

EMF Training

**Goals:**

- To know how are designed and how to use Eclipse EMF and the major components based on this framework (QTV, EMT, .. components)
- To develop applications based on these tools
- To use dedicated tools based on the MDE approach

Our advantages:

- Training created by Eclipse committers and real EMF experts
- Many practical exercises (66%)

Duration: 2 days

Public: Architects, Developers

Pre-requisite : Good knowledge of Java. Basic knowledge of Eclipse plugin programming.

1 - Presentation of the Eclipse Modeling Project

- Structuring and overview of the Eclipse projects
- Introduction to MDA concepts and DSM approaches
- Introduction to the frameworks of the Eclipse Modeling Project

Exercises:

- Installation and customization of environments
- Navigation inside a model and its meta-model

Duration : 1.5 h

2 - Ecore and GenModel models

- Core concepts of Eclipse EMF
- The Ecore meta-model
- The Ecore datatypes
- Detailed explanation of the GenModel
- Link between metamodels

Exercises:

- Development of basic EMF projects, including specific metamodel definition
- Creation of models conformed to this metamodel
- First customizations of the modeler

Duration : 1.5 h

3 - EMF Advanced features

- Detailed explanation of the EMF.Edit and EMF.Codegen frameworks
- Generated and Reflective EMF API
- Event engine mechanism
- Loading XSD
- Tips & Tricks

Exercises:

- Advanced customization of an EMF modeler
- XML serialization according to a given XML schema
- Model manipulation through code

Duration : 4 h

4 - EMF Extensions

- Overview of the EMF ecosystem (CDO, Teneo, ...)
- Validating models using EMF Validation
- Comparing models using EMF Compare
- Generating code (M2T approach) using Acceleo
- Transforming models (M2M approach) using ATL

Exercises :

- Designing a tooling making use of different components
 - Models validation
 - Models comparison
 - code generation
 - Models transformation

Duration : 7 h