Tutorial

Meta Model Documentation

© 2010 actifsource GmbH, Switzerland - all rights reserved.

Tutorial	Actifsource Tutorial – State Machine
Required Time	• 15 Minutes
Prerequisites	• Actifsource Tutorial – Installing Actifsource • Actifsource Tutorial – Simple Service
Goal	• Learn how to document your own Meta Model • Generating browsable HTML documentation
Topics covered	• Meta Model Documentation Builtin model
Notation	↳ To do ⓘ Information • **Bold**: Terms from actifsource or other technologies and tools • **Bold underlined**: actifsource Resources • Underlined: User Resources • *UnderlinedItalics*: Resource Functions • `Monospaced`: User input • *Italics*: Important terms in current situation
Disclaimer	The authors do not accept any liability arising out of the application or use of any information or equipment described herein. The information contained within this document is by its very nature incomplete. Therefore the authors accept no responsibility for the precise accuracy of the documentation contained herein. It should be used rather as a guide and starting point.
Contact	**actifsource GmbH** Täfernstrasse 37 5405 Baden-Dättwil Switzerland www.actifsource.com
Trademark	**actifsource** is a registered trademark of **actifsource GmbH** in Switzerland, the EU, USA, and China. Other names appearing on the site may be trademarks of their respective owners.

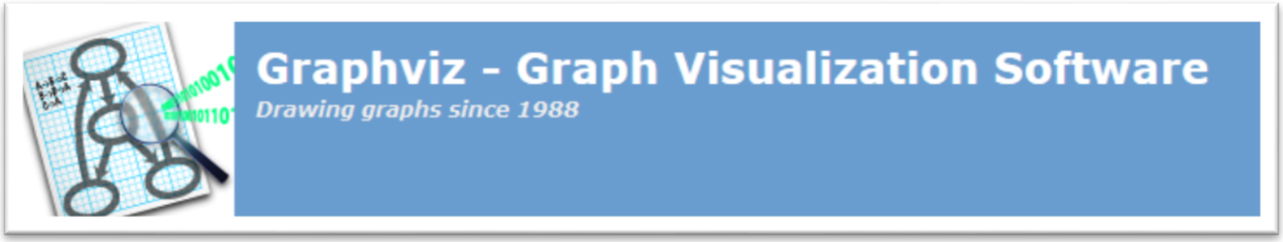
© 2010 actifsource GmbH, Switzerland - all rights reserved.

Overview

- Install Graphviz
- Create your meta model
- Prepare your project
- Create the documentation model

© 2010 actifsource GmbH, Switzerland - all rights reserved.

Part I: Install Graphviz


Graphviz - Graph Visualization Software
Drawing graphs since 1988

- Install the **graphviz** tool from http://www.graphviz.org/
- Make sure that **graphviz** is added to your system path
- The Actifsource meta model documentation generator is looking for the *graphviz executable* **dot.exe** in your system path.

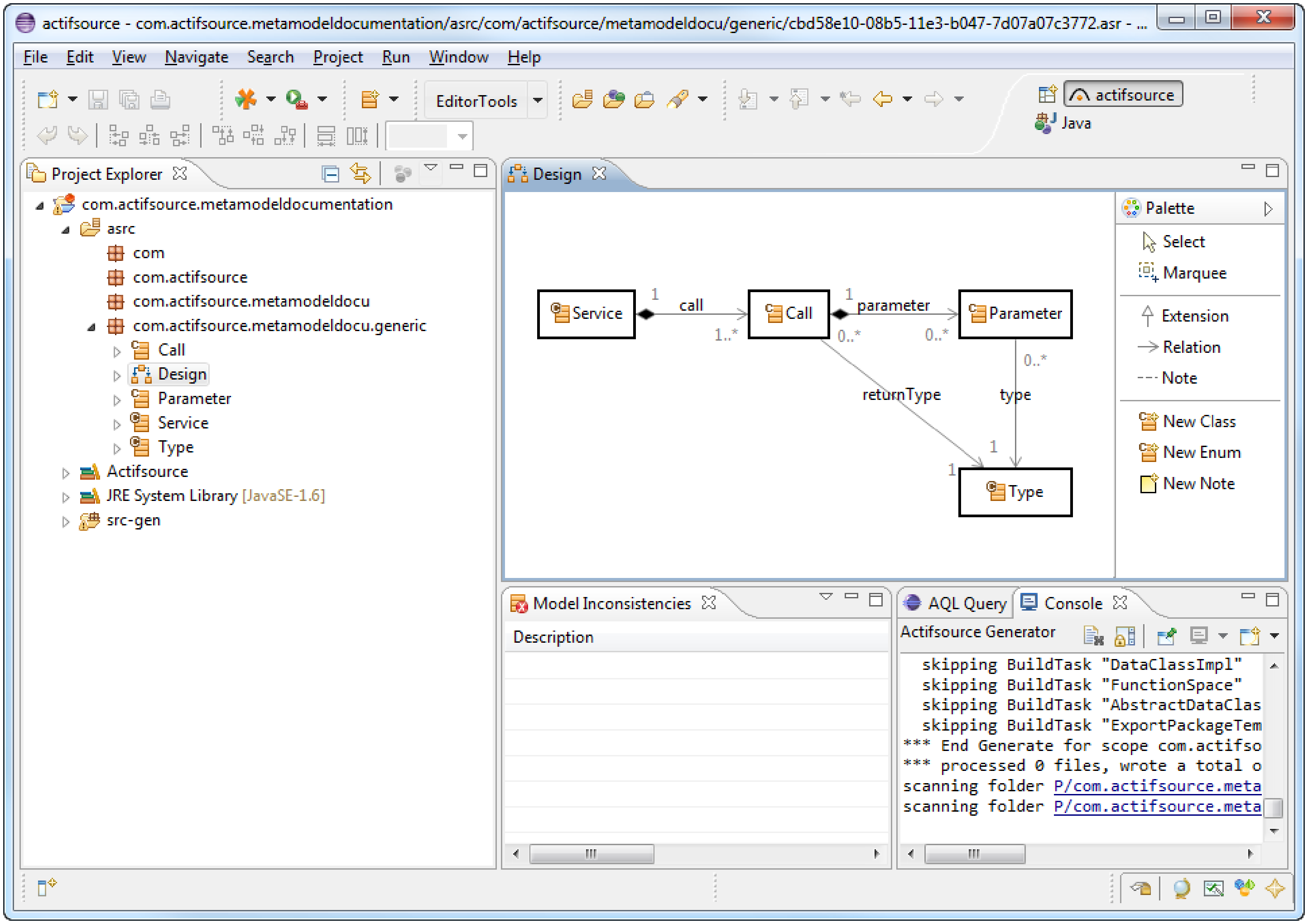
© 2010 actifsource GmbH, Switzerland - all rights reserved.

Part II: Create your meta model

- Create a simple meta model as shown in the **Actifsource Tutorial - Simple Service**
- Make sure to use a **Class Diagram** for the **meta model design**

© 2010 actifsource GmbH, Switzerland - all rights reserved.

Create your meta model

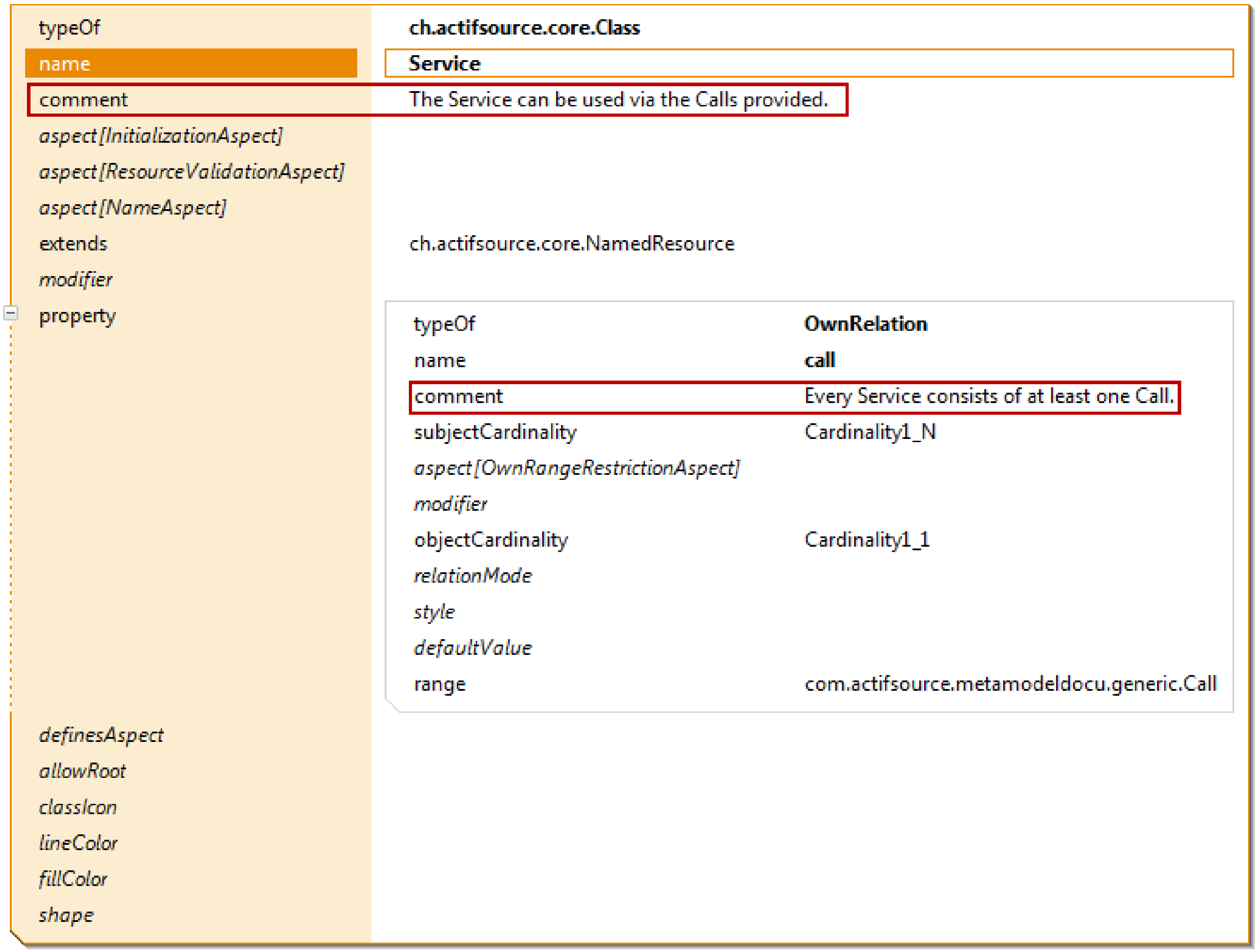

actifsource - com.actifsource.metamodeldocumentation/asrc/com/actifsource/metamodeldocu/generic/cbd58e10-08b5-11e3-b047-7d07a07c3772.asr - ...
File Edit View Navigate Search Project Run Window Help
EditorTools
actifsource
Java
Project Explorer
com.actifsource.metamodeldocumentation
asrc
com
com.actifsource
com.actifsource.metamodeldocu
com.actifsource.metamodeldocu.generic
Call
Design
Parameter
Service
Type
Actifsource
JRE System Library [JavaSE-1.6]
src-gen
Design
Service
call
1
1..*
Call
parameter
1
0..*
Parameter
0..*
returnType
type
0..*
1
1
Type
Palette
Select
Marquee
Extension
Relation
Note
New Class
New Enum
New Note
Model Inconsistencies
Description
AQL Query
Console
Actifsource Generator

```
  skipping BuildTask "DataClassImpl"
  skipping BuildTask "FunctionSpace"
  skipping BuildTask "AbstractDataClas
  skipping BuildTask "ExportPackageTem
*** End Generate for scope com.actifso
*** processed 0 files, wrote a total o
scanning folder P/com.actifsource.meta
scanning folder P/com.actifsource.meta
```

- Create a simple meta model as shown in the **Actifsource Tutorial - Simple Service**
- Use a **Class Diagram** named Design

© 2010 actifsource GmbH, Switzerland - all rights reserved.

Create your meta model



typeOf	**ch.actifsource.core.Class**
name	**Service**
comment	The Service can be used via the Calls provided.
aspect [InitializationAspect]	
aspect [ResourceValidationAspect]	
aspect [NameAspect]	
extends	ch.actifsource.core.NamedResource
modifier	
property	
definesAspect	
allowRoot	
classIcon	
lineColor	
fillColor	
shape	

typeOf	**OwnRelation**
name	**call**
comment	Every Service consists of at least one Call.
subjectCardinality	Cardinality1_N
aspect [OwnRangeRestrictionAspect]	
modifier	
objectCardinality	Cardinality1_1
relationMode	
style	
defaultValue	
range	com.actifsource.metamodeldocu.generic.Call

↳ Add proper comments to all classes, relations and attributes

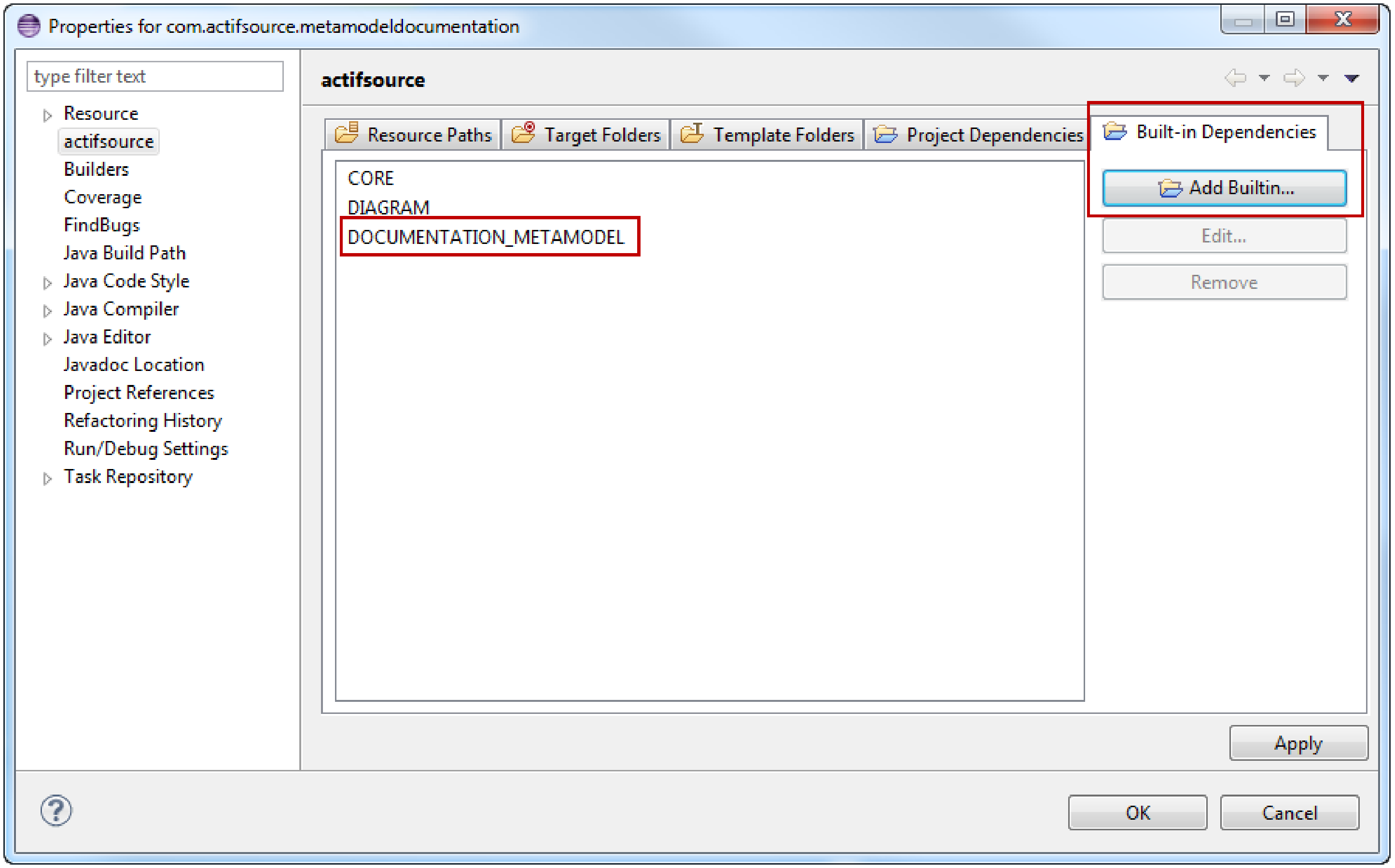
© 2010 actifsource GmbH, Switzerland - all rights reserved.

Part III: Prepare your project

- Add a **Builtin Dependency** to **DOCUMENTATION_METAMODEL**
- Add a target folder to generate the documentation

© 2010 actifsource GmbH, Switzerland - all rights reserved.

Prepare your project


Properties for com.actifsource.metamodeldocumentation

type filter text

- Resource
- actifsource
- Builders
- Coverage
- FindBugs
- Java Build Path
- Java Code Style
- Java Compiler
- Java Editor
- Javadoc Location
- Project References
- Refactoring History
- Run/Debug Settings
- Task Repository

actifsource

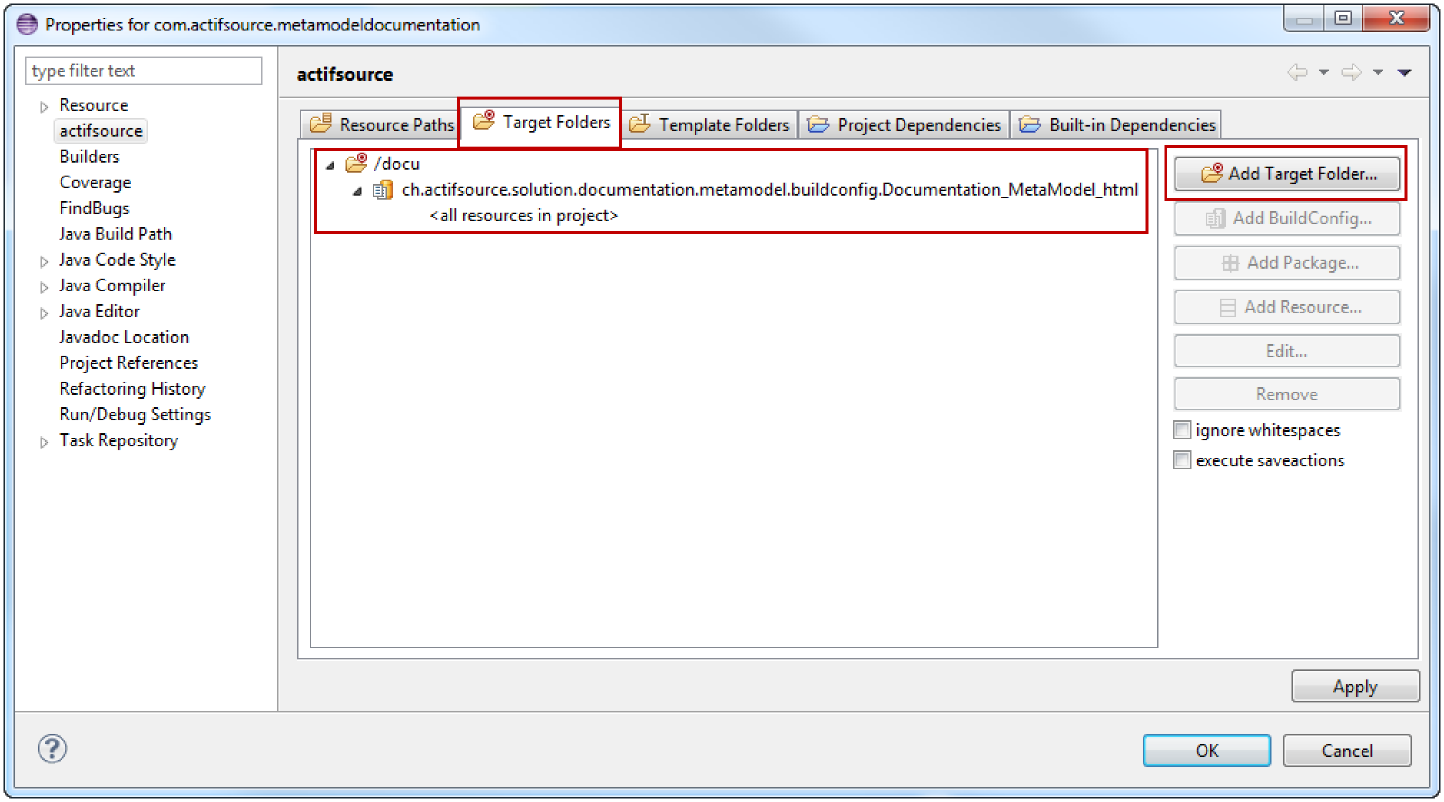
Resource Paths | Target Folders | Template Folders | Project Dependencies | Built-in Dependencies

CORE
DIAGRAM
DOCUMENTATION_METAMODEL

- Open the properties of your project
- Add a **Builtin Dependency** to **DOCUMENTATION_METAMODEL**

© 2010 actifsource GmbH, Switzerland - all rights reserved.

Prepare your project



/docu
ch.actifsource.solution.documentation.metamodel.buildconfig.Documentation_MetaModel_html
<all resources in project>

- Open the properties of your project
- Add a new **Target Folder** docu
- Add the **Build Config** Documentation_MetaModel_html to the **Target Folder**
- ⓘ Make sure you have added the **Builtin Dependency** to **DOCUMENTATION_METAMODEL** before

© 2010 actifsource GmbH, Switzerland - all rights reserved.

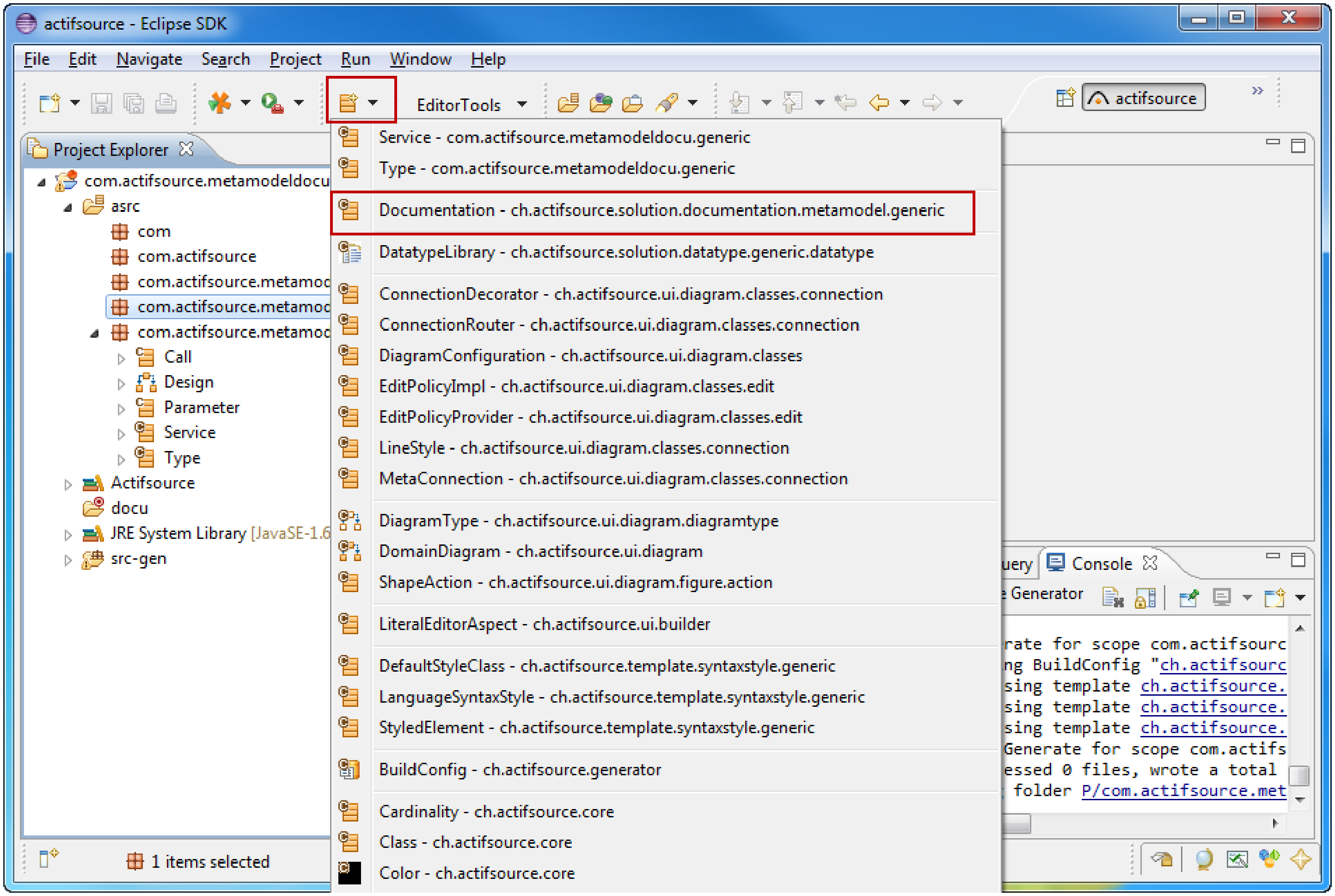
Part IV:

Create the documentation model

- Instantiate a new resource of type **Documentation**
- Add chapters and sub chapters to your documentation

© 2010 actifsource GmbH, Switzerland - all rights reserved.

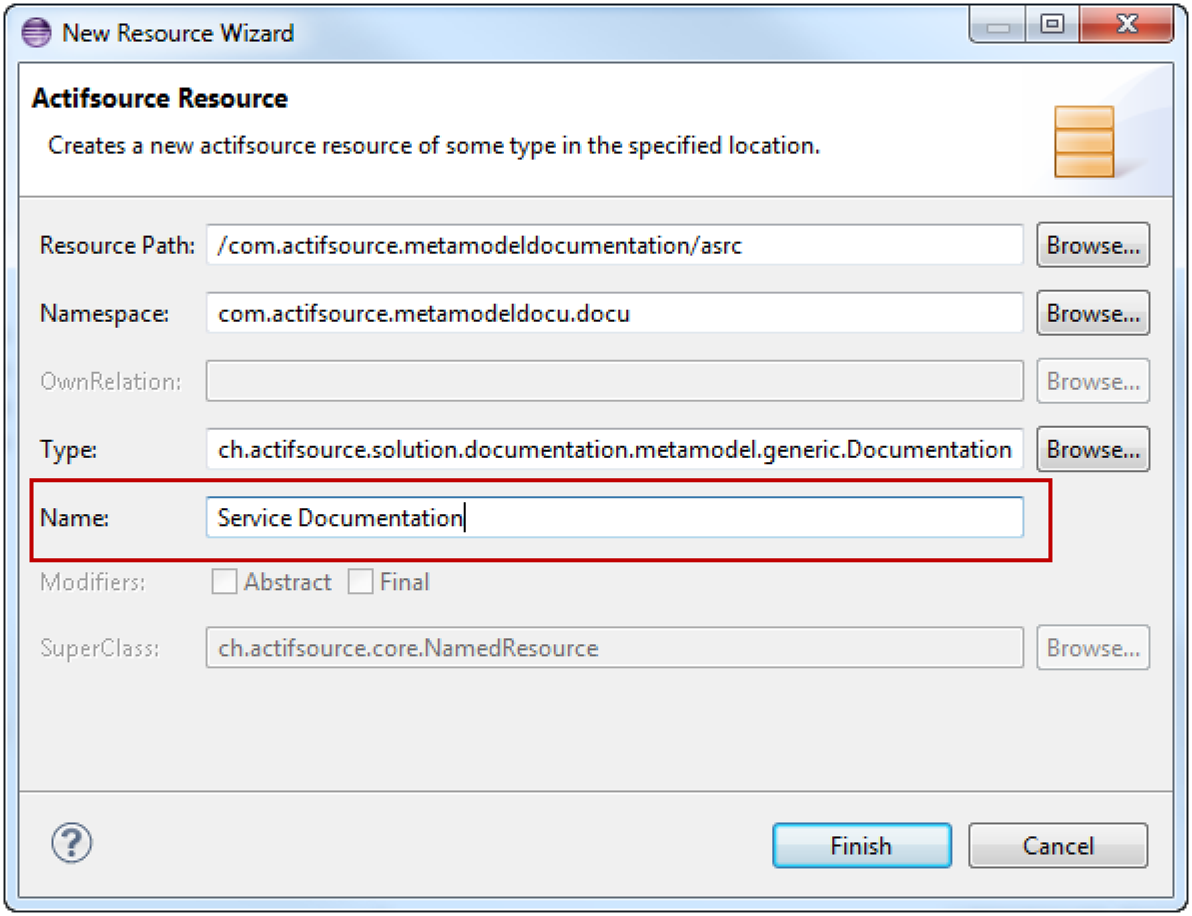
Create the documentation model


actifsource - Eclipse SDK
File Edit Navigate Search Project Run Window Help
EditorTools
actifsource
Project Explorer
com.actifsource.metamodeldocu
asrc
com
com.actifsource
com.actifsource.metamoc
com.actifsource.metamoc
com.actifsource.metamoc
Call
Design
Parameter
Service
Type
Actifsource
docu
JRE System Library [JavaSE-1.6
src-gen
1 items selected
Service - com.actifsource.metamodeldocu.generic
Type - com.actifsource.metamodeldocu.generic
Documentation - ch.actifsource.solution.documentation.metamodel.generic
DatatypeLibrary - ch.actifsource.solution.datatype.generic.datatype
ConnectionDecorator - ch.actifsource.ui.diagram.classes.connection
ConnectionRouter - ch.actifsource.ui.diagram.classes.connection
DiagramConfiguration - ch.actifsource.ui.diagram.classes
EditPolicyImpl - ch.actifsource.ui.diagram.classes.edit
EditPolicyProvider - ch.actifsource.ui.diagram.classes.edit
LineStyle - ch.actifsource.ui.diagram.classes.connection
MetaConnection - ch.actifsource.ui.diagram.classes.connection
DiagramType - ch.actifsource.ui.diagram.diagramtype
DomainDiagram - ch.actifsource.ui.diagram
ShapeAction - ch.actifsource.ui.diagram.figure.action
LiteralEditorAspect - ch.actifsource.ui.builder
DefaultStyleClass - ch.actifsource.template.syntaxstyle.generic
LanguageSyntaxStyle - ch.actifsource.template.syntaxstyle.generic
StyledElement - ch.actifsource.template.syntaxstyle.generic
BuildConfig - ch.actifsource.generator
Cardinality - ch.actifsource.core
Class - ch.actifsource.core
Color - ch.actifsource.core
uery
Console
Generator

```
rate for scope com.actifsourc
ng BuildConfig "ch.actifsourc
sing template ch.actifsource.
sing template ch.actifsource.
sing template ch.actifsource.
Generate for scope com.actifs
essed 0 files, wrote a total
 folder P/com.actifsource.met
```

- Select a resource folder
- Create a new resource of type **Documentation** using the **new resource tool**

© 2010 actifsource GmbH, Switzerland - all rights reserved.


New Resource Wizard

Actifsource Resource

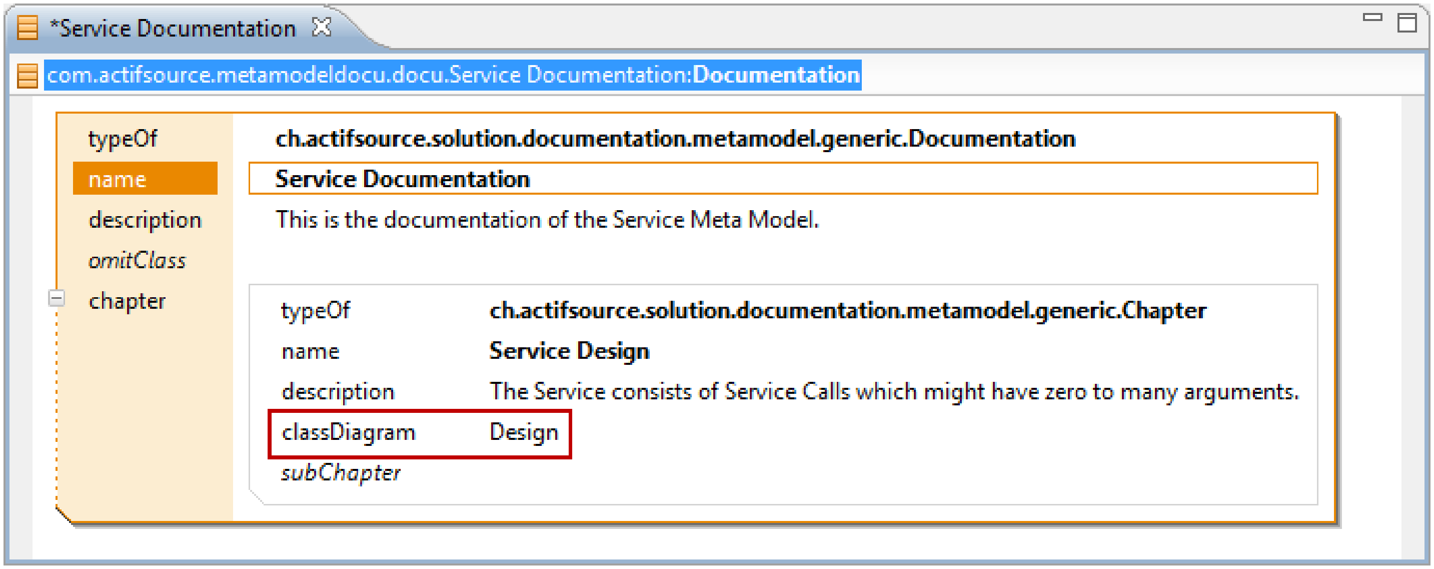
Creates a new actifsource resource of some type in the specified location.

Resource Path:	/com.actifsource.metamodeldocumentation/asrc	Browse...
Namespace:	com.actifsource.metamodeldocu.docu	Browse...
OwnRelation:		Browse...
Type:	ch.actifsource.solution.documentation.metamodel.generic.Documentation	Browse...
Name:	Service Documentation	
Modifiers:	☐ Abstract ☐ Final	
SuperClass:	ch.actifsource.core.NamedResource	Browse...

Create a new resource named Service Documentation of type **Documentation**

© 2010 actifsource GmbH, Switzerland - all rights reserved.

Create the documentation model



com.actifsource.metamodeldocu.docu.Service Documentation:**Documentation**

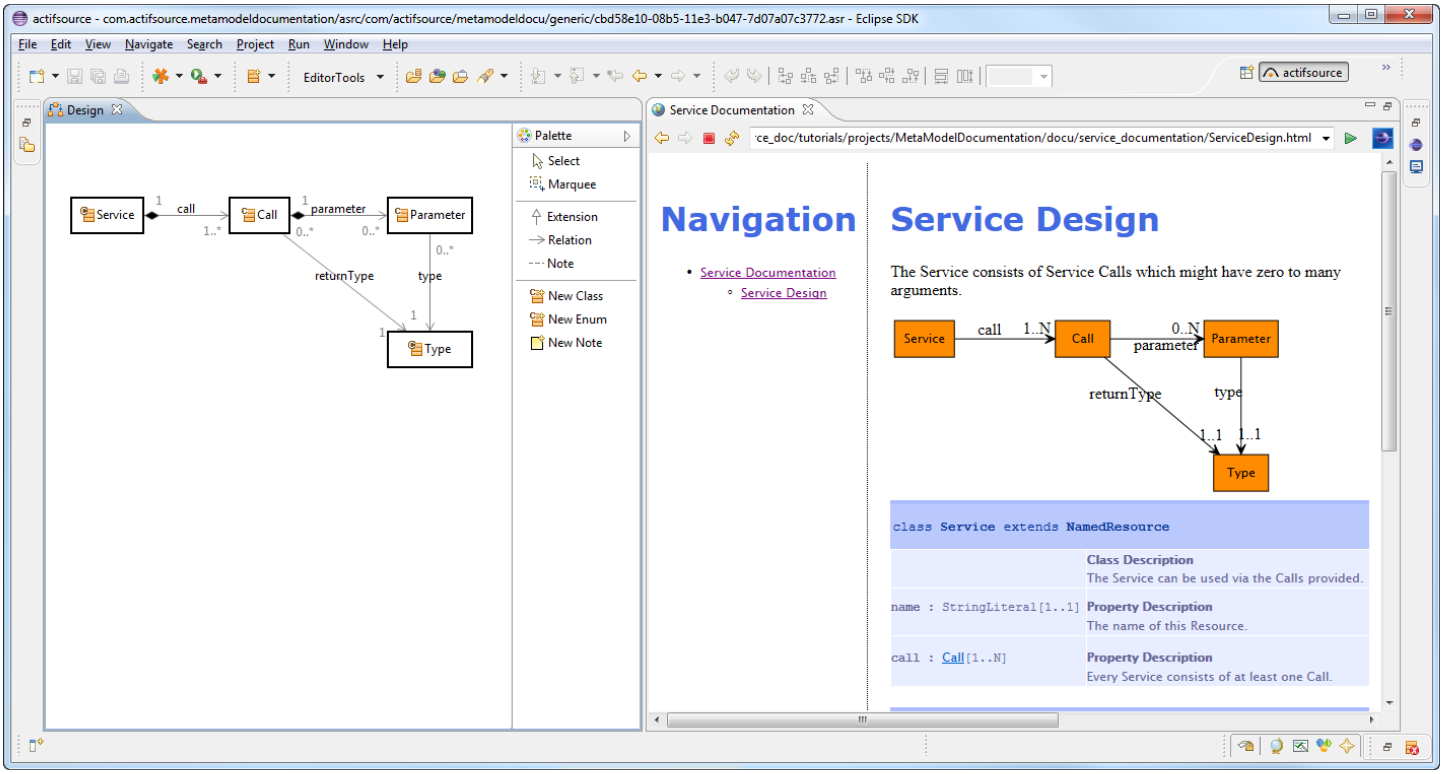
typeOf	**ch.actifsource.solution.documentation.metamodel.generic.Documentation**
name	**Service Documentation**
description	This is the documentation of the Service Meta Model.
omitClass	
chapter	

typeOf	**ch.actifsource.solution.documentation.metamodel.generic.Chapter**
name	**Service Design**
description	The Service consists of Service Calls which might have zero to many arguments.
classDiagram	Design
subChapter	

- Open the resource Service Documentation
- Add some descriptions where needed
- Add a new **Chapter** named Service Design
- Make sure to refer to your **Class Diagram** named Design
- Save your resource

© 2010 actifsource GmbH, Switzerland - all rights reserved.

Create the documentation model


actifsource - com.actifsource.metamodeldocumentation/asrc/com/actifsource/metamodeldocu/generic/cbd58e10-08b5-11e3-b047-7d07a07c3772.asr - Eclipse SDK
File Edit View Navigate Search Project Run Window Help
EditorTools
actifsource
Design
Service
call
1
1..*
Call
parameter
1
0..*
0..*
Parameter
0..*
returnType
type
1
1
Type
Palette
Select
Marquee
Extension
Relation
Note
New Class
New Enum
New Note
Service Documentation
ce_doc/tutorials/projects/MetaModelDocumentation/docu/service_documentation/ServiceDesign.html
Navigation
Service Documentation
Service Design
Service
call
1..N
Call
0..N
parameter
Parameter
returnType
type
1..1
1..1
Type

Service Design

The Service consists of Service Calls which might have zero to many arguments.

class Service extends NamedResource

	Class Description The Service can be used via the Calls provided.
name : StringLiteral[1..1]	**Property Description** The name of this Resource.
call : Call[1..N]	**Property Description** Every Service consists of at least one Call.

ⓘ Find the generated html documentation in the **Target Folder** docu

© 2010 actifsource GmbH, Switzerland - all rights reserved.