SPARX SYSTEMS

Enterprise Architect

Team Support

How to support modeling in teams? Sparx Systems Enterprise Architect is a team modeling platform, with a free readable Light version, many deployment options, version control, reusable assets, reviews, Team Library, user security and Workflow Scripts.

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Date: 2020-01-20

Version: 15.1
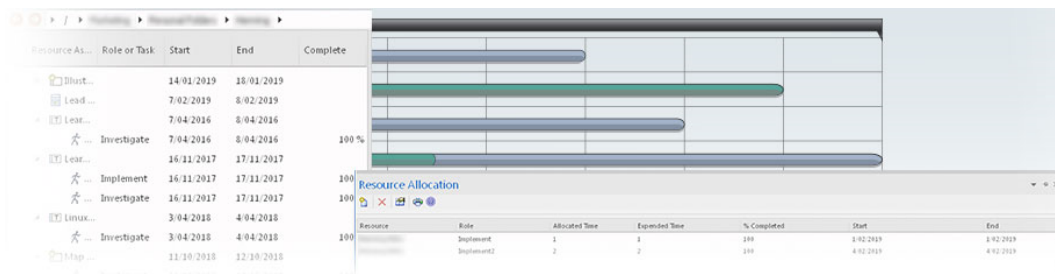
CREATED WITH ENTERPRISE ARCHITECT

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Team Support

Enterprise Architect has been built from the ground up as a team modeling platform, and has extensive support for groups of people working together on the same projects, sharing information, ideas and models. The team support includes features ranging from Baselines, Version Control and a Reusable Asset Service that protect the valuable modeling assets in a team environment, to collaborative tools such as a Discussion Forum, Team Library and Gantt Charts to facilitate people working together. The role-based security system has been designed to encourage collaboration, allowing team members to work together without the fear of interfering with each other's work.

There is a wide range of deployment options that will suit any team development environment, allowing people to work centrally or remotely in highly distributed environments. Corporate policy and standards can also be built into the models with the use of Workflow Scripts. A free 'Lite' version of Enterprise Architect is available for team members who simply want to view the models, and high quality corporate documentation can be generated in a wide number of formats to communicate with people outside the modeling platform.

Overview

Facility	Description
Team Development	Setup a collaborative modeling environment, taking advantage of security, workflow and shared reference data, as discussed in this topic.
Formal Model Reviews	A simple yet powerful mechanism for capturing, in real time, reviews of a section of the model in line with a particular event. Typically, a Project Manager or other coordinator will create a Review element specifically to discuss one or more elements for a project phase, project stage or other category of review, over a defined period.
Project Management	Explore some of the ways you can manage your project and team within Enterprise Architect.
Project Resources	Track and manage the people and resources in your project.

Glossary	Define a common vocabulary between your different teams, ensuring everyone is on the same page.
Task Allocation	Assign and Track your team's tasks in a Gantt View.
Personal Tasks	Record and manage your personal work within the project.
Model Mail	Securely communicate with your team in an email style embedded within Enterprise Architect, via Model Mail.
Project Calendar	Track the deployment of resources, timeframes for tasks, and upcoming project events such as meetings and milestones, in a calendar format.
Use Case Estimation	Form an estimate of the complexity of a system and an indication of the effort required to implement the model.
Team Library	A team based library of documents to

	record and discuss the development and progress of the project.

Making project data available in a distributed environment

Enterprise Architect offers a diverse set of functionality designed specifically for sharing projects in team-based and distributed development environments; for example: Cloud-based solutions, network deployment of model repositories, replication and XMI Import/Export.

Applying security to the model

User Security is a means of improving collaborative design and development by preventing concurrent editing, and limiting the possibility of inadvertent model changes by users not designated as model authors.

Using an internal discussion forum

The Discussions facility provides several mechanisms to support your development team community in discussing

specific elements in the model as a component of each element or, more generally, the development and progress of the model across the project.

Building company policy and project development guidelines into the project

You can create workflow scripts that provide a robust approach to applying company policy and strengthening project development guidelines, by validating against the policy and procedures within the model itself.

Standardizing and re-using project data

You can import and export Reference data (including Glossary and Issue information) from .XML files of another iteration of the same model, or of a different model.

Project Roles
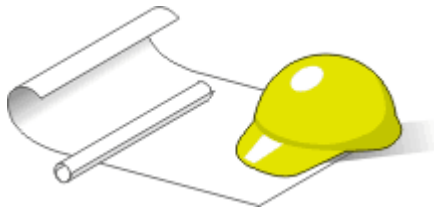
Enterprise Architect is a powerful multi-disciplinary modeling platform that supports common work practices and provides features to assist the entire spectrum of roles and disciplines across enterprise, business, engineering and software projects. Each role will typically use different features of the tool. A number of the roles and their responsibilities that the system supports are outlined here.

You can review a summary of the typical tasks supported for each role, or review the Help topic for the appropriate role title to explore how Enterprise Architect can assist you in carrying out that role within a model-driven project.

Roles and Responsibilities

Role	Responsibilities
Business Analyst	Create high-level models of business processes.
Software Architect	Map functional requirements, perform real time modeling of objects, design the Deployment model and detail the

	deliverable components.
Software Engineer	Map Use Cases onto Class diagrams, detail the interactions between Classes, define the system deployment and define software Packages.
Developer	Perform round trip code engineering, including reverse engineering of existing code and generation of code from Class elements.
Project Manager	Assign resources to elements, measure risk and effort, estimate project sizes, and manage element status, change control and maintenance.
Tester	Create test scripts against elements in the modeling environment.
Implementation Manager	- Track and assign maintenance-related items to elements within Enterprise Architect - Rapidly capture and keep records of maintenance tasks such as features, changes, documents, issues, defects and tasks - Trace the maintenance of the items and processes involved in system

	deployment
Technology Developer	Create customized additions to the functionality already present within Enterprise Architect.
Database Developer	Develop databases, including modeling database structures, importing database structures from an existing database and generating DDL for rapidly creating databases from a model.

Summary of Typical Tasks

Throughout a design and development project there are many different tasks to be performed, which could be carried out either by one person or - more probably - by members of a team with different responsibilities. In either case, Enterprise Architect supports most - if not all - of the responsibilities you might have on your project. The descriptions in this topic identify a number of job roles that the system supports. For those that most resemble your role on a project, refer to the Help topic for that job title to read a description of how that role might make use of Enterprise Architect, then use the references within those topics to explore some of the features of importance to the role.

Summary of Typical Job Roles

Most of these roles work with specific types of diagram, so you might want to learn more about diagram types in general and specific types of diagram in particular.

Several types of project team member might want to generate documentation on their work and report on how the project is developing and changing. Using Enterprise Architect you can generate project reports in either document or web format.

Role	Responsibilities

Business Analyst	For modeling: • Requirements • High-level business processes • Business activities • Work flows • System behavior
Database Developer	• Developing databases • Modeling database structures • Creating logical data models • Generating schema • Reverse engineering databases
Software Architect	• Mapping functional requirements of the system • Mapping objects in real time • Mapping the deployment of objects • Defining deliverable components
Tester	• Developing test cases • Importing requirements, constraints and scenarios • Creating Quality Test documentation • Tracking element defects and changes
Software Engineer	• Mapping Use Cases into detailed Classes

	• Defining the interaction between Classes • Defining system deployment • Defining software Packages and the software architecture
Project Manager	• Providing project estimates • Resource Management • Risk Management • Maintenance Management
Developer	• Forward, reverse and round-trip engineering • Visualizing the system states • Visualizing Package arrangements • Mapping the flow of code
Implementati on Manager	• Modeling the tasks in rolling-out a project, including network and hardware deployment • Assigning and tracking maintenance items on elements (issues, changes, defects and tasks)
Technology Developer	For creating or customizing: • UML Profiles • Patterns

	• Code Templates
	• Tagged Value Types
	• MDG Technologies
	• Add-Ins

Notes

- The Corporate, Unified and Ultimate editions of Enterprise Architect have a user security feature that can be applied or turned off; if security is turned on, you need to have the appropriate access permissions to use many of the facilities

Business Analysts

A Business Analyst can use Enterprise Architect to create high-level models of business processes, including business requirements, activities, workflow, and the display of system behavior.

Using Enterprise Architect, a Business Analyst can describe the procedures that govern what a particular business does. Such a model is intended to deliver a high-level overview of a proposed system.

Business Analyst Tasks

Task	Detail
Model High Level Business Processes	Using Analysis diagrams, you can model the high-level processes of the business. Analysis diagrams are a subset of UML 2.5 Activity diagrams and are less formal than other diagram types, but they provide a useful means for expressing essential business characteristics and requirements.
Model Requirements	Gathering requirements is typically the first step in developing a solution, be it for developing a software application or

	for detailing a business process; it is an important step in the implementation of a project. Using Enterprise Architect, you can define the Requirement elements, connect Requirements to the model elements for implementation, connect Requirements together into a hierarchy, report on Requirements, and move Requirements out of model element responsibilities.
Model Business Activities	You can use Activity diagrams to model the behavior of a system and the way in which these behaviors are related to the overall flow of the system. Activity diagrams do not model the exact internal behavior of the system but show instead the general processes and pathways at a high level.
Model Workflow	To visualize the cooperation between elements involved in the workflow, you can use an Interaction Overview diagram, which provides an overview of sub activities that are involved in a system.
Display System Behavior	In displaying the behavior of a system as a Use Case diagram, Enterprise Architect provides an easily understood tool for

	mapping the functional requirements and behavior of a system.

Software Architects

Software Architects can use Enterprise Architect to map functional requirements with Use Cases, perform real time modeling of objects using Interaction diagrams (Sequence, Timing, Communication or Interaction Overview), design the Deployment model and detail the deliverable components using Component diagrams.

Software Architect Tasks

Task	Detail
Map Functional Requirements of the System	With Enterprise Architect you can take the high level business processes that have been modeled by the Business Analyst and create detailed Use Cases. Use Cases describe the proposed functionality of a system and are only used to detail a single unit of discrete work.
Map Objects in Real Time	You can use Interaction diagrams (Sequence and Communication diagrams) to model the dynamic design of the system. Sequence diagrams detail the messages

	that are passed between objects, and the lifetimes of the objects. Communication diagrams are similar to Sequence diagrams, but instead display the way in which the object interacts with other objects.
Map Deployment of Objects	You can use Deployment diagrams to provide a static view of the run-time configuration of processing nodes and the components that run on the nodes. Deployment diagrams show the connections between hardware, software and any middleware that is used on a system.
Detail Deliverable Components	Using Component diagrams, you can model the physical aspects of a system. Components can be executables, libraries, data files or another physical resource that is part of a system. The component model can be developed from scratch from the Class model or can be brought in from existing projects and from third-party vendors.

Software Engineers

Software Engineers using Enterprise Architect can manually map Use Cases onto Class diagrams, detail the interactions between Classes, define the system deployment with Deployment diagrams and define software Packages with Package diagrams.

Software Engineering Tasks

Task	Detail
Map Use Cases into Detailed Classes	Within Enterprise Architect you can study the Use Cases developed by the Software Architect, and with that information create Classes that fulfill the objectives defined in the Use Cases.
	A Class is one of the standard UML constructs that is used to detail the pattern from which objects are produced at run time; to record the relationships between Use Cases and Classes, you can create diagrams linking the elements with Realization connectors, and/or map the Realization connectors in the Relationship Matrix.

Detail Interaction Between Classes	You can use Interaction diagrams (Sequence and Communication diagrams) to model the dynamic design of the system. Sequence diagrams are used to detail the messages passed between objects, and the lifetimes of the objects. Communication diagrams are similar to Sequence diagrams, but instead display the way in which objects interact with other objects.
Define System Deployment	Deployment diagrams provide a static view of the run-time configuration of processing nodes and the components that run on the nodes. Deployment diagrams can be used to show the connections between hardware, software and any middleware that is used on a system, to explain the connections and relationships of the components.
Define Software Packages	You can use Package diagrams to detail the software architecture. Package diagrams are used to organize diagrams and elements into manageable groups, declaring the dependencies.

Simple Use Case diagram
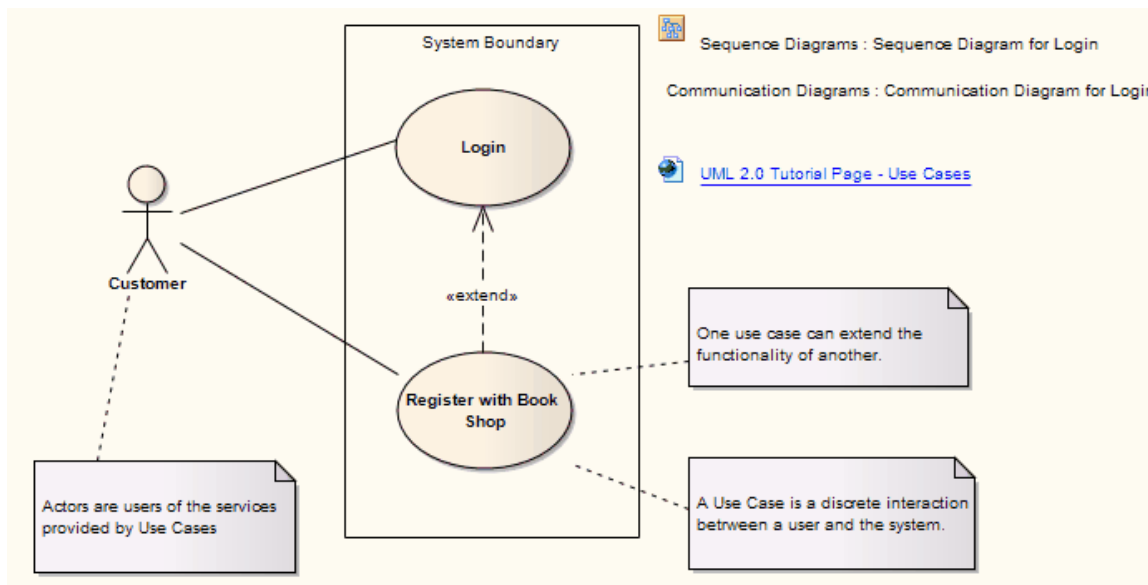
Developers

Developers can use Enterprise Architect to perform round trip code engineering, which includes reverse engineering of existing code and generation of code from Class elements.

Developer Tasks

Task	Detail
Round Trip Engineering	Enterprise Architect gives you unparalleled flexibility in 'round tripping' software from existing source code to UML 2.5 models and back again. Round trip engineering involves both forward and reverse engineering of code, keeping the model and code synchronized.
Reverse Engineering	In Enterprise Architect, you can reverse engineer code from a number of supported languages and view the existing code as Class diagrams, which illustrate the static design view of the system. Class diagrams show Classes and interfaces, and the relationships between

	them; the Classes defined in UML Class diagrams can have direct counterparts in the implementation of a programming language.
Forward Engineering	As well reverse engineering your code into your model, you can forward engineer elements of your model into code (code generation). This way you can make changes to your model with Enterprise Architect and quickly implement the changes in the source code.
Determine the System State	To visualize the state of the system you can use StateMachine diagrams to describe how elements move between States, classifying their behavior according to transition triggers and constraining guards. StateMachine diagrams capture system changes over time, typically being associated with particular Classes; often a Class can have one or more StateMachine diagrams to fully describe its potential states.
Visualize Package	Package diagrams help you design the architecture of the system; they are used

Arrangement	to organize diagrams and elements into manageable groups, and to declare their dependencies.
Follow the Flow of Code	Activity diagrams help you develop a better understanding of the flow of code. Activity diagrams illustrate the dynamic nature of the system; you can model the flow of control between Activities and represent the changes in state of the system.

Simple Class Diagram
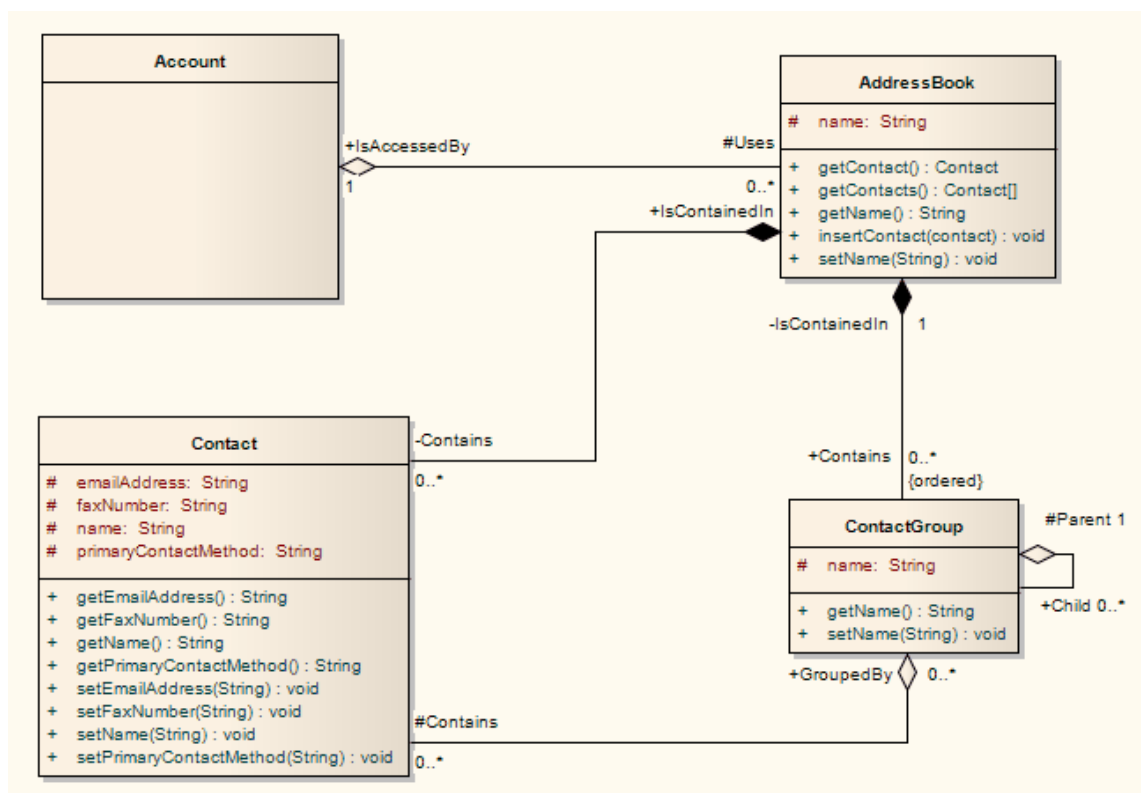
Notes

- You can use StateMachine, Package and Activity diagrams to better understand the interaction between code elements and the arrangement of the code

Project Managers

Enterprise Architect provides support for the management of projects. Project Managers can use the system to assign resources to elements, measure risk and effort, estimate project sizes, and manage element status, change control and maintenance.

Project Manager Tasks

Task	Detail
Provide Project Estimates	In Enterprise Architect you have access to a comprehensive project estimation tool that calculates effort from Use Case and Actor objects, coupled with project configurations defining the technical and environmental complexity of the work environment.
Resource Management	Managing the allocation of resources in the design and development of system components is an important and sometimes difficult task; Enterprise Architect provides you with an effective tool for assigning resources directly to model elements and tracking progress

	over time.
Risk Management	You can use the Risks window to assign risk to an element within a project; using risk types you can name the risk, define the type of risk and give it a weighting.
Maintenance	Within Enterprise Architect you can assign maintenance-related items to elements and track them, providing rapid capture and record keeping for items such as features, changes, documents, issues, defects and tasks. You can also create and maintain a Project Glossary of processes, procedures, terms and descriptions.

Testers

Enterprise Architect provides a design testing facility for Testers and Quality Assurance personnel to create a range of test scripts against elements in the modeling environment.

Testing Tasks

Task	Detail
Test Cases	With Enterprise Architect, you can set up a series of tests for each model element. The test types include Unit, Acceptance, System, Integration, Inspection and Scenario tests.
Import requirements, constraints and scenarios	To use testing to maintain the integrity of the entire business process, you can import requirements, constraints and scenarios defined in earlier iterations of the development life cycle. Requirements indicate contractual obligations that elements must perform within the model. Constraints are conditions that must be met in order to pass the testing process; constraints can be:

	• Pre-conditions (states that must be true before an event is processed) • Post-conditions (events that must occur after the event is processed) or • Invariant constraints (which must remain true through the duration of the event) Scenarios are textual descriptions of an object's action over time and can be used to describe the way a test works.
Create quality test documentatio n	Enterprise Architect provides the facility to generate high quality test documentation in .RTF, DOCX and PDF file formats.
Element defect changes	In defect tracking you can allocate defect reports to any element within the model, so that all who are involved in the project can quickly view the status of defects and see which defects have to be addressed and which have been dealt with.

Implementation Managers

Enterprise Architect provides support for the management of project implementation. You can track and assign maintenance -related items to elements within Enterprise Architect, and rapidly capture and update records of maintenance tasks such as features, changes, documents, issues, defects and tasks. By providing a centralized facility for each element involved in the deployment process Enterprise Architect offers a powerful solution for tracing the maintenance of the items and processes involved in system deployment.

Implementation Tasks and Tools

Task	Detail
Develop Deployment Diagrams	Using Deployment diagrams, you can model the roll out of a project, including network deployment and workstation deployment.
	Users involved in project deployment can add maintenance tasks to the diagram elements.
	Deployment diagrams provide a static view of the run-time configuration of nodes on the network or of workstations,

	and the components that run on the nodes or are used in the workstations.

Technology Developers

Technology Developers are Enterprise Architect users who create customized additions to the functionality already present within Enterprise Architect.

Additions include UML Profiles, Patterns, Code Templates, Tagged Value Types, Scripts, Custom Queries, Transformations, MDG Technologies and Enterprise Architect Add-Ins. By creating these extensions the Technology Developer can customize the Enterprise Architect modeling process to specific tasks and speed up development.

Developing Technologies

Extension	Detail
UML Profiles	By creating UML Profiles you can create a customized extension for building UML models that are specific to a particular domain.
	Profiles are stored as XML files and can be imported into any model as required.
Patterns	Patterns are sets of collaborating Objects and Classes that provide a generic template for repeatable solutions to

	modeling problems. As Patterns are discovered in any new project, you can publish the basic Pattern template. Patterns can be re-used with the appropriate variable names modified for any future project.
Code Templates	Code templates are used to customize the output of source code generated by Enterprise Architect; in this way you can generate code languages not specifically supported by Enterprise Architect and define how the system generates source code to comply with your own company style guidelines.
Tagged Value Types	Tagged Values are used in Enterprise Architect to extend the information relating to an element in addition to the information directly supported by the UML language. A Tagged Value, strictly, is the value of a property of a modeling item, the property being called a tag; for example: a Class element called Person might have a tag called 'Age' with the Tagged Value of '42'. More loosely, the combination of tag and

	value can be referred to as a Tagged Value.
	A Tagged Value Type is a group of parameters that define and/or limit the possible values of a tag and, in many instances, how a specific value is assigned to the tag; for example, the tag 'Age' might have a Tagged Value Type of 'Integer', so the user simply types in a numeric value.
	Alternatively, the type could be 'Spin', with lower and upper limits of, say, 20 and 120, so the user sets a value by clicking on arrows in the field to increment or decrement the value within the limits of 20 and 120.
	Typically, Tagged Values are used during the code generation process, or by other tools to pass on information that is used to operate on elements in particular ways.
MDG Technologies	MDG Technologies can be used to create a logical collection of resources that can contain UML Profiles, Patterns, Code Templates, Image files and Tagged Value types that are accessed through a technology file.
Enterprise	Using Add-Ins you can build your own

Architect Add-Ins	functionality into Enterprise Architect, creating your own mini programs that can extend the capabilities of the system, defining your own menus, and creating your own Custom Views.

Database Developers

Enterprise Architect supports a range of features for the development of databases, including modeling database structures, importing database structures from an existing database and generating DDL for rapidly creating databases from a model.

Database Development Tasks

Task	Detail
Create Logical Data Models	With Enterprise Architect you can build database diagrams using the built-in UML Data Modeling Profile. This supports the definition of Primary and Foreign keys, cardinality, validation, triggers, constraints and indexes.
Generate Schema	By using Enterprise Architect's DDL generation function you can create a DDL script to create the database table structure from the model. Enterprise Architect currently supports: • DB2 • Firebird

	• MS Access
	• MySQL
	• MS SQL Server
	• Oracle
	• PostgreSQL
	• Informix (#)
	• Ingres (#)
	• InterBase (#)
	• Sybase Adaptive Server Anywhere (#)
	• Sybase Adaptive Server Enterprise (#)
	(#) - No further development will be undertaken on these DBMSs, due to a general lack of interest for these products from the Enterprise Architect user base. This will allow Sparx Systems to concentrate its efforts on the other areas of Database modeling.
Reverse Engineer Database	Using an ODBC data connection you can import a database structure from an existing database to create a model of the database. By generating the model directly from the database you can quickly document your work and create a diagrammatic account of a complex database through the

	graphical benefits of UML.

Example Data Model Diagram
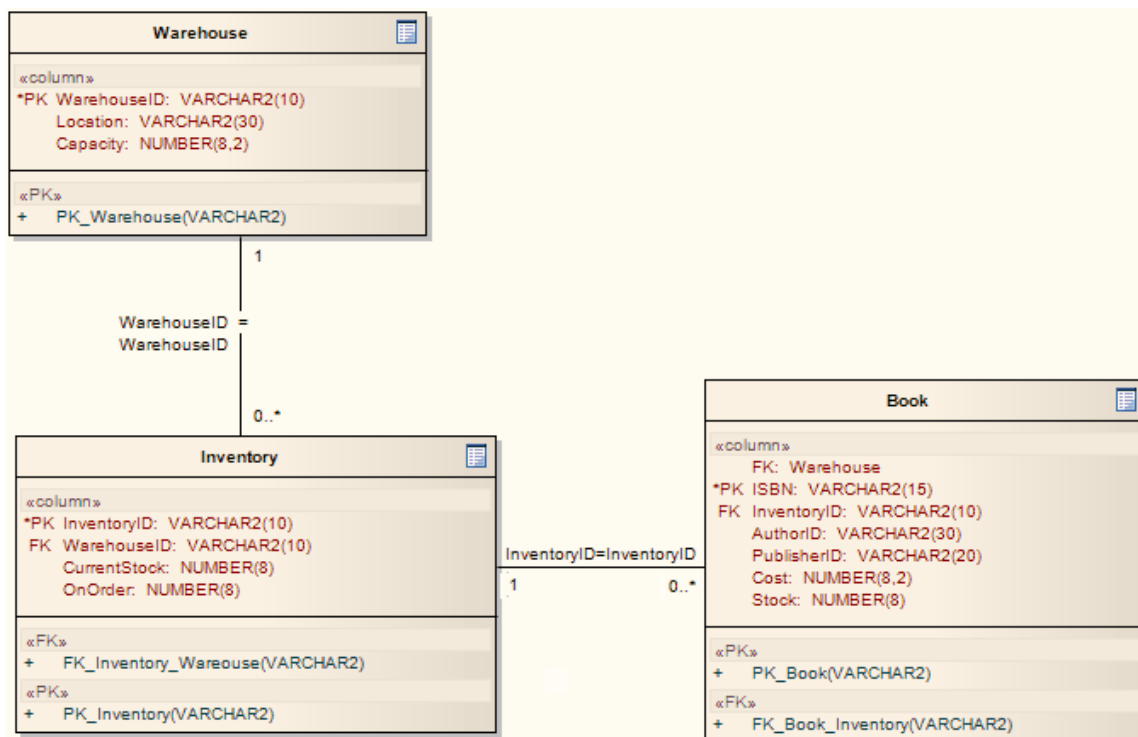
Translation Facilities

Enterprise Architect is used in almost every country in the world, and versions of the product are available in which the user interface and Help system are defined in one of the several common natural languages. The model content is then written and read in the same natural language. However, now more than ever teams are engaged in distributed modeling, and collaborative development has become the norm in the business, technology, engineering and scientific communities. Much of this collaboration takes place across not only temporal and geographical boundaries, but also linguistic boundaries as the models are read, digested and augmented by groups of people who speak different natural languages.

Enterprise Architect (using a built-in Cloud integration service) provides a way for individual users to display a translation of the descriptions (notes) for various objects such as elements, operations and connectors. The mechanism uses a built-in and exemplar integration service layer to connect to remote translation services provided by Google and Microsoft. This means that a model developed in, say, Switzerland using German can be translated and viewed in Canada in English. A German modeler might define a Requirement element named '*Das System muss die ausgewählten Kanaleinstellungen anzeigen*' and a Canadian modeler could translate and view that Requirement as '*The system must display the selected channel preferences*'. Not only that, but either modeler is likely to have

French-speaking colleagues who would prefer to translate the same Requirement into French as '*Le système doit afficher les préférences de canal sélectionnées*'.
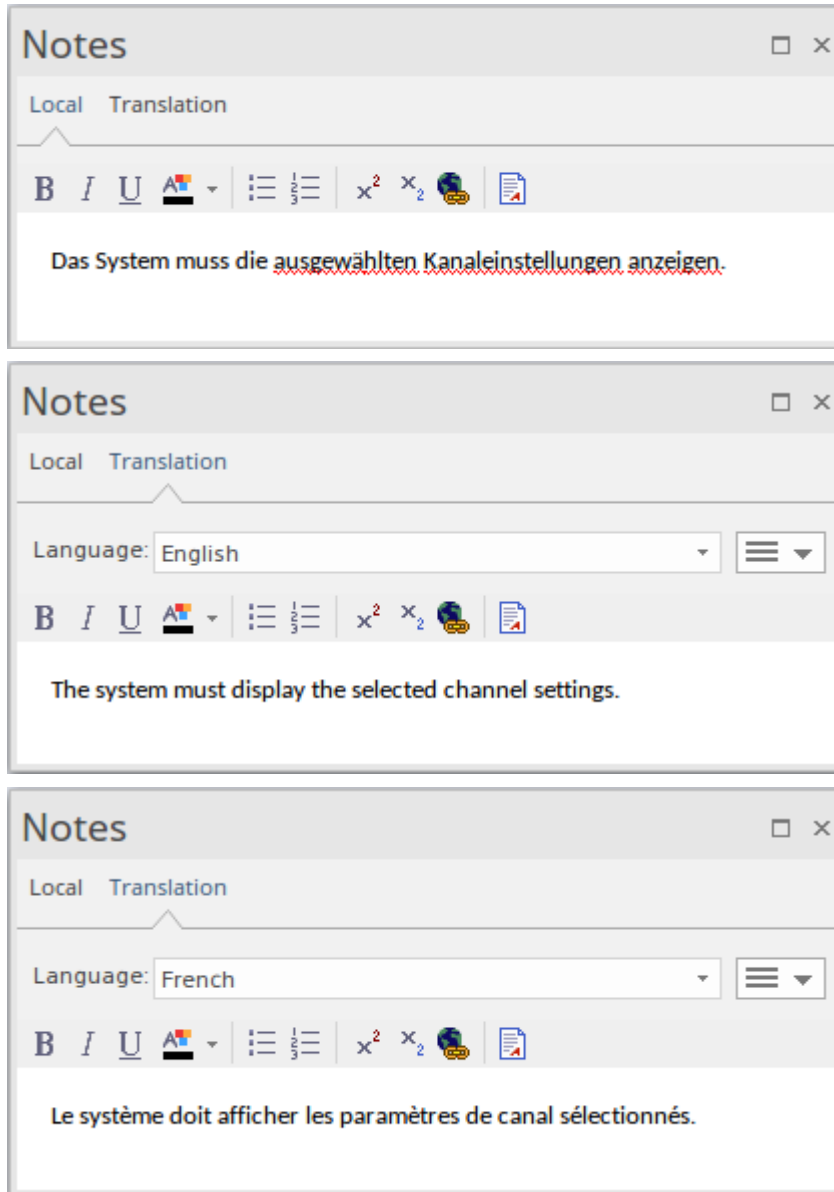
You can also record translations of element and operation names. Modeling can thus overcome not only temporal and geographic barriers, but linguistic barriers as well.

A Glossary facility also exists to override the translation of terms that are proprietary, such as product names, or in-house vernacular that should not be translated; this mechanism also provides specifically-defined translations of

terms for which the translation services would not provide the best result. A user can also manually update translated notes, and when the original text is updated the edited translation will be flagged as potentially out-of-date.

Documentation can be generated to any selected language, providing a way of producing a software and portable model narrative accessible by almost anyone in the world - perfect for cross-linguistic teams that have contractual obligations to have formal documentation in a number of languages.

In brief, the facilities of the Enterprise Architect text translation feature include:

- An Integration plug-in that enables connections to internet translation facilities via Pro Cloud Server 4.1 and above; available in the Corporate, Unified and Ultimate editions of Enterprise Architect, for automatic translations

- A 'Translations' page of the 'Manage Project Options' dialog, through which you configure the mode of translation, the translator application, translation options and the languages from and to which to translate the text, for the model (if User Security is enabled, you require 'Manage Reference Data' permissions to do this)

- Separate tabs in the Notes window to enter and display the Notes text in the local (or primary) language and to enter or initiate translations of that text; the 'Translation' tab enables you to select from a range of languages and to force or automatically apply translation (if using an internet translator application)

- A manual translation facility that enables you to type, in the 'Translation' tab of the Notes window, translations of

the Notes text displayed in the 'Local' tab; available in all editions of Enterprise Architect

- Notes text context menu options to flag specific instances of a term for customized translation or for protection from translation

- A tab of the Properties window for elements and operations to manually record the translated object name and alias in each of the selected languages

- Glossary model elements that you can use to either block translation of a term within a section of text, or ensure that it is translated to a specific text string

- An option in the 'Generate Document' dialog, 'Generate' tab to specify the language in which to generate the document

Formal Review Elements

A Review element is a simple yet powerful mechanism for capturing, in real time, discussions concerned with a particular event on one or more elements and/or diagrams. Typically, a Project Manager or other coordinator will create a Review element specifically to discuss one or more objects for a project phase, project stage or other category of review, over a defined period. A number of reviewers then 'join' the review and enter discussion points and responses in the Collaborate window. Note that you can only be joined to one Review element at a time.

The most direct and structured scenario would be for the review coordinator to create the Review element through the Reviews window. The Review element is a composite element that generates a child diagram, and the review coordinator would then add the elements and/or diagrams (as Navigation Cells) to be reviewed to that child diagram. A joined reviewer simply selects objects on the diagram and adds topics or responses on each object to the 'Review' tab of the Collaborate window.

The Review element also acts as a bridge to continue focused discussions in subsequent work sessions.

The review comments pertinent to an element can be displayed in that element on a diagram, in the Review Compartment of the element.

This feature is available in releases of Enterprise Architect from 14.0 onwards.

If you want to simply comment on or discuss an element or diagram without capturing your discussion in a formal review, use the 'Discuss' tab of the Collaborate window. See the *Informal Discussions* Help topic.

Using Review Elements

Review elements are used to plan and coordinate a formal review of part of your model, defining:

- When the review is to start and end
- What elements or diagrams are to be reviewed (and, as the review progresses, which objects have not yet been reviewed)
- The current status of the review
- Any specific instructions for performing the review
- Who is involved in the review
- Any resources to use during the review
- The priority of the review

The start and end date information is defined in two special EAReview Tagged Values (on the Review element 'Properties' dialog, see the 'General' page and 'EAReview' tab):

- EndDate - the date on which the Review will be complete with no further discussions expected
- StartDate - the date from which users can join the review, and add discussions and responses

Other information can be provided through the Review

element's normal element properties including Linked Documents, Notes and associated Note elements, Tagged Values and attributes. Review elements and their contents can be the subject of searches and document generation, all of which add to the information-gathering and grouping purposes of the element. The element also has a child diagram that aids planning, management and coordination of the review, and that provides a quick overview of and access to the elements under review.

Review elements can be used in a number of contexts, including model development, testing, delivery, maintenance and management. They can be added to specific Review diagrams - which have their own 'Review' Toolbox page - or to more general diagrams, using 'Review' icons from the 'Review', 'Artifact', 'Maintenance' or 'Management' toolbox pages.

Review elements are generally set up and managed within Enterprise Architect, but users both of Enterprise Architect and of the WebEA facility can use Review elements to direct their input to discussions on project and model reviews.

Creating a Review element

Typically, to create a Review element:

1. Open the Reviews View ('Start > Collaborate > Reviews > All Reviews').

2. Right-click on the View background and select the 'New Review' option; the 'Create Review' dialog displays, with the 'Name' field defaulting to the name of the currently-selected Package.

3. If necessary, overtype the name with a different Review element name.

4. In the 'Status' field click on the drop-down arrow and select the appropriate status.

5. In the 'Start' field, click on the drop-down arrow and select the date on which the review starts.

6. In the 'End' field, click on the drop-down arrow and select the date on which the review should complete. Click on the OK button.

7. In response to the prompt for the owner Package, either accept the current Package or browse for a different Package. Click on the OK button.

8. You are automatically joined to the review, in the Collaborate window, and can create some initial discussion points. A Review diagram is automatically created and displayed, containing the Review element.

Alternatively, you could start by creating a Review diagram (a Custom diagram in the 'Extended' category) or a diagram of any other type, and drag onto it the 'Review' icon from the Diagram Toolbox (as indicated in the *Using Review Elements* section); the icon and element have these appearances:
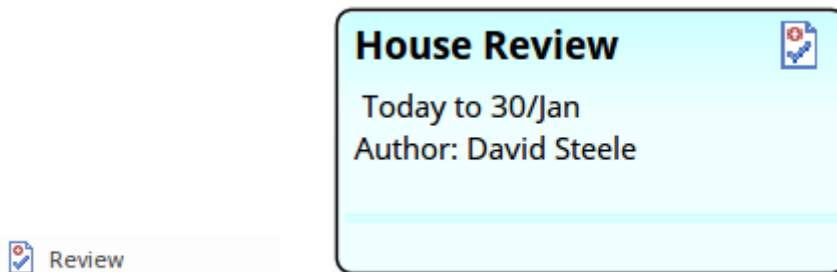
The element defaults to the Infoview display format, which you can edit or disable. You would then display the element 'Properties' dialog and provide the start and end dates on the 'General' page 'EAReview' tab.

Locating Review elements

In order to join a review, you have to locate the available Review elements and select the appropriate one.

Select the 'Start > Collaborate > Review > All Reviews' ribbon option. The Reviews window displays, showing the Review elements that exist in the model, grouped according to the 'Status' value.

Having listed the available reviews, you can join one by right-clicking on it and selecting the 'Join Review' option. This makes the review your Active Review, and the entry displays in bold. (Right-click on the View background and select the 'Refresh' option.)

Further information on the Reviews window is provided in the *Manage Reviews* section later in this topic.

There are a number of alternative options for locating Review elements. In the header of the 'Review' tab in the Collaborate window, click on the ☰ icon and select one of

these options:

- 'All Reviews' to open the Reviews window, as just described, to list all Review elements

- 'Review Details' to display the discussion history of your current review, and to show the details of the elements reviewed

- 'Find Current Review' to locate your active Review element in the Browser window

You can also select four reports from the 'Find in Project' window, Discussions group (select the 'Explore > Search > Model' ribbon option and the 'Discussions' option in the drop-down list in the first field):

- Review - Lists the Review elements that exist in the model

- Recently Modified Reviews - Generates a list of Review elements that have been recently created or modified

- Recently Discussed Reviews - Generates a list of Review elements in which discussions have taken place

- Open Reviews - Generates a list of Review elements with the status 'Open', which can be joined for discussion

Performing Reviews

To join a review, select the 'Start > Collaborate > Reviews > All Reviews' option, right-click on the required review from the Reviews window and select the 'Join Review' context

menu option.

Alternatively, to join a review you could:

- Right-click on the appropriate Review element in a diagram, the Browser window or the results of a model search, and select the 'Join Review' context menu option

- If a review is shown in the 'Review' tab of the Collaborate window, right-click on it and select the 'Join Review' option; the name of the review element then becomes the button name at the top of the screen, and the review topics for the currently selected model element display in the body of the window

When a user has joined a review, that is their Active review until they leave the review again. The Review element links to the review topics and posts of each joined user until they either log out of the model or select the 'Leave Review' context menu option.

When you log back into the model, and/or want to continue adding to the review, you can join it again using the 'Join Review' menu option.

Contributing to a Review

After you have joined a review, select the 'Start > Collaborate > Reviews > Review' ribbon option. The Collaborate window displays at the 'Review' tab. (Alternatively, press Ctrl+9 and select the 'Review' tab.)

Click on the element or the Navigation Cell for the diagram

that you want to comment on, in the Review diagram or the 'Details' tab of the Reviews window, to make that object the focus of the Collaborate 'Review' tab.

Alternatively, click on the object to review in the Browser window or a non-Review diagram and:

· Right-click on the object > Collaborate > Review

To create a topic for review or make a response to a topic, use the guidelines provided in this table.

Operation	Action
Create a review topic	At the end of any existing review conversation, the message *Create Review Topic* displays. Double-click on the message and type your topic as continuous text (no carriage returns). The text automatically wraps at the border of the Collaborate window.
	If you do need to break your text into paragraphs, press Ctrl+Enter at the break point.
	When you have finished typing, click off the text or press the Enter key.
	· An open expansion arrow and a icon display at the start of your text, and your user name, the time or date of posting and the number of responses (initially zero) display beneath your text

	· The messages *Post Reply* and *Create Review Topic* display below the topic If user security is enabled and you have selected to show avatars, the review icon is replaced by an image representing the user who contributed that item. If the user does not have a personal avatar image, a default 'head and shoulders' silhouette displays as the avatar.
Add a response	Double-click on the 'Post Reply' message and type your response as continuous text. When you have finished typing, click off the text or press the Enter key. · A ↘ icon, your user ID and the time of posting display above your text · The message *Post Reply* displays beneath your text You can also right-click on a post and select the 'Post Reply' menu option. All new replies are added underneath the review thread they are in response to.
Edit postings	Whilst you are typing a message, the editor automatically checks the spelling and underlines possible spelling errors in red. You can backspace or move the cursor to the errors to correct them. You

	can also move the cursor anywhere in the message body and add or delete text (press the Delete key). Once you have posted a message, you can delete the whole message but you cannot edit it.
Copy review topic text	If you want to re-use some or all of the text of a review item, select the text before you save it and press Ctrl+C to copy it to the clipboard. You can then paste the text into a new review item or into another document in Enterprise Architect. You can also paste copied text from the clipboard into the review item, by pressing Ctrl+V.
Set review topic status	A new review topic has the status of 'Open', with no indicator. To change the status, right-click on the item and select either: • 'Status	Awaiting Review' to indicate that some form of confirmation or approval is required for the point raised in the review topic (the indicator then displays to the right of the topic) or • 'Status	Closed' to indicate that users should not add any further comments to

	the thread (the indicator ✓ then displays to the right of the topic)
	If the review topic already has one of these statuses, you can also select the 'Status | Open' option to return the topic to 'Open' status, indicated by the 🏃 icon.
Set review topic priority	As part of the review, you might want to identify the priority of a point being raised. It might be very important to act on the point, or it might be agreed that the point discusses a 'nice to have' feature that could be addressed at a later date. To set the priority, right-click on the review topic and select one of the options:
	• 'Priority | High' (▥)
	• 'Priority | Medium' (▮), or
	• 'Priority | Low' (▫)
	Alternatively, if you decide that an item does not need to be prioritized, select the 'Priority | <none>' option. This leaves the item icon as ▬ .
Delete a review topic or reply	Right-click on the review topic or a reply, and select the 'Delete Selected' menu option. A prompt displays to confirm the deletion. Click on the Yes button.
	If you delete a review topic, all replies associated with that topic will be deleted

	as well.

Manage Reviews

Select the 'Start > Collaborate > Reviews > All Reviews' ribbon option.

(Alternatively, click on the 'In Review' button across the top of the 'Review' panel in the Collaborate window and select the 'All Reviews' option.)

This displays an overview of all Review elements in your model, enabling you to quickly see what reviews are taking place and what is happening within any review you want to explore.
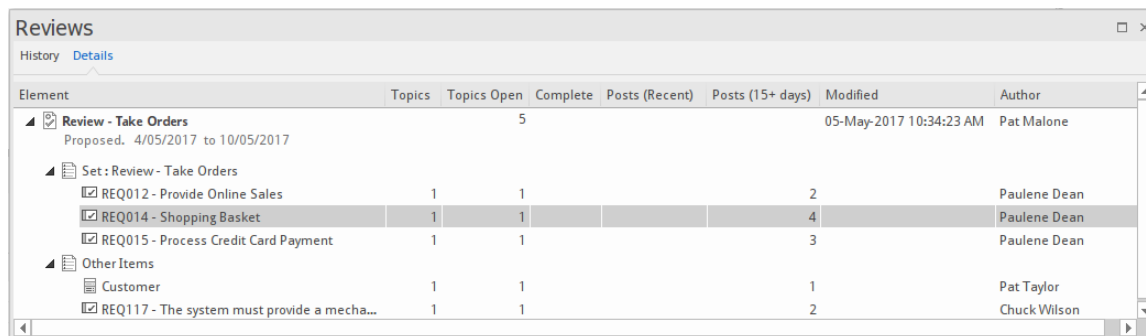
If you are already joined to a review, your active Review element is displayed in the list in bold. Otherwise, you can join a review by right-clicking on the Review element name and selecting the 'Join Review' option. Equally, you can leave your active review by right-clicking on it and selecting the 'Leave Review' option.

Right-click on the Review item you have joined, and select the 'Review Details' option to display the Reviews window at the 'Details' tab.

For each Review element there is a 'Set' segment that identifies the elements to be reviewed as added to the Review diagram. Additionally, there is an 'Other' segment that identifies any review activity on the Review element

itself, or on any other elements in the model that are added to the review but not included on the diagram.

The columns of the display show a number of properties of each element in the review.

These properties include the start and end dates of the review period, the number of topics posted for the element, the number of those topics open or awaiting review and the number closed, the number of topics and replies posted in the last three days, between three and fifteen days ago, and more than fifteen days ago. You can change the sequence of these columns if you prefer, by dragging the column headings across the heading band.

You can right-click on:

- The column headers to add or remove columns using the 'Field Chooser', and to display the Filter bar to filter the list for review topics having a specific property

- An element name to display the element Review topics and comments on the 'Review' tab of the Collaborate window

- An element name to find the element in the Browser window (or double-click on the item); this also opens the Collaborate window for the element

- An element name to locate any diagrams that contain the

element

- The window and select the 'Refresh' option to refresh the list, to include any review topics that have been posted since you opened the review

The 'Field Chooser' dialog offers additional columns to add to the Review listing.

If you are not joined to a review, you can also create a new Review element by clicking on the 'New Review' option, as explained at the top of this topic.

Informal Discussions

Using the 'Discuss' tab of the dockable Collaborate window, you can select an individual element or diagram and develop an informal discussion that is directly associated with that object. This makes it easy to locate, view and contribute to a discussion, or more than one discussion, on the selected object.

You can participate in discussions on different elements and diagrams simply by clicking on each object in turn; the Collaborate window immediately switches to the discussion of the new selected object, identified by name underneath the window option bar.

As a discussion develops, the number of responses is shown below the original post; therefore you can see when a discussion has a new reply without having to expand and work through the thread. You can apply a priority and status to a discussion, which helps you to indicate the importance of the discussion and to resolve and close off the points raised in the discussion so that they do not continue indefinitely. You can also delete the whole posting or specific replies, to balance retaining discussion history with removing irrelevant information.

Three further facilities of the Collaborate window are the:

· 'Review' tab, which you use to attach formal discussions on one or more elements and/or diagrams to a review session, encapsulated in a Review element; see the *Formal Review Elements* Help topic

- 'Chat' tab and text box, which you can use to follow and participate in quick conversations on a point of interest, not necessarily connected with the selected element; see the *Model Chat* Help topic

- 'Journal' tab, on which you jot down any notes, comments, reminders or references that you want to write down during the day; see the *Introducing the Journal* Help topic

The discussion comments pertinent to an element can be displayed in that element on a diagram, in the 'Discussion' compartment of the element.
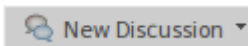
Access

Select an element or diagram, then open the Collaborate window using one of these methods:

Ribbon	Start > Collaborate > Discussions > Discuss
Context Menu	Browser window > Right-click on object > Collaborate > Discuss
	On diagram > Right-click on element > Collaborate > Discuss
Keyboard	Ctrl+9 > Discuss

Operations in Discussions

Operation	Action
Create a discussion	The window displays the message *Create new Discussion*. Double-click on this message and type your posting as continuous text (no carriage returns). The text automatically wraps at the border of the Collaborate window. You can also paste copied text from the clipboard into the discussion item, by pressing Ctrl+V.
	If you do need to break your text into paragraphs, press Ctrl+Enter at the point at which to break the text.
	When you have finished typing, click off the text or press the Enter key.
	- An open expansion arrow and a 💬 icon display to the left of your text - Your user ID and the time of posting display just underneath your text, followed by the text *0 Replies* - The messages *Post Reply* and *Create new Discussion* display beneath your text
	You can also right-click on the window and select the 'Create new Discussion' menu option. All new discussions are

	added below existing discussion threads.
	If user security is enabled and you have selected to show avatars, the discussion icon is replaced by an image representing the user who contributed that item. If a user does not have an avatar image, a default 'head and shoulders' silhouette displays as the avatar.
Monitor Discussion	(This facility is available on repositories connected through the Cloud Server.) Once a discussion has been started on an element, you can set a flag to notify you whenever a response is posted to the thread. To set the flag, click on the element name in the Browser window and select the 'Collaborate > Monitor Discussions' option. The flag then operates for your user ID. When a response is posted in a monitored discussion, this prompt displays in the bottom right-hand corner of the Enterprise Architect workspace: New Discussion 1. Click on the drop-down arrow; just above the prompt, a list of the monitored elements that have unopened responses is displayed. 2. Click on the element to investigate; the

	Collaborate window displays, showing the Discussions tab and the response to the discussion thread. If you want to remove a discussion flag - or all discussion flags you have set - on the 'Discuss' tab of the Collaborate window click on the element name header and select the 'Manage Monitored Discussions' option. The 'Manage Monitored Discussions' dialog displays, showing the monitored element names and their type, author and last-modified date. • Click on a specific element, or Ctrl-click on multiple names, and click on the Delete button to stop monitoring the discussions on those elements, or • Click on the Select All button and on the Delete button to clear all elements from your monitored discussion list • If you have selected elements but do not want to remove all of them, click on the Clear All button and make a different selection
Add a response	Double-click on the 'Post Reply' message and type your response as continuous text. When you have finished typing, click off

	the text or press the Enter key. • A ↪ icon, your user ID and the date and time of posting display above your text • The message *Post Reply* displays beneath your text • The *Replies* count is incremented underneath the original posting You can also right-click on a post and select the 'Post Reply' menu option. All new replies are added underneath the discussion thread they are in response to.
Edit postings	Whilst you are typing a message, the editor automatically checks the spelling and underlines possible spelling errors in red. You can backspace or move the cursor to the errors to correct them. You can also move the cursor anywhere in the message body and add or delete text (press the Delete key). Once you have posted a message, you can delete the whole message but you cannot edit it.
Copy discussion text	If you want to re-use some or all of the text of a discussion item, you can copy it to the clipboard by selecting the text and pressing Ctrl+C before you save it. You

	can then paste the text into a new discussion item or into another document in Enterprise Architect.
Set discussion status	The ⚡ icon against a new discussion indicates that the discussion has the status of 'Open'. To change the status, right-click on the discussion item and select either: • 'Status | Awaiting Review' (⚑) or • 'Status | Closed' (✔) If the discussion already has one of these statuses, you can also select the 'Open' option to return the discussion to 'Open' status. When you review the discussions in the Collaborate window, you might want to include discussions that have the status of 'Closed', or you might prefer to hide them. To toggle the inclusion of closed discussions, right-click on the body of the window and click on the 'Show Closed Topics' option.
Set discussion priority	As part of the discussion, you might want to identify the priority of a point being raised. It might be very important to act on the point, or it might be agreed that the point discusses a 'nice to have' feature

	that could be addressed at a later date. To set the priority, right-click on the discussion topic and select one of the options: • 'Priority | High' (▥) • 'Priority | Medium' (▮), or • 'Priority | Low' (▮) Alternatively, if you decide that an item does not need to be prioritized, select the 'Priority | <none>' option. This leaves the item icon as ▬ .
Delete a discussion or reply	Right-click on the discussion or a reply, and select the 'Delete Selected' menu option. A prompt displays to confirm the deletion. Click on the Yes button. If you delete a discussion, all replies associated with that discussion will be deleted as well.
Review Discussion History	Either: • Click on the object name bar at the top of the window, or • Right-click within the body of the window, or • Select the 'Start > Collaborate > Discussions' ribbon option In each case, select the 'Discussion

	History' option.
	The Discussions window displays, listing all existing discussion items on *elements*. You can right-click on the:
	• Column header band and select options to display the 'Field Chooser' and add to or reduce the number of columns, or to display the Filter bar to filter the list for discussions having a specific property such as the user who posted the discussion items, or the person who created the elements (element Author)
	• Body of the window and select to open a preview pane on the right or at the bottom of the window, to instantly see each discussion thread as you click on it in the list; you can also hide the preview pane if you do not need it
	• Body of the window and on the 'Visible Timeframe' option, selecting to show discussions posted today, or during the 7, 30 or 90 days prior to today
	• Body of the window and select to refresh the list to include any discussions that have been posted since you opened the discussion history
	• Selected element and select to: - Find the discussed element in the Browser window or diagrams

	- Display the 'Properties' dialog for the discussed element - Review and edit the discussion in the Collaborate window, opening the window if it is not currently available

Notes

- The Discussions facility is available in the Corporate, Unified and Ultimate editions of Enterprise Architect

- If you are working with an External Data Source in a Cloud-connected model, you can review external data item features and characteristics in the External tab of the Browser window; see the *External Item Details* Help topic

- If the editor does not highlight spelling errors, select the 'Start > Desktop > Preferences > Preferences > Objects' ribbon option and deselect the 'Disable Spelling' checkbox

- A standard report is available for locating *elements* that have recently been the subject of discussions; select the 'Start > Collaborate > Discussions > Recently Discussed Elements' ribbon option

Model Chat

The Collaborate window has a 'Chat' tab that provides the facility of following and participating in quick conversations on a point of interest, with members of a selected user group.

The user groups are those defined in User Security, which must be enabled in order for the Chat facility to be available.

Each initial comment or response is a separate message, listed in date/time order, with the most recent message at the top of the list. The messages are independent of the currently selected model object and the full list displays whenever the user group is selected in the 'Chat' tab. As the messages are independent of any model object, they do not appear in the 'Discussions' tab (All Discussions) or 'Recently Discussed Elements' report (which are element-based).

If you simply want to make notes for yourself, you can use the 'Journal' tab on which you jot down any notes, comments, reminders or references that you want to record during the day.

You can filter the messages by the time interval prior to today, and you can set up a check to notify you when new messages are posted by members of one or more user groups.

This is an example of a Chat session:
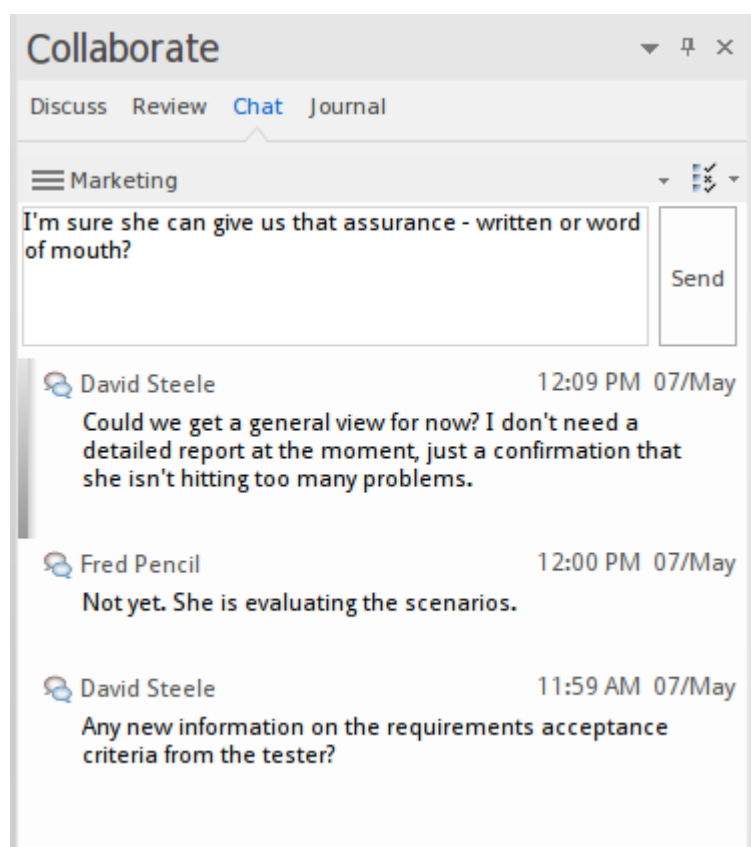
Access

Ribbon	Start > Collaborate > Discussions > Chat
Context Menu	Browser window > Right-click on element > Collaborate > Chat On diagram > Right-click on element > Collaborate > Chat
Keyboard Shortcuts	Ctrl+9 > Chat

Select a User Group

Initially, the button at the top of the 'Chat' tab displays the name 'Select a Discusion Group'. Click on the button and on the name of the user group to send messages to. The name of the currently-selected user group then becomes the name of the button.

If you want to communicate with a different group, click on the button again and select the name of that group.

If you do not want to continue chatting, you can select 'Disconnect from current Discussion'.

Create a message

Step	Description
1	At the top of the 'Chat' tab, in the text field, type your message. You can right-click on the text and select from a number of editing context menu options, and you can create glossary terms and new elements from highlighted text, or links to existing elements. You can also paste in copied text from the clipboard,

	by pressing Ctrl+V.
	If you want to create a paragraph break, press Ctrl+Enter (the Enter key alone will submit the message).
2	When you have completed your message, click on the Send button or press the Enter key. The message displays in the list underneath the text field.
	If you have selected to show avatars (the 'Configure > Security > Administer > User Settings > Show user avatars' ribbon option), all messages show an image representing the user who contributed that message. If a user does not have an avatar image, a default 'head and shoulders' silhouette displays as the avatar.

Review Messages

Once a message has been sent, it cannot be edited. If you want to re-use the text of a message item, you can copy some or all of the message to the clipboard by pressing Ctrl+C before you send it. You can then paste the text into a new chat item or into another document in Enterprise

Architect.

You can also delete a message by right-clicking on it and selecting the 'Delete Message' option.

Messages sent by other people to the currently-selected User Group display in your screen immediately. Messages deleted by other users do not disappear immediately. To update your list, right-click on it and select the 'Reload Messages' option.

Monitor User Groups for Messages

You can set the system to monitor selected user groups, to notify you when a member of one of those user groups posts a message whilst the 'Chat' tab is either set to a different user group or not visible.

The notification is a New Model Discussion button that displays in the bottom right of the Status Bar when a message is posted from a selected user group. The button also displays if a message is posted in the thread you have been reading, and the 'Chat' tab is not visible. Click on the button to redisplay the 'Chat' tab with the message thread.

If you are monitoring more than one user group, the New Model Discussion button provides a menu to indicate which of the selected groups has posted a new and unread message. When you click on a group, the 'Chat' tab displays with the appropriate thread of messages.

To set up a check for messages from a user group:

1. Click on the 'Options' icon on the right of the 'Chat' tab, and select the 'Monitor Groups for new Messages' option.

2. Select a user group to monitor. If you want to monitor more than one group, either:

    - Do steps 1 and 2 again for each individual group to monitor, or

    - Select the 'All' group to check for messages from any of the user groups

3. Select the 'Monitor Groups for new Messages' option again, and click on the 'Check for new Messages Every' option. Click on the interval of time at which the system will check for new messages - every minute, or up to every ten minutes.

4. If you want to cancel monitoring a specific group, repeat steps 1 and 2. Clicking on a selected group will deselect it.

5. If you want to cancel monitoring all of the selected groups, perform step 1 and then click on the 'None' option.

Filter messages by age

The 'Options' icon provides the 'Message Visibility' option, to limit the display of messages to those posted within a certain number of days prior to today's date.

When you select this option, a menu displays from which

you select to display only messages posted today (the default), or within the last 7, 30 or 90 days.

If you do not want to limit the display of messages to an interval you have set, you can cancel it by selecting the 'All' option.

Introducing the Journal

Enterprise Architect provides a great facility for maintaining a daily journal, in which you can type all kinds of ideas, comments, notes, suggestions, events, to-do lists and other reminders of what you have done or intend to do within the model. This is a good way to keep the momentum flowing day to day. The facility is simple to use, allowing you to quickly jot down your thoughts as they occur to you.

The 'Journal' page is part of the Collaborate window, which allows you to take notes as you engage in formal or informal discussions and chats with other team members, as well as during your work on other screens and dialogs.

Because the Journal entries are specific to your login, this facility is only available within a model for which User Security has been enabled.

Access

Ribbon	Start > Collaborate > Journal
Keyboard Shortcuts	Ctrl+9 > Journal

Creating the first Journal Entry

When you first access the Journal page, it has the single entry 'Today' in the 'Date' column. You can type freely in the 'Journal Entry' column against 'Today', including carriage returns and text formatting. Right-click on selected text to access the editing options, which include:

- Creating a Glossary definition from the text, and inserting existing definitions in the text

- Generating a new element in the same Package, with the selected text as the name and linked to the text

- Creating a link from the selected text to an existing element in the model (in the Notes window only)

- Creating a hyperlink to a wide range of target objects, including image files, diagram images, web pages, text files, Help topics and Enterprise Architect commands

- Searching for instances of the selected text in a range of sources (options derived from the 'Code Editor' context menu)

- Editing the text, with cut, copy, paste and delete, setting

fonts, and setting paragraph format

When you have finished typing your note, click off the Collaborate window.

You can return to the Journal Entry at any time and:

- Add further notes; you use the same Journal Entry to record all your notes and comments throughout the day
- Edit the existing text, including reformatting
- Delete text or complete notes; select the text and click on the Delete key or use the 'Delete' context menu option

Journal Entries Each Day

Every day, when you open Enterprise Architect and the 'Journal' page, it has a 'Today' item at the top, against which you record the day's Journal entries. Beneath the 'Today' item are the entries for previous days, identified by the date on which you made them. This only list dates on which you have made an entry; there are no blank lines for days on which you did not make an entry.
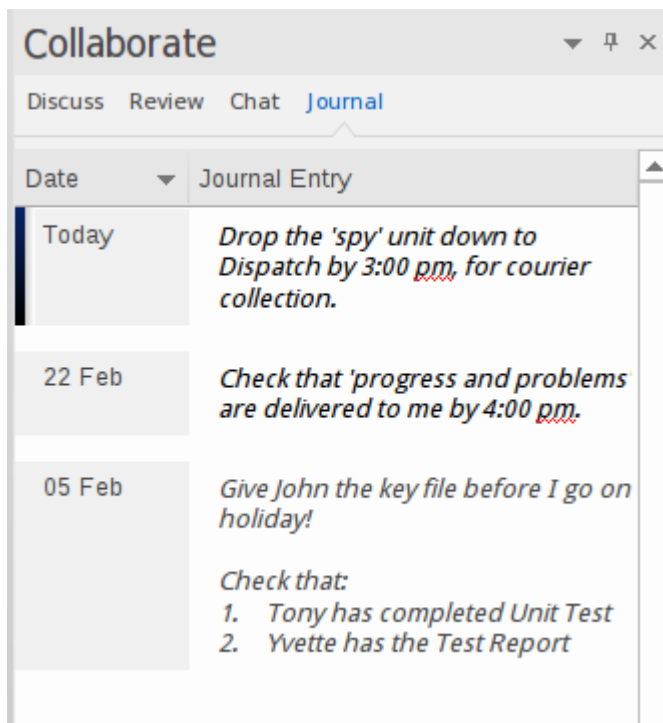
As well as formatting and editing today's entry, you can edit the entries for previous days. This means you can remove information that is no longer relevant (such as old reminders) or things you listed to be achieved that you have now completed. On the other hand, you can also highlight entries that are still significant, and refer back to them from the 'Today' entry.

Whilst the Today entry is always at the top of the page, you can change the order of display of earlier entries to show the oldest first, or the most recent. Simply click on the column heading to change the sort order.

User Security

User Security in Enterprise Architect is a means of blocking the use of model update functions across the model by means of access permissions for each function, and protecting specific elements and diagrams from change by means of user locks. The intent is not to prevent access to information, but to prevent inadvertent changes to data.

Security is an optional facility in the system. If required it is enabled by the Security Administrator, who at the same time sets the security policy to either:

- Require User Lock to Edit - the whole project is blocked against editing and the user locks an object to open it and edit it, or
- User/group locking - the whole project is open for editing and the user locks an object to protect it from being edited

The Security Administrator also sets up the user and group IDs and passwords, which every user requires to log in to the model when security is enabled. Access permissions are assigned to the user IDs to determine which update functions the user can apply. The users can still view any information in the project. If security is not enabled in the project, no login is required and users do not have to have access permissions to perform update functions.

Access

Ribbon	Configure > Security

Security Operations

Operations For	Detail
Administrators	A number of security tasks can be performed only by users with Administrative permissions to the security operations. The person who enables security receives online instructions to login as Admin. This login ID automatically: • Has access permissions to perform all security operations • Is a member of an Administrators user group, which also has access permissions to perform all security operations
Users	Other security tasks can be performed by users who do not have Administrative rights, on work performed under their own user ID. These users must still have

	the appropriate access permissions to perform many of these 'user' tasks.

Notes

- User Security can be enabled in the Corporate, Unified and Ultimate editions of Enterprise Architect

Enable/Disable Security

User security is not automatically enabled on the system. If your organization requires the security facilities, the Security Administrator enables them using an authorization key obtained from the Sparx Systems website. Similarly, if security facilities are no longer required, the Security Administrator explicitly disables security, again using the authorization key.

Access

Ribbon	Configure > Security > Administer > Enable Security

Enable and Disable User Security

Step	Action
1	Obtain the authorization key from the Sparx Systems website on: • the 'Team Modeling Resources' section (Trial

		User) or • the 'Registered Users' section (Registered User; you must also have your Registered Users login and password) The two authorization keys are not interchangeable - the Trial User key does not work on a registered user installation.
2		In Enterprise Architect, select the 'Enable Security' menu option. The 'Enter authorization' dialog displays.
3		In the 'Enter authorization key' field, type the authorization key from the Sparx Systems website.
4		If required, select the 'Automatically apply Exclusive Edit Locks to diagrams' checkbox. In standard (User/Group Locking) mode, this option blocks multiple users from simultaneously attempting to modify the same diagram (see *Notes*). This option is ignored in 'Require User Lock to Edit' security mode.
5		Click on the OK button. Security is enabled, and an Admin user and Administrators user group are created, both with all access permissions; the Admin user has the password of 'password'.

6	Select the 'Configure > Security > Administer > Login as Another User' ribbon option, and log in as 'admin' with the initial password of 'password'. It is recommended that you change the Admin password immediately.
7	Set up users and permissions as required.

Notes

- Once security has been enabled, you must have 'Security-Enable/Disable' permission to turn it off - the initial Admin administrator and Administrators group automatically have this permission; the system prompts you to log off the project and log on again, but this is not strictly necessary

- If you re-enable security, be aware that any changes you have made to the Admin user (password and reduced access permissions) are reset to 'password' and full access; similarly, the Administrators user group is reinstated with full access permissions

- The 'Automatically apply Exclusive Edit Locks to diagrams' option is not displayed when disabling security, therefore to toggle the setting whilst security is enabled you must disable security and re-enable it; security

settings (users, groups and permissions) and locks on elements are not affected by this action

- If the 'Automatically apply Exclusive Edit Locks to diagrams' option is selected, as a user modifies a diagram the system automatically applies a User Lock to the diagram, preventing any other user from modifying it
  It is creating a difference between the database and buffer versions of the diagram that triggers the temporary lock, and elimination of difference that releases the lock; therefore, the system releases the lock when:
  -   The user saves the changes to the diagram, with the Save icon or keyboard keys
  -   The user undoes the last remaining action in the 'Undo' list
  -   The user saves or discards changes via the system prompt when they close the diagram

  If the diagram already has a User Lock or Group Lock that does not exclude the current user, this lock is set aside and saved when the temporary User Lock is applied; when the temporary User Lock is released, the pre-existing lock is restored

Set Security Policy

The security policy determines how security mechanisms are applied and interpreted on the system. There are two possible security policies in Enterprise Architect:

- User/Group Locking mode - All elements and diagrams are considered unlocked and anyone can edit any part of the model; however, when you edit a diagram, Package or element, you lock the element or set of elements at either the user level or group level and no other user can edit the object
This mode is good for cooperative work groups where there is a solid understanding of who is working on which part of the model, and locking is used mainly to prevent further changes or to limit who has write access to a part of the model

- Require User Lock to Edit mode - More rigorous: the model is read-only, and everything is locked so that nobody can edit anything unless they explicitly check out the object with a user lock; a single 'check out' function operates on a diagram to check out the diagram and all contained elements in one go.
There are also functions on the context (right-click) menus of Packages, diagrams and elements in the Browser window to apply a user lock when this mode is in use
You would use this mode when there is a strict requirement to ensure only one person can edit a resource

at one time; this is suitable for much larger projects where there might be less communication between users

For element locking, the two policies are modified by the 'Apply Locks to Connectors' menu option. If this option is:

- Selected, security locks on elements are applied to all connectors owned by the locked elements (users other than the locking user cannot edit the connectors)

- Unselected, security locks on elements do not apply to the owned connectors

Access

Ribbon	Configure > Security > Administer > Require User Lock to Edit (select for 'Require User Lock to Edit' mode, deselect for 'User/Group Locking' mode)

Notes

- Only the Admin Security Administrator, with Admin permissions, is able to set the security policy applied

- When you add new elements in 'User/Group Locking' mode (elements editable by default), no user lock is created automatically for the newly created element

- When you add new elements in 'Require User Lock to Edit' mode (elements locked by default), a user lock is created on the new element to enable instant editing

- For all connectors other than Aggregations, the connector is owned by the source element in the relationship (as currently applied in Version Control)

Maintain Groups

Whilst you can apply access permissions to each user individually, it is easier and more convenient to assign all users who are to have the same access permission(s) to a security group, and assign the permissions to the group in a single action.

The security group also acts as a mailbox for Model Mail, where the group name can be selected as the addressee; when an internal mail is sent to the group, all members of the group receive that email in their Model Mail view. The group name can act as either:

- A mail list, in which case each group member receives their own copy of the message, or

- A mail box, in which case the email is a single entity and the group members do not receive separate instances of it; if one group member responds to or deletes the email, the other group members see that action as if they had performed it themselves

Having created a security group, you can create a Perspective Setting and/or a Ribbon Set for the group, to hide the Perspectives and ribbons that the group members are unlikely to use or are not permitted to use. See the *Perspectives for Security Groups* Help topic.

Access

Ribbon	Configure > Security > Groups

Set up a security group

Field/Button	Action
New	Click on this button to clear the fields ready to define a new group.
Group Name	Type the security group name.
Description	Type a description of the group.
Save	Click on this button to save the group definition and add it to the Groups list.
Link to Active Directory	Select this checkbox to enable linking to a Windows Active Directory Group from which to import users. The 'Select Group' dialog displays on which you specify the Windows Active Directory Group to attach to. You then start importing the users when you click on the Sync button. You must have 'Accept Active Directory Authentication' permission in Windows

	to link to the Active Directory; an error message displays if you do not have this.
OpenID Group	This feature is available from Enterprise Architect Release 14.1.
	OpenID groups can be linked to local model groups - this is used if the option to automatically create or modify OpenID users is set. When a new user logs in they will be assigned to the local groups that correspond with the OpenID groups they belong to. When an existing user logs in they will be assigned to the linked OpenID groups they belong to and removed from any they don't belong to.
	If OpenID login has been enabled for the model, then local groups can be linked to OpenID groups.
	Type the name of the OpenID group to be linked to the local model group, note that the group name is case sensitive.
	Note: OpenID login must be enabled in the 'Security Users' dialog; see the *Maintain Users* Help topic.
Shared Mail	To make the group name act as a mail box, select this checkbox against the name in the list.
	To use the group name as a mail list,

	leave the checkbox unselected.
Active Directory Link	Displays the address of the Active Directory Group that this user group is linked to, if any.
Sync	Enabled if the group is linked to a Windows Active Directory. Click on this button to synchronize the group with the Active Directory (that is, import specific users into the model from the Active Directory). You use this option when you initially set up the User Group; subsequent user IDs must be added to the user group manually.
Permissions	Lists the permissions that can be assigned to the user group. Select the checkbox against each permission the members of the group are to have.
Users	After you add users to the user group, they are listed in this panel.
Close	Click on this button to close the dialog.

Notes

- You must have 'Security - Manage Users' permission to manage user groups; the initial Admin administrator and Administrators group automatically have this permission

- You do not define groups as group logins with passwords; if you intend to use a group login, you can define a single-user login and password that all group members use (that is, Enterprise Architect allows multiple logins under one user ID)

- Users that have been imported from an Active Directory are listed in the 'Manage Users' dialog'; if the 'Accept Windows Authentication' option is enabled on that dialog, when a user opens the model the system checks the database for their Windows ID and, if it matches, automatically logs the user in without prompting for a password

- Emails already sent to a group as a mail list and those sent to a group as a mailbox cannot be interchanged; if you change the status of the 'Shared Mail' checkbox, the only way to change the distribution of past emails is to forward them to the group name again

- You can subsequently edit the group name; changes are automatically reflected in the internal Model Mail mail list or mail box

Security Group Workflow

The security group workflow is a means of managing the transition of elements through a series of stages defined by an element property such as the Status, so that the elements can only pass from one stage to the defined next stage and not get arbitrarily set to a much later (or earlier) stage. Control is applied when the user changes an element's property through the Properties window or 'Properties' dialog, or through a Kanban diagram bound to the element property.

You can manage workflow through the Workflow Scripting Engine, but by setting up a workflow definition in the User Security facility you can make use of the existing security groups to finely and tightly control which users can move an element between certain states. For example, applying the element 'Status' property:

- Developers (Security Group 'Dev') can change Status only from:
  - 'Proposed' to 'In Progress'
  - 'In Progress' to 'Implemented'
  - 'Reviewed' to 'Merged'

- Reviewers (Security Group 'Rev') can change Status only from:
  - 'Implemented' to 'Reviewed' or
  - 'Implemented' to 'In Progress'

- Testers (Security Group 'Test') can change Status only from:

- 'Merged' to 'Tested'

· Project Managers (Security Group 'PMan') can change Status from any value to any previous value

Note: Currently, the Security Group Workflows can be set only on the 'Status' element property.

Prerequisites

User Security must be enabled, and the appropriate User Security Groups set up (although you can add and delete Security Groups during the process described here).

Access

Ribbon	Configure > Security > Administer > Group Workflow

Set up Workflow on Security Groups

The 'Status Workflow' dialog is displayed.
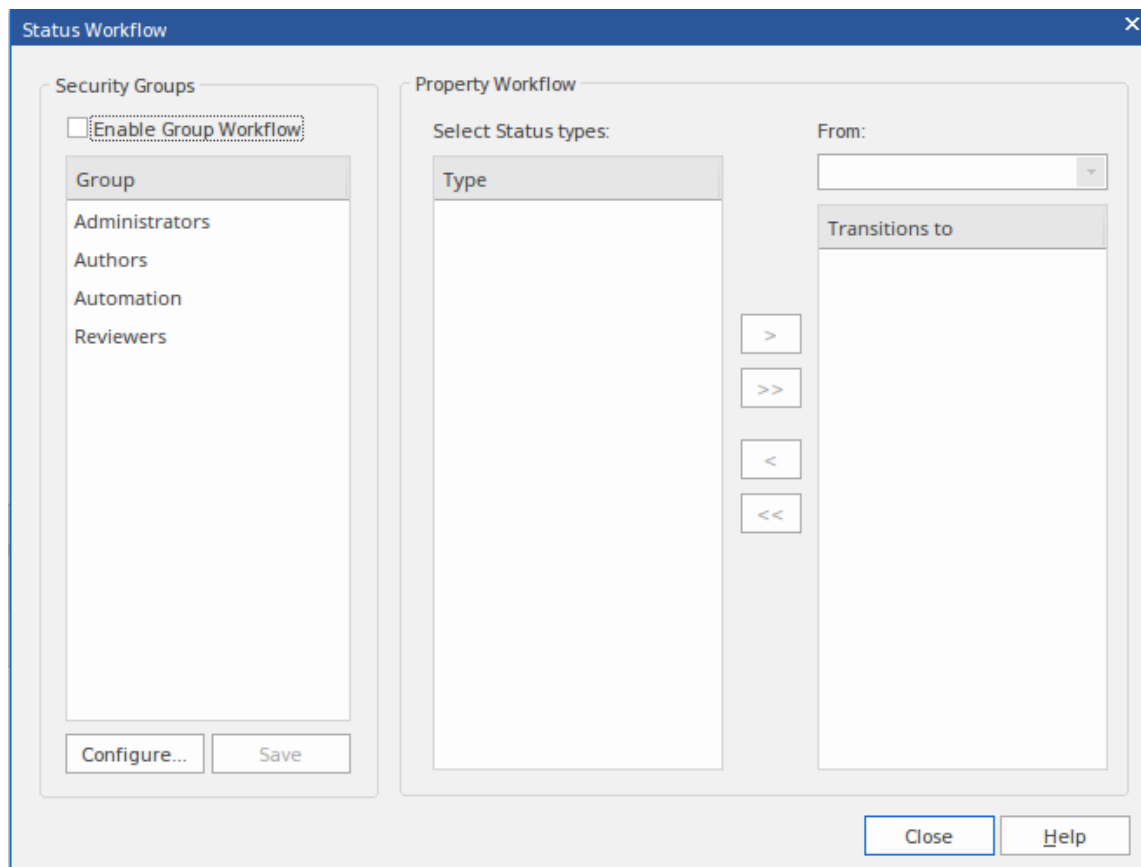
Step	Action
1	Select the 'Enable Group Workflow' checkbox to enable security group workflows. (Later, clear the checkbox if you want to suspend any currently-defined workflows for a period.)
2	In the 'Group' panel, click on the required security group. (If the required group is not listed, click on the Configure button to display the 'Security Groups' dialog and create the group.)

	The available values for the Status property are listed in the 'Type' panel.
3	In the 'From' field, click on the drop-down arrow and select the Status value that the users in the selected security group can change.
4	In the 'Type' panel, click on the value that the users can change the status *to*, and then click on the ▸ button to transfer that value to the 'Transitions to' panel. You can transfer all values to the 'Transitions to' panel by clicking on the ⏵⏵ button. If you need to correct or otherwise remove values from the 'Transitions to' panel, use one of these two buttons: ◂ ◂◂ As an example, if you wanted to allow Reviewers to transition elements from 'Implemented' to 'Reviewed' or 'In Progress', you would select 'Implemented' in the 'From' field and click on 'Reviewed' and the ▸ button, and then click on 'In Progress' and the ▸ button.
5	Click on the Save button.

	You can now either:
	• Repeat steps 3-5 and assign another rule to the same security group, to allow them to transition from another value
	• Repeat steps 2-5 and assign rules to a different security group, to allow them to transition from one value to one or more others
	• Click on the Close button and stop defining security group workflows

Maintain Users

When you have enabled security, you create the user definition for each user that has access to the model. The user definition consists of the user ID and password, the permissions the user has, the user groups the user is a member of, and whether the user ID is provided and validated by external user authentication mechanisms.

Access

Ribbon	Configure > Security > Users: New The 'Security Users' dialog displays.

Set up a user for your model

Ste p	Action
1	You can manage users in multiple ways: • Set up the user manually, as described here • Import the user IDs from a Windows Active Directory • Trust the user information from a third-party Single Sign-On system and allow it to manage users If you are importing the user IDs from a Windows Active Directory, do not complete any user detail

		fields on this dialog, but select the 'Accept Windows Authentication' checkbox and go to the *Import User IDs from Active Directory* Help topic. To allow automatic management of users by a single Sign-On (SSO) system, tick the SSO mechanism to use (either Windows or OpenID) and tick 'Automatically create or modify Windows or OpenID users'. See *Single Sign-On (SSO) Options* for more details.
	2	In the: • 'Login' field, type the user ID • 'Firstname' field, type the user's first name • 'Surname' field, type the user's last name Optionally, in the 'Department' field, type the name of the user's department. The 'Add User to Authors' checkbox defaults to selected, to add the new user to the list of authors of model elements. If the user is not to be added to the list of authors, deselect the checkbox.
	3	Click on the Save button, and then click on the Change Password button. The 'Change Password' dialog displays.
	4	In the 'New password' field, type the user's password. This can be any number of characters in length.

	(As this is a new user, the 'Enter old password' field is disabled.)
5	In the 'Retype new' field, type the user's password again, for confirmation.
6	Click on the OK button. A *Password Changed* message displays. Click on the OK button to return to the 'Security Users' dialog.
7	In the 'User Groups' panel, select the checkbox against each user group that the user is to be a member of. This assigns to the user all permissions that the selected groups have.
8	In the 'User Permissions' panel, select the checkbox against each permission that you want to assign to the user as an individual. If a permission is grayed out and already ticked, the user already has that permission as a member of a User Group.
9	The top right corner of the Enterprise Architect display shows your user ID, with a short drop-down menu providing personal access options including whether your login credentials are stored and automatically applied when you open the model ('Remember Me'). If you want to use this option, you must select the 'Allow 'Remember Me'' checkbox on

	this 'Security Users' dialog.
10	The user definition is complete. You can now either: • Click on the New button to add another user, or • Click on the Close button to exit the 'Security Users' dialog

Notes

- You must have 'Security - Manage Users' permission to maintain users; the initial Admin administrator and Administrators group automatically have this permission
- You can transport the user definitions between models as Reference Data, using the 'Configure > Model > Transfer > Export Reference Data' and 'Import Reference Data' options

Single Sign-On (SSO)

Single Sign-On (SSO) enables a model to trust a third-party authentication system to log in to a model. Instead of logging in to Enterprise Architect, the user logs into a third-party system that authenticates the user as valid and allows them access to Enterprise Architect. Enterprise Architect trusts the authentication returned from the SSO system and logs the user in to the model.

Enterprise Architect supports two SSO systems:

- Windows authentication with Active Directory
- OpenID - This feature is available from Enterprise Architect Release 14.1

SSO systems

Windows Authentication	Windows Authentication allows a model to trust the currently logged in Windows user. If the username returned from the Windows system matches a model user, then the model is logged in as that user.
	Windows Authentication works best when run with an Active Directory Domain.
	You can enable Windows Authentication

	by selecting the 'Accept Windows Authentication' checkbox on the 'Security Users' dialog
OpenID	OpenID is the current preferred standard for SSO authentication for web sites. It also works well for applications such as Enterprise Architect. To use OpenID, an OpenID server must be configured and accessible by Enterprise Architect. There are many options for OpenID servers, including self-hosted servers and online services. Enterprise Architect requires an OpenID server that supports the 'OpenID Connect' standard and is able to return a unique user identifier in the 'user_info' request. This user identifier will be matched to a local model user.

Single Sign-On (SSO) Options
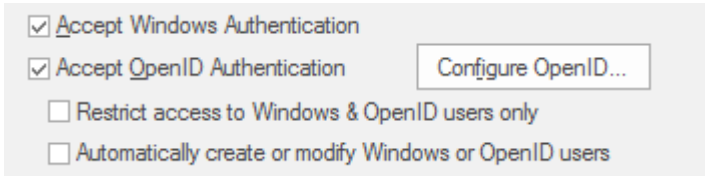
These options are available from Enterprise Architect Release 14.1.

After enabling SSO there are two main options that can be set:

- Restrict access to Windows and OpenID user only
- Automatically create or modify Windows or OpenID users

These options are detailed here.

Access

Ribbon	Configure > Security > Users ☑ Accept Windows Authentication ☑ Accept OpenID Authentication Configure OpenID... ☐ Restrict access to Windows & OpenID users only ☐ Automatically create or modify Windows or OpenID users

Restrict access to Windows and OpenID users only

Enabling this option will stop local model users from being able to log in to the model. Only users validated through

either Windows or OpenID SSO will be able to log in.

An exception is made for local users who have the 'Security - Manager Users' permission set. This allows a local administrator to still have access and be able to update or modify the SSO settings.

Automatically create or modify Windows or OpenID users

Enabling this option will allow the model to create new users derived from the trusted SSO source. Users will be assigned local group permissions based on the groups linked to the SSO provider. Existing users will be assigned to or revoked from linked groups based on their SSO groups.

Notes:

- A new user that is not in any SSO groups that are linked to model groups, will not be automatically created

- An existing user that is not in any SSO groups that are linked to model groups, will not be logged in

- An existing user's individual permissions will not be modified automatically

- An existing user will not be removed from a group that is not linked to an SSO group

Note

It is recommended that you always keep a local model administrator account (with a strong password) to allow recovery in the case the SSO authentication fails (for example, if the OpenID server is offline or mis-configured)

Configure OpenID

This feature is available from Enterprise Architect Release 14.1.
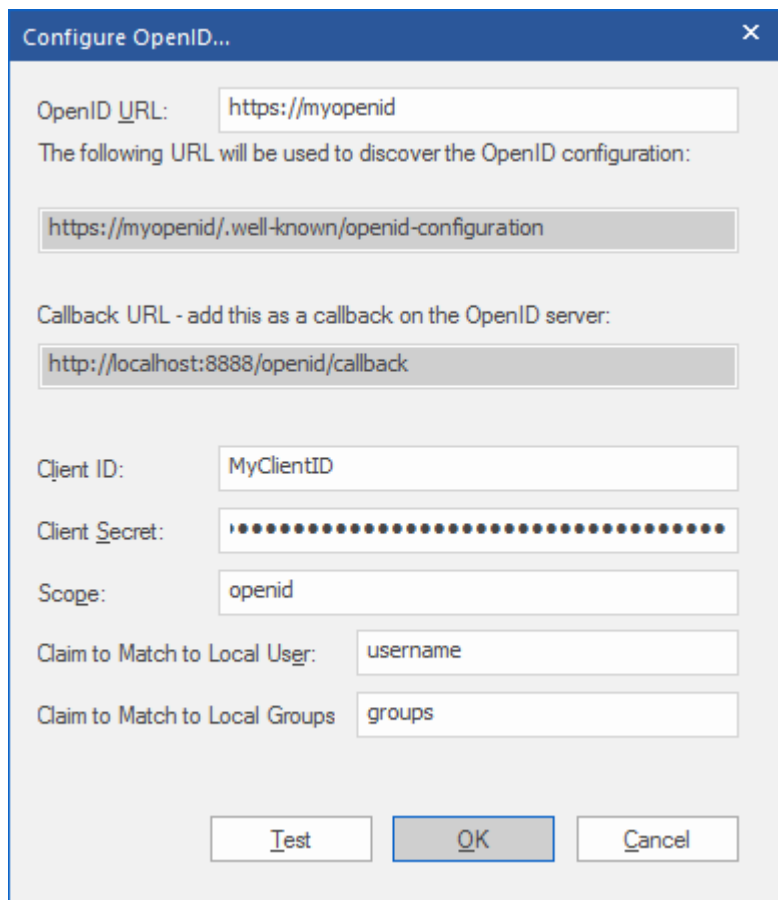
To enable users to log in with an OpenID account, an OpenID server that supports the 'OpenID Connect' standard must be available.

These settings will be used by Enterprise Architect, Pro Cloud Server, and WebEA.

Access

Ribbon	Configure > Security > Users > Accept OpenID Authentication
	Configure > Security > Users > Configure OpenID

Settings

Field	Action
OpenID URL	Enter the full path to the discovery URL of the OpenID server, minus the standard "/.well-known/openid-configuration" (this will be appended automatically).
	Include the protocol (http:// or https://), and the Port if running on a non-standard Port (that is, not 80 or 443).
	You should be able to copy the address with the "/.well-known/openid-configuration" appended and open it in a browser and see a text-based response.

	Press the Test button now and click on 'Login with OpenID' to open a browser to the correct address. If the URL is incorrect or OpenID returns a malformed configuration response, an error message will display.
Client ID	OpenID needs to be configured with a client to allow Enterprise Architect to use its services. Enter the Client ID here.
Client Secret - (optional)	Some OpenID clients require a Client Secret to further secure the requests. If the client requires a secret, enter it here. It will be saved as an encrypted value.
Scope	Enter the OpenID scopes required to return a response with the required information. A scope of 'openid' is mandatory according to the standard. Other common scopes include 'profile' or 'email'.
Claim to Match to Local User	Enter the claim that will be returned when querying the OpenID 'user_info' that will be used to match the OpenID user to an existing model user login. 'Claims' are information fields that the OpenID server is claiming are true about

	the authenticated user. Most OpenID servers allow this to be customized so it can be set up to return a claim field specifically for use with Enterprise Architect, if desired. **Note:** The only claim that is guaranteed to be unique for a user is 'sub'. This is the 'subject' of the claim. For new models this would be a good default setting in the claim field. For existing models where there are already users in the model that should be matched to OpenID, it is recommended to use a 'username' field of some sort. Either the standard 'preferred_username', 'email' (if email is used, it is recommended that email validation is enabled) or a custom 'EA username' would make sense in this situation. If using a claim other than 'sub' it is up to the maintainer of the OpenID server to ensure that the claim is unique and secure, and to ensure the claim can not be edited by the user.
Claim to Match to Local Groups	This option is used if the additional setting 'Automatically create or modify Windows or OpenID users' is enabled. It is not used otherwise. See the *Single*

	Sign-On (SSO) Options Help topic.
	Enter the claim that will be returned when querying the OpenID 'user_info' that will be used to match the OpenID user's groups to existing model groups.
	'Claims' are information fields that the OpenID server is claiming are true about the authenticated user. Most OpenID servers allow this to be customized so it can be set up to return a claim field specifically for use with Enterprise Architect, if desired.
	The OpenID standard does not specify anything in regards to user groups. Some OpenID servers have this functionality built in but still need to be enabled so the groups can be returned in the 'user_info'. The returned groups can be either a single JSON field or a JSON array containing multiple group names.

Testing Connection

Once all fields are completed, press the Test button. A window will pop up with a 'Log in to OpenID' button. Click the button to open a web browser to the OpenID server

authentication page.

Provide valid credentials and allow Enterprise Architect access to the OpenID server account (this might or might not be required depending on the OpenID environment).

If successful, the browser should close automatically and Enterprise Architect will show a success window with the OpenID user's details, including any groups returned and the model groups they are linked to.

Example of a valid 'user_info' response

This is an example response for a 'KeyCloak' OpenID server.

Claim to Match to Local User: username

Claim to Match to Local Groups: groups

```
{
    "sub": "6da812c4-8f2c-400f-b602-13bab1d4605e",
    "address": {},
    "name": "Example Person",
    "groups": [
        "EA Special Users",
        "EA Administrators"
    ],
    "given_name": "Example",
    "family_name": "Person",
```

```
    "email": "eperson@example.com",
    "username": "eperson"
}
```

Import User IDs From Active Directory

Whilst you can define each of your model users individually and specifically for Enterprise Architect security, you can also import your Windows user IDs from Windows Active Directory and use those as the security user IDs with Windows Authentication. If you set up your security user IDs in this way, when a user opens the model the system checks the users database for their Windows ID and, if it matches, automatically logs the user in without prompting for a password.

As a pre-requisite, you create an appropriate user group into which to import the user IDs; you can also use this to assign appropriate permissions to the user IDs as a whole.

Access

Ribbon	Configure > Security > Users

Import user IDs from Windows Active Directory

Ste	Action

p	
1	On the 'Security Users' dialog do not complete any user details fields. Instead, select the 'Accept Windows Authentication' checkbox and click on the Import button. The 'Import Users' dialog displays.
2	In the 'Security Group' panel, select the checkbox against the appropriate security group to contain the imported user IDs.
3	Click on the Add button. The 'Select Users' dialog displays.
4	If the 'Select this object type' field has not defaulted to 'Users': 1. Click on the Object Types button; the 'Object Types' dialog displays 2. Select the checkbox against 'Users' (the type of object to import from the Active Directory). 3. Click on the OK button to return to the 'Select Users' dialog.
5	Click on the Locations button. The 'Locations' dialog displays.
6	Browse for and select the location to import from,

	within the Active Directory.
	Click on the OK button to return to the 'Select Users' dialog.
7	In the 'Enter the object names to select' field, either: • Type in the user IDs individually (click on the examples link to see examples of the correct formats) and go to step 13, or • Click on the Advanced button to search for IDs; the 'Select Users' dialog redisplays showing a 'Common Queries' tab
8	In the 'Name' and 'Description' fields, type any characters or text that help identify the IDs you are searching for.
9	In the 'Starts with' field, click on the drop-down arrow and, if necessary, select a different qualifier.
10	Optionally, to further filter the IDs to search for, select the 'Disabled accounts' or 'Non-expiring password' checkboxes, and/or select a value in the 'Days since last logon' field.
11	Click on the Find Now button to initiate the search, and to display a list of IDs in the bottom panel of the dialog. You can vary the types of information shown here by clicking on the Columns button and selecting the

	column headings to display, then dragging the column titles into the sequence you prefer.
12	When you have identified the IDs to import, click on a required ID (or press Ctrl or Shift while you click to select several) and click on the OK button. The 'Select Users' dialog redisplays, with the selected ID or IDs listed in the 'Enter the object names to select' field.
13	Click on the OK button to redisplay the 'Import Users' dialog with the selected users' names listed in the 'Users' panel.
14	Click on the Import button to add the user IDs to the 'Security Users' dialog.
15	Click on a user ID to populate the dialog fields with the user ID details. You can also set group membership and/or single permissions here.

Notes

- You must have 'Security - Manage Users' permission to maintain users; the initial Admin administrator and

Administrators group automatically have this permission

- As a security measure, the Windows Authentication is automatically deactivated if the project file is moved to a different location; once the file has been relocated, you can toggle the 'Accept Windows Authentication' checkbox to reactivate Windows Authentication

- Enterprise Architect generates random passwords for Windows user IDs; however, if necessary you can assign a new password to an imported user ID

List of Available Permissions

In the Corporate, Unified and Ultimate editions, if security is enabled, users can update information if they have the appropriate access permissions for the data update tasks for that type of data. The tasks that a user can perform with each access permission are listed here.

Some permissions take precedence over others. For example, if a user has 'Use Version Control' permission, they can modify model elements on import even if they do not have 'Update Element' permission.

Permissions

Permission	Enables the user to
Administer Database	Compact and repair a project database.
Admin Workflow	Develop and manage workflow scripts.
Audit Settings	Change the audit settings in the 'Audit Settings' dialog.
Audit View	Enable auditing and display data in the 'Audit View' and 'Audit History' tab.

Baselines - Manage	Create, delete, import and export Baselines.
Baselines - Restore model	Merge data into the project model from a Baseline or XML file.
Change Password	Change your own password.
Check Data Integrity	Check and repair project data integrity.
Configure Datatypes	Add, modify and delete datatypes.
Configure External Data Sources	When importing data from an external tool you need this permission to configure the default mapping values that determine what type of local elements are created in Enterprise Architect when the data is imported.
Configure Images	Configure alternative element images.
Configure Model	Allows users to enable and modify access to Add-In scripts according to the

Add-Ins	accessing user's membership of the defined security user group.
Configure Packages	Configure controlled Packages and Package properties.
Configure Project Prerequisites	Set up the: • MDG Technologies that are mandatory, permitted or blocked for the project • Minimum version and build of Enterprise Architect required for the model
Configure Resources	Create and manage: • Resources window items: document templates, Design Patterns, profiles and favorites • Available Project resources • CSV Specifications
Configure Stereotypes	Add, modify and delete Stereotypes.
Configure Version Control	Set up Version Control options for the current model.

Edit Scripts	Add, edit, delete and regroup model scripts.
Export-XML	Export a model to XMI or Enterprise Architect's Native XML format. Also required for CSV Import and Export, and for creating and editing CSV Specifications.
Generate Documents	Generate document and web reports from model Packages.
Generate Source Code and DDL	Generate source code and DDL from a model element, and synchronize code against model elements if it already exists.
Import XMI	Import a model from XMI or Enterprise Architect's Native XML format. Also required for CSV Import and Export, and for creating and editing CSV Specifications.
Lock Elements	Lock an element or Package.
Manage Diagrams	Create new diagrams, copy and delete existing diagrams, and publish a diagram as a Pattern.

Manage Glossary	Create, edit and delete glossary items in the Project Glossary.
Manage Issues	Update and delete model Issues.
Manage Project Calendar	Add, update and delete Project Calendar events; those without this permission can view calendar items.
Manage Project Settings	Update and manage project-wide settings including: • The default element font size and type for the model • The model default diagram • Resource metrics, risks, efforts and allocation • Auto-created Diagram Image and Image Map • WebEA URL and Index
Manage Reference Data - Update	Update and delete reference items.
Manage	Create and synchronize replicas.

Replicas	
Manage Tests	Update and delete Test records.
Reverse Engineer from DDL and Source Code	Reverse engineer from source code or ODBC, and synchronize model elements against code.
Run Scripts	Run and debug a script.
Security - Enable/Disable	Disable user security in Enterprise Architect.
Security - Manage Locks	Delete element locks set by other users.
Security - Manage Users	Maintain users, groups and assigned permissions.
Spell Check	Spell check a Package and set the spell check language.
Transfer Data	Transfer model between different

	repositories.
Transform Package	Perform transformations of Packages and elements.
Update Diagrams	Update diagram appearance, properties and layout, including on the 'Page Setup' dialog.
Update Elements	Save model changes (including deletions) for elements, Packages, and relationships.
Use Version Control	Check files in and out using Version Control.
View Locks	Display all locks that have been set in the model.
Visibility Level Admin	Assign Visibility Levels to Packages in a model configured for Visibility Levels, on Oracle 8+ and Microsoft SQL Server 2016 databases, hosted on the Cloud by the Pro Cloud Server.

View All User Permissions

When a user has been set up on the system with their appropriate access permissions, you can periodically monitor the list of permissions to verify what they are able to do and check that their profile is up to date. The access permissions shown as selected are derived from their individual profile and from their membership of security groups.

Access

Ribbon	Configure > Security > Users

Display the permissions assigned to a user ID

Step	Action
1	On the 'Security Users' dialog, select the user ID in the 'Users' list so that the details display in the 'User Details' panel.

| 2 | Review the list of permissions in the 'User Permissions' panel. The user has all access permissions for which the checkbox is selected, and does not have the permissions for which the checkbox is clear. |

Notes

- You must have 'Security - Manage Users' permission to maintain users; the initial Admin administrator and Administrators group automatically have this permission

- On this dialog you can select and deselect checkboxes in the 'User Permissions' panel to edit the user's individual access permissions, but you cannot change permissions assigned via the User Groups; click on the Save button to save any changes

View and Manage Locks

When security is enabled, users lock and unlock model elements in order to work on them, which can require monitoring and control. You can periodically view and, if necessary, delete the active locks placed on elements by users.

Access

Ribbon	Configure > Security > Locks

Manage user locks

Step	Action
1	On the 'Manage Locks' dialog, in the 'View Locks For' panel, click on the radio button for the type of lock to view. • All • Groups Only • Users Only

	Locks of the selected type are listed in the 'Active Locks' panel.
2	To remove a lock, click on it and click on the Unlock Selected button.
	You can select (and deselect) multiple locks by pressing Ctrl as you click on each one, or Shift as you click on the last lock in a range.
	You can also select all locks in the list by clicking on the Select All button, and clear that selection by clicking on the Select None button (or by clicking off the list).
3	When you have finished reviewing the locks, click on the Close button to close the dialog.

Notes

- You must have 'Security - Manage Locks' permission to delete user locks; the initial Admin administrator and Administrators group automatically have this permission
- You can view locks without the 'Manage Locks' permission, so that you can contact the lock owner if necessary
- The 'Manage Locks' dialog does not currently show any Full locks set in the model

- If you want to display the resulting information in a more readable layout, you can resize the dialog and its columns

Password Encryption

In releases of Enterprise Architect prior to 7.1, Security Administrators of projects on SQL Server or Oracle repositories can encrypt the password used to set up the connection between Enterprise Architect and the repository. The system user does not have the real password, thereby preventing them from accessing the repository using other tools such as Query Analyzer or SQLPlus.

For password encryption for all repositories at and beyond release 7.1, you provide the connection but protect the password using model shortcuts.

Access

Ribbon	Configure > Security > Administer > Encrypt Password

Encrypt a repository password

Step	Action

1	In the 'Password' field, enter the password to access the repository.
	The 'Encrypted' field displays the modified password to be provided to users.
2	Instruct users to connect Enterprise Architect to the repository using the encrypted password prefixed with $$.
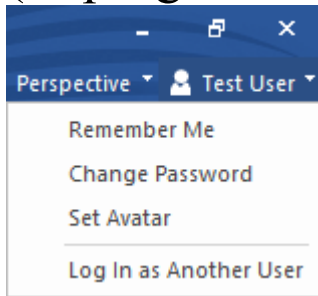
Notes

- Do not click on the Test Connection button as it can cause an error with encrypted passwords
- For SQL Server repositories, you must enter the Initial Catalog details from the 'All' tab of the 'Data Link Properties' dialog

Change Password

It is recommended that users of any computer system change their passwords - or have them changed - at regular intervals. When security is enabled in Enterprise Architect, users can change their own passwords or, if the user is unable or not authorized to do this, a Security Administrator can set or change the user's password.

Access

Ribbon	Configure > Security > Administer > Change Password (User) Configure > Security > Administer > Users (Administrator)
Other	(Top right corner of screen) > > Change Password

User - Change your own user password

Step	Action
1	On the 'Change Password' dialog, in the 'Enter old password' field, type your current password.
2	In the 'New password' field, type your new password. This can be any number of characters in length.
3	In the 'Retype new' field, type your new password again, for confirmation.
4	Click on the OK button. The *Password Changed* message displays.
5	Click on the OK button to clear the message. Use your new password next time you log in.

Administrator - Set or change any user's password

Step	Action

p	
1	On the 'Security Users' dialog, in the 'Users:' panel, click on the user's name. The user's details display in the dialog fields.
2	Click on the Change Password button. The 'Change Password' dialog displays.
3	In the 'New password' field, type the user's new password. This can be any number of characters in length. You do not have to enter the user's current password.
4	In the 'Retype new' field, type the user's password again, for confirmation.
5	Click on the OK button. The *Password Changed* message displays.
6	Click on the OK button.
7	By secure means, notify the user of their new password.

Notes

- A user must have 'Change Password' permission to change their own password; the initial Admin administrator and Administrators group automatically have this permission
- A Security Administrator must have 'Security - Manage Users' permission to change other users' passwords; the initial Admin administrator and Administrators group automatically have this permission

Hide Project Root

A project often contains a number of models to support different areas of development or administration. Any one user - other than perhaps the Project Manager or Administrator - is unlikely to be working across the whole structure, and would not need to see the entire project. Therefore, Enterprise Architect provides a facility to hide project Root Nodes and their contents on the basis of security group locks. The facility is not available on locks set on individual user IDs.

When you set a Group Lock on a Root Node, you can also select a checkbox to hide the Package in the Browser window from users who are not members of the locking group or Administrators. If you change the type of lock, or remove the lock altogether, the Package becomes visible to all users.

This feature hides the Root Package and its contents from initial view in the Browser window. It does not prevent the contents of the Package from being exposed in Model Searches. If you want to completely hide a Package from groups of users, consider Pro Cloud Server Visibility Levels.

Lock Model Elements

If you need to set a lock on a Package, element or diagram, or clear that lock, you can do so from either the Browser window or - for an element or diagram - from within a diagram. You follow one of three procedures, depending on whether you are:

- Locking an element or diagram under the 'User/Group Locking' security policy
- Locking a Package under the 'User/Group Locking' security policy
- Locking an element or diagram under the 'Require User Lock to Edit' security policy

You can also lock all elements, diagrams or Packages in a selected group, at once. The procedures are the same as for locking individual objects, subject to the comments provided here.

Notes

- You must have 'Lock Elements' permission to lock an element or diagram

Locking multiple objects together

You can select multiple objects in the Browser window, and lock them at the same time. The multiple objects should be of the same type; that is, several Packages OR several diagrams OR several elements. The selected objects must also have the same parent and therefore be peers.

When you have selected the objects to lock, right-click on one of them and:

- Under 'User/Group Locking' policy, select:
    - Lock Element(s)
    - Lock Diagrams(s) or
    - Lock Package(s)

- Under 'Require User Lock to Edit' policy, select:
    - Apply/Release User Lock(s)

If there is a locking conflict with any item to be locked - for example, a different user or group has locked the individual item - that item is ignored by the locking process and a warning error is added to the System Output window; this avoids multiple popup dialog warnings.

Lock Objects Under User/Group Locking

Under the User/Group Locking security policy, if you need to set or release a lock on an element or diagram, you can do so from either the Browser window or from within the diagram.

Access

Ribbon	• Design > Diagram > Manage > Lock (on selected diagram) • Design > Element > Manage > Lock (on selected element)
Context Menu	Select one of: • Browser window | Right-click on diagram | Lock • Browser window | Right-click on element | Lock • Browser window | Select a Package, diagram or element and press Ctrl+Shift+L • On a diagram | Right-click on diagram background | Lock Diagram

	• On a diagram | Right-click on element | Lock Element or • On a diagram | Select an element and press Ctrl+Shift+L

Set a lock on an element or diagram

Step	Action
1	On the 'Lock Element' or 'Lock Diagram' dialog, in the 'Lock Type' panel, select the radio button for the required option: • 'No lock' - do not set a lock on this object; clear any existing lock that you have set, or clear any Full lock that other users have set • 'Full lock' - lock this object so that no-one can edit it without specifically clearing the lock • 'User lock' - lock this object so that only you can make further edits; other users cannot unlock or edit the object • 'Group lock' - lock this object so that any member of the specified group can edit the object; other users cannot unlock or edit the object

2	If you have selected the 'Group lock' option, in the 'GroupID' field click on the drop-down arrow and select the group containing users that can edit the object. The 'GroupID' drop-down list only includes groups that you are a member of.
3	Click on the OK button.

Notes

- To check whether the project security is in User/Group locking mode, select 'Configure > Security > Administer'; the 'Require User Lock to Edit' option should be deselected

- You must have 'Lock Elements' permission to lock an element or diagram

- If the item already has a lock, only the corresponding lock option and the 'No lock' option are highlighted; you have to release the lock in order to set a different type of lock

- If a diagram is locked and you select an element on it, the element border displays in red, indicating that you cannot move it or resize it

- If an element is locked and you click on it on a diagram, the element border displays in black; you can display the properties but not change them

- If you select the 'Full Lock, no-one may edit' option, a red exclamation mark displays against the object in the Browser window

- If you select the 'User Lock, locking user may still edit' or 'Group lock, locking group may still edit' options, a blue exclamation mark displays against the object in the Browser window; other users see a red exclamation mark

Lock Packages Under User/Group Locking

If, in User/Group locking mode, you want to lock or unlock the contents of a Package, you can do so in a single operation. You can set the lock on the entire contents (including child Packages), just on the top-level Package content, or just on the elements or diagrams in the Package.

Access

Ribbon	Design > Model > Manage > Lock (on selected Package)
Context Menu	Browser window | Right-click on Package | Package Control | Lock Package
Keyboard	On selected Package, Ctrl+Shift+L

Lock or Unlock a Package

Ste	Action

p	
1	In the 'Lock Type' panel, select the appropriate radio button for the lock to apply: · No lock - do not set a lock on this Package; clear any existing lock that you have set, or clear any Full lock that other users have set · Full lock - lock this Package so that no-one can edit it without specifically clearing the lock · User lock - lock this Package so that only you can make further edits; other users cannot unlock or edit the Package · Group lock - lock this Package so that any member of the specified group can edit the object; other users cannot unlock or edit the Package
2	If you have selected the 'Group lock' option, in the 'GroupID' field click on the drop-down arrow and select the group containing users that can edit the object. The 'GroupID' drop-down list only includes groups that you are a member of. Additionally, if you are setting the Group Lock on a Root node, you can select the 'Hide for other Groups' checkbox to hide the Package and its contents from users who are not part of the security group or the 'Administrators' group. This hides the Package from general view in the Browser window, but does not prevent the Package content from being exposed in

		model searches.
3		The 'What to Process' checkboxes default to selected to also lock: • Elements and/or diagrams in the Package • The contents of child Packages (that is, the whole branch) If you want to exclude any type of Package content from the change in lock status, deselect each appropriate checkbox.
4		Click on the OK button to apply the lock.

Notes

- To check whether the project security is in User/Group locking mode, select 'Configure > Security > Administer'; the 'Require User Lock to Edit' option should be deselected

- You must have 'Lock Elements' permission to lock a Package

- If the Package is already locked, only the corresponding lock option and the 'No lock' option are highlighted; you have to release the lock in order to set a different type of lock

- If you select the 'Full Lock, no-one may edit' option, a red exclamation mark displays against the Package in the Browser window

- If you select the 'User Lock, locking user may still edit' or 'Group lock, locking group may still edit' options, a blue exclamation mark displays against the Package in the Browser window; other users see a red exclamation mark

Lock Objects Under Require User Lock to Edit

In the 'Require User Lock to Edit' security mode, if you want to edit one or more of the diagrams or elements in a Package, you must set a User Lock on either the specific objects or the Package that contains them. You can set or release the lock from either a diagram or the Browser window. Once you have set a lock, only you or the Security Administrator can release it again; no other user can release your locks.

Access

Ribbon	Design > Model > Manage > Lock (on selected Package)
	Design > Diagram > Manage > Lock (on selected open diagram)
	Design > Element > Manage > Lock (on selected element)
Context Menu	Select one of:
	• Browser window | Right-click on Package | Package Control | Apply/Release User Lock, or

	· Browser window | Right-click on diagram | Apply/Release User Lock, or · Browser window | Right-click on element | Apply/Release User Lock, or · Browser window | Select a Package, diagram or element, then press Ctrl+Shift+L, or · On a diagram | Right-click on background | Apply/Release User Lock, or · On a diagram | Right-click on element | Apply/Release User Lock, or · On a diagram | Click on an element, then press Ctrl+Shift+L

Set or clear a user lock in Require User Lock to Edit security mode

Step	Action
1	On the 'Set User Lock' dialog, click on either the: · 'Apply User Lock' radio button to set the lock or · 'Release User Lock' radio button to clear the lock

2	For a Package, if you want to also lock all child Packages, select the 'Include Child Packages' checkbox.
	If any elements in the Package tree are locked by other users, a list of elements that couldn't be locked displays.
3	Click on the OK button.
	The system locks or unlocks:
	• The selected element
	• The selected diagram and the diagram settings for elements on the diagram (not the elements themselves), or
	• The Package and all elements and diagrams in the top level of the Package

Notes

- To check whether the project security is in Require User Lock to Edit mode, select 'Configure > Security > Administer'; the 'Require User Lock to Edit' option should be selected

- You must have 'Lock Elements' permission to lock either an element on a diagram or a Package

- When you set a user lock, a blue exclamation mark

displays against the object or objects that are locked; other users see these as red exclamation marks

Locked Element Indicators

When a user sets a lock on an item through User Security, the lock status of the item is indicated in the Browser window by a marker against the item - a red or blue exclamation mark - as shown:
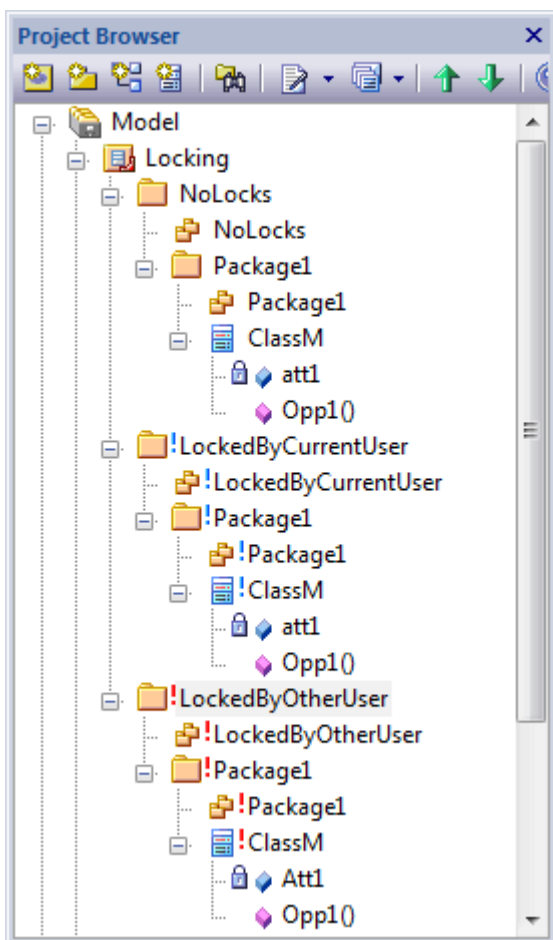
These indicators also display against the locked element on any diagram in which the element is represented.

The effect of the lock and the meaning of the status marker depend on the security policy applied to your project.

Require User Lock to Edit

Marker	Meaning
No marker	There is no lock, the item is not editable, but any user can now apply a user lock to edit the item.
Blue exclamation mark	You have applied a user lock and can edit the item; no other user can release the lock, set their own lock or edit the item.
Red exclamation mark	Another user has applied a user lock, and you cannot release the lock, set your own lock or edit the item. You can find out which user has locked the item.

User/Group Lock

Marker	Meaning
No marker	There is no lock, the item is editable, but any user can now apply a user or group lock.

Blue exclamation mark	The item has a lock set by you or a group including your user ID as a member, and you can edit the item.
Red exclamation mark	The item has a lock set by another user, or a group of which you are not a member; you cannot edit the item. You can find out which user has locked the item. The red exclamation mark also indicates that you or another user has set a full lock on the item. Any user can clear that lock.

Notes

- If a diagram is locked and you select an object on it, the object border displays in red; this indicates that you cannot change the location or size of the object on the diagram

Identify Who Has Locked An Object

When you are working in your model, you might find that you are unable to update an element, diagram or Package. If you cannot update any object, this might mean that you do not have the access permissions to update diagrams or elements. However, if the object in the Browser window has a red exclamation mark next to it this indicates that either another person has placed a user lock or group lock on the object, or you or another user have put a full lock on the object.

You can quickly establish if the lock is a full lock (which you can remove) or which user has set a user or group lock.

Access

Context Menu	• Browser window | Right-click on Package | Package Control | Lock Package • Browser window | Right-click on a diagram | Lock Diagram • Browser window | Right-click on element | Lock

Identify the lock holder

Step	Action
1	In the Browser window right-click on the diagram, Package or element that has a red lock indicator, and select the appropriate 'Lock' option (for a Package, the option is in the Package Control submenu). If the lock is: • A Full lock, the 'Lock <object>' dialog displays, and you can delete the lock and set your own • A user lock or group lock, a message displays showing the user ID of the person or group who currently holds the lock on that item; click on the OK button to close the dialog

Notes

• You must have Lock Elements permission to lock or clear the lock on a Package, element or diagram

Manage Your Own Locks

As you are working in your model, you might set user locks on elements, diagrams and Packages so that you can work on them and protect that work while it is progress. Having completed your work, you might then want to remove those locks. You can do this on each object individually, using the same procedure as you used to set the lock. You can also display a list of all the locks you have set, and remove selected locks or all locks at once. This is especially useful when working under the 'Require user locks to edit' security policy.

Access

Ribbon	Configure > Security > Administer > Manage My Locks
Keyboard Shortcuts	Ctrl+Shift+L

Manage your own locks

Notes

- You must have 'Lock Elements' access permission to set user locks on modeling elements, but you do not require any access permission to list or clear them using this procedure

Step	Action
1	All the locks that you have set in the model are listed on the 'My Locks' dialog. This dialog does not show Full locks or Group locks.
2	If you intend to clear locks, either: • Select a single lock you intend to clear • Press Ctrl or Shift as you select a number of locks or a range of locks respectively, to clear • Click on Select All to select all of your locks, or • Click on Select None to clear your selection, if you have made an error
3	If you have selected locks to clear, click on the Unlock Selected button. The objects that were locked are now unlocked.

Project Calendar

The Project Calendar provides a project management overview in calendar format of the deployment of resources, timeframes for tasks, and upcoming project events such as meetings and milestones. The calendar displays in the Diagram View workspace, consisting of a:

- Calendar panel, displaying months of the year
- Diary panel sectioned into days or weeks
- Toolbar at the top of the window, which enables you to define what information is displayed and how it is formatted

Access

Ribbon	Start > Collaborate > Calendar

Features

Screen area	Description
Calendar Panel	The Calendar panel, when viewed normally on the screen with other

windows and panels, displays a calendar of three months that by default includes the current month.

By closing or reducing other windows and panels on the screen, and depending on the size of your screen, you can show the months for a longer period, to a maximum of 3 years and six months.

You can review data for up to several decades into the past, if such data has been recorded, and plan ahead for up to several decades into the future; to display future or past months, either:

· Click on the arrows in the names of the months on the left and right of the top row of months, or

· Click and hold the mouse on the name of a month so that a list of months and years displays, then move the mouse forwards to scroll up the list or backwards to scroll down the list; when you reach the required month, ensure that it is highlighted and release the mouse button

On the calendar, today's date has a red border; if you have scrolled the calendar so that today's date is not shown, click on the second icon in the toolbar () to position the current month in the top left

	of the calendar with today's date highlighted.
Diary Panel	The 'Diary' panel displays a set of day fields, each of which can contain one or more markers for an event or task.
	The content of the display is determined by the selections you make in the toolbar, and principally by the object type you select from the first drop-down field:
	• Project Calendar
	• Allocated Resources
	• Project Tasks
	The structure of the display depends on the period you want to review, specified using the icons on the toolbar:
	• 1 day (Project Calendar only)
	• 5 days (Mon - Fri) (Project Calendar only)
	• 7 days (Mon - Sun)
	• 31 days
	However, in the 'Calendar' panel you can highlight specific periods of between 1 and 7 days (Project Calendar only) and 14, 21, 28, 35 and 42 days, to display just those periods in the 'Diary' panel.
	If you select a period of between 1 and 7 days, each day is divided into one hour

	time intervals; you can adjust the time intervals for these periods, using the toolbar.
	For the current day, the current time is also highlighted.
	Also, if you click on today's date in the 'Calendar' panel the 'Diary panel' changes to show the shortest period (7 days or 1 day) for the object type, again with adjustable time intervals for the times of day.
	For displays of 7 or more days, you can scroll up or down to display the information for earlier or later dates; if you scroll away from today's date, you can return to it by right-clicking anywhere on the display and selecting the 'Show Today' option.
Toolbar	The toolbar options modify what is displayed on the 'Diary' panel, and help you to add certain kinds of information.
	The icons and fields in the toolbar, from left to right, have these functions:
	• Add New <object> - enables you to create a new record for an event or task
	• Show Today - re-focuses the 'Diary' panel and 'Calendar' panel on today's

	date, for any object type
	• 1, 5, 7, 31 - sets the number of days displayed in the 'Diary' panel
	• First drop-down - identifies the type of information to display: Calendar events, allocated Resources, or Tasks
	• Second drop-down - identifies the type or characteristic of object to filter for (and depends on the value selected in the first field)
	• Third drop-down - identifies the subtype of event, such as Planning Meeting or People off sick or, for Allocated Resources, the element type to filter for

	• Options:
	    - Configure Event Subtypes - displays the 'Configure Subtype' dialog, which you use to define categories of event to record on the Calendar
	    - Time Scale - where the display includes times of day; enables you to reset the time interval to numbers of minutes
	    - Show End Time - for the Project Calendar, where the times of day are NOT shown and an event occurs within one day, this shows or hides the time at which the event

	finishes (the start time displays automatically)
	  - Show Time As Clocks - toggle between showing start and end times in digital format and as a clock face
	  - Compress Weekend Days - in 31-day format, toggle between showing Saturday and Sunday as separate fields and a pair of half-fields
	  - Show ToolTips - toggle between showing and hiding mouse roll-over tool-tips

Notes

- The Project Calendar is available in the Corporate, Unified and Ultimate editions of Enterprise Architect

- In the Lite edition of Enterprise Architect, you can view Calendar entries but not change them

Calendar

Project Calendar is a display mode of the project Calendar facility. In Project Calendar mode, the 'Diary' panel shows a selected period of time containing flags for each event that takes place in or through that period. These events can be, for example, meetings, staff absences or commitments, product releases or public holidays.

You can customize the range of events that you record, using the 'Configure Subtype' dialog.

Access

Ribbon	Start > Collaborate > Calendar > Project Calendar

Record an event in the Project Calendar

Step	Action
1	Double-click on the required day, or the first day in a longer period.

		The 'Project Event' dialog displays.
2		In the 'Subject' field, type the name of the event.
3		If the event is to take place at a specific place, in the 'Location' field type the name of the place or room.
4		In the 'Category' field, click on the drop-down arrow and select the appropriate categorization: • Event (such as an external trade show, or internal presentation) • Meeting (whether internal or external) • Milestone/Objective (such as a product test or release) • People (an absence or commitment of a specific staff member)
5		If the event is likely to occupy one complete day, select the 'All day event' checkbox; this: • Places the event icon at the top of the day field in the Diary, above any time sections • Hides the time sections of the 'Start time' and 'End time' fields
6		In the Start time and End time fields, specify the start and end dates and/or times of the event. In the date section of each field, either: • Click on the drop-down arrow to display the

		current month and select the month and date, or • Click on the 'spin' arrows to roll the date forwards or backwards by one day at a time In the time section of each field, click on the hour or minute components (which are separate) and either: • Type in the required time or • Click on the 'spin' arrows to roll the time backwards or forwards
7		In the 'Event Type' field, click on the drop-down arrow and select an appropriate type label for the event; the options change depending on the value you selected for the 'Category' field. This provides the fill color for the event icon, as indicated by the fill box next to each option.
8		In the 'Defined as' field, click on the drop-down arrow and select the indicator for whether the event is internal or external to your organization.
9		If the event consists of a telephone call, select the 'Phone Call' checkbox.
10		In the description field, type any notes required on the event; these display in the mouse roll-over tool-tip for the event on the 'Diary' panel.

| 11 | If this event repeats at regular intervals, click on the Recurrence button and complete the 'Event Recurrence' dialog. |
| 12 | Click on the OK button to save the event and display it on the Calendar. |

Define a recurring event

Ste p	Action
1	In the 'Start' and 'End' fields, specify the start and end times of the event; click on the hour or minute components (which are separate) and either: - Type in the required time or - Click on the 'spin' arrows to roll the time backwards or forwards
2	In the 'Duration' field, click on each of the day(s), hours and minutes portions and either type or 'spin' to the required value. The hours and minutes portions are linked to the 'Start' and 'End' fields, so that: As you edit the 'Start' field or the 'Duration' field,

		the 'End' field adjusts to maintain the duration relative to the start time
		• As you edit the 'End' field, the 'Duration' field changes to match the difference between the start and end times
3		In the 'Recurrence pattern' panel, select the appropriate radio button for the frequency of the event.
		As you select the radio button, the fields on the right of the panel change to further define when the event recurs.
4		Select the appropriate radio buttons and field values, with this guidance:
		• Daily can be every 1, 2, 3, 4, 5 or 6 days, or every day of the working week
		• Weekly is on one or more specific days of the week, the events being separated by a period of between 1 and 51 complete weeks
		• Monthly can be on a specific date or a specific day of the month, the events being separated by a period of between 1 and 11 complete months
		• Yearly can be on a specific date or a specific day of a specific month
5		In the 'Range of recurrence' panel, in the 'Start' field, specify the date on which the event cycle begins.

	Click on the day, month and year components (which are separate) and either: • Type in the required value or • Click on the 'spin' arrows to roll the date backwards or forwards
6	Select the appropriate radio buttons to indicate that the recurrence cycle: • Has no defined end point • Ends after a specific number of occurrences of the event (type in the number) • Ends by a specific date (enter the date)
7	Click on the OK button, and again on the 'Project Event' dialog. The event icon displays at all points in the Calendar where it is scheduled to occur, as defined in the 'Event Recurrence' dialog; the recurrence is indicated by a graphic depicting two recirculating arrows.
8	If the recurrence is no longer required: • Double-click on the icon for any occurrence of the event, to display the 'Project Event' dialog • Click on the Recurrence button to display the 'Event Recurrence' dialog • Click on the Remove Recurrence button; the 'Event Recurrence' dialog closes • Click on the OK button; the 'Project Event' dialog

	closes
	Only the first occurrence of the event remains in the Calendar.

Notes

- The Project Calendar is available in the Corporate, Unified and Ultimate editions of Enterprise Architect

- In these editions, if security is enabled you must have 'Manage Project Calendar' permission in order to create, update or delete Project Calendar events; if security is not enabled, you can change data without this permission

- In the Lite edition of Enterprise Architect, you can view Calendar entries but not change them

- You can transport a calendar of defined events between projects, using the 'Configure > Model > Transfer > Export Reference Data' and 'Import Reference Data' ribbon options

Configure Event Subtypes

The 'Configure Subtype' dialog enables you to define additional types of event to record on the Project Calendar, such as:

- Define a new event type within a select event category
- Change an existing event type
- Delete an existing event type

Access

Ribbon	Start > Collaborate > Calendar : | Configure Event Subtypeₛ

Manage the event types for your project

Step	Action
1	On the 'Configure Subtype' dialog, in the 'Category' field, click on the drop-down arrow and select the appropriate category for the event.

2	Click on the 'Type' field and type a suitable name for the event type (or select an existing event from the list under the 'Category' field).
3	In the 'Color' field, click on the drop-down arrow and select or define a color for the event icon.
4	Click on the Save button to save the new or edited event type to the list for the specified category. Click on the New button if you are going to create another event type.
5	If the event type is no longer required, click on the Delete button.
6	If required, you can change the sequence of the event types in the displayed list, using the 'Up Hand' and 'Down Hand' buttons at the bottom of the dialog.
7	Click on the OK button to close the dialog; any new event types are available for use in the Project Calendar.

Notes

- In the Corporate, Unified and Ultimate editions of

Enterprise Architect, if security is enabled you must have 'Manage Project Calendar' permission in order to create or delete Project Calendar event subtypes; if security is not enabled, you can change data without this permission

· You can transport your defined event types between projects, using the 'Configure > Model > Transfer > Export Reference Data' and 'Import Reference Data' ribbon options

Allocated Resources

'Allocated Resources' is a display mode of the project Calendar facility, that you can use to:

- Review the allocation of resources across the project over a period of time
- Review the status of the work assigned to those resources
- Display and edit the details of the task assigned to a resource
- Allocate further resources to an element
- Delete a resource allocation from an element
- Create and send an email to the resource allocated to an element

In 'Allocated Resources' mode, the 'Diary' panel shows the selected period of time (see the *Project Calendar* topic), with at least one icon representing each element in the project to which a resource has been allocated during that period. If an element has more than one allocated resource, each element:resource combination is represented separately.

Each icon shows the element name and resource name, and indicates the status of the assigned work with one of these symbols:

- a green square, indicating that the resource has been assigned the work
- a green tick, indicating that the resource has completed the assigned work

- a red square, indicating that the resource has not completed the assigned work

- a square divided diagonally with green and red halves, indicating that the assigned work is to be completed within one working day

Typically, while the work is in progress a resource is represented by:

- An icon with a green square on the day the work is planned to start, and

- An icon with a red square on the day the work is planned to finish

When the work is complete, the icons on both days display the green tick.

Resources are initially allocated to elements through the:

- Resource Allocation window, or

- 'Allocated Work' tab of the Personal Tasks window

You can then edit these allocations through either of those windows or through the Allocated Resources Calendar itself.

Access

Ribbon	Start > Collaborate > Calendar > Allocated Resources

Allocate Resources

Option	Action
Display/edit details of an allocated resource	Either: • Double-click on any icon for that element:resource combination, or • Right-click on the icon and select the 'Properties' option The 'Assigned Resources' dialog displays, showing the details of the assignment of the resource to a task on the element. This dialog has the same content, format and functions as the Resource Allocation window, in Item mode.
Add resource to element	Right-click on any icon for the element and select the 'Assign Resource to <element name>' option. The 'Assigned Resources' dialog displays, showing the start and end dates both set to the date from which you selected the icon, and the 'Allocated Time' field set to '1'; all other fields are blank. This dialog has the same content, format and functions as the Resource Allocation

	window, in Item mode. Specify the resource and the role or task that resource is performing, and define the period for which the resource is allocated to the element.
Message Resource	Right-click on any icon for the element:resource combination and select the 'Message Resource <resource name>' option. The 'Model Message' dialog displays, on which you create and send your message to the resource allocated to the element.
Delete resource from element	Right-click on any icon for the element:resource combination, and select the 'Delete Resource from <element name>' option. A prompt displays to confirm the deletion; click on the Yes button. The icon and any corresponding icons for that element:resource combination are deleted from the calendar, and the resource is no longer allocated to that element.
Locate element in diagrams in	Right-click on any icon for the element, and select the 'Find in all Diagrams' option.

which it is used	If the element is used in only one diagram, that diagram displays.
	If the element is used in more than one diagram the 'Element Usage' dialog displays, listing the diagrams in which the element occurs.
	Select the required diagram and click on the Open button to display that diagram.
	This option also operates on Port and Part Property Type Classifiers.
Locate element in Browser window	Right-click on any icon for the element, and select the 'Find in Project Browser' option.
	The area of the Browser window containing the element is brought into focus and expanded, and the element is highlighted.
Locate resource allocation start date corresponding to allocation end date	Firstly, click on the end date icon for the element:resource combination to highlight it; the corresponding start date icon is also highlighted.
	If the start date icon is not in view, right-click on the end date icon and select the 'Show Start/End' option; the display scrolls to show the start date and the start date cell is highlighted.

Locate resource allocation end date corresponding to allocation start date	Firstly, click on the start date icon for the element:resource combination to highlight it; the corresponding end date icon is also highlighted. If the end date icon is not in view, right-click on the start date icon and select the 'Show Start/End' option; the display scrolls to show the end date and the end date cell is highlighted.
Refocus display on today's date	Right-click anywhere on the display and select the 'Show Today' option. The display returns to today's date, which is highlighted and outlined.

Notes

- The Project Calendar is available in the Corporate, Unified and Ultimate editions of Enterprise Architect
- In these editions, if security is enabled you must have 'Configure Resources' permission in order to allocate resources to or remove resources from the Project Calendar; if security is not enabled, you can change data without this permission
- In the Lite edition of Enterprise Architect, you can view Calendar entries but not change them

· As the start and end icons for a completed task are identical, and one-day tasks have only one icon, the methods to show the corresponding start date or end date for an icon are also useful to show whether the icon is for a start or end date, or for a one-day task; alternatively, double-click on the icon and review the allocation dates

Project Tasks

Project Tasks is a display mode of the project Calendar facility, that you can use to:

- Review the tasks across the project over a period of time
- Review the progress of those tasks
- Create new tasks
- Display and edit the details of the task
- Allocate a resource to a task
- Delete a task
- Create and send an email to the resource assigned to a task
- Create and send an email to the owner of the task

In Project Tasks mode, the 'Diary' panel shows the selected period of time (see the *Project Calendar* topic), with at least one icon representing each project task scheduled during that period. The icon represents an independent record of the task - there are no comparisons or validations of the tasks. Therefore you can have separate icons for the same task, with different resources allocated or no resources allocated; you can even have identical task records, if these serve a purpose for you.

Each icon shows the task name and resource name, and indicates the status of the task with one of these symbols:

- a green square, indicating that the task has been scheduled
- a green tick, indicating that the task is complete

- a red square, indicating that the task is incomplete
- a square divided diagonally with green and red halves, indicating that the task is to be completed within one working day

Typically, while a task is in progress it is represented by:

- An icon with a green square on the day the work is planned to start, and
- An icon with a red square on the day the work is planned to finish

When the work is complete, the icons on both days display the green tick.

Tasks can be created and managed through this view of the Project Calendar, or the:

- Project Tasks view for the whole project, or
- 'Project Tasks' tab of the Personal Tasks window

Access

Ribbon	Start > Collaborate > Calendar > Project Tasks

Manage Project Tasks

Option	Action
Create a task	Either: • Double-click on the date cell in which the task is to start, or • Right-click on the cell and select the 'Add New Task' option, or • Click on the down-arrow next to the first icon in the Calendar toolbar, and select the 'New Task' option The 'Task Details' dialog displays, through which you create the task.
Display and edit a task	Either: • Double-click on the task • Right-click on the cell and select the 'Properties' option, or • Click on the down-arrow next to the first icon in the Calendar toolbar, and select the 'Properties' option The 'Task Details' dialog displays; if necessary, edit the information.
Allocate a resource to a task	Certain tasks might not initially be assigned to a resource, but might later require specific assignment to finish them off. Open the task to edit it, click on the

	drop-down arrow in the 'Assigned' field and select the required resource.
Delete a task	Right-click on any icon for the required task and select the 'Delete <task-name>' option. You are prompted to confirm the deletion; click on the Yes button.
Create and send a message to the task owner	Right-click on any icon for the task and select the 'Message Owner' option. The 'Model Message' dialog displays, on which you create and send your message to the user who owns the task (as identified in the 'Task Details' dialog). If the task does not have a defined owner, this option does not operate.
Create and send a message to the resource assigned to the task	Right-click on any icon for the task and select the 'Message Assigned <resource name>' option. The 'Model Message' dialog displays, on which you create and send your message to the resource assigned to complete the task (as identified in the 'Task Details' dialog). If the task does not have a defined resource, this option does not operate.

Locate task start date corresponding to task end date	Firstly, click on the end date icon for the task to highlight it; the corresponding start date icon is also highlighted.
	If the start date icon is not in view, right-click on the end date icon and select the 'Show Start/End' option; the display scrolls to show the start date and the start date cell is highlighted.
Locate task end date corresponding to task start date	Firstly, click on the start date icon for the task to highlight it; the corresponding end date icon is also highlighted.
	If the end date icon is not in view, right-click on the start date icon and select the 'Show Start/End' option; the display scrolls to show the end date and the end date cell is highlighted.
Refocus display on today's date	Right-click anywhere on the display and select the 'Show Today' option.
	The display returns to today's date, which is highlighted and outlined.

Notes

- The Project Calendar is available in the Corporate, Unified and Ultimate editions of Enterprise Architect
- In the Lite edition of Enterprise Architect, you can view Calendar entries but not change them

Model Mail

The Model Mail facility provides you with the ability to send, receive and respond to emails within the project team, under your User Security ID either as an individual user or as a member of a group that has a shared mail inbox. The 'Mail Inbox' tab shows all emails that you have received, and the 'Sent Mail' tab shows all the emails you have created and sent. Within the facility you can re-organize, forward, delete and mark the emails, both sent and received.

This facility is available in the Corporate, Unified and Ultimate editions of Enterprise Architect, with User Security enabled; the mail system uses the individual and group users defined in User Security.

Access

Ribbon	Start > Collaborate > Mail

Review your Model Mail messages

Option	Action

Open a message	Double-click on the message. If the message contains a hyperlink, click on the link to open or display the target file or object.
Flag	Check the flag color to establish the significance of the message (the meanings of the flag colors should be defined within the project team).
Status	Check for the read or unread icon; unread message items are anyway displayed in bold.
Sender	The name of the project team member who sent the message.
Subject	The topic of the message.
Date	Indicates the age of the message, whether it was sent: • Today • Yesterday • This week • This Month • Last Month • Older

Sent	The exact date and time the message was sent.
Select Columns	Right-click on the column headings and select the 'Field Chooser' menu option, which enables you to add or remove specific columns from the display.
	You can also click on the column headings and drag them across the header bar to reposition the columns in a different sequence.
	Adding the 'To' column will display the user account or group name that this mail item was sent to; this column is useful to identify whether the message was sent to you as an individual or as a member of a Group with a Shared Mail inbox - if you received the message as a member of a shared mail group, remember that your actions on this message will also affect all other members of this group.
Filter Columns	You can filter the mail items listed by displaying the Filter Bar (right-click on the column headings and select the 'Toggle Filter Bar' option) and typing in the value (or partial value) to filter on.
	For example, if you type your group mail account name in the filter field for the

	'To' column, you will list only those mail items sent to the group mail address, not those sent to you as an individual. To clear the value of a filter field, click on the blue cross against that field.
Reorganize messages in the list	Either: - Click on a column heading to toggle sorting of list items by this column in ascending or descending order, or - Right-click on the column heading and select the 'Enable Group Box' option to organize the messages into groups

Model Mail Toolbar Options

Option	Action
Compose Message	Open the 'Model Message' dialog, through which you create and send a mail message.
Delete Messages	Delete a selected message or messages; you are prompted to confirm the deletion.

Reply	Open the 'Model Message' dialog, through which you create a response to the sender of the message, which includes a copy of the message and any earlier messages in the thread.
Reply to All	Open the 'Model Message' dialog, through which you create a response to the sender of the message and the other recipients, which includes a copy of the message and any earlier messages in the thread.
Forward	Open the 'Model Message' dialog, through which you forward the message to other project team members with, if necessary, your own comments.
Mark as Unread	Mark the selected messages as unread (bold item text with a closed envelope icon).
Mark as Read	Mark the selected messages as read (normal text with an open envelope icon showing a page emerging).
Viewing Panel	Adds a panel to the Model Mail view showing the contents of the currently selected message. The 'Viewing' panel

	can be displayed to the right or bottom of the message list. Select 'Hide' to show only the message list.
Help Contents	Display this Help topic.

Model Mail Context menu options

Option	Action
Compose New Message	Click to open the 'Model Message' dialog, through which you create and send a mail message.
Reply	Create a response to the sender of the message, which includes a copy of the message and any earlier messages in the thread. Shortcut: Ctrl+R
Reply to All	Create a response to the sender of the message and the other recipients, which includes a copy of the message and any earlier messages in the thread.

	Shortcut: Ctrl+Shift+R
Forward	Forward the message to other project team members with, if necessary, your own comments. Shortcut: Ctrl+F
Set Message Flag	Select the appropriate flag color to establish the significance of the message (the meanings of the flag colors should be defined within the project team). You can also select: • Complete - to display a tick next to the message, indicating that any actions required by the message content have been taken • None - to display only a grayed outline of the message flag, with no status color or 'complete' tick
Mark as Unread	Mark the selected messages as unread. Shortcut: Ctrl+U
Mark as Read	Mark the selected messages as read. Shortcut: Ctrl+Q, or click on the message and press the R key.
Check for	Refresh the message list to include any

New Messages	new messages waiting in the message queue, which would otherwise not display until the automatic refresh cycle has run. Shortcut: Ctrl+F5
Delete	Delete a selected message or messages; you are prompted to confirm the deletion.

Manage your sent messages on the Sent Items tab

Option	Action
Open a message	Double-click on the message. From the open message you can reply to yourself (perhaps to annotate what you sent to the recipients), reply to yourself and all other recipients (to quickly add more information for the same mail list), or forward the message to other team members.
Flag	Check the flag color to establish the significance of the message (the

	meanings of the flag colors should be defined within the project team).
To	Check the name(s) of the project team member(s) to whom the message was sent.
Subject	The topic of the message.
Date	Indicates the age of the message, whether it was sent: • Today • Yesterday • This week • Last Week • This Month • Last Month • Older
Sent	The exact date and time the message was sent.
Select Columns	Right-click on the column headings and select the 'Field Chooser' menu option, which enables you to add or remove specific columns from the display. You can also click on the column headings and drag them across the header

	bar to reposition the columns in a different sequence. Adding the 'Sender' column is useful to identify whether you have sent the message as an individual, or as a member of a shared mail group.
Reorganize messages in the list	Either: • Click on a column heading to toggle sorting of list items by this column in ascending or descending order, or • Right-click on the column heading and select the 'Enable Group Box' option to organize the messages into groups
Delete messages	Right-click on the message and select the 'Delete' option. You are prompted to confirm the deletion.
Reply to All	Right-click on the message and select the 'Reply to All' context menu option to send a further email to yourself and the recipients of the message The 'Model Message' dialog displays. Shortcut: Ctrl+Shift+R
Forward	Right-click on the message and select the

	'Forward' option to send the selected message to other team members.
	The 'Model Message' dialog displays.
	Shortcut: Ctrl+F

Create a Message

You can use the 'Model Message' dialog to compose messages to project team members within the project, under your Author ID, and to:

- Reply to messages from other team members
- Forward messages to other team members
- Link model components to the message, or add hyperlinks to files or other objects of relevance

Access

Context Menu	Right-click on an object (or select several objects) | Collaborate | Send Message
Ribbon	Start > Collaborate > Mail

Create a message to another project team member as a new message, a reply to a message, or a forwarded message

Ste	Action

p	
1	If you have selected the context menu 'Send Message' option on one or more objects in the Browser window, the 'Model Message' dialog immediately displays with links to each selected object. The recipient of the message will be able to press Ctrl and click on each link to open the 'Properties' dialog for the corresponding object.
2	Otherwise, the Model Mail view displays at the 'Mail Inbox' tab. Select the appropriate toolbar icon or context menu option to create or open and reply to or forward a message. The 'Model Message' dialog displays.

3	If you are creating or forwarding a message, or you want to send a reply to a wider audience, for each person you intend to send the message to:
	• Click on the To: button
	  A list of project team member and group IDs displays
	• Scroll to the required name and double-click on it
	  The name is added to the 'To:' field

4	In the 'Subject' field, type or edit the subject of the message as necessary.
5	In the 'Flag' field click on the drop-down arrow and

		on the appropriate flag color or option for your message.
6		In the text panel, write the text of your message. You can format the text using the facilities of the 'Notes' toolbar at the top of the field.
7		If you intend to link a (further) diagram or model object to this message, place the cursor at the appropriate position in your message text, click on the object in the Browser window, and click on the Insert Quick Link button. A short menu displays, listing the name of the object you have selected or 'Other' to search for and select another object. To link to the object you selected, click on its name; a hyperlink to that object is inserted in the message text.
8		If you intend to link to some other object, or you want to link to another target such as a file, Model Search or Team Library message, click on either: - The 'Hyperlink' icon in the message (or Notes) toolbar or - The Insert Quick Link button and select the 'Other' option The 'Hyperlink Details' dialog displays; create the required link.

9	Click on the Send button to send the message to the recipients.

Notes

- This facility is available in the Corporate, Unified and Ultimate editions of Enterprise Architect, with User Security enabled (Security provides the user names to address your mail message to)

Team Library

If the project team members require a forum in which to discuss the development and progress of the project, they can make use of the facilities of the Enterprise Architect Team Library.

Access

Ribbon	Start > Collaborate > Team Library
Keyboard Shortcuts	Ctrl+Alt+U

Features

Feature	Description
Structure	A point of discussion and the responses (Comments) to that point are created as Documents. Documents are held in Topic groups, which are in turn organized into Categories; your organization decides on

	the grouping and organization of Documents. You can create text to explain Categories and Topics, and you can create and respond to Documents and Comments on Documents.
Displays	The Team Library has two main displays: • The Team Library window is used to create new Categories and Topics and to delete messages; you operate on it by selecting options from the context menu Each item in the hierarchy displays a mouse-over tool-tip, showing the item title, the author's name and the date and time the item was created • The 'Team Document' tab, in the main work area, is used to create, view, edit, print, and comment on Documents, and to create and maintain the descriptions of Topics and Categories This tab has a status bar that shows the item author's name, the date and time the item was created, and the date and time the item was last modified
Facilities	Within the Team Library you can: • Select to display and edit an item in the

	'Team Document' tab, by clicking on the item name in the Team Library window • Search for text strings in the item titles to locate Documents on a specific subject, using the 'Search' icon in the toolbar of the Team Library window • Add resources to a Category, Topic or Document, such as diagram images and XMI files of Packages; these are held in a *Resources* folder under the selected Team Library item • Link model elements, diagrams, external files and other Documents to a Document • Link to a Team Library Document from the Linked Document on an element • Change the loading behavior of the Team Library • Access Team Libraries from other projects, including those on other servers
Specification Manager	The Team Library acts as a repository for the review documents generated in the Specification Manager. These documents are automatically stored in Topics within the Formal Reviews Category, but you

	can redirect documents to a different Topic from the Team Library, using the 'Bind to Project Browser Package' option.
Icons	Each item in the Team Library window has an icon that indicates the nature or status of the item. The meaning of each of these icons is explained here: • 📄 - Document name • 📝 - Comment name • ! - Protected by password (also on Category and Topic icons); a blue icon indicates that a user with the password has opened the item, and a red icon indicates that the item is locked • 📄 - Status 'Awaiting Approval' (also on Category and Topic icons) • 📄 - Status 'Approved' (also on Category and Topic icons) • 📄 - Status 'Rejected' (also on Category and Topic icons) • 📁 - Category name • 📑 - Topic name • 📧 - Resources folder for a Category, Topic or Document • 📩 - Linked objects folder for a Category, Topic or Document • 📄 - Diagram or clipboard image within

| | the Resources folder |
| | • 🗄 - XMI file of a Package, within the Resources folder |

Notes

- You can transport your Team Library set-up between projects, using the 'Configure > Model > Transfer > Export Reference Data' and 'Import Reference Data' ribbon options

Work on Team Library Items

Within the Team Library, you can perform a wide range of operations on the Documents and the Topics and Categories that contain them. These operations include creating an item, commenting on a Document, password-protecting an item so that it is not accidentally changed, accessing protected items, adding resources to an item, and deleting an item. All of these operations are accessed through the context menu in the Team Library window.

Access

Open the Team Library window using one of the methods described here, then right-click on an item

Ribbon	Start > Collaborate > Team Library
Keyboard Shortcuts	Ctrl+Alt+U

Team Library Options

Option	Action

New Category New Topic New Document	Add a new Category, new Topic or new Document to the Team Library. Alternatively, click on the 'New Topic' or 'New Document' icon in the window toolbar.
New Category From Template New Topic From Template New Document from Template	Add a new Category, new Topic or new Document, based on a defined template.
New Comment	Create a response to the selected Document. Alternatively, click on the 'New Comment' icon in the window toolbar.
Rename	Edit the name of the currently-selected item, in situ. Shortcut: F2

Copy Path to Clipboard	Copy the path of the currently-selected item to the clipboard. You can then paste the path into a document or file to add the discussion to any text concerning the item. Shortcut: Ctrl+C
Show Contents	Display the description or text of the item selected from the Team Library window, if the 'Team Document' tab is not yet open.
Share Resource	(If anything other than a *Resources* folder is selected.) Add an item into the *Resources* folder under the selected Category, Topic or Document. If a *Resources* folder does not exist, one will be automatically created. Available options: • Package from Current Model • Image of Active Diagram • Active Profiler Report • Bookmark Active Website • Image from Clipboard
Add Package From Current Model	(If a *Resources* folder is selected.) Export a Package as an XMI file from the current model as a resource of the

	selected Category, Topic or Document. You browse for and select the required Package using the 'Select <item>' dialog.
Import to Current Model	(If a Package XMI file resource is selected.) Import the resource Package to the current model. You browse for and select the required target Package using the 'Select <item>' dialog; the resource is imported as a child of that Package. This is a useful option for transferring relevant Packages from the Team Library of one model into another model.
Image of Active Diagram	(If a *Resources* folder is selected.) Add an image of the currently-displayed diagram as a resource of the selected Category, Topic or Document. You are prompted to provide a reference name for this image.
Active Profiler Report	(If a *Resources* folder is selected.) Add an active Profiler Report as a resource of the selected Category, Topic or Document. You are prompted to browse for and

	select the appropriate active report.
Image From Clipboard	(If a *Resources* folder is selected.) Add an image held on the clipboard as a resource of the selected Category, Topic or Document.
View Image	(If a diagram image resource is selected.) Open the View Image window, containing an image of the selected diagram. Alternatively, double-click on the image name.
Copy Image To Clipboard	(If an image resource is selected.) Copy the image or diagram image to the clipboard.
Refresh Category 'xyz' Refresh Topic 'xyz' Refresh Document 'xyz' Refresh Comment	Refresh the currently-open Category, Topic, Document or Comment, getting new Comments, Documents and Topics that other users might have created. However, if you open a different Category, Topic or Document the Team Library always displays the latest information from the database. Alternatively, click on the 'Refresh' icon in the window toolbar.

'xyz'	
Reload Current Connection	Reload the entire Team Library connection, getting new Categories, Topics and Documents.
Review Status	Assign or clear a status marker against the selected Category, Topic or Document; you can mark the item as: • Awaiting Approval • Approved • Rejected Or clear the marker (None).
Bind to Project Browser Package	Bind the selected Topic to a Package in the Browser window, so that Review Documents created in the Specification Manager for that Package are automatically stored in the Topic. When you select this option, the 'Select Package to Bind' dialog displays, on which you browse for and select the Package to bind the Topic to.
Security Options	Access one of three options: • 'Apply Password Lock' - to display a prompt to enter a security password • 'Unlock for Editing' - to display a

	prompt to enter the set password so that you can edit the item • 'Remove Password Lock' - to display a prompt for the set password, which is then removed When you set the password, an exclamation mark icon is added to the Category, Topic or Document name.
Connections...	Access other Team Libraries from other Enterprise Architect models or models located on servers. Alternatively, click on the drop-down arrow in the 'Connection Options' field in the window toolbar, and select one of the listed models. Use the '<Configure Connections>' option to add and connect to additional Team Libraries.
Options...	Change the loading behavior of the Team Library.
Delete Category 'xyz' Delete Topic 'xyz'	Delete this Category, Topic, Document or Comment and all sub-topics and sub-documents, or delete the resource attached to the item. Alternatively, click on the item and press

Delete Document 'xyz' Delete Resource 'xyz' Delete Comment 'xyz'	the Delete key. A confirmation dialog displays; click on the Yes button to remove the item and any dependent items from the Team Library.
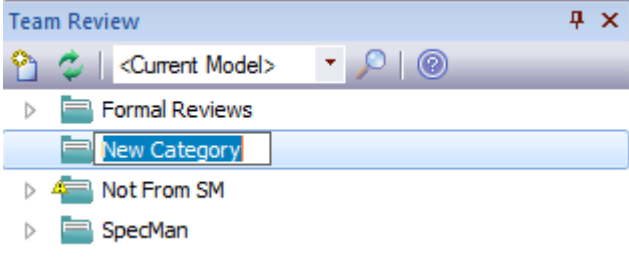
Add a New Category

You can add new Categories to the Team Library, in which to store related Topics and Documents.

Access

Ribbon	Start > Collaborate > Team Library
Keyboard Shortcuts	Ctrl+Alt+U

Create a Category

Step	Action
1	Right-click on a blank area in the Team Library window and select the 'New Category' option. A new 'Category' icon displays in the hierarchy.

2	Overtype the *New Category* text with the name of the Category, and click off the name.
	The Category description editor displays in the 'Team Document' tab; type the appropriate Category description, if required.
3	Add new Topics and/or resources to the Category.

Create a Category - Alternative

Ste p	Action
1	Right-click on a blank area in the Team Library window and select the 'New Category from template' option.
	A new 'Category' icon displays in the hierarchy.
2	Overtype the *New Category* text with the name of the Category, and click off the name.

		The 'New Category from Template' dialog displays.
3		Click on the 'Template' drop-down arrow and select a predefined template for the Category description. Click on the OK button.
4		The Category description editor displays in the 'Team Document' tab; type the appropriate Category description, if required.
5		Add new Topics and/or resources to the Category.

Add a New Topic

In the Team Library you can add new Topics to a Category, in which to store related Documents and their Comments.

Access

Ribbon	Start > Collaborate > Team Library
Keyboard Shortcuts	Ctrl+Alt+U

Create a new Topic

Step	Action
1	Either: • Right-click on the required Category name in the Team Library window and select the 'New Topic' option • Click on the Category name and click on the 'New Topic' icon in the Team Library toolbar, or

	• Click on the Category name and press Ctrl+N A new 'Topic' icon displays under the Category name.
2	Overtype the *New Topic* text with the name of the Topic, and click off the name. The Topic description editor displays in the 'Team Document' tab; type the appropriate Topic description, if required.
3	Add new Documents and/or resources to the Topic.

Create a new Topic - Alternative

Step	Action
1	Right-click on the required Category name in the Team Library window and select the 'New Topic from Template' option. A new 'Topic' icon displays under the Category name.
2	Overtype the *New Topic* text with the name of the Topic, and click off the name.

		The 'New Topic from Template' dialog displays.
3		Click on the 'Template' drop-down arrow and select a predefined template for the Topic description. Click on the OK button.
4		The Topic description editor displays in the 'Team Document' tab; type the appropriate Topic description, if required.
5		Add new Documents and/or resources to the Topic.

Notes

- If you already have the 'Team Document' tab open, the 'New Topic from Template' dialog displays as soon as you select the 'New Topic from Template' menu option; you can click on and overtype the Topic name after you have created the Topic description

Add a New Document

Within the Team Library, you can create a new Document on a Topic as either:

- A blank Document
- A Document based on a predefined template, or
- A Document from a file link

Access

Ribbon	Start > Collaborate > Team Library
Keyboard Shortcuts	Ctrl+Alt+U

Create a blank Document

Step	Action
1	Either: • Right-click on the appropriate Topic name in the

	Team Library window and select the 'New Document' option • Click on the Topic name and on the 'New Document' icon in the Team Library toolbar, or • Click on the Topic name and press Ctrl+N A new 'Document' icon displays underneath the Topic name.
2	Overtype the *New Document* text with the name of the Document, and click off the name. The text editor displays in the 'Team Document' tab.
3	Type the text of the Document as required.

Create a Document based on a predefined template

Step	Action
1	Right-click on the appropriate Topic name in the Team Library window and select the 'New Document from template' option. A new 'Document' icon displays in the hierarchy.

2	Overtype the *New Document* text with the name of the Document, and click off the name. The 'New Document from Template' dialog displays.
3	Click on the drop-down arrow in the 'Template' field, and select a predefined template for the Document contents.
4	Click on the OK button. The template structure is displayed in the 'Team Document' tab.
5	Type in or paste the text of the Document.

Create a Document based on a link to an external file

Step	Action
1	Open a file browser (such as Windows Explorer) and locate the file.
2	Click on the file name and drag it onto the appropriate Topic name in the Team Library

	window. A new 'Document' icon is created underneath the selected Topic, and the body of the Document is shown in the 'Team Document' tab. A link to the source file is created at the start of the message.
3	Click twice on the *New Document* text in the Team Library window, and overtype the text with the name of the Document.
4	In the 'Team Document' tab, create and edit text around the file link, and add further links if required.

When you have created the Document

You can	Detail
Create links from the Document	To elements and diagrams from the: • Browser window • Model Search • Model Views window, or • Package Browser
Create links	Such as:

from the Document to Team Library objects	• Categories • Topics, and • Documents
Create links from the Document to external files	These links can be either in the text of the Document or on the Category, Topic or Document in the Team Library window (the link is added to the *Model Links* folder for the Team Library item).
Add resources to the Document	It is simple and convenient to link to the resources that are the subject of discussion or that illustrate points in the discussion.
Receive Comments on the Document from other users	The objective of the Team Library is to discuss aspects of development, so you can expect to receive Comments on the Documents that you have posted, and to create Comments on the material posted by your colleagues.

Comment on a Document

You use the Team Library as a forum for discussion of items and issues within the project, so when you read a Document on a particular point (or a response to that Document) you might want to respond with your own Comment.

You can create a Comment directly from the Document you are responding to, from material that you want to use as your response, or from a predefined document template.

Access

Ribbon	Start > Collaborate > Team Library
Keyboard Shortcuts	Ctrl+Alt+U

Create a Comment in the Team Library

Step	Action

1	Either:
	• Right-click on the required Document (or Comment) in the Team Library window and select the 'New Comment' option
	• Click on the Document name and on the 'New Comment' icon in the Team Library toolbar, or
	• Click on the Document name and press Ctrl+N
	A *Re:<Documentname>* entry displays underneath the Document you are replying to, and the cursor becomes active in the 'Team Library ' tab so that you can create and edit your response.
2	Type in, format and save the contents of the Comment.

Create a Comment from external material

Step	Action
1	Open a file browser (such as Windows Explorer) and locate a file containing the material you want to use in your response.
2	Click on the file name and drag it into the Team

	Library window, over the Document to which you are replying. A prompt displays for you to specify whether to: • Create a new Comment containing the text of the file (the file name displays as the Comment name) or • Add the file to the original Document as a Model Link
3	If necessary, edit, format and save the contents of the reply.

Create a Comment based on a predefined template

Ste p	Action
1	Right-click on the appropriate Document name in the Team Library window and select the 'New Comment from template' option. A new 'Comment' icon displays in the hierarchy, and the 'New Document from Template' dialog displays.
2	Click on the drop-down arrow in the 'Template' field,

	and select a predefined template for the 'Comment' contents.
3	Click on the OK button. The template structure is displayed in the 'Team Library' tab.
4	Type in or paste the text of the Document.

When you have created the Comment

You can	Detail
Create links from the Comment	To elements and diagrams from the: • Browser window • Model Search • Model Views window, or • Package Browser
Create links from the Comment to Team Library objects	These links can be to related Team Libraries: • Categories • Topics and • Documents

Create links from the Comment to external files	These links can be either in the text of the Comment or on the parent Category, Topic or Document in the Team Library window (the link is added to the *Model Links* folder for the Team Library item).
Add resources to the Comment	It is simple and convenient to link to the resources that are the subject of discussion or that illustrate points in the discussion.
Receive replies to the Comment from other users	The objective of the Team Library is to discuss aspects of development, so you can expect to receive replies to the Comments that you have posted, and to create Comments on the material posted by your colleagues.

Protection Against Editing

When you have created a Team Library Category, Topic or Document containing text, the item text is exposed to change by any user who has access to the Team Library. You can protect the item against unrestricted changes by setting a password on it. The password only refers to that item; to protect the text of Topics, Documents or Comments subordinate to the item, you set a password on each of them as well.

When the password is set, only those users who have the password can edit that item, and only when they specifically enter the password to unlock that item. Any other user of the Team Library can still view the protected item.

The password does not protect the item from operations on the item as a whole, including being deleted.

Notes

- The use of a password on an item is indicated by an exclamation mark against the item in the Team Library window; a blue icon indicates that a user with the password has opened the item, and a red icon indicates that the item is locked

- When you click on an item to set a password, the item opens; you can edit the item after you have set the password, while it is still open

- Once a password-protected item is closed, any user who wants to edit the item must first select to unlock the item for editing and then enter the password set on the item
- Unlocking is specific to the user; the item remains locked to other users until they enter the password themselves
- If the password becomes unnecessary, you can remove it from the item

Edit an Item

When you have created a Category, Topic, Document or Comment, you edit the text within it using the Team Document editor. This is based on the Document editor, which is used to edit report documents and Linked Documents throughout Enterprise Architect.

You can also change the name of the item by selecting it, pressing F2 and typing the new name.

Access

Open the Team Library window using one of the methods outlined here, then double-click an item or select the item and press the Enter key, to open the Team Document editor.

Ribbon	Start > Collaborate > Team Library
Keyboard Shortcuts	Ctrl+Alt+U

Option Descriptions

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

Actions

Creating and importing documents

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

Inserting hyperlinks and bookmarks (including using the 'New', 'Link to Existing Element' and 'Hyperlink' options on the 'Create' context menu)
Inserting images, OLE objects, frames and drawing objects
Printer set up and printing documents
Check spelling and use of terms
Tracking, accepting and rejecting changes to the text
Protecting document text from accidental change
Create and refer to definitions of Glossary terms in the Project Glossary (using the 'Create | Glossary Definition' context menu option)

Notes

- To undo one or more immediately previous edits, press Ctrl+Z, or select the 'Layout > Diagram > Undo' ribbon 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 'Layout > Diagram > Redo' ribbon option

Add Object Links

In the Team Library window you can create hyperlinks from a Document to any elements and diagrams that are associated with it. This helps you to:

- Rapidly navigate to the objects in the Browser window

- Access the element properties, and

- Open a diagram directly from the Team Library

You can also create links to:

- Other Categories, Topics and Documents in the Team Library window

- External files from a file browser

Facilities

Facility	Action
Associate an element, diagram, external file or Team Library item with a message	Drag the object over the required Category, Topic or Document in the Team Library window, from the: • Browser window • Package Browser • Model Views window • Model Search window or • External file browser

	To create a link to another Team Library item, press Ctrl as you drag that item over the required Category, Topic or Document.
	If it does not already exist, a *Model Links* folder is created under the selected Team Library item, and the link to the dragged object is added to the folder.
Associate an external file with the message text	From any browser, click on and drag the file name into the text of the message.
	The filename becomes a link to the file; click on it to display the contents of the file.
	The external file name also becomes a link to the file within the message when you drag the filename onto a Topic to create a Document.

Review Options

To review an object in the *Model Links* folder, right-click on the object to display the navigation context menu.

Option	Action
Open	Open the linked diagram or external file.

	Alternatively, double-click on the diagram link.
Properties	Display the 'Properties' dialog for the selected element or diagram. Alternatively, double-click on the element, attribute or operation link to open the 'Properties' dialog of the object.
Create (Edit) Linked Document	Either: • Open the 'New Linked Document from Template' dialog, to begin creating a new Linked Document on the element, or • Open the 'Linked Document Editor' to change an existing Linked Document
Find in all Diagrams	Open the diagram in which the element is used, or display a list of several diagrams in which the element has been used.
Find in Project Browser	Highlight the element or diagram in the Browser window.
Locate Item	Highlight, in the Team Library window, the Team Library item linked to the message. Alternatively, double-click on the link in

	the *Model Links* folder.
Delete Model Link <name>	Delete the association between the Document and the object.

Team Library Resources

Whilst having a discussion through the Team Library, it is convenient to link to the resources that are the subject of discussion or that illustrate points in the discussion. Such resources include:

- XMI files of Packages within the current project
- Active Profiler reports
- Images of currently-active diagrams
- Images currently captured on the clipboard
- Bookmarks to currently active websites

You can link to such resources from Category or Topic notes, or from a Document. The resource links are created in a *Resources* folder underneath the selected Category, Topic or Document, as shown:
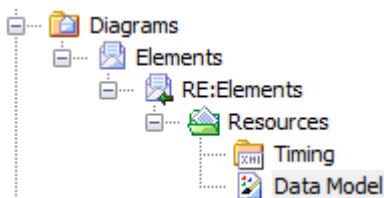
Access

Open the Team Library window using one of the methods outlined here, then;

Right-click on <object> | Share Resource | <resource type>

You create the *Resources* folder by creating a link to a

resource underneath the selected Category, Topic or Document. Similarly, you delete the *Resources* folder by deleting the last resource within it. Having added a resource, you can right-click on it and use a further context menu to:

- Reimport the Package XMI files to the model or
- Display the images

Ribbon	Start > Collaborate > Team Library
Keyboard Shortcuts	Ctrl+Alt+U

Search Team Library

The Team Library provides the facility to search the titles of all Team Library items, to locate items referring to a specific subject.

Search the Team Library

Step	Action
1	In the Team Library window toolbar, click on the 🔍 (Search) icon. The search panel displays underneath the toolbar.
2	In the blank field, type the text string to search for.
3	If required, select the 'Match Case' checkbox to locate text with the same case as the search string.
4	If required, select the 'Match Whole Word' checkbox to locate only complete words that match the search string.
5	Click on the Find button. The search locates the first instance of the search string in the title of a Category, Topic, Document or

	Comment, and displays the contents of that item in the 'Team Library' tab.
6	To locate further instances of the text string, click again on the Find button.
7	To close the search panel, click again on the 'Search' icon in the toolbar.

Team Library Options

You can change the loading behavior of the Team Library, using the 'Team Library Server Options' dialog. If you change the settings, the new loading behavior is not applied until you restart the Team Library.

Access

Open the Team Documents window using one of the methods outlined here, then right-click in the Team Documents window and select 'Options'.

Ribbon	Start > Collaborate > Team Library
Keyboard Shortcuts	Ctrl+Alt+U

Team Library Options

Option	Action
Preload items less than	Type the threshold item size (in KB) below which the items will be preloaded

	and above which item data is only loaded when selected.
Load item data when required	The fastest loading option. Team Library data is only loaded on demand; for example, when you read a Document.
Preload all data	Caches the entire contents of the Team Library on load; this takes longer to load but, once completed, navigating the Team Library is faster.

Team Library Connections

If you are modeling in a different model from the rest of your team, you can switch to Team Libraries from other Enterprise Architect models, including models located on servers. This connects only to the Team Library for the selected model; it does not change the model open in the Browser window or anywhere else in the system.
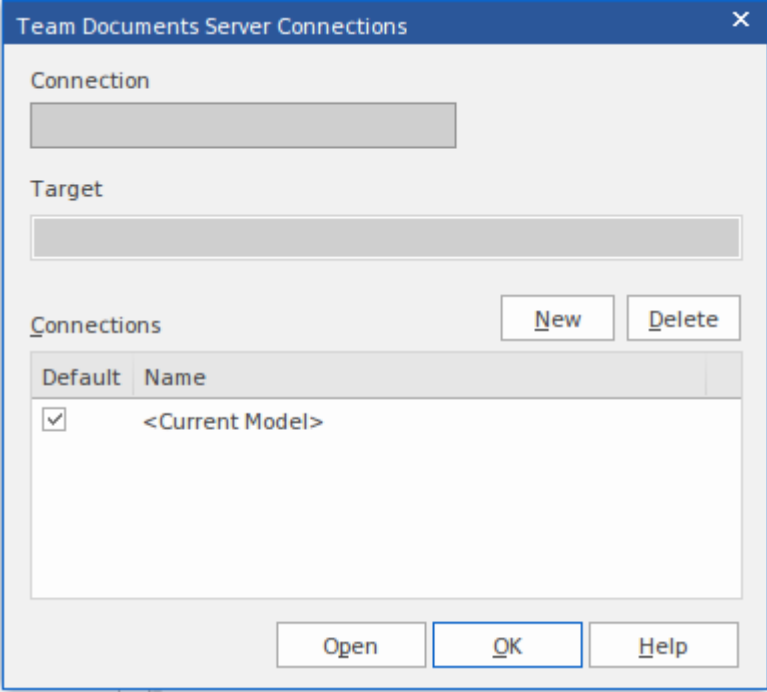
Access

Open the Team Documents window using one of the methods outlined here, then either:

- Right-click on the Team Documents window and select 'Connections', or
- Click on the 'Connection Options' drop-down field and choose 'Configure Connections'

Ribbon	Start > Collaborate > Team Library
Keyboard Shortcuts	Ctrl+Alt+U

Switch to another Team Library

Ste p	Action
1	Select the appropriate model name from the drop-down list in the '<current model>' field, to connect to the Team Library for that model. If the required model is not listed, click on the '<Configure Connections>' option; the 'Team Documents Server Connections' dialog displays. Go to Step 3.
2	Alternatively: Right-click anywhere in the Team Library window and select the 'Connections' option; the 'Team Documents Server Connections' dialog displays.

	In the list in the 'Connections' panel, select the checkbox against the appropriate model name to connect to the Team Library for that model, then click on the Open button.
	The connection now switches to the Team Library in the selected model.
	If the required model is not listed, go to Step 3.
3	Click on the New button and select the appropriate type of connection from the list.
	• For a local project file, a browser dialog displays through which you can search for and select the appropriate model
	• For a model in a DBMS data repository, select the 'Connection Wizard' option to display the Microsoft 'Data Link Properties' dialogs, through which you can locate and connect to the repository
	• For a Cloud connection, the 'Cloud Connection' dialog displays in which you specify the details of the model connection on the Cloud
	• For an external connection string, a prompt displays in which you type in or paste that connection string
4	When you have selected and opened or connected to the required Enterprise Architect model, and returned to the 'Team Documents Server Connections' dialog, the model name displays in the 'Connection Name' field and in the 'Connections'

	panel.
5	Select the checkbox against the model name and click on the Open button to connect to the Team Library for that model. The Team Library now shows the discussions in the selected model.

Fields/Options on the 'Team Documents Server Connections' dialog

Option	Action
Connection	Verify the name of the selected model.
Target	Verify the path to the selected model.
New	Click on this button to display the list of connection types you can select as the first step in identifying the model for a new Team Library connection.
Delete	Click on this button to delete the currently selected connection from the 'Connections' list. There is no

	confirmation prompt; the connection is immediately removed from the list.
Connections	View all Team Library connections created; click on the checkbox against the required connection.
Open	Click on this button to switch the Team Library to the selected connection and to close the dialog.

Spell Checking

Enterprise Architect provides a powerful spell checking facility that operates at both project level and Package level.

Features

Feature	Detail
Automatic Spell Checking	The spell checker can be set to run automatically, so that it highlights possible errors in text as it is created or pasted in: 1. Select 'Start > Desktop > Preferences > Preferences > Objects'. 2. Deselect or select the 'Disable spelling' checkbox.
Spelling Configuration	You can configure what types of text error the spell checker should detect, using the 'Spelling Options' dialog.
Use Languages	Enterprise Architect is supplied with dictionaries for US English, Canadian

Other Than English	English and British English; you can download a set of dictionaries for other languages from the Sparx Systems website.
Using the Spell Checker	You can run the spell checker manually on the whole model, or on a selected Package.
Correcting Text	As the spell check progresses, Enterprise Architect highlights any errors or unknown words; you have several options for responding to these potential spelling errors.

Notes

- In the Corporate, Unified and Ultimate editions of Enterprise Architect, if security is enabled you must have 'Spell Check' permission to perform any spell check or change any spell check options

Select Spell Checker Options

You can configure the spell checker to ignore or detect specific types of text conformation. Ignoring the conformation means to skip over the text without identifying it as an error.

Access

Ribbon	Publish > Dictionary > Spelling > Spelling Options

Configure the spell checker

Option	Action
Ignore capitalized words	Ignore any words beginning with a capital letter, such as 'David'. You might enable this option if the text being checked contains many proper names.
Ignore	Ignore any words containing all capital

all-caps words	letters, such as RADAR. You might enable this option if the text being checked contains many acronyms.
Ignore Words with Numbers	Ignore any words containing embedded digits, such as 'Win95' and 'Q4'. You might enable this option if the text being checked contains many code words or other symbols containing digits.
Ignore Words with Mixed Case	Ignore any words containing an unusual mixture of upper- and lower-case letters, such as 'MicroHouse' and 'CapsLock'. You might enable this option if the text being checked contains many variable names or other symbols that use changes in letter-case to distinguish words.
Ignore Domain Names	Ignore any words that appear to be Internet domain names, such as wintertree-software.com.
Report Doubled Words	Detect any word appearing twice in a row, such as 'the the'.
Case Sensitive	Distinguish between capitalized and non-capitalized words. For example, canada would be considered

	as different from Canada, and therefore reported as a misspelling.
	When the option is disabled, canada and Canada are considered to be identical.
	Note that the performance of the spell checker is reduced if this option is disabled.
Phonetic Suggestions	Suggest alternative words based on phonetic (sounds-like) similarity to the misspelled word; this option tends to improve the correction of badly misspelled words.
	Enabling this option increases the time required to locate suggestions.
	Note that either this option or the 'Typographical Suggestions' option must be enabled in order to list suggestions of alternative words.
Typographical Suggestions	Suggest alternative words based on typographical (looks-like) similarity to the misspelled word. This option is appropriate for people who are generally good spellers.
	Note that either this option or the 'Phonetic Suggestions' option must be enabled in order to list suggestions of alternative words.

Suggest Split Words	Suggest two separate words as a replacement for a misspelling containing two joined words. For example, 'is the' would be suggested as a replacement for 'isthe'.
Auto Correct	Automatically change words marked with Auto Change actions to their specified replacements. When this option is disabled, a confirmation prompt displays before the words are changed.
Main Dictionary Language	Set the language of the main dictionary used to check spelling; the drop-down list shows only languages for which dictionaries are installed on your system. To check spelling in a different language, select the language in the list.
Suggestions	Determine the speed and accuracy of the initial automatic search for suggested replacements for misspelled words. Click on the appropriate radio button for your choice.
OK	Close the 'Preferences' dialog, and save any changes made to the settings.

Cancel	Close the 'Preferences' dialog, and discard any changes made to the settings.

Notes

- In the Corporate, Unified and Ultimate editions of Enterprise Architect, if security is enabled you must have 'Spell Check' permission to perform any spell check or change any spell check options

Use Languages Other Than English

Enterprise Architect is supplied with three dictionaries, for US English, Canadian English and British English. Additional dictionaries are available as a pack, for download from the registered pages of the Sparx Systems website.

The dictionaries in this downloadable file enable spell checking in these languages:

- Brazilian
- Danish
- Dutch
- Finnish
- French (Continental)
- German
- Italian
- Norwegian
- Portuguese
- Spanish and
- Swedish

Download the additional language dictionary pack

Step	Action

1	Access the registered user page on the Sparx Systems web site.
2	At the end of the page, download the EADict.zip file from the Enterprise Architect Dictionary section.
3	Unzip the file into the Enterprise Architect install directory - C:\Program Files\Sparx Systems\EA. This makes the non-English spelling dictionaries available to the Enterprise Architect spell checker.

Notes

- In the Corporate, Unified and Ultimate editions of Enterprise Architect, if security is enabled you must have 'Spell Check' permission to perform any spell check or change any spell check options
- Enterprise Architect .EAP files default to use Jet 3.5 as the database engine; this does not support unicode character sets, which makes the use of certain languages - such as Portuguese - difficult, including spell checking words in those languages

  If you use such languages, it is recommended that you either upsize to a DBMS repository or set JET 4.0 as the

database engine

If your .EAP project is not in a Jet 4.0 database, you should also 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

Using the Spell Checker

Enterprise Architect has an inbuilt spell checker, which you can configure to detect a range of types of possible spelling error in your project, and to use one of several language dictionaries other than English.

Access

Ribbon	Publish > Dictionary > Spelling > Spell Check Project
	Publish > Dictionary > Spelling > Spell Check Current Package
Keyboard Shortcuts	Ctrl+F7 (spell check project)
	Ctrl+Shift+F7 (spell check current Package)

Run the spell checker

Step	Action

1	Select the 'Spell Check Project' or 'Spell Check Current Package' menu option, as required. The 'Spell Check' dialog displays.
2	('Spell Check Project' option.) Select the checkbox against each of the items to spell check within your model.
3	Click on the Start button to begin the spell check. As the spell check proceeds, the text being checked displays in the text panel at the bottom of the screen; if an error is detected, the 'Check Spelling' dialog displays, offering several options to correct the error.

Notes

- You can use the 'Spell Check Project' menu option to check spelling for the entire project

- The 'Spell Check Current Package' option only checks the Package currently open, and you cannot select items to check

- In the Corporate, Unified and Ultimate editions of Enterprise Architect, if security is enabled you must have 'Spell Check' permission to perform any spell check or change any spell check options

Correcting Words

As a spell check progresses, Enterprise Architect highlights any errors or unknown words in the 'Check Spelling' dialog. The inbuilt spell check stores user-defined words in the user dictionary (%APPDATA%\Sparx Systems\EA\userdic.tlx). During the spell check process, if you add a word, it is written into this file for later reference. While the spell check is in progress you can:

- Correct the spelling of a word
- Ignore the error
- Add the word to the user dictionary
- Suggest alternatives or
- Otherwise assist in the spelling correction process

Correct spelling

As the Spell Checker identifies possibly mis-spelled words, make the appropriate response:

Action
- Modify the spelling by hand and click on the Change button or Change All button to change the word to that spelling   - Click on a suggested alternative and click on the Change button or Change All button to change the word

to that spelling

- Click on the Ignore button or Ignore All button to exclude the word from the spell check
- Click on the Add button to add the word to the user dictionary
- Click on the Suggest button to list alternative spellings or words
- Click on the Cancel button to abort the spell check entirely