SIRIUS TRAINING - BASICS

Course Goals
- Learn how to create a simple modeling environment with Sirius
- Learn the methodological and technical bases for building a modeling workbench

Our added-value
The course is designed by the creators of the Sirius Project and other Eclipse committers. Many hands-on exercises (50%)

Duration: 4 days
Audience: Architects, developers
Prerequisites: Basic knowledge of Java development and experience using the Eclipse IDE.

1 - MDA and Eclipse overview
- Introduction to MDE and Domain Specific Modeling concepts
- Overview of the Eclipse modeling technologies (EMF, GMF)

Exercises
- Environment installation and configuration
- Models creation using the tree editor

Duration: 1h

2 - Sirius overview
- The Sirius approach
- Architecture
- End-user’s features
- Overview of navigation languages

Exercises
- Hands-on with provided examples

Duration: 3.5h

3 - Introduction to meta-modeling with EMF
- Basic concepts of EMF
- The Ecore meta-model
- The first modeling tool created by EMF
- The generation model: GenModel
- Links between meta-models

Exercises
- Development of a basic EMF modeler based on a specific meta-model, model instances creation
- First customizations of the modeler

Duration: 2.5 h

4 - Navigation with AQL
- Overview
- Syntax
- Tuning queries

Exercises
- Navigation and advanced querying with system services

Duration: 3.5h

5 - Diagram representations
- Specific interpreters
- The viewpoints specification file
- Mapping between semantic and graphical notions
- Specification of a graphical representation

Exercises
- Creation of “class-diagram-like” graphical viewpoints
- Discovery of available shapes

Duration: 3,5h

6 - Editing diagrams
- Java services
- Other edition tools
  - Editing the label
  - Double-click
  - Contextual menus
  - ...

Exercises
- Enhancement of the sample modeler with extended tools

Duration: 7h

7 - Creating advanced viewpoints
- Conditional styles
- Filters
- Mappings specialization
- Validation rules and quick-fixes
- Internationalisation
- Properties Views
- Best practices

Exercises
- Enhancement of the sample modeler with validation rules, quick-fixes and dynamic elements

Duration: 2.5h

8 - Other representation types
- Table
- Matrix
- Tree

Exercises
- Enhancement of the sample modeler with tables, matrix and trees

Duration: 3.5h

9 - Modeler deployment
- Componentization extension
- Feature creation
- Creation and export of an update site
- Installation of an update site
- Build with Maven/Tycho

Exercises
- Creation of a build for the sample modeler

Duration: 1h

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