

Release Engineering with EGF Build

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EGF

- ◆ EGF (Eclipse Generation Factories) is an Modeling component project
- ◆ Purpose: providing a model-based generation framework, especially to automate software production
- ◆ Objectives:
 - Supporting complex, large-scale and customizable generations
 - Promoting generation portfolios in order to capitalize on generation solutions
 - Providing an extensible generation structure



Project page: <http://www.eclipse.org/egf>

Wiki: <http://wiki.eclipse.org/EGF>

Blog: <http://blanglois.blogspot.com/>

Objectives of the EGF Build Portfolio

- ◆ **Facilitating the definition & maintenance of build chains:**
 1. A **build editor** describes a build chain
 2. A **generator** targets a build platform, here **Hudson / Jenkins / Ant and Buckminster**
 3. Use of the build chain

- ◆ **Taking advantage of the model-based approach**
- ◆ **Versioning of the build models for LTS/VLTS**

Stages



```

#eclipse
eclipse.download.prefix=file:/home/data/httpd/download.eclip

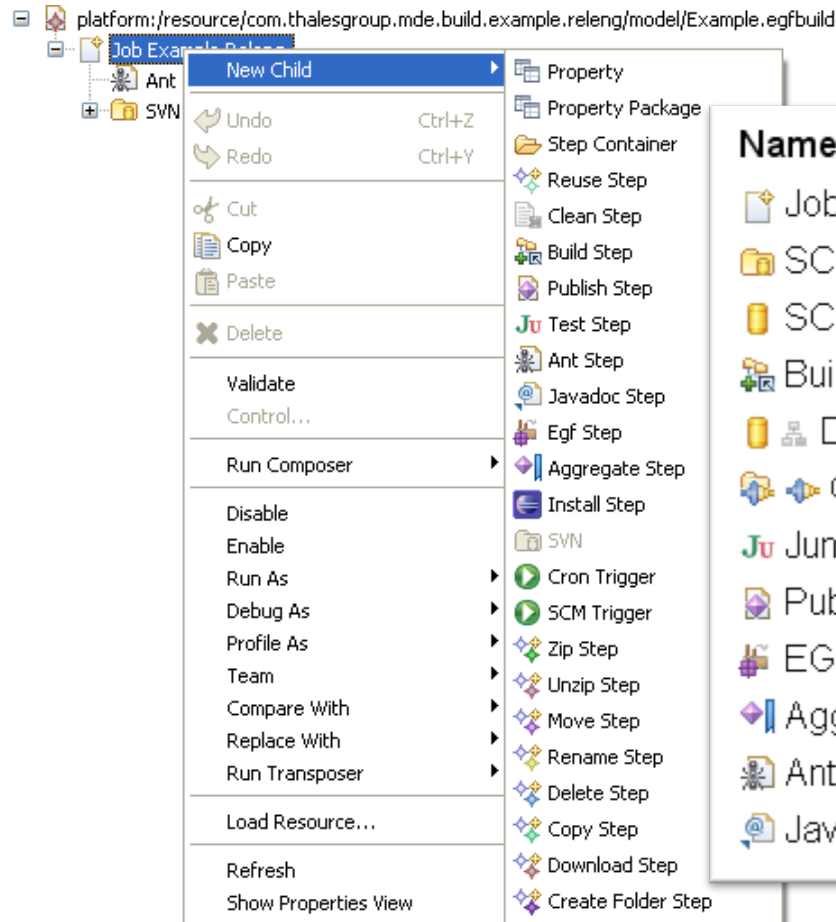
#buckminster installation
buckminster.download.url=${eclipse.download.prefix}/tools/bu
director.url=${buckminster.download.url}/products/director_1
buckminster.release=3.6
bm.headless.site=${buckminster.download.url}/headless-${buck
bm.external.site=http://download.cloudsmith.com/buckminster/
polarion.site=http://community.polarion.com/projects/subvers

#egf installation
#TODO change url site
egf.site=https://hudson.eclipse.org/hudson/job/buckminster-egf

#do not generate version range with buckminster in manifest.
pde.bundle.range.generation=false
    
```

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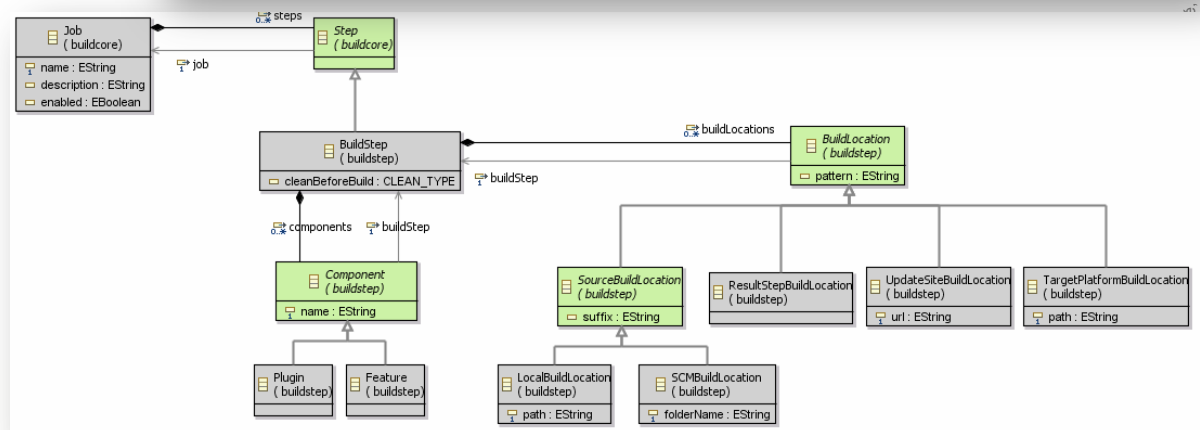
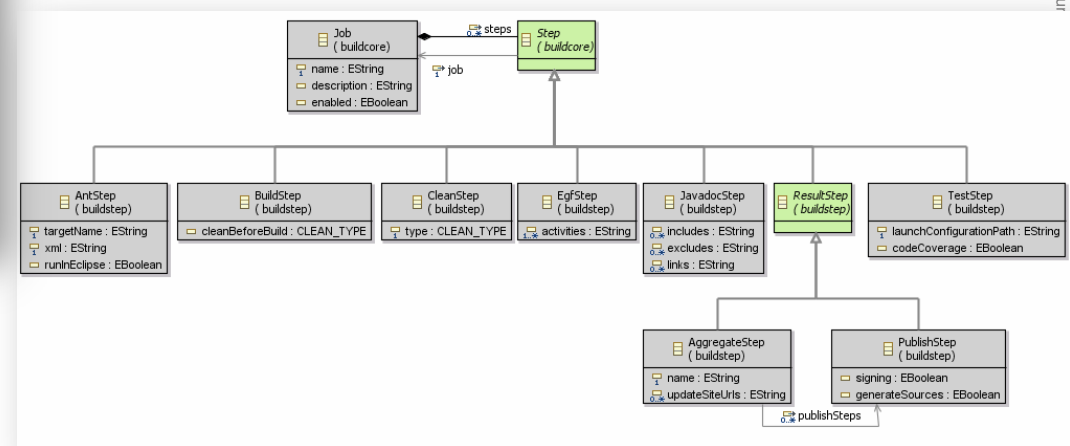
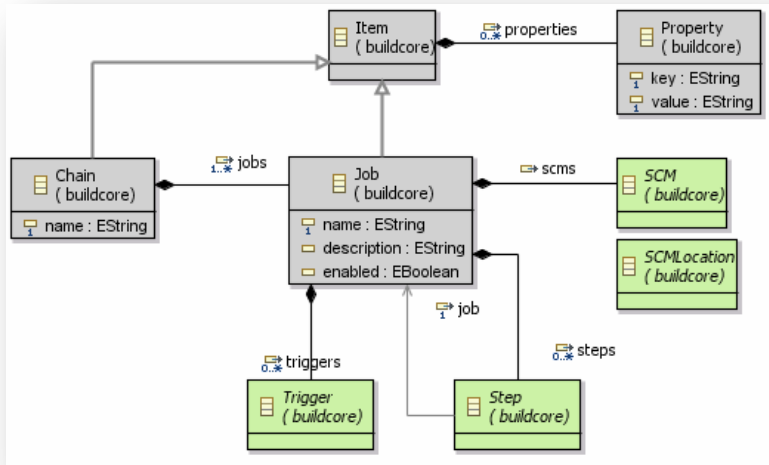
Modeling a build chain



Name	Description
Job	List of steps
SCM Configuration	Type of SCM locations
SCM Location	SCM locations (e.g., svn url)
Build Step	Materializes and builds a workspace
Dependencies	Sources and dependencies locations
Components	Features and plugins to find and build
Junit Step	Launches a Junit launch configuration
Publish Step	Generates P2 site and dropins
EGF Step	Launches an EGF activity
Aggregation Step	Aggregates several P2 sites and dropins
Ant Step	Launches a custom ant target
Javadoc Step	Generated Javadoc from sources

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EGF Build Metamodels



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Extension & Customization

- **EGF Build Metamodels are extensible**
 - ◆ Reuse EMF Extension
 - ◆ Possibility to add new Steps, Items...
- **EGF Build Portfolio is extensible**
 - ◆ Replace / Remove provided patterns
 - ◆ Add new patterns
- **Transformation and validation patterns available**
 - ◆ Transform an EGF Model Build before generation
 - ◆ Validate and EGF Model Build before generation

Information

- **Mail :**
 - ◆ matthieu.helleboid@thalesgroup.com
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- **Eclipse bugtracker :**
 - ◆ <https://bugs.eclipse.org/bugs>
 - ◆ **Product : Modeling**
 - ◆ **Component : EGF**
- **Resources :**
 - ◆ **Eclipse Wiki :** http://wiki.eclipse.org/EGF_Build_Portfolio
 - ◆ **Video :** <http://vimeo.com/22033124>