Enterprise Architect

User Guide Series

Reuseable Asset Service (RAS)

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Reuseable Asset Service (RAS)

Within a large organization, groups of users can be separated by geographical distance be on different networks. This can make it difficult to share common data, standards and modeling structures, without the complexity of using external version control tools or manually distributing XMI files between projects. Enterprise Architect has a **Reusable Asset Service** (RAS) that provides a simple and convenient mechanism for modelers to distribute or download reusable model structures, information, corporate directives and standards. The shared repository is accessible via a Cloud Service connection, making it accessible for distributed teams. The person who sets up the reusable data can retain governance of the resource or asset, whilst users of the service can easily review the currency of the information and download the latest versions into their models or file folders.

The RAS gives distributed teams convenient access to a single 'source of truth' for shared data, including project milestones, architectural frameworks and industry standards.

Reusable Assets

Reusable Assets consist of:

- Packages containing elements, diagrams and structures (as drawn from any point within the **Project Browser**), and
- Files in a range of text, code and graphic formats, including .eap files

An asset can be, for example:

- A common Class library or framework
- A set of common Requirements or Use Cases
- A draft specification document
- Marketing collateral

Storage Structure and Use

Reusable Assets are held in a remote registry, accessed through a Cloud Service connection. The registry contains any number of Storages, which can either be left unprotected for any user to create, or change-restricted by an Administrator password. Each Storage can contain any number of Asset Packages holding modeling structures, and files containing textual or graphical information and data. When a user creates a Storage, they can protect the contents from being updated in the Registry or downloaded into a model, using password protection defined by that user.

For each Package, the RAS automatically identifies the:

- Version of the Package held in the registry
- Diagrams and elements (including child Package elements) contained by the Asset Package
- Dependencies on parent Packages of any external elements that the Asset Package references
- Dependencies on MDG Technologies

Any user, regardless of password protection, can freely browse and identify the contents of a Package held in a Storage - including displaying the diagrams - without importing the material into a model. A user that has imported an Asset Package into their model can compare their model Package against any version of the Asset Package, to check for and assess any differences between them.

Notes

- The **Reusable Asset Service** is available in the Corporate, Business and Software Engineering, System Engineering and Ultimate editions of Enterprise Architect

Connect to the Asset Service

The **Reusable Asset Service** provides model structures and documents to you from one or more registries on remote systems. You access these registries through a Cloud connection to the appropriate server. The connection details should be provided to you by your System Administrator or Reusable Asset Service Administrator.

Access

Ribbon	Publish > Model Exchange > Reusable Assets
Menu	Tools > **Reusable Asset Service**

Connect to Assets

Field/Option	Detail
Registry	This field normally defaults to the last-used registry name. If the field is empty, or if you want to switch to a different registry, click on the ... button to the right of the field. The 'Cloud Connection' dialog displays. Using the information provided by your administrator, type in the server name, URL and the name of the model hosting the registry data. For example, if you wanted to download the UBL Frameworks into your model, you would specify the server 'sparxcloud.com' and the model name 'modelpatterns'. If advised by your Administrator, type in the user name and password for the server. Click on the **OK button**; the 'Registry' field now shows the server name.
Storage	If there is more than one Storage available in the Registry, this field defaults to the first listed in the Registry. To check for or select other Storages, click on the drop-down arrow at the right of the field. Click on the Storage to review. For example, if you were downloading UBL frameworks, you would select 'UBL' in the list. The 'Registry Browser' tab displays the Packages registered in the selected Storage.

Notes

- The **Reusable Asset Service** is available in the Corporate, Business and Software Engineering, System Engineering and Ultimate editions of Enterprise Architect

Browse Assets

When you select a Storage in the **Reusable Asset Service**, the 'Registry Browser' tab immediately displays a list of the Packages registered in that Storage. You can review and use these Packages using the context menu and buttons on the tab.

You can review the properties and contents of the selected Package in the Storage, and access any files in the Storage, using the tabs in the lower half of the Reusable Asset Service view, underneath the 'Registry Browser' tab.

If you have left the Registry Browser open for a while and there is a possibility that the Registry has been changed, you can click on the icon in the Reusable Asset Service toolbar to refresh the Browser with the latest contents of the Registry.

Access

Ribbon	Publish > Model Exchange > Reusable Assets > Registry Browser
Menu	Tools | **Reusable Asset Service** > Registry Browser

Review Assets

Field/Option	Detail
Toggle Filter Bar	Right-click on the column headings and select this option to show or hide the **Filter** Bar on the display.
<filter bar fields>	Type in the appropriate characters to list only Packages that have that string of characters in the values in the corresponding column.
Package	This column shows the name of the Packages held in the selected Storage.
Version	This column defaults to the most recent version of each Package held in the selected Storage. You can click on the drop-down arrow at the end of a field and select a different version of the corresponding Package, if any have been registered.
Last Registered	This column shows the date and time at which the currently-listed version of each Package was registered.
Registered By	This column shows the user name of the person who registered the currently-listed version of each Package.
Import	Click on a Package name and click on this button to begin to import either the Package alone or the Package and its dependent structures into your model. You can perform the same action by right-clicking on the Package name and selecting the 'Import from Registry' menu option. If the Package from the Registry already exists in your model, it is deleted and

	replaced by this import. On a 'Learning Center Library' Storage, click on this button to open the 'Download Library' dialog. On a 'Reference Data Library' Storage, click on this button to open the 'Import Reference Data' dialog. On a 'Source Code Library' Storage, click on this button to open the 'Save As' dialog.
Compare with Package in Model	If you have previously imported a Package from the Registry into your model, you can right-click on the Package name in the Registry Browser and select this option to compare the imported Package with the Registry version, and show any differences. The system automatically selects the model Package from the **Project Browser**.
Find in Project Browser	If you have previously imported a Package from the Registry into your model, you can right-click on the Package name in the Registry Browser and select this option to highlight the corresponding Package in the **Project Browser**.

Notes

- Some of the other options available on the Registry Browser are used to set up assets in the Registry
- If the Storage is password-protected, a prompt for you to enter a password displays when you select to perform an operation on the data; in this situation, you need the 'Read-only' password to process the information from the Storage, and the 'All-access' password to change the information in the Storage
- The 'Registry Browser' tab will be empty for a 'Learning Center Library', 'Reference Data Library' or 'Source Code Library' type Storage - the contents of these Storages will be available in the 'Storage Files' tab of the **Reusable Asset Service** view

Asset Properties

When you select a Storage and a Package in the Registry Browser, the first four tabs in the lower half of the **Reusable Asset Service** view are updated with information from the Package. The 'Asset Properties' tab is a read-only view of the properties of the selected Package itself.

Access

Open the '**Reusable Asset Service**' window using one of the methods outlined below.

Select a package, then click on the 'Asset Properties' tab, to display properties for the selected package.

Ribbon	Publish > Model Exchange > Reusable Assets
Menu	Tools > **Reusable Asset Service**

Review Package Properties

Field	Detail
Package	Displays the name of the selected Package.
GUID	Displays the Global Unique Identifier of the Package.
Version	Displays the version reference (such as 1.1 or Beta) of the Package.
Author	Displays the user ID of the person who created the Package (the Package Author).
Created Date	Displays the date and time at which the selected version of the Package was created (that is, registered) in the Registry.
Modified Date	Displays the date and time at which the selected version of the Package was last modified (that is, re -registered) in the Registry.
Comments	Displays any comment recorded against the Package when it was registered in the Storage.
Notes	Displays the notes recorded against the Package when it was registered in the Storage.

Notes

- The 'Asset Properties' tab will be empty for a 'Learning Center Library', 'Reference Data Library' and 'Source Code Library' type Storage

Package Contents

When you select a Storage and a Package in the 'Registry Browser', the first four tabs in the lower half of the **Reusable Asset Service** view are updated with information from the Package. The 'Contents' tab lists the diagrams and elements (including child Packages) held in the selected Package, listing the two types of object separately. You can organize the information within a column into alphabetical or reverse-alphabetical order for ease of reference, and use the **Filter bar** to filter the display to show only items with values containing specific characters or digits.

Access

Open the '**Reusable Asset Service**' window using one of the methods outlined below.

Select a package, then click on the 'Contents' tab, to display the contents of the selected package.

Ribbon	Publish > Model Exchange > Reusable Assets
Menu	Tools > **Reusable Asset Service**

Review Package Contents

Field/Option	Detail
Content Type	Click on this button to toggle between listing the Package diagrams first and listing the Package elements first.
Toggle Filter Bar	Right-click on the column headings and select this option to show or hide the **Filter** Bar on the display.
<filter bar fields>	Type in the appropriate characters to list only elements and diagrams that have that string of characters in the values in the corresponding column.
Content Type: Diagram Content Type: Element	These are the headers for the two types of object listed in this tab. Click on the appropriate expansion box to hide or show the list of diagrams or elements under the heading.
Name	Displays the name of the element or diagram available in the Package.
Type	Displays the type of the element or diagram, such as UseCase or **Use Case Diagram**.
GUID	Displays the Global Unique Identifier of the element or diagram.
Content Type	Displays the object type of the item - Element or Diagram.
Find in Project Browser	Right-click on an element or diagram line and select this option to see if the element or diagram also exists in your model and, if it does, to highlight it in the **Project Browser**.
	Right-click on a diagram name and select this option to display the diagram within

View Diagram	a labeled frame, as an image. Alternatively, double-click on the diagram name.

Notes

- The 'Contents' tab will be empty for a 'Learning Center Library', 'Reference Data Library' and 'Source Code Library' type Storage

Package Dependencies

A Package held as an asset in the **Reusable Asset Service** registry might contain elements and diagrams that have relationships with objects in other Packages. The Packages containing these 'external' objects will also have been added to the Registry, to support the first Package, and will be listed in the 'Registry Browser' tab along with other, unrelated Packages. You can establish whether the selected Package in the Registry Browser has links to other Packages in the Registry, and which they are, by reviewing the 'Dependency' tab.

Package A depends on Package B if any of these constructs (or their **Tagged Values**) in Package A references elements in Package B:

- Elements
- Attributes
- Operations
- Operation Parameters
- Diagrams
- Connectors

Access

Open the '**Reusable Asset Service**' window using one of the methods outlined below.

Select a package, then click on the 'Dependency' tab, to display a list of Dependencies for that package.

Ribbon	Publish > Model Exchange > Reusable Assets
Menu	Tools > **Reusable Asset Service**

Check Package Dependencies

Field/Option	Detail
Package	Displays the name of the related Package.
Version	Displays the latest registered version of the related Package that has links to the selected Package.
GUID	Displays the Global Unique Identifier of the related Package.
Find in Project Browser	Right-click on the 'Package' line and select this option to see if the Package also exists in your model and, if it does, to highlight it in the **Project Browser**.

Notes

- If one Package depends on another, and that second Package itself depends on another Package, both the second and third Packages are shown in the 'Dependency' tab

- The 'Dependency' tab will be empty for a 'Learning Center Library', 'Reference Data Library' and 'Source Code Library' type Storage

Package Technologies

It is possible that the asset Package in the Registry is associated with one or more Technologies, especially if the Package comes from a model developed as an extension or customization of the UML. You can check whether an asset Package has any associated Technologies, and what they are, by viewing the 'Technology' tab of the **Reusable Asset Service** view.

Access

Open the '**Reusable Asset Service**' window using one of the methods outlined below.

Select a package, then click on the 'Technology' tab, to display a list of Technologies required to support the selected package.

Ribbon	Publish > Model Exchange > Reusable Assets
Menu	Tools > **Reusable Asset Service**

Review Technologies

Field/Option	Detail
Name	Displays the name of the Technology as recorded in the Registry.
Version	Displays the required version of the Technology to support the asset Package, available through the Registry.
ID	Displays the unique identifier of the Technology.
Type	Identifies whether the Technology is system-supplied and built in to Enterprise Architect (such as BPMN 2.0 or ArcGIS), or user-defined. A user-defined technology can be introduced from an external source or developed by a user within the system.
Registry Status	Indicates whether the Technology file is: • Available - the Technology file is registered in the current Storage, or • Unavailable: - The Technology file is not registered in the Storage, or - The Technology is a built-in Technology and is already integrated with your system, or must be purchased under license, or - The Technology is available from a URL and can be downloaded from that URL
Import Technology	If your local system does not have one of the Available Technologies, you can quickly import it from the Registry. 1. Right-click on the Technology name and select Import Technology. 2. A prompt displays for you to confirm the import to your system; click on the

	Yes button. 3. A message displays to confirm that the Technology has been imported; click on the **OK button**. You might have to restart Enterprise Architect to activate the Technology. Other than the remote Technologies, you cannot import a Technology flagged as Unavailable. You can import a remote Technology from its URL site.

Notes

- You can also import Available Technologies from the registry as part of the process of importing the asset Package
- If the Storage is password protected, a prompt to enter your password displays (this can be a Read-Only or a Complete Access password) after you confirm that you want to import the Technology; you cannot import the Technology without this password
- The 'Technology' tab will be empty for a 'Learning Center Library', 'Reference Data Library' and 'Source Code Library' type Storage

Storage Files

The 'Storage Files' tab of the **Reusable Asset Service** view simply lists the files that have been uploaded to the specified Storage. The files can be of any type, uploaded from any directory on any system connected to the registry. Typically they would be document or graphics files that provide standards, guidelines or design information on a model structure. The tab displays the file name and extension, and a comment on the nature or purpose of the file.

Files held in the Registry are compressed, so to view the contents you download them onto your local system.

Access

Open the '**Reusable Asset Service**' window using one of the methods outlined below.

Select a package, then click on the 'Storage Files' tab, to display a list of files associated with the selected package, that are available for download.

Ribbon	Publish > Model Exchange > Reusable Assets
Menu	Tools > **Reusable Asset Service**

Review files in Draft/Complete type Storage

On the 'Storage Files' tab, check the 'Comments' field against each file that interests you.

To view the contents of a file, right-click on the file name and select the 'Import From Registry' option. The 'Save As' browser displays, through which you select the directory into which to copy the file.

Click on the **Open button**. The file is copied into the selected location, from which you can open it.

Review files in Learning Center/Reference Data/Source Code Library type Storage

On the 'Storage Files' tab, check the 'Comments' field against each file that interests you.

To import and install a Library file, right-click on the Library file and select the 'Import From Registry' option. Depending on the Storage type, one of the following dialogs will appear :

- 'Download Libraries' dialog for a 'Learning Center' type Storage
- 'Import Reference Data' dialog for a 'Reference Data Library' type Storage
- 'Save As' dialog for a 'Source Code Library' type Storage

'Learning Center Library', 'Reference Data Library' and 'Source Code Library' type Storage will not contain any Assets. So clicking :

- 'Import' button in the Registry Browser will import and install Library file from the Storage
- 'Delete' button in the Registry Browser will delete all Library files in the Storage

Notes

- If the Storage is password-protected, the system prompts you to enter a password before you begin importing a file from the Storage; in this case you require either a Read-Only or Complete Access password

Compare an Asset to the Model

If you are developing a Package in your model against a standard structure, or using common elements from the **Reusable Asset Service**, you can check that your model conforms to the standard or incorporates any changes to the common elements, by performing a comparison between the asset Package and your model.

Access

Open the '**Reusable Asset Service**' window using one of the methods outlined below.

Select a package, then right-click on the package and choose 'Compare with Package in Model'.

Ribbon	Publish > Model Exchange > Reusable Assets
Menu	Tools > **Reusable Asset Service**

Compare Asset Package and Model

A prompt displays for you to confirm the comparison. Click on the **Yes button**.

The **Baseline Comparison view** displays, showing the element hierarchy in which differences have been detected between the Package in the model and the asset Package in the Registry (as the Baseline).

All facilities of the standard Baseline Comparison are available, including the ability to 'roll back' differences so that the element or Package in the model matches the Registry.

Notes

- If the Storage is password-protected, the system prompts you to enter a password before you begin comparing information in the Storage and in the model; in this case you require either a Read-Only or a Complete Access password

Import an Asset into the Model

The **Reusable Asset Service** provides common or standard information and data that you can import into your local model. The unit that you import is a selected version of the Asset Package; you can also, optionally, import:

- Other Packages on which the selected Asset Package depends, and/or
- Available Technologies that support full use of the model structures in the Asset Package

The Asset Package (with, if selected, any needed Packages) is imported into the currently-selected model Package in the **Project Browser**, unless the Asset Package already exists anywhere else in the Project. In this case, the system locates the existing Package and overwrites it with the imported Asset Package.

Access

Open the '**Reusable Asset Service**' window, using one of the methods outlined below.

On the 'Registry Browser' tab, either;

- select an Asset Package and click on the 'Import' button, or
- right-click on an Asset package and choose 'Import from Registry'

Ribbon	Publish > Model Exchange > Reusable Assets
Menu	Tools > **Reusable Asset Service**

Import Asset Package

Before selecting an Asset Package to import into your model, click on the 'Version' drop-down arrow and select the appropriate version of the Package to import.

When you select to import an Asset Package into your model, a short menu displays from which you select to import:

- The Package alone or
- The Package with the Packages on which it is dependent

A prompt then displays for you to confirm the import, and to warn you that if the Package already exists in the model, it will be overwritten by the import. Click on the **Yes button** to continue, or the **No button** to cancel the import.

If the Storage is password protected, after you confirm the import a prompt displays for your Read-Only or Complete-Access password; enter this and click on the **OK button**.

The 'Import from Registry' dialog displays, followed by confirmation that the import of the Package or Packages is complete. Click on the OK button.

If the Package depends on Technologies

If the Technologies associated with an Asset Package are not already on your system and/or enabled in your model, during the display of the 'Import from Registry' dialog the 'Import Technology From Registry' dialog also displays. Process this dialog as described.

Field/Option	Detail
Name	Displays the name of the Technology as recorded in the Registry. The check box against each name is selected by default. If you want to import one

	technology but not another, de select the checkbox of the technology to ignore.
Version	Displays the required version of the Technology to support the Asset Package, available through the Registry.
Registry Status	Indicates whether the Technology file is: • **Available** - the Technology file is registered in the current Storage, or • **Unavailable** - for one of these reasons: - The Technology file is not registered in the Storage, or - The Technology is a built-in Technology and is already integrated with your system, or must be purchased under license, or - The Technology is available from a URL and can be downloaded from that URL
Model Status	Indicates whether the Technology is already in your model and disabled. (If the Technology is in your model and enabled, there is no need to import it and it is not listed in the dialog.)
OK	Click on this button to import and/or enable the selected Technology or Technologies in your system. A status message displays to indicate that the Package and Technologies have been imported and the Technologies enabled. You might have to restart Enterprise Architect for the Technologies to take full effect. Click on the **OK button** to clear the message. In the **Project Browser**, the Package has been added to the model with (if selected) the Packages on which it is dependent.

Import Library

The **Reusable Asset Service** provides ability to store Library files, that you can import into your local model. The type of Library file available in a Storage will depend on the Storage type. When a Library from Learning Center Library storage is imported and installed, it will be available for use on all Enterprise Models in this system. When a Library from Reference Data Library storage is imported, it will be installed into the current model. When a Library from Source Code Library storage is imported, it will be saved in the specified location in the file system.

Library from Learning Center Library storage :

- click on the 'Import' button to open the 'Download Libraries' dialog, with all the Library files in this storage checked in the 'Download Libraries' dialog, or
- right-click on a Library file in the 'Storage Files' tab and choose 'Import from Registry' option to open the 'Download Libraries' dialog with that particular Library file checked in the 'Download Libraries' dialog

Library from Reference Data Library storage :

- click on the 'Import' button to open the 'Import Reference Data' dialog, with all the reference data in that particular Library file selected in the 'Import Reference Data' dialog, or
- right-click on a Library file in the 'Storage Files' tab and choose 'Import from Registry' option to open the 'Import Reference Data' dialog, with all the reference data in that particular Library file selected in the 'Import Reference Data' dialog

Library from Source Code Library storage :

- click on the 'Import' button to open the 'Save As' dialog to select a location in the file system to save the imported Library to, or
- right-click on a Library file in the 'Storage Files' tab and choose 'Import from Registry' option to open the 'Save As'

dialog to select a location in the file system to save the imported Library to

If the Storage is password protected, a prompt for you to enter a password displays for your Read-Only or Complete-Access password; enter this and click on the **OK button**.

Notes

- You can also import Technologies separately from the Package that is dependent on them, using the Technology Tab of the **Reusable Asset Service** view
- 'Learning Center Library', 'Reference Data Library' and 'Source Code Library' type Storage will not contain any Asset Packages

Set Up Registry Password

As a System Administrator, you can password-protect the Registry server to prevent users from modifying the Registry; that is, restrict users from creating, modifying and deleting Storages. Once you have set password protection, only those users who have a valid Administrator password can modify the Registry.

You can also change the password at regular intervals, for added security.

Access

Ribbon	Publish > Model Exchange > Reusable Assets : Set Administrator Password
Menu	Tools | **Reusable Asset Service** : Set Administrator Password

Set the Administrator Password

Field/Option	Detail
Enter old password	Disabled if no password exists for the Registry server. If the server has a current password, type it in to this field.
New password	Type in the new Administrator password.
Retype new	Type in the new Administrator password, for confirmation.
OK	Click on this button to set the password and close the dialog.
Cancel	Click on this button to abort the changes and close the dialog.

Notes

- To remove password protection from the Registry server, complete the 'Enter old password' field but leave the 'New password' and 'Retype new' fields blank
- If a Storage has a Complete Access password, then you can use either the Administrator password or the Complete Access password to modify the Storage

Set Up the Asset Service

The process of setting up assets and files in the **Reusable Asset Service** has a number of simple stages, typically:

- Identify the Registry
- Create the Storages, including copying an existing Storage as template for a new one
- Set password protection on each Storage
- Register the Asset Packages and Storage Files, and update them as necessary

Access

Ribbon	Publish > Model Exchange > Reusable Assets
Menu	Tools | **Reusable Asset Service**

Identify Registry

The Registry server holds the Storages of the **Reusable Asset Service**. It will have been previously configured by your system administrator, to be accessed through a Cloud Connection. Your system administrator will provide the connection details for you to use.

In the Reusable Asset Service view, click on the button to the right of the 'Registry' field. The 'Cloud Connection' dialog displays.

Using the information provided by your administrator, type in the server name, URL and the name of the model hosting the registry data. If advised by your administrator, also type in the user name and password for the server.

Click on the **OK button**; the 'Registry' field now shows the server name.

Create Storages

A Storage is a container within the Registry, holding related assets and files. There can be several Storages in the Registry, to support the different areas of work or purposes that your organization might define.

Step	Action
1	Click on the icon in the **Reusable Asset Service** toolbar.
2	If necessary, enter the Administration password that prevents update access to the Registry. Click on the **OK button**. The 'New Storage' dialog displays.
3	In the 'Name' field, type a name that indicates the purpose or content of the Storage.
4	In the 'Type' field, select: • 'Draft' if you intend to make significant changes to the content of the Storage, such as populating it with assets and/or files; you can overwrite existing Packages or files in a Draft Storage

	• 'Complete' if the Storage is ready for use; you cannot overwrite any Packages or files in a Complete Storage, although you can delete Packages and files and add new ones • 'Learning Center Library' if the Storage should contain only Enterprise Architect Learning Center Library files; this Storage type can be populated only with Library files and not with Asset Packages; you can overwrite existing Library files in a Learning Center Library storage • ' Reference Data Library' if the Storage should contain only Enterprise Architect Reference Data Library files; this Storage type can be populated only with Library files and not with Asset Packages; you can overwrite existing Library files in a Reference Data Library storage • 'Source Code Library' if the Storage should contain only Source Code Library files; this Storage type can be populated only with Library files and not with Asset Packages; you can overwrite existing Library files in a Source Code Library storage You can modify a Storage at a later time, and change this setting.
5	If you want to set Storage Access Passwords on this Storage, click on the check box against one or both password types, and provide and confirm the Complete Access and/or Read-Only Access passwords.
6	Click on the **OK button**. A prompt displays for you to confirm the creation of the Storage, with the type of access you have set on the Storage.
7	Click on the **Yes button**. A confirmation message displays; click on the **OK button**. The name of the new Storage displays in the 'Storage' field.

Password Protection

The Registry can be protected by a Registry password, so that only the Administrator can create and modify storages. If no Registry password is set, a second level of password protection can be applied.

The owner of a Storage can apply password protection to restrict users in processing and modifying the contents of the Storage either intentionally or unintentionally. Password protection can be applied at two levels:

- Complete Access - users enter their password and can modify or delete the Storage itself, and within the Storage can register, update and delete Packages and files in the Registry, view Packages and import assets into their models
- Read-Only Access - users enter their password and can import assets into their models

You set the Complete Access password before you set the Read-Only Access password.

If password protection is set and a user has no password, they can only view the contents of the Storage. If no password protection is set, all users can freely access and modify the Storage and its contents.

You set the passwords on each Storage as you create that Storage, using the 'New Storage' dialog. Once the Storage has been created, you can change or remove an existing password using the 'Modify Storage Access' dialog, but you cannot add a password.

If a Storage is password protected, the system displays a prompt for the password when the user begins to:

- Change or delete a password on the Storage
- Copy the Storage to create a new Storage
- Delete the Storage
- Register a Package or file in the Storage
- Import a Package, file or Technology from the Storage
- Delete a Package or file from the Storage
- Compare an Asset Package with a Package in the model

The system displays the password prompt when any of those operations is performed for the first time after the user:

- Connects to a Registry
- Reloads the Registry Browser
- Selects a Storage in the 'Storage' field in the **Reusable Asset Services view**

If the user enters the correct password and therefore establishes their credentials, the system does not display a password prompt again for any valid operation that user performs until they:

- Select a different Storage in the 'Storage' field in the Reusable Asset Services view or
- Reload the Registry Browser from the Registry

Register Assets and Files

Whilst a Storage exists and, if the Storage is under password protection, you have the Complete Access password, you can register Packages from a model and files from your system as assets in that Storage. If the Asset Package was developed using one or more MDG Technologies, you can optionally register those technologies in the Storage as well.

See the *Register New Assets* Help topic.

Copy Storages

It is possible to copy a Storage as the basis for creating another Storage, for example if you want to use the same set of assets in the context of larger set for a different department, work area or development phase.

Note: It is not possible to change the Type of a 'Learning Center Library', 'Reference Data Library' and 'Source Code Library' type Storage, nor is it possible to change a Draft or Complete type Storage into a 'Learning Center Library', 'Reference Data Library' or 'Source Code Library' type Storage

Step	Action
1	In the 'Storage' field, select the Storage to be copied.
2	Click on the icon in the **Reusable Asset Service** toolbar.
3	If necessary, enter the Administrator password or your Complete Access password and click on the **OK button**. The 'Save Storage As' dialog displays.
4	In the 'Name' field, type a name that indicates the purpose or content of the new Storage.
5	In the **Type field**, select: • Draft if you intend to make significant changes to the content of the Storage, such as populating it with assets and/or files; you can overwrite existing Packages or files in a Draft Storage • Complete if the Storage is ready for use; you cannot overwrite any Packages or files in a Complete Storage, although you can delete Packages and files and add new ones You can modify a Storage at a later time, and change this setting.
6	If you want to set Storage Access Passwords on this Storage, click on the check box against one or both password types, and provide and confirm the Complete Access and/or Read-Only Access passwords.
7	Click on the **OK button**. A prompt displays for you to confirm the creation of the Storage, with the type of access you have set on

	the Storage.
8	Click on the **Yes button**. A confirmation message displays; click on the **OK button**. The name of the new Storage displays in the 'Storage' field.

Change Storage Details

After you have set up a Storage, you can update it at a later stage to:

- Change the status, or Type,
- Change one or both of the existing Complete Access and Read-Only Access passwords
- Delete one or both of the passwords

It is not possible to add a password where one has not previously been set.

You cannot change or delete passwords unless you have the Complete Access password yourself.

Note: It is not possible to change the Type of a 'Learning Center Library', 'Reference Data Library' and 'Source Code Library' type Storage, nor is it possible to change a Draft or Complete type Storage into a 'Learning Center Library', 'Reference Data Library' or 'Source Code Library' type Storage

Step	Action
1	On the **Reusable Asset Service** view, in the 'Storage' field click on the drop-down arrow and select the Storage to update.
2	Click on the icon in the **Reusable Asset Service** view toolbar.
3	If necessary, enter the Administrator password or your Complete Access password and click on the **OK button**. The 'Modify Storage Access' dialog displays.
4	In the 'Type' field, click on the drop-down arrow and select: • 'Complete' if the Storage has now been set up and is ready for use; you cannot overwrite any Packages or files in the Storage, although you can delete them and add new Packages and files • 'Draft' if you intend to make significant changes to the content of the Storage; you can overwrite existing Packages or files
5	The 'Action' field defaults to 'None', to indicate no changes to the passwords. If you are changing or deleting the passwords, click on the drop-down field and select: • Change Password to enable both password type fields ready for editing • Remove Storage Access Password to simply delete the Complete Access password altogether • Remove Read-Only Access Password to simply delete the Read-Only Access password altogether
6	If you have selected the 'Change Password' option, select the appropriate password checkbox or both checkboxes, and type in the new password(s). Re-type the password(s) in the 'Confirm Password' field(s).
7	Click on the **OK button** to save your changes and close the 'Modify Storage Access' dialog.

Delete a Storage

If a Storage has been created by mistake, or is no longer necessary in the Registry, you can delete it and its entire contents of Package and files in one action.

Step	Action
1	On the **Reusable Asset Service** view, in the 'Storage' field click on the drop-down arrow and select the Storage to delete.
2	Click on the icon in the **Reusable Asset Service** view toolbar. A prompt displays to confirm the deletion.
3	Click on the **Yes button**. If necessary, enter the Adminstrator password or your Complete Access password and click on the **OK button**. A message displays to confirm that the Storage has been deleted.
4	Click on the **OK button** to clear the message. The Storage and its contents have been cleared from the Registry.

Register New Assets

After you have set up your Draft/Complete Storages in the **Reusable Asset Service** Registry, you can register assets in them. The assets include:

- Packages of modeling structures, held in the **Project Browser** of your model; these Packages can include diagrams and subordinate Packages
- Any Packages containing model components on which the primary Asset Packages depend
- Any MDG Technologies that you used in developing the Asset Packages, and that you decide to register with the Packages
- Any text or graphics files you want to make available to your corporate community; these files are compressed before being added to the Storage

You register the first three items together. You can register files in the Storage during that same process, or separately.

You can register separate versions of the same Package. If you register a Package that already exists in the Registry under the same version reference, and the Storage has Draft status, the existing version is overwritten. If you register the same Package with a different version number or reference, it is registered separately and users can access both versions of the Package from the Registry.

'Learning Center Library', 'Reference Data Library' and 'Source Code Library' type Storages cannot contain packages of modeling structures - they can contain only Library files, which will appear in the 'Storage Files' tab. A Library file is :

- a Zipped file containing Enterprise Architect specific Learning Center files for 'Learning Center Library' Storage type
- an XML file containing Enterprise Architect specific reference data XML file for 'Reference Data Library' Storage type
- a Zipped file containing source code files for 'Source Code Library' Storage type

Once registered, the Library file will be available in the 'Storage Files' tab of the Reusable Asset Service view.

Access

Ribbon	Publish > Model Exchange > Reusable Assets
Menu	Tools | **Reusable Asset Service**

Register Package as Asset

Step	Action
1	In the **Reusable Asset Service** view, select the appropriate Registry and Storage.
2	In the **Project Browser** for your model, click on the Package to register as an Asset.
3	On the 'Registry Browser' tab, click on the **Register button**. If the Storage is password protected, a prompt displays for your Complete Access password. Enter this and click on the **OK button**.
4	The 'Register Package(s)' dialog displays, showing the:

	• Name and type of the Storage • Name and status of the selected Package (the status at this point being 'Pending') • The name, GUID and current version of the selected Package; you can type a different version number or text string if necessary If there is a version of the Package already in the Registry, and the Storage has 'Draft' status, you can either: • Overwrite the registered Package with an update of that version, or • Add the updated Package as another Asset under a different version number; in this case, the 'Packages to Register' panel shows the version number, registration date and comments on the latest version of the Asset Package You cannot overwrite an existing Package if the Storage has 'Complete' status. In this case, add the Package under a different version number.
5	In the 'Comments' field type a short comment and, in the 'Notes' field, a longer explanation of the Package being registered.
6	Click on the **Check Dependency button** and resolve the dependencies of the Package. At the end of this process, the selected Package has the status Ready (for registration).
7	You can, at this point, also register files as assets of the Storage. See Step 4 of the *Register File as Asset* procedure. However, if you prefer you can follow the complete procedure separate from registering Packages.
8	Click on the **Register button**. A prompt displays to confirm registering the Package. Click on the **Yes button**. If the same version of the selected Package already exists in the Registry (if the Storage is a Draft) a prompt displays to confirm overwriting it. Click on the Yes button. A progress dialog displays. If the Package does not have any associated MDG Technologies, a message displays confirming that Package registration is complete. Go to step 10.
9	If the Package has one or more associated MDG Technologies, the 'Register MDG Technology' dialog displays, listing the Technologies and prompting you to register (OK) or ignore all of them. If you want to register some Technologies but not others, click on those you do not want to register, and click on the **Remove button** for each one in turn. Click on the **OK button** or **Ignore button**. A message displays confirming that Package and Technology registration is complete. Notes: • If a remote Technology is removed from registration (that is, the Technology is not registered along with the Package), the registered Package will refer to this Technology at its URL When importing the Package from Registry, the system will import this remote Technology from its URL (if the remote Technology is not already available in the importing model) • If a remote Technology is registered with the Package being registered, the system will store a copy of the Technology file in the Registry When importing the Package from Registry, the system will import the Technology stored in the Registry and will not import it from its URL (if the remote Technology is not already available in the importing model)
10	Click on the **OK button**. The 'Registry Browser' tab is updated with the newly-added details of the Package and any dependent Packages. You can review the details on the tabs on the lower half of the **Reusable Asset Server view**.

Register File as Asset

Step	Action
1	In the **Reusable Asset Service** view, select the appropriate Registry and Storage.
2	On the 'Registry Browser' tab, click on the **Register button**. If the Storage is password-protected, a prompt displays for your Complete Access password. Enter this and click on the **OK button**. The 'Register Package(s)' dialog displays.
3	If any Packages are listed in the 'Packages to Register' panel, and you do not want to re-register them, clear the checkbox against each Package name.
4	Click on the **Additional Files button**. The 'Select Additional Files' dialog displays.
5	Click on the **Add button**. A 'Select' screen displays, on which you browse for and click on the required file. You can only select one file at a time on this browser.
6	Click on the **Open button**. The 'Add Comment' dialog displays.
7	Type a brief comment on the nature or purpose of the file in the Registry, and click on the **OK button**. Focus returns to the 'Select Additional Files' dialog, which now lists the selected file.
8	Repeat steps 5-7 for each Asset file to register. When you have finished, click on the **OK button**. The 'Register Package(s)' dialog redisplays.
9	Click on the **Register button**. A prompt displays to confirm that you want to register the files.
10	Click on the **Yes button**. A 'Progress' dialog displays while the files are registered, followed by a message confirming that the (Package and) File registration is complete.
11	Click on the **OK button** to clear the message, and to return focus to the **Reusable Asset Service** view. You can review the files on the 'Storage Files' tab in the lower half of the view.

Register Learning Center Library

Step	Action

1	In the **Reusable Asset Service** view, select the appropriate Registry and 'Learning Center Library' Storage.
2	On the 'Registry Browser' tab, click on the **Register button**. If the Storage is password protected, a prompt displays for your Complete Access password. Enter this and click on the **OK button**.
3	The 'Register Learning Center Library' dialog displays. Select the Library file by pressing the button next to the 'File' field. Type in a short comment for the Library being registered in the 'Comments' field.
4	Click on the **Register button**. A prompt displays to confirm registering the Library file. Click on the **Yes button**. If the same Library file already exists in the Registry a prompt displays to confirm overwriting it. Click on the Yes button. A progress dialog displays and a message displays confirming that Library registration is complete.
5	Click on the **OK button**. The 'Storage Files' tab in the lower half of the **Reusable Asset Server view** is updated with the newly-added Library file.

Register Reference Data Library

Step	Action
1	In the **Reusable Asset Service** view, select the appropriate Registry and 'Reference Data Library' Storage.
2	On the 'Registry Browser' tab, click on the **Register button**. If the Storage is password protected, a prompt displays for your Complete Access password. Enter this and click on the **OK button**.
3	The 'Register Reference Data Library' dialog displays. Press the button next to the 'File' field and select : • From File System – to select an existing Reference Data XML file from file system • From Model – to open the 'Export Reference Data' dialog for selecting categories that will be registered as Reference Data Library once the **Register button** is clicked and a name is entered in the Enter Reference Data File Name dialog. Type in a short comment for the Library being registered in the 'Comments' field.
4	Click on the **Register button**. A prompt displays to confirm registering the Library file. Click on the **Yes button**. If the same Library file already exists in the Registry a prompt displays to confirm overwriting it. Click on the Yes button. A progress dialog displays and a message displays confirming that Library registration is complete.
5	Click on the **OK button**.

	The 'Storage Files' tab in the lower half of the **Reusable Asset Server view** is updated with the newly-added Library file.

Register Source Code Library

Step	Action
1	In the **Reusable Asset Service** view, select the appropriate Registry and 'Source Code Library' Storage.
2	On the 'Registry Browser' tab, click on the **Register button**. If the Storage is password protected, a prompt displays for your Complete Access password. Enter this and click on the **OK button**.
3	The 'Register Source Code Library' dialog displays. Select the Library file by pressing the ... button next to the 'File' field. Type in a short comment for the Library being registered in the 'Comments' field.
4	Click on the **Register button**. A prompt displays to confirm registering the Library file. Click on the **Yes button**. If the same Library file already exists in the Registry a prompt displays to confirm overwriting it. Click on the Yes button. A progress dialog displays and a message displays confirming that Library registration is complete.
5	Click on the **OK button**. The 'Storage Files' tab in the lower half of the **Reusable Asset Server view** is updated with the newly-added Library file.

Check Package Dependencies

As you register a Package in the **Reusable Asset Service**, the system provides a check on whether that Package is dependent on any external content; that is, whether it links to any modeling component held in Packages other than its own child Packages. You can perform three types of dependency check:

- Complete, which will consider Package A to be dependent on Package B if Package A contains any element, attribute, operation, operation parameter, diagram or connector (or their **Tagged Values**) that references elements in Package B.
- Normative, which is the same as a Complete Dependency Check except that it will not treat as a dependency for Package A any element from Package B that is added as a link on a diagram in Package A
- Package Dependency/Import, where only those Packages that are target of a Dependency/Package Import connector from Package A will be treated as dependent Packages for Package A.

You perform this dependency check as an integral part of the Asset Registration process (specifically, at step 6 of the Register Package as Asset process). The check automatically identifies, firstly, the Packages directly needed by the Asset Package, and then any Packages needed by those initial Packages, and so on until the needed Packages are not dependent on any other.

In practice, such dependency chains are likely to be quite short. If you know that the original Asset Package is dependent on two other Packages, one of which is subordinate to the other, you can simplify the process further by selecting the Parent or Ancestor Package first and thus avoiding the extra steps of selecting the two Packages separately.

Access

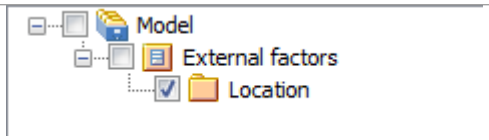
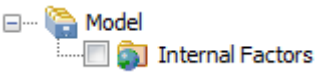
Open the '**Reusable Asset Service**' window, using one of the methods outlined below.

- In the 'Reusable Asset Service' window, click on the 'Register' button.

Ribbon	Publish > Model Exchange > Reusable Assets
Menu	Tools > **Reusable Asset Service**

Check Package Dependencies

Step	Action
1	Select the appropriate Registry, Storage and version of the model Package to register, and provide any appropriate comments or notes.
2	Click on the **Check Dependency button**. If there are no Packages on which the Asset Package depends, the system sets that Package to 'Ready'. Go to step 6. The 'Select Needed Package: <dependent package name>' dialog displays, showing the model hierarchy containing the Packages needed by the Asset Package. Each needed Package has a selected checkbox against it. If you know that a needed Package is a child or grandchild of another needed Package, click on the checkbox next to the 'higher' Package name so that the child is validated as part of the parent. In this example, if the Asset Package has dependencies on both External factors and Location, click on the 'External factors' check box to register both dependencies as External factors.

	 If the needed Package is already registered in the Registry, it is indicated by a globe icon:  In this case, select the 'Use latest version of selected package in Registry (if available)' checkbox to link to the registered version. For such Packages, no further dependency check is performed and, on the 'Register Package(s)' dialog, the Package's Status is set to 'Ready'.
3	Click on the **OK button**. The 'Register Package(s)' dialog updates to show the initial 'Asset Package status' as 'Ready', and to list the needed Packages each with the status of 'Pending'.
4	Click on the **Check Dependency button** again. If there are no Packages on which the needed Package depends, the system sets that Package to 'Ready' and sets the focus on the next Pending Package. If there are no more Pending Packages, go to step 6. If the needed Package is dependent on other Packages, the 'Select Needed Package: <dependent package name>' dialog displays again, showing the model hierarchy containing those Packages, each with a selected checkbox next to it. As in step 2, you can select a 'higher' Package if appropriate.
5	Click on the **OK button**. The 'Register Package(s)' dialog updates to show the first needed Package status as 'Ready', and to list any further needed Packages with the status of 'Pending.
6	If there are further needed Packages in the chain, repeat step 4. The system automatically identifies them and lists them for validation as in step 5. Otherwise the system sets the final needed Package status to Ready and you can continue to register files and MDG Technologies.

Notes

- A Package with status Pending cannot be registered; only Packages with status Ready can be registered
- If you are certain that there are no parent-child relationships between the needed Packages, you can work through these steps quickly by just clicking on the Check Dependency and OK buttons alternately until all Packages in the Package to Register list have the status Ready
- The system does not allow you to register an Asset Package that has dependencies on its own parent or grandparent Package; such dependencies would cause the Asset Package to be registered twice - by itself and as part of the parent Package - creating the risk of differences developing between the two instances

Update an Asset

Over time, you might need to revise the contents of the Registry. Such updates can include:

- Registering additional Asset Packages and files
- Registering a new version of an Asset Package
- Registering a new edition of a Storage file
- Registering new Libraries
- Deleting an Asset Package
- Deleting a Storage file
- Deleting a Library
- Changing the details of a Storage
- Deleting an entire Storage and the assets and files within it

Access

Ribbon	Publish > Model Exchange > Reusable Assets > Registry Browser
Menu	Tools | **Reusable Asset Service** > Registry Browser

Update Tasks

Task	Detail
Register new Asset Packages and Storage files	You can add further Asset Packages and files to a Storage at any time.
Register a new version of an Asset Package	You register a new version of an Asset Package as if it were a new Asset. In the 'Current Version' field on the 'Register Package(s)' dialog, you enter a different number or reference to that assigned to the currently-registered asset. You can overwrite an existing Asset Package under the same version number only if the Storage has 'Draft' status. If the Storage has 'Complete' status, you cannot overwrite the existing Asset Package under the same version number. To replace the current version, you must delete the Asset from the Storage and register the Package again.
Delete Asset Package from Storage	Click on the Package name in the 'Registry Browser' tab and either: • Click on the **Delete button** or • Right-click and select the 'Delete From Registry' menu option In either case a short submenu displays, prompting you to select to delete: • The Asset Package only, or • The Asset Package and the Packages on which it is directly or indirectly dependant When you select the appropriate option, a prompt displays for you to confirm the

	deletion. Click on the **Yes button**. A message displays to confirm that the Package has been deleted from the Registry, and the name of the Package is removed from the 'Registry Browser' tab. If the Storage is password-protected, the system prompts you to enter a Complete Access password before it begins deleting the Package(s). If any of the registered Packages depend on the Package being deleted, the system displays the names of these Packages and prompts for confirmation before deleting each Package.
Register a new version of a Storage File.	You register a new version of a Storage file as if it were a new file under a different file name. You can overwrite an existing file under the same file name only if the Storage has 'Draft' status. If the Storage has 'Complete' status, you cannot overwrite the existing file. To replace the current version, you must delete the file from the Storage and register the file again.
Delete Storage Files from Storage	On the 'Storage Files' tab, right-click on the file name and select the 'Delete From Registry' option. A prompt displays for you to confirm the deletion. Click on the **Yes button**. A status message confirms the deletion, the file is removed from the Registry and the file name is removed from the 'Storage Files' tab. If the Storage is password-protected, the system prompts you to enter a Complete Access password before it begins deleting the file.
Register a new Library File	You can add further Library files to a Storage at any time. When you register a Library file, the file name and location will be used as the unique identifier for the file. You can overwrite this Library file in Registry by registering a file with the same name and from the same file system location.
Delete Library Files from Storage	To delete all Library files in Storage, click on the **Delete button** in the 'Registry Browser' tab. To delete a particular Library file, right-click on the Library file name in the 'Storage Files' tab and select the 'Delete From Registry' option. A prompt displays for you to confirm the deletion. Click on the **Yes button**. A status message confirms the deletion, the Library file(s) is removed from the Registry and the Library file(s) name is removed from the 'Storage Files' tab. If the Storage is password-protected, the system prompts you to enter a Complete Access password before it begins deleting the Library file.
Change Storage Details	This task is as documented for setting up the Registry. Note that whilst you can copy a Storage as a new Storage, you cannot transfer assets directly between existing Storages.
Delete a Storage and its contents	This task is as documented for setting up the Registry. Note that whilst you can copy a Storage as a new Storage, you cannot transfer assets directly between existing Storages.
Refresh Registry Browser	If there is a possibility that another user has updated the Registry while you have had it open, click on the icon in the **Reusable Asset Service** toolbar to refresh your display from the latest updates to the Registry.