

# GMF Training

**Goals:**

- To know how are designed and how to use Eclipse GEF and GMF2
- To be able to develop applications based on these tools

**Our advantages:**

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

**Duration:** 3 days

**Public:** Architects, Developers

**Pre-requisite :** Good knowledge of Java and EMF. 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 approach
- Reminder on the EMF framework
- Introduction on the GMF project and its architecture
- Creating a GMF modeler

**Exercises:**

- Installation and customization of environments
- Navigation using existing GMF modelers
- Comparison with classic GEF tools
- Creating an EMF metamodel

Duration : 3.5 h

## 2 - GEF

- GEF goals
- MVC architecture of GEF
- Introduction to the draw2d graphic library
- API and development of GEF components (EditPart and EditPolicy)

**Exercises:**

- Create a diagram with GEF

Duration : 3.5 h

### 3 - GMF Tooling

- GMF architecture
- The GMFGRAPH model for graphical definition
- The GMFTOOL model for tooling definition
- The GMFMAP model for mapping definition
- The GMFGEN model for generative definition

#### *Exercises:*

- Creation of simple modelers
- Using the definition models to generate code
- Explanation of the generated code

Duration : 3.5 h

### 4 - GMF Runtime

- GMF Runtime library
- Creation of new components
- Advanced visual design
- GMF extension points

#### *Exercises:*

- Graphical customization
- Using the GMF providers

Duration : 3.5 h

### 5 - Advanced GMF

- Shortcuts between modelers
- Packaging and deployment of EMF and GMF projects
- Tips & Tricks
- Dynamic loading of labels and graphical elements

#### *Exercises:*

- Customizing the graphical appearance
- Using the GMF parsers
- Linking two distinct modelers
- Industrialization of this exercises

Duration : 7 h