

firepickdelta

Configuring log4j.properties

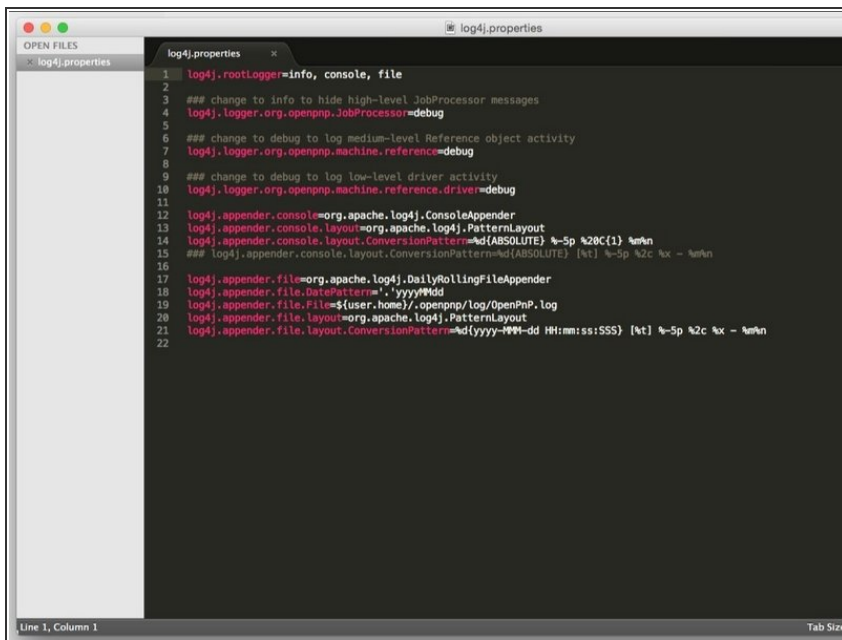
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Step 1 — Introduction



- In this guide, we'll be setting up the debug logging configuration for OpenPnP.
- ❗ OpenPnP uses a framework called [log4j](#) that does the heavy lifting of logging debug data.
- ❗ The configuration file that contains which bits of information are logged, is contained in **log4j.properties**, which is located in the .openpnp directory.

Step 2 — Open This File in a Decent Text Editor



```
log4j.properties
1 log4j.rootLogger=info, console, file
2
3 ### change to info to hide high-level JobProcessor messages
4 log4j.logger.org.openpnp.JobProcessor=debug
5
6 ### change to debug to log medium-level Reference object activity
7 log4j.logger.org.openpnp.machine.reference=debug
8
9 ### change to debug to log low-level driver activity
10 log4j.logger.org.openpnp.machine.reference.driver=debug
11
12 log4j.appender.console=org.apache.log4j.ConsoleAppender
13 log4j.appender.console.layout=org.apache.log4j.PatternLayout
14 log4j.appender.console.layout.ConversionPattern=%d{ABSOLUTE} %-5p %20C{1} %n
15 ### log4j.appender.console.layout.ConversionPattern=%d{ABSOLUTE} [%t] %-5p %20c %x - %n
16
17 log4j.appender.file=org.apache.log4j.DailyRollingFileAppender
18 log4j.appender.file.DatePattern='yyyyMMdd'
19 log4j.appender.file.File=${user.home}/.openpnp/log/OpenPnP.log
20 log4j.appender.file.layout=org.apache.log4j.PatternLayout
21 log4j.appender.file.layout.ConversionPattern=%d{yyyy-MM-dd HH:mm:ss:SSS} [%t] %-5p %20c %x - %n
22
```

- Open the file in a decent text editor.
- We recommend [Sublime Text 2](#).

Step 3 — Change the Debug Levels



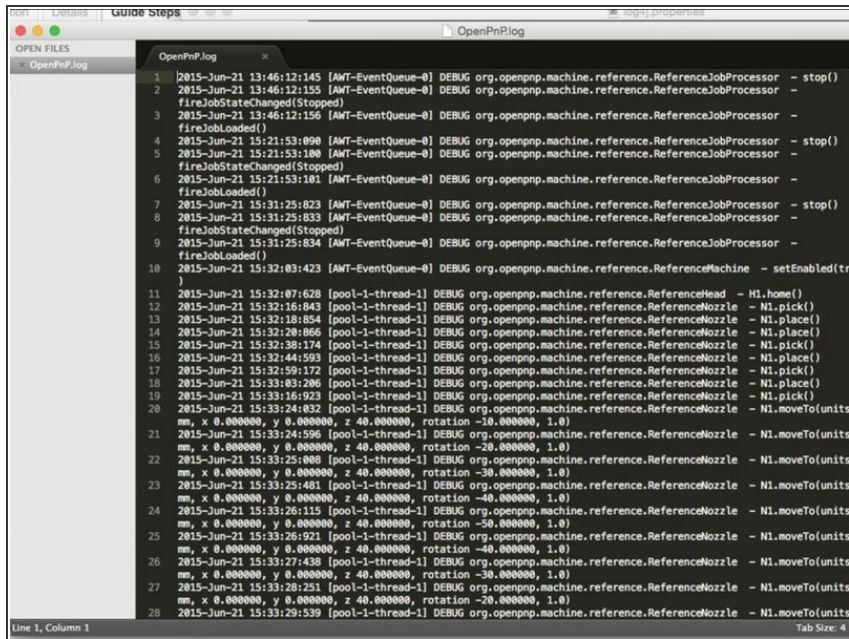
- A lot of stuff can be ignored in this file for now, but we will change a few things from **info** level to **debug** level. This will log more stuff to the console that can be helpful for debug logging.
- Turn on driver debug logging by finding the line that says **log4j.logger.org.openpnp.machine.reference.driver** and change the **info** string to **debug**.

Step 4 — Run OpenPnP



- At this point, you can run OpenPnP and it will log some data to **.openpnp/log**

Step 5 — Read the Log(s)



```
1 2015-Jun-21 13:46:12:145 [AWT-EventQueue-0] DEBUG org.opennpnp.machine.reference.ReferenceJobProcessor - stop()
2 2015-Jun-21 13:46:12:155 [AWT-EventQueue-0] DEBUG org.opennpnp.machine.reference.ReferenceJobProcessor -
  fireJobStateChanged(Stopped)
3 2015-Jun-21 13:46:12:156 [AWT-EventQueue-0] DEBUG org.opennpnp.machine.reference.ReferenceJobProcessor -
  fireJobLoaded()
4 2015-Jun-21 15:21:53:090 [AWT-EventQueue-0] DEBUG org.opennpnp.machine.reference.ReferenceJobProcessor - stop()
5 2015-Jun-21 15:21:53:100 [AWT-EventQueue-0] DEBUG org.opennpnp.machine.reference.ReferenceJobProcessor -
  fireJobStateChanged(Stopped)
6 2015-Jun-21 15:21:53:101 [AWT-EventQueue-0] DEBUG org.opennpnp.machine.reference.ReferenceJobProcessor -
  fireJobLoaded()
7 2015-Jun-21 15:31:25:823 [AWT-EventQueue-0] DEBUG org.opennpnp.machine.reference.ReferenceJobProcessor - stop()
8 2015-Jun-21 15:31:25:833 [AWT-EventQueue-0] DEBUG org.opennpnp.machine.reference.ReferenceJobProcessor -
  fireJobStateChanged(Stopped)
9 2015-Jun-21 15:31:25:834 [AWT-EventQueue-0] DEBUG org.opennpnp.machine.reference.ReferenceJobProcessor -
  fireJobLoaded()
10 2015-Jun-21 15:32:03:423 [AWT-EventQueue-0] DEBUG org.opennpnp.machine.reference.ReferenceMachine - setEnabled(tr
  ue)
11 2015-Jun-21 15:32:07:620 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceHead - H1.home()
12 2015-Jun-21 15:32:16:843 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.pick()
13 2015-Jun-21 15:32:18:854 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.place()
14 2015-Jun-21 15:32:28:866 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.place()
15 2015-Jun-21 15:32:38:174 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.pick()
16 2015-Jun-21 15:32:44:593 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.place()
17 2015-Jun-21 15:32:59:172 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.pick()
18 2015-Jun-21 15:33:03:206 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.place()
19 2015-Jun-21 15:33:16:923 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.pick()
20 2015-Jun-21 15:33:24:032 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.moveTo(units
  mm, x 0.000000, y 0.000000, z 40.000000, rotation -10.000000, 1.0)
21 2015-Jun-21 15:33:24:506 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.moveTo(units
  mm, x 0.000000, y 0.000000, z 40.000000, rotation -20.000000, 1.0)
22 2015-Jun-21 15:33:25:008 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.moveTo(units
  mm, x 0.000000, y 0.000000, z 40.000000, rotation -30.000000, 1.0)
23 2015-Jun-21 15:33:25:481 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.moveTo(units
  mm, x 0.000000, y 0.000000, z 40.000000, rotation -40.000000, 1.0)
24 2015-Jun-21 15:33:26:115 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.moveTo(units
  mm, x 0.000000, y 0.000000, z 40.000000, rotation -50.000000, 1.0)
25 2015-Jun-21 15:33:26:921 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.moveTo(units
  mm, x 0.000000, y 0.000000, z 40.000000, rotation -60.000000, 1.0)
26 2015-Jun-21 15:33:27:430 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.moveTo(units
  mm, x 0.000000, y 0.000000, z 40.000000, rotation -30.000000, 1.0)
27 2015-Jun-21 15:33:28:251 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.moveTo(units
  mm, x 0.000000, y 0.000000, z 40.000000, rotation -20.000000, 1.0)
28 2015-Jun-21 15:33:29:539 [pool-1-thread-1] DEBUG org.opennpnp.machine.reference.ReferenceNozzle - N1.moveTo(units
```

- Navigate to the .opennpnp/log directory, and locate the latest log (it's helpful to sort by time).
- Load it in a text editor.
- You will see that log4j has logged debug-level information out to this file. This information will come in handy for troubleshooting purposes.