

Log4j Configuration[Using configuration file]

Summary

A method to use the configuration file to configure Log4j. Divided into Java's property format and XML format.

Description

Using configuration file [Java property format]

Using # properties file

Each class in the application can have their own logger or common logger.

Log4j provides the root logger that all loggers can inherit.

Contents for root logger are required on the top when creating log4j.properties.

Example

```
#log4j.rootLogger=DEBUG, A1
log4j.rootLogger=OFF, A1
log4j.appender.A1=org.apache.log4j.ConsoleAppender
log4j.appender.A1.layout=org.apache.log4j.PatternLayout
log4j.appender.A1.layout.ConversionPattern=[%d{yyyy-MM-dd HH:mm:ss}] - %m%n
```

Using configuration file [initialization using log4j.properties file]

Initialization by making log4j.properties file that includes required logging elements. Following example is the file of setting that prints the message on the console using org.apache.log4j.ConsoleAppender in info level.

Example

```
[Log4j.properties]
# A basic log4j configuration file that creates a single
console appender
# Create a single console appender that logs INFO and higher
log4j.rootLogger=INFO, stdout
# Configure the stdout appender to go to the console
log4j.appender.stdout=org.apache.log4j.ConsoleAppender
# Configure the stdout appender to use the PatternLayout
log4j.appender.stdout.layout=org.apache.log4j.PatternLayout
# Pattern to output the caller's filename and line number.
log4j.appender.stdout.layout.ConversionPattern=%5p [%t] (%F:%L) - %m%n
```

This setting uses ConsoleAppender that prints the message in one Appender, that is, System.out.

log4j.properties file should be installed in WEB-INF/classes folder and if it is multiple application environment, log4j.properties can be installed for each application.

Following log4j.properties file is based on level of message and other parameters and examples of setting to record log message in several Appenders. Print out the message in out.log file and print out the console.

Example of Use

```
[Log4j.properties]
# A sample log4j configuration file
```

```

# Create two appenders, one called stdout and the other called rolling
log4j.rootLogger=DEBUG, stdout, rolling

# Configure the stdout appender to go to the console
log4j.appender.stdout=org.apache.log4j.ConsoleAppender

# Configure the stdout appender to use the PatternLayout
log4j.appender.stdout.layout=org.apache.log4j.PatternLayout

# Pattern to output the caller's filename and line number
log4j.appender.stdout.layout.ConversionPattern=%5p [%t] (%F:%L)- %m%n

# Configure the rolling appender to be a RollingFileAppender
log4j.appender.rolling=org.apache.log4j.RollingFileAppender

# Configure the name of the log file for the rolling appender
log4j.appender.rolling.File=output.log

# Set up the maximum size of the rolling log file
log4j.appender.rolling.MaxFileSize=100KB

# Keep one backup file of the rolling appender
log4j.appender.rolling.MaxBackupIndex=1

# Configure the layout pattern and conversion pattern for the rolling appender
log4j.appender.rolling.layout=org.apache.log4j.PatternLayout
log4j.appender.rolling.layout.ConversionPattern=%d{ABSOLUTE} - %p %c - %m%n

```

Using configuration file [initialization of Log4j]

XML file is also located in WEB-INF/classes folder as Log4j.properties. And file name should be designated in log4j.configuration system property to indicate which file to load.

Following is how to set the property in Log4j.configuration file.

```
set CATALINA_OPTS=-Dlog4j.configuration=log4j.xml
```

Or, it can be designated in Java command line.

```
java -Dlog4j.configuration=log4j.xml
```

Example

```

[log4j.xml]
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE log4j:configuration SYSTEM "log4j.dtd">
<log4j:configuration
xmlns:log4j='http://jakarta.apache.org/log4j/'>
<appender name="stdout"
class="org.apache.log4j.ConsoleAppender">
<layout class="org.apache.log4j.PatternLayout">
<param name="ConversionPattern" value="%5p [%t] (%F:%L)- %m%n"/>
</layout>
</appender>
<root>
<priority value ="INFO" />
<appender-ref ref="stdout" />
</root>
</log4j:configuration>

```

For your reference, the location of log4j.xml file is not relatively designated in /WEB-INF/class and do the following to use the absolute path of file system.

```
java -Dlog4j.configuration=file:/c:/dev/env/log4j.xml
```

Reference

[Apache Logging Services Project](#)