

# GSoC 2009

## Camel Dynamic Routes

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### Project Description

We can already modify XML at runtime; we could do with visualizations using Scala, Ruby, Groovy, Python so that folks can view & edit the routes in whatever language they want and hack them. For more see the [Web Console](#) which supports updating the routes at runtime using the XML structure.

To do this we'll need to be able to turn a RouteDefinition back into the DSLs - such as Groovy/Ruby/Scala/Python

### Status

#### Week of May 11 - May 17, 2009

- Try most of the test cases of camel-core

#### Weeks of May 23 - June 7, 2009

- Learn the camel-web component and the RESTful WS tool: Jersey.....finished
- Do a rough prototype which supports Groovy expression.....finished
  - A prototype is implemented and support creating routes by using Groovy language. We can use the face as follows to create a route on Camel.
  - [http://docs.google.com/View?id=df6drqgg\\_1391f4s9wmhf](http://docs.google.com/View?id=df6drqgg_1391f4s9wmhf)
  - Now the Camel-web module depends on Camel-groovy module.
- Submit the late design document, expected previously.....finished

#### Week of June 8 - June 14, 2009

- Improve Groovy Route Editor
- Do Ruby route editing support.....finished
  - The editor form now support creating routes by using Ruby language. We can use the face as follows to create a route on Camel.
  - [http://docs.google.com/View?id=df6drqgg\\_1393gcgfgzgp](http://docs.google.com/View?id=df6drqgg_1393gcgfgzgp)
  - Now the Camel-web module depends on Camel-ruby module.
- Do some modification on Xml Route editor if needed.....canceled
- Do the Groovy style view of route.(Now the editor can only support creating operation, but has no idea how to display a route in GroovyRouteBuilder style).....canceled
- Commit a camel-web-20090611 patch, which contains the Groovy and Ruby route editing support.....finished

#### Week of June 15 - June 21, 2009

- <http://issues.apache.org/activemq/browse/CAMEL-1389>
- <http://issues.apache.org/activemq/browse/CAMEL-1392>

#### Week of June 22 - June 27, 2009

- <http://issues.apache.org/activemq/browse/CAMEL-1392>. It's a little complex to translate the RouteDefinition into GroovyRouteBuilder, so in this week I still work at it.
- [http://docs.google.com/View?id=df6drqgg\\_1396cnhrwzmf](http://docs.google.com/View?id=df6drqgg_1396cnhrwzmf)
- [http://docs.google.com/View?id=df6drqgg\\_1398w9jt74hf](http://docs.google.com/View?id=df6drqgg_1398w9jt74hf)
- Now the groovyRenderer can support most of the EIP route definitions. It can generate a overview of the route definition, but can't support Expression. Current XML editor also has this problem, it just replace the expression definition with a <expressionDefinition/> element.
- I want to solve it through digging into the ExpressionNode and ExpressionDefinition level, but after a lot of work and test, I found it so difficult because in ExpressionDefinition, some Groovy closures are embedded in and hard to restore to the original states. I will post some of my experiments on mailing list for discusses.

#### Week of June 28 - July 6, 2009

- Improve the groovyRenderer.
- Do plenty of test (test cases of org.apache.camel.processor in camel-core).
- [http://docs.google.com/View?id=df6drqgg\\_1400hgqpt3cg](http://docs.google.com/View?id=df6drqgg_1400hgqpt3cg) test records: lines not with a prefixion "#" have been supported.

#### Week of July 7 - July 13, 2009

- Add test cases for groovy renderer.
- <https://issues.apache.org/activemq/browse/CAMEL-1804>. A user guide for groovy renderer to show how to use, what DSL features are supported, and any know holes.

### Week of July 14 - July 19, 2009

- Write the user guide of groovy renderer.
- Improve the code of groovy renderer, to reduce some hard code in it, especially for the Expression Definition processing.
- <https://issues.apache.org/activemq/browse/CAMEL-1839>

### Week of July 20 - July 24, 2009

- Continue to add some DSL test cases.
- Add DSLs' related content into the user guide.

### Week of July 25 - Aug 1, 2009

- Go on a vacation.

### Week of Aug 3 - Aug 9, 2009

- Add AOP, OnCompletion, OnException and ReSequence DSL support.....finished
- Add interceptFrom, interceptSendToEndpoint DSL support.....finished
- Implement renderRoutes method for groovy renderer.....finished
- List the supported DSL parameters in [Groovy Renderer User Guide](#)

### Week of Aug 10 - Aug 16, 2009

- Add some DSL support
- Review and improve all the DSL
- Improve predicateRenderer to support all the predicate DSL
- Complete [Groovy Renderer User Guide](#)
- Do a camel-web example to show how to change business flows by using runtime route modification

### Week of Aug 17 - Aug 24, 2009

- Add several samples to show off the functionalities of groovy renderer
  - [Content Based Routing on Camel](#) shows how to define you processor and invoke it through [Web Console](#). It also shows how to define [Content Based Router](#) on [Web Console](#).
  - [Load Balance for Existing Messaging Service](#) gives a sample at first and adds [Load Balancer](#) for it.
- Clean up the related document for final evaluation
  - Add several screen shots for [Groovy Renderer User Guide](#) to present how to edit a route on [Web Console](#).
- Submit all the deliverables before Aug 19

### Links

- [CAMEL-1655](#)
- [Official GSoC timeline](#)
- [Xueqiang Mi's Application](#)
- [Apache's GSoC page](#)
- [CAMEL-1392](#)
- [Groovy Renderer User Guide](#)
- [Content Based Routing on Camel](#)
- [Load Balance for Existing Messaging Service](#)