Eclipse & Distributed Testing Framework (DTF)

Rodney Gomes and Luis Alves

http://wiki.github.com/rlgomes/dtf/

Overview

- What is DTF
- What DTF isn't
- What DTF solves
- Writing a simple test
- Writing a distributed test
- What Eclipse gives DTF
- Future Eclipse Integration

What is DTF

- Framework written in Java with test cases written in an XML language similar to a few other XML languages out there with its own distinctive tags and features.

What is DTF

- Framework written in Java with test cases written in an XML language similar to a few other XML languages out there with its own distinctive tags and features.

- DTF tries to solve distributed testing in an easy to read an yet flexible manner than doesn't make it hard for the test writer to write complex tests.

What is DTF

- Framework written in Java with test cases written in an XML language similar to a few other XML languages out there with its own distinctive tags and features.

- DTF tries to solve distributed testing in an easy to read an yet flexible manner than doesn't make it hard for the test writer to write complex tests.

- A DTF setup can consist of multiple Agents (DTFA), a Controller (DTFC) and a Test Runner (DTFX). These components make up the testing components that allow you to write your tests and execute remote actions.

What is DTF

- Test framework for all of your testing needs from Functional Testing all the way through System Testing, Load, Performance and End-to-End Testing.

- A testing framework for your products lifetime being able to adapt tests and tags with ease when moving between different product releases.

- DTF tries to make reading tests developed by others easier, of course, there is always a way of making your XML test case very obscure, it just tends to be a bit harder than with most other scripting/testing languages.

What DTF isn't

- Its not a unit testing framework as unit tests should always be written in the same language that the API or product being tested is written in.

- Its not like other frameworks you've seen or like any other use of XML that you may have seen to date. From a very particular way of writing XML to the actual way that remote vs local actions are handled DTF is in a very different and new category of testing frameworks.

What DTF Solves

- Easily migrate tests between different product release with an XSL style sheet since all tests are written in XML and you can easily adapt test in one easy step.

- XML tags are documented from the DTF JavaDoc elements in the code, which allows you to keep your code changes and documentation all in on place.

- Tests are easy to document in appropriate description section of the XML data and using a style sheet you can easily keep track of your test inventory as well.

What DTF Solves

- Test case portability. Aside from the framework being written in Java the tests written in XML allow the developer of a tag to hide environment specific logic in the Java code and outside of the test case logic.

What DTF Solves

- Test case portability. Aside from the framework being written in Java the tests written in XML allow the developer of a tag to hide environment specific logic in the Java code and outside of the test case logic.

- Plugin system allows you to share functionality across different products very easily by building with different set of plug-ins that are common to multiple teams.

What DTF Solves

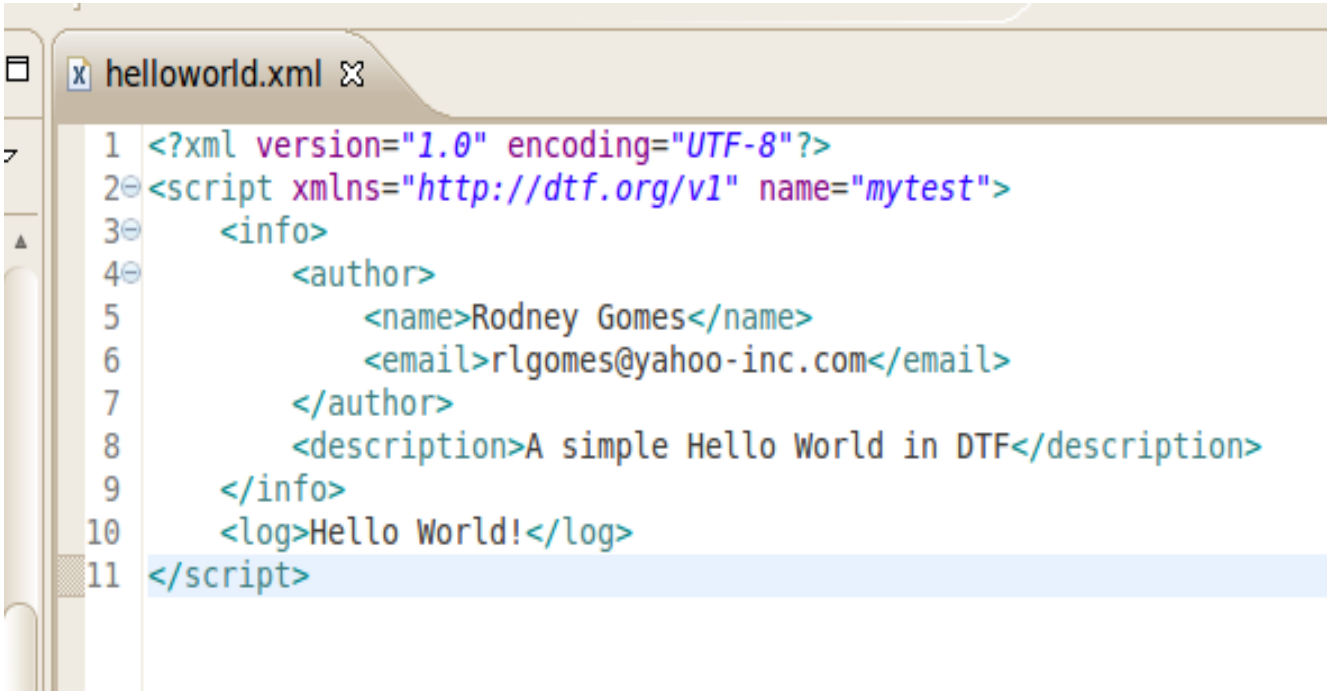
- Test case portability. Aside from the framework being written in Java the tests written in XML allow the developer of a tag to hide environment specific logic in the Java code and outside of the test case logic.

- Plugin system allows you to share functionality across different products very easily by building with different set of plug-ins that are common to multiple teams.

- Event system allows for any action to easily be monitored for performance measuring. The statistics calculation is already built into the framework easy to use manner.

Writing a simple test

- With Eclipse's support for writing XML makes writing your first test very quick since auto completion fills in the right XML elements.



Writing a distributed test

- Now taking the previous test this is how easily you can execute the same log statement on a different host.

remote_helloworld.xml

```
1  <?xml version="1.0" encoding="UTF-8"?>
2  <script xmlns="http://dtf.org/v1" name="remote_helloworld">
3      <info>
4          <author>
5              <name>Rodney Gomes</name>
6              <email>rlgomes@yahoo-inc.com</email>
7          </author>
8          <description>A simple Hello World in DTF</description>
9      </info>
10
11     <local>
12         <lockcomponent id="DTFA1"/>
13     </local>
14
15     <component id="DTFA1">
16         <log>Hello World!</log>
17     </component>
18 </script>
```

What Eclipse gives DTF

- Editing Java Code is a breeze in Eclipse.

- Editing XML is also very easy with auto completion kicking at just the right moment.

What Eclipse gives DTF

- Editing Java Code is a breeze in Eclipse.
- Editing XML is also very easy with auto completion kicking at just the right moment.
- DTF components can be easily executed within Eclipse.

What Eclipse gives DTF

- Editing Java Code is a breeze in Eclipse.
- Editing XML is also very easy with auto completion kicking at just the right moment.
- DTF components can be easily executed within Eclipse.
- Remote debugging is also very easy thanks to Eclipse and allows for diagnosing issues quick and easy.

Future Eclipse integration plans

- DTF Documentation View to allow the test case writer to easily see what each tag does and various examples displayed that are already written in the DTF JavaDocs and part of the DTF generated documentation.

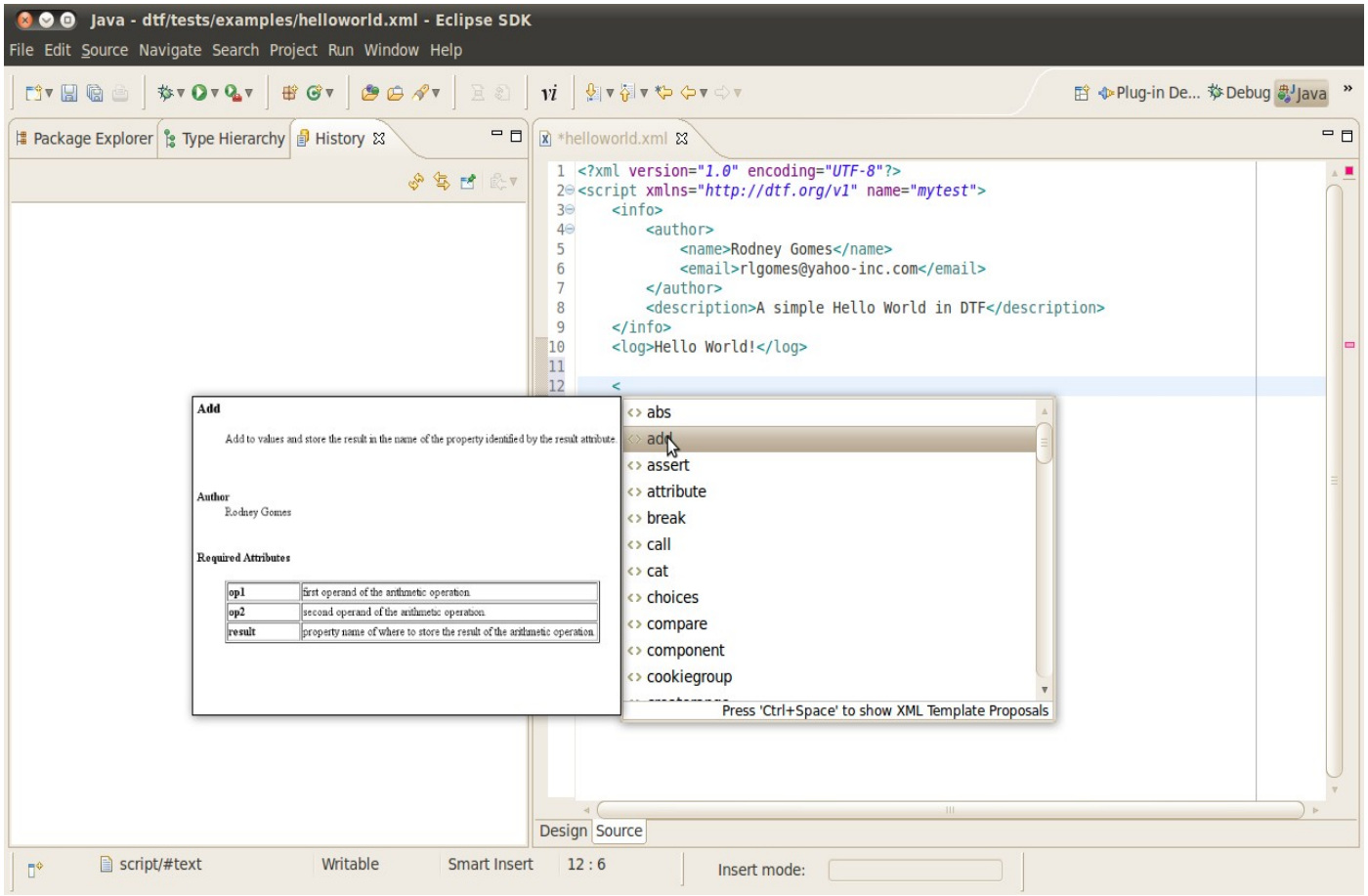
- Pop-up during XML editing with additional information about each tag currently being used. Very similar to JavaDoc documentation that appears during Java editing in Eclipse.

- Test case template generation from various example scenarios for testing distributed services of different types.

- Tighter integration with DTF to allow spawning of components on the current system or other hosts just like Hudson starts up its various slaves and allows you to monitor them in your browser.

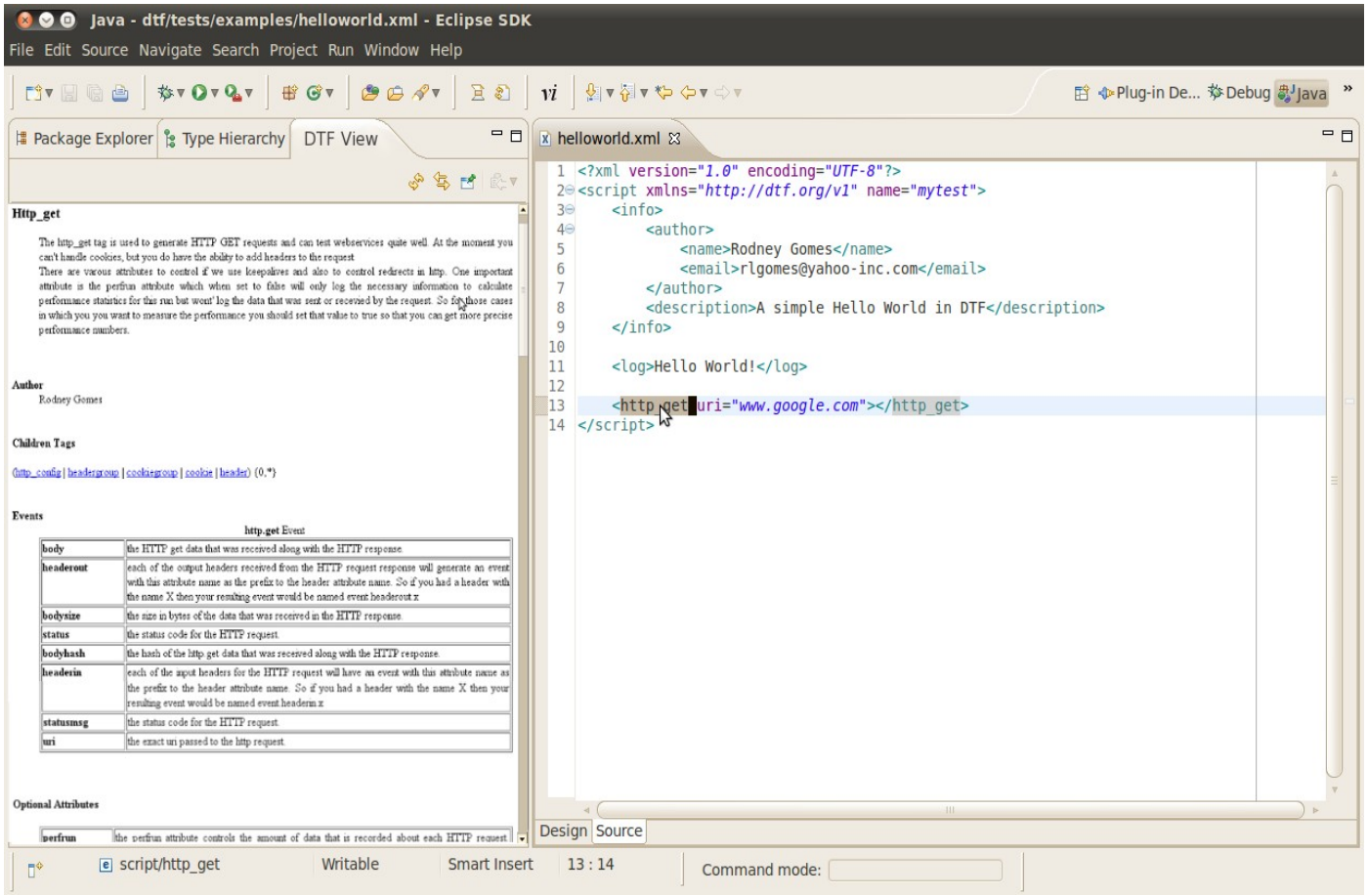
Future Eclipse integration plans

- Auto-completion with DTF Documentation:



Future Eclipse integration plans

- DTF documentation and examples view:



Contact Information

DTF - http://wiki.github.com/rlgomes/dtf/

Luis Alves <luis.alves@lafaspot.com>

Rodney Gomes <rodneygomes@gmail.com>