

LogSaw User Documentation

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Chapter 1. Welcome

The idea for this project was born sometime 2009, when I had to parse some really large log files from a customers production server. It turned out that I had to use Notepad to skim through the logs -- more specialized free tools in this area just couldn't handle the size.

Soon after this, LogSaw came into live. When designing this application, my focus was to keep it lean and simple, with as little code as needed. This design philosophy is still apparent today when you open LogSaw, as it's interface is pretty simplistic. Also, I found this a good opportunity to get *seriously* started with Eclipse RCP development. So, based on my previous experience with Apache Lucene, it was a no-brainer to choose Lucene for the backend stuff -- and Eclipse RCP for the frontend.

In March 2010, I have turned LogSaw open-source in the hopes to form a community around it. I hope you will like this tool and if you have any suggestions or comments, feel free to post them on the forums [<http://logsaw.sourceforge.net/redirect.php?target=HelpForum>]. As with any other open-source project, your input is very important for the future development of this application and is greatly appreciated!

Thank You for using LogSaw!

Chapter 2. Getting started

The main purpose of this application is viewing log files. So you will probably want to import a log file to get started. Once you have done so, go ahead and take a look at it.

Chapter 3. Support

If you run into any problems, please read the FAQs [<http://logsaw.sourceforge.net/redirect.php?target=FAQs>] first. Now, if that doesn't help you out, feel free to ask for help in our forums [<http://logsaw.sourceforge.net/redirect.php?target=HelpForum>].

Chapter 4. Concepts

Log Resource

A log resource represents a source of log events, which can then be fed into the local fulltext index for your viewing pleasure.

There can be different types of log resources, for example simple file-based versus directory-based or even network-based ones. But as of version 1.0 of LogSaw, only one simple file-based type of log resource is provided out-of-the-box: the Simple Log Resource.


Each log resource is internally associated with a log dialect, which provides the metadata describing the fields contained in each log event. This metadata is also used to display the log events in the UI.

Log Dialect

A log dialect provides means to extract log events from a `java.io.InputStream` and breaks them down into dialect-specific fields. Moreover, it also provides related metadata, for example the log levels being available.

Chapter 5. Tasks

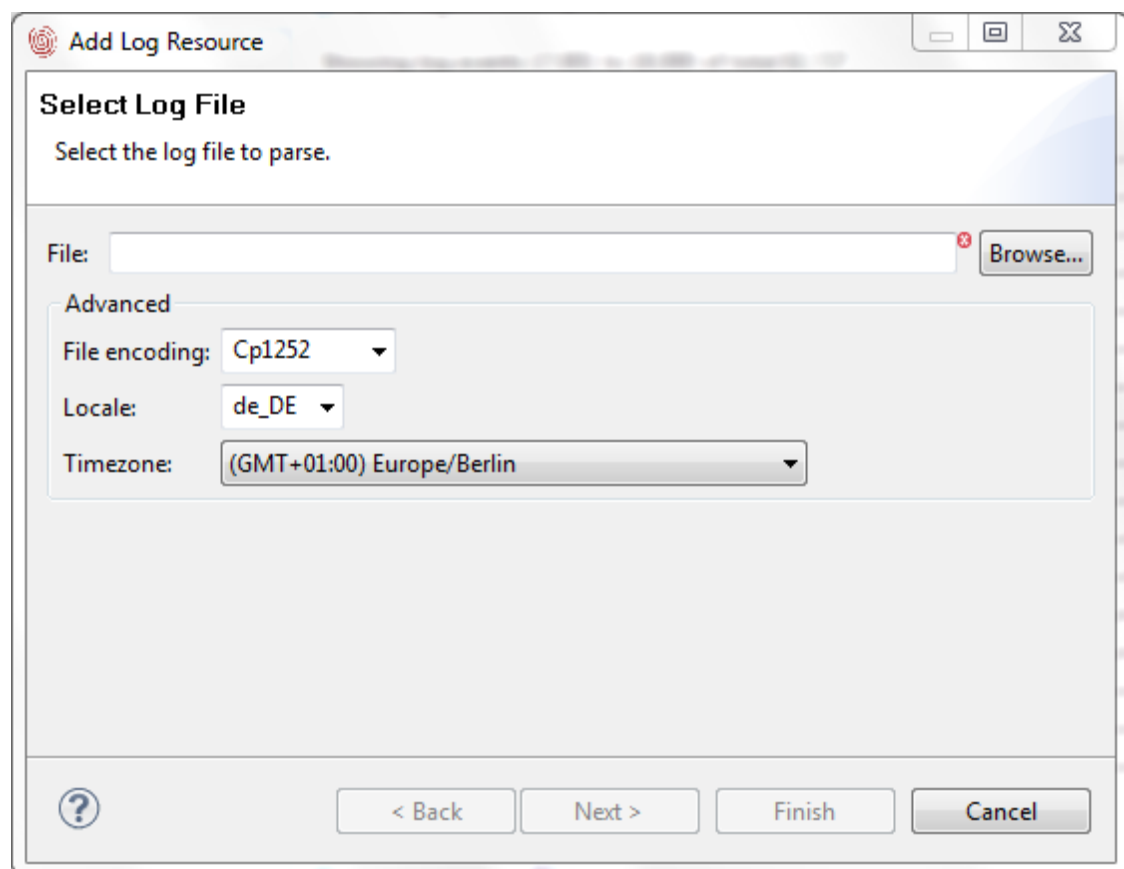
Adding a Log Resource

Before you can view a log file, you first need to create a log resource for it. To do so, go to File menu and choose Add Log Resource ().

Specifying the log file to import

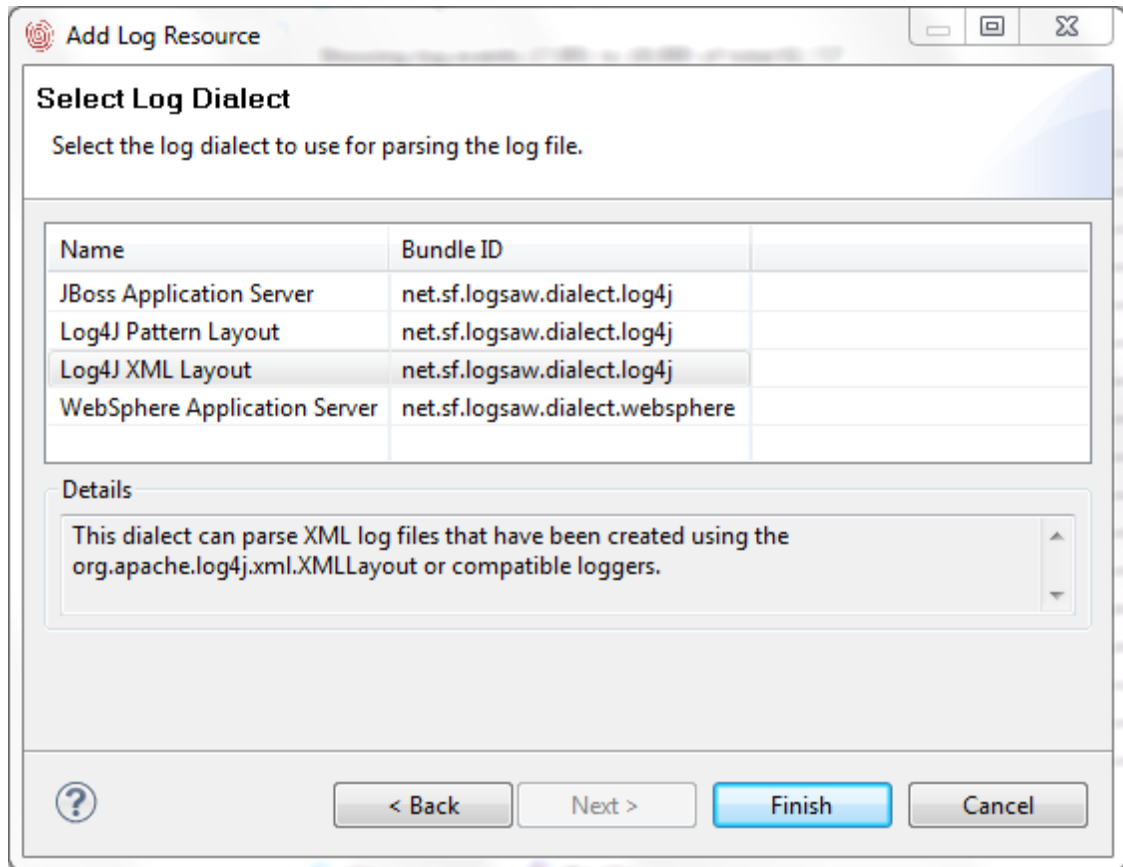
Once in the wizard, browse to the log file you wish to import and hit next. Unless you know what you are doing, leave the other settings on that page untouched and proceed.

Figure 5.1. The Select Log File wizard page




Selecting a Log Dialect

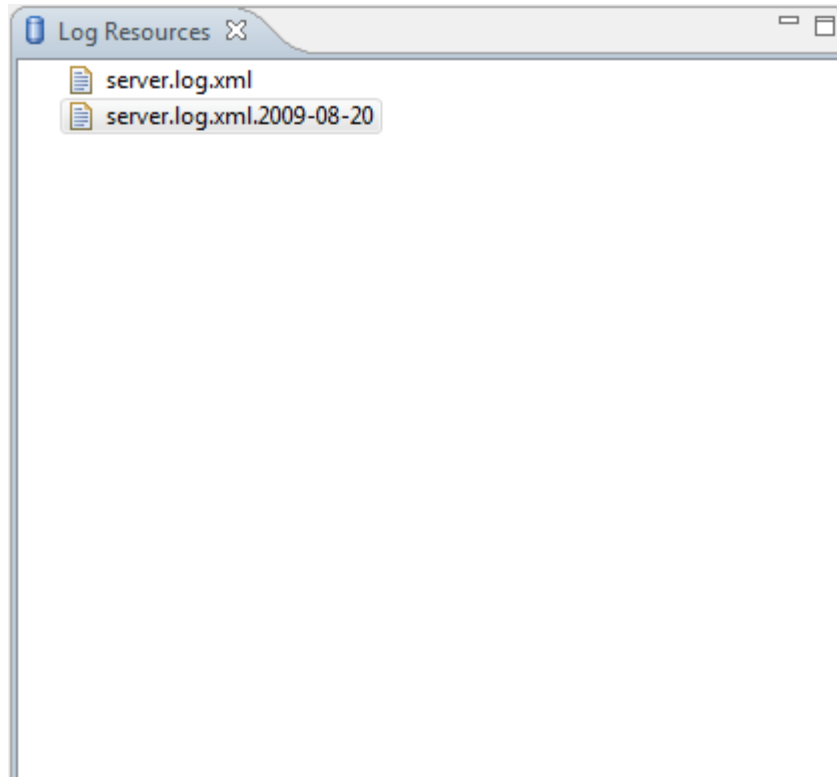
Now select the dialect that matches your log file. Configure the dialect on the following page if applicable, then hit finish.

Figure 5.2. The Select Log Dialect wizard page


Managing Log Resources

Once you have imported a log resource, it will be shown in the Log Resources view (). This view lists all the log resources currently registered with the application and is the starting point for working with them.



From here you can open a log resource for viewing by double-clicking on it. Also, it allows you to synchronize, truncate and delete log resources via the right-click popup menu.

Figure 5.3. The Log Resources view

Tip

You can add new log resources by simply dragging and dropping a supported log file into this view. The Add Log Resource wizard () will then open with the given file being preselected.

Viewing a Log Resource

Once you have double-clicked on a log resource in the the Log Resources view (), a Log Viewer () will open up for it. This viewer shows the log events supplied by a given log resource. The events are being paginated with a fixed page size of 1000 log events per page to reduce memory consumption. Also, only those events will be displayed that match the filter criteria currently set.



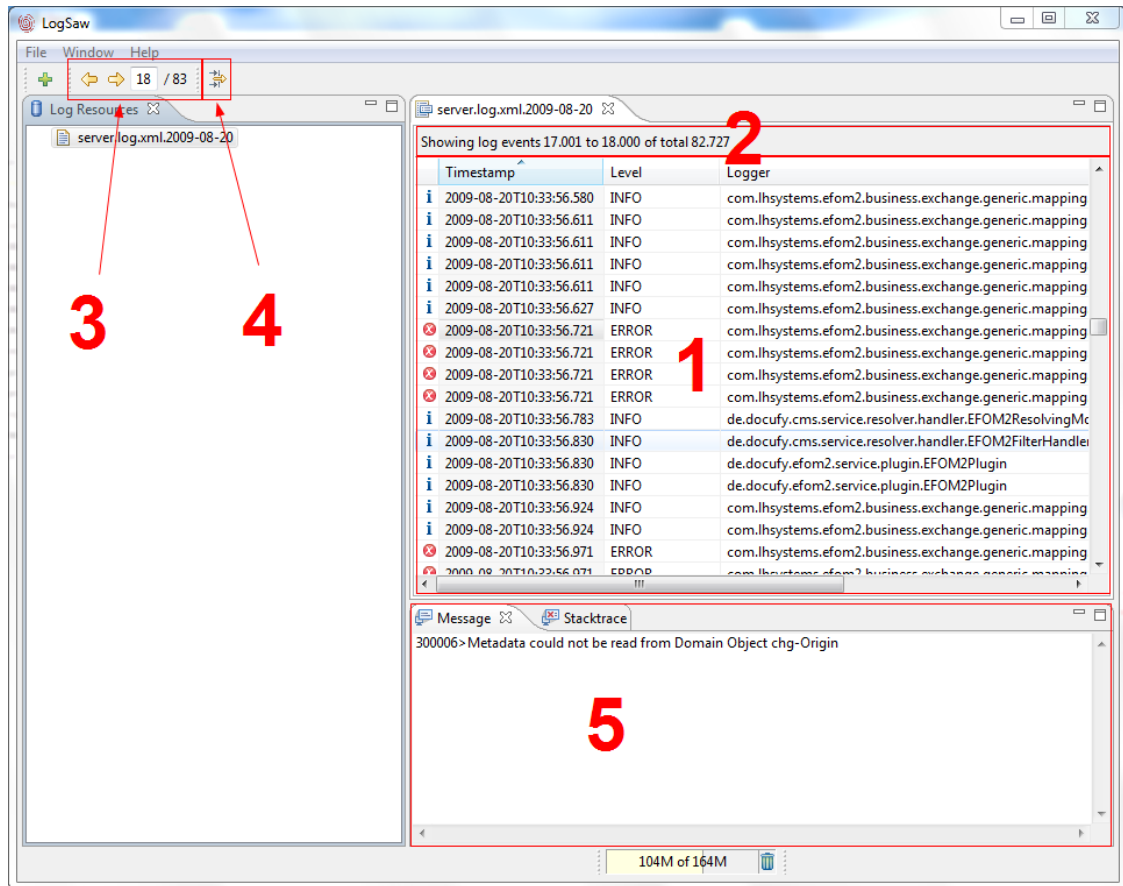
Within the table, you may use the arrow keys to navigate through the log events. For the log event currently being highlighted, you may inspect the message and stacktrace (if available) by using the Message () and Stacktrace () views respectively.

Figure 5.4. The Log Viewer



1. Table containing the log events of the page currently selected
2. Information regarding the page offset and total amount of log events available
3. Pagination controls: Previous Page, Next Page, Goto Page
4. Access to filter settings currently in use
5. Detail views for inspecting Message and Stacktrace fields of log event currently being highlighted

Tip

When working with a log viewer, you can open a second instance at any time using menu Window and then choosing New Window. Having two or more instances for the same log resource will allow you to work with multiple active filters at the same time.

Specifying which columns to show


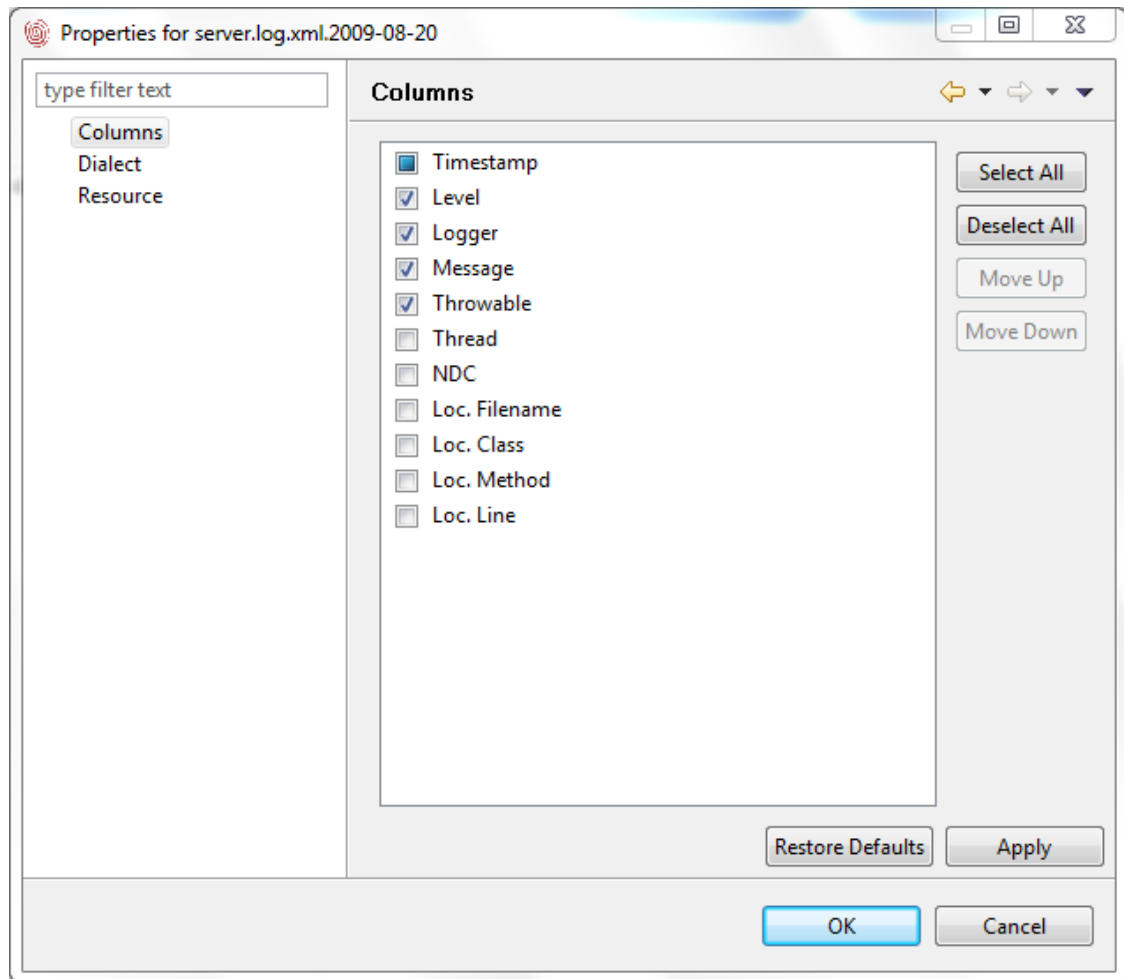


For each log resource, you can choose which columns to show in the log viewer by accessing the right-click popup menu of the respective log resource in the Log Resources view () and then choosing Properties. Navigate to the Columns page and use the checkboxes to add or remove columns from the table.

Figure 5.5. Choosing the columns to display

Using Filters

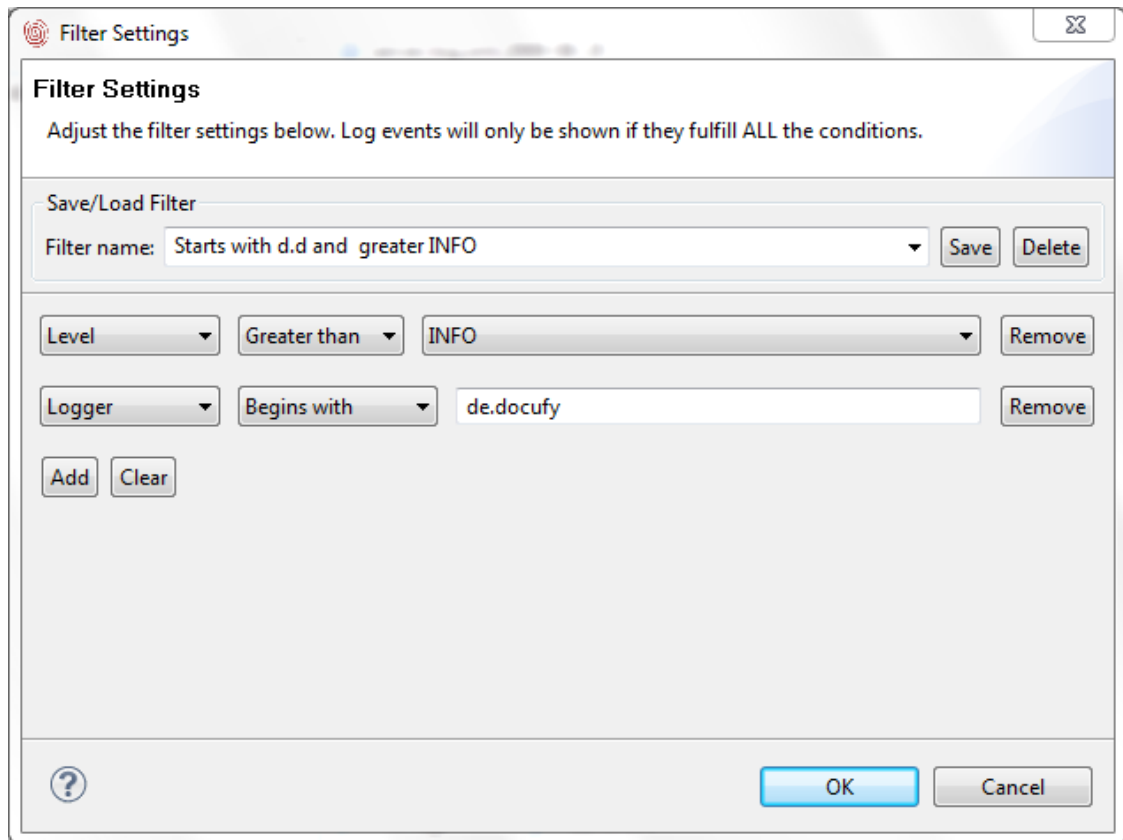
Probably the most powerful feature of this application are its filtering capabilities. To manage filters, open a Log Viewer () for the log resource you wish to apply the filter to. Then press the Filter Settings button () in the toolbar to open the filter definition dialog.

Defining a Filter

Once opened, the dialog will display all the criteria of the filter currently active in a table-like fashion. Each line represents a filter criterion. You may add additional criteria using the Add button in the lower left area of the dialog. To discard all criteria currently set, you may use the Clear button.

Depending on the field designated to a criterion, the criterion may expose a drop-down or text area to define the actual filter condition.

Once you have defined all the filter criteria to your liking, press OK to apply the filter to the log viewer currently opened.

Figure 5.6. The Filter Settings dialog**Note**

If no filter is currently active, a default criterion is conveniently added for you when the dialog is opened.

Managing Filters


You may save filters for later re-use. This is useful when you have different filter criteria, and would like to switch between them easily.


To do so, enter a name for the filter in the Filter name drop-down and then hit the Save button. Now you can load this filter at any time by choosing it from the Filter name drop-down.

To change the filters underlying criteria, simply load it then make the changes and finally press the Save button to save them.

Obviously, you can also remove a previously saved filter from the drop-down by pressing the Delete button.

Quick Filter

Another way of defining a filter is by using the quick filter function built into the Log Viewer (). To use that, open a log resource and then highlight a field of an event that you would like to base

your new filter criterion on. Now open the Quick Filter menu () and choose the menu item that best describes the filter condition. On click, the filter definition dialog will be opened with the new criterion added at the bottom.


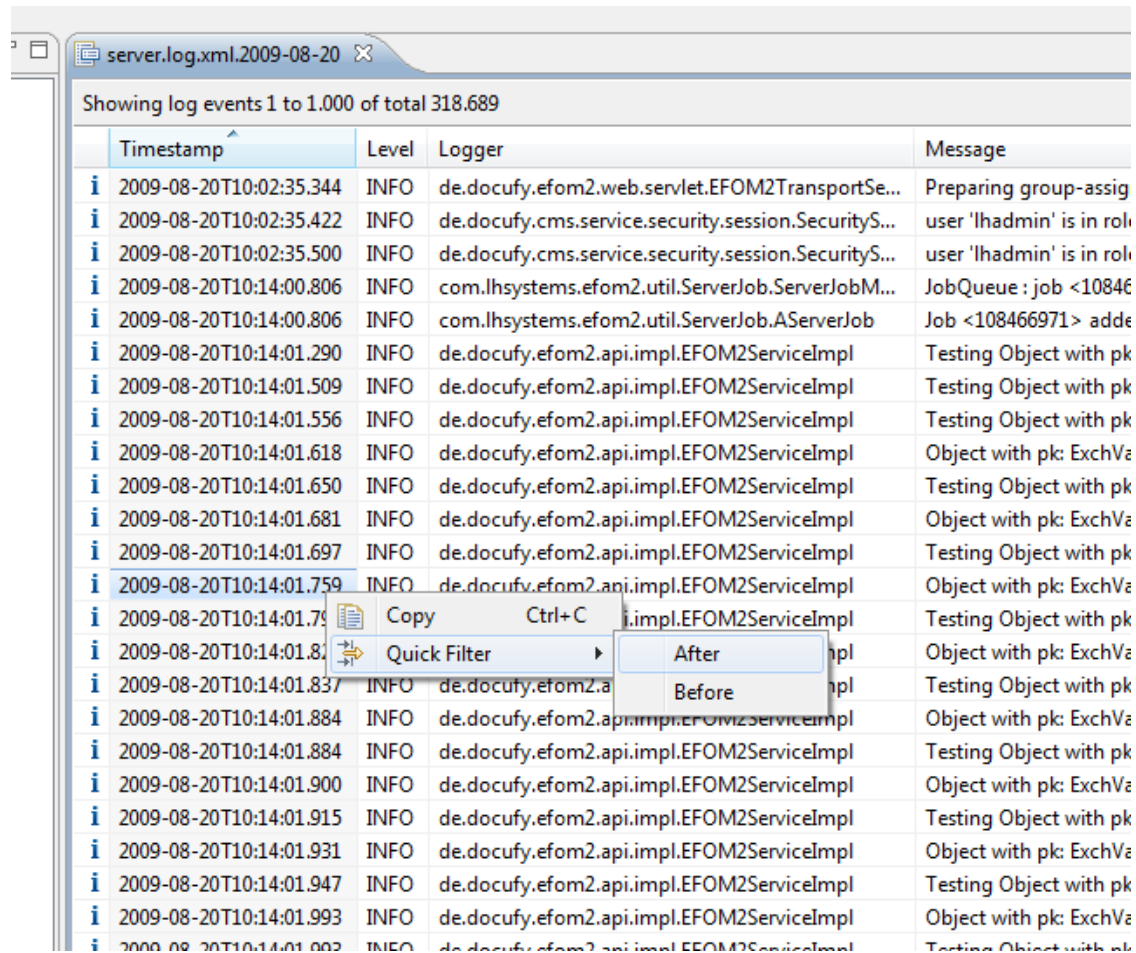
For example, if you would like to view only log events *after* a certain event, first highlight the Timestamp field of that very log event. Now access the right-click popup menu, then open the Quick Filter menu () and choose After.

Figure 5.7. The Quick Filter menu



Appendix A. Log Resource types

Simple Log Resource

The *Simple Log Resource* allows to parse the contents of a single specific file for log events. The actual parsing of the file is then performed using log dialects.

Appendix B. Log Dialect types

JBoss Application Server

This dialect can parse log files produced by the *default* logging mechanism of various versions of JBoss Application Server. It is based off the Log4J Pattern Layout Dialect, but with a fixed pattern for each JBoss version.

The fields available are somewhat limited when using this log format, as shown by the table below.

Table B.1. Fields supported

	Timestamp	Level	Logger	Thread	Message
JBoss 4.x	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
JBoss 5.x	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
JBoss 6.x	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Log4J Pattern Layout

This dialect can parse *almost* any log file that is generated using a Log4J PatternLayout [<http://logging.apache.org/log4j/1.2/apidocs/org/apache/log4j/PatternLayout.html>] format. Most common conversion characters are supported, with a few exceptions. Please see the following table regarding the conversion characters supported and known limitations.

Table B.2. Conversion character support

Conversion character	Description	Supported
c	Category / Logger	<input checked="" type="checkbox"/>
C	Fully qualified class name	<input checked="" type="checkbox"/>
d	Date	<input checked="" type="checkbox"/>
F	Filename	<input checked="" type="checkbox"/>
l	Location information	<input type="checkbox"/>
L	Line number	<input checked="" type="checkbox"/>
m	Message	<input checked="" type="checkbox"/>
M	Method name	<input checked="" type="checkbox"/>
n	Newline character	<input checked="" type="checkbox"/> (only at the end of pattern)

Conversion character	Description	Supported
p	Priority / Level	<input checked="" type="checkbox"/>
r	Time elapsed relative to startup	<input type="checkbox"/>
t	Thread name	<input checked="" type="checkbox"/>
x	NDC	<input checked="" type="checkbox"/>
X	MDC	<input type="checkbox"/>

Log4J XML Layout

This dialect can parse log files that follow the Log4J XMLLayout [<http://logging.apache.org/log4j/1.2/apidocs/org/apache/log4j/xml/XMLLayout.html>] format. The XMLLayout format is the preferred source of log files, because no Regex parsing is needed to split a log event into its fields. This reduces the risk of false mappings and also enables separation of messages and exceptions - whereas in text based formats, exceptions are contained in the message field.

WebSphere Application Server

This dialect can parse log files that have been created by IBM WebSphere Application Servers using basic format [<http://publib.boulder.ibm.com/infocenter/iserics/v5r3/topic/rzamy/50/trb/trbjvminterp.htm>]. Advanced format is currently not supported.