



Tracking Changes¹

During the development of the tool people with the experience of creating a new Functional Profile asked for the requirement of the possibility to track changes in the Profile Definition. See for detailed description of how to create a Profile Definition chapter '6CreateProfileDefinition'.

Enterprise Architect provides two separate but complementary facilities for tracking changes to data across the project. These are 1) Auditing and 2) Baselining and differencing to capture and roll back changes. These features are described below. First there is a use case description that gives the project facilitator a reason to use the feature.

1. Auditing²

Use Case

A project facilitator in a project of creating a new functional profile is creating the profile definition with a group of experts. Changes are made in descriptions of functions, optionality in conformance criteria, in the text of criteria, new functions are added and new criteria are added. During this process the expert team wants to look back at the changed that were made and he reason why they changed it.

Feature

Auditing on project-level enables the project facilitator to record model changes, so changes in the project developing a new Functional Profile, in EA. Auditing is not part of the EHR-S FM Tool, so it is not described in detail in this user guide.

By enabling Auditing, you can view information on changes such as:

- Who changed an element, e.g changes in text or optionality in a function or criterion.
- How many elements they changed.
- When they changed the data, e.g date and time when the changes were made.
- What the previous values were, e.g the optionality was MAY and this is changed in a SHOULD.
- What type of elements they changed.

Auditing does **not** record changes to:

- RTF Templates
- Model Documents
- Baselines
- Profiles

¹ Tracking changes in EA Help.

² Auditing in EA Help.



Features are:

Quickstart: You can quickly enable auditing and see it in action. See Help in EA chapter 'Auditing Quickstart'.

Settings: Once auditing is enabled within a project, you have a variety of options available for customizing what is recorded by the audit. See Help in EA chapter 'Audit Settings'.

The Audit View: To view what has been recorded by the audit, use the Audit View, which provides an interface to everything recorded by auditing. If security is enabled, you must have Audit View permission to display data in the Audit View. See Help in EA chapters 'Audit View' and 'List of Available Permissions'.

Model Views: You can also obtain a snapshot of selected items in the model, using the *Model View* facility. In the Corporate, Business and Software Engineering, Systems Engineering or Ultimate editions of EA, this facility enables you to automatically generate a snapshot at intervals and, if there are changes in the items collected by the defined search, to trigger a notification to you of such changes. This enables you to monitor work flow and other events of concern to you. See Help in EA chapters 'Model View' and 'Monitor Events'.

RTF Report: You can generate an RTF report that includes the audit history information for the selected element or package, by choosing the *basic + audit* RTF template. See Help in EA chapter 'Generate Documentation'.

Audit History: Using Auditing, you can track changes to an element or connector over time. However, enabling Auditing also enables an Audit History tab in the System Output window, which summarizes all changes made to the selected element or connector. See Help in EA chapter 'Audit History Tab'.

Performance Issues: By enabling auditing on a project, you increase the time taken for most actions. For most modeling tasks, this increase is insignificant; however, there are some instances where the difference is more substantial. See Help in EA chapter 'Performance Issues'.

Notes

- The Auditing facility is available in the Corporate, Business and Software Engineering, System Engineering and Ultimate editions
- **Warning** - If your site runs separate editions of Enterprise Architect, when Auditing is turned on in a project any Desktop or Professional edition users are locked out of the project; to restore access, turn Auditing off in the project from the Corporate, Business and Software Engineering, Systems Engineering or Ultimate edition instance of Enterprise Architect.

Auditing was not used in the process of the EHR-S FM FP Designer tool development.



2. Baselining and differencing to capture and roll back changes³

Use Case

After a ballot the suggested changes are made in the Profile Definition and the new version of the Functional Profile. Before balloting the new Functional Profile max file of this profile was saved and kept for historical and safety reasons.

After compiling the new version of the Functional Profile the project team wants to see the changes they made in the new version of the Functional Profile in comparison with the version that went to ballot. They want to see the changes in a diff report and in a diagram.

Feature

The Enterprise Architect Corporate, that you need for working with the EHR-S FM Tool, provide a facility to 'baseline' or snapshot a model branch in XMI format at a particular point in time, and store it within the model in compressed format.

More than one baseline can be stored against a single Enterprise Architect package; using baselines, you can compare packages at the current and earlier stages of development, using the *Compare* (Diff) utility.

The Compare utility enables you to compare the current model with:

- A Baseline
- An exported Enterprise Architect XMI file on disk
- A version-controlled Enterprise Architect XMI file on disk

Package Baselines

Enterprise Architect includes tools to help you manage and review changes to your models (functional profile) over time. These tools apply the concepts of *Baselines*, *Differencing* and *Merges*.

You use Baselines, Differencing and Merges essentially to compare two snapshots of a specific part of your project, to capture the differences between them and either roll back or incorporate selected changes or all changes.

Baselines

EA provides a facility to create a Baseline or 'snapshot' of the contents of a selected package and its child packages at a particular point in time; this enables you to later compare that branch of the model at that time with the current state of the branch.

Baselines are stored in the same XML format as is used for version control, but are stored within the project in compressed format.

You can also have parallel copies of parts of your model for team development, and create Baselines within each copy to merge changes into the project master. See for more detailed description the Help of EA chapter 'Baselines'.

Differencing

Differencing (*Diff*, or *Compare*) enables you to explore the differences between:

³ Package Baselines in EA Help.



- The current state of a specific part of your project, and
- Previous or parallel versions captured in a Baseline or an XMI 1.1 file on disk

The section includes an example of such a comparison. See for more detailed description the Help of EA chapters 'The Compare Utility (Diff)' and 'Example Comparison'.

Merges

Once Differencing is complete, you can merge information from the Baseline into the current project; it is not possible to go the other way.

You can:

- Merge information manually, change by change
- Merge information automatically by electing to merge in all changes in one batch procedure
- Revert completely to the original Baseline by importing the stored XMI directly
- Merge information and elements from a Baseline in a different project, making it possible to keep multiple versions of a single model in synch

The merge options are available through the toolbar, context menus and the keyboard on the Compare Utility tab, which shows the results of a comparison. See for more detailed description the Help of EA chapter 'Compare Utility Tab Options'.

Visual Differences in Diagrams

Changes to a model might include:

- Adding or removing elements and connectors on a diagram, or
- Changing the position of elements or the overall layout of a diagram

You might believe that a diagram has changed, and select to compare it with a baseline using a context menu option from the Project Browser. Alternatively, you might perform a baseline comparison on a package or a model and select from the comparison output any diagrams that are flagged as changed. See for more detailed description the Help of EA chapter 'Check Visual Changes to Diagrams'.

Notes

- Package Baseline facilities are available in the Corporate⁴, Business and Software Engineering, Systems Engineering and Ultimate editions of Enterprise Architect.
- If a package under version control forms part of a Baseline, and that package is checked in to the model, you cannot merge the original data from the Baseline into that package.
- You can also obtain a snapshot of selected items in the model, using the Model Views facility; this facility enables you to automatically generate the snapshot at intervals and, if there are changes in the items collected by the defined search, to trigger a notification to you of such changes, which enables you to monitor work flow and other events of concern to you.

⁴ This edition of EA is required to work with the Ehr-S FM Tool.



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- If security is enabled you must have **Baselines - Manage** permission to create, import and delete Baselines, and **Baselines - Restore** permission to merge data from a Baseline; security permissions are not required to select an existing Baseline and perform a comparison with the model

In phase 2 of the EHR-S FM FP Designer tool development this functionality was not used. The max version of the Functional Profile can be used to compare the max files, compare two xml files.