Jedit Log Viewer

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Introduction

The goal of the project was to provide an excellent tool for analyzing xs logs for both general understanding and trouble shooting purposes. To meet this goal three principal features were developed

1. Search
2. Level of Detail
3. Navigation/Discovery

Outline

Motivation

XS Logs are not easy to understand and it is painful to stare at mono color text. I wanted to have some of the same facilities available when looking at code syntax coloring, folding, navigation and search.

Related Work

1. LogViewer
2. Loogle[6]
3. SipSpider
4. Alexandre Blais's Scripts

Search

Search is the quickest way to get find you want it is far more efficient then Navigation. Search offers very little in the way of discoverability and is very unfriendly to novices. This project implements search using the Jedit[5][13] standard text editor search facility as well use Jedit's Beanshell[3] macro facility to store and hot key pre-canned useful searches.

Example Beanshell Search Macro

```
SearchAndReplace.setSearchString("^INVITE sip:");
SearchAndReplace.setAutoWrapAround(true);
SearchAndReplace.setRegexp(true);
SearchAndReplace.setSearchFileSet(new CurrentBufferSet());
SearchAndReplace.find(view);
```

Level of Detail

XS logs contain a lot of information, the relevance of this information varies quite a bit therefore it is useful to easily hide irrelevant information. The three principle ways this is achieved in this project are

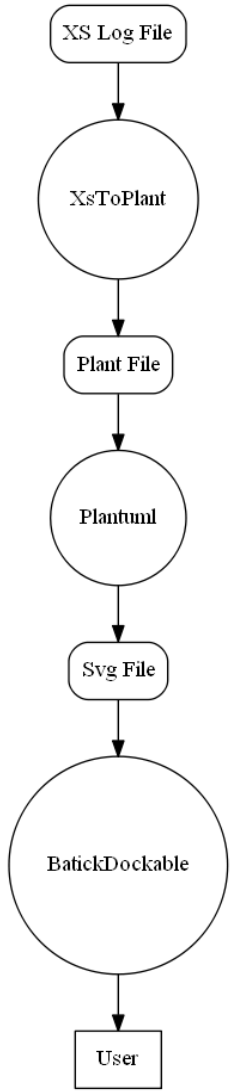
1. Folding via a Jedit Plugin I wrote called XsLogFolder[11]
2. Filtering Table of Contents using Jedit's Sidekick Plugin
3. Filtering the XS logs removing unwanted information through scripts or programs

Navigation/Discovery

Navigation can be thought of as the way to find things when you are not sure what you are looking for. It also provides a high level view and context in which you orient yourself. This project implements this feature in the following ways.

1. Jedit's Syntax highlighting of the xs log to draw attention to important information
2. Jedit's Sidekick plugin to generate a Table of Contents
3. Java programs[12] [10] to convert xs log into Plantuml[8] diagrams with line location hyperlinks
4. A Jedit Plugin that I wrote BatikDockable[2] an svg viewer based on Batik[1] to view and synchronize the plantuml svg diagrams with the xs log.

How the Visualization Works



Interactive Editing

The visualization aspect of this project has a much broader range of applicability then just viewing XS logs. As long as you can produce an svg with hyperlinks to line numbers you can reuse the technique to visualize any text document or even interactively edit graphic languages.
Supported languages are

1. Plantuml[8]
2. Graphviz[4]
3. Tikz[9]
4. Matplotlib[7]

Future Work

Possible future side projects include

1. Improve the visualization of XS logs
2. General applicability of Beanshell to our work at Broadsoft

Summary

1. Special thanks to Jonathan Wood
2. Low development effort and rich feature set thanks to leveraging FOSS total lines of Code 475
3. Most useful to novices but hopefully interesting to experts too
4. Jedit is a great powerful editor
5. Questions ?
6. Feedback

References

[1] Batik home page.
https://xmlgraphics.apache.org/batik/.

[2] Batikdockable svn location.
svn://beach/mtlrepos/working/ttaillefer/side/projects/jedit/plugins/BatikDockable.

[3] Beanshell home page.
http://www.beanshell.org/.

[4] Graphviz home page.
http://www.graphviz.org/.

[5] Jedit home page.
http://jedit.org/.

[6] Loogle home page.
https://home.unite.broadsoft.com/pages/viewpage.action?title=Loggle&spaceKey=BWENGKB.

References

[7] Matplotlib home page.
http://matplotlib.org/.

[8] Plantuml home page.
http://plantuml.com/.

[9] Tikz example page.
http://www.texample.net/tikz/examples/.

[10] Xseventstoplant svn location.
svn://beach/mtlrepos/working/ttaillefer/side/projects/xslog/XsEventsToPlant.

[11] Xslogfolder svn location.
svn://beach/mtlrepos/working/ttaillefer/side/projects/jedit/plugins/XsLogFolder.

References

[12] Xslogtoplant svn location.
`svn://beach/mtlrepos/working/ttaillefer/side/projects/xslog/XsLogToPlant`.

[13] Neal Ford.
The Productive Programmer.
O'Reilly Media, July 2008.