ESKORT Designer for Clearance

User Guide, Section I - Introduction

DOCUMENT

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1. Overview

This document introduces the ESKORT Designer tool, member of ESKORT Compliance Solutions.

1.1 Conventions

Definitions – The first time a specific term or concept is mentioned in a relevant subsection it is printed in italic. If required, further definition will follow shortly after the first time it is mentioned and is preceded by an icon.

Exercise – Exercises are printed in bold and are preceded by an icon. 

[Menu] – Menu options, buttons, window and field names are printed within square brackets. The word option, button, field, dialog/window behind the word will specify the type.

2. ESKORT Designer

2.1 Introduction

The ESKORT Designer for Clearance is a configurable editor that supports editing of structured information stored in XML (Extensible Mark-up Language), which is the emerging standard for representation and communication of structured data. The XML standards are managed by the World Wide Web consortium, and supported by all major software vendors.

In the context of ESKORT Clearance, the ESKORT Designer is used to maintain the *Configuration Archive.*

The Configuration Archive is the XML data store that holds the configuration documents used by the ESKORT Analysis module. Some of the key document types in the Configuration Archive are Environments, Knowledge Bases, Taxpayer Lists and Tasks.

2.2 Using ESKORT Designer to Edit Structured Information

Basically, the ESKORT Designer supports editing of *Documents* representing hierarchically structured information.[1] One such example of a hierarchically structured document is a knowledge base with knowledge rules.

A document is made up of one or more *Element*s, which are used to represent the *structure* in the document. In the Knowledge Base example, the document would be made up of elements such as KnowledgeBase, KnowledgeRule, Author, etc. The types of elements in the document (KnowledgeBase, KnowledgeRule, Author) are referred to as *Element Types.* In general, an element can have subordinate elements (referred to as *Child Elements*), which again can have other subordinate elements - thus making up the structure of the document. By specifying, for each element type, the types of child elements that are valid, the structure of the document can be precisely controlled. In the Knowledge Base example, KnowledgeRule elements would be valid children of KnowledgeBase elements, and Author elements would be valid children of KnowledgeRule elements.

The *actual information* in the document is represented as *Attribute*s on the elements. An attribute is data stored in the element itself, which can be referred to by its name. In the Knowledge Base example, the KnowledgeBase element would have attributes such as:

- Name – name of the knowledge base
- Description – description, describing the knowledge base
- Environment – environment context of the knowledge base
- Etc.

The specification of valid child elements and attributes for each element type allowed in a document is referred to as a *Document Schema* (or a Document Contents Definition).

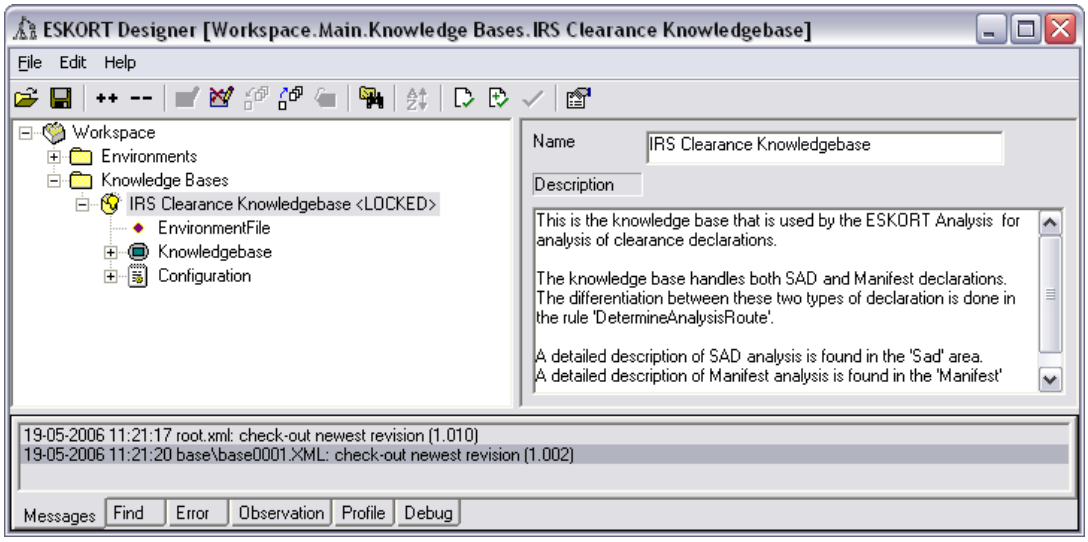
[1] Simple examples of hierarchically structured information include: a purchase order with order lines; a project plan with activities and sub-activities; an address book with address and telephone information for groups (such as companies) and persons.

Typically ESKORT Designer is configured to edit documents compliant with a specific document schema. This means that ESKORT Designer can ensure that the edited document is always valid, and - more importantly - support the user in creating a valid document.

ESKORT Designer supports editing structured information in documents. These documents are made up of elements. Elements can have child elements. Elements have attributes that contain the actual information.

The basic ESKORT Designer interface has two main panes:

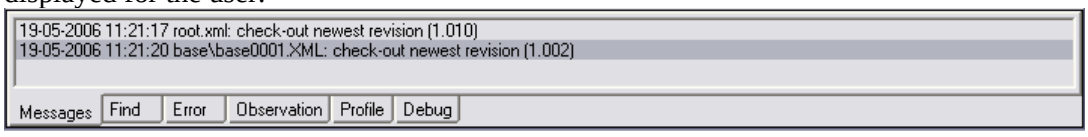
- The *Structure Pane* - the left part of the interface, which presents the structure of the document, and allows elements to be created, deleted or moved around.
- The *Editor Pane* - the right part of the interface, which represents the attributes of the current element in the Structure Pane.



It should be noted, that the above is a little simplified. In some configurations the structure pane provides additional views on the document, and similarly, the editor pane can be configured to present information from other parts of the document - typically from the child elements of the current element.

2.2.1 The Message Pane

The ESKORT Designer also has a *Message Pane* at the bottom where messages are displayed for the user.



The message pane consists of five tabs:

- **Message**

  Messages and status from the ESKORT Designer will be reported in the [Message] tab.

- **Find**

The results of a search will be reported in [Find] tab. Double-clicking a search result will jump to the relevant element. See also section 2.4.12.

- **Error**

  Any discrepancies from a verify process will be reported in [Error] tab. Errors can be investigated by double-clicking them. See also section 2.4.14.

- **Observation**

  When testing rules in the ESKORT Designer any observations created by the rules will be reported in the [Observation] tab. See also section **Error! Reference source not found.**.

- **Debug**

  When testing rules in the ESKORT Designer further information will be reported in the [Debug] tab.

  Note: the contents of the [Debug] tab is intended for use by experienced knowledge engineers; The details of the information will not be explained further as it is not readily useful for normal users.

2.3 Configuration Archive

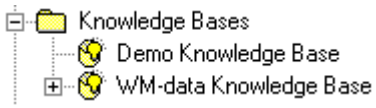
The *Configuration Archive* contains the configuration documents used by ESKORT Clearance.

The key document types managed in the Configuration Archive are:

- Knowledge Bases
- Knowledge Base environments

For information of the contents of these documents refer to the other sections (II, III, IV and V) of this User Guide.

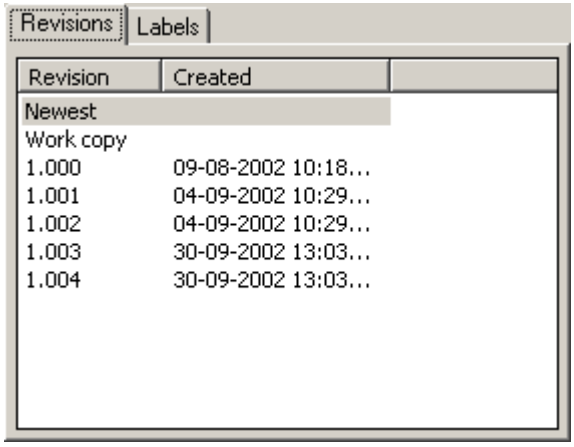
Of each document type multiple instances can be created. To illustrate, users could create multiple knowledge bases, which are instances of the same document type (Knowledge Bases).



2.3.1 Revisions

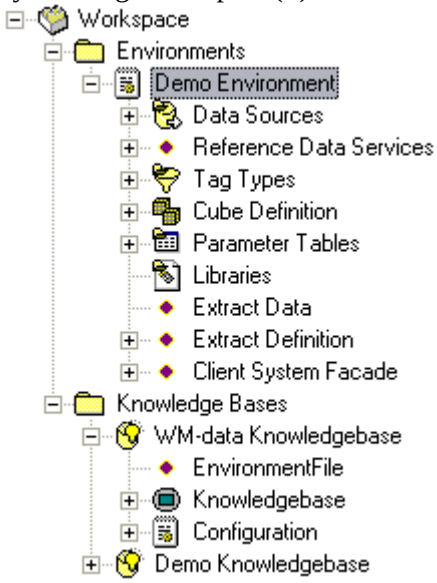
Typically, each document type instance, e.g. a knowledge base, will have multiple *revisions*. Any time a specific document is saved permanently, a new revision is being created.

Revisions are versions of the same document type instance. For instance, a specific knowledge base will typically have multiple revisions, with one revision being the current.



2.4 The Structure Pane

The structure pane represents the structure of the document by showing the elements in an outline, where each line corresponds to an element, and child elements are shown indented relative to their parent elements. You can control whether child elements are shown or not by clicking on the plus (+) and minus (-) symbols.



The above shows an expanded Environment document (Demo Environment), showing the child elements it contains. The element is referred to as the Current Element. You can change which element is current by clicking on the element you want to be current, or by moving around with the arrow keys.

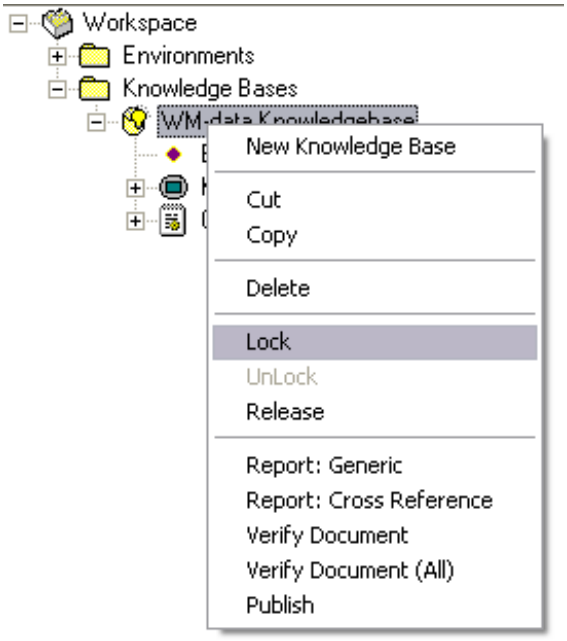
If you want to expand the entire outline, click the ++ button on the toolbar. You can collapse the outline by clicking the -- button on the toolbar.

2.4.1 Working with the document structure

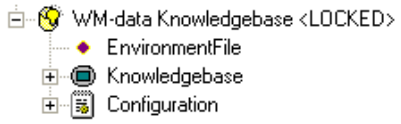
Work with the document structure is accomplished by activating the context menu on an element by right-clicking it, as illustrated in the following sample:

2.4.2 Locking and Unlocking

Before being able to work with a document, the document must be locked. This prohibits other users from editing the document at the same time.



A locked document can be recognized by the word <LOCKED>, which appears next to the locked document. Also, a locked document is editable which implies that the fields in the Editor pane are enabled.



Instead of using the context menu you may lock a document by clicking on the  icon in the toolbar.

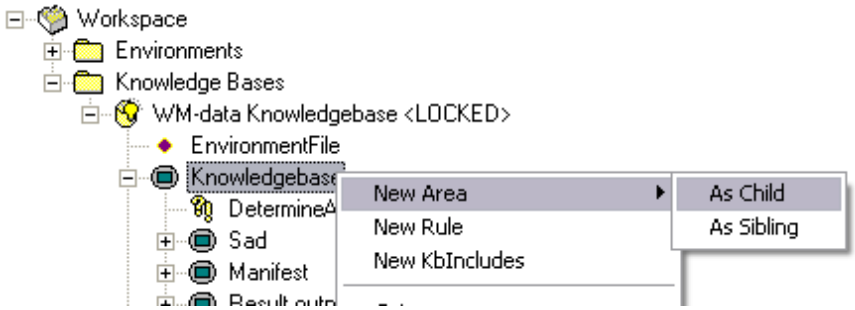
Unlocking can be done similarly, using the context menu or the  icon in the toolbar.

2.4.3 Inserting elements

The top-most section of the context menu presents the elements that can be inserted after the current element as *child* or *sibling* elements. ,

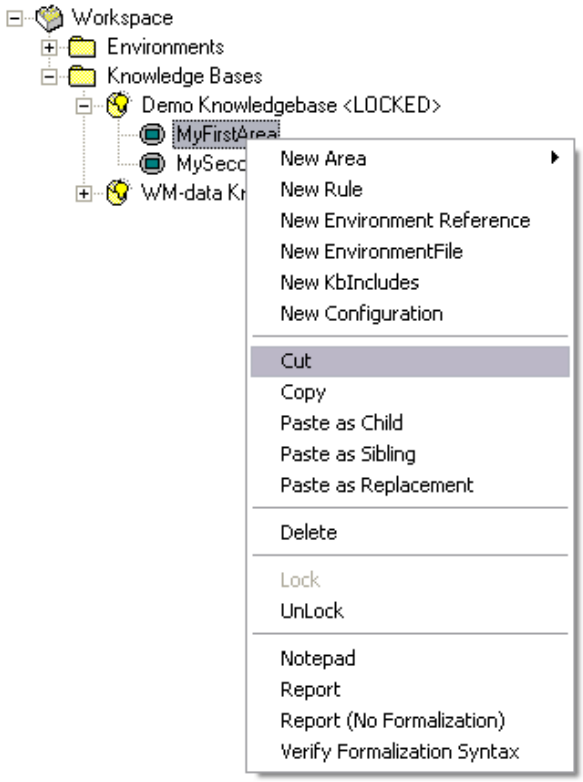
A child element is an element inserted below the current (parent) element in the next level in the hierarchy. Contrary to this a sibling is an element at the same level in the hierarchy as the current element, inserted below a common (parent) element.

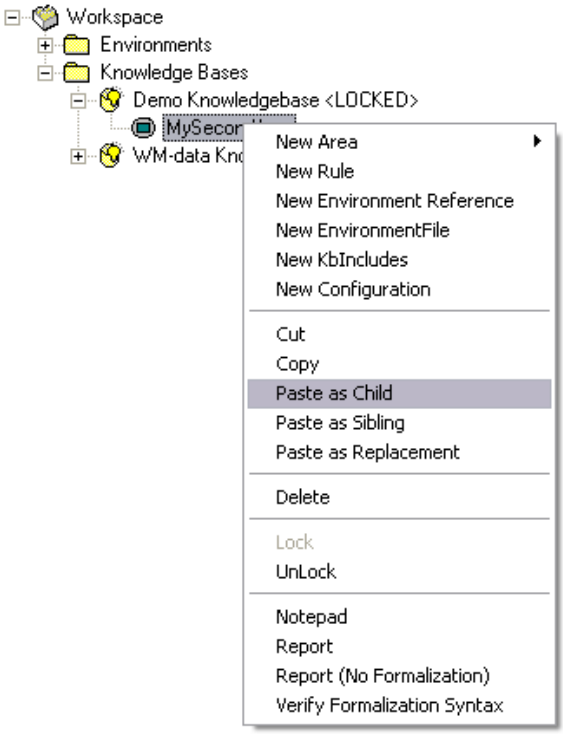
At a Knowledge Base element e.g. it is possible to insert an Area as a child element, or a another Knowledge Base as a sibling element. ESKORT Designer will automatically determine which elements are valid to insert as child or sibling elements. In some cases the same type of element is valid both as a child and as a sibling element. In these cases ESKORT Designer will provide a sub-menu which allows one of these alternatives to be chosen.

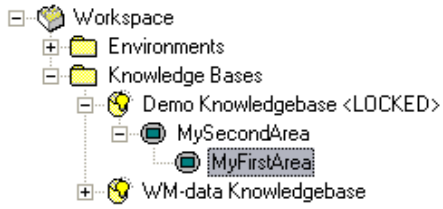


2.4.4 Copying and Moving Elements

The current element may be copied or cut to the Windows clipboard using the Cut and Copy items in the context menu. In both cases, the entire structure (the element and all its children) will be copied. The element is pasted by selecting the element after which the copied element should be inserted, and selecting the appropriate Paste choice in the context menu of that element. Note that one of the options will be to replace the current element by the copied element. No paste choices in the context menu indicate that the current content of the clipboard does not represent an element that can be pasted in the current element.

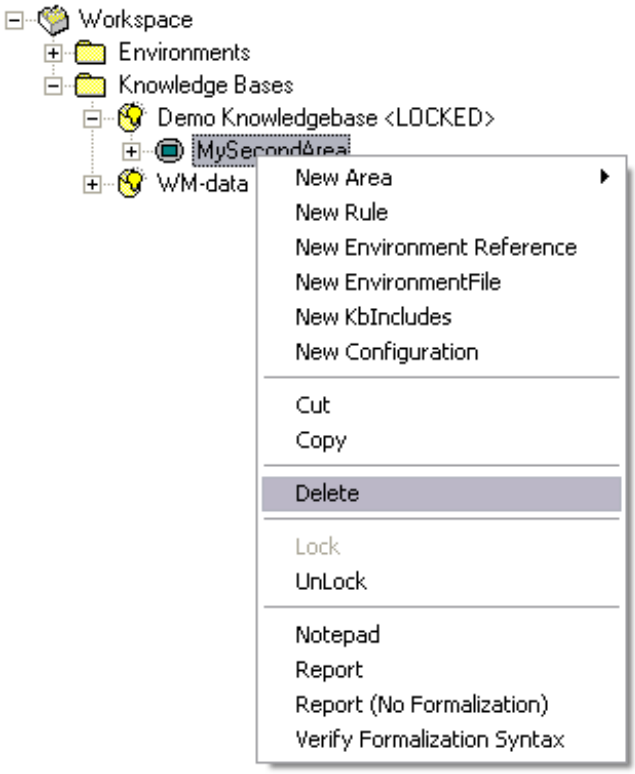






2.4.5 Removing Elements

The current element may be removed using the Delete item in the context menu.



2.4.6 Work Copy

Any changes you make will be kept in a so-called *work copy* of the locked document. The work copy is maintained as long as you keep the document locked. Once you unlock the document the work copy will be discarded.

If you have made changes to the document and want to leave ESKORT Designer without unlocking the document (maybe you are not yet done with implementing all changes), then you should save the document first.

You can save your changes by using [File] | [Save]. Alternatively you can use the  button on the toolbar.

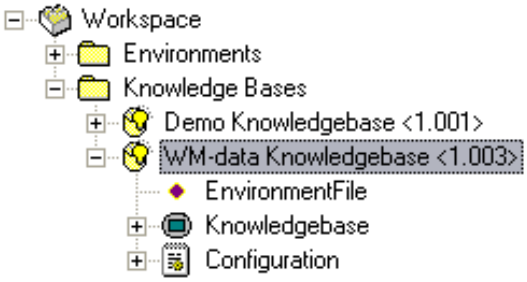
If you forgot to save your changes in the work copy while exiting the ESKORT Designer, the system will prompt you whether or not you want to save.

2.4.7 Revisions

Every document in the ESKORT Designer has one or more revisions. The document currently loaded is called the *current revision*. This current revision is not necessarily the newest revision. The newest revision is however the default revision being loaded when starting the ESKORT Designer.

The current revision of a document is the revision that is shown in the ESKORT Designer.

If the current revision is not the newest revision, then the revision number is displayed next to the document. See the illustration below:

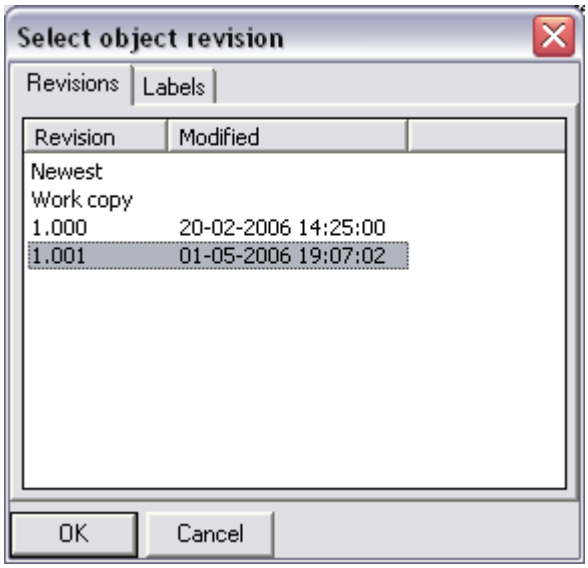


2.4.8 Saving and Loading Revisions

You can save a document in a new revision by using the  button on the toolbar.

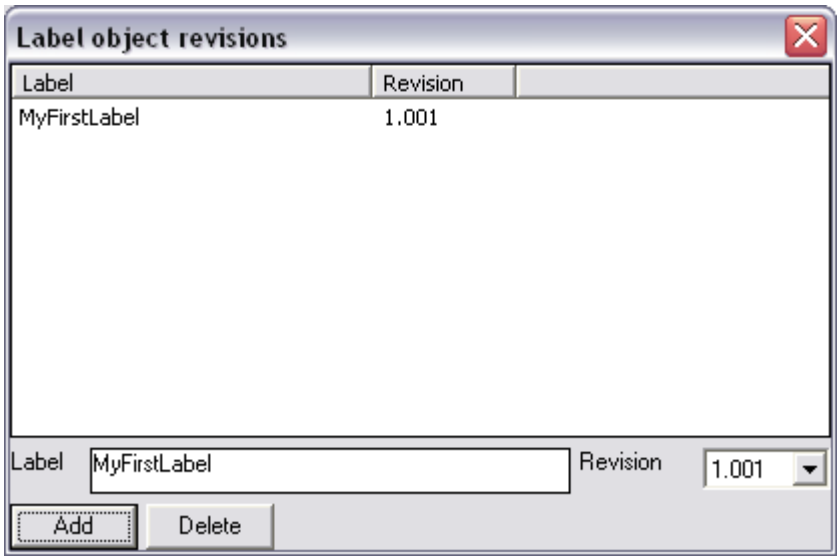
This will effectively take your work copy, store it in a new revision of the document, unlock the document and discard the work copy.

You can load a revision of a document by making the document the current element and clicking the  button on the toolbar.



2.4.9 Labels

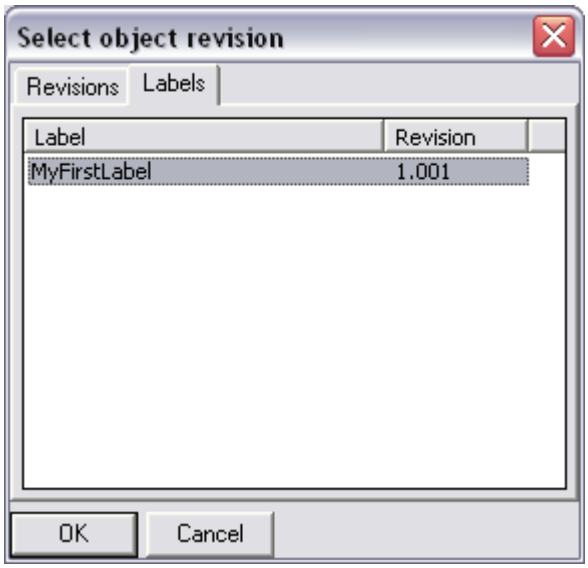
You can label revisions by clicking the  button on the toolbar.



In the dialog select the revision that you want to label, enter a label in the Label edit box and click the [Add] button.

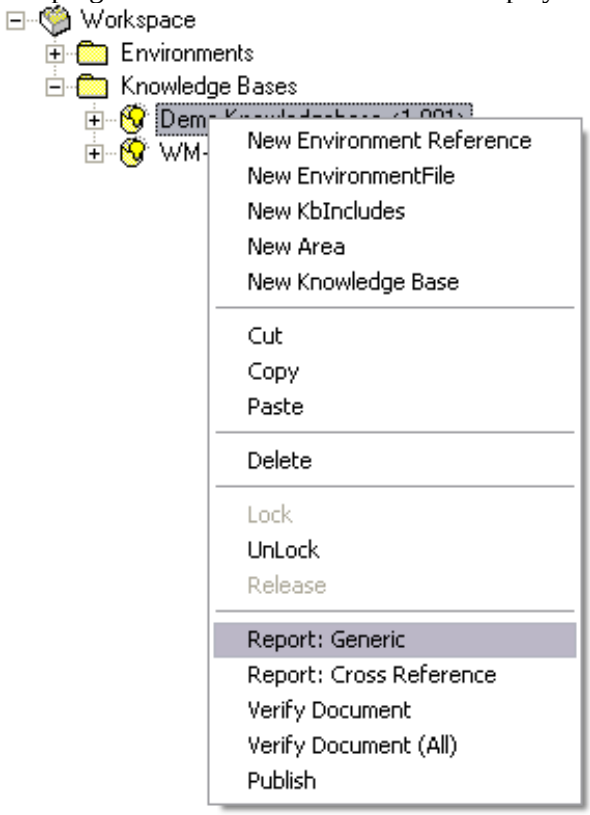
You may add multiple labels to the same revision.

Once you have labeled revisions, you can load them through their label instead of their revision number.



2.4.10 Plug-ins

Some elements have been configured to support one or more plug-ins - such as a report. The plug-ins available for an element is displayed at the bottom of the context menu.



Appendix A lists all available plug-ins.

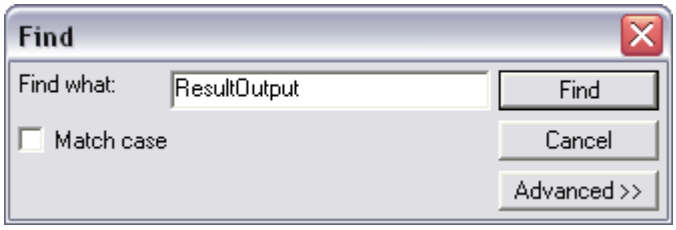
2.4.11 Reports

Many of the plug-ins are report tools. It allows you to create an HTML report of for examples rules in a knowledge base.

Refer to appendix A for the various report possibilities.

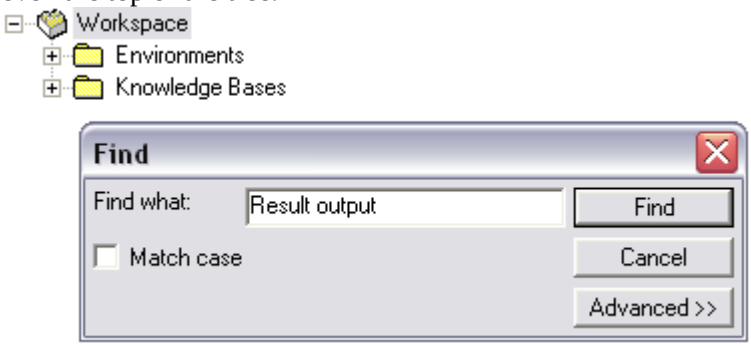
2.4.12 Searching

You can search in documents by making the document the current element and clicking the  button on the toolbar.

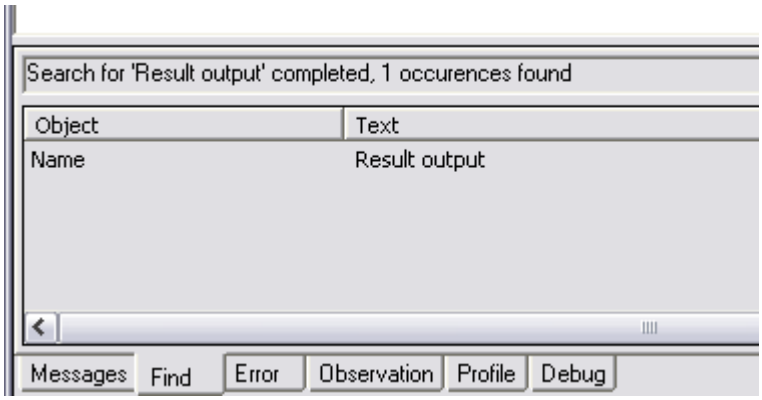


Checking “Match Case” indicates that the search should consider uppercase and lowercase letters as distinct. To illustrate, with Match Case un-checked, a search for “rule” would find occurrences of both “rule” and “Rule”; With Match Case checked only occurrences of “rule” would be found.

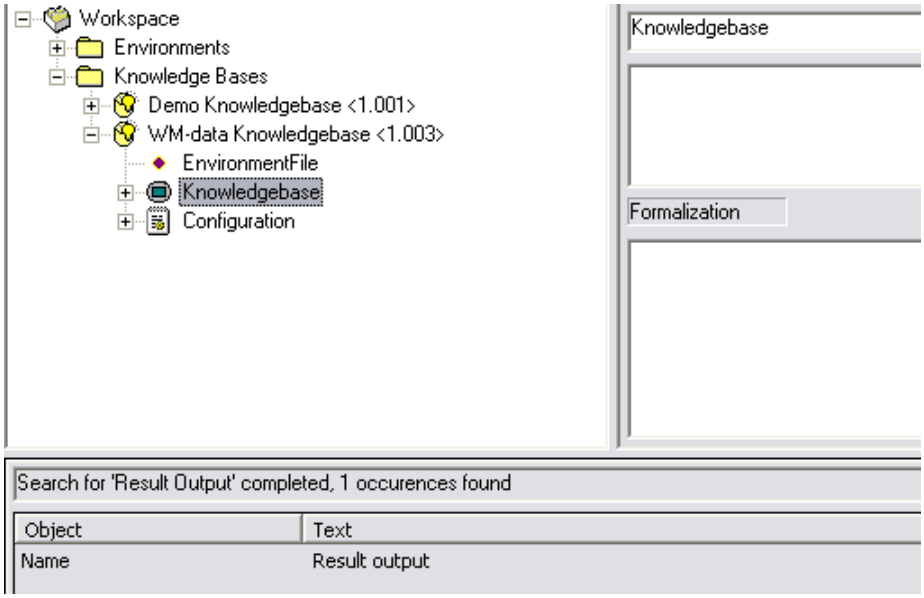
You can also search in multiple documents by selecting the folder you want to search in or even the top of the tree.



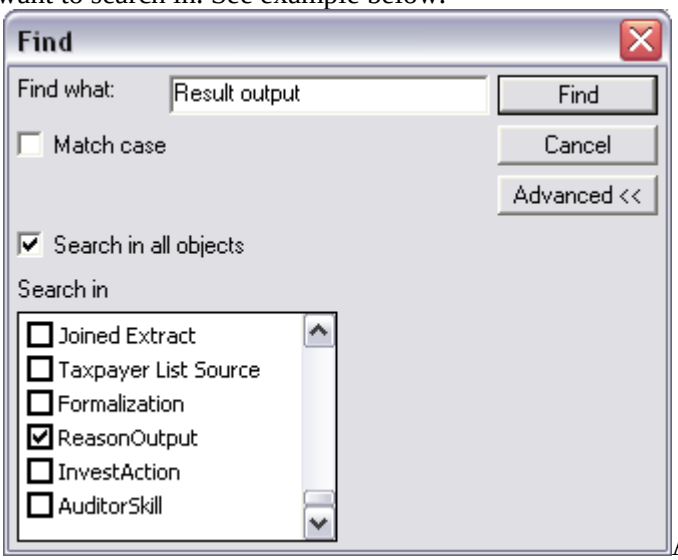
Results are presented in the [Find] tab in the Message Pane.



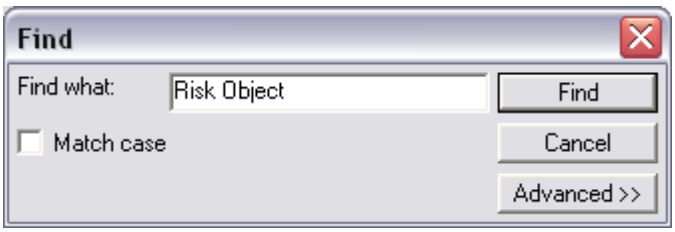
Double click the occurrence for jumping to the relevant element.



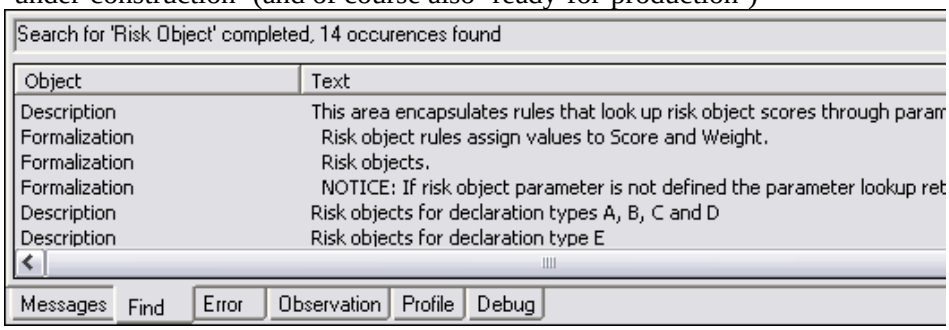
If you only want to search in specific elements, then click the [Advanced] button on the [Find] dialog, uncheck the [search in all objects] checkbox and check the elements you want to search in. See example below:



An example of searching could be that we are interested in finding all rules in a knowledge base that have status 'under-construction'. To do so, make the knowledge base the current element and click the search  button on the toolbar. Type in under-construction in the search dialog:



In the [Search] tab in the message pane the result together with number of occurrences can be seen. The search can therefore also be used to count the number of rules that have status 'under-construction' (and of course also 'ready-for-production')



Other examples could be that we want to find the rules that use a specific function in their implementation. Or we would like to find rules that use a specific cube-member.

2.4.13 Sorting

Some element types support sorting of their child elements. When nodes are inserted or pasted, the sorting will be applied automatically. However, when an element is renamed (e.g. a cube), sorting does not take effect immediately.

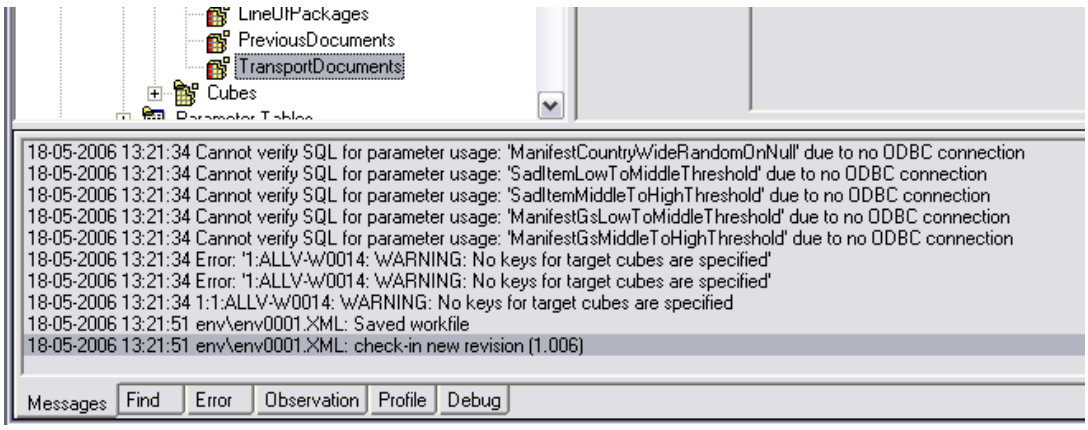
The  button in the toolbar allows sorting to be reapplied by the user. The button is active when the selected element is a child element to an element that supports sorting of its child elements.

Sorting of child elements is supported for the following element types: Parameters, Dimensions, Dimension, Cubes, Extract Definition, and Record Table.

2.4.14 Verify Documents

Certain document types (environments, knowledge bases, tasks) can be verified using one of the verification buttons e.g.  on the toolbar.

This option verifies a number of aspects of the document in questions, e.g. whether all internal references can be resolved. Any discrepancies will be reported in the [Error] tab in the Message Pane and can be investigated by double-clicking them.



 ”Verify” Checks that the formalization syntax within the rule or area is correct. Please refer to Reference, Formalization Language in the online help for the complete syntax definition.

An example of the type of error reported during this verification would be the syntax errors “A = 5 5”, or

“if A < 2”

The correct syntax would have been “A = 55” and “if A < 2”.

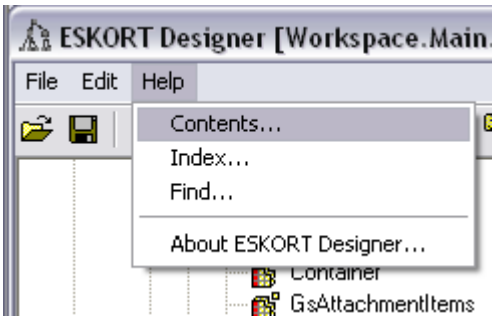
 “Verify Document” Checks the entire document with respect to formalization syntax, and validity of parameters and cube and member references. Only rules in the state ‘Ready-for-production’ are checked.

 “Verify Document All” Checks the entire document with respect to formalization syntax, and validity of parameters and cube and member references. All rules in the state ‘Ready-for-production’ or ‘Ready-for-test ‘ are checked.

2.4.15 Help

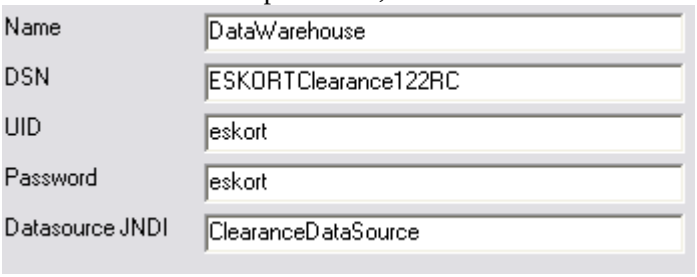
Context sensitive Help to the element in focus can be invoked by pressing F1.

The online help can also be opened by choosing [Contents…], [Index…], or [Find…] in the Help menu of the main menu. Choose [Contents…] and click [Getting Help] for additional information on how to use the online help.



2.5 The Editor Pane

The editor pane displays information from the attributes of the current element, as illustrated in the example below, which shows the attributes of an ExtractData element.



When the document is locked, the attributes can be edited using the displayed controls (text boxes, checkboxes, combo boxes, etc.).

Appendix A: Plug-Ins

This appendix lists the plug-ins available for an element.

Environment

The plug-ins available for the Environment element are:

- ***Verify Document***

  Checks the entire environment for validation with of parameters and cube and member references.

  Refer to section 2.4.14 for more information of document verification.

- ***Report: Generic***

  Creates an HTML report of the cubes, dimensions, parameters and extract definitions in the environment. The user specifies the exact content of this report.

  Refer to [ESKORT Designer, Section II – Introduction to Environments] for more information about generic reports for environments and to [ESKORT Designer, Section III– Introduction to Knowledge Engineering] for more information about generic reports for knowledge bases.

KnowledgeBase

The plug-ins available for the KnowledgeBase element are:

- ***Report: Generic***

  Creates an HTML report of the areas and rules in a knowledge base. The user specifies the exact content of this report.

  Refer to [ESKORT Designer, Section III – Introduction to Knowledge Engineering] for more information about generic reports for knowledge bases.

- ***Report: Cross Reference***

  Creates an HTML report of cross-reference information on the rules and use of members in the rules.

  Refer to [ESKORT Designer, Section III – Introduction to Knowledge Engineering] for more information about generic reports for cross-references.

- ***Verify Document***

  Checks the entire knowledge base with respect to formalization syntax, and validity of parameters and cube and member references. Only rules in the state ‘Ready-for-production’ are checked.

  Refer to section 2.4.14 for more information of document verification.

- ***Verify Document (All)***

  Checks the entire knowledge base with respect to formalization syntax, and validity of parameters and cube and member references. All rules in the state 'Ready-for-production' or 'Ready-for-test ' are checked.

  Refer to section 2.4.14 for more information of document verification.

Area

The plug-ins available for the Area element are:

- ***Notepad***

  Creates an XML-extract of the knowledge base and shows it in notepad. The extract contains the current area together with the child areas and rules belonging to this area.

  Note: The content of this XML-extract is intended for use by experienced knowledge engineers and should not be used by the normal user.

- ***Report***

  Creates an HTML report of the current area together with the child areas and rules belonging to this area.

- ***Report (No Formalization)***

  Creates an HTML report of the current area together with the child areas and rules belonging to this area. This report contains no formalization.

- ***Export for Test Analysis***

  Creates an extract knowledge base file (XML-file) containing the current area together with the child areas and rules belonging to this area.

  This file can be used for testing only the rules within the current area in the Analysis Server.

  Refer to [ESKORT Designer, Section V – Defining and Releasing Tasks] for more information about test analysis functionality.

Rule

The plug-ins available for the Rule element are:

- ***Notepad***

  Creates an XML-extract of the knowledge base and shows it in notepad. The extract contains the current rule.

  Note: The content of this XML-extract is intended for use by experienced knowledge engineers and should not be used by the normal user.

- ***Rule Templates***

  Shows a HTML file that contains templates for typical rule formalizations. These can be copied and pasted into the rule formalization as a help when formalising the rules.

- ***Report***

  Creates an HTML report of the current rule.

- ***Report (No Formalization)***

  Creates an HTML report of the current rule. This report contains no formalization.

- ***Verify Formalization Syntax***

  Verifies that the formalization of the rule is syntactically correct.

  Refer to section 2.4.14 for more information of verification.