **Permissions** profile.

2 Locate the user or group for which you wish to set profile permissions. Then click the arrow icon beside the user or group name to open the profile permission list.

3 Use the checkboxes to indicate which profiles the user or group is permitted to view or modify.

4 Click **Save** to save the new permission settings.

Propagation of Permissions

An asset can have one or more dependent objects. For example, a Service asset can refer to a WSDL which in turn can refer to one or more XML Schema assets. You can optionally choose whether the permissions assigned to an asset instance should be automatically propagated to the asset instance's dependent objects.

In the context of CentraSite Control, propagation of permissions means that the new permissions completely replace the old permissions; the new permissions are not merged with the old permissions. As an alternative, you can use a change-time policy containing the action "Set Instance and Profile Permissions". With this action, you can choose whether the new permissions will be merged with the old permissions or will replace the old permissions. See the section *Built-In Actions for Design/Change-Time Policies* in the document *Built-In Design/Change-Time Actions Reference* for details.

Propagation of instance level permissions

By default, the access level permissions that are assigned on an asset are implicitly propagated to these dependent objects. This behavior is activated when you mark the checkbox **Propagate permissions to dependent objects** in the asset's **Permissions** tab. For example, assigning Modify permission on a Service asset propagates the Modify permission to the asset's WSDL, schemas, etc.

If you do not have permission to assign instance-level permissions to a dependent object, the dependent object will not be modified and a warning message will be issued.

You can propagate permissions only for the following asset types:

- Service
- XML Schema
- BPEL

Propagation of profile permissions

In addition to propagating permissions that control the access to an asset instance (as described above), it is also possible to propagate permissions that control the access to the asset instance's profiles. This means that the profile permissions that you define for an asset instance can be propagated to the asset's dependent objects. However, this is only possible if the dependent object is of the same asset type as the first object; this restriction arises because different asset types can have different sets of profiles.

This behavior is activated when you mark the checkbox **Propagate profile permissions** in the asset's **Permissions** tab. This checkbox is only available for the following asset types:

- Service
- XML Schema

14 Versioning an Asset

You can use the versioning feature in CentraSite to add an updated version of an asset to the catalog. For example, if you make significant changes to a Web service (such as adding operations to the service or modifying the data types that it uses), you can use the versioning feature to add the new version of the service to the catalog.

Versioning can be active or inactive for any given asset type. The method for activating versioning for an asset type is included in the description of the asset type advanced settings in the section *Viewing or Editing the Properties of an Asset Type* in the document *Object Type Management*. Note also the restrictions for activating versioning, as described in the section **Considerations for Asset Types of the webMethods Suite**.

When you generate a new version of an asset, CentraSite adds a new asset of the same type to the catalog. The new asset will have the same name and description as the one from which it was versioned. It will have an updated version number. The new version is related to the old version by a "Supersedes" association from the new version to the old version. In cases where the detail page of an asset has a **Summary** profile, the association is displayed under the **Summary** profile.

Note: Depending on the type of asset you version, some of the attributes are cloned from the original asset and others are not. For example, when you version a Web service, the settings on the **Classifications** profile are cloned, however, the attribute settings on many of the other profiles, including the **Permissions** profile, are not. After you version an asset, you should always examine the attribute settings for the new version and set them appropriately.

The metrics and event information that was collected for the old version of the asset will remain unchanged in the registry/repository. The old version's metrics and event information will not be copied to the new version. CentraSite will begin collecting metrics and event information for the new version of the asset.

CentraSite maintains two sets of version numbers for an asset. One set is maintained for CentraSite's own internal use. CentraSite automatically assigns this version number when you create a new version of an asset. You cannot modify it. The version numbers assigned by CentraSite have the format `<MajorVersion>.<Revision>` and are always sequentially numbered starting from 1.0 (e.g., 1.0, 2.0, 3.0). If the revision feature is enabled, the revision number is incremented automatically each time you modify the current version of the asset; see the section **Working with Asset Revisions** for details.

Each version of an asset also has a separate user-defined version identifier. This is the “public” version number that CentraSite Control shows to users when it displays the catalog. The user-defined version identifier does not need to be numeric. For example, you might use a value such as “V2.a (beta)” to identify a version.

Generating New Asset Versions

You can create a new version of an asset or a new version of a selected set of assets. The descriptions in this section give you details on how to do this.

To create a new version of any given asset, you must belong to a role that has the "Manage Assets" permission for the organization in which the asset resides.

When you version an asset, you become the owner of the new version of the asset. Ownership is not carried forward from the previous version.

The new version of the asset will belong to the same organization as its previous version.

Note: You cannot create a new version of a virtual asset.

The following sections describe how to create new asset versions.

Creating a New Version of an Asset

Use the following procedure to create a new version of a single asset.

To generate a new version of an asset

1 In CentraSite Control, display the asset for which you want to generate a new version. If you need procedures for this step, see *Viewing Details for an Asset*.

2 On the asset detail page, open the **Versions** profile.

3 Click the **Add Version** button.

Note: You can also initiate this step by choosing the **Actions** button and then choosing the **Add New Version** command.

4 Complete the fields in the **Add Version** dialog box as follows:

In this field...	Specify...
Namespace	The namespace associated with this new version. This is of specific relevance for web service assets. The namespace given here reflects the target namespace defined in the associated WSDL file. A change of the namespace can be a differentiating factor between versions. Note that if you supply a new namespace here, you should ensure that the WSDL associated with this asset also reflects the new namespace.
System Version	In addition to the user-defined version, CentraSite automatically generates a **System Version** number. The system version number is independent from the version number you specify. The system version numbers are maintained for CentraSite's own internal use. CentraSite automatically assigns this version number when you create a new version of an asset. You cannot modify it. The version numbers assigned by CentraSite have the format <MajorVersion>.<Revision> and are always sequentially numbered starting from 1.0 (e.g., 1.0, 2.0, 3.0). The revision number is incremented automatically each time you modify the current version of the asset.

User Version - New	An identifier for the new version. You can use any versioning scheme you choose. The version identifier does not need to be numeric.
	
	Examples:
	
	`0.0a`
	`1.0.0 (beta)`
	`Pre-release 001`
	`V1-2007.04.30`

Organization	Specify the organization to which this new version will be added. **Note:** The **Organization** list contains the names of all organizations for which you have "Manage Assets" permission. **Important:** Choose the organization with care. You cannot change the organization assignment after the service is versioned. You can, however, export a versioned service from one organization and import it to another.
Change Log	*Optional*. A comment or other descriptive information about the new version.
Propagate versions to dependent objects	*(CentraSite only processes this checkbox for assets of type Service.)* Mark this checkbox if you wish to automatically create new versions of all of the service's dependent schemas. The schemas will only be updated if you have permissions to modify them.

5 Click **OK**.

Creating a New Version for a Set of Assets

You can create a new version for a set of assets, as described in this section.

Note: The dialog for creating a new version of a set of assets does not contain the fields **Namespace** and **Change Log** that are available if you are creating a new version for a single element, as described in the section **Creating a New Version of an Asset**.

Use the following procedure to create a new version of a set of assets.

To generate a new version of a set of assets

1 In CentraSite Control, use either the Browse or the Search feature in the asset catalog to select a set of assets for which you want to create a new version. If you need information on how to browse or search the asset catalog, refer to the section **Browsing the Asset Catalog** or **Searching the Asset Catalog**.

2 Mark the checkbox of each asset for which a new version will be created.

3 In the **Actions** menu, click **Add New Version**.

4 In the dialog, specify a new version number, in the same way as described previously for creating a new version of an individual asset.

Notes:

1. If one or more or the selected assets is not the most recent version of the asset, an error message will appear and no new version will be created for any of the assets.
2. If one or more or the selected assets is a virtual asset, an error message will appear and no new version will be created for any of the assets.

Locating Other Versions of an Asset in the Catalog

The **Versions** profile for an asset displays the list of all the asset's versions. To locate other versions of an asset, simply display the asset and examine its **Versions** profile as described below.

To locate other versions of an asset

1 In CentraSite Control, display the asset whose versions you want to examine. If you need procedures for this step, see *Viewing Details for an Asset*.

2 Open the **Versions** profile. This profile will list all versions of the asset.

3 If you want to display the details for one of the listed versions, choose the name of that version.

Purging Older Versions

If you have created several versions of an asset, you might want to delete some or all of the older versions. You can do this by purging old versions.

To purge old versions of an asset

1 Open the **Details** view of the most recent version of the asset. Ensure that there are no open views of versions of the asset that you intend to purge.

2 Open the **Versions** profile. The display now shows the available versions for the asset.

3 Select a version, then from the context menu choose **Purge**. This causes all versions older than the selected version to be deleted.

If, for example, you have versions 1, 2, 3, 4 and 5 of an asset, and you want to keep just versions 4 and 5, you can select version 4 in the display, then click **Purge**. This will delete all versions older than version 4.

Considerations for Asset Types of the webMethods Suite

If you are using CentraSite in conjunction with other components of the webMethods Suite, the versioning capability for the asset types defined by these components is by default not activated. Unless the documentation for the webMethods Suite components states otherwise, do not activate the versioning for these asset types.

15 Working with Asset Revisions

Within each version of an asset you can have several revisions. When revision processing is enabled, CentraSite stores a new revision of the current asset version each time you update the asset. In CentraSite Control you can view the stored asset properties for each stored revision.

For example, if you have an asset whose current version is 2.1, you might want to modify the contents of the `Description` property of the asset in the asset's detail page, but without creating a new version. In this case, when you save the new description of the asset, the version number is updated automatically by CentraSite to 2.2.

The following sections describe how to work with asset revisions.

Introduction

As described in the section **Versioning an Asset**, CentraSite automatically maintains an internal version number for each asset. The version number has the format *<MajorVersion>.<Revision>*, for example "2.0".

When revision processing is enabled, the revision number of an asset is initially 1, and is automatically incremented each time you save changes to the asset. When revision processing is disabled, all revisions of an asset except the most recent are discarded, and the revision number is automatically reset to 0.

When you create a new version of an asset, as described in the section **Versioning an Asset**, CentraSite internally treats the new asset version as a new registry object and assigns a new internal object ID to it. When you create a new revision of an asset, CentraSite internally treats the new asset revision as the same registry object and does not assign a new internal object ID to it.

Currently, when you switch the revision feature on or off, you can only do this for all assets in all organizations; there is no possibility of limiting the effects of revision processing to a subset of the assets or organizations.

By default, i.e., immediately after the installation of CentraSite, revision processing is switched off.

Deleting an object also deletes all of its revisions. The constraints for deleting objects however apply only to the current revision. This means that all incoming associations that exist on the current state of the object have to be released before deletion.

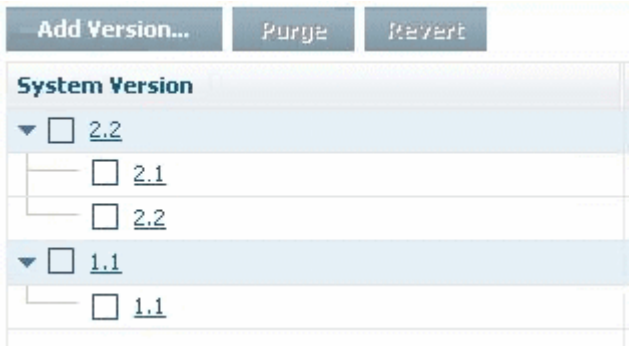
If an object with existing revisions is exported, then only the currently selected revision is exported and the revision history is not exported.

Searching (including Advanced Search) always defaults to the current revision of an object. It is possible to express a revision label in an advanced search. If an advanced search expects revisions to be found, it is not possible to define additional search criteria .

Visualization of Revisions

When revision processing is switched on, you can see the revisions of any given asset by choosing the **Versions** tab in the asset's detail view. If an asset has several revisions, these will be shown. If an asset has not been modified since it was created, the asset's version will be shown with a single revision with the number ".1"

The following example shows an asset with two versions. Version 2 of the asset has two revisions, namely 2.1 and 2.2. Version 1 is unchanged since it was created and has therefore a revision 1.1.



If you want to view the asset properties stored for any particular revision, choose the link for the required revision. Note that you cannot change the properties of a revision of an asset version if there is a newer revision of the same asset version.

Purging Old Revisions

If you have several revisions of a version of an asset, you can delete one or more of the older revisions by using the **Purge** button as follows:

To purge revisions of an asset

1 Ensure that the **Versions** tab of the asset is selected in the asset's detail view.

2 In the asset version where you want to purge the revisions, select the oldest revision that you want to retain.

3 Click **Purge**.

This deletes all revisions older than the selected revision.

Reverting to an Older Revision

If you have several revisions of an asset version, and you want to revert to an older revision than the current revision, you can do this using the **Revert** button. When you revert to an older revision, all revisions newer than the selected revision are deleted.

The revert feature is only available if the outgoing associations of the older revision are still valid, i.e., the objects referred to by the older revision must still exist.

If an older revision is reactivated in this way, the ownership and organization of the asset are set to those of the user who activated the revert feature.

If you want to revert to a revision that has a different lifecycle state than the current revision, you will be asked to confirm that you want to revert to the older revision. In this case, you must also have permission to change the lifecycle state.

When you revert to an older revision, instance level permissions are not restored.

To be able to use the revert feature, you need View and Modify permissions on the current state of the object as well as at least View permissions on the revision that you want to revert to.

To revert to an older revision, proceed as follows:

To revert to an older revision of an asset version

1 Ensure that the **Versions** tab of the asset is selected in the asset's detail view.

2 In the asset version where you want to revert to an older revision, select the older revision that you want to revert to.

3 Click **Revert**.

This removes the all revisions newer that the selected revision and makes the selected revision the new current revision.

Switching Revision Processing On

Currently, revision processing is switched on using a Java command at the operating system command line.

To switch revision processing on

1 Ensure that all of the JAR files of the *redist* folder are included in the CLASSPATH variable.

Ensure also that the location of the *redist* folder is included in the PATH variable. This is because the *redist* folder contains libraries required by the Java classes.

The *redist* folder is located directly under the CentraSite installation directory.

2 Enter the following command at the operating system command line:

```
java  com.centrasite.registry.revision.admin.RevisionAdministrator  -enable  ↩
-user user -password password
```

The user you specify must belong to the CentraSite Administrator role.

The Java program now runs to completion, and the revision processing is switched on.

If you want to run the Java program to access a CentraSite registry running on a remote host, you can add the option `-h <host>` to the Java command, where `<host>` is the URL of the remote CentraSite host.

Switching Revision Processing Off

Currently, revision processing is switched off using a Java command at the operating system command line.

To switch revision processing off

- Use the same procedure as described above for switching the revision processing on, but use the option "-disable" instead of "-enable".

  The Java program now runs to completion, and the revision processing is switched off.

Checking the Current State of Revision Processing

You can check the whether revision checking is currently switched on or off by using a Java command at the operating system command line.

To check the current state of revision processing

- Use the same procedure as described above for switching the revision processing on, but use the option "-check" instead of "-enable".

  The Java program now runs to completion and indicates the current status of revision processing: the value "true" indicates that revision processing is switched on; the value "false" indicates that revision processing is switched off.

16 Changing the Ownership of an Asset

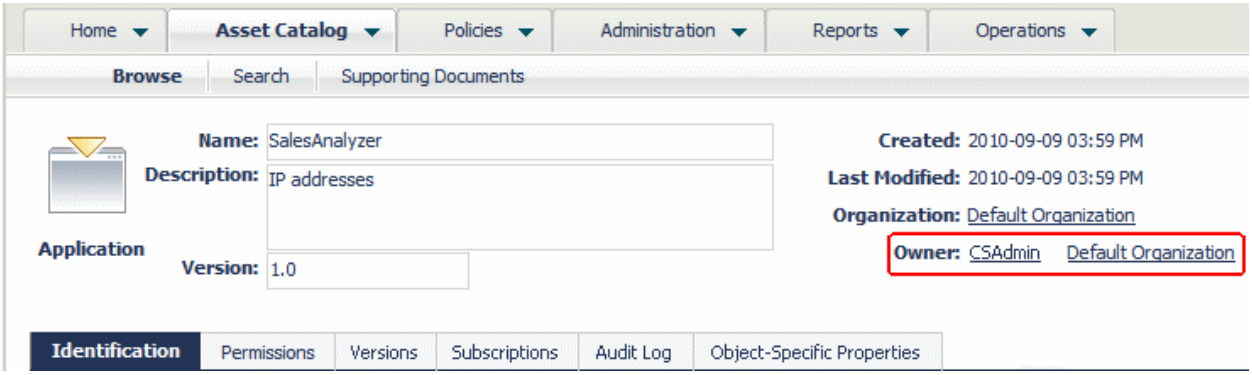
In CentraSite, there are two concepts of ownership. An asset belongs to a particular *user* (known as the asset's *owner*) and it also belongs to a particular *organization*. The owner of an asset has special access rights to the asset and serves as the asset's main point of contact. The asset's organization determines whose rules of governance apply to the asset.

After an asset is created, it is sometimes necessary to change its ownership. For example:

- You might need to transfer an asset *to another user* if the original owner leaves the company, transfers to another position, or is otherwise unable to continue serving as the owner of an asset.
- You might need to transfer ownership of an asset *to another organization* when the asset reaches a point in its lifecycle where it is managed by a different group of users. When a service moves into production, for example, you might want to transfer it to your operations organization.

User Ownership

The user who adds an asset to the catalog automatically becomes the asset's owner. User ownership is specified by the asset's **Owner** attribute, which appears on the **Details** page in CentraSite Control.



The owner of an asset automatically receives Full permission on the asset. The owner also participates in various processes and policies that affect the asset. For example, the owner of an asset is responsible for reviewing and approving all consumer-registration requests that users submit against the asset.

When you change ownership of an asset, you transfer all of the permissions and responsibilities associated with ownership of the asset to another user.

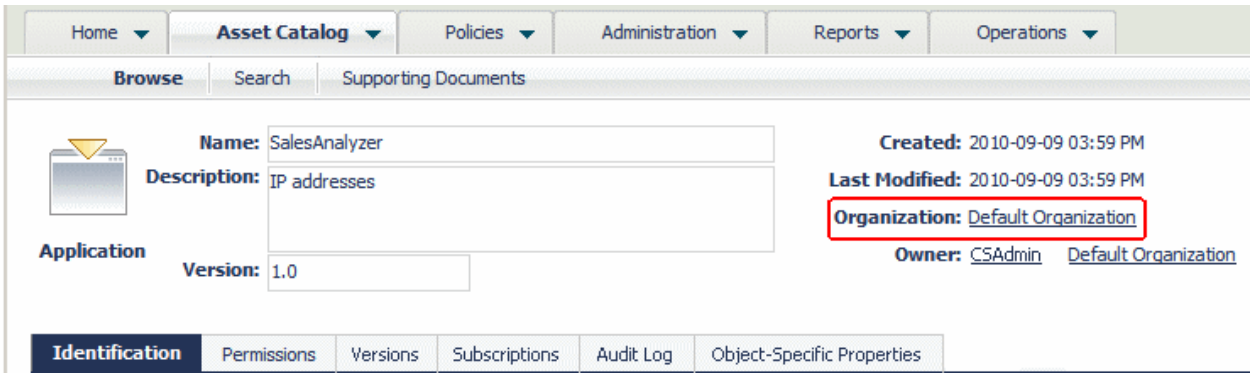
Note: Certain predefined assets that are installed with CentraSite are owned by an internal user known as the *default user*. You cannot transfer assets to or from this user.

Organizational Ownership

The organizational ownership for an asset is specified by the asset's **Organization** attribute. The organization to which an asset belongs determines which policies apply to the asset, which lifecycle model it follows, and which group of users have implicit permission to view the asset. In other words, it determines whose rules of governance apply to the asset. Consequently, when you change an asset's organizational ownership, you are in effect placing the asset under the governance of a different organization.

An asset's **Organization** attribute is specified when a user adds the asset to the catalog. Users can add assets to any organization for which they have "Create Assets" permission. (Most users only have permission to create assets in their own organization, so most assets in the registry belong to the same organization as their owner.)

The organization to which an asset belongs is shown in the **Organization** attribute on the asset's Details page.



Note: In some parts of the user interface and the CentraSite API for JAXR documentation, the organization to which an asset belongs is referred to as the *submitting organization*. This is simply another way of referring to the organization that is specified in the asset's **Organization** attribute.

Who Can Change Ownership of an Asset?

To change the ownership of an asset, you must belong to the CentraSite Administrator role.

Conditions that Must be Satisfied in Order to Change Ownership of an Asset

To change the ownership of an asset, the following conditions must be met:

- The asset that you are moving must not belong to the default user (nor can you move an asset to the default user).
- The asset that you are moving must not be in a pending state (e.g., awaiting approval) or have a consumer registration request pending for it.
- The asset that you are moving must not be a component of a composite asset. If an asset is a component of another asset, you can move it only by moving the root asset to which it belongs. For information about composite assets, see the section *Working with Composite Types* in the document *Object Type Management*.
- You cannot move the asset to an inactive user.

What Happens During a Change of Ownership?

When you change the ownership of an asset, CentraSite modifies the asset's Owner and/or Organization attributes in the way you specify. Additionally, CentraSite:

- Records the ownership change in the audit log.
- Triggers pre- and post-update policies that exist for the asset.
- Sends a notification to the inbox of the asset's previous owner and the new owner. This behavior can be suppressed by modifying a parameter of the Default Move Handler action that is activated by the Default Move Handler predefined policy; see the section *Built-In Actions for Design/Change-Time Policies* in the document *Built-In Design/Change-Time Actions Reference* for details.
- Updates the asset's instance level permissions (if the asset is transferred to a different user).
- Updates the asset's lifecycle state (if the asset is transferred to an organization that has its own lifecycle model for the asset's type).

The following sections describe the effect that an ownership change has on various aspects of an asset. Before transferring an asset to another user and/or organization, review this information so you understand how the asset will be affected.

Effect of an Ownership Change on Permission Assignments

When you transfer ownership to another user, the Full permission that CentraSite implicitly grants to the owner of an asset is transferred to the new owner and taken away from the previous owner (the previous owner will retain any explicit permissions on the asset that he or she might have). Otherwise, CentraSite makes no changes to the instance-level or role-based permissions currently associated with the asset. This means that:

- All instance-based permissions that are assigned to the asset will remain in effect after the transfer. For example, if group ABC currently has Modify permission on an asset, group ABC will continue to have Modify permission on the asset after the ownership change.
- All role-based permissions remain as is. If a user currently has access to the asset via an organization-level role-based permission, he or she will lose access to the asset if it is transferred to another organization. CentraSite Control makes no attempt to preserve a user's access to the asset by adjusting the user's role-based permissions. If you change the organizational ownership of an asset, you should review the role-based permission settings in the receiving organization afterwards to ensure that the asset is available to all the users who need it.

Policies that are Triggered During an Ownership Change

CentraSite treats an ownership change as an *update to the asset*. Thus, changing the ownership of an asset triggers the execution of any pre-update and post-update policies that apply to the asset. If a pre-update policy fails, the ownership of the asset is not changed.

Note: When you transfer an asset to a different organization, CentraSite applies the policies of the *receiving organization* to the asset.

Effect of an Ownership Change on Objects Associated with the Asset

If you transfer a composite asset to another user or organization, CentraSite automatically changes the ownership of all the asset's nonshared components. (For a description of the components that are associated with the predefined composite types, see the section *Working with Composite Types* in the document *Object Type Management*.)

Other than changing the nonshared components for a composite type, CentraSite *does not change the ownership of any objects, assets, or repository artifacts that are associated with the asset*. For example, if an Application asset has a "Uses" relationship with a Service asset, changing the ownership of one asset in this relationship does not change the ownership of the other.

After you transfer an asset to a new owner, review the asset and ensure that the new owner has permission to access the objects with which it is associated. Adjust the permission settings on those assets (or transfer them to the new owner, too) as necessary to ensure the new owner has access to them.

Effect of an Ownership Change on Other Versions of the Asset

Changing the ownership of an asset that is versioned does not affect any previous or later versions of the asset. When you transfer the ownership of a particular version of an asset, CentraSite transfers just that version. Other versions of the asset are not affected.

Effect of an Ownership Change on the Asset's Lifecycle State

If you transfer an asset to a different user, but you do not change its organization, the asset's lifecycle state is not changed. However, if you transfer an asset to another organization, the asset's state can change depending on the lifecycle model (LCM) that is in effect for the asset's type in the receiving organization.

The following table describes how the asset's lifecycle state is affected during a transfer to another organization.

If the originating organization uses..	And the receiving organization uses...	Then...
No LCM for the type	No LCM for the type	The asset's lifecycle state does not change (i.e, it remains unset).
No LCM for the type	An organization-specific LCM for the type	The asset's lifecycle state switches to the initial state of the receiving organization's LCM.
The system-wide LCM for the type	The system-wide LCM for the type	The asset's lifecycle state does not change.
An organization-specific LCM for the type	No LCM for the type	The lifecycle state is removed from the asset.
An organization-specific LCM for the type	An organization-specific LCM for the type	The asset's lifecycle state switches to the initial state of the receiving organization's LCM.

How to Change Ownership of an Asset

This section provides procedures for transferring assets to a different user or a different organization. (Note that it contains procedures for transferring a single asset and for transferring multiple assets.)

Note: If you want to transfer an asset to a different user and a different organization at the same time, use the procedures for changing user ownership. These procedures allow you to optionally change the asset's organization in addition to its owner.

- How to Change User Ownership of an Individual Asset
- How to Change User Ownership of Multiple Assets (Bulk Transfer)

How to Change User Ownership of an Individual Asset

Use the following procedure to transfer the ownership of a single asset to a specified user.

To change the ownership of an individual asset

1 In CentraSite Control, display the Details page for the asset whose ownership you want to change. If you need procedures for this step, see *Viewing Details for an Asset*.

2 On the Details page, click the **Actions** button and select **Change Owner**.

3 In the **Change Owner** dialog box, select the user to whom you want to transfer ownership of the asset.

If you want to filter the user list, type a partial string in the search field.

4 If you want to transfer the asset to a different organization, select the organization from the **Organization** list box. (Only organizations for which the user has "Create Assets" permission are available for selection.)

Note: If you do not select an organization from the **Organization** list box, the asset will remain in its *current organization*. CentraSite does not automatically transfer the asset to the selected user's organization. If you want to transfer the asset to the new owner's organization, be sure to specify that user's organization in the **Organization** list box.

5 Click **OK**.

How to Change User Ownership of Multiple Assets (Bulk Transfer)

Use the following procedure to transfer the ownership of multiple assets to a specified user.

Important: If you have selected several assets where one or more of them are predefined assets (such as UDDI ... Services, for example), you can use the **Change Owner** button to change the ownership of all of the selected assets. However, as you are not allowed to change lifecycle state of predefined assets, only assets you have permission for will be changed.

To change the ownership of multiple assets

1 In CentraSite Control, go to **Asset Catalog > Browse**.

2 Select the assets whose ownership you want to change.

3 Click the **Actions** link and select **Change Owner**.

4 In the **Change Owner** dialog box, select the user to whom you want to transfer ownership of the assets.

   If you want to filter the user list, type a partial string in the search field.

5 If you want to transfer the assets to a different organization, select the organization from the **Organization** list box. (Only organizations for which the user has "Create Assets" permission are available for selection.)

   Note: If you do not select an organization from the **Organization** list box, the selected assets will remain in their *current organizations*. CentraSite does not automatically transfer the assets to the selected user's organization. If you want to transfer the assets to the new owner's organization, be sure to specify that user's organization in the **Organization** list box.

6 Click **OK**.

How to Change the Organization of an Individual Asset

Use the following procedure to transfer an asset to a specified organization.

To change the organization of an individual asset

1 In CentraSite Control, display the Details page for the asset that you want to transfer. If you need procedures for this step, see *Viewing Details for an Asset*.

2 On the Details page, click the **Actions** button and select **Change Organization**.

3 In the **Change Organization** dialog box, select the organization to which you want to transfer ownership of the asset.

4 Click **OK**.

How to Change the Organization of Multiple Assets (Bulk Transfer)

Use the following procedure to transfer multiple assets to a specified organization.

Important: If you have selected several assets where one or more of them are predefined assets (such as UDDI ... Services, for example), you can use the **Change Organization** button to transfer the ownership of all of the selected assets. However, as you are not allowed to transfer ownership of predefined assets, only assets you have permission for will be transferred.

To change the organization for multiple assets

1 In CentraSite Control, go to **Asset Catalog > Browse**.

2 Select the assets that you want to transfer.

3 Click the **Actions** link and select **Change Organization**.

4 In the **Change Organization** dialog box, select the organization to which you want to transfer ownership of the assets.

5 Click **OK**.

17 Deleting an Asset

Deleting an asset permanently removes the asset from the catalog. An asset can only be deleted if it is not the target of an association from another registry object.

When you delete an asset, CentraSite removes the catalog entry for the asset (that is, it removes the instance of the asset from CentraSite's object database). Also note that:

- The asset's performance metrics and event information are also deleted.

  Note: When you delete services, this information is deleted by the built-in action "Delete RuntimeEvents and RuntimeMetrics of Service", which is installed with CentraSite (see the section *Built-In Actions for Design/Change-Time Policies* in the document *Built-In Design/Change-Time Actions Reference* for more information).

- When you delete a composite asset, all of its nonshared components are also deleted (see the section *Working with Composite Types* in the document *Object Type Management* for a description of the nonshared components that are associated with the predefined composite types).
- When you delete an XML Schema that refers to other XML Schemas, the referenced XML Schemas are also deleted automatically, provided that you have permission to delete them. If you do not have permission to delete a referenced XML Schema, the referenced XML Schema will not be deleted and a warning message will be issued.

Deleting an asset will *not* remove:

- Other assets to which the asset refers (unless the reference is to an asset that is a nonshared component of the asset you are deleting). For example, if the asset that you are deleting is a Service asset with a "Consumes" or "Consumed By" relationship with other services in the registry, the related services will not be deleted.
- Supporting documents that are attached to the asset.
- Earlier versions of an asset. Only the latest version of an asset can be deleted; to remove earlier versions, they must be purged, see ***Purging Older Versions***.

Before you delete an asset, we strongly recommend that you examine the asset's **Impact Analysis** profile to determine whether other assets will be affected by the asset's deletion.

Use the following procedure to delete an asset(s):

To delete an asset

1 In CentraSite Control, display the detail page of the asset that you want to delete. If you need procedures for this step, see *Viewing Details for an Asset*.

2 In the **Actions** menu, click **Delete**.

You can delete multiple assets in a single step. The rules described above for deleting a single asset apply also when deleting multiple assets.

Important: If you have selected several assets where one or more of them are predefined assets (such as UDDI ... Services, for example), you can use the **Delete** button to delete the assets. However, as you are not allowed to delete predefined assets, only assets you have permission for will be deleted. The same applies to any other assets for which you do not have the required permission.

To delete multiple assets in a single operation

1 In CentraSite Control, use either the Browse or the Search feature in the asset catalog to select a list of the assets you want to delete. If you need information on how to browse or search the asset catalog, refer to the section *Browsing the Asset Catalog* or *Searching the Asset Catalog*.

2 Mark the checkbox of each asset you want to delete.

3 In the **Actions** menu, click **Delete**.

18 Working with Supporting Documents

The supporting document library contains the collection of documents that you can associate with an asset. The documents that make up your organization's supporting document library reside in the document repository, which is the physical data store in which CentraSite maintains file-like objects.

Besides the documents in your organization's supporting document library, the document repository stores other large, file-like objects such as XML schemas, WSDL files and report templates. However, when you interact with the supporting document library using CentraSite Control, you will see only the portion of the repository that comprises the supporting document library for an organization. You will not see other files that reside in the repository.

Who Can Manage the Supporting Document Library?

Any user with "Create Assets" permission for an organization can upload documents to that organization's supporting document library.

By default, everyone in your organization is permitted to view the documents that you upload to your organization's supporting document library. To enable users in other organizations to view documents, you must grant them View permission on the document.

Document Folders

You use folders to group the documents within your organization's supporting document library. A folder can contain sub-folders or documents, and sub-folders can contain further sub-folders or documents, and so on.

Creating a Folder in the Supporting Document Library

Use the following procedure to create a new folder.

To create a new folder

1 In CentraSite Control, go to **Asset Catalog > Supporting Documents**.

This displays the list of folders and documents that are currently stored for your organization.

2 Select the existing folder under which you want to create the new folder.

3 In the context menu of the folder, choose **Add Folder** and in the resulting dialog, specify the name of the folder.

- The name can contain any combination of characters, including spaces.
- The name must not exceed 256 characters.

4 Click **OK**.

Deleting a Folder in the Supporting Document Library

Use the following procedure to delete a folder.

Be aware that:

- CentraSite will not allow you to delete a folder if it contains documents that are currently attached to an asset.
- If none of the documents in the folder are attached to an asset, CentraSite will delete the folder and all of its documents.

To delete a folder

1 In CentraSite Control, go to **Asset Catalog > Supporting Documents**.

2 Select the folder that you want to delete.

3 Choose **Delete** from the context menu of the folder.

Adding Documents to the Supporting Document Library

Use the following procedure to upload documents to the Supporting Document Library.

The document that you want to upload must reside within the file system of the computer where your browser is running. You cannot upload a document from a URL.

To add a supporting document to the library

1 In CentraSite Control, go to **Asset Catalog > Supporting Documents**.

2 Select the folder where the uploaded document will be stored.

3 Choose **Add Document** from the context menu of the folder.

In this field...	Specify...
Folder	The folder where the new document will be stored. This is by default the name of the folder you selected. You can use the **Browse** button to navigate to the required folder.
File	The file that you want to upload to the supporting document library from the computer's file system. You can use the **Browse** button to navigate to the required folder.
Name	The name by which the document will be identified in the library. ■ The name can contain any combination of characters, including spaces.

In this field...	Specify...
	■ The name must not exceed 256 characters.
Description	Optional. A descriptive comment that provides additional users with more information about the document. Description cannot exceed 4000 characters.

4 Click **OK**.

This adds the document to the Supporting Document Library.

Viewing Details of a Supporting Document

After you have added a document to the supporting library, you can view its stored details as follows:

To view the details of a supporting document

1 Open the list of supporting documents by choosing **Asset Catalog > Supporting Documents** and choose the required folder in the hierarchical tree view.

2 Choose **Details** from the context menu of the listed supporting document.

The **Permissions** tab displays the current permission settings for the document.

The **Attached To** tab lists the assets, if any, to which the document is attached.

The **Versions** tab shows the existing versions of the document.

Note: Due to the current implementation, which creates supporting documents in a two-phase process, two version numbers are assigned when you add a supporting document. Thus, the document versions 1.0 and 2.0 are displayed for a newly added document.

Replacing Documents in the Supporting Document Library

Use the following procedure to replace an existing document in the supporting document library with another file.

To replace a supporting document in the library

1 In CentraSite Control, go to **Asset Catalog > Supporting Documents**.

2 In the Supporting Documents list, locate the document that you want to replace and choose **Details** from its context menu.

3 In the **Edit Document Details** dialog box, click the **Upload File** button. This opens the **Create New Version** dialog.

4 Specify the file that you want to upload to the library.

5 Click **OK** to upload the document.

Note that a version history of the document is visible under the **Versions** profile of the document's detail page. You cannot, however, revert to an older version of the document, since the supporting document library only stores the most recent version of the document.

Moving a Document to Another Folder

When you move a document to another folder, keep the following points in mind:

- Moving a document to another folder will not affect existing references to the document.
- CentraSite will not allow you to move a document to another folder if the destination folder already contains a document with the same name. You must rename one of the documents before you execute the move.

Use the following procedure to move a document from one folder to another.

To move a document to another folder

1 In CentraSite Control, go to **Asset Catalog** > **Supporting Documents**.

2 In the **Supporting Documents** list, select the document that you want to move.

3 In the **Folder** field, elect the folder to which you want to move the document.

4 Click **Save.**

Renaming a Document in the Supporting Document Library

Use the following procedure to rename a document in the library.

Renaming a document will not affect existing references within CentraSite. However, if any of your users address the document directly using a URL reference, changing the name of the document will break those links.

To rename a document

1 In CentraSite Control, go to **Asset Catalog > Supporting Documents**.

2 In the Supporting Documents list, locate the document that you want to rename.

3 Choose **Rename** from the document's context menu.

4 In the **Name** field, specify a new name for the document.

- The name can contain any combination of characters, including spaces.
- The name must not exceed 256 characters.

5 Click **Save**.

How to Determine Which Assets Refer to a Document

Use the following procedure to display the list of assets to which a document is currently attached.

To display the list of assets that refer to a supporting document

1 In CentraSite Control, go to **Asset Catalog > Supporting Documents**.

2 In the displayed hierarchy of folders, open the folder that contains the required supporting document.

3 In the list of supporting documents displayed, locate the entry for the supporting document.

4 Click the entry for the supporting document. This open the details page for the supporting document.

5 Click the tab **Attached To**.

This displays the list of all assets to which the supporting document is attached.

As just described, there is a tab named **Attached To** for each supporting document. Note that when you display the set of supporting documents in a folder, there is also a display column named **Attached To** that you can optionally select or deselect with the column chooser. This display column shows the assets to which each supporting document is attached. If the list of assets is too long to be fully displayed on the screen, the ellipsis ("...") indicates that some asset names are not displayed. You can view the whole list of assets by moving the cursor over the visible assets. This causes the whole list to be displayed as rollover text.

Caution: If a folder contains many supporting documents, and if the supporting documents are attached to many assets, CentraSite might take some time to retrieve all of the information required for the **Attached To** display column. Therefore, you might prefer to keep the **At-**

tached To column deselected, and instead view the contents of the **Attached To** tab for an individual supported document, as described above.

Deleting Documents from the Supporting Document Library

Use the following procedure to remove a document from the supporting document library.

Be aware that CentraSite will not allow you to delete a document that is attached to an asset. You can only delete "unattached" documents. To determine whether a document is attached to an asset, see *How to Determine Which Assets Refer to a Document*.

To delete a document from the supporting document library

1 In CentraSite Control, go to Asset Catalog > Supporting Documents.

2 Locate the document that you want to delete and select the check box beside its name.

3 Click **Delete.**

19 Downloading an Asset

CentraSite Control offers two methods of retrieving the source files of CentraSite assets, namely *exporting* and *downloading*. The source file is the file that was imported into CentraSite in order to create the registry entry for the asset. For example, the source file for a web service asset is the service's WSDL file. The source file for an XML schema asset is its schema file. The difference between exporting and downloading is as follows:

- The *export* feature creates a zip file containing one or more assets from the repository, as well as all associated registry objects. The export feature is described in the document *Importing/Exporting Registry Objects*.
- The *download* feature creates a zip file containing just the source file of a single asset from the repository, without any of the associated registry objects. If the source file refers to other source files in the repository (for example, a WSDL file can reference XML schema files), the referenced files will also be included in the zip file. If the asset refers to files in the Supporting Document Library, these can optionally be included in the zip file.

If an asset was not created by an importer, but was instead created from scratch without using a source file, the download feature can still be activated. In this case, however, the downloaded zip file does not contain an asset source file but instead only contains files from the Supporting Document Library that are attached to the asset.

Permissions

If you use the download feature to create a zip file, it contains only the files that you have permission to view.

Performing the Zip Download

The asset that you want to download must belong to an asset type for which there is an importer. The importer can be either one of the predefined importers (see the list of available importers in the section ***Publishing a New Asset into the Catalog***), or a user-defined importer.

To download an asset and its associated files, proceed as follows:

To download an asset and its associated files

1 Use the **Asset Catalog > Browse** or **Asset Catalog > Search** feature to locate the asset you want to download.

2
- **For Web services or XML schemas:**
  - Choose **Download Documents** from the context menu of the asset,

    OR

- choose **Download Documents** from the **Actions** menu of the asset.

  In the **Download Documents** dialog, check the box **Include Supporting Documents** if you want to include attached documents from the Supporting Document Library.

3 Click **OK**. This starts the creation of the zip file.

The default location to which the zip file is downloaded is *My Documents\Downloads*.

Structure of the Zip File

The zip file is organized as a directory that holds all the downloaded files. Subfolders are only created if any of the names of the downloaded files are not unique; in this case, the files are stored in consecutively numbered subfolders (for example: 1/SchemaA.xsd, 2/SchemaA.xsd, etc.).

If a downloaded file refers to one or more other downloaded files, for example if a WSDL file refers to a schema, the reference within the file is adjusted so that it points relatively to the file in the zip file. This is also true if the referenced file is located within a numbered subfolder.

Example: The WSDL file *Service.wsdl* refers to *SchemaA.xsd*, to another *SchemaA.xsd* with a different namespace, and to *SchemaB.xsd*. The resulting zip file has the following structure:

Service.wsdl
1/SchemaA.xsd
2/SchemaA.xsd
SchemaB.xsd

Performing the Single Document Download

You can download a document from the Supporting Document Library or from an asset, as usual text file. To do this, proceed as follows:

To download documents directly from the Supporting Document Library

1 Open the Supporting Document Library of a specific organization by clicking **Asset Catalog** > **Supporting Documents**.

2 Select the checkbox for the required document or documents.

3 Click **Download**.

Note: If you selected more than one document, the output is directed to a zip file.

To download an attached document from the Supporting Document Library

1 Open the detail view of the asset to which the supporting document is attached.

2 Open the **Specification** or the **Details** profile, as appropriate for the asset type.

This shows the files that are attached to the asset.

3 Locate the supporting document that you want to download. Click the **Download** button for this entry.

4 Specify the location in the file system where you want to store the supporting document, then click **OK**.

To download a WSDL document from a Service or an XSD document from a Schema

1 Open the **Summary** tab of the asset.

2 Click on the WSDL/URL hyperlink.

3 Click the **Download** button.

4 Specify the location in the file system where you want to store the supporting document, then click **OK**.

If the WSDL or schema file includes a reference to another file (usually a relative address) in the repository, then this reference will be changed to an absolute repository address.

To download schemas from REST services or XML services

1 Locate the Technical Details profile.

2 Click the **Download** button adjacent to the attribute "Schema Name".