EMF TRAINING

Course Goals
• To know how are designed and how to use Eclipse EMF and the main components based on this framework
• To develop applications based on these tools
• To use dedicated tools based on the MDE approach

Our added-value
• Training created by Eclipse committers and real EMF experts
• Many practical exercices (66%)

Duration: 2 days

Audience: Architects, Developers

Pre-requisites:
• Good knowledge of Java.
• Basic knowledge of Eclipse plugins programming.

1 - Presentation of the Eclipse Modeling Project
• Structuring and overview of the Eclipse projects
• Introduction to MDE concepts
• Introduction to the frameworks of the Eclipse Modeling Project

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

Duration: 1.5h

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: 1.5h

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: 4h

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

Exercises
• Designing a tooling making use of different components
• Models validation
• Models comparison
• Code generation

Duration: 7h

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