ENTERPRISE ARCHITECT

User Guide Series

Model Perspectives

CREATED WITH **ENTERPRISE ARCHITECT**

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Model Perspectives

Enterprise Architect is used by a wide range of teams, from executives and Business Architects who model organizational change and strategic direction at the highest level, through to Technology Architects who model infrastructure and implementation at the lowest level, with a large number of other disciplines in between. These additional disciplines include Business Analysts, Process Analysts and Requirement Analysts; Information Architects, Data Architects, Application Architects and Security Architects; System Engineers and Product Engineers; Testers; Scrum Masters and many more.

Enterprise Architect has a huge range of available features supporting these disciplines that, when seen together, might be difficult to assess. To ensure a modeler can quickly identify and use the features of greatest value to the role they are performing at a particular time, Perspectives have been created to bundle the features - including modeling languages and example patterns - into sets. This allows you to effectively change roles and focus simply by switching to another Perspective - almost like putting on a different hat. When a Perspective is selected the tool instantly changes to hide the irrelevant features and only display the ones defined for that Perspective. Some modelers might select or be assigned a single Perspective for the lifetime of a role or project, whilst others might switch Perspectives five or six times a day.

The Perspectives are completely configurable, allowing fine grain inclusion (and thus exclusion) of language constructs and tool features; this can be done at a whole-model level, security group level or personal level.
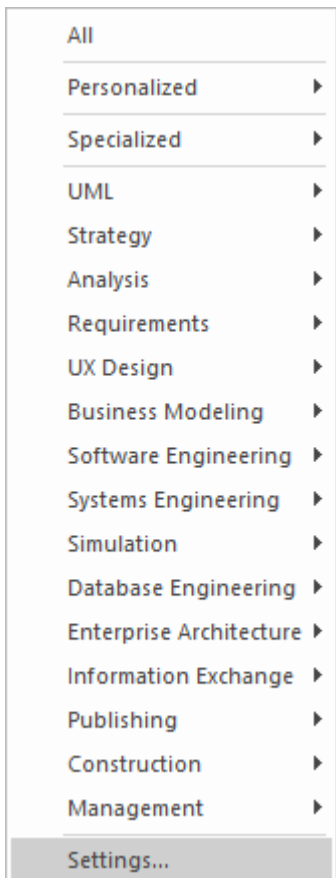
Perspectives:

- Are selections of Technologies - some specific to one of the many modeling languages - and their model and diagram Patterns

- Are tailored to domain-specific modeling scenarios; when you work in a specific domain, you can apply a Perspective to expose appropriate facilities and hide all others

- Remove the significant distraction of having to identify and assess multiple technologies before proceeding with your work

- Help you to select and apply an environment of particular modeling languages or Technologies, enabling you to work effectively and efficiently on the task at hand

- Help you to switch easily and quickly between tools when your modeling focus changes; you simply select another Perspective from the list of Perspective Sets (which identify the domain they support) and Enterprise Architect then hides the features of the previous Technologies and applies the new environment

Initially you can select from the built-in Perspective Sets and the more than eighty Perspectives they provide. As your experience in modeling with Enterprise Architect develops and your work becomes more specific, you can create custom Perspectives either just for yourself or for all users of the model. This helps you work within a Technology that you might have recently imported and activated, or apply a combination of Technologies that are not associated in the built-in sets.

Overview

You select and switch to the required Perspective through:

- The 👁 <perspective name> option at the top right of the screen (which identifies the currently-active Perspective), or

- Through the 'Start > All Windows > Perspective' drop-downs in the ribbon, or

- Directly through the Perspective Portal in the Portals window

Selecting a built-in Perspective automatically brings up the Model Builder dialog with the Model Builder tab selected, which provides a rich set of new model patterns and guidance notes, filtered to narrow down the available patterns, technologies, diagram types and other modeling constructs to the precise set required, with similar actions on the Diagram Toolbox pages and dialogs. This helps you to quickly build accurate, focused models with minimal 'noise' and maximum fidelity.

Applying a Perspective mainly takes place through the Model Builder dialog, Diagram Toolbox and 'Stereotypes' dialog, for creating model structures. Note that the 👁 <perspective name> option sets the global Perspective for the model and in these dialogs and displays, but the windows, dialogs and ribbons allow you to swap to a different Perspective for a work task instantly, making it easy to find and change to the exact modeling tools required at that moment.

As a huge boost to modeling encompassing several disciplines and modeling domains, selecting a Perspective provides its Technology as an available development tool, whilst all existing model structures that make use of the *hidden* Technologies still render and work as normal. If you have a model that contains, say, a BPMN View and a SysML View, you might apply a Perspective to support the creation of BPMN structures and see only BPMN templates and Toolbox items in your BPMN development. But if you open a SysML diagram during this work, you will still see the SysML Toolbox pages, Properties pages and options that enable you to properly examine that diagram.

To further enhance your modeling experience, you can also use the Perspective Sets dialog to filter the Perspectives, hiding complete Perspective sets or individual Perspectives. This enables you to reduce the list of Perspectives offered for selection to just those you are likely to use.

Additionally, the model administrator can tailor the Perspectives and/or ribbons available to each User Security Group, as a Perspective Setting or Ribbon Set for each group. This filters the Perspectives available to a user according to their security group, rather than their personal choice. See the *Perspectives for Security Groups* Help topic.

Regardless of which Perspective you select, all of the coding languages, templates, RTF templates and images remain immediately available.

For specific instructions on using Perspectives, see the *Using Perspectives* Help topic.

System Perspectives

Enterprise Architect provides a rich set of more than eighty Perspectives built directly into the application, which have been crafted to align with the multitude of roles that modelers perform; these Perspectives are grouped into Sets that make finding the right Perspective quick and easy, and include:

- Business Sets for Strategy, BPMN, Business Analysis and more, helping the business user focus on their current task

- SysML, MBSE, Software, Simulation and others, for the Systems Engineer and Software Engineer

- ArchiMate, TOGAF, Zachman Framework and GRA-UML, version-specific Sets that provide the most common

tools for the needs of Enterprise Architects

- SPEM, Process Guidance and MDG Technology Builder for Project Managers

Each set contains a number of relevant and useful Perspectives. This image shows an example of the Analysis Perspective Set, which contains a number of Perspectives.

For a more comprehensive description of the built-in Perspectives, see the *Types of Perspective* Help topic.

Custom Perspectives

In addition to the built-in Perspectives, you can create any number of your own Perspectives on the 'Personal Sets' tab of the Perspective Sets dialog. While the built-in, or system, Perspectives typically contain a single language or technology - for example the Business Process Model and Notation (BPMN) Perspective allows you to focus on just BPMN - custom Perspectives allow you to open a number of technologies at the same time. For example, if you regularly create prototypes you might want to create a 'Prototyping' Perspective that groups the technologies and modeling languages you use in that work.
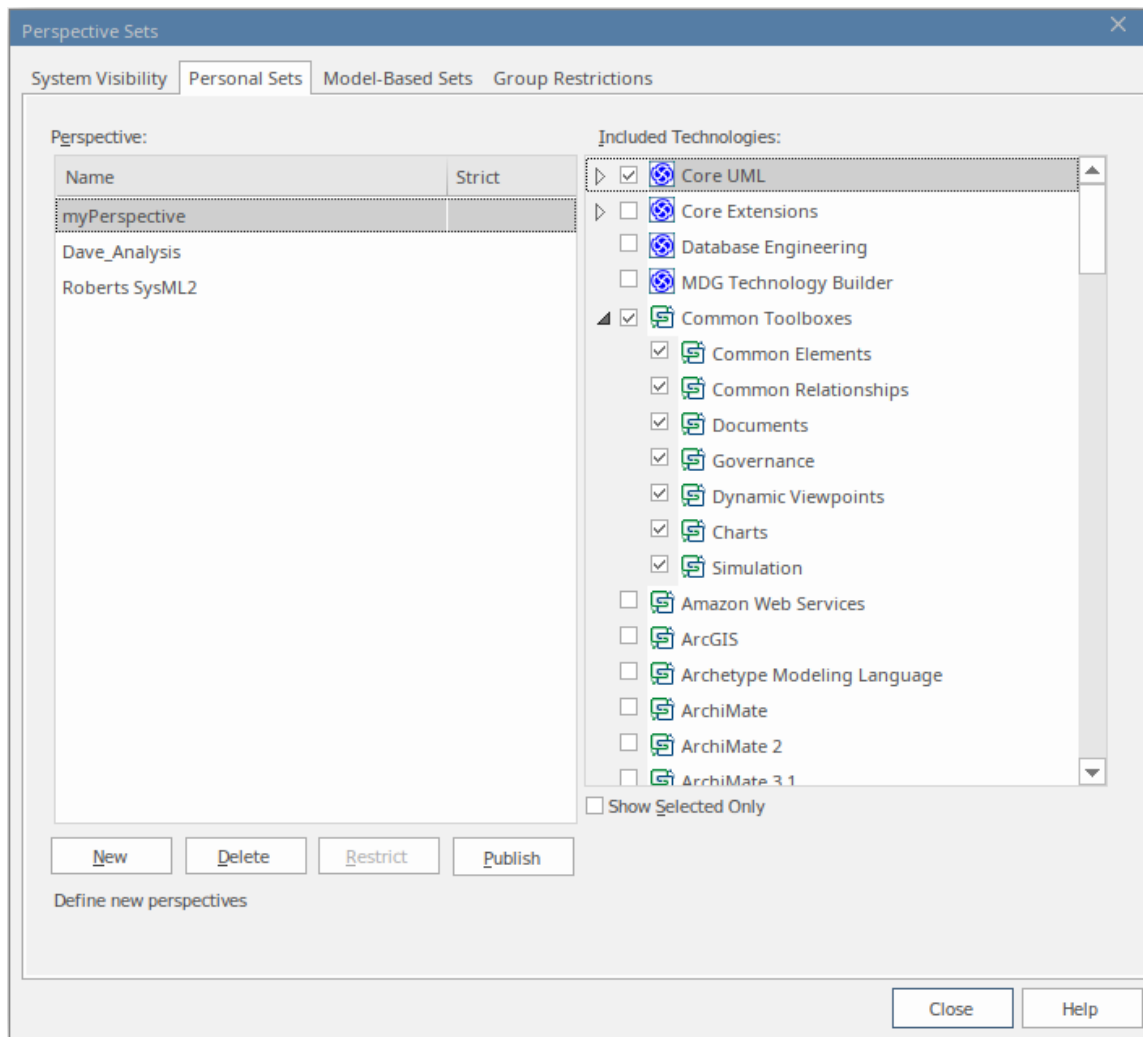
These custom Perspectives can be created, modified and deleted as the roles you perform change over time. For information on creating custom Perspectives, see the *Customizing Perspectives* Help topic.

Perspective Modeling

Built-in perspectives can be modeled using the MDG Technology for Model Perspectives. This can be accessed by selecting the perspective **Custom Technologies > Model Perspectives**. On a perspective workspace diagram, one or more perspectives are modeled as having a number of technology sets, each of which is made up of a number of technologies. A perspective can be linked to a security group. When a security group has a perspective linked to it, that perspective will be the only one that members of the security group can access, so security groups can be linked to multiple perspectives, including built-in (internal) perspectives.

Ribbon sets can also be defined on a perspective workspace diagram. A ribbon set defines which ribbon commands are available and will have a number of linked ribbon categories, named for the main ribbons - Design, Layout, Develop etc. Each ribbon category will have a number of ribbon groups, named for the panels on a ribbon, e.g. ribbon category 'Design' will have ribbon groups Explore, Package, Diagram etc. When a ribbon set is linked to a security group, it defines and limits the ribbon commands available to members of the security group.

For more information, see the Perspective Modeling help topic.

Types of Perspective

There is a wide selection of built-in Perspectives provided within Enterprise Architect, each containing a suite of Patterns. The Perspectives themselves are organized into groups called Perspective Sets.

Extensive research has been conducted to define sets of Perspectives that are expertly tailored to meet the needs of modelers who work in a particular project discipline or team role. For example, there are Perspectives for strategists, enterprise and solution architects, requirement analysts, user experience designers, informaticians, systems engineers and many more, remembering that a user can switch to another available Perspective at any time when their role or modeling emphasis changes. You can select certain sets and hide others; effectively, it is like having access to fifty different tools, but all cleverly concealed when they are not required, allowing you to stay focused on the task at hand with the tools, workspaces, languages and features that are needed, including best practice patterns to get your modeling off to a flying start.

This *Types of Perspective* topic is a reference, describing each Perspective Set and Perspective. You can also create your own Personal Perspectives, which are included under the second item in the full list of Perspective Sets.

To select and apply any of these Perspectives, see the Using Perspectives Help topic.

Perspectives

Category	Perspectives
All	This category lists every Perspective Set and Perspective available.
Personal Sets	This category lists every custom Perspective that is available to you.
Shared Sets	The 'Shared Sets' category holds the Perspectives that you have created for yourself, using the 'Start > All Windows > Perspective > Settings' option. For further details, see the Help topic *Customizing Perspectives*.
Specialized	This category lists all Perspectives provided by imported User Technologies (including the UML Technology).

UML	The UML category provides the Perspectives for normal UML modeling, including:
	
	• All UML Modeling - all modeling tools and objects provided by the other Perspectives in this group
	• UML Structural Models - the modeling tools and objects for structural UML models, such as:
	  - Package diagrams
	  - Class diagrams
	  - Object diagrams
	  - Composite Structure diagrams
	  - Component diagrams
	  - Deployment diagrams
	• UML Behavioral Models - the modeling tools and objects for behavioral UML models, such as:
	  - Use Case diagrams
	  - Sequence diagrams
	  - Communication diagrams
	  - Timing diagrams
	  - Interaction Overview diagrams
	  - Activity diagrams
	  - StateMachine diagrams

Strategy	The Strategy category provides Perspectives for:
	• All Strategy - all modeling tools and objects provided by the other Perspectives in this group
	• Mind Mapping - the basic Mind Map diagram

	• Strategy modeling, such as:
	  - Organizational Chart
	  - Value Chains
	  - Strategy Maps
	  - Balanced Scorecard
	  - One-level and Two-level Flow Charts
	  - Decision Analyses with Decision Tree and with Decision Models
	  - SWOT Analysis

	• Risk Analysis - the Risk Taxonomy - Threat Community diagram
Analysis	The Analysis category provides Perspectives for:
	• All Analysis - all modeling tools and objects provided by the other Perspectives in this group
	• Custom Diagram Style - the 'Simple Style' diagram rendering for presentations and non-technical display of information
	• Amazon Web Services (AWS) - for creating Amazon/AWS diagrams in Enterprise Architect
	• Google Cloud Platform (GCP) Icons - for creating Google Cloud Platform diagrams
	• Microsoft Azure - a new Image library of graphics (icons and images) required to model Microsoft Azure deployments
	• Whiteboards - diagram structures in Whiteboard and/or Hand-drawn mode
	• Simple Analysis, based on a Two Activity Process

	• Case Management Model and Notation (CMMN) analysis, with a:
	  - Claims Management example
	  - Basic 5-Task Plan
	  - Three Choice Tasks Pattern
	  - Two Phase Case Plan

	• Eriksson-Penker Business Extensions (EPBE) modeling, the basic business process
	• Web Stereotypes, based on a simple Java Server Page (JSP) model
	• Threat Modeling
Requirements	The Requirements category provides Perspectives for:
	• All Requirements - all modeling tools and objects provided by the other Perspectives in this group
	• Creating a range of Requirement Hierarchy diagrams, and a Requirement Specification View

	• Working with Decision Model and Notation (DMN) to:
	  - Create a simple Decision diagram with a Decision Table
	  - Set up a DMN Business Knowledge Model
	  - Model a DMN Decision

	• Setting up a Modeling Business Rules model
	• Setting up one-level and two-level Data Flow Diagrams models
UX Design	The UX Design category provides a number of Perspectives for modeling user interfaces on various devices, including:
	• All UX Design - all modeling tools and objects provided by the other

	Perspectives in this group • **User Interaction & Experience** for various phone and tablet devices • **Interaction Flow Models IFML** Interaction flows on desktop applications, information entry, interaction on wireframe devices, and information searches • A basic Enterprise Architect user interface model for a window with lists and combo boxes • An alternative simple user interface • **Win32 User Interface Dialogs**

Business Modeling	The Business Modeling category provides these Perspectives:
	
	All Business Modeling - all modeling tools and objects provided by the other Perspectives in this group
	• **Business Process Model and Notation (BPMN)** - Patterns for:
	  - BPMN 2.0 modeling
	  - BPEL 2.0 Starter model
	• **BPSim Business Simulations** - Patterns for BPMN 2.0 and BPEL 2.0 modeling, plus:
	  - Patterns for Business Process Simulation (BPSim) constructs and
	  - Patterns for a number of BPSim Case Studies
	• **Business Motivation Model (BMM)**
	• Business Model Patterns for Business Use Case models and Use Case Realization
	• **Business Modeling/Interaction** model Patterns
	• BABOK - a wide range of Patterns supporting models for:
	  - Strategies
	  - Collaboration activities
	  - Analyses
	  - Business Processes
	  - Project Management activities
	  - Standard business documents
	• BIZBOK - Patterns for modeling BIZBOK activities
	• **Value Delivery Modeling Language (VDML)** - Patterns for modeling in Value Data Markup Language

Software Engineering	The Software Engineering category provides Perspectives for software development, including: • All Software Engineering - all modeling tools and objects provided by the other Perspectives in this group • Code Engineering, modeling programs in a number of programming languages • Service Oriented **SOMF 2.1**, for several Conceptual Association types • **SoaML**, for modeling aspects of basic service provision • XSLT Feature demonstrations, such as XSLT transforms and debugging • WSDL - providing a complete WSDL template model • XML Schema - providing an XML Schema Package and diagram • **ICONIX** modeling • **Gang of Four (GoF) Patterns** Patterns for Creational, Structural and Behavioral models
Systems Engineering	The Systems Engineering category provides Perspectives to support Systems Engineering projects: • All Systems Engineering - all modeling tools and objects provided by the other

Perspectives in this group

- [Systems Modeling Language (SysML)](#), with a wide range of Patterns for generating:
  - Project structures
  - Requirements diagrams
  - Use Case diagrams
  - Activity diagrams
  - Block Definition diagrams
  - Internal Block diagrams
  - Parametric diagrams
  - StateMachine diagrams
  - Libraries
  - Model elements
  - OpenModelica Case Studies

- UAF, with Patterns for:
  - Strategic Views (St-xx)
  - Operational Views (Op-xx)
  - Services View (Sv-xx)
  - Personnel Views (Pr-xx)
  - Resources Views (Rs-xx)
  - Security Views (Sc-xx)
  - Projects Views (Pj-xx)
  - Standards Views (Sd-xx)
  - Actual Resources Views (Ar-xx)
  - Dictionary View (Dc)
  - Requirements View (Rq)
  - Summary and Overview (SmOv)
  - Information View (If)
  - Parameters Views (Pm-xx)
  - The SysML 1.5 sets (as listed, except for OpenModelica Case Studies)

- [Unified Profile for DoDAF/MODAF (UPDM)](#) with Patterns for:
  - UPDM Frameworks (DoDAF and MODAF)
  - DoDAF All Viewpoints (AV-n)
  - DoDAF Capability Viewpoints (CV-n)
  - DoDAF Data and Information Viewpoints (DIV-n)
  - DoDAF Operational Viewpoints (OV-n)
  - DoDAF Project Viewpoints (PV-n)
  - DoDAF Services Viewpoints (SvcV-n)
  - DoDAF Standard Viewpoints (StdV-n)
  - DoDAF Systems Viewpoints (SV-n)
  - MODAF All Views (AV-n) Viewpoints
  - MODAF Acquisition (AcV-n) Viewpoints
  - MODAF Operational (OV-n) Viewpoints
  - MODAF Service Oriented Views (SOV-n) Viewpoints
  - MODAF Strategic Views (StV-n) Viewpoints
  - MODAF System Viewpoints (SV-n)
  - MODAF Technical Standards Views (TV-n) Viewpoints

- Executable StateMachines, with various Patterns including a set to demonstrate case studies

- Matlab/Octave Solvers

- AUTOSAR, by LieberLieber - sets of patterns for creating models in accordance with the AUTOSAR 4 Virtual Function Bus specification in LieberLieber AUTOSAR Engineer

- MARTE - a range of UML-type Patterns for creating diagrams under the 'Modeling and Analysis of Real Time and Embedded systems' profile from the OMG

Simulation	The Simulation category provides Perspectives to allow easy access to the wide variety of Simulation technologies available in Enterprise Architect: • All Simulation - all modeling tools and objects provided by the other Perspectives in this group • SysML with Modelica • UML Behavioral • Executable StateMachines • Matlab/Octave Solvers • BPSim • Decision Modeling • Executable Business States • Win 32 UI Models
Database Engineering	The Database Engineering category provides sets of Perspectives for modeling a range of DBMS repositories, including: • All Database Engineering - all modeling tools and objects provided by the other Perspectives in this group • Starter Model and Model Structure Patterns for each of the main DBMSs supported by Enterprise Architect • Data Warehouse Architecture • Data Warehouse Schema • Patterns for simple Entity Relationship Diagrams (ERDs) models • Patterns for simple ArcGIS Geodatabases projects and workspaces

Enterprise Architecture	The Enterprise Architecture category provides a number of Perspectives for Enterprise Architecture frameworks, including:
	
	• All Enterprise Architecture - all modeling tools and objects provided by the other Perspectives in this group
	• ArchiMate Modeling Language, supplying Patterns for:
	   - Basic viewpoints such as Organization, Application Usage and Service Realization
	   - Motivation Viewpoints such as for Stakeholders, Principles and Requirements Realization
	   - Strategy Viewpoints
	   - Implementation and Migration Viewpoints
	• The Open Group Architecture Framework (TOGAF), with Patterns for:
	   - A Starter Model
	   - The Architecture Development Method
	   - The Enterprise Continuum
	   - The Technical Reference Model
	   - Catalogs
	• The Zachman Framework
	• GRA-UML annotations library and starter model
	• The Essential Architecture (TEA)

Information Exchange	The Information Exchange category supports a number of built-in technologies, providing Perspectives and basic model Patterns for: • All Information Exchange - all modeling tools and objects provided by the other Perspectives in this group • Ontology Definition Metamodel

	• [Geography Markup Language (GML)](#) • [Archetype Modeling Language (AML)](#) • [National Information Exchange Modeling (NIEM)](#) 3.0, 3.1, 3.2 and 4.0 Reference Models and NIEM 3 and 4 starter models • SIMF • Universal Business Language (UBL) • [UML Profile for Core Components (UPCC)](#) • UMM 2.0 Profile
Publishing	The Publishing category provides Perspectives for communicating information on the model, including: • All Publishing - all modeling tools and objects provided by the other Perspectives in this group • [Document Generation](#) • [Standard Charts](#) • [Dynamic Charts](#) • [Diagram Legends](#) to define how diagram legends are set up and used • [Model Glossary](#) • Help Authoring • Process Guidance - working up process templates
Construction	The Construction category provides these Perspectives: • All Construction - all modeling tools and objects provided by the other Perspectives in this group • Project Management, for Project Management and Roadmap diagrams • [Kanban Boards](#) workflows • Reviews and Discussions to define the structure and function of these team collaboration activities • Construction View to show a simple Construction rendering of an element with its management items, and more complex diagrams that include the elements related to the Construction element • Test Management to define how tests are planned and managed • Change Management to define a model for managing issues and changes • Scriptlets • [The Data Miner](#) • [Software & Systems Process Engineering Meta-Model (SPEM)](#)
Custom Technologies	The Custom Technologies category provides Perspectives to support: • All Management - all modeling tools and objects provided by the other Perspectives in this group • The MDG Technology Builder • Model Perspectives • Model Add-Ins

Using Perspectives

You can access both built-in and custom Perspectives from a number of different points. This makes it easy to start your work in the appropriate environment with the required Perspective from any point, and to quickly and smoothly switch to a different Perspective if the need arises.

Conversely, if you prefer to have a wider range of tools and languages immediately available to you, you can select the appropriate 'All <perspective group name>' option in the Model Builder or list to filter for all Perspectives for a domain.

Note that if a 'Perspective for Security Group' has been set for the model and you are a member of that security group, you will not be able to change the visibility of Perspectives as that will be defined by the administrator for the group.

Access

Currently, selecting a built-in Perspective will take you to the Model Builder dialog. Some access paths first take you to the Perspectives Portal, and when you select a Perspective from there the Model Builder dialog is opened and you choose the appropriate Patterns to use (if required).

Other paths take you directly to the Model Builder, where you first select the Perspective and then the Patterns to use (if required).

Ribbons	Start > All Windows > Perspective > <perspective group> > <perspective> Start > Explore > Portals > Perspectives > <perspective group> > <perspective> Start > Personal > Model Builder > <perspective group> > <perspective> Design > Package > Model Builder > <perspective group> > <perspective>
Context Menu	Right-click on Package > Model Builder (pattern library) > <perspective group> > <perspective>
Other	(Top right corner of screen) > > <perspective group> > <perspective> ('My Perspective' options just apply the custom Perspective) Navigator Toolbar : : > <perspective group> > <perspective>

Use a Perspective

Having selected a Perspective, and depending on what Perspective that is, you would expect to see impacts on the Model Builder dialog, 'New Diagram' dialog, Diagram Toolbox and 'Stereotypes' dialog, each offering fewer options more specific to the Technology or operations you are working in. For Perspectives related to Code Engineering, the code editors and code generators might also have a narrower focus.

As you develop models and/or engineer code, you will see the structures you require and not have to pick them out from many other structures of no relevance to the work you are doing.

Filter Perspectives Available

You are unlikely to use all the Perspectives available in Enterprise Architect, so if you prefer you can exclude the

individual Perspectives - or complete Perspective Sets - that you do not need from display in the Model Builder and ⬤
selection lists. You do this using the 'Perspective Sets' dialog:

Start > All Windows > Perspective > Settings

The 'Perspective Sets' dialog defaults to the 'System Sets' tab. If you want to exclude a complete Perspective Set, deselect the checkbox against that category in the 'Perspective Sets' panel.

Otherwise, if you want to just exclude individual Perspectives click on the parent Perspective Set name and, in the 'Perspectives' panel, deselect the checkbox against the Perspective name. In this illustration, the CMMN and Erikson-Penker Model Perspectives have been excluded from display.
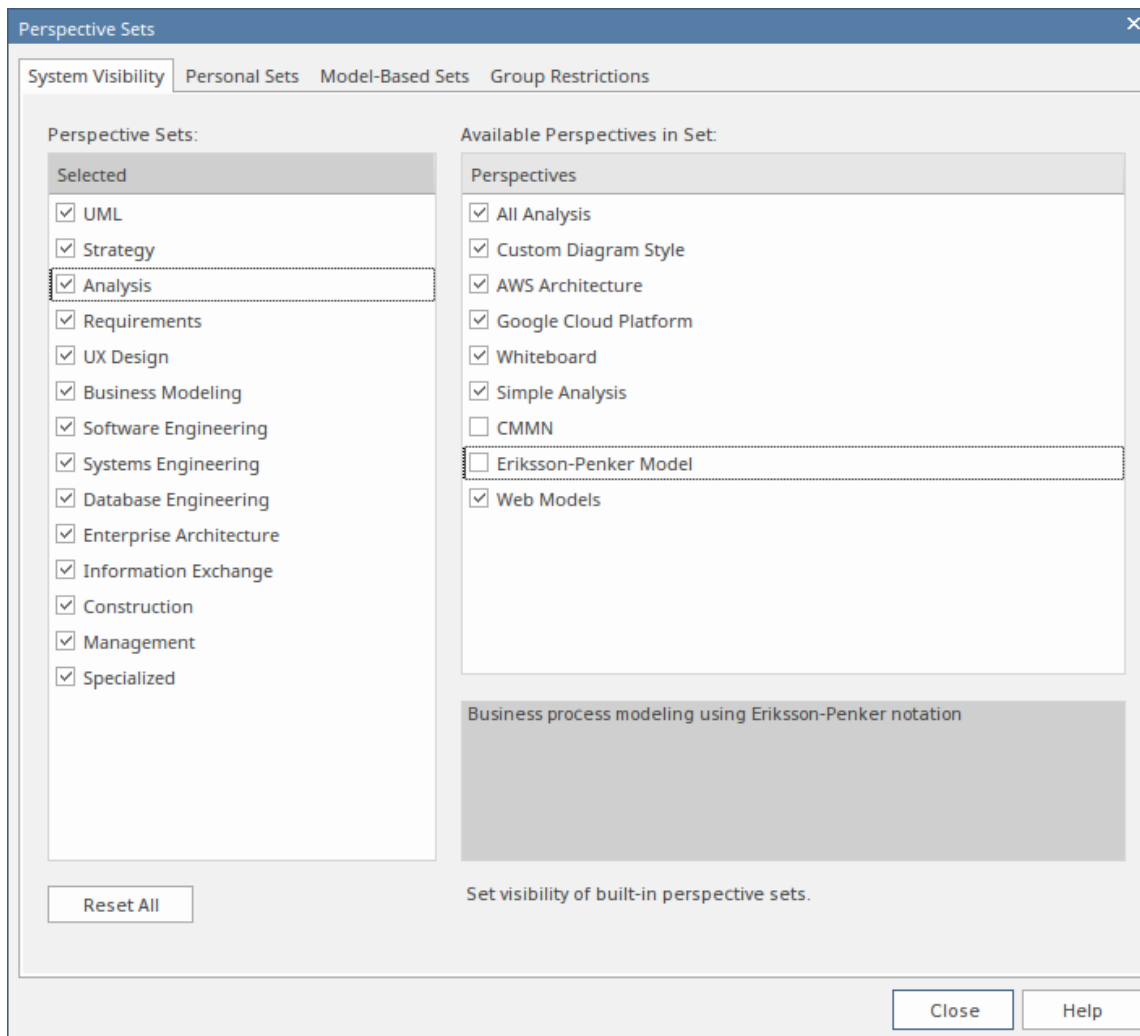
Note that if you exclude a Perspective Set, the checkboxes against the individual member Perspectives remain selected. However, the Perspectives do not show in the selection lists in, say, the Model Builder.

If you decide to show any excluded Perspectives again, return to the dialog and select the appropriate checkboxes. Alternatively, show all Perspectives as explained in *Revert to All Perspectives*.

Revert to All Perspectives

If you have filtered your list of Perspectives, or been working within a specialized Perspective such as Requirements or a customized Perspective, and you want to return to a non-specific environment, either:

- Select the 'Start > All Windows > Perspective > Settings' ribbon option to display the 'Perspective Sets' dialog, and click on the Reset All button or

- Select ⬤ > All

Notes

- A Perspective hides all Technologies that are not specifically associated with it; if you use custom Technologies in your work, add them to a custom Perspective with any built-in Technologies you want to use, so that all your specialized tools are available together

- An individual Technology might not present all facilities you need (for example, ICONIX does not have a diagram profile, so a Perspective that just exposes ICONIX does not allow you to create diagrams); select or create a custom Perspective that includes a Technology that adds the missing facilities (in this case, the UML Technology)

- In order to function when included in and presented by the Perspective, a Technology must remain enabled in the 'Manage Technologies' dialog

Customizing Perspectives

Whilst Enterprise Architect boasts a wide range of system (built-in) Perspectives, as users and teams gain more experience with the huge number of technologies and features in the tool, or their roles change, they might want to create their own personal or model based Perspectives more specifically tailored to their area of work, or to expose Technologies they have recently imported. Enterprise Architect provides the ability for Perspectives to be completely customized down to the level of the items that appear on a technology Toolbox page, and these definitions can be created once and then reused by different team members or even across different repositories.

Before starting, review the Technologies available to you in Enterprise Architect and identify and enable those you want to apply in a Perspective, either individually or in combination. This is particularly important for any custom Technologies you have, as selecting a Perspective makes available only those Technologies it specifically contains and hides all others - including your custom Technologies.

You can create custom Perspectives for your own personal use, or for all model users, and move or copy individual Perspectives between the two levels. You can also publish custom Perspectives, exporting them as a set from one model and importing them as a set into other models.

The procedures for working with personal custom Perspectives and model-level custom Perspectives are the same, except where specifically stated in this topic.

If you have User Security enabled on a model or project, as an administrator you can also set up Perspective Settings that identify the Perspectives available to users in each of the defined security groups. See the *Perspectives for Security Groups* Help topic.

Access

These access options display the 'Perspective Sets' dialog, through which you can create customized Perspectives.

Ribbon	Start > All Windows > Perspective > Settings... > Personal Sets or Shared Sets
Perspective drop-down	Open the Perspective drop-down menu located in the top-right corner of the main window. Select 'Settings...' from the bottom of the list. The settings can also be loaded from other places in Enterprise Architect that show the Perspective drop-down menu. Then select **Personal Sets** or **Shared Sets**

Create Custom Perspective

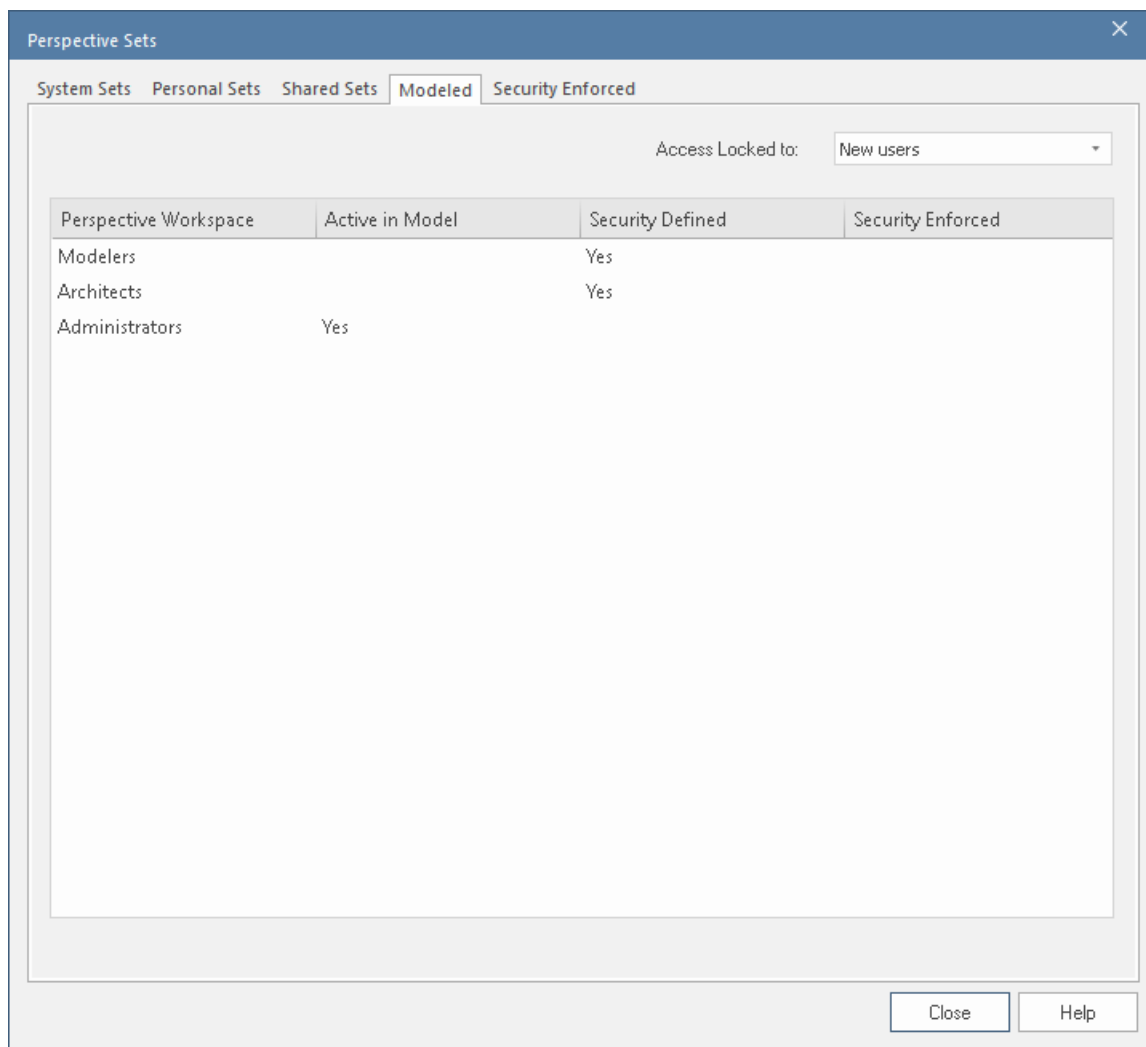| Step	Action
1	Click on the **New button**. The 'Create Perspective' dialog displays, prompting you for the name of the new Perspective. Type in the Perspective name. In your Perspective, you can restrict the creation of constructs (types of diagram, element, connector and Pattern) from within other Technologies. (See the Restrict Custom Perspective section later in this topic.) If you want to do this, select the 'Strict' checkbox. Click on the **OK button**. The name is added to the 'Perspective' panel. If you have selected the 'Strict' checkbox for a Perspective, the word 'Yes' displays in the 'Strict' column and the **Restrict button** is enabled.
2	The new Perspective will be selected. Tick the technologies to be included in the Perspective. Untick any technologies that should not be in the new Perspective. Tick the 'Show Selected Only' checkbox to quickly see only the technologies that are currently ticked.
3	You can also edit the Perspective name, and clear or select the 'Strict' checkbox; right-click on the Perspective name and select the 'Edit' option. The 'Edit Perspective' dialog displays, on which you can overtype the name and/or alter the

	checkbox selection. Then click on the OK button.
4	When you have finished setting up or changing a Perspective, click on the Save button, or click on the Close button and you will be prompted to save any changes.

Manage Modeled Perspectives

Enterprise Architect 17.0 adds a new tab to manage Perspectives that are modeled using the new Perspective Modeling stereotypes.

The list shows all <<perspective workspace>> elements in the model that are used to encapsulate modeled perspective and ribbon sets.

Active in Model	If 'Yes' then this Perspective Workspace has been activated in the model and can be viewed in the Shared Sets tab.
	Right-click on the row to update with any changes to the modeled perspective, or to de-activate to remove it from the Shared Sets
	If blank then this Perspective Workspace has not been activated in the model and will not be available to select. Right-click to activate the Perspective Workspace -

|	choose to also link the Security Groups if available.
Security Enabled	If 'Yes' then this Perspective Workspace has a linked <<security group>> element and can be used to restrict users in the linked group to only be allowed access to this Perspective Workspace.
Security Enforced	If 'Yes' then this Perspective Workspace has been activated in the model and is linked to a Security Group the will restrict uses in that group to only be able to access perspectives, technologies and ribbons as defined in the <<perspective workspace>>. These will be listed in the **Security Enforced** tab.

Restrict a Custom Perspective

Enterprise Architect is a tool for all seasons and is used to create models for initiatives of all sizes, from small endeavors such as a website for a small retail store right up to highly complex systems used in aerospace missions. Many of the supported languages and technologies also have this dimension, defining mechanisms for simple grammars through to extremely complex mechanisms for modeling large real-time systems.

Enterprise Architect provides the Strict Perspectives as a mechanism to restrict users to just the subset of the technology and the tool that they need to undertake their modeling tasks. For example, there might be a group of strategic modelers who just need to model straight-through processing. They only need access to the basic BPMN modeling palette such as Activities and Control Flows, and are not concerned about Pools, Lanes Gateways and Message Flows, for example, and certainly don't want to see Choreography diagrams. The librarian could set up a Strict Perspective restricted to just these modeling elements, connectors and diagrams.

To set a custom Perspective to 'Strict', click on the Perspective name and click on the Restrict button. The 'Modeling Permissions/Restrictions' dialog displays, listing the constructs (diagram, element, connector and Pattern) of each Technology in the Perspective.
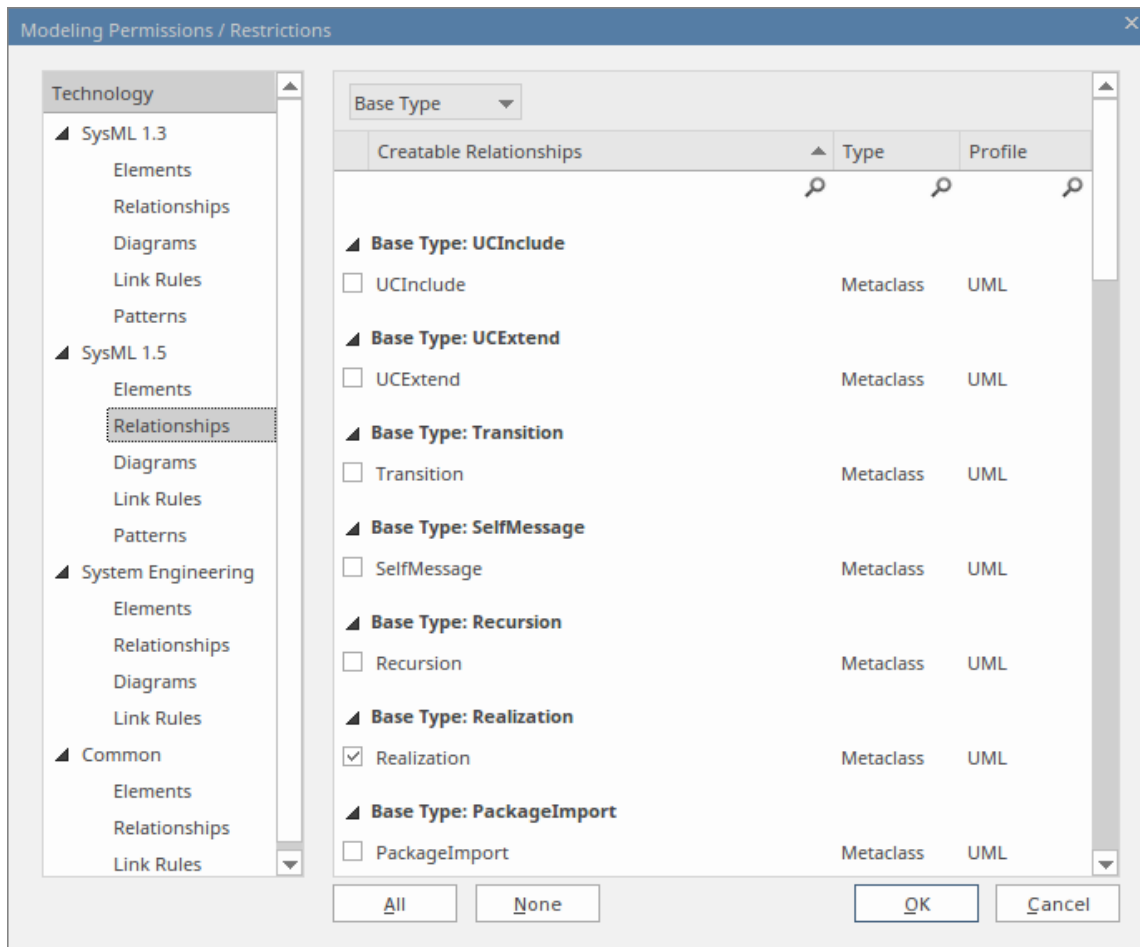
Click on the type of construct for each Technology in turn, and in the lists in the right-hand panel select the checkbox against each type of element, relationship, diagram, link rule or Pattern to allow in the Perspective. If it makes the process easier, use the All button or None button to select all checkboxes or clear all checkboxes before checking or clearing individual entries.

When you have finished setting the allowed constructs, click on the OK button to return to the 'Perspective Sets' dialog.

Publish Custom Perspectives

If you have custom Perspectives in one model, you can publish them by exporting them as a set to file and importing them into other models.

1. On the appropriate tab ('Shared Sets' or 'Personal Sets'), click on the Publish button to display the 'Publish Perspectives' dialog.
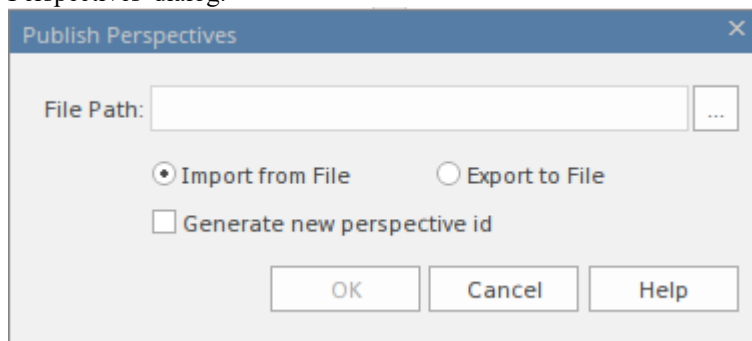
2. In the 'File Path' field, type in or browse for the location of the external file:
    - From which to import previously-captured custom Perspectives, or

- Into which to export the current set of custom Perspectives

3. Select the appropriate radio button for the import or export operation you are performing.

4. Click on the OK button. The exported Perspectives are copied to the specified file. Imported Perspectives are listed on the 'Perspective' panel of the 'Shared Sets' or 'Personal Sets' tab, as appropriate.

Move or Copy Custom Perspectives

If you have created a Perspective in either the 'Shared Sets' tab or the 'Personal Sets' tab, you can move or copy that Perspective from its source tab to the other. You might move a Perspective to make yours available to other users, or to restrict a model Perspective to your own use, or copy the Perspective and edit it to create a variant for general or personal use.

Right-click on the selected Perspective to move or copy that Perspective, or click in the white space of the 'Perspective' panel to move or copy all Perspectives in the list. A short menu provides options to move or copy the Perspective to the alternative group - 'Shared Sets' or 'Personal Sets'. Click on the appropriate option; the move or copy takes place immediately and the Perspective name is displayed in the target panel.

Delete a Custom Perspective

If you no longer want to use a custom Perspective, you can delete it from the list of those available.

On the 'Shared Sets' or 'Personal Sets' tab of the 'Perspective Sets' dialog, click on the custom Perspective name and then on the Delete button.

In response to the confirmation prompt, click on the Yes button.

Perspectives for Security Groups

Perspectives can be integrated with User Security, allowing administrators and librarians to define the set of Perspectives available to a given security user group. This ensures that users in the group have all the tools and languages they need, whilst helping them focus on their work by completely hiding any irrelevant tools that might otherwise be distracting. This results in productivity gains, while still allowing the modelers to switch between Perspectives that have been assigned to them. So, for example, a security group called *Strategic Process Modelers* could be defined and an administrator could assign to it the entire *Strategy* Perspective set and the *Decision Modeling* Perspective from the *Requirement* set. All users assigned to this group would have access to, and be able to switch between, the individual Perspectives or, by selecting *All,* would be able to access the technologies in all their Perspectives. Users who have been assigned as members of a number of groups will have available to them the amalgam (union) of all their groups' Perspectives.

An administrator or librarian who has defined fine-grained technologies using the strict and restricted feature can apply these restricted Perspectives to any group, thus ensuring that the members of the group have only the restricted set of elements, connectors and diagrams from the specified technology. For example, there might be a group of strategic modelers who just need to model straight-through processing. They only need access to the basic BPMN modeling palette such as Activities and Control Flows, and are not concerned about Pools, Lanes, Gateways and Message Flows, for example, and certainly don't want to see Choreography diagrams. The librarian could set up a Strict Perspective restricted to just these modeling elements and connectors and diagrams. They then apply it to the group *Strategic Process Modelers* and ensure the users are made part of that group using the 'Security Users' dialog, available from the 'Configure' ribbon. This gives an administrator fine grained control of what parts of the language their project team can use, resulting in boosts in productivity and outputs.
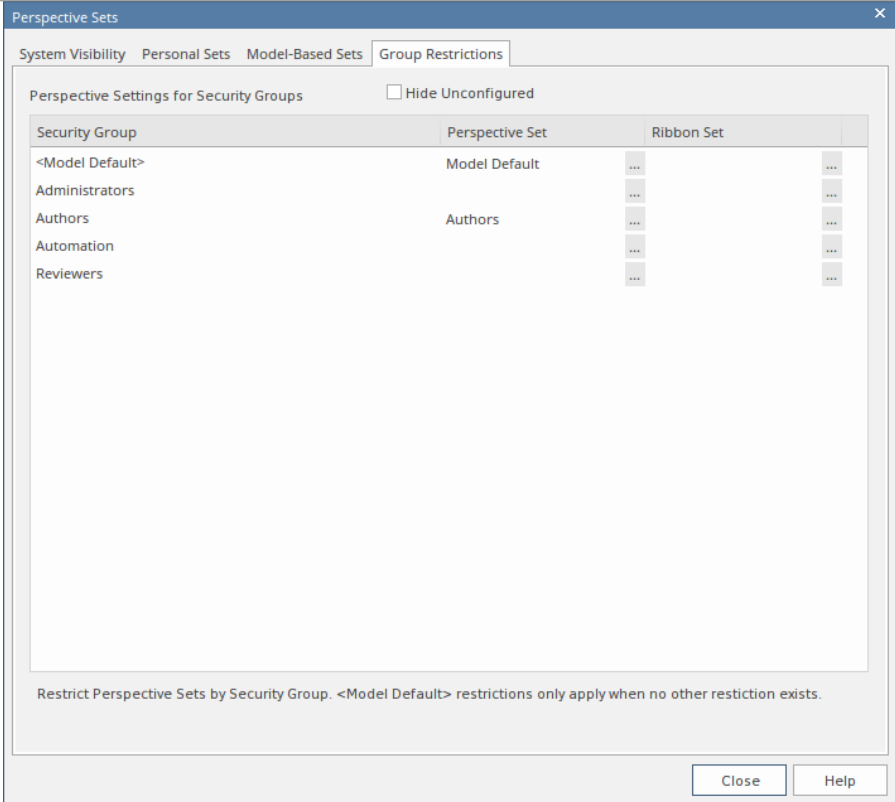
The model administrator can similarly tailor the ribbons available to each user security group, as a Ribbon Set for each group, so that particular ribbons can be hidden to further customize and focus the modelers' workspace.

It is important to note that the 'hidden' technologies are not disabled - the model is still logically correct and fully supported for every underlying technology; it is simply that a particular security group will not be able to model using the hidden technologies.

This feature is available in the Corporate, Unified and Ultimate Editions of Enterprise Architect, from Release 15.0.

Access

Ribbon	Start > All Windows > Perspective > Settings > Security Enforced
	On the 'Perspective Sets' screen, The 'Perspective Settings for Security Groups' panel displays, listing the existing security groups for which Perspective Sets have been defined. (Existing security groups that do not have a Perspective Setting will show in the list if the 'Hide Unconfigured' checkbox is deselected.)

Perspective Sets

System Visibility   Personal Sets   Model-Based Sets   Group Restrictions

Perspective Settings for Security Groups   ☐ Hide Unconfigured

Security Group	Perspective Set	Ribbon Set	
<Model Default>	Model Default	...	...
Administrators		...	...
Authors	Authors	...	...
Automation		...	...
Reviewers		...	...

Restrict Perspective Sets by Security Group. <Model Default> restrictions only apply when no other restriction exists.

Close   Help

Notice that in the 'Perspective Set' column against the security group 'Authors' the value 'Authors' indicates the Perspective Setting that exists for that group.

At the top of the list is the group '<Model Default>', which enables you to refine the Perspectives and ribbons available to all users of this model - it is effectively an 'all model users' security group.

Create or Edit a Perspective Setting for a Security Group

1. Click on the required security group name, then click on the ⌈...⌋ icon on the right of the field in the 'Perspective Set' column. The 'Perspectives for Security Group' dialog displays.
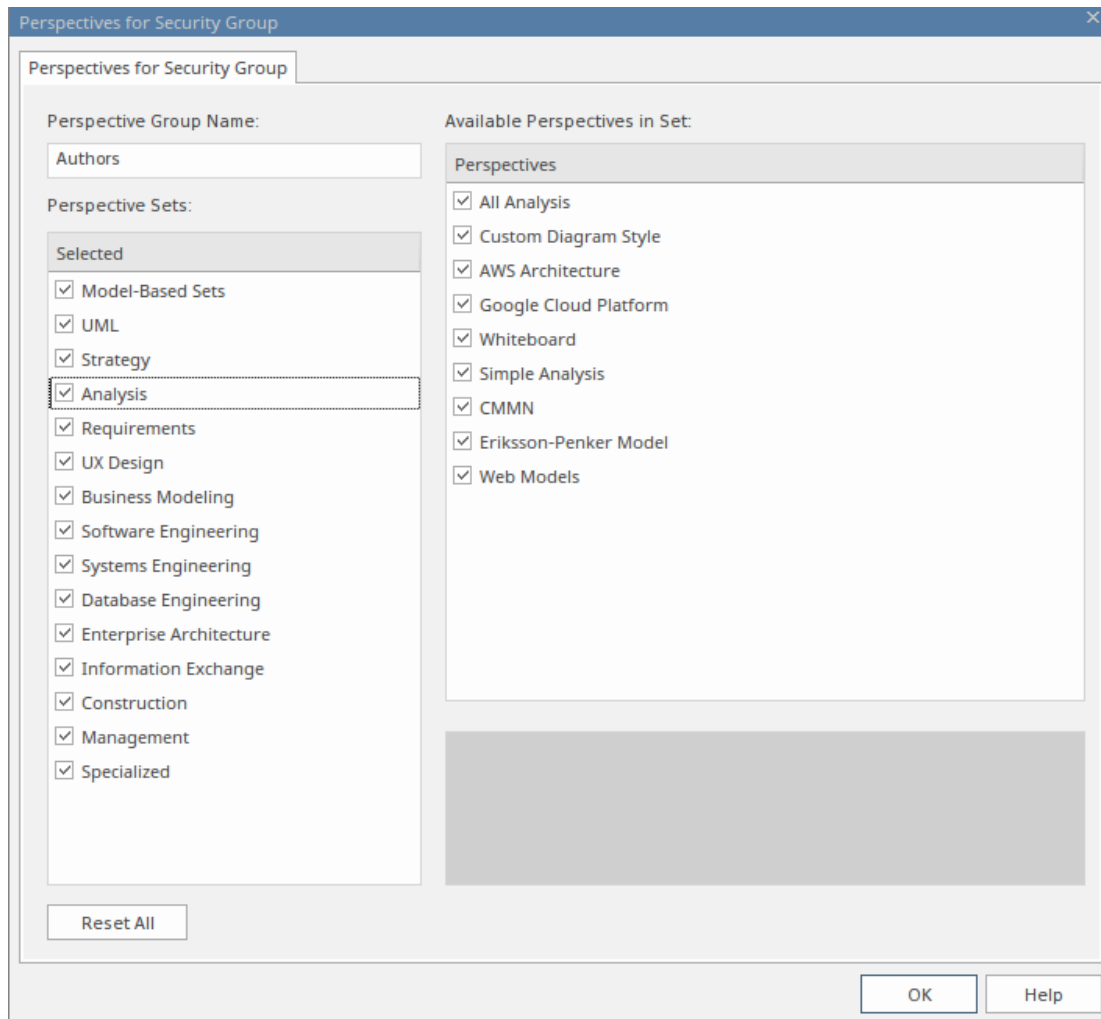
The dialog lists all of the Perspective Sets available in Enterprise Architect and, when you click on the name of a Perspective Set, all of the Perspectives available in the selected set (as shown for the 'Analysis' Set). All Sets and Perspectives have checkboxes, which initially are all selected.
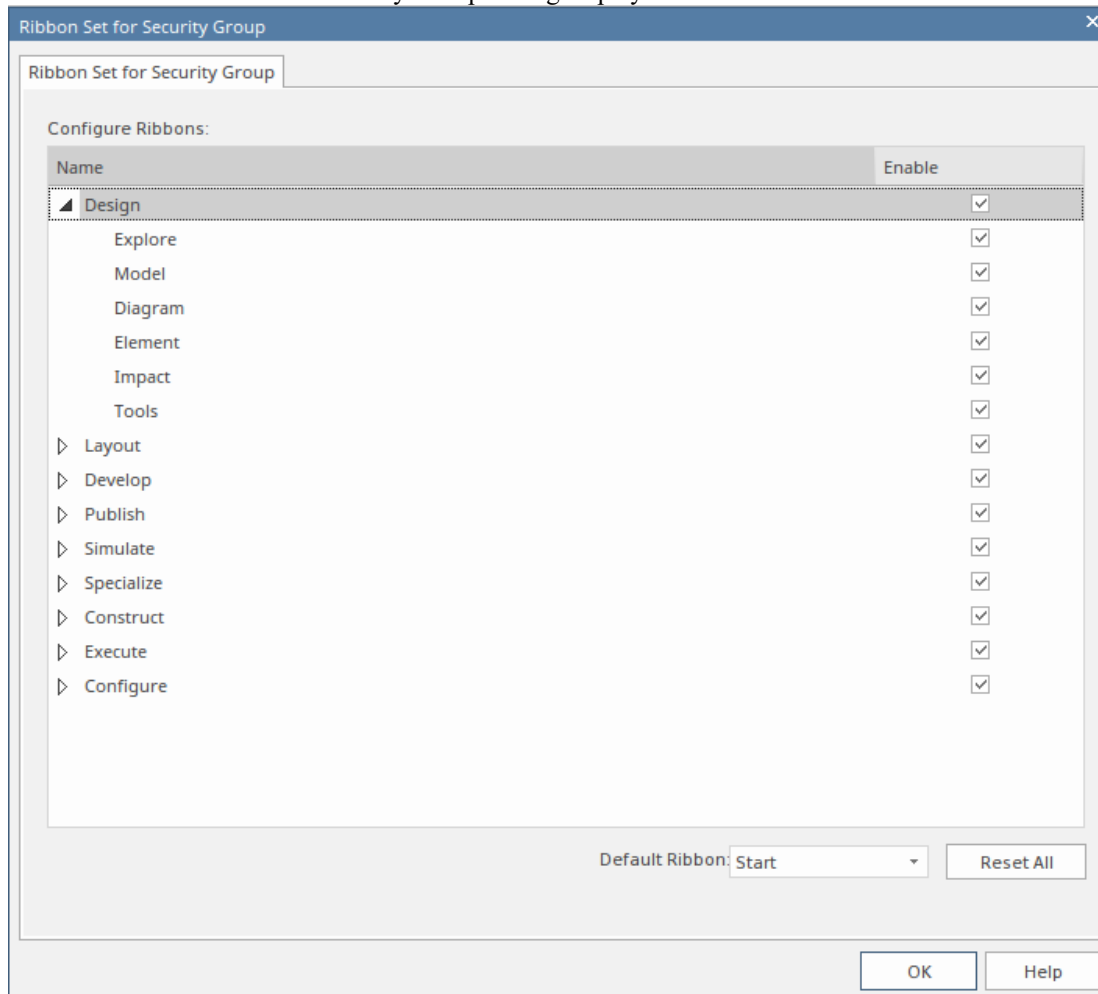
2.   To make a complete Perspective Set unavailable to users in the security group, click on the corresponding checkbox to clear it.

3.   To make individual Perspectives unavailable within an active Perspective Set, click on the corresponding checkboxes to clear them.

4.   Work through all the Perspective Sets to define all the Perspectives that are not available to the users in the security group. If you want to reset all unselected checkboxes to selected, click on the Reset All button.

5.   When you have defined the Perspective Setting, click on the 'Perspective Group Name' field and type in a name for the Perspective Setting for the security group.

6.   Click on the OK button. The 'Perspective Settings for Security Groups' tab of the 'Perspective Sets' screen redisplays, with the name of the Perspective Setting in the 'Perspective Set' field for the selected security group.

7.   You can repeat the process for another user security group.

8.   When you have set up your Perspective Settings for the security groups, click on the Close button to close the 'Perspective Sets' screen.

Create a Ribbon Set for a Security Group

This process is similar to that for creating a Perspective Setting for a security group.

1. Click on the required security group name, then click on the [...] icon on the right of the field in the 'Ribbon Set' column. The 'Ribbon Set for Security Group' dialog displays.

The dialog lists all of the ribbons available in Enterprise Architect and, when you expand the name of a ribbon, all of the option panels available in the selected ribbon (as shown for the 'Design' ribbon). All ribbons and panels have checkboxes, which initially are all selected.

2. To make a complete ribbon unavailable to users in the security group, click on the corresponding checkbox to clear it.

3. To make individual option panels unavailable within an active ribbon, click on the corresponding checkboxes to clear them. Clearing all the panel checkboxes for a ribbon also hides the complete ribbon (you cannot display an empty ribbon).

4. Work through all the ribbons to define all the option panels that are not available to the users in the security group. If you want to reset all unselected checkboxes to selected, click on the Reset All button.

5. When you have defined the Ribbon Set, you can also identify one ribbon as being the default that is shown whenever users in the selected security group open Enterprise Architect. Click on the drop-down arrow in the 'Default Ribbon' field, and select the required ribbon name.

6. Click on the OK button. The 'Perspective Settings for Security Groups' tab of the 'Perspective Sets' screen redisplays, with the name of the Ribbon Set in the 'Ribbon Set' field for the selected security group.

7. You can repeat the process for another user security group.

8. When you have set up your ribbon sets for the security groups, click on the Close button to close the 'Perspective Sets' screen.

Notes

- Only model administrators can edit these settings

- You cannot hide the 'Start' ribbon, 'Specification - Specify' ribbon or 'Document - Edit' ribbon, or any panels that they contain

- If the 'Settings' ribbon is hidden, the Model Administrator's login overrides that to ensure that the administrator can administer the model

- Using the Reset All button for a Perspective Setting or Ribbon Set effectively cancels any special settings for the security group, and gives the member users access to all Perspectives and ribbons

Perspective Modeling

Perspective Workspace

A perspective workspace package will contain a perspective workspace diagram on which a built-in perspective set can be modeled. Opening the perspective workspace diagram will make the Model Perspectives toolbox appear. The rest of this section describes the elements and packages used on a perspective workspace diagram.

Once you have finished modeling a built-in perspective set, select the perspective workspace package and use the **ribbon > Specialize > Publish Perspective** command to open the Perspective Sets dialog where you will be able to load and activate the perspective workspace.
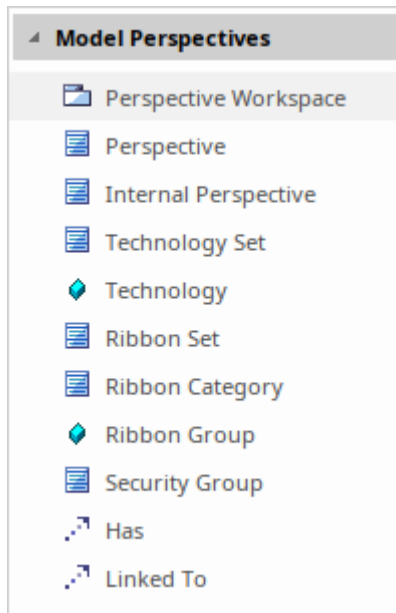
Perspective

A perspective is represented by a Class with the <<perspective>> stereotype. After importing a perspective workspace, the names of the perspective elements in the workspace will appear under Perspective > Model-Based Sets. A perspective has technology sets and is linked to security groups.

Technology Set

A technology set is represented by a Class with the <<technology set>> stereotype. The name of a technology set element is not important; it is not used anywhere else. It is a set of technologies, represented by <<technology>> attributes, that make up all or part of a perspective. A perspective can have multiple technology sets, and a technology set can belong to multiple perspectives. You can set restrictions on this technology set using the right-click > Set Restrictions to command. A technology set has tagged value Strict which can be set to true.

Technology

A technology is represented by an Attribute with the <<technology>> stereotype. When you drop a technology attribute from the toolbox onto a technology set element, a dialog will allow you to pick from the full list of available

technologies. But see the Technology Set Patterns, below, which create a technology set with all of its technologies, to save you having to select technologies one by one.

Ribbon Set

Ribbon sets are linked to security groups. A <<ribbon set>> element, name not important, has <<ribbon category>> elements representing each ribbon category (Design, Layout, Develop etc - the Start category is always assumed present so is not modeled) each of which has <<ribbon group>> attribute for each ribbon panel (e.g. Design has Explore, Package, Diagram, Element and Dictionary). If you want to limit the ribbon commands a security group member can access, link the security group element to a ribbon set consisting of all the ribbon categories and groups they are permitted access to (it's an allow list). It is recommended that you drop the "Complete Ribbon Set" pattern on the diagram and remove the ribbon groups you don't want. A ribbon set element has a tagged value "default ribbon" which allows you to define which ribbon is made visible at startup. Unless otherwise declared, this will be the Start ribbon.

Ribbon Category

A ribbon category is represented by a Class with the <<ribbon category>> stereotype. A ribbon set has ribbon categories. A ribbon category can own ribbon group attributes. Ribbon categories are named for each ribbon on the main menu except Start, which is always assumed present and therefore not modeled.

Ribbon Group

A ribbon group is represented by an Attribute with the <<ribbon group>> stereotype and is owned by a ribbon category. Ribbon groups are named for each panel on a main ribbon. Use the Complete Ribbon Set pattern to create the full set of ribbon categories with their ribbon groups then you can easily remove the ones you don't want. This is much easier than adding everything you want, individually. To remove a ribbon group from the ribbon, simply delete the attribute.

Security Group

A security group is represented by a Class with a <<security group>> stereotype and can have ribbon sets linked to it. In a security-enabled model, drop a <<security group>> element from the toolbox and a dialog asks you to choose from all the security groups defined in the current model, if any. In a non security-enabled model, it only offers "<Model Default>". You can then link to or from all the perspectives, internal perspectives and ribbon sets that the security group can access.

Internal Perspective

An internal perspective is represented by a Class with the <<internal perspective>> stereotype. It is named for the sub-menu on the perspective menu, e.g. UML, Strategy, Analysis. Linking an internal perspective to a security groups makes all of the perspectives under the internal perspective available to the security group. For example, linking an internal perspective named Business Modeling to a security group makes the BPMN, BPSim, Business Motivation etc perspectives all available to the security group.

Internal Perspective Groups Pattern

This pattern will create one of every available internal perspective group. When you link a perspective to a security group, that security group will have an allow list of available perspectives; in other words, it won't have access to any of the built-in perspectives unless they are explicitly made available. Use this pattern to add the full set of internal perspective groups to the diagram then choose which ones to link to each security group, using the Linked To connector.

Complete Ribbon Set Pattern

This pattern will create one of every available ribbon category and populate it with every available ribbon group. (If you use this pattern as a security user with restricted ribbon set, you will get a reduced set of elements created). A ribbon set is defined as an allow list of ribbon categories and groups. To exclude a small number of groups or categories from a ribbon set, drop this pattern onto a diagram, connect from ribbon set to each ribbon category using the <<has>> connector and then delete the category elements and group attributes that aren't required.

Technology Set Patterns

The Technology Set pattern can be imported from the Model Builder dialog. It includes a Technology Set element for every built in perspective provided with Enterprise Architect. These can be copied or moved into your perspective workspace and linked to one or more Perspective elements.