Cloud Service Automation

Integration with ArcSight Logger

Software version: 4.80

Document release date: January 2017

Software release date: January 2017

Contents

Introduction

This white paper describes the integration of ArcSight Logger with HPE Cloud Service Automation (CSA). Because CSA interacts with multiple datacenter management and automation products, each product must be configured to complete the integration. Step-by-step instructions for each product are provided to easily guide you through the configuration. As a result, you will be able to view all the log events generated by different products on a single dashboard in ArcSight Logger.

HPE Operations Orchestration, HPE SiteScope, HPE Universal CMDB, and Matrix Operating Environment are integrated with CSA. Each of these products has its own logging mechanism. To troubleshoot in such a complex environment, you would have to log in to each server and check the respective product log file, which is a tedious and time consuming process. Hence, there is a need for an integrated view of all the product logs. This can be achieved by integrating CSA with ArcSight Logger. The log events from each product can be sent and stored in ArcSight Logger, facilitating search and further analysis. Log events across products can be displayed in a single view, which significantly reduces troubleshooting effort.

This implementation is designed for an audience that has working knowledge and hands-on experience with CSA, Matrix Operating Environment, SiteScope, Operations Orchestration, and Universal CMDB. You must understand the core concepts and have demonstrated proficiency with these products discussed. Others may benefit from this document, but many background details found in other documentation are omitted. For more information, click here.

About ArcSight Logger

ArcSight Logger is the first Universal Log Management solution that unifies searching, reporting, alerting, and analysis across any type of enterprise log data, making it unique in its ability to collect, analyze, and store massive amounts of data generated by modern networks. It supports multiple deployment options and can be deployed as an appliance and as software.

About Log4j2 Appender

Log4j2 Appender is a tool that is implemented as a plug-in for log4j2 that integrates the ArcSight Logger with any product that uses the Log4j2 utility for logging. Log4j2 Appender must exist on the classpath and is automatically picked up by the logging infrastructure. Integration is done by altering the `log4j2.xml` file of the specific product rather than modifying the application code. Specific changes of the configuration are described in specific sections of this document. The Log4j2 utility sends the product logs to ArcSight Logger. ArcSight Logger indexes and performs search analysis on these log events.

About Log4j Appender

Log4j Appender is a tool that integrates the ArcSight Logger with any product that uses the Log4j utility for logging. Integration is done by altering the `log4j.properties` file of the specific product rather than modifying the application code. The Log4j utility forwards the product logs to the Log4j Appender, which in turn sends it to ArcSight Logger. ArcSight Logger indexes and performs search analysis on these log events.

Assumptions

This implementation requires that the CloudSystem Enterprise environment is installed, configured, and functioning correctly. Each component must be verified to work alone and as an integrated CloudSystem Enterprise environment. The major components include the following:

- CSA
- Operations Orchestration (OO)
- SiteScope
- Identity Management Component (IdM)
- Matrix Operating Environment (Matrix OE)
- Universal CMDB

For links to the documents that provide information for installing, configuring, and verifying these components and their interoperability, click here. Versions can be found in the *CSA Support Matrix*.

Limitations of the free version

ArcSight Logger is available as free downloadable software that brings true enterprise-class log management functionality to everyone. You can download, install, and start getting instant value out of their logs within minutes. Using the free version, you can collect up to 750 MB of log data per day and store up to 500 GB of uncompressed logs (assuming average compression 10:1). The free version also comes with 90 days of phone and email support, followed by access to the ArcSight Logger user community.

As shown below, the downloadable version of ArcSight Logger provides access to all enterprise features for a full 12 months.

In order not to exceed the daily limit of the logger, it is highly recommended that you adhere to the default log levels provided in the log4.properties file for all the products. You can contact HPE Support for further assistance with changing log levels.

Installation and configuration

The major steps required to integrate ArcSight Logger with CSA include the following:

- Installing and Configuring ArcSight Logger
- Configuring CSA
- Configuring SiteScope
- Configuring Operations Orchestration
- Configuring Universal CMDB
- Configuring the Identity Management Service (IdM)
- Configuring Matrix operating environment
- Configuring Helion OpenStack®
- Searching for events
- Using regular expressions

Installing and configuring ArcSight Logger

The free version of ArcSight Logger is included on the CSA product media. It is also available for download from the following URL:

http://www8.hp.com/us/en/software-solutions/arcsight-logger-log-management/

ArcSight logger is supported on the following platforms:

- Red Hat Enterprise Linux, version 6.5, 64-bit
- Oracle Enterprise Linux, version 5.4, 64-bit
- CentOS, version 6.5, 64-bit

Prerequisites for ArcSight logger are:

- CPU: 1 or 2 x Intel Xeon Quad Core or equivalent
- Memory: 4–12 GB
- Disk Space: 100–120 GB

Follow the instructions provided in **Section 2: Installing the Software Version of Logger** in the *ArcSight Logger Administrator's Guide*, which is available in the CSA media.

Configuring CSA

To configure CSA, complete the steps in the following sub-procedures in the order presented. Full reference for log4j2 configuration can be found here: http://logging.apache.org/log4j/2.x/manual/configuration.html

See Appendix A for an example `log4j2.xml` file.

Basic CSA ArcSight Logger Configuration

To configure CSA ArcSight Logger, complete the following steps:

1. Log in to the CSA server.

2. Open `log4j2.xml`, which is in `C:\Program Files\Hewlett-Packard\CSA\jboss-as\standalone\deployments\csa.war\WEB-INF\classes`.

3. By default, the log level is set to **ERROR**, so only error logs will be generated and transferred to ArcSight Logger. If detailed logs are required, then change the log level to **INFO** for root logger as follows:

```
<Loggers>
    <Logger name="name1">
        <filter  ... />
    </Logger>
    ...
    <Root level="INFO">
        <AppenderRef ref="arcsight_core"/>
    </Root>
</Loggers>
```

4. Configure one or more ArcSight appenders as follows:

```
<Appenders>
    ...
<ArcSightAppender name="arcsight_core" hostName="192.x.x.x"
hostPort="515" transportType="SYSLOG" eventName="CORE"
deviceVendor="HP" deviceProduct="CSA" deviceVersion="4.50"
useCefHeader="true">
<PatternLayout pattern="%d [%t] %-5p %c %x - %m%n"/>
</ArcSightAppender>
</Appenders>
```

5. In `log4j2.xml`, change the following properties to match the IP address of the ArcSight Logger and the UDP port on the ArcSight Logger portal:

```
hostName=192.x.x.x
hostPort=515
<ArcSightAppender name="arcsight_core" hostName="192.x.x.x"
hostPort="515" transportType="SYSLOG" eventName="CORE"
deviceVendor="HP" deviceProduct="CSA" deviceVersion="4.50"
useCefHeader="true">
 <PatternLayout pattern="%d [%t] %-5p %c %x - %m%n"/>
 </ArcSightAppender>
</Appenders>
```

6. Configure one or more loggers that use ArcSight appenders as follows:

```
<Loggers>
    ...
    <Logger name="com.hp.csa.service.export"
            level="error">
        <AppenderRef ref="arcsight_core"/>
    </Logger>
</Loggers>
```

The logs sent to `C:\Program Files\Hewlett-Packard\CSA\jboss-as\standalone\log\csa.log` by CSA will now be transferred to ArcSight Logger.

7. Open `csa.properties` from `C:\Program Files\Hewlett-Packard\CSA\jboss-as\standalone\deployment\csa.war\WEB-INF\classes`.

8. In `csa.properties`, change the line `loggerEnabled=false` to `loggerEnabled=true`.

9. Restart the CSA service from the service manager.

10. Verify that the ArcSight Logger has been integrated correctly with CSA by doing the following:

11. Open the logger portal URL: `https://<loggerHostname>:<logger port>/`.

12. In the **Summary** tab, check that the IP address of the CSA server appears in the **Devices** tab.

13. Check that the CSA IP address is in the `Devices` tab.

14. Check that the events are shown in the search screen.

Integration of CSA Core Logs with the ArcSight Logger

To integrate CSA Core logs with the ArcSight Logger, complete the following steps:

1. Under `<Appenders>`, add the following content to the `log4j2.xml` file:

```
<Appenders>
...
  <ArcSightAppender name="arcsight_core" hostName="192.x.x.x"
hostPort="515" transportType="SYSLOG" eventName="CORE"
deviceVendor="HP" deviceProduct="CSA" deviceVersion="4.50"
useCefHeader="true">
  <PatternLayout pattern="%d [%t] %-5p %c %x - %m%n"/>
  </ArcSightAppender>
</Appenders>
```

2. Modify the following properties to match the IP address of the ArcSight Logger and the UDP port on the ArcSight Logger portal:

```
hostName=192.x.x.x
hostPort=515
```

3. Under `<Loggers>`, add the following content to the `log4j2.xml` file:

```
<Loggers>
 ...
 <Logger name="com.hp.csa.service" level="debug">
  <AppenderRef ref="arcsight_core"/>
 </Logger>
</Loggers>
```

Add as much of the section for loggers as you need.

Integrate CSA Marketplace Portal Logs with the ArcSight Logger

To integrate CSA Marketplace Portal logs with the ArcSight Logger, complete the following steps:

1. Under `<Appenders>`, add the following content to the `log4j2.xml` file:

```
<Appenders>
    ...
    <ArcSightAppender name="arcsight_mpp" hostName="192.x.x.x"
hostPort="515" transportType="SYSLOG" eventName="MPP"
deviceVendor="HP" deviceProduct="CSA" deviceVersion="4.50"
useCefHeader="true">
        <PatternLayout pattern="%d [%t] %-5p %c %x - %m%n"/>
    </ArcSightAppender>
</Appenders>
```

2. Modify the following properties to match the IP address of the ArcSight Logger and the UDP port on the ArcSight Logger portal:

```
hostName=192.x.x.x
hostPort=515
```

3. Under `<Loggers>`, add the following content to the `log4j2.xml` file:

```
<Loggers>
...
 <Logger name="com.hp.ccue.mpp" level="debug">
```

```
  <AppenderRef ref="arcsight_mpp"/>
  </Logger>
</Loggers>
```

Add as much of the section for loggers as you need.

Integrate CSA Elastic Search Logs with the ArcSight Logger

To integrate CSA Elastic Search logs with the ArcSight Logger, complete the following steps:

1. Under `<Appenders>`, add following content to the `log4j2.xml` file:

```
<Appenders>
    ...
    <ArcSightAppender name="arcsight_elastic" hostName="192.x.x.x" hostPort="515"
transportType="SYSLOG" eventName="ELASTIC"
deviceVendor="HP" deviceProduct="CSA" deviceVersion="4.50"
useCefHeader="true">
        <PatternLayout pattern="%d [%t] %-5p %c %x - %m%n"/>
    </ArcSightAppender>
</Appenders>
```

2. Modify the following properties to match the IP address of the ArcSight Logger and the UDP port on the ArcSight Logger portal:

```
hostName=192.x.x.x
hostPort=515
```

3. Under `<Loggers>`, add the following content to the `log4j2.xml` file:

```
<Loggers>
...
    <Logger level="debug"
name="com.hp.csa.service.common.BasicElasticSearchServiceImpl" >
        <AppenderRef ref="arcsight_elastic"/>
    </Logger>
</Loggers>
```

Add as much of the section for loggers as you need.

Configuring SiteScope

To configure SiteScope, complete the following steps:

1. Log in to the SiteScope server.

2. Copy the jar file named `arcsight-cef-library-1.0.0.release.8-1.0.0.8.jar`, which is available in the CSA media, to the C:\SiteScope\WEB-INF\lib directory on the SiteScope server.

3. Open `log4j.properties` from `C:\SiteScope\conf\core\Tools\log4j\PlainJava\log4j.properties`.

4. Replace the contents of `log4.properties` with the contents provided in .

5. In `log4j.properties`, change the following properties to match the IP address of the ArcSight Logger and the UDP port on the ArcSight Logger portal:

```
log4j.appender.cef1.hostName=192.x.x.x
log4j.appender.cef1.port=515
```

6. Restart the SiteScope service from the service manager.

    The logs that are sent to `C:\Sitescope\logs\RunMonitor.log` and `C:\Sitescope\logs\error.log` by SiteScope are also sent to the ArcSight Logger.

7. Verify that the ArcSight Logger has been integrated correctly with SiteScope:

8. Open the logger portal at `https://<loggerHostname>:<logger port>/`.

9. Select the **Summary** tab and check that the IP address of the SiteScope server appears in the **Devices** tab.

10. Click the SiteScope server IP address in the **Devices** tab.

11. Check that the events are shown in the search list.

Configuring Operations Orchestration

Configure the following versions of Operations Orchestration in the order shown:

- Configuring Operations Orchestration (pre-10.x versions)
- Configuring Operations Orchestration (version 10.x)

Configuring Operations Orchestration (pre-10.x versions)

To configure Operations Orchestration versions prior to version 10.x, complete the following steps:

1. Copy the jar file named `arcsight-cef-library-1.0.0.release.8-1.0.0.8.jar`, which is available in the CSA media, to the following directories on the Operations Orchestration server:

   ```
   C:\Program Files\Hewlett-Packard\Operations Orchestration\RAS\Java\Default\webapp\WEB-
   INF\lib
   C:\Program Files\Hewlett-Packard\Operations Orchestration\jetty\lib
   ```

2. Copy `log4j-1.2.8.jar` from `C:\Program Files\Hewlett-Packard\Operations Orchestration\RAS\Java\Default\webapp\WEB-INF\lib to C:\Program Files\Hewlett-Packard\Operations Orchestration\jetty\lib`.

3. Go to the following locations:

   ```
   C:\Program Files\Hewlett-Packard\Operations Orchestration\RAS\Java\Default\webapp\conf
   C:\Program Files\Hewlett-Packard\Operations Orchestration\jetty\resources
   ```

4. Replace the contents of the `log4j.properties` files with the content provided in Appendix C for the corresponding Operations Orchestration version.

5. In the `log4j.properties` files, change the following properties to match the IP address of the ArcSight Logger and the UDP port on the ArcSight Logger portal:

   ```
   log4j.appender.cef1.hostName=192.x.x.x
   log4j.appender.cef1.port=515
   ```

6. Restart the RSCentral and RSJRAS services from the service manager.

   The logs sent to `${iconclude_home}\Central\logs\CentralWrapper.log`
   and `${iconclude_home}\RAS\Java\Default\webapp\logs\iConcludeJRAS.log` by
   Operations Orchestration are also sent to ArcSight Logger.

7. Verify that ArcSight Logger has been integrated correctly with Operations Orchestration:

8. Open the logger portal at `https://<loggerHostname>:<logger port>/`.

9. Select the `Summary` tab and check that the IP address of the Operations Orchestration server appears in the `Devices` tab.

10. Click the Operations Orchestration server IP address in the **Devices** tab.

    Check that the events are shown in the search screen.

Configuring Operations Orchestration (version 10.x)

To configure Operations Orchestration version 10.x, complete the following steps:

1. Copy the jar file named `arcsight-cef-library-1.0.0.release.8-1.0.0.8.jar`, which is available in the CSA media, to the following directories on the Operations Orchestration server:

   ```
   C:\Program Files\Hewlett-Packard\Operations Orchestration\Central\lib
   C:\Program Files\Hewlett-Packard\Operations Orchestration\Central\tomcat\lib
   ```

2. Add following content to the `log4j.properties` file that is in the `C:\Program Files\Hewlett-Packard\Operations Orchestration\Central\conf` directory:

   ```
   #Update Start
   ```

```
log4j.appender.arcsightAppender=com.hp.esp.arcsight.cef.appender.Log4jAppender
log4j.appender.arcsightAppender.deviceVendor=HP
log4j.appender.arcsightAppender.deviceProduct=CSA
log4j.appender.arcsightAppender.deviceVersion=4.5
log4j.appender.arcsightAppender.transportType=SYSLOG
log4j.appender.arcsightAppender.hostName=192.x.x.x
log4j.appender.arcsightAppender.port=515
log4j.appender.arcsightAppender.layout=org.apache.log4j.PatternLayout
log4j.appender.arcsightAppender.layout.ConversionPattern=%d [%t] %-5p %c %x - %m%n
log4j.appender.arcsightAppender.eventName=OO_EVENT
log4j.appender.arcsightAppender.useCefHeader=true
#Update End
```

3. Modify the following properties to match the IP address of the ArcSight Logger and the UDP port on the ArcSight Logger portal:

```
log4j.appender.ArcsightAppender.hostName=192.x.x.x
log4j.appender.ArcsightAppender.port=515
```

4. Uncomment as necessary and append `arcsightAppender` to the end of the existing `log4j.rootlogger` , `log4j.logger.com.hp.oo`, and `log4j.logger.com.hp.oo.execution` properties in the `log4j.properties` file so that they appear as follows.

```
#Execution
log4j.logger.com.hp.oo.internal.sdk.execution=${execution.log.level},
   execution.appender, arcsightAppender
log4j.additivity.com.hp.oo.internal.sdk.execution=false
log4j.logger.com.hp.oo.maven=${execution.log.level}, execution.appender,
arcsightAppender
log4j.additivity.com.hp.oo.maven=false
log4j.rootLogger=WARN, general.appender, arcsightAppender
log4j.logger.com.hp.oo= server.appender, arcsightAppender
log4j.logger.com.hp.oo.execution=execution.appender, arcsightAppender
```

Configuring Universal CMDB

To configure Universal CMDB, complete the following steps:

1. Copy the jar file named `arcsight-cef-library-1.0.0.release.8-1.0.0.8.jar`, which is available in the CSA media, to the `C:\hp\UCMDB\UCMDBServer\lib` directory on the Operations Orchestration server.

2. Open the `log4j.properties` named as `root.properties` file from `C:\hp\UCMDB\UCMDBServer\conf\log\root\root.properties`.

3. Replace the contents of `root.properties` with the contents provided in Appendix D.

4. In `root.properties`, change the following properties to match the IP address of the ArcSight Logger and the UDP port on the ArcSight Logger portal:

```
log4j.appender.cef1.hostName=192.x.x.x
log4j.appender.cef1.port=515
```

5. Restart the UCMDB Server, UCMDB_Probe_DB, and UCMDB Probe services from the service manager.

   The logs sent to `C:\hp\UCMDB\UCMDBServer\runtime\log\error.log` by Universal CMDB are also sent to the ArcSight Logger.

6. Verify that the ArcSight Logger has been integrated correctly with Universal CMDB:

7. Open the logger portal at `https://<loggerHostname>:<logger port>/`.

8. Select the `Summary` tab and check that the IP address of the Universal CMDB server appears in the **Devices** tab.

9. Click the UCMDB server IP address in the `Devices` tab.

   Check that the events are shown in the search screen.

Configuring the Identity Management Service (IdM)

Integrating the IdM logs with the ArcSight Logger

To integrate the IdM logs with the ArcSight Logger, complete the following steps:

1. Copy the jar file named `arcsight-cef-library-1.0.0.release.8-1.0.0.8.jar`, which is available in the CSA media, to the following directory on the CSA server:

   `C:\Program Files\Hewlett-Packard\CSA\jboss-as\standalone\deployments\idm-service.war\WEB-INF\lib`

2. Add following content to the `log4j.properties` file that is in the `C:\Program Files\Hewlett-Packard\CSA\jboss-as\standalone\deployments\idm-service.war\WEB-INF\classes` directory:

```
#Update Start
log4j.appender.arcsightAppender=com.hp.esp.arcsight.cef.appender.Log4jAppender
log4j.appender.arcsightAppender.deviceVendor=HP
log4j.appender.arcsightAppender.deviceProduct=CSA
log4j.appender.arcsightAppender.deviceVersion=4.5
log4j.appender.arcsightAppender.transportType=SYSLOG
log4j.appender.arcsightAppender.hostName=192.x.x.x
log4j.appender.arcsightAppender.port=515
log4j.appender.arcsightAppender.layout=org.apache.log4j.PatternLayout
log4j.appender.arcsightAppender.layout.ConversionPattern=%d [%t] %-5p %c %x - %m%n
log4j.appender.arcsightAppender.eventName=IDM
log4j.appender.arcsightAppender.useCefHeader=true
#Update End
```

3. Modify the following properties to match the IP address of the ArcSight Logger and the UDP port on the ArcSight Logger portal:

   ```
   hostName=192.x.x.x
   hostPort=515
   ```

4. Append `",arcsightAppender"` to the end of the existing `log4j.rootlogger` property in the `log4j.properties` file.

Configuring idm-service.war in CSA

Unlike the `csa.war` configuration, which is using `log4j2.xml`, the `idm-service.war` configuration is using `log4j.properties`.

By default, the `idm-service.war` directs log entries to the `C:\Program Files\Hewlett-Packard\CSA\jboss-as\standalone\log\hpcloud-idm-service.log` file.

To send log entries to ArcSight, complete the following steps:

1. Copy the jar file named `arcsight-cef-library-1.0.0.release.8-1.0.0.8.jar`, which is available in the CSA media, to the following directory:
   `C:\Program Files\Hewlett-Packard\CSA\jboss-as\standalone\deployments\idm-service.war\WEB-INF\lib`

2. Open the `log4j.properties` from `C:\Program Files\Hewlett-Packard\CSA\jboss-as\standalone\deployments\idm-service.war\WEB-INF\classes\.`

3. Add the following lines, changing the following properties to match the IP address of the ArcSight Logger and the UDP port of the ArcSight Logger portal:

```
#set the CEF log4j appender ...
log4j.appender.cef1=com.hp.esp.arcsight.cef.appender.Log4jAppender
log4j.appender.cef1.deviceVendor=HP
log4j.appender.cef1.deviceProduct=CSA
log4j.appender.cef1.deviceVersion=4.5
log4j.appender.cef1.transportType=SYSLOG
log4j.appender.cef1.hostName=192.x.x.x
log4j.appender.cef1.port=515
log4j.appender.cef1.layout=org.apache.log4j.PatternLayout
log4j.appender.cef1.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n
log4j.appender.cef1.useCefHeader=true
```

```
log4j.appender.cef1.eventName=IDM Event
```

4. Modify the following line to add the `cef1` appender to the rootLogger:

   Modify: `log4j.rootLogger=INFO, consoleAppender, jbossAppender, tomcatAppender`

   To: `log4j.rootLogger=INFO, consoleAppender, jbossAppender, tomcatAppender, cef1`

   See Appendix E for an example log4j.properties file for the `idm-service.war` file.

5. Restart the CSA service from the service manager.

6. Verify that **IDM Event** messages are now appearing in the ArcSight logger, by doing the following:

   a. Log into either the Cloud Service Management Console or the Marketplace Portal.

   b. View the log entries in the ArcSight portal for the associated device, and verify that entries with a name of **IDM Event** are appearing.

Configuring Matrix operating environment (Matrix OE)

To configure Matrix OE, complete the following steps:

1. Copy the jar file named `arcsight-cef-library-1.0.0.release.8-1.0.0.8.jar`, which available in the CSA media) to the `C:\Program Files\HP\Matrix infrastructure orchestration\lib` directory on the Matrix OE server.

2. Open `log4j.properties` from `C:\Program Files\HP\Matrix infrastructure orchestration\conf`.

3. Replace the contents of `log4j.properties` with the content provided in Appendix F.

4. In `log4j.properties`, change the following properties to match the IP address of the ArcSight Logger and the UDP port on the ArcSight Logger portal:

   ```
   log4j.appender.cef1.hostName=192.x.x.x
   log4j.appender.cef1.port=515
   ```

5. Restart the Matrix infrastructure orchestration service from the service manager.

   The logs sent to `C:\ Program Files\HP\Matrix infrastructure orchestration\logs\hpio.log` and `C:\ Program Files\HP\Matrix infrastructure orchestration\logs\hpio-controller.log` by the Insight Orchestration application are also sent to the ArcSight Logger.

6. Verify that the ArcSight Logger has been integrated correctly with Matrix OE:

   a. Open the logger portal URL: `https://<loggerHostname>:<logger port>/`.

   b. In the **Summary** tab, check that the IP address of the Matrix OE server appears in the **Devices** tab.

   c. Click the Matrix OE server IP address in the **Devices** tab.

7. Check that the events are shown in the search screen.

Configuring Helion OpenStack®

To integrate the Helion OpenStack designer logs with the ArcSight Logger, complete the following steps:

1. Copy the jar file named `arcsight-cef-library-1.0.0.release.8-1.0.0.8.jar`, which is available in the CSA media, to the following directory on the Helion OpenStack server:

   `\var\lib\designer\webapps\designer\WEB-INF\lib\`

2. Add following content to the `log4j2.xml` file that is in the `\var\lib\designer\webapps\designer\WEB-INF\classes` directory:

```
<!-- Update Start -->
<appender name="ARCSIGHT" class="com.hp.esp.arcsight.cef.appender.Log4jAppender">
  <param name="deviceVendor" value="HP"/>
  <param name="deviceProduct" value="CSA"/>
  <param name="deviceVersion" value="4.5"/>
  <param name="transportType" value="SYSLOG"/>
  <param name="hostName" value="192.x.x.x"/>
```

```
    <param name="port" value="515"/>
    <param name="eventName" value="CLOUD_OS"/>
    <param name="useCefHeader" value="true"/>
    <layout class="org.apache.log4j.PatternLayout">
      <param name="ConversionPattern" value="%d [%t] %-5p %c %x - %m%n"/>
    </layout>
</appender>
<!-- Update End -->
```

3. Modify the values of the following parameters to match the IP address of the ArcSight Logger and the UDP port on the ArcSight Logger portal:

```
<param name="hostName" value="192.x.x.x"/>
<param name="port" value="515"/>
```

4. Add the ArcSight appender to the `com.hp.ccue`, `org.springframework`, and `root` loggers in the `log4j2.xml` file. After this information has been added, the portion of the file affected by the change will appear as follows, with the added information shown in bold font below:

```
<logger name="com.hp.ccue" additivity="false">
     <level value="error"/>
     <appender-ref ref="FILE"/>
     <appender-ref ref="CONSOLE"/>
    <appender-ref ref="ARCSIGHT"/>
</logger>

<logger name="org.springframework" additivity="false">
     <level value="info"/>
     <appender-ref ref="FILE"/>
     <appender-ref ref="CONSOLE"/>
<appender-ref ref="ARCSIGHT"/>
</logger>
<root>
     <level value="warn"/>
     <appender-ref ref="CONSOLE"/>

     <appender-ref ref="FILE"/><appender-ref ref="ARCSIGHT"/>
</root>
```

5. Run the following two commands to stop and then restart the Helion OpenStack designer:

```
\var\lib\designer\bin\shutdown.sh
\var\lib\designer\bin\startup.sh
```

Searching for events

The most useful type of search is the timestamp-based search. Extracting logs across products in a given period will help you track the flow of events.

You can perform searches using search strings that are similar to Google searches. For example, you can search by subscription name using the name provided in the CSA Cloud Subscriber Portal when a subscription was submitted. A search for the subscription name returns all the related CSA log events for subscriptions with that name. Note that if the subscription name is not unique, the log events that are returned might not be related to the given subscription.

Another method is to use saved searches to return logs.

To create saved searches for CSA logs, complete the following steps:

1. In the ArcSight Logger Portal, click **Analyze** > **Search**.
2. Select the desired time period.
3. For each case, provide the `regex` string given in Using regular expressions.
4. Click **Go** to return all the CSA logs for the selected time period.
5. Save the search string if you want to reuse it.

Using regular expressions

You can create, customize, and save the regular expression (regex) searches described in this section.

All CSA logs

This regular expression returns all CSA logs for the selected time period.

```
| rex "\d+ \S+ \d+ \S+\,\d+ \[\S+\] (?<status>\S+)  (?<userType>\S+)=(?<username>\S+);
\S+=(?<artifactId>\S+);.*" | regex userType = "csaUserName"
```

CSA error logs

This regular expression returns all the CSA logs that have error messages.

```
| rex "\d+ \S+ \d+ \S+\,\d+ \[\S+\] (?<status>\S+)  (?<userType>\S+)=(?<username>\S+);
\S+=(?<artifactId>\S+);.*" | regex userType = "csaUserName" | regex status = "ERROR"
```

CSA info or warning logs

This regular expression returns all the CSA logs that are either info or warning type log messages.

```
| rex "\d+ \S+ \d+ \S+\,\d+ \[\S+\] (?<status>\S+)  (?<userType>\S+)=(?<username>\S+);
\S+=(?<artifactId>\S+);.*" | regex userType = "csaUserName" | regex status = "INFO|WARN"
```

CSA logs for all users

This regular expression returns all the CSA logs for all users.

```
| rex "\d+ \S+ \d+ \S+\,\d+ \[\S+\] (?<status>\S+)  (?<userType>\S+)=(?<username>\S+);
\S+=(?<artifactId>\S+);.*" | regex userType = "csaUserName" | regex username= ".*"
```

To customize this search, replace the ".*" for the search parameter username with the CSA username. For example:

```
|rex "\d+ \S+ \d+ \S+\,\d+ \[\S+\] (?<status>\S+)  (?<userType>\S+)=(?<username>\S+);
\S+=(?<artifactId>\S+);.*" | regex userType = "csaUserName" | regex username= "CSAAdmin"
```

In the above case, csaAdmin is a user in CSA that has submitted a subscription.

CSA logs for all artifact IDs

This regular expression returns all the CSA logs for all artifact IDs.

```
| rex "\d+ \S+ \d+ \S+\,\d+ \[\S+\] (?<status>\S+)  (?<userType>\S+)=\S+;
\S+=(?<artifactId>\S+);.*" | regex userType = "csaUserName" | regex artifactId = ".*"
```

To customize this search, replace the ".*" for the search parameter artifactid=".*" with the artifact ID for a particular subscription or user. The artifact ID can be obtained by filtering based on username and time period. For example:

```
| rex "\d+ \S+ \d+ \S+\,\d+ \[\S+\] (?<status>\S+)  (?<userType>\S+)=\S+;
\S+=(?<artifactId>\S+);.*" | regex userType = "csaUserName" | regex artifactId =
"402894d536c3d81b0136c43d2ffc247a"
```
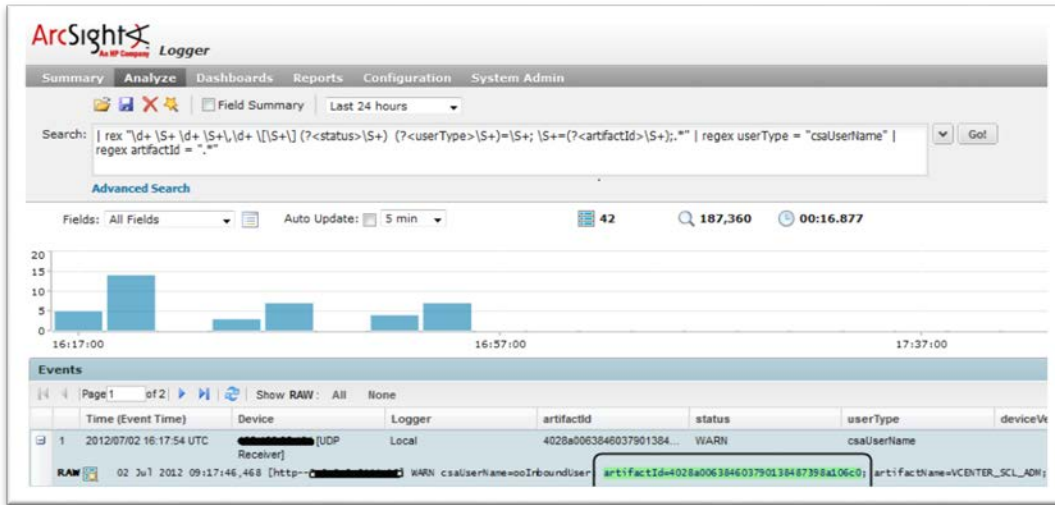
When you search for a particular artifactId or csaUserName, *do not* click the ID in the log itself, which is shown in the green highlighted text in the following image.

If you click the ID, it will resolve to a broken query and does not show the results of the search. Instead, make note of the ID and manually type it into the query.

For more information about searching, see **Searching and Analyzing Events** in the *ArcSight Logger Administrator's Guide*.

Manually uploading log files

The reference implementation mentions integration with only the products listed in the above sections. If you want to integrate with any other product, you can use a manual upload. Manual upload of log files can be performed using File Receivers. File Receiver-type receivers read log files from a network file system (NFS), CIFS, or Storage Area Network (SAN). These receivers can read single or multi-line log files. The log file can be uploaded only once using the file receiver. If the log file needs to be uploaded again, then a new file receiver must be created.

Note: Below is an example of configuring a file receiver and uploading the log events onto the ArcSight Logger for a specific log file. You must customize the regular expression and other parameters mentioned below according to their log file.

Creating a file receiver

To create a file receiver, complete the following steps:

1. Log in to the ArcSight Logger Portal. The default credentials are admin/password.
2. Select the **Configuration** tab.
3. In the left pane, click **Event Input/Output**.
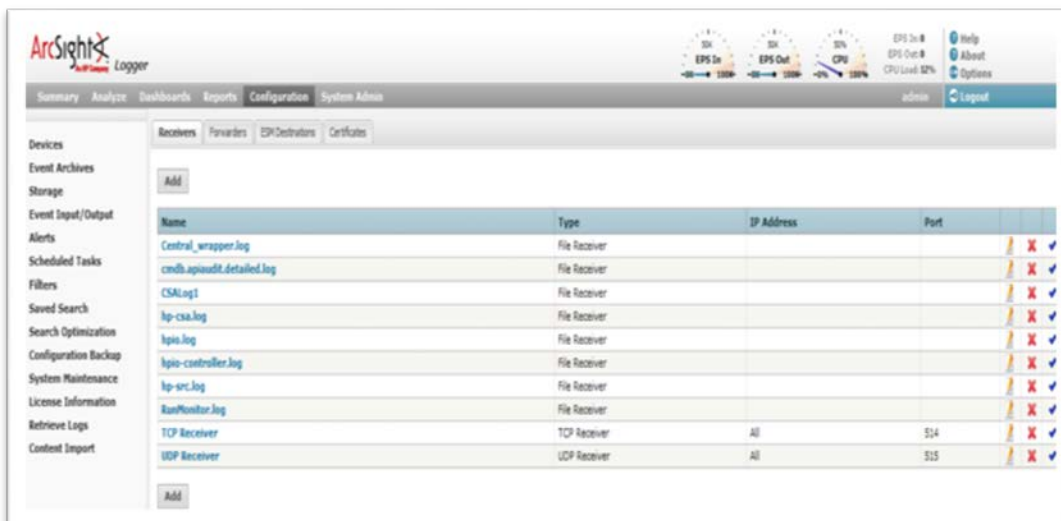
4. Click **Add** to add a new receiver.

5. In the **Name** field, type the Receiver name.

6. In the **Type** field, type File Receiver.
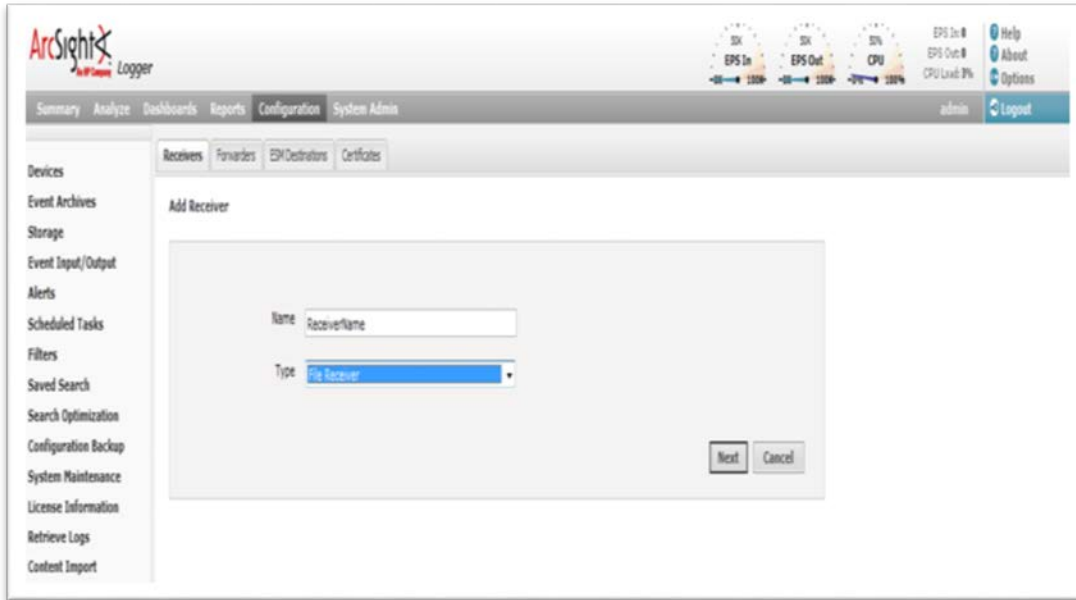
7. Click **Next**.

8. In the **Folder** field, type the name of the folder where the log files exist on the ArcSight Logger server. Make sure the ArcSight Logger user has read and write permissions for the folders.

9. In the **Wildcard** field, type the name of the log file.
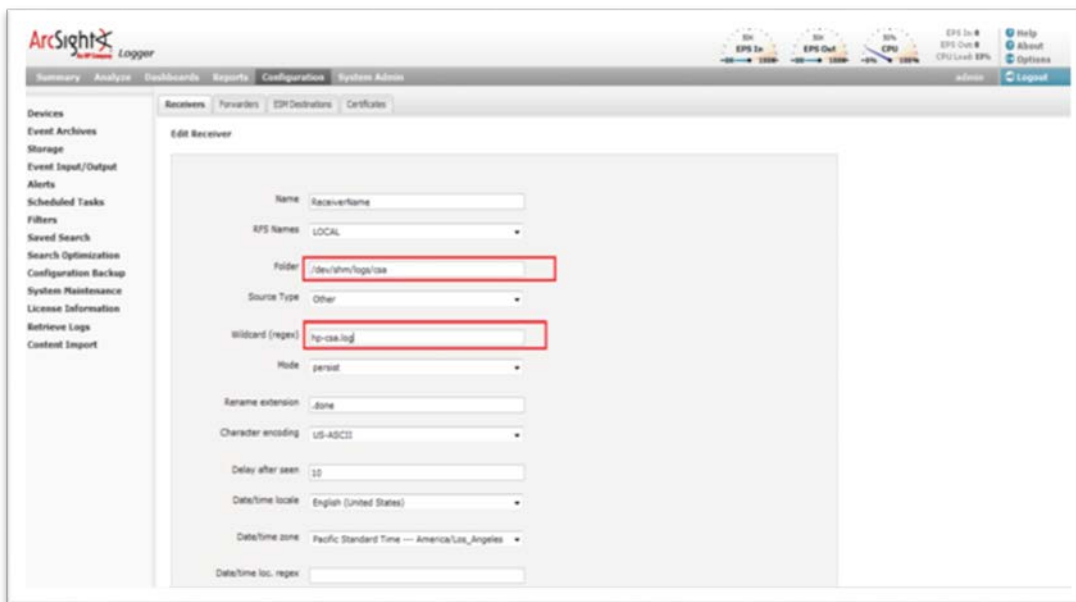
10. In the **Date/time loc. regex** field, type the regular expression to identify the date in an event.

   For example, consider the following log event:

```
28 Feb 2012 06:02:36,646  INFO
[org.springframework.scheduling.concurrent.ScheduledExecutorFactoryBean#0-2]
(CatalogLifecycleManagerImpl.java:210) - [csa] [CATALOG] Catalog initialization
complete.
```

The regular expression for the date/timestamp in this log event is:

```
^(.*?)\,\d+.*
```

11. In the **Date/time format** field, type the date/timestamp format.

For example:
If the date is:
28 Feb 2012 06:02:36
The format should be:
dd MM yyyy HH:mm:ss

12. In the **Event start (regex)** field, type the regex for event start. This tells the logger the pattern used for each event. That is, where the event starts and ends.

For example:

Consider the following log event:

```
28          Feb          2012          06:02:36,646          INFO
[org.springframework.scheduling.concurrent.ScheduledExecutorFactoryBean#0-2]
(CatalogLifecycleManagerImpl.java:210) - [csa] [CATALOG] Catalog initialization
complete.
```

The regular expression for the event start pattern is:

```
^(.*?)\,\d+.*
```


13. After completing the fields described in these steps, click **Save**.

14. The file receiver that you created is disabled by default. Enable the receiver by clicking the enable icon shown in the following image.

When the receiver is enabled, the log data is loaded to the logger.
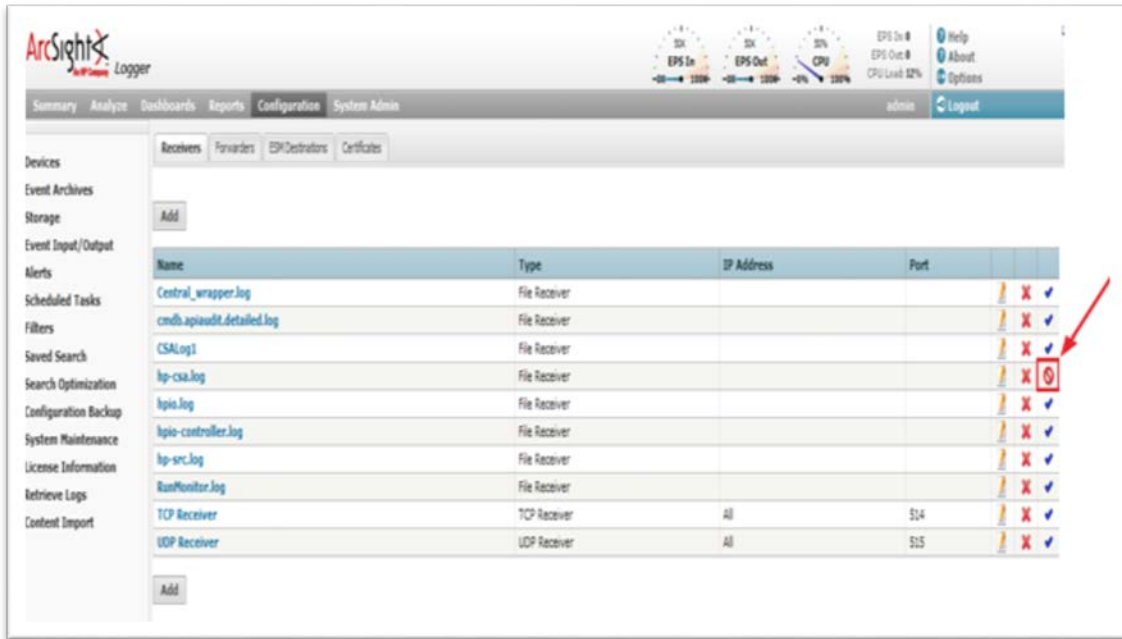
15. To look at all the log events loaded by the receiver, click **Analyze** > **Search**.
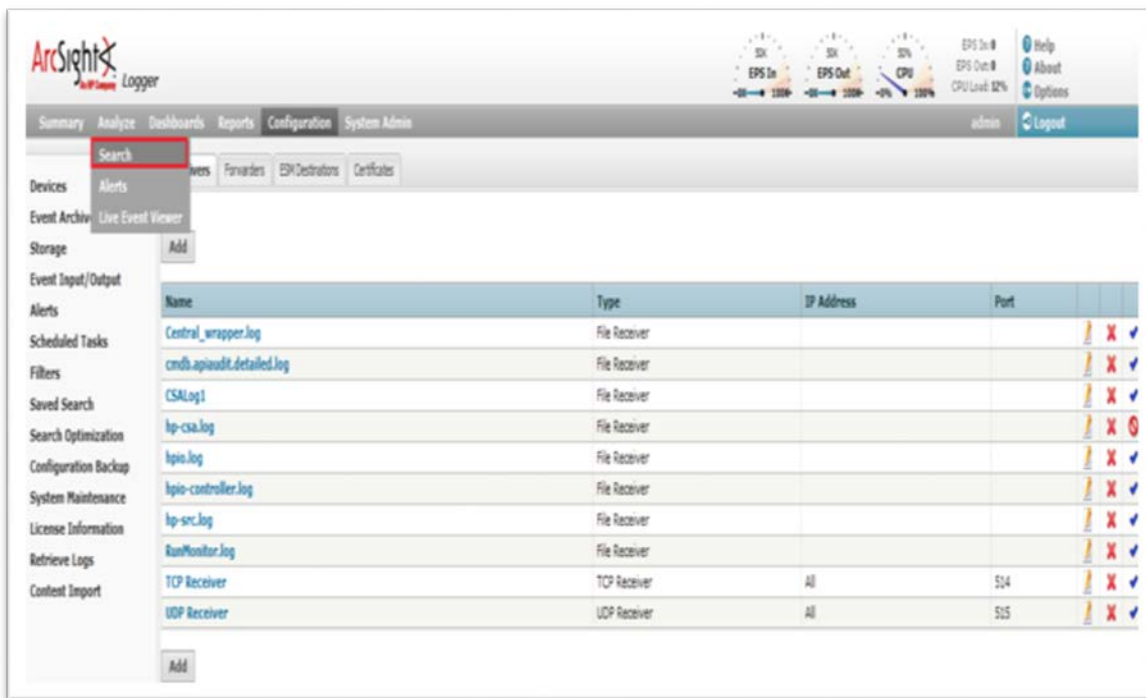
16. Select **Last 30 days** as the time range.

17. Enter the following search string, replacing `hp-csa.log` with the receiver name that you provided:

    ```
    _deviceGroup in ["Logger Internal Event Device [hp-csa.log]"]
    ```

    Every file receiver is recognized as Logger Internal Event Device by the logger. Therefore, the search should be performed on the device group and logger internal event device.

18. Click **GO**.
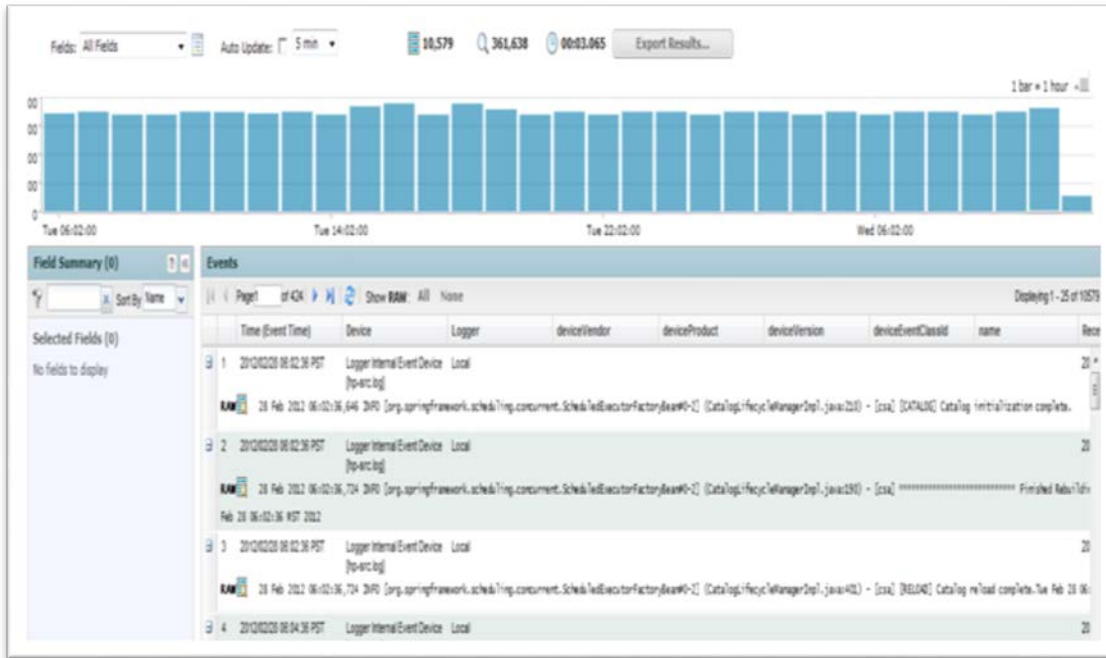
19. You can create custom filters to analyze log events. You cannot create custom filters that filter by time.

Best practices for manual upload

During manual upload, there is a chance that log events could be uploaded repetitively. This might exceed the daily inflow limit of the free version of ArcSight Logger (750 MB per day). To avoid this situation, observe the following best practices:

1. Perform periodic uploads on a daily, weekly, monthly, or as-needed basis. Avoid more than one upload per day.

2. After each upload, rename the log file so that repetitive uploads can be avoided and fresh logs are generated in the new log file.

Upgrading ArcSight Logger

If you upgrade ArcSight but you are not upgrading CSA, then you do not need to do anything.

If you upgrade CSA, the `log4j.properties` file may contain duplicate entries if CSA was previously integrated with ArcSight Logger.

To re-enable ArcSight logging, follow the instructions in Configuring CSA.

Appendix A

Example `log4j2.xml` file.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<Configuration schema="Log4j-config" monitorInterval="30">
    <!--
        Steps for use with ArcSight:
        1. Configure one or more ArcSightAppenders, setting the hostName and hostPort values.
        2. Associate the appenders with 1 or more Loggers, in the lower section
           of the file, by using the name of the appender.
           These are the AppenderRef lines.
        3. Change Logger level values to send the desired amount of
           information to ArcSight.
    -->
    <Appenders>
        <!-- These 3 appenders have been added to the default log4j2.xml file -->
        <!-- This appender is associated with the csa Logger -->
        <ArcSightAppender name="arcsight_core"
            hostName="192.x.x.x" hostPort="515"
            transportType="SYSLOG"
            eventName="CSA" deviceVendor="HP" deviceProduct="CSA"
            deviceVersion="4.5" useCefHeader="true">
            <PatternLayout pattern="%d [%t] %-5p %c %x - %m%n"/>
        </ArcSightAppender>
        <!-- This appender is associated with the MPP Logger -->
        <ArcSightAppender name="arcsight_mpp"
            hostName="192.x.x.x" hostPort="515"
            transportType="SYSLOG"
            eventName="MPP" deviceVendor="HP" deviceProduct="CSA" deviceVersion="4.5"
            useCefHeader="true">
            <PatternLayout pattern="%d [%t] %-5p %c %x - %m%n"/>
        </ArcSightAppender>
        <!-- This appender is associated with the Elastic Search Logger -->
        <ArcSightAppender name="arcsight_elastic"
            hostName="192.x.x.x" hostPort="515"
            transportType="SYSLOG"
            eventName="CCUE" deviceVendor="HP" deviceProduct="CSA" deviceVersion="4.5"
            useCefHeader="true">
            <PatternLayout pattern="%d [%t] %-5p %c %x - %m%n"/>
        </ArcSightAppender>
        <!-- End: ArcSight appenders -->
```

```xml
        <Console name="STDOUT" target="SYSTEM_OUT">
            <PatternLayout pattern="%d{DATE} [%t] %-5p %x %C{1} \: %m%n"/>
        </Console>
        <RollingFile name="sqlappender" filename="${sys:jboss.server.log.dir}/csa_sql.log"
                    filePattern="${sys:jboss.server.log.dir}/csa_sql-%i.log"
                    append="true">
            <PatternLayout pattern="%d{DATE} [%t] %-5p %x %C{1} \: %m%n"/>
            <Policies>
                <SizeBasedTriggeringPolicy size="1 MB"/>
            </Policies>
            <DefaultRolloverStrategy max="3"/>
        </RollingFile>

        <RollingFile name="blazeds" filename="${sys:jboss.server.log.dir}/blazeds.log"
                    filePattern="${sys:jboss.server.log.dir}/blazeds-%i.log"
                    append="true">
            <PatternLayout pattern="%d{DATE} [%t] %-5p %x %C{1} \: %m%n"/>
```

```xml
            <Policies>
                <SizeBasedTriggeringPolicy size="1 MB"/>
            </Policies>
            <DefaultRolloverStrategy max="3"/>
        </RollingFile>

        <RollingFile name="msvc" filename="${sys:jboss.server.log.dir}/csa-msvc.log"
                    filePattern="${sys:jboss.server.log.dir}/csa-msvc-%i.log"
                    append="true">
            <PatternLayout pattern="%d{DATE} [%t] %-5p %x %C{1} \: %m%n"/>
            <Policies>
                <SizeBasedTriggeringPolicy size="1 MB"/>
            </Policies>
            <DefaultRolloverStrategy max="3"/>
        </RollingFile>

        <RollingFile name="ccue" filename="${sys:jboss.server.log.dir}/ccue.log"
                    filePattern="${sys:jboss.server.log.dir}/ccue-%i.log"
                    append="true">
            <PatternLayout pattern="%d{DATE} [%t] %-5p %x %C{1} \: %m%n"/>
            <Policies>
                <SizeBasedTriggeringPolicy size="1 MB"/>
            </Policies>
            <DefaultRolloverStrategy max="3"/>
        </RollingFile>

        <RollingFile name="mpp" filename="${sys:jboss.server.log.dir}/mpp.log"
                    filePattern="${sys:jboss.server.log.dir}/mpp-%i.log"
                    append="true">
            <PatternLayout pattern="%d{DATE} [%t] %-5p %x %C{1} \: %m%n"/>
            <Policies>
                <SizeBasedTriggeringPolicy size="1 MB"/>
            </Policies>
            <DefaultRolloverStrategy max="3"/>
        </RollingFile>

        <RollingFile name="fileappender" filename="${sys:jboss.server.log.dir}/csa.log"
                    filePattern="${sys:jboss.server.log.dir}/csa-%i.log"
                    append="true">
            <PatternLayout pattern="%d{DATE} [%t] %-5p %x %C{1} \: %m%n"/>
            <Policies>
                <SizeBasedTriggeringPolicy size="1 MB"/>
            </Policies>
            <DefaultRolloverStrategy max="3"/>
        </RollingFile>

        <RollingFile name="designer" filename="${sys:jboss.server.log.dir}/designer.log"
                    filePattern="${sys:jboss.server.log.dir}/designer-%i.log"
                    append="true">
            <PatternLayout pattern="%d{DATE} [%t] %-5p %x %C{1} \: %m%n"/>
            <Policies>
                <SizeBasedTriggeringPolicy size="1 MB"/>
            </Policies>
            <DefaultRolloverStrategy max="3"/>
        </RollingFile>
    </Appenders>

    <Loggers>

        <Root level="error">
```

```xml
            <AppenderRef ref="fileappender"/>
            <!--
                One option is to add one Arcsight appender at the top-most level, the Root logger.
                The alternative is to add specific appenders to Loggers below, to associate
subsets
                of log messages with specific event names in ArcSight.
            -->
            <!--
            <AppenderRef ref="arcsight_core"/>
            -->
        </Root>

        <!--log4j.logger.org.hibernate.type=ERROR, sqlappender-->
        <!--log4j.additivity.org.hibernate.type=false-->
        <Logger name="org.hibernate.type" level="error">
            <AppenderRef ref="sqlappender"/>
        </Logger>

        <!--log4j.logger.com.hp.csa.blazeds=ERROR, blazeds-->
        <!--log4j.additivity.com.hp.csa.blazeds=false-->
        <Logger name="com.hp.csa.blazeds" level="error">
            <AppenderRef ref="blazeds"/>
        </Logger>

        <!--log4j.logger.com.hp.csa.service.request=ERROR-->
        <Logger name="com.hp.csa.service.request"
                level="error">
        </Logger>
        <!--log4j.logger.com.hp.csa.service.consumer=ERROR-->
        <Logger name="com.hp.csa.service.consumer"
                level="error">
        </Logger>
        <!--log4j.logger.com.hp.csa.service.lifecycle=ERROR-->
        <Logger name="com.hp.csa.service.lifecycle"
                level="error">
        </Logger>
        <!--log4j.logger.com.hp.csa.service.process=ERROR-->
        <Logger name="com.hp.csa.service.process"
                level="error">
        </Logger>
        <!--log4j.logger.com.hp.csa.service.export=ERROR-->
        <Logger name="com.hp.csa.service.export"
                level="error">
        </Logger>
        <!--log4j.logger.com.hp.ccue.mpp=ERROR, mpp-->
        <!--log4j.additivity.com.hp.ccue.mpp=false-->
        <Logger name="com.hp.ccue.mpp" level="info">
            <AppenderRef ref="mpp"/>
            <!-- Arcsight appender added -->
            <AppenderRef ref="arcsight_mpp"/>
        </Logger>

        <!-- log4j.logger.com.hp.csa.service.common.BasicElasticSearchServiceImpl=ERROR, msvc -->
            <!-- log4j.additivity.com.hp.csa.service.common.BasicElasticSearchServiceImpl=false --
>
        <Logger name="com.hp.csa.service.common.BasicElasticSearchServiceImpl" additivity="false"
level="debug">
            <!-- Arcsight appender added -->
            <AppenderRef ref="arcsight_elastic"/>
        </Logger>
```

```xml
        <!-- log4j.logger.com.hp.ccue.consumption.svc.impl.ElasticSearchServiceImpl=ERROR, msvc -->
            <!-- log4j.additivity.com.hp.ccue.consumption.svc.impl.ElasticSearchServiceImpl=false
-->
        <Logger name="com.hp.ccue.consumption.svc.impl.ElasticSearchServiceImpl" additivity="false"
level="debug">
            <AppenderRef ref="msvc"/>
            <!-- Arcsight appender added -->
            <AppenderRef ref="arcsight_elastic"/>
        </Logger>

        <!-- log4j.logger.com.hp.ccue.consumption.svc.bk.ExportContentBkServiceDelegateImpl=ERROR,
msvc -->
            <!--
log4j.additivity.com.hp.ccue.consumption.svc.bk.ExportContentBkServiceDelegateImpl=false -->
        <Logger name="com.hp.ccue.consumption.svc.bk.ExportContentBkServiceDelegateImpl"
additivity="false" level="debug">
            <AppenderRef ref="msvc"/>
        </Logger>

        <!--# Cloud OS plugin debug messages in log-->
        <!--log4j.logger.com.hp.csa.provision.cloudos=INFO-->
        <Logger name="com.hp.csa.provision.cloudos"
                level="info">
        </Logger>
        <!--log4j.logger.com.hp.csa.plugin.cloudos=INFO-->
        <Logger name="com.hp.csa.plugin.cloudos"
                level="info">
        </Logger>
        <!--log4j.logger.com.hp.csa=ERROR-->
        <Logger name="com.hp.csa"
                level="info">
            <!-- Arcsight appender added -->
            <AppenderRef ref="arcsight_core"/>
        </Logger>
        <!--log4j.logger.com.hp.ccue.designer=WARN, designer-->
        <Logger name="com.hp.ccue.designer" level="warn">
            <AppenderRef ref="designer"/>
        </Logger>
    </Loggers>
</Configuration>
```

Appendix B

```
SiteScope log4j.properties file
###################################################################
#                                        SiteScope log4j Configuration file
#
###################################################################
log.file.path=logs
#loglevel can be any of DEBUG INFO WARN ERROR FATAL
loglevel=ERROR
monitor.loglevel=ERROR
skip.loglevel=INFO
remote_test.loglevel=INFO
def.file.max.size=1000KB
def.files.backup.count=5


#DO NOT CHANGE heartbeat.loglevel!
heartbeat.loglevel=INFO
heartbeat.log.file.path=heartbeat
def.heartbeat.file.pattern=%d{yyyy-MM-dd HH:mm:ss,SSS}\t%m%n


#set the CEF log4j appender ...
log4j.appender.cef1=com.hp.esp.arcsight.cef.appender.Log4jAppender
log4j.appender.cef1.deviceVendor=HP
log4j.appender.cef1.deviceProduct=CSA
log4j.appender.cef1.deviceVersion=4.5
log4j.appender.cef1.transportType=SYSLOG
log4j.appender.cef1.hostName=192.x.x.x
log4j.appender.cef1.port=515
log4j.appender.cef1.layout=org.apache.log4j.PatternLayout
log4j.appender.cef1.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n
log4j.appender.cef1.useCefHeader=true
log4j.appender.cef1.eventName=SiteScope Event


#
# Categories that write to error.log
#

log4j.rootCategory=${loglevel}, error.appender, cef1

log4j.category.com.mercury.sitescope.platform.log.ErrorLogger=${loglevel}, error.appender, cef1

log4j.category.org.apache.axis.encoding.ser=FATAL,error.appender, cef1


#
# Bootstrap categories
#
log4j.category.com.mercury.sitescope.bootstrap=INFO, error.appender, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.bootstrap=false

log4j.category.com.mercury.sitescope.infra.services.ServiceController=INFO, error.appender,
monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.infra.services.ServiceController=false


#
# HA categories
#
log4j.category.com.mercury.sitescope.ha=INFO, ha.appender
log4j.additivity.com.mercury.sitescope.ha=false
```

```
#
# Skip Monitor log
#
log4j.category.com.mercury.sitescope.entities.monitors.AtomicMonitor.SkipMonitor=${skip.loglevel},
skip.monitor.appender
log4j.additivity.com.mercury.sitescope.entities.monitors.AtomicMonitor.SkipMonitor=false


#
# Amazon EC2 Integration log
#
log4j.category.com.mercury.sitescope.monitors.amazon.cw=${loglevel},
amazon.ec2.integration.appender
log4j.additivity.com.mercury.sitescope.monitors.amazon.cw=false


#
# Various categories that write to RunMonitor.log
#

log4j.category.com.mercury.sitescope.monitors=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.monitors=false

log4j.category.com.mercury.sitescope.entities.monitors=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.entities.monitors=false

log4j.category.com.mercury.sitescope.util.cmdline=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.util.cmdline=false

log4j.category.com.mercury.sitescope.util.cmdparser=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.util.cmdparser=false

log4j.category.com.mercury.sitescope.util.jdbc=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.util.jdbc=false

log4j.category.com.mercury.sitescope.util.process=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.util.process=false

# In order to view the perfex and perfex dispatcher tables in the progress move this to debug
log4j.category.com.mercury.sitescope.util.process.ProcessMgr=${monitor.loglevel},
monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.util.process.ProcessMgr=false

log4j.category.com.mercury.sitescope.util.script=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.util.script=false

log4j.category.com.mercury.sitescope.util.ssh=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.util.ssh=false

log4j.category.wmi.protocol=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.wmi.protocol=false

log4j.category.com.mercury.sitescope.infra.broadvision=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.infra.broadvision=false

log4j.category.com.mercury.sitescope.infra.event=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.infra.event=false

log4j.category.com.mercury.sitescope.infra.ipmi=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.infra.ipmi=false
```

```
log4j.category.com.mercury.sitescope.infra.network=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.infra.network=false

log4j.category.com.mercury.sitescope.infra.queue=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.infra.queue=false

log4j.category.com.mercury.sitescope.platform.ems=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.platform.ems=false

log4j.category.com.mercury.sitescope.platform.mdrv=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.platform.mdrv=false

log4j.category.com.mercury.sitescope.platform.mq=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.platform.mq=false

log4j.category.com.mercury.sitescope.api.adapter.ems=${monitor.loglevel}, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.api.adapter.ems=false

log4j.category.com.mercury.sitescope.platform.log.MonitorLogger=INFO, monitors.appender, cef1
log4j.additivity.com.mercury.sitescope.platform.log.MonitorLogger=false

log4j.category.AuthenticationLogger=FATAL, authentication.appender, cef1
log4j.additivity.AuthenticationLogger=false

#
# Statistics Logger
#

log4j.category.com.mercury.sitescope.platform.log.statistics.StatisticsLogger=INFO,
statistics.logger.appender
log4j.additivity.com.mercury.sitescope.platform.log.statistics.StatisticsLogger=false

log4j.category.com.mercury.sitescope.platform.log.statistics.MonitorStatisticsLogger=INFO,
statistics.logger.appender
log4j.additivity.com.mercury.sitescope.platform.log.statistics.MonitorStatisticsLogger=false

log4j.category.com.mercury.sitescope.platform.log.statistics.MemoryStatistics=INFO,
statistics.logger.appender
log4j.additivity.com.mercury.sitescope.platform.log.statistics.MemoryStatistics=false

log4j.category.com.mercury.sitescope.platform.log.statistics.PoolStatistics=INFO,
statistics.logger.appender
log4j.additivity.com.mercury.sitescope.platform.log.statistics.PoolStatistics=false

log4j.category.com.mercury.sitescope.platform.log.statistics.StatisticsLoggerRaw=WARN,
statistics.logger.raw.appender
log4j.additivity.com.mercury.sitescope.platform.log.statistics.StatisticsLoggerRaw=false

#
# SSH Trace log
#

log4j.category.SSHTrace=INFO, monitors.appender
log4j.additivity.SSHTrace=false

#
# Perfex log
#

log4j.category.PerfexLogger=${monitor.loglevel}, monitors.appender, cef1
```

```
log4j.additivity.PerfexLogger=false

#
# Template Silent Deployment log
#

log4j.category.TemplateDeploymentLogger=INFO, template.silent.deployment.appender
log4j.additivity.TemplateDeploymentLogger=false


#
#com.mercury.sitescope.api.PreferenceProxy.multiTest
#
log4j.category.com.mercury.sitescope.api.util.RemoteMultiTestUtil=${remote_test.loglevel},
remote_test.appender
log4j.additivity.com.mercury.sitescope.api.util.RemoteMultiTestUtil=false


#
# High Availability and initial configuration copy write to mirror.log
#
log4j.category.com.mercury.sitescope.entities.actions.MirrorConfiguration=${loglevel},
mirror.appender
log4j.additivity.com.mercury.sitescope.entities.actions.MirrorConfiguration=false
log4j.category.com.mercury.sitescope.entities.actions.CopyInitialConfiguration=${loglevel},
mirror.appender
log4j.additivity.com.mercury.sitescope.entities.actions.CopyInitialConfiguration=false
log4j.category.com.mercury.sitescope.entities.actions.CopyConfiguration=${loglevel},
mirror.appender
log4j.additivity.com.mercury.sitescope.entities.actions.CopyConfiguration=false

# Audit Log category - ver SIS 10.0
log4j.category.NewAuditLog=INFO, newaudit.log.appender
log4j.additivity.NewAuditLog=false


# Dynamic monitors changes category
log4j.category.DynamicMonitoringChanges=${loglevel}, dynamic.monitoring.changes.appender
log4j.additivity.DynamicMonitoringChanges=false

# Primary Heartbeat category
log4j.category.PrimaryHeartbeatLog=${heartbeat.loglevel}, primary.heartbeat.appender
log4j.additivity.PrimaryHeartbeatLog=false

# Failover Heartbeat category
log4j.category.FailoverHeartbeatLog=${heartbeat.loglevel}, failover.heartbeat.appender
log4j.additivity.FailoverHeartbeatLog=false

# Failover Manager Heartbeat category
log4j.category.FailoverManagerHeartbeatLog=${heartbeat.loglevel},
failover.manager.heartbeat.appender
log4j.additivity.FailoverManagerHeartbeatLog=false


# Upgrade category

log4j.category.com.mercury.sitescope.upgrade.UpgradeManager=INFO, upgrade.appender
log4j.additivity.com.mercury.sitescope.upgrade.UpgradeManager=false
log4j.category.com.mercury.sitescope.integrations.bac.upgrade.BACIntegrationUpgrader=INFO,
upgrade.appender
log4j.additivity.com.mercury.sitescope.integrations.bac.upgrade.BACIntegrationUpgrader=false
```

```
log4j.category.com.mercury.sitescope.integrations.bac.upgrade.BACIntegrationUpgradersFactory=INFO,
upgrade.appender
log4j.additivity.com.mercury.sitescope.integrations.bac.upgrade.BACIntegrationUpgradersFactory=fals
e


# Change ${loglevel} to DEBUG to enable baselining component logging
log4j.category.BaseliningComponent=${loglevel}, baselining.appender
log4j.additivity.BaseliningComponent=false

# Tomcat request statistics filter
log4j.category.com.mercury.topaz.webinfra.filters.UserStatsLogFilter=${loglevel},
request.statistics.appender
log4j.additivity.com.mercury.topaz.webinfra.filters.UserStatsLogFilter=false

log4j.category.dataIntegration=${loglevel}, data.integration.appender
log4j.additivity.dataIntegration=false

# Change to enable Template Persistency Upgrade logging
log4j.category.com.mercury.sitescope.platform.configmanager.treenodes.template.upgrader=INFO,
templates.persistency.upgrade.appender
log4j.additivity.com.mercury.sitescope.platform.configmanager.treenodes.template.upgrader=false

# OA metric integration logger
log4j.category.operationAgentIntegration=${loglevel}, oa.metric.integration.appender
log4j.additivity.operationAgentIntegration=false
log4j.category.com.mercury.sitescope.integrations.om.metric=${loglevel},
oa.metric.integration.appender
log4j.additivity.com.mercury.sitescope.integrations.om.metric=false

# Downtime logger
log4j.category.com.mercury.sitescope.integrations.bac.downtime=${loglevel}, downtime.appender
log4j.additivity.com.mercury.sitescope.integrations.bac.downtime=false

log4j.category.com.mercury.sitescope.platform.downtime=${loglevel}, downtime.appender
log4j.additivity.com.mercury.sitescope.platform.downtime=false

#
# Log Appenders
#

log4j.appender.monitors.appender=org.apache.log4j.RollingFileAppender
log4j.appender.monitors.appender.File=../${log.file.path}/RunMonitor.log
log4j.appender.monitors.appender.MaxFileSize=${def.file.max.size}
log4j.appender.monitors.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.monitors.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.monitors.appender.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n


#
# Statistics Logger appender
#
log4j.appender.statistics.logger.appender=org.apache.log4j.RollingFileAppender
log4j.appender.statistics.logger.appender.File=../${log.file.path}/server_statistics.log
log4j.appender.statistics.logger.appender.MaxFileSize=${def.file.max.size}
log4j.appender.statistics.logger.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.statistics.logger.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.statistics.logger.appender.layout.ConversionPattern=%d [%t] %-5p - %m%n


#
# Statistics Logger Raw appender
```

```
#
log4j.appender.statistics.logger.raw.appender=org.apache.log4j.RollingFileAppender
log4j.appender.statistics.logger.raw.appender.File=../${log.file.path}/server_statistics_raw.log
log4j.appender.statistics.logger.raw.appender.MaxFileSize=30000KB
log4j.appender.statistics.logger.raw.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.statistics.logger.raw.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.statistics.logger.raw.appender.layout.ConversionPattern=%d[%t],%m%n


#
# Template Silent Deployment appender
#
log4j.appender.template.silent.deployment.appender=org.apache.log4j.DailyRollingFileAppender
log4j.appender.template.silent.deployment.appender.File=../${log.file.path}/silent_deployment.log
log4j.appender.template.silent.deployment.appender.DatePattern='.'yyyy-MM-dd
log4j.appender.template.silent.deployment.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.template.silent.deployment.appender.layout.ConversionPattern=%d{yyyy-MM-dd HH:mm:ss}
- %m%n


###
# Use the DatedFileAppender *INSTEAD* of RollingFileAppender to create date-named logs
##
#log4j.appender.monitors.appender=com.mercury.sitescope.util.DateFormatFileAppender
#log4j.appender.monitors.appender.FilePattern='../${log.file.path}/error'yyyy_MM_dd'.log'

# file buffering for the error log to help performance of logging operations
#log4j.appender.monitors.appender.BufferedIO=true
#log4j.appender.monitors.appender.BufferSize=8192

log4j.appender.error.appender=org.apache.log4j.RollingFileAppender
log4j.appender.error.appender.File=../${log.file.path}/error.log
log4j.appender.error.appender.MaxFileSize=${def.file.max.size}
log4j.appender.error.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.error.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.error.appender.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n


log4j.appender.mirror.appender=org.apache.log4j.RollingFileAppender
log4j.appender.mirror.appender.File=../${log.file.path}/mirror.log
log4j.appender.mirror.appender.MaxFileSize=${def.file.max.size}
log4j.appender.mirror.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.mirror.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.mirror.appender.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n


log4j.appender.ha.appender=org.apache.log4j.RollingFileAppender
log4j.appender.ha.appender.File=../${log.file.path}/ha.log
log4j.appender.ha.appender.MaxFileSize=${def.file.max.size}
log4j.appender.ha.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.ha.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.ha.appender.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n


#
# Audit Log appender
#
log4j.appender.newaudit.log.appender=org.apache.log4j.DailyRollingFileAppender
log4j.appender.newaudit.log.appender.File=../${log.file.path}/audit.log
log4j.appender.newaudit.log.appender.DatePattern='.'yyyy-MM-dd
log4j.appender.newaudit.log.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.newaudit.log.appender.layout.ConversionPattern=%d{yyyy-MM-dd HH:mm:ss} - %m%n
```

```
#
# Dynamic monitors changes tracking appender
#
log4j.appender.dynamic.monitoring.changes.appender=org.apache.log4j.DailyRollingFileAppender
log4j.appender.dynamic.monitoring.changes.appender.File=../${log.file.path}/dynamic_monitoring_chan
ges.log
log4j.appender.dynamic.monitoring.changes.appender.DatePattern='.'yyyy-MM-dd
log4j.appender.dynamic.monitoring.changes.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.dynamic.monitoring.changes.appender.layout.ConversionPattern=%d{yyyy-MM-dd HH:mm:ss}
- %m%n


#
# Request statistics appender
#
log4j.appender.request.statistics.appender=org.apache.log4j.RollingFileAppender
log4j.appender.request.statistics.appender.File=../${log.file.path}/request_statistics.log
log4j.appender.request.statistics.appender.MaxFileSize=10000KB
log4j.appender.request.statistics.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.request.statistics.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.request.statistics.appender.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n


#
# Baselining appender
#
log4j.appender.baselining.appender=org.apache.log4j.RollingFileAppender
log4j.appender.baselining.appender.File=../${log.file.path}/baselining.log
log4j.appender.baselining.appender.MaxFileSize=${def.file.max.size}
log4j.appender.baselining.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.baselining.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.baselining.appender.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n


#
# Generic data integration appender
#
log4j.appender.data.integration.appender=org.apache.log4j.RollingFileAppender
log4j.appender.data.integration.appender.File=../${log.file.path}/data_integration.log
log4j.appender.data.integration.appender.MaxFileSize=${def.file.max.size}
log4j.appender.data.integration.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.data.integration.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.data.integration.appender.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n


#
# Template Persistency appender
#
log4j.appender.templates.persistency.upgrade.appender=org.apache.log4j.RollingFileAppender
log4j.appender.templates.persistency.upgrade.appender.File=../${log.file.path}/template_persistency
_upgrade.log
log4j.appender.templates.persistency.upgrade.appender.MaxFileSize=${def.file.max.size}
log4j.appender.templates.persistency.upgrade.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.templates.persistency.upgrade.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.templates.persistency.upgrade.appender.layout.ConversionPattern=%d [%t] (%F:%L) %-5p
- %m%n


#
# upgrade appender
#
log4j.appender.upgrade.appender=org.apache.log4j.RollingFileAppender
log4j.appender.upgrade.appender.File=../${log.file.path}/upgrade.log
log4j.appender.upgrade.appender.MaxFileSize=1000KB
log4j.appender.upgrade.appender.MaxBackupIndex=5
```

```
log4j.appender.upgrade.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.upgrade.appender.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n


#
# OA metric integration appender
#
log4j.appender.oa.metric.integration.appender=org.apache.log4j.RollingFileAppender
log4j.appender.oa.metric.integration.appender.File=../${log.file.path}/oa_metric_integration.log
log4j.appender.oa.metric.integration.appender.MaxFileSize=1000KB
log4j.appender.oa.metric.integration.appender.MaxBackupIndex=5
log4j.appender.oa.metric.integration.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.oa.metric.integration.appender.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n


#
# Amazon EC2 integration appender
#
log4j.appender.amazon.ec2.integration.appender=org.apache.log4j.RollingFileAppender
log4j.appender.amazon.ec2.integration.appender.File=../${log.file.path}/amazon_ec2_integration.log
log4j.appender.amazon.ec2.integration.appender.MaxFileSize=1000KB
log4j.appender.amazon.ec2.integration.appender.MaxBackupIndex=5
log4j.appender.amazon.ec2.integration.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.amazon.ec2.integration.appender.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n


#OA Event integration log file - this is the file where the events are written to.
log4j.category.operationAgentIntegrationFile=INFO, oa.event.integrationFile.appender
log4j.additivity.operationAgentIntegrationFile=false

log4j.appender.oa.event.integrationFile.appender=org.apache.log4j.RollingFileAppender
log4j.appender.oa.event.integrationFile.appender.File=../${log.file.path}/HPSiteScopeOperationsMana
gerIntegration.log
log4j.appender.oa.event.integrationFile.appender.encoding=UTF-8
log4j.appender.oa.event.integrationFile.appender.MaxFileSize=5000KB
log4j.appender.oa.event.integrationFile.appender.MaxBackupIndex=0
log4j.appender.oa.event.integrationFile.appender.layout=org.apache.log4j.PatternLayout

#OA Event integration log file for HA mode - this is the file where the events are written to.
log4j.category.operationAgentIntegrationHAFile=INFO, oa.event.integrationFile.HA.appender
log4j.additivity.operationAgentIntegrationHAFile=false

log4j.appender.oa.event.integrationFile.HA.appender=org.apache.log4j.RollingFileAppender
log4j.appender.oa.event.integrationFile.HA.appender.File=../${log.file.path}/HPSiteScopeOperationsM
anagerIntegration.HA.log
log4j.appender.oa.event.integrationFile.HA.appender.encoding=UTF-8
log4j.appender.oa.event.integrationFile.HA.appender.MaxFileSize=5000KB
log4j.appender.oa.event.integrationFile.HA.appender.MaxBackupIndex=0
log4j.appender.oa.event.integrationFile.HA.appender.layout=org.apache.log4j.PatternLayout


#
# Downtime appender
#
log4j.appender.downtime.appender=org.apache.log4j.RollingFileAppender
log4j.appender.downtime.appender.File=../${log.file.path}/downtime.log
log4j.appender.downtime.appender.MaxFileSize=1000KB
log4j.appender.downtime.appender.MaxBackupIndex=5
log4j.appender.downtime.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.downtime.appender.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n


#
# Skip monitor appender
#
```

```
log4j.appender.skip.monitor.appender=org.apache.log4j.RollingFileAppender
log4j.appender.skip.monitor.appender.File=../${log.file.path}/skip_monitor.log
log4j.appender.skip.monitor.appender.MaxFileSize=${def.file.max.size}
log4j.appender.skip.logger.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.skip.monitor.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.skip.monitor.appender.layout.ConversionPattern=%d [%t] %-5p - %m%n


#
# Multi test appender
#
log4j.appender.remote_test.appender=org.apache.log4j.RollingFileAppender
log4j.appender.remote_test.appender.File=../${log.file.path}/remotes_multi_test.log
log4j.appender.remote_test.appender.MaxFileSize=${def.file.max.size}
log4j.appender.remote_test.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.remote_test.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.remote_test.appender.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n


#
# Primary heartbeat appender
#
log4j.appender.primary.heartbeat.appender=org.apache.log4j.RollingFileAppender
log4j.appender.primary.heartbeat.appender.File=../${heartbeat.log.file.path}/primary_heartbeat.log
log4j.appender.primary.heartbeat.appender.MaxFileSize=${def.file.max.size}
log4j.appender.primary.heartbeat.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.primary.heartbeat.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.primary.heartbeat.appender.layout.ConversionPattern=${def.heartbeat.file.pattern}


#
# Failover heartbeat appender
#
log4j.appender.failover.heartbeat.appender=org.apache.log4j.RollingFileAppender
log4j.appender.failover.heartbeat.appender.File=../${heartbeat.log.file.path}/failover_heartbeat.lo
g
log4j.appender.failover.heartbeat.appender.MaxFileSize=${def.file.max.size}
log4j.appender.failover.heartbeat.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.failover.heartbeat.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.failover.heartbeat.appender.layout.ConversionPattern=${def.heartbeat.file.pattern}


#
# Failover Manager heartbeat appender
#
log4j.appender.failover.manager.heartbeat.appender=org.apache.log4j.RollingFileAppender
log4j.appender.failover.manager.heartbeat.appender.File=../${heartbeat.log.file.path}/heartbeat.log
log4j.appender.failover.manager.heartbeat.appender.MaxFileSize=${def.file.max.size}
log4j.appender.failover.manager.heartbeat.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.failover.manager.heartbeat.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.failover.manager.heartbeat.appender.layout.ConversionPattern=${def.heartbeat.file.pa
ttern}


#
# Authentication appender
#
log4j.appender.authentication.appender=org.apache.log4j.RollingFileAppender
log4j.appender.authentication.appender.File=../${log.file.path}/authentication.log
log4j.appender.authentication.appender.MaxFileSize=${def.file.max.size}
log4j.appender.authentication.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.authentication.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.authentication.appender.layout.ConversionPattern=%d [%t] %-5p - %m%n
```

Appendix C

Operations Orchestration configuration files:

- Operations Orchestration 9.05 RAS
- Operations Orchestration 9.03 RAS
- Operations Orchestration 9.05 Jetty
- Operations Orchestration 9.03 Jetty

Operations Orchestration 9.05 RAS

```
######################################################################
#                           Operations Orchestration - RAS log4j Configuration file
#
######################################################################

# uncomment this if you want to see what log4j does when it reads this file.
#log4j.debug=true

log4j.rootLogger=INFO, stdout, R, cef1

#
# trim down the logging levels for org. and net. packages.
# these values can be overridden below for more specific packages.
#
log4j.logger.org=WARN, stdout, R, cef1
log4j.additivity.org=false
log4j.logger.org.acegisecurity.intercept=WARN, stdout, R, cef1
log4j.additivity.org.acegisecurity.intercept=false
log4j.logger.net=WARN, stdout, R, cef1
log4j.additivity.net=false

log4j.appender.cef1=com.hp.esp.arcsight.cef.appender.Log4jAppender
log4j.appender.cef1.deviceVendor=HP
log4j.appender.cef1.deviceProduct=CSA
log4j.appender.cef1.deviceVersion=4.5
log4j.appender.cef1.transportType=SYSLOG
log4j.appender.cef1.hostName=192.x.x.x
log4j.appender.cef1.port=515
log4j.appender.cef1.layout=org.apache.log4j.PatternLayout
log4j.appender.cef1.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n
log4j.appender.cef1.useCefHeader=true
log4j.appender.cef1.eventName=OO Event

#
# Spring logging
#
log4j.category.org.springframework=WARN,stdout, cef1
log4j.additivity.org.springframework=false
log4j.category.org.mortbay=INFO,stdout, cef1
log4j.additivity.org.mortbay=false

#
# apache logging
#
log4j.logger.org.apache.commons.httpclient=WARN,stdout, cef1
log4j.additivity.org.apache.commons.httpclient=false
log4j.logger.httpclient.wire=WARN,stdout, cef1
```

```
log4j.additivity.httpclient.wire=false

#
# enable more specific logging according to the needs of the application
#
log4j.logger.com.iconclude.webservices.ras=INFO,stdout,R, cef1
log4j.additivity.com.iconclude.webservices.ras=false


#
# set up console logging
#
log4j.appender.stdout=org.apache.log4j.ConsoleAppender
log4j.appender.stdout.target=System.out
log4j.appender.stdout.layout=org.apache.log4j.PatternLayout
log4j.appender.stdout.layout.ConversionPattern=%5p [%t] (%d{HH:mm:ss,SSS}) %c - %m%n


#
# set up file logging
#
log4j.appender.R=org.apache.log4j.RollingFileAppender
log4j.appender.R.File=${log.dir}/iConcludeJRAS.log
log4j.appender.R.MaxFileSize=1000KB
log4j.appender.R.MaxBackupIndex=10
log4j.appender.R.layout=org.apache.log4j.PatternLayout
log4j.appender.R.layout.ConversionPattern=%5p [%t] (%d{HH:mm:ss,SSS}) %c - %m%n
```

Operations Orchestration 9.03 RAS

```
########################################################################
#     Operations Orchestration - RAS log4j Configuration file        #
########################################################################

# uncomment this if you want to see what log4j does when it reads this file.
#log4j.debug=true

log4j.rootLogger=INFO, stdout, R, cef1

#set the CEF log4j appender ...
log4j.appender.cef1=com.hp.esp.arcsight.cef.appender.Log4jAppender
log4j.appender.cef1.deviceVendor=HP
log4j.appender.cef1.deviceProduct=CSA
log4j.appender.cef1.deviceVersion=4.5
log4j.appender.cef1.transportType=SYSLOG
log4j.appender.cef1.hostName=192.x.x.x
log4j.appender.cef1.port=515
log4j.appender.cef1.layout=org.apache.log4j.PatternLayout
log4j.appender.cef1.layout.ConversionPattern=%5p [%t] (%d{HH:mm:ss,SSS}) %c - %m%n
log4j.appender.cef1.useCefHeader=true
log4j.appender.cef1.eventName=OORASEvent



#
# trim down the logging levels for org. and net. packages.
# these values can be overridden below for more specific packages.
#
log4j.logger.org=WARN, stdout, R, cef1
log4j.additivity.org=false
log4j.logger.org.acegisecurity.intercept=WARN, stdout, R, cef1
log4j.additivity.org.acegisecurity.intercept=false
log4j.logger.net=WARN, stdout, R, cef1
```

```
log4j.additivity.net=false

#
# Spring logging
#
log4j.category.org.springframework=WARN,stdout
log4j.additivity.org.springframework=false
log4j.category.org.mortbay=INFO,stdout
log4j.additivity.org.mortbay=false

#
# apache logging
#
log4j.logger.org.apache.commons.httpclient=WARN,stdout, cef1
log4j.additivity.org.apache.commons.httpclient=false
log4j.logger.httpclient.wire=WARN,stdout, cef1
log4j.additivity.httpclient.wire=false

#
# enable more specific logging according to the needs of the application
#
log4j.logger.com.iconclude.webservices.ras=INFO,stdout,R, cef1
log4j.additivity.com.iconclude.webservices.ras=false

#
# set up console logging
#
log4j.appender.stdout=org.apache.log4j.ConsoleAppender
log4j.appender.stdout.target=System.out
log4j.appender.stdout.layout=org.apache.log4j.PatternLayout
log4j.appender.stdout.layout.ConversionPattern=%5p [%t] (%d{HH:mm:ss,SSS}) %c - %m%n

#
# set up file logging
#
log4j.appender.R=org.apache.log4j.RollingFileAppender
log4j.appender.R.File=${log.dir}/iConcludeJRAS.log
log4j.appender.R.MaxFileSize=1000KB
log4j.appender.R.MaxBackupIndex=10
log4j.appender.R.layout=org.apache.log4j.PatternLayout
log4j.appender.R.layout.ConversionPattern=%5p [%t] (%d{HH:mm:ss,SSS}) %c - %m%n
```

Operations Orchestration 9.05 Jetty

```
######################################################################
#                               Operations Orchestration - Jetty log4j Configuration file
#
###################################################################### uncomment this if you want
to see what log4j does when it reads this file.
#log4j.debug=true


log4j.rootLogger=INFO, iconclude, cef1


#
# trim down the logging levels for org. and net. packages.
# these values can be overridden below for more specific packages.
#
log4j.logger.org=WARN, iconclude, cef1
log4j.additivity.org=false
log4j.logger.org.acegisecurity.intercept=WARN, iconclude
log4j.additivity.org.acegisecurity.intercept=false
log4j.logger.org.acegisecurity.providers.dao.ldap=ERROR,iconclude
log4j.additivity.org.acegisecurity.providers.dao.ldap=false
log4j.logger.net=WARN, iconclude, cef1
log4j.additivity.net=false

log4j.appender.cef1=com.hp.esp.arcsight.cef.appender.Log4jAppender
log4j.appender.cef1.deviceVendor=HP
log4j.appender.cef1.deviceProduct=CSA
log4j.appender.cef1.deviceVersion=4.5
log4j.appender.cef1.transportType=SYSLOG
log4j.appender.cef1.hostName=192.x.x.x
log4j.appender.cef1.port=515
log4j.appender.cef1.layout=org.apache.log4j.PatternLayout
log4j.appender.cef1.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n
log4j.appender.cef1.useCefHeader=true
log4j.appender.cef1.eventName=OO Event



#
# Hibernate logging
#
log4j.category.org.hibernate=OFF,iconclude
log4j.additivity.org.hibernate=false
log4j.category.com.mchange.v2.c3p0.SQLWarnings=WARN,iconclude
log4j.additivity.com.mchange.v2.c3p0.SQLWarnings=false

# enable DEBUG here to see the SQL statements
#log4j.category.org.hibernate.SQL=DEBUG,iconclude
#log4j.additivity.org.hibernate.SQL=false

# enable DEBUG here to see collection initalization and caching
#log4j.category.org.hibernate.event.def=DEBUG,iconclude
#log4j.additivity.org.hibernate.event.def=false


#
# C3P0 logging
#
log4j.category.com.mchange=INFO,iconclude
log4j.additivity.com.mchange=false


#
```

```
# Spring logging
#
log4j.category.org.springframework=WARN,iconclude
log4j.additivity.org.springframework=false
log4j.category.org.mortbay=INFO,iconclude
log4j.additivity.org.mortbay=false


#
# apache logging
#
log4j.logger.org.apache.commons.httpclient=WARN,iconclude, cef1
log4j.additivity.org.apache.commons.httpclient=false
log4j.logger.httpclient.wire=WARN,iconclude, cef1
log4j.additivity.httpclient.wire=false


#
# audit trail logging
#   audits are sent to the INFO level
#
log4j.logger.com.iconclude.dharma.commons.repo.RepositoryLoggingAuditor=INFO,audit
log4j.additivity.com.iconclude.dharma.commons.repo.RepositoryLoggingAuditor=false
log4j.appender.audit=org.apache.log4j.RollingFileAppender
log4j.appender.audit.File=${iconclude.home}/Central/logs/audit.log
log4j.appender.audit.MaxFileSize=10000KB
log4j.appender.audit.MaxBackupIndex=1
log4j.appender.audit.layout=org.apache.log4j.PatternLayout
log4j.appender.audit.layout.ConversionPattern=%d{ISO8601} - %m%n


#
# headless logging
#   audits are sent to the INFO level
#
log4j.logger.com.iconclude.dharma.services.execution.HeadlessServiceBase=INFO,iconclude,headless
log4j.additivity.com.iconclude.dharma.services.execution.HeadlessServiceBase=false
log4j.appender.headless=org.apache.log4j.RollingFileAppender
log4j.appender.headless.File=${iconclude.home}/Central/logs/headless.log
log4j.appender.headless.MaxFileSize=10000KB
log4j.appender.headless.MaxBackupIndex=1
log4j.appender.headless.layout=org.apache.log4j.PatternLayout
log4j.appender.headless.layout.ConversionPattern=%5p (%d{HH:mm:ss,SSS}) - %m%n



#
# enable more specific logging according to the needs of the application
#
log4j.logger.com.iconclude.dharma.model.operations.ModelObjectValidationCache=WARN,iconclude
log4j.additivity.com.iconclude.dharma.model.operations.ModelObjectValidationCache=false
log4j.logger.com.iconclude.dharma.reports.dao=INFO,iconclude
log4j.additivity.com.iconclude.dharma.reports.dao=false
log4j.logger.com.iconclude.dharma.reports.LogAggregationParameters=WARN,iconclude
log4j.additivity.com.iconclude.dharma.reports.LogAggregationParameters=false
log4j.logger.com.iconclude.dharma.tapestry=WARN,iconclude
log4j.additivity.com.iconclude.dharma.tapestry=false
log4j.logger.com.iconclude.dharma.tapestry.components.ReportsBrowser=INFO,iconclude
log4j.additivity.com.iconclude.dharma.tapestry.components.ReportsBrowser=false
#log4j.logger.com.iconclude.dharma.tapestry.components.GuidedRepairPage=WARN,iconclude
#log4j.additivity.com.iconclude.dharma.tapestry.components.GuidedRepairPage=false
log4j.logger.com.iconclude.dharma.model.execution=INFO,iconclude, cef1
log4j.additivity.com.iconclude.dharma.model.execution=false
log4j.logger.com.iconclude.dharma.services=INFO,iconclude, cef1
```

```
log4j.additivity.com.iconclude.dharma.services=false
log4j.logger.com.iconclude.dharma.services.execution=INFO,iconclude, cef1
log4j.additivity.com.iconclude.dharma.services.execution=false
log4j.logger.com.iconclude.dharma.model.library=INFO,iconclude
log4j.additivity.com.iconclude.dharma.model.library=false
log4j.category.com.iconclude.dharma.model.library.hibernate=INFO,iconclude, cef1
log4j.additivity.com.iconclude.dharma.model.library.hibernate=false
log4j.category.com.iconclude.dharma.model.library.hibernate.QueuedHibernatePersistence=INFO,iconclu
de
log4j.additivity.com.iconclude.dharma.model.library.hibernate.QueuedHibernatePersistence=false
log4j.category.com.iconclude.dharma.model.library.hibernate.HibernateInterceptor=WARN,iconclude
log4j.additivity.com.iconclude.dharma.model.library.hibernate.HibernateInterceptor=false
log4j.logger.com.iconclude.dharma.tapestry=WARN,iconclude
log4j.additivity.com.iconclude.dharma.tapestry=false
log4j.logger.com.iconclude.dharma.tapestry.RCVisit=INFO,iconclude
log4j.additivity.com.iconclude.dharma.tapestry.RCVisit=false
log4j.logger.com.iconclude.dharma.tapestry.RCRunEngineHelper=INFO,iconclude
log4j.additivity.com.iconclude.dharma.tapestry.RCRunEngineHelper=false
log4j.logger.com.iconclude.dharma.model.library.search=INFO,iconclude
log4j.additivity.com.iconclude.dharma.model.library.search=false
log4j.logger.com.iconclude.dharma.app.SearchPanel=INFO,iconclude
log4j.additivity.com.iconclude.dharma.app.SearchPanel=false
log4j.logger.com.iconclude.dharma.services.discovery.RASRegistry=WARN,iconclude
log4j.additivity.com.iconclude.dharma.services.discovery.RASRegistry=false
log4j.logger.com.iconclude.dharma.app.debugging=INFO,iconclude
log4j.additivity.com.iconclude.dharma.app.debugging=false
log4j.logger.com.iconclude.dharma.runengine.impl=WARN,iconclude, cef1
log4j.additivity.com.iconclude.dharma.runengine.impl=false
log4j.logger.com.iconclude.dharma.runengine.registry=INFO,iconclude, cef1
log4j.additivity.com.iconclude.dharma.runengine.registry=false
log4j.logger.com.iconclude.dharma.commons.concurrent=INFO,iconclude
log4j.additivity.com.iconclude.dharma.commons.concurrent=false
log4j.logger.com.iconclude.dharma.model.execution.persistence=WARN,iconclude
log4j.additivity.com.iconclude.dharma.model.execution.persistence=false
log4j.logger.com.iconclude.dharma.commons.util.hibernate.OraDatasourceConnectionProvider=INFO,iconc
lude
log4j.additivity.com.iconclude.dharma.commons.util.hibernate.OraDatasourceConnectionProvider=false
log4j.logger.com.iconclude.dharma.model.security.RCUserRepository=INFO,iconclude
log4j.additivity.com.iconclude.dharma.model.security.RCUserRepository=false
log4j.logger.com.iconclude.dharma.scheduler=INFO,iconclude
log4j.additivity.com.iconclude.dharma.scheduler=false
log4j.logger.oracle.jdbc=ERROR,iconclude, cef1
log4j.additivity.oracle.jdbc=false
log4j.logger.oracle.ons=WARN,iconclude
log4j.additivity.oracle.ons=false


log4j.logger.SCRIPTLET=DEBUG,iconclude
log4j.additivity.SCRIPTLET=false
# log4j.category.EXECUTION_LOGGER=INFO,iconclude
# log4j.additivity.EXECUTION_LOGGER=false
# log4j.category.MODEL_LOGGER=INFO,iconclude
# log4j.additivity.MODEL_LOGGER=false
# log4j.category.BASIC_LOGGER=INFO,iconclude
# log4j.additivity.BASIC_LOGGER=false


#
# set up console logging
#
log4j.appender.iconclude=org.apache.log4j.ConsoleAppender
```

```
log4j.appender.iconclude.encoding=UTF-8
log4j.appender.iconclude.target=System.out
log4j.appender.iconclude.layout=org.apache.log4j.PatternLayout
# Pattern to output the caller's file name and line number (anything %F or %L is very expensive!).
# More patterns down below.
#log4j.appender.iconclude.layout.ConversionPattern=%-5p [%t] (%F:%L) %m%n
#log4j.appender.iconclude.layout.ConversionPattern=%5p [%t] (%F:%L) - %m%n
# pattern to output the category (last two elements of the classname).
#log4j.appender.iconclude.layout.ConversionPattern=%5p [%t] (%d{HH:mm:ss}) %c{2} - %m%n
# pattern to output the category with full package name.
log4j.appender.iconclude.layout.ConversionPattern=%5p [%t] (%d{HH:mm:ss,SSS}) %c - %m%n


#
# If you want a rolling file appender, this is the syntax...
#
#log4j.appender.iconclude=org.apache.log4j.RollingFileAppender
#log4j.appender.iconclude.File=logs/iConclude.log
#log4j.appender.iconclude.MaxFileSize=1000KB
#log4j.appender.iconclude.MaxBackupIndex=10
#log4j.appender.iconclude.layout=org.apache.log4j.PatternLayout
#log4j.appender.iconclude.layout.ConversionPattern=%p %t %c - %m%n
#log4j.appender.iconclude.layout.ConversionPattern=%5p [%t] (%d{HH:mm:ss,SSS}) %c - %m%n

#############################################################################
#
# Uncomment line below to enable LWSSO logging per:
# http://wiki.mercury.com/confluence/display/Arch/LW-SSO+UI+Integration+Release+2.0
#
#############################################################################

#log4j.logger.com.hp.sw.bto.ast.security=DEBUG



#
# central audit
# INFO level
#
log4j.logger.com.iconclude.dharma.util.CentralAudit=INFO,central
log4j.additivity.com.iconclude.dharma.util.CentralAudit=false
log4j.appender.central=org.apache.log4j.RollingFileAppender
log4j.appender.central.File=${iconclude.home}/Central/logs/Central_audit.log
log4j.appender.central.MaxFileSize=10000KB
log4j.appender.central.MaxBackupIndex=1
log4j.appender.central.layout=org.apache.log4j.PatternLayout
log4j.appender.central.layout.ConversionPattern=%d{ISO8601} - %m%n
```

Operations Orchestration 9.03 Jetty

```
#########################################################################
#  Operations Orchestration - Jetty log4j Configuration file            #
#########################################################################

# uncomment this if you want to see what log4j does when it reads this file.
#log4j.debug=true

log4j.rootLogger=INFO, iconclude, cef1

#set the CEF log4j appender ...
log4j.appender.cef1=com.hp.esp.arcsight.cef.appender.Log4jAppender
```

```
log4j.appender.cef1.deviceVendor=HP
log4j.appender.cef1.deviceProduct=CSA
log4j.appender.cef1.deviceVersion=4.5
log4j.appender.cef1.transportType=SYSLOG
log4j.appender.cef1.hostName=192.x.x.x
log4j.appender.cef1.port=515
log4j.appender.cef1.layout=org.apache.log4j.PatternLayout
log4j.appender.cef1.layout.ConversionPattern=%5p (%d{HH:mm:ss,SSS}) - %m%n
log4j.appender.cef1.useCefHeader=true
log4j.appender.cef1.eventName=OOEvent


#
# trim down the logging levels for org. and net. packages.
# these values can be overridden below for more specific packages.
#
log4j.logger.org=WARN, iconclude
log4j.additivity.org=false
log4j.logger.org.acegisecurity.intercept=WARN, iconclude
log4j.additivity.org.acegisecurity.intercept=false
log4j.logger.org.acegisecurity.providers.dao.ldap=ERROR,iconclude
log4j.additivity.org.acegisecurity.providers.dao.ldap=false
log4j.logger.net=WARN, iconclude
log4j.additivity.net=false


#
# Hibernate logging
#
log4j.category.org.hibernate=OFF,iconclude
log4j.additivity.org.hibernate=false
log4j.category.com.mchange.v2.c3p0.SQLWarnings=WARN,iconclude
log4j.additivity.com.mchange.v2.c3p0.SQLWarnings=false

# enable DEBUG here to see the SQL statements
#log4j.category.org.hibernate.SQL=DEBUG,iconclude
#log4j.additivity.org.hibernate.SQL=false

# enable DEBUG here to see collection initalization and caching
#log4j.category.org.hibernate.event.def=DEBUG,iconclude
#log4j.additivity.org.hibernate.event.def=false

#
# C3P0 logging
#
log4j.category.com.mchange=INFO,iconclude
log4j.additivity.com.mchange=false

#
# Spring logging
#
log4j.category.org.springframework=WARN,iconclude
log4j.additivity.org.springframework=false
log4j.category.org.mortbay=INFO,iconclude
log4j.additivity.org.mortbay=false

#
# apache logging
#
log4j.logger.org.apache.commons.httpclient=WARN,iconclude
log4j.additivity.org.apache.commons.httpclient=false
log4j.logger.httpclient.wire=WARN,iconclude
```

```
log4j.additivity.httpclient.wire=false

#
# audit trail logging
#   audits are sent to the INFO level
#
log4j.logger.com.iconclude.dharma.commons.repo.RepositoryLoggingAuditor=INFO,audit
log4j.additivity.com.iconclude.dharma.commons.repo.RepositoryLoggingAuditor=false
log4j.appender.audit=org.apache.log4j.RollingFileAppender
log4j.appender.audit.File=${iconclude.home}/Central/logs/audit.log
log4j.appender.audit.MaxFileSize=10000KB
log4j.appender.audit.MaxBackupIndex=1
log4j.appender.audit.layout=org.apache.log4j.PatternLayout
log4j.appender.audit.layout.ConversionPattern=%d{ISO8601} - %m%n


#
# headless logging
#   audits are sent to the INFO level
#
log4j.logger.com.iconclude.dharma.services.execution.HeadlessServiceBase=INFO,iconclude,headless
log4j.additivity.com.iconclude.dharma.services.execution.HeadlessServiceBase=false
log4j.appender.headless=org.apache.log4j.RollingFileAppender
log4j.appender.headless.File=${iconclude.home}/Central/logs/headless.log
log4j.appender.headless.MaxFileSize=10000KB
log4j.appender.headless.MaxBackupIndex=1
log4j.appender.headless.layout=org.apache.log4j.PatternLayout
log4j.appender.headless.layout.ConversionPattern=%5p (%d{HH:mm:ss,SSS}) - %m%n



#
# enable more specific logging according to the needs of the application
#
log4j.logger.com.iconclude.dharma.model.operations.ModelObjectValidationCache=WARN,iconclude
log4j.additivity.com.iconclude.dharma.model.operations.ModelObjectValidationCache=false
log4j.logger.com.iconclude.dharma.reports.dao=INFO,iconclude
log4j.additivity.com.iconclude.dharma.reports.dao=false
log4j.logger.com.iconclude.dharma.reports.LogAggregationParameters=WARN,iconclude
log4j.additivity.com.iconclude.dharma.reports.LogAggregationParameters=false
log4j.logger.com.iconclude.dharma.tapestry=WARN,iconclude
log4j.additivity.com.iconclude.dharma.tapestry=false
log4j.logger.com.iconclude.dharma.tapestry.components.ReportsBrowser=INFO,iconclude
log4j.additivity.com.iconclude.dharma.tapestry.components.ReportsBrowser=false
#log4j.logger.com.iconclude.dharma.tapestry.components.GuidedRepairPage=WARN,iconclude
#log4j.additivity.com.iconclude.dharma.tapestry.components.GuidedRepairPage=false
log4j.logger.com.iconclude.dharma.model.execution=INFO,iconclude
log4j.additivity.com.iconclude.dharma.model.execution=false
log4j.logger.com.iconclude.dharma.services=INFO,iconclude
log4j.additivity.com.iconclude.dharma.services=false
log4j.logger.com.iconclude.dharma.services.execution=INFO,iconclude
log4j.additivity.com.iconclude.dharma.services.execution=false
log4j.logger.com.iconclude.dharma.model.library=INFO,iconclude
log4j.additivity.com.iconclude.dharma.model.library=false
log4j.category.com.iconclude.dharma.model.library.hibernate=INFO,iconclude
log4j.additivity.com.iconclude.dharma.model.library.hibernate=false
log4j.category.com.iconclude.dharma.model.library.hibernate.QueuedHibernatePersistence=INFO,iconclu
de
log4j.additivity.com.iconclude.dharma.model.library.hibernate.QueuedHibernatePersistence=false
log4j.category.com.iconclude.dharma.model.library.hibernate.HibernateInterceptor=WARN,iconclude
log4j.additivity.com.iconclude.dharma.model.library.hibernate.HibernateInterceptor=false
log4j.logger.com.iconclude.dharma.tapestry=WARN,iconclude
```

```
log4j.additivity.com.iconclude.dharma.tapestry=false
log4j.logger.com.iconclude.dharma.tapestry.RCVisit=INFO,iconclude
log4j.additivity.com.iconclude.dharma.tapestry.RCVisit=false
log4j.logger.com.iconclude.dharma.tapestry.RCRunEngineHelper=INFO,iconclude
log4j.additivity.com.iconclude.dharma.tapestry.RCRunEngineHelper=false
log4j.logger.com.iconclude.dharma.model.library.search=INFO,iconclude
log4j.additivity.com.iconclude.dharma.model.library.search=false
log4j.logger.com.iconclude.dharma.app.SearchPanel=INFO,iconclude
log4j.additivity.com.iconclude.dharma.app.SearchPanel=false
log4j.logger.com.iconclude.dharma.services.discovery.RASRegistry=WARN,iconclude
log4j.additivity.com.iconclude.dharma.services.discovery.RASRegistry=false
log4j.logger.com.iconclude.dharma.app.debugging=INFO,iconclude
log4j.additivity.com.iconclude.dharma.app.debugging=false
log4j.logger.com.iconclude.dharma.runengine.impl=WARN,iconclude
log4j.additivity.com.iconclude.dharma.runengine.impl=false
log4j.logger.com.iconclude.dharma.runengine.registry=INFO,iconclude
log4j.additivity.com.iconclude.dharma.runengine.registry=false
log4j.logger.com.iconclude.dharma.commons.concurrent=INFO,iconclude
log4j.additivity.com.iconclude.dharma.commons.concurrent=false
log4j.logger.com.iconclude.dharma.model.execution.persistence=WARN,iconclude
log4j.additivity.com.iconclude.dharma.model.execution.persistence=false
log4j.logger.com.iconclude.dharma.commons.util.hibernate.OraDatasourceConnectionProvider=INFO,iconc
lude
log4j.additivity.com.iconclude.dharma.commons.util.hibernate.OraDatasourceConnectionProvider=false
log4j.logger.com.iconclude.dharma.model.security.RCUserRepository=INFO,iconclude
log4j.additivity.com.iconclude.dharma.model.security.RCUserRepository=false
log4j.logger.com.iconclude.dharma.scheduler=INFO,iconclude
log4j.additivity.com.iconclude.dharma.scheduler=false
log4j.logger.oracle.jdbc=ERROR,iconclude
log4j.additivity.oracle.jdbc=false
log4j.logger.oracle.ons=WARN,iconclude
log4j.additivity.oracle.ons=false


log4j.logger.SCRIPTLET=DEBUG,iconclude
log4j.additivity.SCRIPTLET=false
# log4j.category.EXECUTION_LOGGER=INFO,iconclude
# log4j.additivity.EXECUTION_LOGGER=false
# log4j.category.MODEL_LOGGER=INFO,iconclude
# log4j.additivity.MODEL_LOGGER=false
# log4j.category.BASIC_LOGGER=INFO,iconclude
# log4j.additivity.BASIC_LOGGER=false


#
# set up console logging
#
log4j.appender.iconclude=org.apache.log4j.ConsoleAppender
log4j.appender.iconclude.encoding=UTF-8
log4j.appender.iconclude.target=System.out
log4j.appender.iconclude.layout=org.apache.log4j.PatternLayout
# Pattern to output the caller's file name and line number (anything %F or %L is very expensive!).
# More patterns down below.
#log4j.appender.iconclude.layout.ConversionPattern=%-5p [%t] (%F:%L) %m%n
#log4j.appender.iconclude.layout.ConversionPattern=%5p [%t] (%F:%L) - %m%n
# pattern to output the category (last two elements of the classname).
#log4j.appender.iconclude.layout.ConversionPattern=%5p [%t] (%d{HH:mm:ss}) %c{2} - %m%n
# pattern to output the category with full package name.
log4j.appender.iconclude.layout.ConversionPattern=%5p [%t] (%d{HH:mm:ss,SSS}) %c - %m%n

#
```

```
# If you want a rolling file appender, this is the syntax...
#
#log4j.appender.iconclude=org.apache.log4j.RollingFileAppender
#log4j.appender.iconclude.File=logs/iConclude.log
#log4j.appender.iconclude.MaxFileSize=1000KB
#log4j.appender.iconclude.MaxBackupIndex=10
#log4j.appender.iconclude.layout=org.apache.log4j.PatternLayout
#log4j.appender.iconclude.layout.ConversionPattern=%p %t %c - %m%n
#log4j.appender.iconclude.layout.ConversionPattern=%5p [%t] (%d{HH:mm:ss,SSS}) %c - %m%n

##############################################################################
#
# Uncomment line below to enable LWSSO logging per:
# http://wiki.mercury.com/confluence/display/Arch/LW-SSO+UI+Integration+Release+2.0
#
##############################################################################

#log4j.logger.com.hp.sw.bto.ast.security=DEBUG
```

Appendix D

Universal CMDB `root.properties` Configuration File

```
#####################################################################
#                    - UCMDB root.properties Configuration file                    #
#####################################################################


def.file.max.size=5000KB
def.files.backup.count=10


log4j.rootCategory=WARN, error.appender, cef1

#set the CEF log4j appender ...
log4j.appender.cef1=com.hp.esp.arcsight.cef.appender.Log4jAppender
log4j.appender.cef1.deviceVendor=HP
log4j.appender.cef1.deviceProduct=CSA
log4j.appender.cef1.deviceVersion=4.5
log4j.appender.cef1.transportType=SYSLOG
log4j.appender.cef1.hostName=192.x.x.x
log4j.appender.cef1.port=515
log4j.appender.cef1.layout=org.apache.log4j.PatternLayout
log4j.appender.cef1.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n
log4j.appender.cef1.useCefHeader=true
log4j.appender.cef1.eventName=uCMDBEvent



#enable the following line (and disable the one above) to get per-thread full trace of all logs
#Warning! Extremely heavy log usage, enable only when actively debugging.
#Note: Commenting out all usages of cmdb.per.thread.appender releases the file handles and allows
deletion of the log files.

#log4j.rootCategory=TRACE, error.appender, cmdb.per.thread.appender

per.thread.appender=com.mercury.topaz.cmdb.shared.base.log.ThreadSpecificAppender
per.thread.file=${logs.dir}/threads/thread.log
per.thread.layout=org.apache.log4j.PatternLayout
per.thread.conversionpattern=%d - %m %n
per.thread.footer=----CLOSED-----
per.thread.restrictToCustomer=false
per.thread.customerIdToRestrictTo=1
per.thread.restrictToCallerApplication=false
per.thread.callerApplicationToRestrictTo=Dashboard
per.thread.prependCallerApplicationToMessage=false
per.thread.prependCallerApplicationToFilename=false
per.thread.prependCustomerIDToFilename=false



#######################################
### error.appender                 ##
#######################################
log4j.appender.error.appender=com.mercury.topaz.cmdb.shared.base.log.BetterRollingFileAppender
log4j.appender.error.appender.File=${logs.dir}/error.log
log4j.appender.error.appender.MaxFileSize=${def.file.max.size}
log4j.appender.error.appender.MaxBackupIndex=${def.files.backup.count}
log4j.appender.error.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.error.appender.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n
log4j.appender.error.appender.Threshold=WARN

#######################################
```

```
### cmdb.per.thread.appender          ##
#########################################
log4j.appender.cmdb.per.thread.appender=${per.thread.appender}
log4j.appender.cmdb.per.thread.appender.File=${per.thread.file}
log4j.appender.cmdb.per.thread.appender.layout=${per.thread.layout}
log4j.appender.cmdb.per.thread.appender.layout.ConversionPattern=${per.thread.conversionpattern}
log4j.appender.cmdb.per.thread.appender.Threshold=${per.thread.level}
log4j.appender.cmdb.per.thread.appender.additionalFooter=${per.thread.footer}
log4j.appender.cmdb.per.thread.appender.restrictToCustomer=${per.thread.restrictToCustomer}
log4j.appender.cmdb.per.thread.appender.customerIdToRestrictTo=${per.thread.customerIdToRestrictTo}
log4j.appender.cmdb.per.thread.appender.restrictToCallerApplication=${per.thread.restrictToCallerAp
plication}
log4j.appender.cmdb.per.thread.appender.callerApplicationToRestrictTo=${per.thread.callerApplicatio
nToRestrictTo}
log4j.appender.cmdb.per.thread.appender.prependCallerApplicationToMessage=${per.thread.prependCalle
rApplicationToMessage}
log4j.appender.cmdb.per.thread.appender.prependCallerApplicationToFilename=${per.thread.prependCall
erApplicationToFilename}
log4j.appender.cmdb.per.thread.appender.prependCustomerIDToFilename=${per.thread.prependCustomerIDT
oFilename}
```

Appendix E

Example `log4j.properties` file for the `idm-service.war` file.

```
Log4j.properties File
log4j.rootLogger=INFO, consoleAppender, jbossAppender, tomcatAppender, cef1

log4j.appender.consoleAppender=org.apache.log4j.ConsoleAppender
log4j.appender.consoleAppender.layout=org.apache.log4j.PatternLayout
log4j.appender.consoleAppender.layout.ConversionPattern=[%t] %-5p %c %x - %m%n

log4j.appender.jbossAppender=org.apache.log4j.RollingFileAppender
log4j.appender.jbossAppender.layout=org.apache.log4j.PatternLayout
log4j.appender.jbossAppender.layout.ConversionPattern=%d [%t] %-5p %c %x - %m%n
log4j.appender.jbossAppender.File=${jboss.server.log.dir}/hpcloud-idm-service.log
log4j.appender.jbossAppender.MaxFileSize=500KB
log4j.appender.jbossAppender.MaxBackupIndex=10

log4j.appender.tomcatAppender=org.apache.log4j.RollingFileAppender
log4j.appender.tomcatAppender.layout=org.apache.log4j.PatternLayout
log4j.appender.tomcatAppender.layout.ConversionPattern=%d [%t] %-5p %c %x - %m%n
log4j.appender.tomcatAppender.File=${catalina.home}/logs/hpcloud-idm-service.log
log4j.appender.tomcatAppender.MaxFileSize=500KB
log4j.appender.tomcatAppender.MaxBackupIndex=10

#set the CEF log4j appender ...
log4j.appender.cef1=com.hp.esp.arcsight.cef.appender.Log4jAppender
log4j.appender.cef1.deviceVendor=HP
log4j.appender.cef1.deviceProduct=CSA
log4j.appender.cef1.deviceVersion=4.5
log4j.appender.cef1.transportType=SYSLOG
log4j.appender.cef1.hostName=192.x.x.x
log4j.appender.cef1.port=515
log4j.appender.cef1.layout=org.apache.log4j.PatternLayout
log4j.appender.cef1.layout.ConversionPattern=%d [%t] (%F:%L) %-5p - %m%n
log4j.appender.cef1.useCefHeader=true
log4j.appender.cef1.eventName=IDM Event
```

Appendix F

Matrix OE Configuration File

```
#####################################################################
#                        Matrix OE - Configuration file                        #
#####################################################################


log4j.rootLogger=INFO, dailyFile, cef1

#set the CEF log4j appender ...
log4j.appender.cef1=com.hp.esp.arcsight.cef.appender.Log4jAppender
log4j.appender.cef1.deviceVendor=HP
log4j.appender.cef1.deviceProduct=CSA
log4j.appender.cef1.deviceVersion=4.5
log4j.appender.cef1.transportType=SYSLOG
log4j.appender.cef1.hostName=192.x.x.x
log4j.appender.cef1.port=515
log4j.appender.cef1.layout=org.apache.log4j.PatternLayout
log4j.appender.cef1.layout.ConversionPattern=%d [%-18t -%x] %-5p %C.%M - %m%n
log4j.appender.cef1.useCefHeader=true
log4j.appender.cef1.eventName=Matrix OEEvent



### direct log messages to file ###
log4j.appender.dailyFile=org.apache.log4j.RollingFileAppender
log4j.appender.dailyFile.File=logs/hpio-controller.log
log4j.appender.dailyFile.MaxFileSize=50MB
log4j.appender.dailyFile.MaxBackupIndex=20
log4j.appender.dailyFile.layout=org.apache.log4j.PatternLayout
log4j.appender.dailyFile.layout.ConversionPattern=%d [%-18t -%x] %-5p %C.%M - %m%n

### direct log messages to file ###
#log4j.appender.flow=org.apache.log4j.DailyRollingFileAppender
#log4j.appender.flow.File=logs/hpio-flow.log
#log4j.appender.flow.DatePattern='.'yyyy-MM-dd
#log4j.appender.flow.layout=org.apache.log4j.PatternLayout
#log4j.appender.flow.layout.ConversionPattern=%d [%-18t] %-5p %C.%M - %m%n
#log4j.additivity.flow=false

### audit log appender ###
#log4j.category.fileAuditLogger=auditLog
#log4j.appender.auditLog=org.apache.log4j.FileAppender
#log4j.appender.auditLog.File=logs/audit-log.log
#log4j.appender.auditLog.layout=org.apache.log4j.PatternLayout
#log4j.appender.auditLog.layout.ConversionPattern=[%d] - %m%n
#log4j.additivity.auditLog=false

### performance log appender ###
#log4j.category.filePerfLogger=perfLog
log4j.appender.performance=org.apache.log4j.FileAppender
log4j.appender.performance.File=logs/hpio-performance.log.csv
log4j.appender.performance.layout=org.apache.log4j.PatternLayout
log4j.appender.performance.layout.ConversionPattern=%d{ yyyy-MM-dd HH:mm:ss.SSS}, %-18t,%m%n
log4j.additivity.performance=false

### ioassist log appender ###
log4j.appender.ioassist=org.apache.log4j.FileAppender
log4j.appender.ioassist.File=logs/hpio-assist.log
log4j.appender.ioassist.layout=org.apache.log4j.PatternLayout
```

```
log4j.appender.ioassist.layout.ConversionPattern=%d{ yyyy-MM-dd HH:mm s.SSS}, %-18t,%m%n
log4j.additivity.ioassist=false

# Set hibernate log4j config
log4j.logger.org.hibernate.SQL=ERROR, dailyFile, cef1
log4j.logger.org.hibernate=ERROR
log4j.additivity.org.hibernate.SQL=false

# Set quartz log4j config
log4j.logger.org.quartz=INFO, dailyFile, cef1

# Set spring config
log4j.logger.org.springframework=WARN, dailyFile, cef1

# Set per package options
log4j.category.com.hp.hpio.nbapi.servlet=WARN

# Set controller config
log4j.category.com.hp.hpio.controller=INFO
log4j.category.com.hp.hpio.controller.wrapper=INFO
log4j.category.com.hp.hpio.controller.manager.allocation=INFO
log4j.category.com.hp.hpio.controller.manager.resource.impl=INFO
log4j.category.com.hp.hpio.controller.policy=INFO

# Set sbapi config
log4j.category.com.hp.hpio.sbapi=INFO

# SOAP for APIs, supporting services
# Warning: When the below value is set to DEBUG, passwords in clear text may be logged.
# DEBUG should be used by support only, and then with caution.
log4j.category.org.apache.axis=WARN

# VMM
log4j.category.com.hp.mx.vmm=WARN

#controller performance logger
log4j.category.com.hp.hpio.common.performance=INFO, performance
#ioassist logger
log4j.category.com.hp.hpio.ioassist=INFO, ioassist
```

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