



Enterprise Architect

User Guide Series

Document Reports

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Date: 26/07/2018

Version: 1.0

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Document Reports

The documentation engine allows you to create high quality, professional documentation that can completely replace the need to create handcrafted documents. Enterprise Architect provides an extensive set of templates that will be useful in many situations. These templates can be adjusted or new ones created to completely customize the documentation to the reporting requirements of a particular project or methodology, including cover pages and styles. The standard documentation facility helps you to report on any Package or element in the repository, and with the Virtual Documents facility you can selectively pick content from any section of the model and style and order it as you require. There is also a set of built-in reports with pre-configured content and styles that give you immediate information on specific groups of elements or properties in the model. You have the options of:

- Generating one of a set of system-provided reports on specific aspects of your model
- Generating a report from a system-provided template, with control of the report output through Stylesheets, add-in cover pages and tables of contents, filters and a wide range of dialog options
- Creating your own templates, Stylesheets and add-in pages from which to generate reports, applying an even greater degree of control over the contents and format of the output

The document formats are common to many word processors, so you can also work on the reports in other word-processing tools to, for example, integrate the report into a larger, externally-created document.

Documentation Solutions

Feature	Detail
Document Generation	<p>The Document Generator features a powerful WYSIWYG Document editor that you can use to:</p> <ul style="list-style-type: none">• Import and export document templates using XML• Customize copies of the basic, system-provided templates• Create entirely new templates of your own design• Test templates as you design them, by generating ad-hoc reports within the designer• Create and customize independent Stylesheets, Tables of Contents and Cover Sheets to apply to any of your reports <p>It also features a documentation generator that:</p>

	<ul style="list-style-type: none">• Provides a wide range of simple options for filtering and modifying the report output• Generates detailed and comprehensive documents based on the templates• Has an embedded viewer for reading the generated documents directly within Enterprise Architect <p>A tutorial on using the Document Generator and creating document reports is available on the Sparx Systems website.</p>
Virtual Documents	<p>If you want to create very focused and specific documents, with a greater complexity and presenting different views of your model data, you can do so using virtual documents. For these, you set up a Report Package element and/or Model Document elements, and link Packages or model searches (for elements) into the document in whatever order or combination is most appropriate to your requirements.</p> <p>You can select Packages from different areas of the model, arrange them in any order, and edit or delete the Packages; the virtual document automatically incorporates the changes each time you</p>

	generate it.
Word Master Documents	<p>As an alternative to virtual documents, you can link a number of document reports into a single Word master document. This is quite possible with the current report generator but is of greater use with the original Legacy RTF Report Generator.</p> <p>Typically you create a Word master document, then in Enterprise Architect generate some reports that you link back into sub-sections of the master document and refresh as required during project development. In this way the project document becomes an easily-managed and feature-rich work product.</p> <p>You can also populate a Word document from specific sections of reports, based on bookmarks - for example, a Word document might have a section for a small part of your component model; using bookmarks you can generate a full component model, and then link into just one section of the report.</p> <p>This way you can maintain a complex Word document from parts of Enterprise Architect reports; the Document Generator performs one pass for one</p>

template, but using a Word master document and Enterprise Architect bookmarks you can incorporate material from several documents with different formats based on different templates. By adding tables of contents, figure tables, sections, and headers and footers, you can manage a complex document with relative ease; simply update the Enterprise Architect reports then refresh the links in MS Word.

Notes

- In the Corporate, Unified and Ultimate editions of Enterprise Architect, if security is enabled you must have 'Generate Documents' permission to generate document reports
- You can have several reports open at the same time, as separate tabs in the central view area of the Enterprise Architect work area; you can also close the reports individually or all together, leaving views of other types (such as diagrams or code editors) still open

Generate Document Reports

When you want to generate a document report on part of your model, you have a number of options for selecting the object to document, and for defining how your document is to be generated.

A document report describes an element or, more usually, a Package in the model; therefore, your first step is to select the Package or element to generate the document for, from the:

- Project Browser
- Diagram
- Package Browser
- Specification Manager
- Diagram List or
- Model Search

For a Package, you can also define how the diagrams in the Package are to be set out in the document; you do this in the diagram 'Properties' dialog for each diagram. When you have prepared and selected your Package, you open the 'Generate Documentation' dialog and configure the parameters for generating the document.

A tutorial for quickly creating a basic document from the Example model is provided in the second of these two tables. Repeat the tutorial with different selections in the drop-down fields, to see what the system can generate for you automatically.

Access

Select a Package or element for which to generate documentation, then open the 'Generate Documentation' dialog using one of these methods.

Ribbon	Publish > Report > Documentation > Generate Rich Text Documentation
Project Browser Toolbar	 Documentation Generate Documentation (RTF/PDF/DOCX)
Keyboard Shortcuts	F8

Generating reports

Option	Detail
Alternative ways to open the 'Generate Documentati	<p>Use one of these methods:</p> <ul style="list-style-type: none"> In the Specification Manager, click on the 'Specification - Specify > Element > Documentation > Generate

on' dialog	<p>Documentation (RTF/PDF/DOCX)' ribbon option</p> <ul style="list-style-type: none"> • In the Diagram List, Package Browser or Model Search, select one or more items, right-click and select either 'Documentation Generate Documentation for each selected Item' or 'Documentation Generate Documentation for selected Items'
Generate report on elements from Package Browser or Model Search	<p>When you select to create a report from the Diagram List, Package Browser or Model Search tools, you can generate an element-level report rather than a Package-level report, and you have additional flexibility in selecting:</p> <ul style="list-style-type: none"> • The type of element to report on • The specific elements to report on, together or separately, whether in the same Package or not <p>For example, you might want to find all elements with test cases, with the intention of reporting on some or possibly all such elements; with the Diagram List or Package Browser, you would identify these elements yourself within the list of all elements in a selected diagram or Package, but with the Model Search you can automatically pick out the elements</p>

	<p>across a section of the model or across the whole model, as required.</p> <p>The search filtering could be for specific test cases; however, the results are by element so if there are test cases outside the range in any element that has a filtered test, these elements are listed as well.</p> <p>Having generated the list of elements, you can select individual elements, blocks of elements, or all elements from it and then use the context menu to generate one report on all of the selected elements, or a separate report on each element.</p>
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Generate and view an example report immediately

Step	Action
1	Open the EAExample project.
2	In the Project Browser, expand the Testing View and

	click on the Testing Package.
3	Select the 'Publish > Report > Documentation > Generate Rich Text Documentation' ribbon option. The 'Generate Documentation' dialog displays.
4	In the 'Output to file' field, click on the  button and browse for a convenient file location in which to hold the generated report.
5	In the 'Template' field, click on the drop-down arrow and select 'Basic Report'.
6	In the 'Table of Contents' field, click on the drop-down arrow and select 'TOC (portrait)'.
7	In the 'Stylesheet' field, click on the drop-down arrow and select 'Styles - Print Medium'.
8	In the 'Cover Page' field, click on the drop-down arrow and select 'Cover Page (portrait)'.
9	In the 'Output Format' field, click on the drop-down arrow and select 'Portable Document Format (PDF)'.
10	Click on the Generate button.
11	When the report has been generated, click on the

	View button and examine the report.
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Notes

- Reports can be configured to include all Packages within a parent Package, or just the top level

Generate Documentation

It is possible to specify a wide range of parameters to control how your document report is generated and output. You can specify, for example, where the document file is written to, what format it is generated in, and what elements are included in the document. You set these options on the 'Generate Documentation' dialog, on which the options are provided on a number of tabs.

The first, and default, tab is the 'Generate' tab, on which you define how and where the document is generated. After you have set options on any or all of the other tabs, you return to the 'Generate' tab and click on the Generate button to produce your document.

Access

Select a Package or Element for which to generate documentation, then open the 'Generate Documentation' dialog using one of the methods outlined here.

Ribbon	Publish > Report > Documentation > Generate Rich Text Documentation > Generate
Keyboard Shortcuts	F8 Generate

Notes

- For an introduction to generating document reports, see the *Document Reports* Help topic
- The second tab on the 'Generate Documentation' dialog, 'Templates', is used to develop and maintain custom:
 - Templates
 - Stylesheets
 - Tables of Contents and
 - Cover Pages

Set Report Generation Options

Option	Action
Model Document Root Element Root Package	Check the name of the element selected from the Project Browser, diagram, Diagram List, Specification Manager or Model Search. If this is the specially-created Model Document element for a virtual document, the field is 'Model Document'. Otherwise, this field identifies the

	<p>selected element of the hierarchy to be reported on; that is, the Root Element or Root Package.</p>
Output to File	<p>Type or select the location and filename for the generated documentation.</p> <p>Click on the  button to navigate to the location.</p>
Template	<p>Click on the drop-down arrow and select the name of the template to use for your document report.</p> <p>You can select any template from the drop-down list, which is divided into User (or custom) templates and System templates. If you have loaded an MDG Technology containing document templates, those are also listed under the Technology name.</p> <p>You can also immediately create a new template, by selecting the '<new template>' option.</p> <p>The system checks all template folders for the specified template, in the order User Templates > Technology Templates > System Templates. If there are different templates available under the same name, the system uses the first found in this sequence.</p>

<p>Output Format</p>	<p>Click on the drop-down arrow and select the format in which to output the report. The default format is Rich Text Format (.RTF), but you can also select:</p> <ul style="list-style-type: none"> • Portable Document Format (.PDF) or • Microsoft Document Format (.DOCX)
<p>Cover Page</p>	<p>Click on the drop-down arrow and select the name of the cover page definition to apply to your document report.</p> <p>You can select any definition from the drop-down list, whether a standard format or a user-designed page.</p> <p>Use the default value <none> to not include a cover page, or to use a cover page built in to the selected user-defined template.</p>
<p>Table of Contents</p>	<p>Click on the drop-down arrow and select the name of the Table of Contents definition to apply to your document report.</p> <p>You can select any definition from the drop-down list, whether a standard TOC format or a user-designed format.</p> <p>Use the default value <none> to not include a Table of Contents, or to use a table of Contents built in to the selected</p>

	user-defined template.
Stylesheet	<p>Click on the drop-down arrow and select the name of the Stylesheet to apply to your document report.</p> <p>You can select any Stylesheet from the drop-down list, whether a standard definition or a set of user-designed styles. Use the default value '<none>' to not use a Stylesheet and instead apply the styles defined in the template you have selected in the 'Template' field.</p>
Diagram Theme	<p>Click on the drop-down arrow and select a Diagram Theme to apply the color, line thickness and font style to diagrams of elements in the report, if those elements are using default values.</p> <p>If an element has a tailored appearance assigned using, for example, the 'Default Appearance' dialog, that appearance overrides the Theme settings.</p> <p>The default option is the Diagram Theme you have currently set in your 'Local' options. You can, however, select any other Theme just for this report. The field setting reverts to your default Theme after the report is generated.</p>

Watermark	Type in the location of the image to use as a watermark on the document, or click on the  button to browse for the location.
Wash image	If you have selected a watermark image, select this checkbox to apply a wash to the image before applying it to the document. This makes the image lighter so that it does not detract from the report content printed over it.
View Document On Completion	Select this checkbox to open the document report as soon as it has been generated.
Use Language Substitutions	Select this checkbox to switch custom language word substitutions on. Deselect the checkbox to switch custom language word substitutions off.
Markup Glossary Terms	Select this checkbox to apply, throughout the generated RTF report, any styles applied to any Glossary terms through the Notes text of an element. A style is applied to a Glossary term according to its Glossary term type.

<p>Substitution of Glossary Terms</p>	<p>(Available if Markup Glossary Terms is selected.)</p> <p>Click on the drop-down arrow and select a term type. For all glossary terms of that type, wherever a term occurs in the report it will be replaced by its meaning.</p> <p>For example, if you select a term type of 'edition', in the report the terms 'Corp', 'Uni' and 'Ult' would be replaced by the meanings 'Corporate', 'Unified' and 'Ultimate', respectively.</p>
<p>Use Internal Viewer</p>	<p>Select this checkbox to enable the View button to launch the generated document in the Enterprise Architect internal viewer.</p> <p>Deselect this checkbox to enable the View button to launch the generated document in the MS Windows default file viewer.</p>
<p>Include all Diagram Elements in Report</p>	<p>Select this checkbox to include elements in the report from external Packages that are referenced from a diagram, for every diagram searched by the report; the checkbox defaults to selected.</p> <p>To include the external elements in the document, also select the 'Package.Diagram.Element' and</p>

	<p>'Package.Element' checkboxes in the current template.</p> <p>If external elements are to be included only for specific diagrams, deselect this checkbox and - only for the diagrams for which you want to include external elements in the report - for each diagram select the 'Document each contained element in RTF' checkbox in the diagram properties.</p> <p>When both options are deselected, or when neither of the 'Package.Diagram.Element' or 'Package.Element' checkboxes are selected in the template, only elements in the current Package are documented.</p>
Progress	Indicate the progress of document generation with status messages and an increasingly filled status bar.
Resource Document	Click on this button to save the currently-set options as a document definition.
Open Template	<p>Click on this button to edit the currently-selected template using the Document Template Editor.</p> <p>You can only edit user-defined templates,</p>

	<p>not the standard templates provided with the system. If you have selected a system template, this button is grayed out.</p>
Generate	<p>Click on this button to generate the document (after you have set all the options you require, on all tabs of the dialog).</p>
View	<p>Click on this button to launch the generated document in:</p> <ul style="list-style-type: none">• The MS Windows default file viewer, or• The Enterprise Architect internal viewer, if you have selected the 'Use Internal Viewer' checkbox
Abort	<p>Click on this button to cancel report generation; a prompt displays to confirm cancellation of the report.</p>

Selecting a Template

You use report templates to generate reports on your model that present specific information in a particular format, and to help you generate those reports repeatedly and consistently. You can select from a range of system templates on the Document Generator, to immediately generate reports from your model, or you can select custom templates designed by your project team members specifically for the purposes of your project.

A template principally defines the type of content of the report, so that if you generate a report, say, on a Package you will extract and present information on a specific set of structures such as:

- the elements and their features and connectors, or
- the elements at the top of the Package hierarchy, or
- all elements in the Package, or
- all elements in the diagrams whether they are in that Package or from other Packages

A template also presents the report information in a specific format and style, initially based on a set of standard styles. Your report designers can redefine the styles in a custom template to whatever extent they need, but it is better to select the alternative styles from a Stylesheet so that you can choose to apply that set of styles to a report or not, independent of which template you are using, as you need. The initial range of system templates and Stylesheets give

you a great deal of flexibility in quickly and easily determining the content and presentation of the reports you want to generate, and you can further increase this flexibility with additional templates and Stylesheets developed in-house, customized to the requirements of your organization.

System Document Templates

When you generate reports on your model, you select one of the report templates to extract information on specific key aspects of your model. There are several system templates available to use, either to generate a report straight away or to copy and customize to suit your own requirements. Each of the system templates supports a specific aspect of modeling or model management.

You usually generate reports on Packages selected from the Project Browser; these can be used to produce great hierarchical reports on parts of your model, or the whole model if you prefer. There are also system templates for reporting the diagrams in a Package, which you can use to report on elements returned in search results - such reports are non-hierarchical, as they extract specific information from different areas of the model.

Access - copy existing templates for editing

Display the Document Template editor window, select a template, then click on the 'Save As New' toolbar icon.

Ribbon	Publish > Tools > Document Templates : select a particular template >  (toolbar icon)
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Access - select a template for report generation

Use one of the methods outlined here to display the 'Generate Documentation' dialog, then use the 'Template' drop-down list to select which template to use for generating the report.

Ribbon	Publish > Report > Documentation > Generate Rich Text Documentation > select from the 'Template' drop-down list.
Keyboard Shortcuts	F8 select from the 'Template' drop-down list.

Available Predefined Templates

Template	Description
Audit Report - Detailed	Incorporates information from the latest Audit runs.
Data	Used for reporting on Physical database

<p>Modeling Report</p>	<p>models of any of the three types - UML DDL, Information Engineering and IDEF1X.</p> <p>With data modeling, a Class represents a Table and its attributes represent Table fields. In the Data Modeling template, the section and field names are selected to represent the Tables, Columns (fields) and specific Column attributes.</p>
<p>Diagram Report</p>	<p>Extracts information on the diagrams for a Package. It is primarily used for outputting diagram graphics and titles.</p> <p>A common use of this template is where diagrams linked into an external Word master document (where virtual documents are not being used) are to be refreshed. Using the bookmarks generated with the documents, you can refresh the master document diagrams.</p>
<p>Glossary</p>	<p>Extracts the Glossary terms and their types, defined in the Project Glossary.</p> <p>This is commonly used in Virtual documents for appending the Glossary to a larger document.</p>
<p>Maintenance Report</p>	<p>Extracts the Change, Defect and Issue details for all elements in a selected</p>

	<p>Package. This is the information defined on the Maintenance window.</p>
<p>Model Report</p>	<p>The most generalized template, which includes all of the commonly used Sections and fields. It is more appropriate in its use of field names to UML Classes. This template provides table formatting for most of the Elements sub-groups, such as Scenarios, Constraints, Attributes and Operations.</p>
<p>Project Issues</p>	<p>Extracts information on the set of issues that are logged globally in the repository. To report on the non-global, element-specific issues, see the Element > Issue section in the Model Report template.</p>
<p>Project Management Report</p>	<p>Shows the Resource allocation, Effort, Metric and Risk details for each element in the selected Package.</p>
<p>Requirements Report - Details</p>	<p>Extracts full information on the external Requirements of the selected Package, including the model structure each forms a part of, and the internal responsibilities, scenarios and project management and resource records that might exist to</p>

	support requirements management.
Requirements Report - Summary	Provides a brief description of each Requirement element in the selected Package.
Specification Manager List	Lists the elements and sub-Packages, and their subordinate elements, under the current Specification Package in the Specification Manager. Items within a level are listed in alphabetical order.
Test Report	Extracts the Test details for all elements in a selected Package, as defined on the Testing window, and the test data generated by xUnit testing and Testpoint code testing.
Use Case Details	<p>Extracts information on the Use Cases in a selected Package, including the details of any scenarios. This template also excludes child structures.</p> <p>If you want to include sub-element Use Cases, select the Element > Child Elements section.</p>
Use Case Summary	Extracts basic element description information on the Use Cases in a selected Package. This excludes scenario

	details and child structures (to filter out the information on any Sequence diagrams set as child diagrams of the Use Case elements).
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Notes

- The facility to use the 'Diagram > Element' section to report elements contained in a diagram but defined in another Package, is inactive in system templates

Selecting a Cover Page

A cover page defines the text, styles, graphics and layout of the front page of a document. Enterprise Architect provides two standard cover pages, one for portrait documents and one for landscape documents, which you can apply to your document reports independent of the report template and Stylesheet you are using. Your report designers can copy these standard cover pages as the bases for custom cover pages that reflect your corporate styles, logos and document naming conventions.

The cover page templates can contain fields that automatically extract and display data such as:

- The report type
- The Package or element being reported on
- The version of the report
- The status of the report
- The date on which the report was generated
- The name of the person who generated the report
- The location of the report file
- Any logos or graphics to be displayed on the front page

In using a cover page, you do not need to spend time defining the inclusion and display of the report title and provenance - it is already prepared for you. You can access the cover page templates from the 'Cover Page' drop-down list on the 'Generate' tab of the 'Generate Documentation' dialog.

Notes

- If you have custom report templates that already contain the cover page definitions you want, you can still apply them by just setting the 'Cover Page' field on the 'Generate' tab to '<none>'

Selecting a Table of Contents

A very useful feature of any documentation is the inclusion of a Table of Contents. This can, however, be quite demanding to create, especially when you have to set up a Table of Contents for individual documents. Even setting up Contents Lists within templates can still be very time consuming, when you have a number of templates to maintain. It is far quicker and easier to apply a specific Table of Contents template to your document reports independent of which report you are generating and which content template you are basing the report on.

Enterprise Architect provides two TOC templates - one for landscape documents and one for portrait documents - that have the appropriate styles, formatting and numbering system already defined. You can access these templates through the 'Table of Contents' field on the 'General' tab of the 'Generate Documentation' dialog.

Your report developers can copy the two system-provided templates as the bases for custom Tables of Contents, tailored to the requirements of your organization. These customized templates are also directly available to you through the drop-down list for the 'Table of Contents' field.

Notes

- If you have a Table of Contents defined in any of your custom report templates, and you want to use it, just set

the 'Table of Contents' field on the 'General' tab to
'<none>'

Selecting a Stylesheet

Using Stylesheets is an effective method of applying consistent format and appearance standards to categories of documentation, independent of the templates or other methods of defining document content you use. Stylesheets increase the flexibility of your documentation generation, in that you can:

- Provide a suite of documents generated from different templates with the same style standards, using one Stylesheet, and
- Deliver the same document content in different styles for different customer audiences by applying different Stylesheets to documents generated from one template

Enterprise Architect provides six standard Stylesheets - three for printed documentation and three for online documentation. Your report designers can copy these as the bases for custom Stylesheets, reflecting the corporate standards of your organization. Each custom Stylesheet can define a totally different page layout and document styles to other Stylesheets and to the Normal.rtf Stylesheet. You can access both system and custom Stylesheets from the 'Stylesheet' drop-down list on the 'General' tab of the 'Generate Documentation' dialog.

Style Hierarchy

Stylesheets are the top level of a hierarchy of styles across the system.

- Initially, all documents and templates, whether for linked documents or report documents, reflect the global styles defined in the Normal.rtf file; you can edit this file to provide new global styles for all documents and templates created after the update
- In a specific document or template, you can edit the styles for that document or for all documents generated from that template; these edited styles override those of the same name in the Normal.rtf file, but any styles that have not been changed still reflect the definitions in the Normal.rtf file
- You can use a Stylesheet to apply a set of style definitions to a generated document, independent of the template you use; these styles override any styles of the same name defined in the document templates and/or the Normal.rtf file

Notes

- If you have custom templates that contain all the style definitions you need, or if you want to just use the Normal.rtf styles, you can continue to apply those simply by setting the 'Stylesheet' field on the 'General' tab to '<none>'

Document Options

When defining the contents of your document, you can set a wide range of options for selecting the reported items by type and property, and you can organize the information within each type in order of position in the Project Browser or by created or modified date. These document options are provided in two different ways:

- On the 'Options' page on the 'Generate Documentation' dialog, to be set for a specific instance of a report; the options are reset when you exit the dialog or select a different template
- On panels on the 'Document Options' dialog, to be configured in a template as the default settings to be applied to every report generated using that template; these settings can be overridden by the 'specific instance' settings on the 'Generate Documentation' dialog

The listed options are the same for both dialogs, except that the 'Document Options' dialog:

- Includes the 'Exclude Filters', 'Element Filters' and 'Other Filters' pages from the 'Generate Documentation' dialog
- Includes the 'Custom Query' page (for 'Template Fragments')
- Does not provide these options (as found on the 'Options' page of the 'Generate Documentation' dialog):
 - The Switch Generator button
 - The 'Disable large OLE file support' option
 - The 'Insert page breaks when generating a Master

Document' option

- The 'Hide diagram borders' option
- The 'Hide non-printable objects' option

Access - 'Generate Documentation' dialog

Display the 'Generate Documentation' dialog, then select the 'Options' page

Ribbon	Publish > Report > Documentation > Generate Rich Text Documentation > Options
Keyboard Shortcuts	F8 Options

Access - Template Editor 'Document Options' dialog

Display the Document Template editor window, select a template, then display the 'Document Options' dialog.

Ribbon	Publish > Tools > Document Templates : select a particular template >  (toolbar icon)
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Options

Field	Action
Packages by	<p>Click on the drop down arrow in the first field and select to organize Packages in the generated documentation by Name, Tree Order, Modified Date or Created Date.</p> <p>Click on the drop down arrow in the second field and select to list the Packages in either Ascending or Descending order.</p>
Elements by	<p>Click on the drop down arrow in the first field and select to organize elements in the generated documentation by Name, Tree Order, Modified Date or Created Date.</p> <p>Click on the drop down arrow in the second field and select to list the elements in either Ascending or Descending order.</p>
Diagrams by	Click on the drop down arrow in the first

	<p>field and select to organize diagrams in the generated documentation by Name, Tree Order, Modified Date or Created Date.</p> <p>Click on the drop down arrow in the second field and select to list the diagrams in either Ascending or Descending order.</p>
Hide 'note-less' elements	Select this checkbox to exclude all elements without notes from the documentation.
Hide Diagram Borders	<p>Select this checkbox to hide the diagram frame on all diagrams included in the generated document.</p> <p>When selected, this option overrides the 'On Saved Images' checkbox on the 'Start >Settings > Preferences > Diagrams' page.</p>
Skip root package	Select this checkbox to exclude the parent Package from the documentation and include only the child Packages.
Hide non-printable objects	Defaults to selected to hide all objects that have been flagged as non-printable, in any diagrams in the report. Objects are flagged as non-printable through the

	<p>element context menu on a diagram.</p> <p>To show the non-printable objects in this report, deselect the checkbox.</p>
Show status colors	Select this checkbox to display the status colors of each object in any diagrams in the report, regardless of the settings of the 'Show status colors on diagrams' option on the 'Objects' page of the 'Preferences' dialog.
No bookmarks	Select this checkbox to prevent document bookmarks from being inserted into the generated document.
Hide <Anonymous > elements	Select this checkbox to hide anonymous elements in the documentation.
Use style defined in template for notes	Select this checkbox to override the character formatting specified in your 'Notes' fields with the formatting set for the field in the template.
Disable large OLE file support	Select this checkbox to disable support for large Object Linking and Embedding (OLE) files.
Insert page	Select this checkbox to insert a page

breaks when generating a Master Document	break after each Model Document in a Report Package.
Include child elements even if the parent element is filtered out	Select this checkbox to document all child elements that are not otherwise filtered out by the restrictions, even if the parent elements are filtered out.
Indent Linked Document Headings	Select this checkbox to adjust the heading levels of any Linked Document included in the report so that they match the heading levels of the report. The adjustment is made on the assumption that the first heading level in the Linked Document starts at 1.
Hide 'note-less' connectors	Select this checkbox to exclude all connectors without notes from the documentation.
Diagram Format	Click on the drop-down arrow and select the diagram format for the images included within the documentation; either Metafile or Bitmap.

<p>Adjust Heading Levels</p>	<p>Click on the drop-down arrow and select the lowest heading level that can be generated for nested sub-Packages in the document</p> <p>The Document Generator reproduces heading levels down to the value you set; for example, if you have four nested levels of sub-Packages and you set this field to:</p> <ul style="list-style-type: none"> • Heading 2, all sub-Packages in the report are documented under level 2 headings • Heading 4, the first level of sub-Packages are documented under level 2 headings, the next level under level 3 headings, and the remainder all under level 4 headings • Heading 6, the first level of sub-Packages are documented under level 2 headings, the next level under level 3 headings, the next under level 4 headings, and the next under level 5 headings; if you added further levels of sub-Package they would all be documented under level 6 headings <p>The field defaults to Heading 9 to accommodate the maximum number of levels of nested sub-Packages.</p>

<p>Switch generator</p>	<p>Click on this button to switch from this 'Generate Documentation' dialog (the Enhanced Template Driven Generator) to the 'Rich Text Format Report' dialog (Legacy Generator).</p> <p>This button is not available if you displayed the dialog from the Diagram List, Package Browser or Model Search.</p>
<p>Only include objects</p>	<p>Filter elements according to the date they were created or last modified. In the:</p> <ul style="list-style-type: none"> • First field, click on the drop-down arrow and select the value 'Modified' or 'Created' • Second field, click on the drop-down arrow and select the value 'After' or 'Before' • Third field, select the checkbox, click on the drop-down arrow and select the appropriate date
<p>Where Package Phase</p>	<p>Filter elements according to the value of the Package 'Phase' field.</p> <p>In the first field click on the drop-down arrow and select the qualifier, and in the second field type the required phase (or leave the default value 'All').</p>
<p>With element</p>	

<p>status</p>	<p>Filter elements according to status.</p> <p>In the first field, click on the drop-down arrow and select the qualifier ('like', 'not like', 'in', 'not in') and in the second field type the value to be used.</p> <p>Values should be enclosed in quotes; for example:</p> <p style="padding-left: 40px;">"Proposed".</p> <p>If you type more than one value, separate them with a comma; for example:</p> <p style="padding-left: 40px;">"Proposed", "Implemented"</p>
<p>Connector Direction</p>	<p>Click on the drop-down arrow and select the connector direction to include only connectors having that direction.</p> <p>If you select 'Both', the connector is documented twice; once for the source element and once for the target.</p> <p>For the remaining two values, the connector is documented only for the source or target element, as appropriate.</p>
<p>Except where Query excludes Package</p>	<p>This option excludes the selected Package or a child Package from the report, where that Package is specifically identified by a Custom SQL Query or a Custom Script.</p> <p>Click on the appropriate radio button for</p>

the type of query and:

- If you have selected 'Custom SQL', type the query into the window beneath the radio buttons
- If you have selected 'Custom Script', a new field displays; click on the drop-down arrow and select the script, then type the entry point of the Script into the window beneath the radio buttons

Exclude Package Query and Script

On the 'Document Options' dialog (Template Editor) or 'Options' tab (Document Generator) you can enter a custom SQL Query or select a custom Script to tailor the report in a specific way. One possibility is to exclude the selected Package or a child Package from the report. You can base your Query or script on the examples provided here.

The two parameters you use in excluding a Package are:

- #PACKAGEID# - the Package_ID of the current record in t_package being processed on the exclusion condition
- #OBJECTID# - the Object_ID of the current Package element record in t_object being processed on the exclusion condition

Custom SQL Query

To exclude the Package from the report using a Custom SQL Query, you can create the Query based on the t_package columns. For example:

```
SELECT Package_ID AS ExcludePackage
FROM t_package
WHERE Package_ID = #PACKAGEID#
AND Name = 'Test'
```

Alternatively, you can create the Query based on the Package object columns in the t_object table:

```
SELECT t_package.Package_ID AS ExcludePackage
FROM t_package,t_object
WHERE t_package.Package_ID = #PACKAGEID#
AND t_object.Object_ID =#OBJECTID#
AND t_object.Stereotype = 'NoDoc'
```

Custom Script

If you have selected the 'Custom Script' option and want to exclude the Package from the report, you can create a script and enter a call to it, such as:

```
ExcludePackage(#PACKAGEID#)
```

This is a sample of the XML returned by the script:

```
<?xml version="1.0"?>
  <EADATA version="1.0" exporter="Enterprise
Architect">
  <Dataset_0>
    <Data>
      <Row>
        <ExcludePackage>
          89
        </ExcludePackage>
      </Row>
```

```
</Data>
</Dataset_0>
</EADATA>
```

This is an example of JScript for excluding the Package:

```
!INC Local Scripts.EAConstants-JScript
/*
 * Script Name: RTF Exclude Packages Script Sample
 */
function ExcludePackage(packageID)
{
    var xmlDOM = new
ActiveXObject("MSXML2.DOMDocument.4.0");
    xmlDOM.validateOnParse = false;
    xmlDOM.async = false;
    var node =
xmlDOM.createProcessingInstruction("xml", "version='1.0'
encoding='ISO-8859-1'");
    xmlDOM.appendChild(node);
    var xmlRoot = xmlDOM.createElement("EADATA");
    xmlDOM.appendChild(xmlRoot);
    var xmlDataSet =
xmlDOM.createElement("Dataset_0");
    xmlRoot.appendChild(xmlDataSet);
    var xmlData = xmlDOM.createElement("Data");
```

```
xmlDataSet.appendChild(xmlData);
var xmlRow = xmlDOM.createElement("Row");
xmlData.appendChild(xmlRow);
var package as EA.Package;
package = Repository.GetPackageByID(packageID)
if(package.StereotypeEx == "NoDoc")
{
    var xmlName =
xmlDOM.createElement("ExcludePackage");
    xmlName.text = "" + package.PackageID;
    xmlRow.appendChild(xmlName);
}
return xmlDOM.xml;
};
```

Exclude Filters

As you specify the output of your report, you might want to exclude objects of a specific type. You can do this using the 'Exclude Filters' tab, through which you can select to exclude from your report one or more:

- Types of element
- Types of connector, and/or
- Types of diagram

You can select the objects in one of two ways:

- Click on the All button underneath the appropriate panel, to exclude every type of element, connector or diagram, and then Ctrl+click on the individual types that you DO want to include in the report, or
- Click on the None button underneath the appropriate panel to clear all selections (which includes the objects of every type in the report) and then Ctrl+click on each type of object that you do NOT want to show in the report

Notes

- If you want to specifically include or exclude elements on the basis of their specific properties or features, rather than their type, use the 'Element Filters' and 'Other Filters' tabs
- Filters set in a template operate only on that template, and do not operate on subtemplates and template fragments

inserted into the template; to filter the subtemplates, set the filter within each one

Element Filters

As you specify the output of your report, you might want to include only elements that have specific properties, rather than every element encountered. Using the 'Element Filters' tab, you can define which element properties to report on, and which fields and field values. You can also delete the element filters if you no longer want to apply them.

The 'Element Filters' tab is provided in two different ways, as a tab of:

- The 'Generate Documentation' dialog, to set filters for a specific instance of a report; the filters are reset when you exit the dialog or select a different template, or
- The 'Document Options' dialog, to set filters in a template as the default settings to be applied to every report generated using that template; these settings can be overridden by the 'specific instance' settings on the 'Generate Documentation' dialog

The options and behavior are the same for both dialogs, except that the 'Document Options' dialog provides a facility for importing a previously-defined set of Model Search filters from within your model or from an external file (created by exporting a Model Search from another model).

The facilities are also provided through the 'Element Filters' page of the 'Properties' dialog for a Standard Chart element. This page most closely resembles the tab of the 'Document Options' dialog in the Document Template editor.

Access - 'Generate Documentation' dialog

Display the 'Generate Documentation' dialog, then select the 'Element Filters' page.

To open the 'Generate Documentation' dialog, use one of the methods outlined here.

Ribbon	Publish > Report > Documentation > Generate Rich Text Documentation > Element Filters
Keyboard Shortcuts	F8 Element Filters

Access - Template Editor 'Document Options' dialog

Display the Document Template editor window, select a template, then display the 'Document Options' dialog and finally select the 'Element Filters' page of that dialog.

To open the 'Document Options' dialog, use one of the methods outlined here.

Ribbon	Publish > Tools > Document Templates : select a particular template >  (toolbar
--------	--

	icon) > Element Filters
--	-------------------------

Review Element Filters

Column/Button	Action
Search In	Shows the type and name of each element property field to search on. Select the checkbox against a property field to include it in the current search.
Condition	Displays the condition of the search parameter. The possible values are Contains, Equal To, Not Equals and One Of.
Look For	Displays the search term to perform the conditional search on. This value is specific to the selected field; for example, the value could be a date for 'DateCreated' or a text or numerical value for other fields. The search term can contain multiple values, separated by commas.

<p>Required</p>	<p>Indicates that the search results must include elements with the search term in that field; these checkboxes are set on the 'Add Filters' dialog.</p> <p>When no 'Required' checkboxes are selected, the fields listed as filters have an OR relationship; that is, if the search term is found in any one of those fields, then the element is displayed.</p> <p>Any field having the 'Required' checkbox ticked overrides fields where the 'Required' checkbox is not ticked.</p>
<p>Element Features</p> <ul style="list-style-type: none"> - Optional - Required 	<p>Specify whether element features are optional or required; these appear as a new branch underneath the root element term in the 'Search In' column.</p> <p>If you scroll down the 'Search In' column, you might see sub-branches such as Attribute, Change and Custom Property; these are the element features. You can add these features using the 'Add Filters' dialog.</p> <p>Select the:</p> <ul style="list-style-type: none"> • 'Optional' radio button to generate a list of elements that have one of the element features (Element Type = Object), or one of the feature filters

	<p>(Attribute Name = Att1); for example, if your search is:</p> <p>Element Name = Class11, Attribute Name = m_At1 or Scope = Public the search results list all the elements that have the name of Class11 and all the elements that have an Attribute Name of m_At1 or a Scope of Public</p> <ul style="list-style-type: none"> • Required radio button to generate a list of elements that must have the element features; for example, if your search is: Element Name = Class, Attribute Name = m_At1 or Scope = Public you would get elements that must have the name of Class AND have an Attribute with a name of m_att1 OR a Scope of Public
<p>Import Search</p>	<p>Click on this button and select to import the filters defined within a search, from either:</p> <ul style="list-style-type: none"> • An external XML file exported from another project, located on a browser dialog, or • A list of the standard and custom Model Searches within your installation of Enterprise Architect
<p>Add Filter</p>	<p>Click on this button to display the 'Add</p>

	Filters' dialog, to add a new set of parameters to filter the search on.
Edit Filter	Click on this button to display the 'Edit Filters' dialog, to change the search parameters.
Remove Filter	Click on this button to immediately remove the selected filter from the search.

Notes

- Check that the values you provide for the 'Look for' fields are exactly what is contained in the element data fields to be searched; for example, the Unit, Integration, System, Acceptance, Scenario and Inspection TestClasses are represented by attribute values 1 - 6, not by their respective tab names
- Filters set in a template operate only on that template, and do not operate on subtemplates and template fragments inserted into the template; to filter the subtemplates, set the filter within each one

Other Filters

As you specify the output of your report, you might want to include only specific features of elements (sub-element components such as attributes, responsibilities or constraints). If the feature does not have the defined characteristics, it is not reported for the element. Using the 'Other Filters' tab, you can define which features to report on, and which fields and field values. You can also delete the filters if you no longer want to apply them.

The 'Other Filters' tab is provided in two different ways, as a tab of:

- The 'Generate Documentation' dialog, to set filters for a specific instance of a report; the filters are reset when you exit the dialog or select a different template
- The 'Document Options' dialog, to set filters in a template as the default settings to be applied to every report generated using that template; these settings can be overridden by the 'specific instance' settings on the 'Generate Documentation' dialog

The options and behavior are the same for both dialogs.

Access - 'Generate Documentation' dialog

Display the 'Generate Documentation' dialog, then select the 'Other Filters' page.

To open the 'Generate Documentation' dialog, use one of the

methods outlined here.

Ribbon	Publish > Report > Documentation > Generate Rich Text Documentation > Other Filters
Keyboard Shortcuts	F8 Other Filters

Access - Template Editor 'Document Options' dialog

Display the Document Template editor window, select a template, then display the 'Document Options' dialog and finally select the 'Other Filters' tab of that dialog.

To open the 'Document Options' dialog, use one of the methods outlined here.

Ribbon	Publish > Tools > Document Templates : select a particular template >  (toolbar icon) > Other Filters
--------	--

Manage Other Filters

Column/Button	Action
Search In	<p>Shows the type and name of each element feature field to search on.</p> <p>Select the checkbox against a field to include it in the current search.</p>
Condition	<p>Displays the condition of the search parameter.</p> <p>The possible values are Contains, Equal To, Not Equals and One Of.</p>
Look For	<p>Displays the search term to perform the conditional search on.</p> <p>This value is specific to the selected field; for example, the value could be a date for 'DateCreated' or a text value for other fields.</p> <p>The search term can contain multiple values, separated by commas.</p>
Required	<p>Indicates that the search results must include element features with the search term in that field; these checkboxes are set on the 'Add Filters' dialog.</p> <p>When no 'Required' checkboxes are</p>

	<p>selected, the fields listed as filters have an OR relationship; that is, if the search term is found in any one of those fields, then the element is displayed.</p> <p>Any field having the 'Required' checkbox ticked overrides fields where the 'Required' checkbox is not ticked.</p>
Add Filter	Click on this button to display the 'Add Filters' dialog, to add a new set of parameters to filter the search on.
Edit Filter	Click on this button to display the 'Edit Filters' dialog, to change the search parameters.
Remove Filter	Click on this button to remove the selected filter from the search.

Notes

- Filters set in a template operate only on that template, and do not operate on subtemplates and template fragments inserted into the template; to filter the subtemplates, set the filter within each one

Project Constants

As you develop your report, you can incorporate flags that represent project-wide terms and values. The flags - or Project Constants - are replaced with the actual text during document compilation. Using this facility, you can use a particular text string or number extensively throughout your project documentation, whilst maintaining the value in a single location. You define Project Constants on the 'Generate Documentation' dialog; they are then available to be inserted into all custom document report templates in the text, section headers, end-notes, page headers or page footers, using the 'Document Template Designer' context menu.

Access

Ribbon	Publish > Report > Documentation > Generate Rich Text Documentation > Project Constants
Keyboard Shortcuts	F8 Project Constants

Manage Project Constants

Field/Button	Action
Add	<p>Click on this button to add a new Project Constant to the list.</p> <p>A prompt displays for the name and value; type these in and click on the OK button.</p>
Delete	<p>Click on this button to remove the selected Project Constant from the list.</p> <p>A prompt displays to confirm the deletion; click on the OK button to complete the task..</p>
Import	<p>Click on this button to import a set of fields from an external XML file.</p> <p>A browser displays to select the source file and location.</p>
Export	<p>Click on this button to export all fields to an external XML file.</p> <p>A browser displays to specify the target file and location.</p>

Word Substitution

In generating document reports, you will call in many English technical terms that are used across the system, in particular field names. It is possible to replace these field names in your generated documents with other terms that might be more meaningful to the readers, such as a translation of each term into your own language.

Access

Ribbon	Publish > Report > Documentation > Generate Rich Text Documentation > Word Substitution
Keyboard Shortcuts	F8 Word Substitution

Add a translation for a term

Step	Action

1	Double-click on the term in the 'English' column; the 'Enter Value' field displays.
2	Type the substitute text in the 'Enter Value' field, and click on the OK button. The text displays in the 'Substitute' column, against the English term. This substitute will display in your generated reports in place of the English term.

Notes

- To put the word substitutions into effect in a generated report, select the 'Language Substitution' checkbox on the 'Generate' tab

Language Substitution

If you want to generate and export document reports from Enterprise Architect in languages or dialects other than US English, you can customize the codepage, default language ID and character set that the system uses when generating the documentation. This makes it much easier to generate documentation appropriate to your country or location.

Access

Ribbon	Publish > Report > Documentation > Generate Rich Text Documentation > Codepage
Keyboard Shortcuts	F8 Codepage

Notes

- If you want to generate reports in a language that requires Unicode support, please note that Enterprise Architect .eap files default to using JET 3.5 as the database engine, which does not support Unicode character sets (see the

Startup topic); to provide Unicode support in your project, either upsize to a DBMS repository or set JET 4.0 as the database engine, and download a copy of the Jet 4.0 EABase model from the Sparx Systems website and do an EAP to EAP transfer of your model into the Jet 4.0 file

- The codes that you select remain set for all reports you generate, until such time as you specifically change them again
- You can transport these language tag definitions between models, using the 'Configure > Model > Transfer > Export Reference Data' and 'Import Reference Data' ribbon options

Set Reporting Language

Field/Button	Action
Language	Click on the drop-down arrow and select the language code appropriate to the language you want to generate reports in.
Codepage	Click on the drop-down arrow and select the codepage appropriate to the language you want to generate reports in.
Charset	Click on the drop-down arrow and select the character set appropriate to the

	language you want to generate reports in.
English Tag	Lists the default US English language code tags within Enterprise Architect.
Substitute Tag	<p>(For advanced use only.) If you want to apply a different language code tag in place of a US English tag, double-click on the item line. A prompt displays for the substitute tag code; type in the code and click on the OK button.</p> <p>To clear a substitute tag, double-click on the item and delete the code value.</p> <p>When you generate your document reports, the substitute tags are used in the output.</p>

Diagram Options

When generating reports on a Package that includes diagrams, you can set options in each diagram's 'Properties' dialog to define whether that diagram is to be included in the report and, if so, how it is to be represented.

Access

Ribbon	Design > Diagram > Edit > Properties > Diagram
Context Menu	Right-click on diagram background Properties > Diagram

Document Options

Option	Action
Exclude Image from RTF Documents	Select this checkbox to exclude the image of the this diagram from any document reports.

<p>Document Each Contained Element in RTF</p>	<p>Select this checkbox to include, in the report, details of any elements that belong in other (external) Packages but that form part of this diagram within the Package being reported on; the report includes external elements in each diagram on which you have selected the checkbox.</p> <p>On the 'Generate Documentation' dialog, the 'Include all Diagram Elements in Report' checkbox defaults to selected to include external elements for every diagram checked by the report; therefore, to include external elements only for specific diagrams, deselect that checkbox.</p> <p>In either case, you must enable the Package.Diagram.Element and Package.Element sections in your (customized) document generation templates in order to include this external element information in the report.</p>
<p>Divide Diagram Into Multiple Pages</p>	<p>If the diagram is large, select this checkbox to divide the diagram into separate pages in the document report.</p> <p>This option is only effective when the 'Scaled Printing' option on the 'Print Advanced' dialog is set to 'None'.</p>

Rotate Images	Select this checkbox to rotate each diagram image by 90 degrees in the document report; this is only valid for bitmap (.bmp) images.
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Resource Documents

When you set the parameters on the 'Generate Documentation' dialog to define an output document as you need it, you might want to re-use that configuration to obtain a consistent view of changes to your model over time. You can capture the configuration as a Resource Document, which saves the:

- Package name
- Output file destination
- Template
- Output format
- Options page settings
- Exclude Filters
- Element Filters and
- Other Filters

The document is saved into the 'Document Generation > Defined Documents' folder of the Resources window.

Saving your often-used report configurations as Resource Documents can simplify future document generation, both in producing specific documents and in batch-generating all documents or a selection of documents.

Access

To save the current settings as a Resource Document:

Ribbon	Publish > Report > Documentation > Generate Rich Text Documentation > Generate : Resource Document
Keyboard Shortcuts	F8 Generate : Resource Document

Access

To load a Resource Document and use the settings it has saved;

Ribbon	Start > Explore > Browse > Resources > Document Generation > Defined Documents > Right-click on a document > Generate Document
Keyboard Shortcuts	Alt+6 Document Generation Defined Documents Right-click on a document Generate Document

Manage Resource Documents

Task	Action
Create a Resource Document	<p>On the 'Generate Documentation' dialog, click on the Resource Document button and, in the 'Enter Value' field, type a name for the document.</p> <p>Click on the OK button. The document is added to the <i>Document Generation > Defined Documents</i> folder in the Resources window for easy future access.</p>
Open, Generate or Delete Documents	<p>In the Resources window, expand the <i>Defined Documents</i> folder (and, if necessary, the appropriate Document Group subfolder) and right-click on the required document.</p> <p>Select the appropriate context menu option:</p> <ul style="list-style-type: none"> • 'Edit Name' - Open the 'Edit Item' dialog and type over the current name to correct or change it; click on the OK button to save the change • 'Open Document' - Open the corresponding .document file, as specified by the document template 'Filename' property • 'Generate Document' - Open the 'Generate Documentation' dialog,

	<p>loaded with the specified template</p> <ul style="list-style-type: none"> • 'Auto Generate Document' - Generate documentation, with the document located at the path specified by the template's 'Filename' property • 'Delete Document' - Remove the specified document
<p>Batch-generate a number of documents</p>	<p>Right-click on the 'Defined Documents' folder name and select the 'Generate Documents' option; the 'Batch Document Generation' dialog displays.</p> <p>The dialog lists all resource documents in the 'Defined Documents' folder, whether or not they are contained in Document Groups. All the documents default to selected; deselect the checkbox against each document that you do not want to generate (or click on the Deselect All button to clear all selections, then select those you require).</p> <p>Click on the OK button to generate each of the remaining reports into their respective target file locations.</p> <p>Alternatively, to automatically generate every document in the 'Defined Documents' folder (again, whether or not they are in Document Groups), without displaying the 'Batch Document</p>

	Generation' dialog, click on the 'Generate All Documents' context menu option.
--	--

Manage Resource Document Groups

As you create more Resource Documents, you might find it convenient to group them by category, such as model area or purpose. This helps you locate the required document quickly, and also refines the facility of generating multiple documents either through quick manual selection from the group or by generating the whole group automatically.

Task	Action
Create a Document Group	<p>In the Resources window, within the <i>Document Generation</i> folder, right-click on the <i>Defined Documents</i> subfolder and select the 'New Generation Group' option. The 'Enter generation group name' dialog displays, in which you type the name of the Document Group. Click on the OK button to create the group.</p> <p>You can subsequently change the group name by right-clicking on it and selecting the 'Edit Name' option, and then overtyping the name in the 'Edit item' dialog.</p>

<p>Add Resource Documents to Group</p>	<p>To add a Resource document to a Document Group, simply drag it from its current location (in another group or under the <i>Defined Documents</i> subfolder) into the required group.</p>
<p>Delete Document Group</p>	<p>To delete a Document Group and all the Resource Documents it contains, right-click on the group name and select the 'Delete Document Group' option. A warning message displays; if you want to continue and delete the group and documents, click on the OK button.</p>
<p>Generate selected Documents from the Group</p>	<p>To generate some - but not necessarily all - of the Resource Documents in the group, right-click on the group name and select the 'Generate Documents' option. The 'Batch Document Generation' dialog displays, with all documents in the group selected.</p> <p>Deselect the checkbox against each document that you do not want to generate (or click on the Deselect All button and reselect the checkboxes against the documents to generate). Click on the OK button to generate the selected documents to their defined target files,</p>

	and to close the dialog.
Generate all Documents in the Group	To generate all the Resource Documents in the group as a batch, right-click on the group name and select the 'Generate All Documents' option. The system immediately starts to generate the documents in sequence.

Virtual Documents

Both standard and custom report templates generate documents that present information reflecting the organization of the Project Browser. You can also generate document and web reports independent of that organization, grouping and ordering individual Packages and elements according to whatever criteria you want to apply. For this purpose, you use virtual documents.

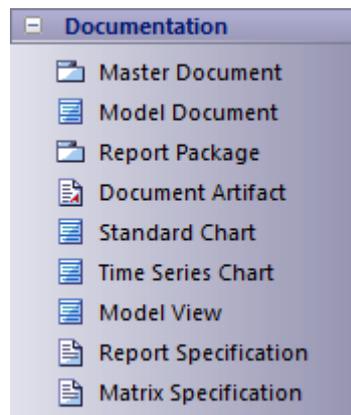
You can create separate virtual documents describing, say, the Requirements, Use Cases or Design elements of a project, based on individual Model Document elements. Alternatively, you can make these separate sections of one report, retaining their own different formats but with common headers and footers, organized under a Report Package element. Any Table of Contents, Stylesheet and/or Cover Page you select would be applied to the combined document and could apply your corporate standards across all the Model Document sections. You can create as many virtual documents as you want, for as many combinations of information as you need.

Elements, Templates and Content Definitions

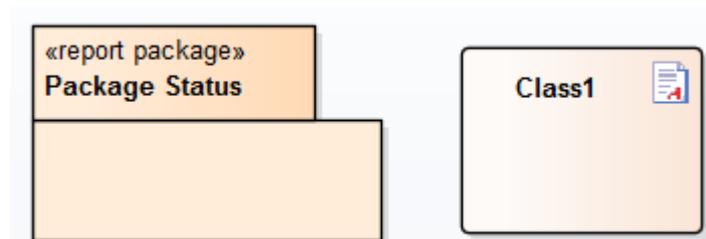
Construct	Detail

Document Elements

Report Package and Model Document elements are available from the 'Documentation' page of the Diagram Toolbox; on the Toolbox, click on  to display the 'Find Toolbox Item' dialog and specify 'Report Package' or 'Model Document'.



When you drag the Report Package and Model Document elements onto a diagram, these symbols display, respectively:



The 'Documentation' Toolbox page also provides the:

- Document Artifact icon, to create an element into which you can generate a virtual document or through which you

	<p>can add a linked document to an element</p> <ul style="list-style-type: none">• Chart template icons, to present the values of selected properties of elements in a number of graphical formats• Report and Matrix Specification elements, which capture report and matrix profiles to help you regenerate custom reports and matrixes consistently• A Master Document icon that has been replaced by the Report Package and is therefore deprecated; you can still use the Master Document instead of the Report Package, but you do not need to provide a value for its RTFTemplate Tagged Value
Templates	<p>For each Model Document element, you can use a standard document template (such as Model Report) or you can create a custom template; for example, a specifically-designed Requirements template for a Requirements document, or a Use Case template for a section on Use Cases.</p> <p>For web reports, you identify the template on the 'Publish as HTML' dialog; for</p>

	<p>document reports, you specify the template name as the value of the RTFTemplate Tagged Value.</p>
Content	<p>The content of the report is defined as either:</p> <ul style="list-style-type: none">• A list of Packages (defined as attributes) dragged onto the Model Document element in whatever order or combination is most appropriate to your requirements; you can easily add or delete Packages as necessary or• (Not for web reports) a standard search (identified by Tagged Values) created within the Model Search facility - when you generate the document, this search captures the required data throughout the model and populates the document; note that diagram searches are not supported <p>You can control the sequence in which information is presented in the document by, for example, changing the sequence of Packages in the Model Document or the sequence of Model Documents in the Report Package.</p>

Notes

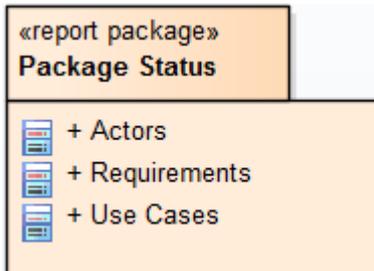
- In a Model Document for a document report, you should not define both a list of Packages and a search; if both are present, when you generate the document it is created from the Package list only
- You cannot use Bookmarking in Report Package elements, which effectively replace Bookmarking in Word

Bookmarking requires each bookmark to be unique; when you generate a report with a standard template (including in a single Model Document element), each bookmark is unique and there is a 1:1 association between the Elements-details being generated and the elements in the repository

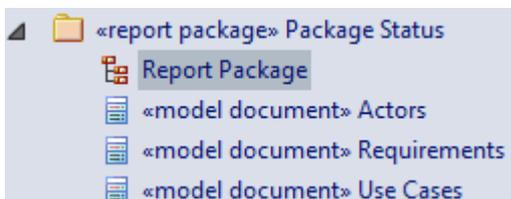
As Report Packages are intended to contain multiple sub-documents, the association ceases to be 1:1; there is no simple method that enables the generated data to be uniquely identified directly in association with the original element

Create Report Packages

If you want to create a series of documents - or sections of a document - that are individually tailored but are generated and organized as a single unit, you can design each document in its own Model Document element but organize these elements under a Report Package. This is a Package element with a child Common diagram to which you add the Model Document elements. You can then generate a document with common contents and the headers and footers, and each section having its own appearance defined by a template appropriate to the section content. When you add Model Document elements to a Report Package, the Report Package element resembles this:



The Report Package element and child diagram are listed in the Project Browser as shown:



Create a Report Package

Step	Action
1	Open or create a diagram in which to create the Report Package. The diagram can be of any type, although 'Documentation' automatically provides the correct Toolbox page.
2	If the Toolbox 'Documentation' page is not already shown, click on  to display the 'Find Toolbox Item' dialog and specify 'Documentation'.
3	Drag the 'Report Package' icon onto the diagram. The system prompts you for the name of the Report Package element.
4	Type the element name and click on the OK button. The system creates the Report Package element and a child Custom diagram of the same name.
5	If creating a Report Package for an HTML report, go to step 6. Otherwise, open the Tagged Values window (the 'Start > Explore > Properties > Tagged Values' ribbon option) and click on the Report Package element. A number of Tagged Values are available, the first set of which you can use to define the Report Constants for the document cover page

	<p>details:</p> <ul style="list-style-type: none">• ReportAlias• ReportAuthor• ReportName• ReportStatus• ReportTitle• ReportVersion
6	<p>Return to the Project Browser and open the Report Package child diagram. At this point, to provide the content for the generated document, you either:</p> <ul style="list-style-type: none">• Create the Model Document elements in the child diagram, or• Drag existing Model Document elements from the Project Browser into the child diagram
7	<p>Having set up the Report Package, and created or added and set up its Model Documents as required, you can generate the document report on the Report Package Document; this pulls in the contents of the Model Documents.</p>

Create Model Document

If you want to create a single document that captures specific details from specific areas of your model, you can define that document using a Model Document element. You can also create a number of individual documents and combine them as sections of a larger document, defining the larger document in a Report Package element. You can create as many Model Document elements as are necessary to provide the independent documents or the sections of the document you require.

Prerequisites

Before you create a Model Document element, you might have to:

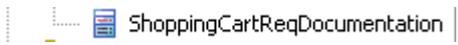
- Create the appropriate document or web page template to define the structure and appearance of the document
- For a document, determine whether to provide the content of the document using selected Packages or a Model Search and - if necessary - create the Model Search to use

Create a Model Document element

Ste	Action
-----	--------

p	
1	<p>Either:</p> <ul style="list-style-type: none">• Open the child Custom diagram of the Report Package element you have created or• If you are creating separate Model Documents, create a new Documentation diagram ('Extended Documentation' in the 'New Diagram' dialog) <p>The new diagram can live anywhere in the model hierarchy, outside the Packages you are adding to the document; you could create a diagram called 'Documentation' within a specific Documentation Package, and use this to hold the independent Model Document elements for your virtual documents.</p> <p>You can also create Model Documents on any other convenient type of diagram, changing the Toolbox page to 'Documentation' (step 2).</p>
2	<p>From the 'Documentation' page of the Toolbox (click on  to display the 'Find Toolbox Item' dialog and specify 'Documentation') drag the 'Model Document' icon onto the diagram to create a new Model Document element.</p> <p>Give the element an appropriate name; for example, if the documentation is relevant to the shopping cart requirements of a model, you could call it ShoppingCartReqDocumentation.</p> <p>Click on the OK button.</p>

3	<p>If you are creating a Model Document element for a web report, go now to the <i>Add Packages to Model Document</i> topic.</p> <p>Otherwise, open the Tagged Values window (the 'Start > Explore > Properties > Tagged Values' ribbon option) and click on the Model Document element.</p> <p>A number of Tagged Values are available, the first set of which you can use to define the Report Constants for the cover page details, if this Model Document element defines a stand-alone document:</p> <ul style="list-style-type: none">• ReportAlias• ReportAuthor• ReportName• ReportStatus• ReportTitle• ReportVersion <p>In the remaining Tagged Values you define the template and, if appropriate, Model Search to use to generate the document:</p> <ul style="list-style-type: none">• RTFTemplate• SearchName• SearchValue
4	<p>The value of the RTFTemplate Tagged Value defaults to 'Model Report' as the template to use for this Model Document. If you want to use a different template, click on the drop-down arrow at the right</p>

	of the value field and select the required template.
5	<p>If you are creating a list of Packages for the Model Document, go now to the <i>Add Packages to Model Document</i> topic.</p> <p>Otherwise, click on the drop-down arrow to the right of the SearchName Tagged Value, and click on the model search type to populate this Model Document. In a Model Document for a document report, do not define both a list of Packages and a search; if both are present, when you generate the document it is created from the Package list only.</p>
6	If necessary for your Model Search, type a search term in the SearchValue Tagged Value.
7	<p>Create further Model Document elements as required.</p> <p>Your Model Document element appears in the Project Browser with a Class icon, as shown:</p>  <p>When you have created all the required Model Document elements, go to the <i>Document Order</i> topic.</p>

Notes

- Diagram Searches are not supported
- Custom SQL searches are supported if they are returning elements; the SQL must include **ea_guid AS CLASSGUID** (case sensitive) and the object type

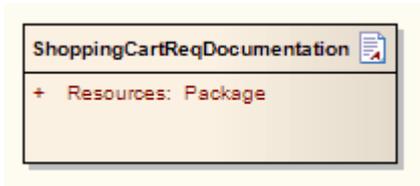
Add Packages to Model Document

After you create a Model Document element, one of the two options available to you is to identify the Packages to document in the reports generated from the element. You can add as many Packages as you need, from anywhere in the model.

Add Packages to Model Document element

Step	Action
1	Open the Documentation diagram, and locate a Package in the Project Browser to add to the documentation; for example, a Resources Package in a Dynamic view.
2	Drag and drop the Package from the Project Browser onto the Model Document element, as shown: 
3	Adding the Package creates an attribute with the

same name as the Package; the attribute can be seen in the Model Document element in the Attributes compartment:

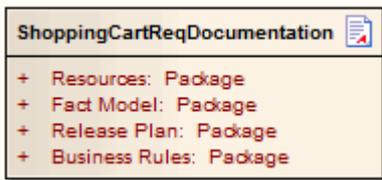


Repeat step 2 for each of the Packages you want to include in the document.

- 4 You could now generate your report as a document or as a web page, but you might prefer to first review how your Package list impacts the order in which information is presented in the report.
- You can change the sequence of Packages, or delete any Packages that are no longer required.

Delete Package in Model Document

In your use of Model Document elements to generate documents on specific Packages, you might determine that a Package you have identified to be documented is no longer necessary. You can omit the Package from your documentation by deleting the corresponding attribute from the Model Document element.



Delete Package from Model Document element

Step	Action
1	In the Project Browser, expand the Model Document element to list the Package attributes.
2	Right-click on the attribute for the Package to omit, and select the 'Delete Attribute' option.

Alternatively

Step	Action
1	In either the Project Browser or the diagram, right-click on the Model Document element and select the 'Features & Properties > Attributes' option. The Features window displays at the 'Attributes' page.
2	On the Attributes list, click on the attribute for the Package to omit.
3	Click on the Delete button to remove the attribute from the document element.

Document Order

The order in which information is compiled into a virtual document depends on:

- The sequence of Model Document elements in a Report Package element
- Whether you define a Model Search in a Model Document element (not for web reports)
- Whether you define a Package list in a Model Document element, and how you order that list

You can review and, if necessary, amend the order in which information is to be compiled, before you generate the document or web page.

Document Sequences

Aspect	Detail
Model Document Sequence	<p>When you generate a document from a Report Package element, the sequence in which the sections are created is determined by the order in which the child Model Document elements are listed in the Project Browser.</p> <p>You can create elements anywhere in a diagram, therefore for sequencing information the document generator</p>

	<p>refers to the Project Browser.</p> <p>If necessary, change the sequence using the green Up Arrow button and Down Arrow button in the Project Browser header bar to move a Model Document element up or down within the Package.</p>
Model Search	<p>A Model Search presents the information in the order specified by the query. For example:</p> <pre>SELECT t_object.Name FROM t_object ORDER BY Name;</pre>
Package Order	<p>When you create a Package list in a Model Document element, the sequence of information is determined by the order in which the Package attributes are listed within the element.</p> <p>You can change the sequence using the 'Attributes' page of the Features window and, if you prefer a Package to be in a different section of the document, you can move the attribute from one Model Document element to another.</p>

Change sequence of Packages in a Model

Document element

Step	Action
1	<p>In the Project Browser or diagram, right-click on the Model Document element and select the 'Features Attributes' option.</p> <p>The Features window displays at the 'Attributes' page.</p>
2	<p>In the Attributes list, right-click on the attribute to move and select 'Move Up' or 'Move Down' to change the order in which the corresponding Packages are included in the documentation.</p>
3	<p>Click on the Close button.</p>

Move a Package attribute from one Model Document to another

Step	Action
	<p>In the Project Browser, expand both Model</p>

1	Document elements so that they list their Package attributes.
2	Click-and-hold on the attribute to move, and drag it onto the name of the target Model Document element.
3	Release the mouse button. The attribute is removed from the source element and added to the top of the list of attributes in the target element.
4	If necessary, move the attribute down the attribute list, as described in the <i>Change sequence of Packages in a Model Document element</i> section.

Generate the Document

When you have created one or more Model Document elements and, if necessary, a Report Package element, and you have set the document order and established any section numbering you want to apply, you can generate printable documentation from these elements.

Access

Select a Report Package or a Model Document element either in the Project Browser or on a diagram, then;

Ribbon	Publish > Report > Documentation > Generate Rich Text Documentation
Keyboard Shortcuts	F8

Generate virtual documentation

Step	Action

1	<p>On the 'Generate Documentation' dialog, set the generating options for your document as required.</p>
2	<p>Click on the Generate button to create the documentation.</p> <p>The Report Generator works through the defined content of the Report Package element and/or the Model Document elements and pulls in the information from either the listed Packages or the executed searches, formatted according to the templates identified in the RTFTemplate Tagged Value for each Model Document element.</p>
3	<p>If you have not selected the 'View Document on Completion' checkbox, click on the View button to view the documentation.</p>

Generate Report to an Artifact Element

When working with virtual documents, it is also possible to directly generate a report as a linked document associated with a Document Artifact element. Because the generated report is stored directly in the model, rather than in the current user's file system, it is much easier to share the report in a team-based modeling environment. The linked document also eliminates the separation of the modeled system and the generated document output, keeping everything integrated and readily accessible.

To generate a report to an Document Artifact's linked document, you start with either:

- A Report Package element with Model Document elements, or
- An independent Model Document element

The Report Package will contain defined Model Documents and the Model Documents will identify templates and Packages or Model Searches. At this point you can quickly and easily create a Document Artifact element on which to generate the report.

Create a Document Artifact element

Ste	Action
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p	
1	On the Documentation diagram, click on the Report Package element or the independent Model Document element.
2	Drag and release the Quick Linker arrow to the right of the Report Package or Model Document element, and select the 'Common Document' menu option to create a (Trace) connector and the Artifact element. Optionally, you can name the element as well.

Generate a report to a Document Artifact element

Step	Action
1	Right-click on the Document Artifact and select the option 'Create Document to Artifact'. The 'Generate Documentation' dialog displays.
2	The text field values are automatically set. Select any checkboxes required (such as 'View Document on Completion'), and click on the

	Generate button.
3	When the report generation is complete, the report displays as a linked document of the Document Artifact element (if not, click on the View button on the 'Generate Documentation' dialog).

Note

- If you have a Report Package with Model Document elements, you can easily create a Document Artifact to test one of the Model Documents individually; in this case, you need to remove the Document Artifact before creating a report from the Report Package again, otherwise the Artifact becomes part of the report instead of being a vehicle for the report

Exclude Package from Report

When documentation is generated for a selected Package, all child Packages of the selected Package are by default included in the documentation. It is quite common to want to exclude one or more Packages in this hierarchy from the report and this can be achieved by marking the Packages for exclusion. When a Package is marked for exclusion, all its child Packages are also excluded from the report. In this way you can customize the content of a report, ensuring that only the relevant information is included. The excluded Packages will be omitted from any report generated from the same Package hierarchy.

Access

Ribbon	Design > Package > Edit > Advanced > Generated Report Options
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Mark a Package to be excluded from reporting

Ste	Action
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p	
1	<p>On the 'Generated Report Options' dialog, select the 'Exclude Package from Generated Reports' radio button.</p> <p>(Select the 'Include Package in Generated Reports' radio button to add the Packages to the reports again.)</p>
2	<p>Click on the OK button.</p>

The Legacy RTF Report Generator

Creating a Rich Text Format (RTF) document is a simple and flexible process. An RTF document is based on an element or (more usually) a Package in your project. To produce a document, you select the Package or element to report on in the Project Browser, Package Browser, Diagram List or Model Search, then press F8 to display the 'Generate Documentation' dialog. On the 'Options' tab, click on the Switch Generator button to access the legacy 'Rich Text Format Report' dialog.

The 'Rich Text Format Report' dialog enables you to set the exact contents and look and feel of your report. You enter the file name of the report, a heading, additional notes, template name (for saving the set-up) and other options. You can also select the style of the report; either plain or formal.

Optionally, you can set up a filter, the details to include, element types to exclude, whether to process child Packages, whether to show diagrams and the diagram format.

You can switch back to the 'Generate Documentation' dialog by clicking on the Switch RTF Generator button.

Notes

- The Legacy Generator is available if you have RTF

templates created in releases of Enterprise Architect prior to 4.1, and you prefer to generate RTF reports using the original generator; however, as you can generate reports from these templates using the post-Enterprise Architect 4.1 RTF Generator, the Legacy Generator and instructions for its use are no longer updated

- Reports produced using the Legacy RTF Generator do reflect the Notes formatting feature in any text associated with elements
- The 'Rich Text Format Report' dialog panels are individually described in the subsequent topics of this section (as listed); the dialog has a lot of options - you can use them selectively to produce output at the level of detail suited to your project

Document a Single Element

RTF documentation can also be generated for a single element.

Access

Select the element for which to generate documentation, then open the 'Generate Documentation' dialog using one of the methods outlined here.

Ribbon	Publish > Report > Documentation > Generate Rich Text Documentation > Options > Switch Generator
Keyboard Shortcuts	F8 Options Switch Generator

Set the Main RTF Properties

The main section of the 'Rich Text Format Report' dialog enables you to set the output location and appearance of the final RTF document.

Set Output Location and Appearance

Step	Action
1	Open the 'Rich Text Format Report' dialog.
2	Supply an Output Filename to save the report into; always include the extension .rtf as part of the filename.
3	In the 'Template Name' field, provide the name of the template to generate the report from.
4	Select a report Style: Formal or Basic.
5	Type a Heading for your report; this appears as the first heading item in your output.
6	Select your required Heading Style and Initial Heading Level Indent from the drop-down lists.

Notes

- It is recommended that you enter a full path name for your report; the images in your report are saved externally in an images directory, and supplying the full directory path avoids confusion over the location of these images
- If you move your report you must also move the images directory

Apply a Filter

You can apply a filter on the 'Rich Text Format Report' dialog to include or exclude elements by date modified, phase or status. This helps to track changes and break a document into multiple delivery phases.

Open the 'Rich Text Format Report' dialog.

- To enable the date filter, select the checkbox in the 'Date' field
- In the first two 'Only include objects' fields, click on the drop-down arrows and select the appropriate criteria (Modified/Created, Before/After)
- The Package phase filter applies at the Package level (not the element level) and ignores the phase of the root Package that you are documenting; to enable the phase filter, in the 'Where Package Phase' field click on the drop-down arrow and select an operator
Enterprise Architect filters out all Packages that do not meet the selection criteria; all elements in the Package are ignored, regardless of their individual phase
- The element status filter enables you to limit the output by element status; unlike the Package phase filter, this filter applies to every element
You can filter against a status of like or unlike a criterion, such as 'like proposed', or against the 'in' and 'not in' operators, such as 'in approved', 'not in validated'; when using the 'in' and 'not in' operators, enter a comma-separated list of status types as your criteria

expression

Exclude Elements

Using the 'Rich Text Format Report' dialog, you can exclude elements of any type from your final output; this is useful when you want to highlight particular items and not overburden a report with too much detail.

To do this:

1. Open the 'Rich Text Format Report' dialog.
2. Click on each element to exclude, or click on the All button to exclude all elements.
3. Click on the None button to clear your selections.

RTF Diagram Format

It is possible to output diagrams to Bitmap files, GIF files or Windows Metafiles.

To do this:

1. Open the 'Rich Text Format Report' dialog.
2. In the 'Diagram format' panel (bottom center of the dialog) select the required format for the report.
3. Generally the two metafile options ('EMF' and 'WMF') are recommended; however, there are times that the others might be suitable.

Include model items in report

The 'Model Include' panel of the 'Rich Text Format Report' dialog has these options:

- 'Glossary' to include the Project Glossary
- 'Tasks' to include project tasks
- 'Issues' to include project issues

Select the appropriate checkbox to include the items in the generated RTF documentation.

RTF Report Options

Additional RTF report options you can select from the 'Options' panel on the 'Rich Text Format Report' dialog are shown here.

You can select whether or not to recursively document Packages, show diagrams or add a page break before each new Package. Select the:

- 'Process all Children' checkbox to recursively process all child Packages within the main Package
- 'Show Diagrams' checkbox to include diagrams in your document; clear this item for no diagrams
- 'New page per package' checkbox to force a page break on each new Package (excepting empty Packages)
- 'Document all elements' checkbox to include all elements included in the project
- 'Document Packages' checkbox to document the Package as an element in addition to the documentation that would normally be produced for Package documentation
- 'Hide 'note-less' elements' checkbox to exclude all elements without notes from the documentation
- 'Embed Diagrams in Document' checkbox to ensure that the diagram images are contained within the RTF document rather than stored in a linked external file
- 'Skip root package' checkbox to exclude the parent Package from the documentation and include only the child Packages

- 'Document Linked Elements' checkbox to include the object details for linked elements that do not originate from the selected Package
- 'Use Heading styles for Details' checkbox to ensure that the details are formatted as heading styles rather than formatted text; this option is only available when the 'Heading Style' field in the 'Main' section of the 'Rich Text Format Report' dialog is set to 'Max 9 levels - elements are Package + 1'

Select Document Sections

Using the 'For each Object Include' section of the 'Rich Text Format Report' dialog you can select the documentation sections to include in your report.

What you include or exclude governs how simple or detailed your report is. You can create multiple reports at different levels of detail for different audiences. Experiment with these options to see what effect inclusion or exclusion has. Most items are self-explanatory.

Selecting the checkbox against a category item in the list selects all of the options that are contained in the category. To expand a category, click on the + symbol next to the category name. To exercise greater control over a category of options expand the top level item and then select the required individual items from the list.

Sometimes an item applies only to a certain type of element; for example, 'Attributes' only applies to Class elements and a few other element types. The 'Child Diagrams' option shows or hides any diagrams that are attached under a model element; for example, a Use Case might have a Scenario diagram attached.

Notes

- Use this feature to produce the right level of detail for your audience; technical readers might want to see

everything, whilst management might require only the general outline

Custom Language Settings

If you export RTF-format documents from Enterprise Architect in languages other than English, you can customize the codepage, default language ID and character set that Enterprise Architect uses when generating RTF. This makes it much easier to generate documentation appropriate to your country or locale.

You can also set up a list of word substitutions. For instance, where Enterprise Architect would include the word 'Figure', you can specify another word to replace it that is either in your language or more meaningful to your readers.

Set up Substitutions

Step	Action
1	Open the 'Rich Text Format Report' dialog.
2	In the 'Language' panel (bottom left of dialog) click on the Adjust button. The 'Customize RTF Language' dialog displays.
3	Double-click on an item to set or clear its Substitute word.

- | | |
|---|---|
| 4 | When you have finished, click on the OK button. |
|---|---|

Set Up Language, Codepage and Character Set

Step	Action
1	From the drop-down lists in the 'Language', 'Codepage' and 'Charset' fields, select the language, codepage and character set that most closely match your location.
2	If required, modify the Substitute Tags by double-clicking on each and manually setting the value (for advanced use only).
3	To clear the substitution list, double-click on each item in turn and delete the substitute value.
4	When you have completed the settings, click on the OK button to save them. Now when you generate RTF documents, the substitute tags are used in the output.

Notes

- If you want to generate reports in a language that requires Unicode support, please note that Enterprise Architect .eap files default to using JET 3.5 as the database engine, which does not support Unicode character sets (see the *Startup* topic); to provide Unicode support in your project, either upsize to a DBMS repository, or set JET 4.0 as the database engine and download a copy of the Jet 4.0 EABase model from the Sparx Systems website, then do an EAP to EAP transfer of your model into the Jet 4.0 file
- You can transport these language and tag definitions between models, using the 'Configure > Model > Transfer > Export Reference Data' and 'Import Reference Data' ribbon options

Generate the Report

Once you have set up the document properties as required, click on the Generate button to generate the report.

When you have generated the document, click on the View button to open the report in MS Word.

Legacy Report Style Templates

Using the 'Legacy RTF Style Editor' you can edit the RTF associated with various sections of the RTF Report facility in Enterprise Architect. You would typically use this functionality to customize a report's look and feel for your company or client.

If you have previously defined and saved a template, click on the Load button on the 'Rich Text Format Report' dialog to open the list of defined templates. Select one in order to load it as the current template; all the features saved become the current features. This enables you to define a set of standard report types that streamline document production.

Access

Ribbon	Start > Explore > Browse > Resources > Document Generation Legacy Templates
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Create or Edit RTF Style Templates

Ste	Action
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p	
1	Expand the Legacy Templates folder.
2	To edit an existing Legacy template, expand the Legacy Templates tree and double-click on the template name, or right-click and select the 'Modify Document Template' option. The 'RTF Style Editor' displays.
3	Alternatively, to create a new Legacy template, right-click on 'Legacy Templates' and select the 'Create RTF Style Template (Legacy)' option. A prompt displays for the new template name.
4	Type the name of the new template and click on the OK button. The RTF Style Editor displays.

RTF Style Editor

The RTF Style Editor contains a list of all available RTF fragments for modification and customization.

Each fragment typically contains RTF plus one or more special tag names that Enterprise Architect replaces with information during generation. Currently you cannot alter

the content within the tag names, but you can omit a complete tag by removing it, or alter its basic display properties in the surrounding RTF.

Special tag names are delimited by # characters; for example, #NOTES#

Click on the:

- Get Default button to retrieve the default Enterprise Architect template for the currently-selected template item in the left hand list
- Save button to save the version of the template for this style only
- Delete button to remove your modified version of the template, which causes Enterprise Architect to use the default template during report generation

To select a template during report generation, click on the 'Style' drop-down arrow on the 'Rich Text Format Report' dialog. Once a style is selected, Enterprise Architect applies that to the current report. Select <Basic> for the inbuilt style.

Notes

- The RTF Style Editor discussed here automatically displays when you modify or create a Legacy RTF template; if you select a template created in the more recent Document Template Editor, that editor opens automatically instead

- You can transport these RTF templates between models, using the 'Configure > Model > Transfer > Export Reference Data' and 'Import Reference Data' ribbon options
- To delete a template, right-click on it and select the 'Delete Document Template' option
- You can also alter the custom language settings

Save as Document

The Document feature enables a particular documentation configuration to be 'remembered', linking the loaded template within the 'Report' dialog to the current highlighted Package. If a particular template is always used with a specific Package, and multiple cases of documentation exist to be propagated, saving these as Documents can ease document generation later.

Create and use Documents

Step	Action
1	Open the 'Rich Text Format Report' dialog.
2	Click on the Save as Document button. The 'Save current as document definition' dialog displays.
3	In the 'Enter Value' field, type a name for the document and click on the OK button. The document is added to the Resources window for easy future access.
4	To generate documentation from the Resources

	<p>window, right-click on the required document. The context menu displays.</p>
5	<p>Select the required context menu option.</p> <ul style="list-style-type: none">• Open Document - Opens the corresponding document file, as specified by the template 'Filename' property• Generate Document - Opens the 'Report' dialog, loaded with the specified template• Auto Generate Document - Generates documentation, with the document located at the path specified by the template's 'Filename' property• Delete Document - Removes the specified document

Use Microsoft Word

When generating reports with the 'legacy' Report Generator, you can use Microsoft Word™ to easily incorporate additional features in the reports. You can:

- Create a custom master document combining separate reports, to add a common table of contents, table of figures, headers and footers
- Create documents with sustainable links to generated 'pieces' of Enterprise Architect output, pre-divided using bookmarks, and updated automatically when the document is opened
- Open a report in Word
- Change linked images to embedded images

Notes

- With the more recent, 'enhanced' Document Report Generator, many of the facilities provided by Word have been incorporated into the Generator or otherwise rendered unnecessary; it is therefore likely that you would have no need to use Word in generating your reports - you can use Virtual Documents, for example, instead of Word master documents and Bookmarks
- These topics on the use of Word are therefore included only to support users who are still working with the 'Legacy' Report Generator, or who are using Word for

personal preference

- When you develop a report using Word with Enterprise Architect, leave definition of the section styles in the Editor to the final stages just prior to report generation; Word truncates the section bookmarks, as it uses a smaller field length for sections
- In Word, you can review and edit reports generated by Enterprise Architect, but you cannot import them back into Enterprise Architect without damaging the section style definition

Open a Report in Microsoft Word

If you want to use Microsoft Word™ to open a document file generated in Enterprise Architect, simply load Word and open the file as a normal document. Word converts the file for display.

If Word is your default handler of document files, you can also load up and view the report by either:

- Double-clicking on the output file, or
- Clicking on the View button on the 'Generate Documentation' dialog

Change Linked Images to Embedded

One of the options available when generating document reports is to embed images in the document, instead of incorporating links to the image files. You would embed images if you want the document to be portable (separated from the directory containing the image files), but use links to the image files if you want to update the images without regenerating the document. You would be more likely to link to image files when developing the model and documentation, and more likely to embed images when the document was ready for review or use.

If you have generated the document report with linked images and imported the document into Word™, and you want to distribute that document, you can convert the file links to embedded images without having to go back to Enterprise Architect to regenerate the document with embedded images.

Break image links in Word

Step	Action
1	Open the required document in Word.
2	Select the 'Edit Links' menu option.

3	Highlight all links in the Links list.
4	Select the 'Save Picture in Document' checkbox.
5	Click on the Break Link button.
6	<p>When prompted, click on the Yes button to break the links.</p> <p>Word breaks the links and saves copies of the images inside the document.</p>

Document Bookmarks

If you want to create a complex document that consists of sections of one or more document reports, rather than one complete report, you can create a master document in Microsoft Word™ and within it create links to the report sections using their bookmarks. Bookmarks are GUID-based numbers that are automatically created for Packages, diagrams and elements, and placed in a document when it is generated. Every object is bookmarked in the document according to these rules:

- All alphabetic and numeric characters remain the same
- All other characters (including spaces) are converted to underscores

For example UC01: Use Case Model becomes UC01__Use_Case_Model. A Package bookmark applies from the beginning of a Package to the end, and includes all child Packages and elements underneath. You can also manually assign bookmarks if you want to have references to additional subdivisions of a model or document. If you change your model and regenerate your document report, you can simply refresh the links in the master document in Word to automatically update the Word document.

When you use bookmarks to add sections of a generated report to a Word master document, you work with Word and the Enterprise Architect Project Browser open at the same time.

Add a Bookmarked Section of an RTF Document to a Word Document

Step	Action
1	Within the Word file, position the cursor at the point at which to insert the section of the document.
2	Select the Word 'Insert File' menu option. The 'Insert File' dialog displays.
3	Browse for and select the document file to insert, then click on the Range button.
4	In the Enterprise Architect Project Browser, right-click on the Package, diagram or element to include in the documentation. The context menu displays.
5	To paste the object's bookmark into the clipboard, select the menu option: <ul style="list-style-type: none">• Copy/Paste Copy Documentation Bookmark
6	In Word, in the 'Range' cell of the 'Insert File' dialog, press Ctrl+V to paste the information from the clipboard.

7	Click on the OK button.
8	<p>Click on the drop-down arrow next to the Insert button. A short menu displays containing two options:</p> <ul style="list-style-type: none">• Insert - embeds a permanent copy of the text• Insert as Link - creates a link that can be updated if you alter the source document <p>Select the 'Insert as Link' option.</p>
9	Repeat steps 1 to 8 for each section of each document you want to include in the Word document.
10	<p>Select the 'Word Tools Options' menu option and, on the 'Options' dialog, select the 'General' tab and select the 'Update automatic links at Open' checkbox.</p> <p>Whenever the Word document is opened, the links to the document sections will be automatically updated with any changes made to the generated documents.</p>

Notes

- You cannot use Bookmarking in Report Package

elements, which effectively replace Bookmarking in Word

Bookmarking requires each bookmark to be unique; when you generate a report with a standard template (including in a single Model Document element), each bookmark is unique and there is a 1:1 association between the element details being generated and the elements in the repository. As Report Packages are intended to contain multiple sub-documents, the association ceases to be 1:1; there is no simple method that enables the generated data to be uniquely identified directly in association with the original element.

Features of Word

When you have generated reports in the Enterprise Architect 'legacy' report generator, you can open them in Microsoft Word™ to enhance the output of your project documentation. Some of the things you might do include:

- Add a table of contents
- Add a table of figures
- Add headers and footers
- Manipulate the report tables
- Set an option to refresh linked files automatically

Add Table of Contents

Among the features of Microsoft Word™ that can be incorporated into generated Enterprise Architect document reports is a Table of Contents, which can be used to aid navigation of the documentation and enhance readability. The Table of Contents provides hyperlinks to the diagrams in the electronic version of the documentation, and page numbers in both the printed and electronic versions of the documentation.

Include Table of Contents in document

Step	Action
1	In Word, open the report to which to add a Table of Contents.
2	Select the 'Insert Reference Index and Tables' menu option.
3	Click on the 'Table of Contents' tab to set the options that are available for setting up the Table of Contents.

Notes

- The format of the Table of Contents is dependant on the heading levels created when the document is generated; to set the heading styles in the document, see the RTF Report Options topic

Add Table of Figures

Among the features of Microsoft Word™ that can be incorporated into generated Enterprise Architect reports is a Table of Figures, which can be used to aid navigation of the documentation and enhance readability. The Table of Figures provides hyperlinks to the diagrams in the electronic version of the documentation, and page numbers in both the printed and electronic versions of the documentation.

Include Table of Figures in document

Step	Action
1	In Word, open the report to which to add a table of figures.
2	Select the 'Insert Reference Index and Tables' menu option.
3	Click on the 'Table of Figures' tab to set the options that are available for setting up the table of figures.

Add Headers and Footers

Among the features of Microsoft Word TM that can be incorporated into generated Enterprise Architect document reports are headers and footers.

Include headers and footers in the document report

Step	Action
1	In Word, open the report to which to add headers and footers.
2	Select the 'View Header and Footer' menu option, and enter the appropriate information into the header section and the footer section of the document.

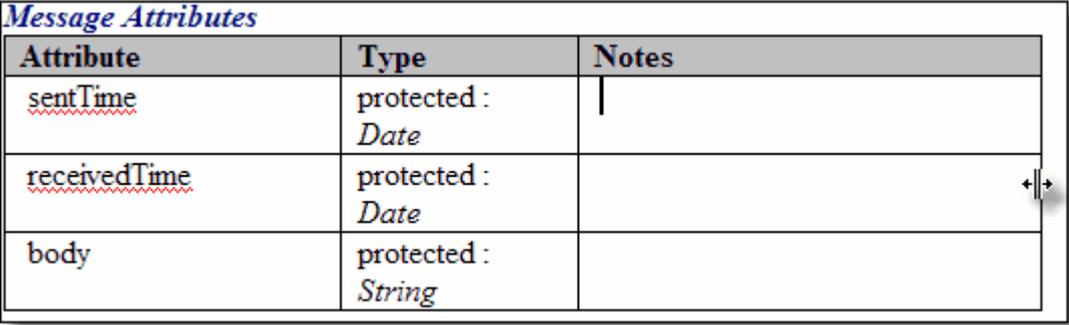
Manipulate Tables in Word

In the document reports generated from the Legacy report generator in Enterprise Architect, tables are included when items such as attributes and methods are selected in the 'For each Object' section of the 'Rich Text Format Report' dialog. Microsoft Word™ offers several levels of customization for tables and can be used to enhance formatting the tables in situations where the margins of the table exceed the dimensions of the page size selected for printing in Word.

Manually resize the table

When the amount of detail for a documented item, such as an attribute or operation, exceeds the margins of the page in Word, you can manually resize the table in order to view all of the details.

Step	Action
1	Select the table that exceeds the margin size.
2	Mouse over the border of the table until the mouse pointer changes into the 'drag' icon, as shown.

	
3	<p>Drag the cursor to the left to reduce the width of the table, and then select the 'Document-Edit > File > File > Print Preview' menu option to confirm that the table borders are within the page margins.</p>
4	<p>Resize all of the tables that overhang the margins of the page, using steps 1 to 3.</p>

Apply styles to tables

One of the customizable properties of Word when working with tables is the ability to apply a style to a table, so that you can rapidly change the appearance of the table.

Step	Action
1	In Word, open the report in which to change the table styles.

2	Locate and select the table for which to adjust the appearance.
3	<p>Select the 'Table Table Auto Format' menu option. The 'Table Autoformat' dialog displays.</p> <p>From here you can specify a predefined table style from the Table styles list, or create a new style by clicking on the New button. The table styles defined in the 'Table Autoformat' dialog only apply to one table at a time so you must apply the style to each table individually.</p>

Refresh Links

If you link into reports generated in Enterprise Architect, you can set an option in the Microsoft™ Word master document so that each time the document is opened, the links are refreshed and - if the reports have changed - the linked text is automatically updated.

Access

In Word, Tools | Options > General

Refresh linked report text

Step	Action
1	Select the 'Update automatic links at Open' checkbox.
2	Click on the OK button.

System Documents

As well as tailoring the output generated from standard or custom report templates, you can generate a number of pre-set reports that are each provided to meet a specific modeling requirement.

Pre-set Reports

Report
Testing Details report - extracts the test details for all elements in the selected Package hierarchy that have test items lodged against them.
Implementation Details Report - lists, for a specified Package, the elements that require implementation, together with any source elements in Realize (Implements) relationships with those elements.
Dependency Details Report - shows a list of any elements that are dependent on (having a Dependency connector to) another element for their specification.
Maintenance Report - extracts the maintenance details for all elements in the selected Package hierarchy that have maintenance items lodged against them.

Diagrams Only Report - lists only the diagrams from the target Package.

Resource Report - shows how your resources are deployed in your project, displaying a list of all elements that have resources allocated to them.

Testing Report - outputs the test scripts and results you have entered against elements in the model.

Testing Details Report

As you manage the test program for your model, you can monitor the status of tests run on the elements within a Package hierarchy by generating a Testing Details report on the Package. You can filter the report to show tests of a certain type, having a specific status, run by a specific person and/or checked by a specific person.

Access

Ribbon	Construct > Status > QA Report > Testing Details
--------	--

Generate a Testing Details report

Field/Button	Action
Root Package	Displays the name of the Package selected from the Project Browser. All elements and Packages under this Package are included in the report. If you want to change the Package, click

	on the new Package in the Project Browser and then click on the  icon at the end of the field. The replacement Package name displays in the field.
Run By	Click on the drop-down arrow and select a name to filter for tests run by that person. Click on the x button to clear the field. (Values are derived from the Project Author definitions in the 'People' dialog - 'Configure > Reference Data > Project Types > People > Project Authors'.)
Checked By	Click on the drop-down arrow and select a name to filter for tests checked by that person. Click on the x button to clear the field.
Test Type	Select the radio button for the required test class - Unit, Integration, System, Scenario, Inspection, Acceptance, or All types.
Status	Select the radio button for the required test status - Passed, Failed, Not Run, or All statuses.
Refresh	Click on this button to re-run the report

	query on the Package currently selected in the 'Root Package' field.
Print	Click on this button to print a summary of the test results.

Notes

- The Testing Details report provides a summary of the test status and who ran and checked the test; the Testing report is an alternative option, providing a detailed description of how each test executed, what the input and acceptance criteria were, and what the results were
- You can restructure the output of the report using the List Header facilities for reported information

Implementation Details Report

Using the Implementation report, you can list all elements in a Package (selected from the Project Browser) that require implementors, together with any source elements that are in Realization (or Implements) relationships with those elements.

Access

Ribbon	Construct > Status > QA Report > Implementation Details
--------	---

Generate Implementation report

Field/Button	Action
Root Package	<p>Displays the name of the root Package; all elements and Packages under this Package are included in the report.</p> <p>If you want to change the Package, click on the replacement in the Project Browser and click on the Refresh List button.</p>

Set Target Types	<p>By default the Implementation report includes only a limited number of element types, such as Use Cases and Requirements.</p> <p>If you want to include other element types, click on this button and select the additional types on the 'Implementation Targets' dialog.</p>
Refresh List	<p>Click on this button to run the report and display the results in the 'Details' panel.</p>
Locate Object	<p>Click on this button to locate the selected implemented (or realized) element in the Project Browser.</p>
Show Unimplemented	<p>Select this checkbox to list all elements in the Package that can be implemented but currently don't have any other element to realize them (for example, a Use Case that has no Component or Class to implement the Use Case behavior).</p>
Show Implemented	<p>Select this checkbox to list all elements in the Package that are implemented; that is, they have another element associated with them in a Realize relationship (for example, a Use Case that is implemented</p>

	by a Component).
Details Option	<p>Lists the implementation details, consisting of:</p> <ul style="list-style-type: none">• The names of the elements in the current Package that can be implemented• The type of the elements that can be implemented• The type of the relationship on the elements (Realization)• The name of any element that the element is implemented by• The type of the implementor element
Print	Click on this button to print the Implementation report.
Save Report	Click on this button to specify the file location into which to save the Implementation report. A prompt displays for the file path and name.

Implementation Targets Dialog

When you generate an Implementation report, by default it includes only certain element types, such as Use Cases and Requirements. If you want to include other element types, you can add them to the report parameters using the 'Implementation Targets' dialog.

Access

Ribbon	Construct > Status > QA Report > Implementation Details : Set Target Types
--------	--

Include other element types in report

Field/Button	Action
Targets - Active	Lists the types of element that the Implementation report includes. If you do not want to include a type of element in your report, double-click on it to remove it from the list. The element

	<p>type is then displayed in the Targets - Available list.</p>
Targets - Available	<p>Lists the types of element that could be included in the report but are currently not.</p> <p>If you want to include any of these types of element in your report, double-click on each one to transfer it to the Targets - Active list.</p>
Close	<p>Click on this button to close the 'Implementation Targets' dialog and immediately refresh the Implementation report with details on the additional element types.</p>

Dependency Details Report

Using the Dependency report, you can list all elements in a Package (selected from the Project Browser) that are dependent on another element for their specification. For example, a Use Case derives its specification from the Requirement that it realizes. On the report, each of the elements in the first column is the source or dependent in a Dependency relationship with the corresponding target element in the Dependent on column.

Access

Ribbon	Construct > Status > QA Report > Dependency Details
--------	---

Run the Dependency report

Field	Action
Root Package	Displays the name of the root Package; all elements and Packages under this Package are included in the report.

	<p>If you want to change the Package, click on the replacement Package in the Project Browser and click on the Refresh button.</p>
Refresh	<p>Click on this button to run the report.</p>
Locate Object	<p>Click on an element name in the report and click on this button to locate the element in the Project Browser.</p>
Print	<p>Click on this button to print the dependency details.</p>
Save Report	<p>Click on this button to save the report as a file. A small dialog displays in which you specify the file location to save the report to.</p>
Details Option	<p>Lists the dependency details, consisting of:</p> <ul style="list-style-type: none">• The names of the elements in the current Package that have a dependency• The type of the elements that have a dependency• The relationship type• The names of the elements that they are dependent on

	<ul style="list-style-type: none">• The type of the elements that they are dependent on
--	---

Maintenance Report

As you manage the maintenance items against elements in your model, you can monitor the status of reported defects, changes, issues and tasks by generating a Maintenance report on the Package. You can filter the report to show maintenance items of a certain type, having a specific status, reported by a specific person and/or resolved by a specific person.

Access

Ribbon	Construct > Status > QA Report > Maintenance Details
--------	--

Generate a Maintenance report

Field/Button	Action
Root Package	Displays the name of the Package selected from the Project Browser. All elements and Packages under this Package are included in the report.

	<p>If you want to change the Package, click on the new Package in the Project Browser and then click on the  icon at the end of the field. The replacement Package name displays in the field.</p>
Reported By	<p>Click on the drop-down arrow and select a name to filter for maintenance items reported by that person. Click on the x button to clear the field.</p>
Resolved By	<p>Click on the drop-down arrow and select a name to filter for maintenance items resolved by that person. Click on the x button to clear the field.</p>
Maintenance Type	<p>Select the radio button for the required item type - Defects, Issues, Changes, Tasks or All types.</p>
Status	<p>Select the radio button for the required item status - New, Verified, Complete or All statuses.</p>
Locate Object	<p>(After clicking on an item in the Item Details list.) Click on this button to highlight the element containing the maintenance item, in the Project Browser.</p>

Refresh	Click on this button to re-run the report query on the Package currently selected in the 'Root Package' field.
Print	Click on this button to print a summary of the item maintenance list.

Notes

- If you want to edit an item from the report, double-click on the item line; the Maintenance window displays, on which you can update the details
- You can re-organize the display of the listed items using the List Header facilities for reported information

Diagrams Only Report

If you want to report on the diagrams in a Package, and only the diagrams, you can generate a 'Diagrams Only' report. This is convenient for printing or handling a lot of diagrams in batch, rather than exporting or printing each diagram at a time.

Access

Ribbon	Publish > Report > Documentation > Run Diagram Report
Keyboard Shortcuts	Ctrl+Shift+F8

Produce a Diagrams Only report

Field/Button	Action
Output Path	Type in or browse for the output location to create the report in.

<p>Embed Diagrams in Document</p>	<p>Leave the checkbox selected to create the diagrams within the document file.</p> <p>Deselect the checkbox to represent the diagrams with linked image files.</p>
<p>Include all child packages</p>	<p>Leave the checkbox selected to include the diagrams in any child Package under the selected Package.</p> <p>Deselect the checkbox to report on the diagrams in the selected Package only.</p>
<p>Include Diagram Name</p>	<p>Leave the checkbox selected to include the diagram names in the generated documentation.</p> <p>Deselect the checkbox to omit the diagram names.</p>
<p>Order Diagrams Alphabetically</p>	<p>Leave the checkbox selected to present the diagrams in alphabetical order.</p> <p>Deselect the checkbox to present the diagrams in the order in which they are listed in the Project Browser.</p>
<p>Diagram Format</p>	<p>Click on the appropriate radio button for the graphics format in which to capture the diagrams.</p> <p>The GIF radio button defaults to selected.</p>

Page Setup	Click on this button to define the page dimensions and layout for the report.
Generate	Click on this button to run the report.
View	When the report is generated, click on this button to display the output document.

Testing Report

As you develop the testing environment for your model, you create and execute test scripts for the elements in the model. To help you track the status and results of running the scripts, you can generate a Testing report on a Package selected from the Project Browser. This report can deal with just the selected Package, or the complete hierarchy of the Package. You can also report on scripts for specific types of test, or for all types of test.

Access

Ribbon	Construct > Testing > Report
--------	------------------------------

Generate a Testing Report

Field/Button	Action
Root Package	Displays the selected Package name. If you want to run the report on a different Package, close the 'Generate Test Documentation' dialog, select the

	replacement Package in the Project Browser, and open the dialog again.
Report on	Deselect the checkbox against each type of test to omit from the report. All checkboxes default to selected.
Include Child Packages	Leave the checkbox selected to report on tests on elements in the subordinate Packages. Deselect the checkbox to report just on the root Package.
Output file	Type in or browse for the file name and path into which to generate the Testing report.
Generate	Click on this button to generate the report. A message displays when the report has been generated. You can then open the file in your preferred file viewer.

Notes

- In your file viewer settings, set the page layout to

'Landscape' to display the columns of the report clearly

- The Testing report provides a detailed description of how each test executed, what the input and acceptance criteria were, and what the results were; the Testing Details report is an alternative option, showing a summary of the test status and who ran and checked the test

Document Templates

You use report templates to generate reports on your model that present specific information in a particular format, and to generate those reports repeatedly and consistently. You can select from a range of system templates on the Document Generator, to immediately generate reports from your model.

A template consists of:

- 'Sections' that identify the model components to report on
- Fields that identify the type of information to extract on each component
- Styles and formatting instructions that define the layout of the report
- Template Fragments containing smaller sub-templates

The system provides more specialized document templates for separate Cover Pages, Stylesheets and Tables of Contents.

You can also design your own custom templates, which provide the additional advantages of being able to generate reports tailored to your own organization, and to update certain aspects of the report without having to re-define every other specification. The report generator helps you manage these custom templates; that is:

- Review the custom templates available to you for generating reports
- Create additional custom templates

- Edit custom templates
- Import templates that were saved to XML files, and
- Delete any custom templates that are no longer required

Access

Ribbon	Publish > Tools > Document Templates
Keyboard Shortcuts	F8 Templates

Manage your Custom Templates

Field/Button	Description
User Templates	<p>Lists the custom Templates, Fragments, Stylesheets, Cover Pages and Tables of Contents currently available to you for generating reports through the 'Generate' tab.</p> <p>Your custom templates can be grouped within these standard folders (by Template Type), or in another folder that you have created to hold specific</p>

	templates.
New	<p>To create a new custom template, click on this button. The 'New Document Template' dialog displays.</p> <p>In the 'New template' field, type the template name.</p> <p>In the 'Template Type' field, click on the drop-down arrow and select the type of template to create.</p> <p>In the 'Copy Template' field, click on the drop down arrow and select either:</p> <ul style="list-style-type: none">• 'None', to create an empty template to develop from scratch, or• The name of an existing system, Technology or custom template to act as a base; this list is filtered to show templates of the type you specified in the 'Template Type' field <p>In the 'Template Group' field either:</p> <ul style="list-style-type: none">• Select an existing group or• Enter the name for a new template group, or• Leave this field blank, to place the template in the appropriate standard type group <p>The 'Template Group' determines the organization of document templates in</p>

	<p>the Resources window. You cannot create a template of a specific type and assign it to the standard group of a different type. For example, you cannot specify a Fragment and select to save it in the Cover Page folder. It either goes to a user-created group that you select or is automatically redirected to the Fragment folder.</p> <p>Click on the OK button; the template opens in the 'Document Template Designer'.</p>
Edit	<p>To make changes to an existing template, click on the template name and then click on this button.</p> <p>The template opens in the 'Document Template Designer'.</p>
Import From Reference File	<p>To import custom templates that were previously saved to batch XML files (that is, through the 'Export Reference Data' option), click on this button. The 'Import Reference Data' dialog displays.</p> <p>Click on the Select File button and browse for and select the required source XML file.</p> <p>In the 'Select Datasets to Import' panel, click on the required datasets:</p>

	<ul style="list-style-type: none"> • RTF Document Templates • Templates - RTF Style Detail • Templates - RTF Tag & Language Options <p>Click on the Import button to import the templates. The names of the imported templates are added to the list on the 'Templates' tab.</p> <p>If the template you want to import is a single, external file (not in a batch file) you can instead open a template and use a different option to import the file into that template.</p>
Delete	<p>To delete a custom template, click on the template name and click on the Delete button.</p> <p>A prompt displays to confirm the deletion.</p> <p>You can select multiple custom templates for deletion; press Ctrl or Shift as you click on each template name.</p>

Notes

- In the Corporate, Unified and Ultimate editions of

Enterprise Architect, if security is switched on, you need 'Configure Resources' access permission to create document templates

- Whatever template you initially select on the 'Template' tab or 'New Document Template' dialog, of whichever template type and/or group, you can easily switch to a different template and template type within the 'Document Template Editor' whenever you need to

Design Custom Document Templates

If you want to record and document details of your model, you can do so using a range of document reports, each generated using a document template. To meet your specific requirements, it is possible to customize the reports by developing your own templates; during this process you also have the option of generating test reports to review the output from your design as you develop it. The custom templates you can develop include full-document templates and independent Stylesheets, Cover Pages and Tables of Contents.

You create and edit report templates using the Document Template Designer to define:

- The model components to report on
- The information to extract on each component and
- The styles and layout of the report

It is possible to create a template from scratch or by copying and editing either another custom template or a system template. If you want to review the system templates you can list and display them using the Document Template Designer, and establish what templates already exist to either extract the information you require, or act as a starting point for your own design.

Access

When you open a template in the Document Template Designer, the Document - Edit ribbon also opens automatically.

Ribbon	Publish > Tools > Document Templates
Other	Resources window Document Generation System Templates <template group> : right-click on a template Copy Resources window Document Generation User Templates <template group> : right-click on a template Open

The Document Template Designer

The Document Template Designer consists of:

- A Toolbar, through which you create or select a template to work on, save your work, and generate and view the test reports
- A 'Sections' panel, on which you select the components of the model to report on
- A 'Content' panel, in which you develop the content and layout of the report, using an extensive range of context menu options

Toolbar Options

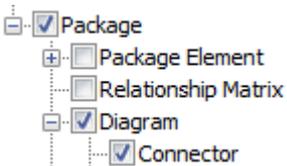
Icon	Action
	<p>Creates a new template.</p> <p>A prompt displays for you to enter the name of the new template and, optionally, the name of an existing template to use as a base.</p>
	<p>Saves changes to the current template.</p>
	<p>Saves the current template as a new template.</p> <p>A prompt displays for the new template name.</p>
	<p>Displays a range of document options that you can set to apply to all reports generated using the template. These options filter and organize the information presented in the report.</p>
	<p>Opens the Resources window and/or folder containing the currently-displayed document template, and highlights the</p>

	template name.
	Toggles the Document Generator view between showing the Sections hierarchy panel and hiding it.
	Displays the Template Group name in which to locate or save the template; defaults to 'Model Templates'. Click on the drop-down arrow and select the appropriate Template Group name to search in. This filters the options in the next field to templates within that group only. For example, Cover Pages, or 'DavidG Reports'.
	Displays a list of the templates in the Template Group you specified in the previous field. To view or edit an existing template, click on the drop-down arrow and select the template name. <ul style="list-style-type: none"> • The system templates are protected; when you select one all editing options are grayed out • Custom templates are available to edit
	Displays the path and name of the file into which to generate the test report from the template.

	<p>If no file path is shown, you can either type one in or use the  button.</p>
	<p>Displays the 'Browser' dialog, in which you can locate and select the file to hold the generated test report.</p>
	<p>Generates and displays the test report based on the template.</p> <p>To generate a test report, you need to specify a target file (above) and select a Package, diagram or element in the Project Browser to run the report on. You could develop a special test Package for this purpose.</p>
	<p>Displays the report held in the file specified in the file path field.</p> <p>You can return to a generated report many times whilst you review the effects of different sections of the template you are editing.</p>

The Sections and Content Panels

Facility	Description
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<p>Sections Panel</p>	<p>Consists of a hierarchy of model components and their properties, each with a checkbox. To include information on a type of component in the report, you select the checkbox against it.</p> <p>As you select checkboxes, corresponding pairs of open/close markers display in the 'Content' panel; for example:</p> <p>Sections Panel</p>  <p>Content Panel</p> <pre>package > diagram > connector > < connector < diagram < package</pre>
<p>Content Panel</p>	<p>The editing area, in which you develop the structure and content of the template.</p> <p>As you add section markers to the template, text containing hints is automatically added to provide guidance between the markers, such as:</p> <pre>element> [right-click-to-insert-Element-field(s)] <element</pre> <p>Replace the hint text with a range of fields (that extract information from your model) and static text that is manually</p>

	entered.
Editing the template	<p>Most of the work you do in creating and updating a document template is accomplished using the facilities of the 'Document - Edit' ribbon, which is automatically displayed when you open the Document Template Designer. For guidance in using these facilities, you can refer to either:</p> <ul style="list-style-type: none"> • <i>Document Edit Ribbon</i>, which describes the facilities directly, or • <i>Editing Documents and Templates</i>, which describes the document editing facilities across Enterprise Architect • <i>Custom Template Design Options</i>, which identifies editing tasks you might want to perform and directs you to the facilities for performing those tasks
Content Panel Context Menu	<p>If you right-click on the field marker text or background of the 'Content' panel a context menu displays, providing a number of additional options to:</p> <ul style="list-style-type: none"> • Insert a field selected from the displayed list, where the entries are specific to the section marker you have selected - you must also delete the text

prompt between the section markers; when the report is generated, the field names are replaced by the corresponding values from the model

- Insert a Project Constant selected from those you have defined in the 'Project Constants' tab of the 'Generate Documentation' dialog
- Insert a Report Constant selected from the standard list; these constants derive values from the element and Package properties
- Update the style sheet used in the template to one of those listed in the submenu, either system-supplied or user-customized; alternatively, switch from a tailored style sheet back to the standard Normal.rtf style sheet
- Hide or show the 'Sections' panel, either providing guidance on what sections to add, or giving more space in which to develop the content of the report
- Cut or copy selected text, and paste text held in the clipboard into a new position
- Undo a change - or a series of changes - that you have made, in reverse sequence, or redo undone changes as

	necessary
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Notes

- A standard file of global document styles, called Normal.rtf, is automatically applied to all new templates you create from scratch; it is possible to edit Normal.rtf to tailor the styles to your requirements, and to override these styles within the template
- You can also create special customized Tables of Contents and Cover Pages to be used optionally on any document report in place of any Cover Pages or Tables of Contents built into the report templates, and Stylesheets that can be chosen to override the Normal.rtf styles or any edited styles in a report template
- You can transport templates between models, using the 'Configure > Model > Transfer > Export Reference Data' and 'Import Reference Data' ribbon options

Setting Sections for Reporting

As part of designing or editing a template for generating a document report, you define the content to deliver in your report, specifically:

- Which model features to report on (such as elements, attributes, linked documents and Tagged Values), using the 'Sections' panel of the Document Template Designer
- What information to provide on the instances of each feature (such as the name, type, phase, priority or author), using the 'Content' panel of the Document Template Designer

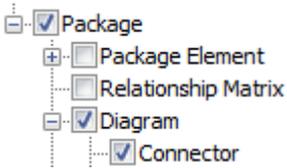
The information you define here determines the structure of the report, what sections it contains and the order of those sections.

Access

Ribbon	Publish > Tools > Document Templates > Sections Publish > Tools > Document Templates > Content
Other	Resources window Document Generation User Templates : right-click on a template Open > Sections

	Resources window Document Generation User Templates : right-click on a template Open > Content
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Select model components to be documented in the report

Step	Action
1	<p>Expand some or all of the hierarchy in the 'Sections' panel.</p> 
2	<p>Select the checkbox next to the feature name; the feature name is then displayed as a pair of section tags in the 'Content' panel of the Document Template Designer.</p> <p>element ></p> <p>< element</p> <p>For features in the lower levels of the hierarchy, selecting a child feature automatically selects the parent level(s) and adds the parent tags to the</p>

	'Content' panel.
3	<p>If you want to change the sequence of sections, click on the appropriate feature name in the 'Sections' hierarchy and click on  or  to move the feature name up or down.</p> <p>The position of the feature name within the 'Sections' hierarchy determines the position of the section documenting that feature in the 'Content' panel, and hence in the report. You can change the sequence either before or after you have selected the checkboxes, it makes no difference.</p>
4	<p>For each selected feature, click between the section tags in the 'Content' panel and add text, or right-click and select the 'Insert Fields' option to add fields.</p>

Notes

- More specific guidance is provided for selecting these features:
 - Child objects
 - Embedded elements
 - Profiled Relationship Matrices
 - Constraints and Scenarios
 - Linked Documents and Document Artifact contents

- Elements held in external Packages
- Tagged Values
- Sections formatted as tables
- Using the Custom section for Custom Query
Fragments

Child Objects

An object in your model can have subordinate objects: for example, elements have child diagrams and other elements; Packages contain other Packages, elements and diagrams; and diagrams contain elements and connectors. When you set up your document report template to report on these subordinate objects, you can:

- Generate just the information you specify in selected fields, such as the object name only; for example, details of elements could be extracted in a number of places - Package elements, Embedded elements, source and target elements on connectors, child elements - and you might not require full details in all sections in your report, so you would just set a field for the element name in some of the sections

Alternatively

- Generate the same type of information as is provided for the parent-level objects of that type, by not defining any content (text or fields) between the section tags; for example, you could generate recursive documentation of child Packages, getting the same level of detail as for the parent Package

Access

<p>Ribbon</p>	<p>Publish > Tools > Document Templates > Sections Publish > Tools > Document Templates > Content</p>
<p>Other</p>	<p>Resources window Document Generation User Templates : right-click on a template Open > Sections Resources window Document Generation User Templates : right-click on a template Open > Content</p>

Examples of reporting on child objects

Example	Detail
<p>Specific object details</p>	<p>This template has valid content (text and the 'Element.Name' field) between the child element tags. Therefore, in the generated report, the child element section will show only the element name and none of the detail shown for the parent element.</p>

	<pre> element*>* {Element.Name} Type: → → {Element.Type}--{Element.BaseClasses} Status:→ → {Element.Status}..Version{Element.Version}..Phase{Element.Phase}. Package: → {Element.ParentPackage}--Keywords..{Element.Tag}. Detail:→ → Created on {Element.DateCreatedShort} {Element.Notes} child*element*> → Child: {Element.Name} <*child*element <element </pre>
<p>Default to parent-level detail</p>	<p>This template has no valid content between the child element tags. Therefore, in the generated report the child element section will default to the detail shown for the parent element.</p> <pre> element*>* {Element.Name} Type: → → {Element.Type}--{Element.BaseClasses} Status:→ → {Element.Status}..Version{Element.Version}..Phase{Element.Phase}. Package: → {Element.ParentPackage}--Keywords..{Element.Tag}. Detail:→ → Created on {Element.DateCreatedShort} {Element.Notes} child*element*> <*child*element <element </pre>
<p>Default parent detail for child objects</p>	<ul style="list-style-type: none"> • Package > Element > Child Element - Package > Element • Package > Element > Diagram - Package > Diagram • Package > Diagram > Element - Package > Element • Package > Diagram > Connector -

	Package > Element > Connector
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Notes

- In principle, it is better to leave Child sections blank to replicate their parent sections

Child sections do not contain the same sub-section detail as their parents; Element::Child Element does not contain sub-sections such as Scenario or Attribute, so where Child Element sections are populated, these sub-sections are not rendered

An exception to this is cases where sub-sections are not required, but different formatting of the section fields is preferred

Report on Structural Elements

As part of your model, you might have created structural elements on an element, such as:

- ActivityParameter
- RequiredInterface
- ActionPin
- Port
- EntryPoint
- ExpansionNode
- ObjectNode
- ProvidedInterface
- ExitPoint
- Part

When you design a document report template, you can add a section to specifically identify and report on these structural elements.

Access

Ribbon	Publish > Tools > Document Templates > Sections
Other	Resources window Document

	Generation User Templates : right-click on a template Open > Sections
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Add section to report on structural elements on an element

Action	Detail
Add section	<p>Select the 'Package > Element > Embedded Elements' checkbox. The embedded elements section markers are added to the template:</p> <p style="padding-left: 40px;">embedded elements > <embedded elements</p> <p>When the report is generated from the template, any structural elements are listed with their parent element.</p>

Notes

- The 'Embedded Elements' section does not contain the same sub-sections as the parent 'Element' section, such as

Scenario or Attribute; if you do not define fields in the 'Embedded Elements' section, it defaults to displaying the same detail as is in the 'Element' section, whereas if you do add fields, only those field values are shown

Reporting Profiled Relationship Matrices

When you are using the Relationship Matrix, you search on combinations of source and target Packages, element types, connector type and connector direction. You can save your frequently-used combinations as profiles, and you can include the results of using these profiles in your document report by setting up a section in the report template.

If you have set up matrix profiles directly within the Relationship Matrix, you do not directly specify a matrix profile in the report; the Document Generator returns the Relationship Matrix for all profiles that include the documented Package as the source or target Package.

You can have more direct control over which matrix profiles are presented in a report, by creating a Matrix Specification Artifact element that defines a profile and then reporting on the Package that contains that Artifact. The profile defined in the Artifact is independent of the Package that contains the Artifact element, and therefore could specify source and target Packages other than the parent Package. The Document Generator can report on only one Matrix Specification Artifact per Package, so if you want to include more than one profile, place each Artifact element in a separate subPackage of the target Package for the report.

Access

Ribbon	Publish > Tools > Document Templates > Sections
Other	Resources window Document Generation User Templates : right-click on a template Open > Sections

Add section to report on Relationship Matrix contents

Action	Detail
Add section	<p>Select the 'Package > Relationship Matrix' checkbox; the relationship matrix section markers are added to the template.</p> <p>Right-click between the markers and add the 'Image' field to return the Relationship Matrix in the report.</p> <pre>relationship matrix > {Matrix.Image} < relationship matrix</pre> <p>You can also insert a number of fields to</p>

	identify specific aspects of the profile, such as relationship name, direction, type, target element and element type, and source element and element type.
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Notes

- You can view a list of the profiles created directly in the Relationship Matrix, in the *Matrix Profiles* folder of the Resources window
- If a reported Package contains a Matrix Specification Artifact and is also part of a profile created directly in the Relationship Matrix, the Artifact element takes precedence and the report does not include the direct Relationship Matrix profile

Report on Constraints and Scenarios

In the Document Template Designer, you can create sections to include information from your model on:

- Constraints on Package Elements, Elements, Connectors and Attributes, and
- Scenarios for Package Elements and Elements

You can set additional options in the 'Constraints' and 'Scenarios' sections to define what types of constraint or scenario are included in your reports.

Access

Ribbon	Publish > Tools > Document Templates > Sections
Other	Resources window Document Generation User Templates : right-click on a template Open > Sections

Set sections to extract Constraint and Scenario details

Object	Detail
Constraints	<p>In the 'Sections' panel, you can choose any or all of these constraint option checkboxes:</p> <ul style="list-style-type: none"> • 'Constraint-Pre' - to include all constraints of the type 'pre-condition' in this section of the report • 'Constraint-Post' - to include all constraints of the type 'post-condition' in this section of the report • 'Constraint' - to include all constraints that have not been generated in the 'Pre-Constraint' and 'Post-Constraint' sections of the report <p>Set any fields you need, between the section markers.</p>
Scenarios	<p>In the 'Sections' panel, you can choose any or all of these scenario option checkboxes:</p> <ul style="list-style-type: none"> • 'Element > Scenario' - to include all scenarios in this section of the report; if any of the subsequent sections are also selected, the report includes all scenarios that are not exception paths • 'Element > Scenario > Exception' - to include all exceptions for each scenario

- 'Element > Scenario > Structured Scenarios' - to include all scenario steps in the scenario sections of the report
- 'Element > Scenario > Structured Scenarios > Exception' - to include the steps for each exception path in the scenario sections of the report

Set any fields you need, between the section markers.

Reporting Linked Documents

If you have large quantities of information to provide on an element or Package, you can attach it as a formatted document either as the content of a Document Artifact element associated with your subject element, or by attaching the document file directly to the element (depending on the edition of Enterprise Architect you are using). In either case, you can include the linked document contents in your document report by selecting one or more of the Linked Document checkboxes in the report template definition.

Access

Ribbon	Publish > Tools > Document Templates > Sections
Other	Resources window Document Generation User Templates : right-click on a template Open > Sections

Add sections to report on Linked Documents

Action	Detail
Add sections	<p>Select the checkboxes for the levels of Linked Document you want to include in the report:</p> <ul style="list-style-type: none"> • 'Package > Package Element > Linked Document' • 'Package > Package Element > External Requirements > Linked Document' • 'Package > Element > Linked Document' or • 'Package > Element > External Requirements > Linked Document' <p>The linked document is rendered into the document report between these markers:</p> <p style="padding-left: 40px;">linked document ></p> <p style="padding-left: 40px;"><linked document</p>

Notes

- In some system templates that you might copy, the 'Linked Document' checkbox is only available as a child of the 'External Requirements' checkbox
- You do not need to add any fields between the linked document section markers

Report Elements From External Packages

Elements can be re-used in different diagrams across a model, which can often mean that a diagram contains 'external' elements from Packages other than the diagram's parent Package. Using the Document Template Designer, you can create custom templates to generate reports showing all elements used in a Package with 'internal' and 'external' elements grouped separately, or only the elements actually held within a Package. You can also select options to expose the external elements from all diagrams in a Package, or only from selected diagrams in the Package.

The separation of 'external' and 'internal' elements avoids duplication of information and identifies the elements that impact the Package but are not part of the Package structure. Normally, you would report the same level of detail for each internal and external element, but you can also define a smaller group of details for the external elements, including the name of the parent Package.

Access

Ribbon	Publish > Tools > Document Templates > Sections

Other	Resources window Document Generation User Templates : right-click on a template Open > Sections
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Add sections to include elements in diagrams

Step	Action
1	<p>In the 'Sections' panel on the left-hand side of the editor window, select the 'Package > Element' checkbox.</p> <p>Selecting the checkbox adds this set of sections to the 'Content' panel of the template:</p> <pre>package > [right-click-to-insert-Package-field(s)] element > [right-click-to-insert-Element-field(s)] < element < package</pre>
2	<p>Delete the two <i>[right-click-to...]</i> texts and after the:</p> <ul style="list-style-type: none"> • package> section marker, type 'Package Name:' then right-click and select the 'Insert Field Name' option • element> section marker, type 'Element Name:' then right-click and select the 'Insert Field Name'

	<p>option</p> <p>The template now resembles this illustration:</p> <pre>package > Package Name: {Pkg.Name} element > Element Name: {Element.Name} < element < package</pre>
3	<p>In the 'Sections' panel, select the 'Package > Diagram > Element' checkbox.</p> <p>Selecting the checkbox extends the set of sections in the 'Content' panel of the template:</p> <pre>package > Package Name: {Pkg.Name} element > Element Name: {Element.Name} < element diagram > [right-click-to-insert-Diagram-field(s)] element > [right-click-to-insert-Element-field(s)] < element < diagram < package</pre>
4	<p>Delete the two <i>[right-click-to...]</i> texts and after the:</p> <ul style="list-style-type: none"> • diagram > section marker type 'Diagram:' then right-click and select the 'Insert Field Name' option <p>Delete the space between the element > section markers. The template now resembles this illustration:</p>

```

package >
Package Name: {Pkg.Name}
element >
Element Name: {Element.Name}
< element
diagram >
Diagram: {Diagram.Name}
element >
< element
< diagram
< package

```

Because the 'Diagram > Element' section does not contain any fields, the type of content of this section in the generated report is determined by the 'Package > Element' section.

Specify diagrams & generate report

Step	Action
1	<p>Select the appropriate option:</p> <ul style="list-style-type: none"> In the 'Diagram Properties' dialog for selected diagrams, the 'Document each contained element in RTF' checkbox, to identify all the elements in those diagrams in your report, or On the 'Generate RTF Documentation' dialog, the 'Include all diagram elements in report' checkbox to include all elements in each and every diagram checked by the report

2	<p>In the Project Browser, select the Package to report on, and execute the report through either:</p> <ul style="list-style-type: none">• The Document Template Designer, or• The 'Generate Documentation' dialog
3	<p>The generated report for the example resembles this output:</p> <pre>Package Name: BlockFrame Element Name: Activity1 Element Name: ActivityInitial Element Name: Block1 Element Name: Block2 Element Name: Block3 Element Name: Block4 Element Name: Block8 Element Name: ExceptionHandler1 Diagram: BlockFrame Element Name: Class-who Element Name: Class2 Element Name: Class3</pre> <p>The report shows that the BlockFrame Package contains 8 elements, but has links to three elements from other Packages because those three elements have been used in the BlockFrame diagram.</p>

Notes

- The illustrations in this description show the very simplest set-up, to achieve the result of identifying external elements in a report; you can, if you prefer, populate the

report with other sections and fields, leaving the 'Diagram > Element' section empty to duplicate the structure of the 'Package > Element' section

- If you do add fields to the 'Diagram > Element' section, the section will have its own structure and format and can provide different element details; for example, selecting the 'Insert Field | Name (Full)' menu option adds the {Element.FullName} field, which identifies each external element's parent Package
- If you insert the 'Package > Diagram > Element' section but not the 'Package > Element' section, the subsequent report will show just the elements used in each diagram, without distinguishing between external and internal elements
- If you insert the 'Package > Element' section but not the 'Package > Diagram > Element' section, the subsequent report will show just the elements held in the Package

Report on Tagged Values

Tagged Values are used extensively across the objects of your model, including:

- Package Elements
- Elements
- Connectors and their Source and Target elements
- Attributes
- Operations (Methods) and
- External Requirements

When designing a template to report on these objects, you can include information on their Tagged Values either:

- As a group, using the 'Tagged Value' subsection to identify all Tagged Values used in the object, or
- Individually, using the 'valueOf()' field to extract a specific value of a specific tag

Access

Ribbon	Publish > Tools > Document Templates > Sections
Other	Resources window Document Generation User Templates : right-click on a template Open > Sections

Extract information on Tagged Values

Action	Detail
<p>Insert a Tagged Value section</p>	<p>The Tagged Value section reports all Tagged Values for the object.</p> <p>In the 'Sections' panel, select the checkbox for each object to report on, and for the Tagged Value subsection for that object. For example:</p> <ul style="list-style-type: none"> • Package > Package Element > Tagged Value • Package > Connector > Source > Tagged Value • Package > Element > External Requirements > Tagged Value, or • Package > Element > Method > Tagged Value <p>The Tagged Value section markers display in the 'Contents' panel.</p> <pre> tagged value > [right-click-to-insert-Tagged-Value-field(s)] < tagged value </pre>

	<p>Delete the <i>[right-click-to-...]</i> text, right-click in the space and select the 'Insert Fields' option to add 'Tagged Value Name', 'Notes' and/or 'Value' fields.</p>
<p>Insert a <code>valueOf()</code> field</p>	<p>For any object having a Tagged Value, you can add a 'valueOf()' field to your report template to extract the value of a specific tag. This should be one of the tags normally associated with the object, such as 'ConnectorAltName' for a connector.</p> <p>Obtain the name of the tag before starting this procedure.</p> <p>To insert the field, right-click between the section tags for the object and select the 'Insert Field valueOf' option.</p> <p>The Document Template Designer prompts you to type in the name of the tag from which to extract the value. Type the name and click on the OK button. The Document Template Designer adds the field at the cursor position, in the format:</p> <pre style="text-align: center;">{Objecttype.valueOf(tagname)}</pre> <p>For example:</p> <pre style="text-align: center;">{Connector.valueOf(ConnectorAltName)} }</pre>

The 'valueOf' field extracts just the value of the tag, so for clarity you could type some lead-in text or the meaning of the tag, immediately preceding the value field. For example:

Alternative Name:

```
{Connector.valueOf(ConnectorAltName)  
}
```

Create Sections as Tables

In a document report template, you can render a model section as a table, defined with any number of columns but with only two rows:

- The first row is used to describe the headings of the columns, which you define and format yourself
- The second row defines the output, which you specify by right-clicking in each cell and selecting the output type from the field list; the output is then generated iteratively for every occurrence of the section in question

For example, you might set up the Model > Glossary > section as a section table, using the table definition:

model >

Model Glossary

glossary >

Term	Type	Meaning
{ModelGlossary.Term}	{ModelGlossary.Type}	{ModelGlossary.Meaning}

< glossary

< model

This table definition renders the document output:

Model Glossary

Term	Type	Meaning
Accounting Periods	Business	A defined period of time whereby performance reports may be extracted. (normally 4 week periods).
Association	Technical	A relationship between two or more entities. Implies a connection of some type - for example one entity uses the services of another, or one entity is connected to another over a network link.

Access

Ribbon	Document-Edit > Paragraph > Table > Insert Table
--------	--

Create and format a table

To	Action
Insert a table in the document	<p>Position the cursor on the point in the text to create the table, and from the 'Document-Edit' ribbon bar select 'Paragraph > Table > Insert Table'. The 'New Table' dialog displays, in which you specify the number of table rows and columns. For a model section table in a report template you can accept the default values of two rows and three columns. Click on the OK button.</p> <p>Your table might be invisible; if so, select the 'Paragraph > Table > Show Gridlines' from the ribbon bar to reveal the table and cell borders in dotted lines. These lines are for guidance in creating the document, and do not display on the printed document. You can add printable</p>

	<p>borders if you prefer, using other menu options.</p> <p>The editor initially creates a table with cells of equal width across the page; you can change the cell width by dragging the cell borders using the mouse, or using other context menu options.</p>
<p>Add a header row</p>	<p>Select the top row of the table, and then select 'Paragraph > Table > Header Row' from the ribbon bar. Apply any heading text, settings and formatting to the highlighted row.</p> <p>In the document or compiled report, the heading row is repeated at the top of the columns each time the table flows on to a new page. In a report, if the heading row is populated with the values from field names, the heading rows on subsequent pages reflect the values from that first row.</p> <p>This option operates on the single row at the top of the table, and not on multiple rows.</p>
<p>Populate data row with fields</p>	<p>Right-click on the table cell and select the 'Insert Field <field name>' option to add one or more fields to the cell.</p> <p>When the report is generated, the field</p>

values are extracted and displayed in the table for each instance of the object, such as an element or attribute.

Notes

- In a document report template, if you type a carriage return between the end of the table and the section terminator, the table you generate has a line space between the rows; for example:

```
package*>@
@
element*>@
* Element-Name* Author*
* [Element Name]* [Element Author]*
@
<^element@
<^package@
```

← Carriage Return

This generates the table:

	Element Name	Author
	Choose Recipient	John Redfern

Line Space

	Manage Contacts	Walter Frederick
--	-----------------	------------------

To avoid this, remove any carriage return between the end of the table and the section terminator, as shown:

```
package">@
@
@
element">@
*      Element-Name*      Author*
*      {Element-Name}*      {Element-Author}*
<^element@
<^package@
```

← No Carriage Return

This generates a table with no space between the rows:

	Element Name	Author
	Choose Recipient	John Redfern
	Manage Contacts	Walter Frederick

Add Section Content

In the Document Template Designer, as you select the checkboxes in the 'Sections' panel to report on the different objects and features of the model, pairs of highlighted tags are added to the 'Contents' panel. Many of these pairs of tags have a short instruction between them, as shown:

```
sectionname >
[right-click-to-insert-< objectname >-fields]
< sectionname
```

Where the text message is shown, you can delete it and use the space between the tags to provide the content of the report, by:

- Typing or pasting boiler-plate text that you want to include in your reports, and
- Inserting fields that extract the values of specific characteristics and properties of the object

Access

Ribbon	Publish > Tools > Document Templates > Content
Other	Resources window Document Generation User Templates : right-click

	on a template Open > Content
--	--------------------------------

Add information content to template

Action	Detail
Add text	<p>Click in the space between the tags (or anywhere else in the template) and type or paste (Ctrl+V) the text you want to display in the report.</p> <p>Highlight and right-click on text to format it, using the Document Editor commands.</p>
Insert fields	<p>Right-click in the area between the opening and closing tags, and select the 'Insert Field' option; this displays a context-sensitive list of fields to add to this section of the template.</p> <p>Click on the name of the field you want to add. The Document Template Editor displays the field tag in the text space. For example:</p> <p style="text-align: center;">{Element.ParentPackage}</p> <p>When you generate a report from the template, the report generator replaces the</p>

field name with the actual value. You might need to type lead-in text and add spaces to support the field value, or use the fields in a table with row and column headings.

You can insert as many fields as you want from the list; you usually apply each field once, as the report generator applies the template instructions to each instance of the object.

Notes

- As the model and linked document tags do not require fields, you cannot display the editor context menu between these tags
- The child element, embedded element and child Package tags represent sections that can have defined fields, but these fields prevent the sections from replicating the structure of their parent element and Package sections; as it is preferable to use the parent structures, these tags do not prompt you to add fields with the *[right-click-to-insert-<objectname>-fields]* message, although the message is still applicable
- If you select a field with short date format (such as `Pkg.DateCreatedShort`, `Diagram.DateModifiedShort` or

Element.DateCreatedShort) the format is actually drawn from the MS Windows settings; to use a different short date format, click on the Start icon on the Windows desktop and select the 'Control Panel | Regional and Language Options | Customize' option

Apply User-Defined Section Numbering

In your report template, you might want to number the section levels, with a numbering format of your own design. For example:

1. Package level 1
 - 1.1 Package level 2 (child Package)
 - 1.1.1 Element Level 1
 - 1.1.1.1 Element (child element)

To define the numbering format you:

- First create a numbering list, then
- Create a set of list overrides for this list

In the overrides, you change the initial 1.0.0 setting to 1.1.1. You can then apply the numbering list to the headings set for Packages and elements, using paragraph numbering.

Access

Ribbon	Document-Edit > Edit > Edit > List and Overrides
--------	--

Define the numbering format

Step	Action
1	<p>To create the numbering list, select the 'Create List Item' menu option.</p> <p>The 'List Properties' dialog displays:</p> <ul style="list-style-type: none"> • In the 'List Name' field, type a name for the list • Leave the 'Multi-level list' checkbox selected • If you have added sections to your document and want to restart numbering for each new section, select the 'Restart at section break' checkbox • Click on the OK button to close the dialog
2	<p>To create the list override, select the 'Create List Override' menu option.</p> <p>The 'List Override Properties' dialog displays:</p> <ul style="list-style-type: none"> • In the 'List to Override' field, type or select the name of the list you have just created • Leave the 'Override Levels' checkbox selected • Click on the OK button to close the dialog
3	<p>To set up the list level properties for a level, select the 'Edit List Level' menu option.</p> <p>The 'List Level properties' dialog displays.</p> <ul style="list-style-type: none"> • Select the 'List item' radio button and type or

	<p>select the list item you have just created</p> <ul style="list-style-type: none"> • Set the 'List Level' field to '1' (for the Package Section) and the 'Number text' field to '~1~' • Click on the OK button to save the values and close the dialog
4	<p>Select the 'Edit List Level' menu option again to re-open the dialog:</p> <ul style="list-style-type: none"> • Select the 'List item' radio button and type or select the list item you have just created • Set 'List Level' to '2' (for the 'Element Section' or 'Child Package Section', for example) • Set 'Start at' to '1' (to ensure that numbering at this level begins at 1.1 rather than 1.0) • Click on the OK button to close the dialog and save the changes
5	<p>Repeat steps 3 and 4 for each additional list level to need, incrementing the List Level number and resetting Start at to 1 each time.</p>

Apply the defined numbering levels

Step	Action

1	<p>In the 'Content' panel of the Document Editor, select the first item of text to be numbered (for example, Package).</p> <pre> package-> Package: {Pkg.Name} ¶ element-> Element: {Element.Name} ¶ child-elements-> <-child-elements ¶ <-element ¶ child-packages-> <-child-packages ¶ <-package ¶ </pre>
2	<p>Set the text style to one of the Heading styles (Heading 1 to Heading 9), using the 'Style' drop-down field in the Document Editor toolbar.</p> <pre> package-> Package: {Pkg.Name} ¶ </pre>
3	<p>Right-click on the text and select the 'Paragraph List Numbering' menu option.</p> <p>The 'Apply paragraph numbering using Lists' dialog displays.</p> <ul style="list-style-type: none"> • In the 'List' panel, select the required List and Override combination • Set the 'Level' field to the required level (1, for the top level) • Click on the OK button to close the dialog, and check that the required level has been applied to the selected text <pre> package-> 1. Package: {Pkg.Name} ¶ </pre>

4	<p>Repeat step 3 for the next level (Element), but change the 'Level' field to 2.</p> <pre>element>¶ 1.1 Element:-{Element.Name}¶</pre>
5	<p>Continue applying the overrides for each lower section level as necessary, then generate your document.</p> <p>The output will be numbered and formatted, as illustrated by the example.</p>

Numbering Level Example

- 1. Package: Formal Requirements**
 - 1.1 Package: Manage Users*
 - 1.1.1 Element: REQ011 – Manage User Accounts
 - 1.1.2 Element: REQ016 – Add Users
 - 1.2 Package: Manage Inventory*
 - 1.2.1 Element: REQ019 – Manage Inventory
 - 1.2.2 Element: REQ020 – Receive Books
 - 1.2.3 Element: REQ021 – List Stock Levels

Custom Template Design Options

The Document Template Designer, through the 'Document-Edit' ribbon, provides a wide range of options for defining the format and styles of the document reports generated from your custom templates. In addition to these functions, you can also access options from the toolbar at the top of the 'Content' panel, and from an in-text context menu.

Access

When you open a template in the Document Template Designer, the Document - Edit ribbon also opens automatically.

Ribbon	Publish > Tools > Document Templates
Other	Resources window Document Generation System Templates <template group> : right-click on a template Copy Resources window Document Generation User Templates <template group> : right-click on a template Open

Option Descriptions

The ribbon option descriptions are grouped according to the actions you are performing.

Actions
Creating and importing templates
Configuring the editor page display and formatting tools shown
Incorporating stylesheets, special texts and Tables of Contents Managing the base styles in the Normal.rtf style template file
Moving through, searching and selecting text
Formatting characters and text strings
Formatting paragraphs and text blocks
Inserting tab points
Inserting sections, columns and page breaks, and repaginating

Inserting and editing page headers and footers, and footnotes and endnotes
Inserting tables
Setting up User-Defined Section Numbering
Inserting hyperlinks
Inserting images, OLE objects, frames and drawing objects
Checking the spelling of text, and word use
Tracking changes and incorporating or rejecting them
Protecting document and template text from accidental change
Printer setup and printing documents

Notes

Throughout your template editing:

- To undo one or more immediately previous edits, press Ctrl+Z, or select the 'Undo' context menu option; you can

still undo a change even after you have saved the change

- To redo one or more immediately previous undone edits, press Ctrl+Y, or select the 'Redo' context menu option

Using Bookmarks

Within a document template, you can insert a bookmark to locate material inside the generated document, either from within the same document or from a separate Word document.

Manage bookmarks

As your report template develops, the editor automatically assigns a unique bookmark to the start and end of each model section you select from the 'Sections' panel.

You can also create your own bookmarks in any document wherever you want to reference a specific point, and move these to other points in the text.

(In the report template you can move the automatic bookmarks as well, but if you want to use these as reference points for a Word document to access, it is better to leave them as they are.)

To insert a bookmark:

1. Move the cursor to the point in the text to mark, and select the 'Bookmark' menu option; the 'Bookmarks' dialog displays.
2. Either select an existing bookmark from the list (to switch it to the current location) or type a new bookmark name in the top field. Do not use spaces in the Bookmark; this will prevent the bookmark from being inserted.

3. Click on the Insert button.

To locate bookmarked text in the document:

- Select the 'Bookmark' menu option and, on the 'Bookmarks' dialog, click on the bookmark and on the Go to button; the editor displays the point at which the bookmark was set, in the top left corner of the display

To delete an existing bookmark:

- Select the 'Bookmark' menu option and, on the 'Bookmarks' dialog, click on the bookmark and on the Delete button

To insert a reference to a bookmark:

1. Move the cursor to the point at which to insert the reference and, if you want to, type some lead-in text such as 'Go to page' or 'See page'.
2. Select the 'Bookmark' menu option and, on the 'Bookmarks' dialog, click on the bookmark and on the Set Page Reference button.

The editor inserts the number of the page containing the bookmark, at the cursor position in the text; for a document, this acts as a hyperlink to the bookmark position.

If you set the reference in a template, the link is created in the document you generate from the template.

In the F8 Document Generation, Bookmarks provide additional facilities:

- All **.Start** and **.End** bookmarks that enclose a labeled field will hide the label in the report if the field has no content; for example:

- The bookmarks **Element.Keywords.Start** and **Element.Keywords.End** enclose the *Keywords* $\{Element.Keywords\}$ report field, but if an element has no keywords, the **Keywords** label in the generated report is hidden and the space closed up
- All **Begin** and **End** bookmarks containing the string **_LIST_** will add a comma to the enclosed section, so that all values extracted from the model for that section will be presented in a comma-separated list; for example:
 - The bookmarks **Pkg_Element_Meth_MethParameter_LIST_Begin** and **Pkg_Element_Meth_MethParameter_LIST_End** in the *parameter* section set a comma that, in the report, is inserted between the multiple parameter name/type pairs in the section
- All **Begin** and **End** bookmarks containing the string **_TITLE_** will add a line break and a value title to the field, and present the values extracted from the model as a vertical list underneath the title; for example:
 - The bookmarks **Pkg_Element_Meth_FeatTagVal_TITLE_Begin** and **Pkg_Element_Meth_FeatTagVal_TITLE_End** in the *Tagged Value* section insert a line space and the heading 'Properties', underneath which is printed, in the report, the names and values of the parameter Tagged Values

Report Constants

The Document Editor (for generated report templates) provides a set of fields that represent data on the report itself, such as the report name, title, generation date, version, author and status. When the report is generated, each field is replaced by the current value of the data item. These are called report constants.

You can insert a report constant anywhere in your template - in text, in headers or footers, or in cover page material. They are particularly suited for cover pages.

Constants

Constant	Replaced by
ReportClipboard	The image currently held on the clipboard.
ReportAuthor	The Enterprise Architect login ID of the user who is generating the report.
ReportStatus	(For a report generated on a root Package) The status of the Package, from the Package Properties. (For a report generated on a single element) The status of the element, from

	<p>the element Properties. Otherwise, the constant remains empty.</p>
ReportName	<p>(For a report generated on a root Package) The name of the Package, from the Package Properties. (For a report generated on a single element) The name of the element, from the element Properties. Otherwise, the constant remains empty.</p>
ReportAlias	<p>(For a report generated on a root Package) The Alias of the Package, from the Package Properties. (For a report generated on a single element) The Alias of the element, from the element Properties. Otherwise, the constant remains empty.</p>
ReportVersion	<p>(For a report generated on a root Package) The version of the Package, from the Package Properties. (For a report generated on a single element) The version of the element, from the element Properties. Otherwise, the constant remains empty.</p>
ReportDateL	<p>The system-generated date in long</p>

ong	format.
ReportDateShort	The system-generated date in short format.
ReportFilename	The file name of the generated report, as recorded on the 'Generate Documentation' dialog.
ReportFilenameShort	The current filename of the generated report. (Will change if the file is renamed on disk.)
ReportTitle	The name of the template used to generate the report, as selected on the 'Generate Documentation' dialog.
ReportSource	The name of the Repository that was used to generate the document. For file-based repositories, this will be the file path and name of the project file. For DBMSs this will be the name of the database used.

Insert a Report Constant

Right-click on the point in the template to insert the data field and select the 'Report Constants | <field name>' option.

Notes on Creating Stylesheets

Stylesheets define a range of formatting parameters that control the appearance and layout of a document report. You create them to provide an alternative set of styles to the Normal.rtf file and to any special styles redefined within a document report template. A user can choose to apply a Stylesheet to any kind of document report they are generating, in which case the styles in the Stylesheet override the styles with matching names in the template or Normal.rtf. You can, therefore, create a Stylesheet that:

- Redefines and overrides certain styles
- Does not include other named styles, so use of those styles defaults to the template or Normal.rtf file definition, and
- Provides additional styles that can be applied by editing the generated report

Each custom Stylesheet can define a totally different page layout and document styles to other Stylesheets and to the Normal.rtf Stylesheet.

The simplest way to create a new Stylesheet is to copy one of the system-provided files (for print output or for online output) or another custom Stylesheet, and edit the style definitions in the copy. However, you can create a Stylesheet from scratch if you prefer; this would be initially derived from the Normal.rtf file.

Access

Use one of the methods outlined here to display the 'New Document Template' dialog. Create the new Stylesheet file, then edit the styles in the Document Template Designer using the 'Styles, Special Text and Table of Contents' facilities.

Ribbon	<p>Publish > Tools > Document Templates :  or</p> <p>Start > Explore > Browse > Resources > Document Generation > User Templates > right-click on Style Sheets > Create Template</p> <p>Start > Explore > Browse > Resources > Document Generation > System Templates > Style Sheets > right-click on <stylesheet name> Copy</p>
Other	<p>In the Resources window, expand the 'Document Generation' folder, then:</p> <ul style="list-style-type: none"> • Expand the 'User Templates' folder right-click on Style Sheets Create Template, or • Expand the 'System Templates' folder Expand the 'Style Sheets' folder right-click on <stylesheet name>

	<p style="text-align: center;">Copy</p> <p>You can also create Stylesheets within the 'Templates' tab of the 'Generate Documentation' dialog.</p>
--	--

Notes on Creating Tables of Contents

A Table of Contents template defines the style, levels and numbering formats of a document report Table of Contents that a user can choose to apply to any kind of document report they are generating, in which case the Table of Contents template overrides any Table of Contents styles defined in the template or Normal.rtf file.

The simplest way to create a new Table of Contents is to copy one of the system-provided files (for portrait output or for landscape output) or another custom Tables of Contents, and edit the style definitions in the copy. However, you can create a Table of Contents from scratch if you prefer; this would be initially derived from the Normal.rtf file.

Access

Use one of the methods outlined here to display the 'New Document Template' dialog and create the new Table of Contents template file.

After creating the new template file, edit the styles in the Document Template Designer using the 'Styles, Special Text and Table of Contents' facilities.

Ribbon	Publish > Tools > Document Templates : 
	In the Resources window, expand the

Other	<p>'Document Generation' folder, then:</p> <ul style="list-style-type: none">• Expand the 'User Templates' folder right-click on Table of Contents Create Template, or• Expand the 'System Templates' folder Expand 'Table of Contents' folder right-click on <table of contents name> Copy
-------	--

Import a Document Template

Many organizations have established corporate formats and templates, or might design templates outside Enterprise Architect. If you want to use such 'external' templates from your business to apply formats and standards to your document reports, you can import them into your document template library.

Access

Ribbon	Document-Edit > File > File > Import File
--------	---

Import a template from an external directory

Step	Action
1	Save the external template as a document.
2	In Enterprise Architect, create a new blank template.

	<p>Either:</p> <ul style="list-style-type: none">• Click on the  icon in the Document Template Designer, or• Right-click on a User Template folder in the Resources window and select 'Create Template' <p>The 'New Document Template' dialog displays. Name the template, but do not specify an existing template to copy from.</p>
3	<p>Once the new blank template is loaded in the Document Template Designer, select the option 'Document-Edit > File > File > Import File'.</p> <p>The 'File Open' dialog displays.</p>
4	<p>Locate your template file, and click on the Open button.</p> <p>The 'Open' dialog closes, returning you to the Document Template Designer; this now contains your imported template.</p>
5	<p>Select the option 'Document-Edit > File > Save'.</p> <p>If necessary, make any changes to the template and select the option 'Document-Edit > File > Save' again.</p>

Notes

- Standard graphical images (such as a logo in the header, main text or footer) are imported; however, any meta-file graphics are not imported
- You can select the new template to use in generating a document report, either on the 'Generate Documentation' dialog or in a Model Document element

Notes on Creating Cover Pages

A Cover Page template defines the style, fields and format of a document report front cover that a user can choose to apply to any kind of document report they are generating, in which case the Cover Page styles override any styles of the same name defined in the report template or Normal.rtf file.

The simplest way to create a new Cover Page is to copy one of the system-provided files (for portrait output or for landscape output) or another custom Cover Page Contents, and edit the style definitions in the copy. However, you can create a Cover Page from scratch if you prefer; this would be initially derived from the Normal.rtf file.

Access

Use one of the methods outlined here to display the 'New Document Template' dialog and create the new Cover Page template file.

After creating the new template file, edit the styles in the Document Template Designer using the 'Styles, Special Text and Table of Contents' facilities.

Ribbon	Publish > Tools > Document Templates : 
Other	In the Resources window, expand the

	<p>'Document Generation' folder, then:</p> <ul style="list-style-type: none">• Expand the 'User Templates' folder right-click on Cover Pages Create Template, or• Expand the 'System Templates' folder Expand 'Cover Pages' folder right-click on <cover page name> Copy
--	---

Template Fragments

Within a document template you can include one or more sub-templates, or Template Fragments. Using Template Fragments, you can include in your document reports information extracted from the model using SQL Queries and Model Scripts, providing a greater level of customization of the document output. You can also use a Template Selector Fragment to call other Template Fragments depending on which type of element is being reported on. It is possible to reuse the same Template Fragment in several different templates, so you can develop a library of common Template Fragments that can be used to build larger, more complex document reports.

A Template Fragment is created through the same process as a normal, full-document template. Each Template Fragment can have its own document options applied, such as filtering and sorting.

You can also use, copy and edit a number of system-provided Template Fragments, which you can access from the Document Generation > System Templates > Fragments folder in the Resources window.

Template Fragments - Process Overview

Step	Action
------	--------

1	Create the Template Fragments to be included in your template.
2	Create a normal, full-document template that is to include your Template Fragments.
3	Within this full-document template add references to your Template Fragments in the appropriate locations.

Notes

- You cannot generate documentation directly from a Fragment; to use a Fragment it must be included in a template

Creating a Template Fragment

A Template Fragment can return data from either an SQL Query or Model Scripts. The process of defining the content of a Template Fragment depends on which type of data you want your Template Fragment to return; the choices being:

- Normal Document Template model data - the Template Fragment operates in the same way as a normal template
- Template Selector - to define a template that calls in other Template Fragments depending on the element type being reported on
- Custom SQL - to refer to the data returned by a custom SQL Query
- Custom Scripts - to refer to data returned from a Model Script
- Document Script - to identify a Model Script to be used by your Template Fragment; the script must return either an empty string or a string that contains raw RTF
- Custom XML Script - to create a query to report values from an XML file produced by a previously-generated script, such as the data from a simulation; the query operates on static data that is not being continually or automatically updated

In all cases the process is very similar to creating a normal document template.

Access

Use one of the methods outlined here to open the 'New Document Template' dialog.

Ribbon	Publish > Tools > Document Templates >  New Template icon
Keyboard Shortcuts	F8 > Templates : New
Other	<p>In the Resources window, expand the 'Document Generation' folder, then:</p> <ul style="list-style-type: none"> • Expand the folder 'User Templates' right-click on the folder 'Fragments' Create Template or • Expand the folder 'User Templates' expand the folder 'Fragments' right-click on <template name> Copy or • Expand the folder System Templates' expand the folder 'Fragments' right-click on <template name> Copy

Create a new Template Fragment

Ste

P	Action
1	Using one of the methods above, display the 'New Document Template' dialog.
2	In the 'New Template' field, type the name for the Template Fragment.
3	In the 'Template Type' field, click on the drop-down arrow and select the 'Fragments' option.
4	<p>In the 'Copy Template' field, click on the drop down arrow and select either:</p> <ul style="list-style-type: none"> • 'None', to create an empty Template Fragment to develop from scratch, or • The name of an existing Template to act as a base
5	<p>In the 'Template Group' field either:</p> <ul style="list-style-type: none"> • Click on the drop-down arrow and select an existing group from the list, or • Type a name to generate a new template group, or • Leave this field blank, to not place the Template Fragment in a group <p>The Template Group determines the location of the Template Fragment in the Resources window.</p>
6	<p>Click on the OK button.</p> <p>The Document Template Designer displays in the</p>

	Diagram View.
7	<p>Define the contents of your Template Fragment; the actual steps you follow depend on the data source you want the Template Fragment to operate on:</p> <ul style="list-style-type: none">• Normal Document Template model data• Template Selector• Custom SQL• Custom Scripts• Document Script• Custom XML Script
8	<p>Once you have created the Template Fragment, you incorporate it into a normal template (or into an existing Template Fragment, if you prefer).</p>

Notes

- Custom Queries and the Custom template section can only be used in Template Fragments; they cannot be used in normal, full-document templates
- As with normal document templates, Template Fragments can also be created and opened via the Resources window
- Template Fragments in the Resources window are held in a Fragments folder in each of the Document Generation >

System Templates and Document Generation > User Templates folders, and are indicated by a T symbol

- If you have an existing template that you want to use as a Template Fragment, copy the template as the base of a new Fragment (as above)
- Filtering operates only for the template in which it is set, and does not propagate through sub-templates/fragments; you can set filtering for each sub-template separately, in the Document Options for the sub-template
- If you embed a Template Fragment within another Fragment, report generation from the parent template will be slower
- If you have a column or node with the name EABOOKMARK, this will insert a document bookmark around the parent section in the 'Contents' panel

How to Define a Template Selector Fragment

A Template Selector is a Template Fragment that calls other Template Fragments depending on what type of element is being reported. The Template Fragments being called can be system Fragments or existing user-defined Fragments, as listed in the Resources window.

Access

Use one of the methods outlined here to display the 'Custom Query' page of the 'Document Options' dialog.

Ribbon	Publish > Tools > Document Templates : <select a fragment template> :  (Document Options icon) > Custom Query
Keyboard Shortcuts	F8 > Templates Fragments Double-click on <Fragment name>, then  (Document Options icon) > Custom Query

Set Up the Template Selector

Option	Action
Template Selector	Click on this radio button to define the template selection commands.
data field	<p>On separate lines, type each element type and the name of the Template Fragment to use for that element type, in the format:</p> <p style="padding-left: 40px;">ElementType:<stereotype>:Fragment Name</p> <p>For example (elements not extended by a stereotype):</p> <p style="padding-left: 40px;">Action::Behavioral ActionPin::Simple Behavioral CollaborationUse::Structural</p> <p>and (element extended by a stereotype):</p> <p style="padding-left: 40px;">Class:table:Database Table</p> <p>To identify the fragment to use if elements are reported that have not been specifically identified, type:</p> <p style="padding-left: 40px;">default::Fragment Name</p> <p>Also see the <i>Notes</i> section in this topic.</p>
OK	Click on this button to save the changes you have made and close the 'Document

	Options' dialog.
--	------------------

Notes

Further advice on providing a value for the data field:

To a certain extent you can adapt the 'extended by stereotype' line according to what alternative modeling language you are using, what you specifically want to extract in the report, and what elements exist under the Package or element you execute the report on. For example:

- Extract Archimate Business Actor elements
 - From a structure containing UML and Archimate elements - Class: Archimate_Business Actor:BusActFrag
 - From a structure containing only Archimate elements - Class:BusinessActor:BusActFrag
 - From a structure containing only Archimate Business Actor elements - Class::BusActFrag
- Extract Business Actor elements
 - From a structure containing UML and Archimate elements - Class:Business Actor:BusActFrag
 - From a structure containing only Archimate elements - Class:BusinessActor:BusActFrag
 - From a structure containing only Business Actor elements - Class::BusActFrag

To establish the type and Sterotype details of a representative element selected in the Project Browser, run

this query in the SQL scratch pad (use the ribbon option 'Start > Explore > Search > Model :  > SQL Scratch Pad'):

- **Select** **t_object.name**, **t_object.Object_Type**,
t_object.Stereotype **from** **t_object** **where**
t_object.Object_ID=#CurrentElementID#

For example, selecting a BPMN DataObject in the Project Browser and running this SQL gives:

Name - Issue List[Initial]

Object_Type - Artifact

Stereotype - DataObject

So you would use the combination

Artifact:DataObject:<fragment name> in the data field

Alternatively, do not use a Template Selector fragment and create a simple template to operate on the Element section of the report, to extract elements of Type - Class and Stereotype - Business Actor. Run this on the specific element(s).

For a complete example, open the system-supplied Template Selector in the 'Document Generation | System Templates | Fragments' folder of the Resources window and review the 'Custom Query' tab of the 'Document Options' dialog.

How to Define a Custom SQL Fragment

You can create a Template Fragment to return data from an SQL Query. You do this by defining an SQL Query in the 'Document Options' of the Template Fragment, then adding fields within the 'Custom' section of your Template Fragment that refer to the columns returned by the SQL Query. The Query is DBMS dependent and so might vary according to the DBMS you are using.

Create an SQL Query Fragment

Step	Action
1	Open or create a Template Fragment in the Document Template Editor.
2	In the Document Template Editor, right-click on the Template background and click on the  icon. The 'Document Options' dialog displays.
3	Select the 'Custom Query' page.
4	In the 'Template Fragment type' panel, select the Custom SQL radio button.

5 In the main text field on the tab, type the SQL Query that is to be run on your model.

You can use #<macro>#s as string substitutions, as for other SQL Search Queries.

Your Query must return one or more columns; for example:

```
SELECT DocName AS TemplateName, Author
AS TemplateLocation
FROM t_document
WHERE DocType = 'SSDOCSTYLE' and
(IsActive = 1)
```

The SQL Query can reference the ID of the element, diagram or Package currently being processed by the document template, using the #OBJECTID#, #DIAGRAMID# or #PACKAGEID# macros; for example:

```
SELECT Count(Object_Type) AS CountOfActors
FROM t_object
WHERE Object_Type = "Actor" and Package_ID
= #PACKAGEID#
```

You can also make your column entries into hyperlinks to the element entries in the generated document. The column header field (in the template

text itself, in the 'Custom' panel) must contain the suffix 'Hyperlink'; for example:

`{Elements-Hyperlink}` for .eap (JET) repositories, or `{Elements.Hyperlink}` for other types of repository

The column entries, or values, must have the format:

`{guid}LABEL`

In this format, `{guid}` is the GUID of the element to link to and `LABEL` is the hyperlink text (such as the element name), either manually inserted or returned from another command. For example:

`{123-456-7890}Class2`

In the generated report this displays as 'Class2', which links to the description of Class2 in the document.

This example returns the hyperlinked name of each base (parent) Class of the element currently being reported:

```
SELECT #Concat t_object.ea_guid,  
t_object.Name#
```

```

AS [BaseClassName-Hyperlink] (for
.eap files; for other repositories use AS
[BaseClassName.Hyperlink])
FROM t_object, t_connector
WHERE t_connector.Start_Object_ID =
#OBJECTID#
AND t_object.Object_ID =
t_connector.End_Object_ID
AND t_connector.Connector_Type =
'Generalization'

```

This query could return multiple entries, in which case the entries are reported one per line. You can, if required, have multiple Hyperlink query statements, separated by commas. You can hyperlink to reported elements, attributes, operations, diagrams and Packages.

It is possible to force a field to be processed as a hyperlink or as formatted notes, by providing a column in this format:

```

custom >
  {Name}
  <fieldname>.Formatted (or
  <fieldname>.Hyperlink) (for all repositories,
excluding .eap)
  < custom

```

In your custom SQL Query statement, you must use an alias matching the template field name; for

	<p>example (in MySQL):</p> <pre> SELECT ea_guid AS CLASSGUID, Object_Type AS CLASSTYPE, Name, Note as "Note.Formatted" FROM t_object Where Object_ID=#OBJECTID# </pre>
6	Click on the OK button to close the 'Document Options' dialog.
7	In the 'Document Template Editor', in the 'Sections' panel, select the 'Custom' checkbox to generate the 'Custom' section.
8	<p>Within the 'Custom' section, right-click and select the 'Insert Custom Field' option.</p> <p>A prompt displays for the name of the field to create.</p>
9	<p>In response to the prompt, type the name of the column that is being returned by your Query; for example, CountOfActors.</p> <p>Click on the OK button.</p>
10	<p>Repeat steps 8 and 9 for each column that you want to include in your report.</p> <p>Add any other formatting and content you need, to the Template Fragment.</p>

- | | |
|----|---|
| 11 | Save the Template Fragment, and add it to a normal document template. |
|----|---|

Notes

- An Element Filter will not apply to the 'Custom' section in a Template Fragment
- In your SQL statements you can reference model details using:
 - #OBJECTID# returns the ID of the element currently being processed by the document template
 - #PACKAGEID# and #Package# return the ID of the Package currently being processed by the document template
 - #Branch# gets the IDs of the child Packages of the current Package being processed, working recursively down to the lowest level of sub-Package; this is only valid when processing a Package - elements return a 0 value
 - #UserName# gets the name of the user logged into version control
 - #Author# takes the user name from the 'Author' field in the 'General' page of the 'Preferences' dialog, so the defined search can be performed on objects created by that user (this value can be manually re-set in the 'Preferences' dialog)

- You can test your SQL Query using the SQL Editor in the Model Search window

How to Define a Custom Script Fragment

You can create a Template Fragment to return data from a Model Script. You do this by creating a Script that returns an XML string in a specific format. You add a reference to this Script in the 'Template Fragment Document Options', then add fields within the 'Custom' section of your Template Fragment that refer to the data returned by the Script.

Creating a Script Fragment

Step	Action
1	<p>Using the Scripting window, create a Model Script that returns a string in XML format.</p> <p>See the examples of:</p> <ul style="list-style-type: none">• A Script that returns data in the appropriate XML format (<i>Example Template Fragment Script</i>)• The XML format that the Script must return so that it can be used by a Template Fragment (<i>Example Output of a Template Fragment Script</i>)
2	<p>Open or create a Template Fragment in the Document Template Editor.</p>

	<p>Right-click on the Template background and click on the  icon.</p> <p>The 'Document Options' dialog displays.</p>
3	<p>Select the 'Custom Query' tab and, in the 'Template Fragment type' panel, select the 'Custom Script' option.</p> <p>A blank field displays to the right of the options.</p>
4	<p>Click on the drop-down arrow and select your Script from the list.</p>
5	<p>In the main text field on the tab, type the entry point of your Script that returns the XML data.</p> <p>For example, if you were using the example script mentioned in step 1, in JScript, then the entry point would be:</p> <pre>MyRtfData(#OBJECTID#);</pre> <p>To convey Package information, you can replace <code>#OBJECTID#</code> with <code>#PACKAGEID#</code>. (Also, for VBScript, omit the semi-colon at the end.)</p> <p>This applies to the calling statement (not the script that is called), which can also reference:</p> <ul style="list-style-type: none">• <code>#Branch#</code> - gets the IDs of the child Packages of the current Package being processed, working recursively down to the lowest level of sub-Package; this is only valid when processing a Package - elements return a 0 value

	<ul style="list-style-type: none">• #UserName# - gets the name of the user logged into version control• #Author# - takes the user name from the 'Author' field in the 'General' page of the 'Preferences' dialog, so the defined search can be performed on objects created by that user (this value can be manually re-set in the 'Preferences' dialog)• #Package# - (as for #PACKAGEID) gets the package_ID of the currently-selected Package
6	Click on the OK button to close the 'Document Options' dialog.
7	In the Document Template Editor, in the 'Sections' panel, select the 'Custom' checkbox to generate the Custom section.
8	Within the 'Custom' section, right-click and select the 'Insert Custom Field' option. A prompt displays for the name of the field to create.
9	In response to the prompt, type the name of the data field that is being returned by your script. Referring to the example from step 1, you would add DateGen. Click on the OK button.
10	Repeat steps 8 and 9 for each data field that you

	want to include in your report. Add any other formatting and content you need, to the Template Fragment.
11	Save the Template Fragment, and add it to a normal Document Template.

Notes

- Scripts have a limit of 60 seconds per call before control is returned to the Document Generator

Example Template Fragment Script

This JScript returns a row of data in XML format. The XML data can be returned in a document report using a Custom Script Template Fragment.

The script will also display the XML data in the System Output window, so you can easily check the output without running a document report.

```
!INC Local Scripts.EAConstants-JScript
```

```
/*
```

```
* Script Name: Document Properties
```

```
* Author: Tom O'Reilly
```

```
* Purpose: To display the properties of a document
```

```
* Date: 02/02/2013
```

```
*/
```

```
function MyRtfData(objectID)
```

```
{
```

```
var i;
```

```
var xmlDOM = new
```

```
ActiveXObject("MSXML2.DOMDocument.4.0");
```

```
xmlDOM.validateOnParse = false;
```

```
xmlDOM.async = false;
```

```
var node = xmlDOM.createProcessingInstruction("xml",  
"version='1.0' encoding='ISO-8859-1'");
```

```
xmlDOM.appendChild(node);
var xmlRoot = xmlDOM.createElement("EADATA");
xmlDOM.appendChild(xmlRoot);
var xmlDataSet = xmlDOM.createElement("Dataset_0");
xmlRoot.appendChild(xmlDataSet);
var xmlData = xmlDOM.createElement("Data");
xmlDataSet.appendChild(xmlData);
var xmlRow = xmlDOM.createElement("Row");
xmlData.appendChild(xmlRow);
var xmlName = xmlDOM.createElement("DateGen");
var today = new Date();
var dd = today.getDate();
var mm = today.getMonth()+1; //January is 0!
var yyyy = today.getFullYear();
if(dd<10){dd='0'+dd} if(mm<10){mm='0'+mm} today =
mm+'/' + dd+'/' + yyyy;
xmlName.text = today;
xmlRow.appendChild(xmlName);
var xmlName = xmlDOM.createElement("TimeGen");
var currentTime = new Date()
var hours = currentTime.getHours()
var minutes = currentTime.getMinutes()
if (minutes < 10)
{
minutes = "0" + minutes
```

```
}  
xmlName.text = hours + ":" + minutes + " ";  
xmlRow.appendChild(xmlName);  
var xmlName = xmlDoc.createElement("Author");  
xmlName.text = Session.UserName;  
xmlRow.appendChild(xmlName);  
var xmlName = xmlDoc.createElement("EA_REPOS");  
xmlName.text = Repository.ConnectionString;  
xmlRow.appendChild(xmlName);  
return xmlDoc.xml;  
};  
Session.Output(MyRtfData(439));
```

Example Output of a Template Fragment Script

You can create a Template Fragment to return data from a Model Script into a document report. The Script must return one or more rows of data in this XML format:

```
<EADATA>
  <Dataset_0>
    <Data>
      <Row>
        <DateGen>09/01/2013</DateGen>
        <TimeGen>9:31 </TimeGen>
        <Author>John</Author>
      </Row>
    </Data>
  </Dataset_0>
</EADATA>
```

Each of these data fields in the XML (such as 'DateGen', 'TimeGen') refers to fields that can be included in the 'Custom' section of a Template Fragment.

Notes

- If the text is a formatted Note, add *formatted="1"* to the field row; for example:

```
<Author formatted="1"><i>John</i></Author>
```

How to Define a Document Script Fragment

You can create a Template Fragment to return data from a Document Script. You do this by creating a Script that returns either an empty string or a string that contains raw RTF. You add a reference to this Script in the 'Template Fragment Document Options', and the returned RTF string is added to the generated document.

This is an example of a Document Script you might create:

```
!INC Local Scripts.EAConstants-JScript
function main()
{
    var reporting as EA.DocumentGenerator;
    reporting = CreateDocumentGenerator();
    if(reporting != null)
    {
        if(reporting.NewDocument(""))
        {
            if(!reporting.LoadDocument("<filename>"))
            {
                Session.Output( "Error: " +
reporting.GetLastError() );
            }
        }
    }
}
```

```
        return reporting.GetDocumentAsRTF();
    }
}
}
```

Create a Document Script Fragment

Step	Action
1	Open or create a Template Fragment in the Document Template Editor.
2	In the Document Template Editor, right-click on the Template background and click on the  icon. The 'Document Options' dialog displays.
3	Select the 'Custom Query' page.
4	In the 'Template Fragment type' panel, select the 'Document Script' radio button.
5	A field displays to the right of the radio button panel; click on the drop-down arrow and select the Model Script to be used by your Template Fragment.
6	In the main text field on the tab, type the entry point

	<p>of your Script that returns the RTF Text.</p> <p>For example, in JScript, the call to your script would be in the form:</p> <pre>Main(#OBJECTID#);</pre> <p>(For VBScript, omit the semi-colon at the end.)</p>	
7	Click on the OK button to close the 'Document Options' dialog.	
8	In the 'Document Template Editor', in the 'Sections' panel, select the 'Custom' checkbox to create the 'Custom' section.	
9	Save the Template Fragment, and add a call to it in a normal document template.	When run, this will return an RTF string that is incorporated into the generated document.

Notes

- The Model Search macros `#.#` can be used in the call statement that calls the procedure, but not in the procedure code; in your call statement you can reference model details using:
 - `#OBJECTID#` to return the ID of the element currently being processed by the document template

- #PACKAGEID# and #Package# to return the ID of the Package currently being processed by the document template
- #Branch# to get the IDs of the child Packages of the current Package being processed, working recursively down to the lowest level of sub-Package; this is only valid when processing a Package, elements return a 0 value
- #UserName# to get the name of the user logged into version control
- #Author# takes the user name from the 'Author' field in the 'General' page of the 'Preferences' dialog, so the defined search can be performed on objects created by that user (this value can be manually re-set in the 'Preferences' dialog)

How to Define a Custom XML Script Fragment

Within a template fragment, you can create a query to report values from an XML file produced by a previously-generated script; for example, the data from a simulation. The query operates on static data that is not updated during generation of the document.

This is an example of the query format:

```
Filename=<filepath>\<filename>.xml  
XPath=/EADATA/Dataset_0/Data/Row
```

The first line is the location of the xml file to process, and the second line is the query to perform on that file, assuming that the file content is:

```
<EADATA>  
  <Dataset_0>  
    <Data>  
      <Row Name="NameValue"  
Second="Value2"></Row>  
      <Row Name="NameValue2"></Row>  
    </Data>  
  </Dataset_0>
```

</EADATA>

You can then add fields within the 'Custom' section of your Template Fragment, to refer to the data returned by the query. For example, you might edit:

custom >

[right-click-to-insert-Custom-field(s)]

< custom

to give:

custom >

Name - Second

< custom

Creating a Custom XML Script Fragment

Step	Action
1	Using the Scripting window, create a Model Script that returns an XML file.
2	<p>Open or create a Template Fragment in the Document Template Editor.</p> <p>Right-click on the Template background and click on the  icon.</p> <p>The 'Document Options' dialog displays.</p>

3	Select the 'Custom Query' tab and, in the 'Template Fragment type' panel, select the 'Custom XML' option.
4	In the main text field on the tab, type the entry point of your Script that returns the XML data. For example: Filename=<filepath>\<filename>.xml
5	Click on the OK button to close the 'Document Options' dialog.
6	In the Document Template Editor, in the 'Sections' panel, select the 'Custom' checkbox to generate the Custom section.
7	Within the 'Custom' section, right-click and select the 'Insert Custom Field' option. A prompt displays for the name of the field to create.
8	In response to the prompt, type the name of the data field that is being returned by your script. Click on the OK button.
9	Repeat steps 7 and 8 for each data field that you want to include in your report. Add any other formatting and content you need, to

	the Template Fragment.
10	Save the Template Fragment, and add it to a normal Document Template.

Notes

- The calling statement (not the script that is called) can reference the ID of the element or Package currently being processed by the document template, using the `#OBJECTID#` or `#PACKAGEID#` macros; for example, `MyRtfData(#OBJECTID#);`
 - `#Branch#` gets the IDs of the child Packages of the current Package being processed, working recursively down to the lowest level of sub-Package; this is only valid when processing a Package - elements return a 0 value
 - `#UserName#` gets the name of the user logged into version control
 - `#Author#` takes the user name from the 'Author' field in the 'General' page of the 'Preferences' dialog, so the defined search can be performed on objects created by that user (this value can be manually re-set in the 'Preferences' dialog)
 - `#Package#` gets the `package_ID` of the currently-selected Package

Adding Fragments to a Document Template

A Template Fragment is a template that can be used as a smaller sub-section of a normal document template. You do not generate a report from a Template Fragment on its own; instead you use a normal template that includes references to one or more Template Fragments.

Fragments can be called into these sections in the template:

- Package
- Element
- Attribute
- Method

They cannot be called into other sections. When generating a document report, as the report generator processes each section in the template, if it encounters a reference to a Template Fragment it will process that Fragment, inserting its output in the appropriate location of the generated report.

Access

Ribbon	Publish > Tools > Document Templates
Keyboard Shortcuts	F8 > Templates

Incorporating Template Fragments into a Document Template

Step	Action
1	Create the Template Fragment(s) to be included in your document template, or identify system Template Fragments to use.
2	Create a new document template, or open an existing template in the document editor.
3	In the 'Sections' panel, select the checkbox against each section that will refer to the Template Fragment(s) ('Package', 'Element', 'Attribute' or 'Method').
4	In the 'Content' panel, at the appropriate point within one of these sections, right-click and select the 'Insert Template' option. The 'Select Template' dialog displays.
5	Click on the drop-down arrow and select the

	Template Fragment to insert.
6	<p>Click on the OK button.</p> <p>The tag {Template - <template name>} is inserted at the current cursor position.</p>
7	<p>Repeat steps 4 to 6 for each Fragment you want to insert into the document template.</p> <p>Complete any other work you need to do on the template, then save it and use it to run reports.</p>

Editing or Switching Template Fragments

Right-click on the red Template tag > <required option>.

Option	Action
View / Edit Fragment	<p>Opens the selected Template Fragment in another instance of the Document Template editor.</p> <p>If you have selected a System Fragment, you can view the Fragment but not edit it.</p> <p>If you have selected a Model (user-created) Fragment, you can edit the Fragment.</p>

Override Fragment	<p>(Option available for a selected System Fragment)</p> <p>Opens another instance of the Document Template Editor, where the System Fragment is duplicated as a Model (user created) Fragment with the same name. You can edit this Fragment and save it, and the original template will apply that new Model fragment instead.</p>
Switch Fragment	<p>Displays the 'Select Template' dialog; click on the drop-down arrow and select a different Template Fragment.</p>

Notes

- You can also add a Template Fragment to a document template by locating the Fragment in the Document Generation folder in the Resources window and dragging the Fragment into the Document Editor; Template Fragments are held in the Fragments folders within the System Templates and User Templates folders
- To delete a Template Fragment from a Template, drag the cursor along the inserted name to highlight it, then press Delete
- It is possible to embed a Template Fragment within

another Fragment; however, this will slow down report generation

