Micro Focus Security ArcSight Connectors

SmartConnector for Apache Tomcat File

Configuration Guide

October 22, 2018

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Revision History

Date	Description
10/04/2018	Added versions 8 and 9, new Version parameter added to "Connector Setup"
10/17/2017	Added encryption parameters to Global Parameters.
11/30/2016	Updated installation procedure for setting preferred IP address mode.
02/14/2014	Added the "Log Rotation - File Name Pattern" section.
11/15/2013	First edition of this Configuration Guide.

SmartConnector for Apache Tomcat File

This guide provides information for installing the SmartConnector for Apache Tomcat File and configuring the device for event collection. This SmartConnector is supported on the Linux platform. Apache Tomcat version 7.0 is supported.

Product Overview

Tomcat is an application server from the Apache Software Foundation that executes Java servlets and renders Web pages that include Java Server Page coding. The Apache Tomcat Server is developed and maintained by an open community of developers under the auspices of the Apache Software Foundation.

Configuration

For information on configuring Apache Tomcat to send events to the ArcSight SmartConnector, see: http://tomcat.apache.org/tomcat-7.0-doc/logging.html#Documentation_references

Make sure that you are using Apache's default log formats.

Install the SmartConnector

The following sections provide instructions for installing and configuring your selected SmartConnector.

Prepare to Install Connector

Before you install any SmartConnectors, make sure that the ArcSight products with which the connectors will communicate have already been installed correctly (such as ArcSight ESM or ArcSight Logger).

For complete product information, read the *Administrator's Guide* as well as the *Installation and Configuration* guide for your ArcSight product before installing a new SmartConnector. If you are adding a connector to the ArcSight Management Center, see the *ArcSight Management Center Administrator's Guide* for instructions, and start the installation procedure at "Set Global Parameters (optional)" or "Select Connector and Add Parameter Information."

Before installing the SmartConnector, be sure the following are available:

- Local access to the machine where the SmartConnector is to be installed
- Administrator passwords

Install Core Software

Unless specified otherwise at the beginning of this guide, this SmartConnector can be installed on all ArcSight supported platforms; for the complete list, see the *SmartConnector Product and Platform Support* document, available from the Micro Focus SSO and Protect 724 sites.

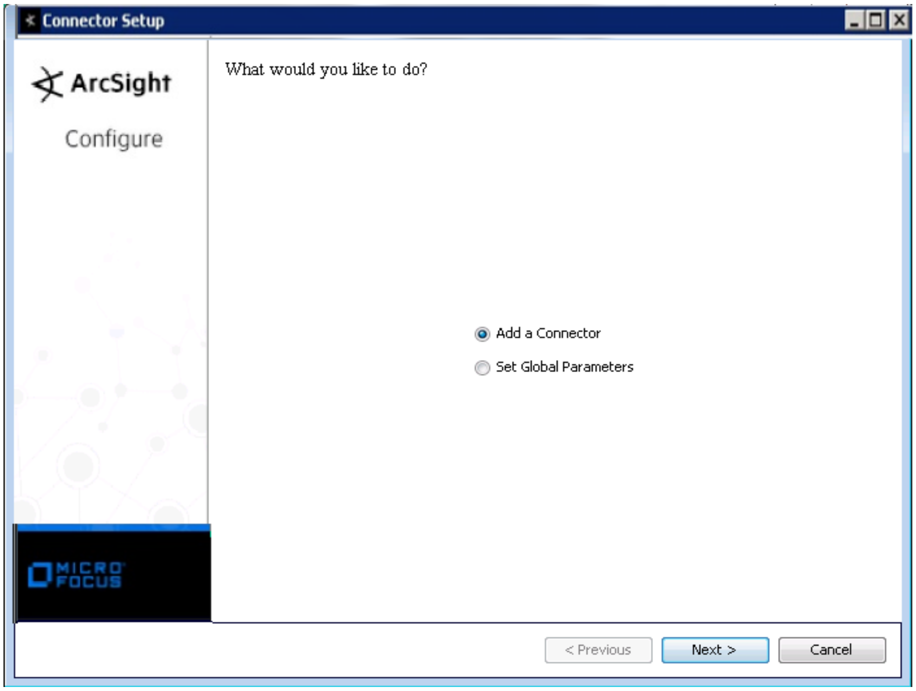
1 Download the SmartConnector executable for your operating system from the Micro Focus SSO site.

2 Start the SmartConnector installation and configuration wizard by running the executable.

Follow the wizard through the following folder selection tasks and installation of the core connector software:

Introduction
Choose Install Folder
Choose Shortcut Folder
Pre-Installation Summary
Installing...

3 When the installation of SmartConnector core component software is finished, the following window is displayed:



What would you like to do?

● Add a Connector
○ Set Global Parameters

Set Global Parameters (optional)

If you choose to perform any of the operations shown in the following table, do so before adding your connector. You can set the following parameters:

Parameter	Setting

Parameter	Setting
FIPS mode	Select 'Enabled' to enable FIPS compliant mode. To enable FIPS Suite B Mode, see the SmartConnector User Guide under "Modifying Connector Parameters" for instructions. Initially, this value is set to 'Disabled'.
Remote Management	Select 'Enabled' to enable remote management from ArcSight Management Center. When queried by the remote management device, the values you specify here for enabling remote management and the port number will be used. Initially, this value is set to 'Disabled'.
Remote Management Listener Port	The remote management device will listen to the port specified in this field. The default port number is 9001.
Preferred IP Version	When both IPv4 and IPv6 IP addresses are available for the local host (the machine on which the connector is installed), you can choose which version is preferred. Otherwise, you will see only one selection. The initial setting is IPv4.

The following parameters should be configured only if you are using Micro Focus SecureData solutions to provide encryption. See the *Micro Focus SecureData Architecture Guide* for more information.

Parameter	Setting
Format Preserving Encryption	Data leaving the connector machine to a specified destination can be encrypted by selecting 'Enabled' to encrypt the fields identified in 'Event Fields to Encrypt' before forwarding events. If encryption is enabled, it cannot be disabled. Changing any of the encryption parameters again will require a fresh installation of the connector.
Format Preserving Policy URL	Enter the URL where the Micro Focus SecureData Server is installed.
Proxy Server (https)	Enter the proxy host for https connection if any proxy is enabled for this machine.
Proxy Port	Enter the proxy port for https connection if any proxy is enabled for this machine.
Format Preserving Identity	The Micro Focus SecureData client software allows client applications to protect and access data based on key names. This key name is referred to as the identity. Enter the user identity configured for Micro Focus SecureData.
Format Preserving Secret	Enter the secret configured for Micro Focus SecureData to use for encryption.
Event Fields to Encrypt	Recommended fields for encryption are listed; delete any fields you do not want encrypted and add any string or numeric fields you want encrypted. Encrypting more fields can affect performance, with 20 fields being the maximum recommended. Also, because encryption changes the value, rules or categorization could also be affected. Once encryption is enabled, the list of event fields cannot be edited.

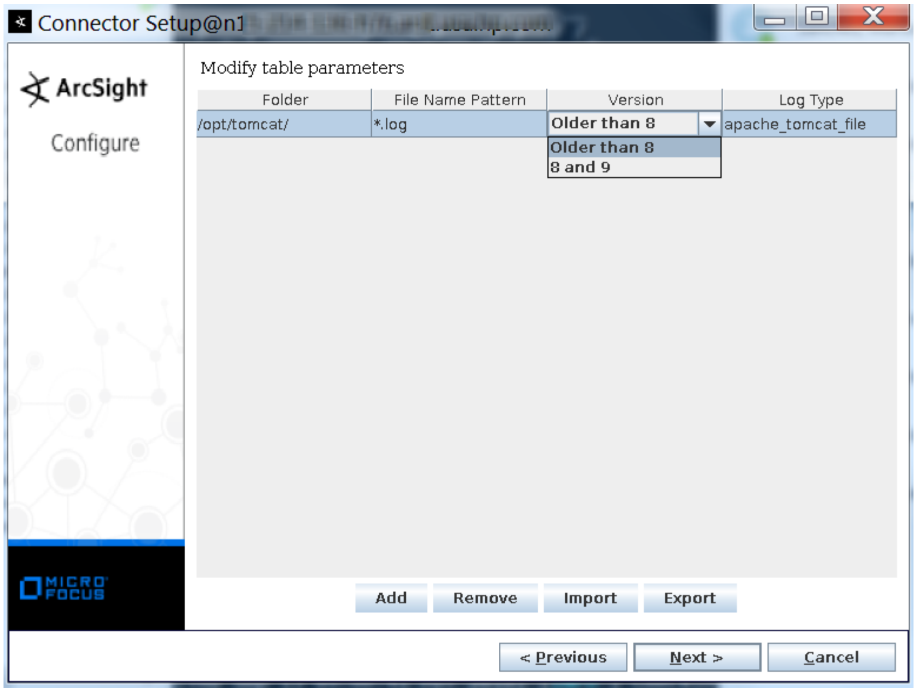
After making your selections, click **Next**. A summary screen is displayed. Review the summary of your selections and click **Next**. Click **Continue** to return to proceed with "Add a Connector" window. Continue the installation procedure with "Select Connector and Add Parameter Information."

Select Connector and Add Parameter Information

1. Select **Add a Connector** and click **Next**. If applicable, you can enable FIPS mode and enable remote management later in the wizard after SmartConnector configuration.

2. Select **Apache Tomcat File** and click **Next**.

3. Enter the required SmartConnector parameters to configure the SmartConnector, then click **Next**.



Modify table parameters

Folder	File Name Pattern	Version	Log Type
/opt/tomcat/	*.log	Older than 8	apache_tomcat_file

Older than 8
8 and 9

<table>
<tr><th>Parameter</th><th>Description</th></tr>
<tr><td>Folder</td><td>The absolute path to the location of the log files, such as 'c:\Program Files\Apache Software Foundation\Apache2.2\logs\' on a Windows platform) or '/var/log/apache/' on a UNIX platform.</td></tr>
<tr><td>File Name Pattern</td><td>The log file name ('filename.2013-*.log') has three parts:
- Part 1: ('filename') is the file
- Part 2: ('2013_*') is the date
- Part 3: ('.log' or '.txt') is the file type
- For example: 'apache_tomcat_file.2013-11-15.log'; or 'catalina.2013-11-15.txt'; or 'localhost_access_log.2013-10-10.txt'
See the section "Log Rotation - File Name Pattern" for details on log file rotation.</td></tr>
<tr><td>Log Type</td><td>Select the appropriate option from the drop-down list: 'apache_tomcat_file' or 'apache_tomcat_access_file':
- Select apache_tomcat_access_file if the file name includes localhost_access and has the following event format: “%h %l %u %t "%r" %s %b”. An example of the apache_tomcat_access_file would be the file name created by the default setting. For example: localhost_access_log.2013-10-10.txt (Note the file type is .txt, not .log.)
For example:
10.10.3.108 - tomcat [11/Apr/2012:16:43:24 -0700] "GET /manager/status HTTP/1.1" 200 5636
- Select apache_tomcat_file if the file name includes catalina, host-manager, localhost, and manager. Also, an event has two lines. For example:
+ The first line maps to regex: \\w{3} \\d+, \\d+ \\d+:\\d+:\\d+ \\w+ \\S+.*
+ The second line maps to regex: (ALL|FINEST|FINER|FINE|CONFIG|INFO|WARNING|SEVERE):.*
For example:
Apr 11, 2012 4:43:15 PM org.apache.coyote.AbstractProtocol init
INFO: Initializing ProtocolHandler ["ajp-bio-8009"]
NOTE: Click Add again to add additional log types. Folder paths can be changed too.</td></tr>
</table>

Parameter	Description
Version	Select the appropriate option from the drop-down list: 'Older than 8' or '8 and 9'. If the Log version is older than 8, select 'Older than 8'. If Log version is 8 and 9, select '8 and 9'.

Select a Destination

1 The next window asks for the destination type; select a destination and click **Next**. For information about the destinations listed, see the *ArcSight SmartConnector User Guide*.

2 Enter values for the destination. For the ArcSight Manager destination, the values you enter for **User** and **Password** should be the same ArcSight user name and password you created during the ArcSight Manager installation. Click **Next**.

3 Enter a name for the SmartConnector and provide other information identifying the connector's use in your environment. Click **Next**. The connector starts the registration process.

4 If you have selected ArcSight Manager as the destination, the certificate import window for the ArcSight Manager is displayed. Select **Import the certificate to the connector from destination** and click **Next**. (If you select **Do not import the certificate to connector from destination**, the connector installation will end.) The certificate is imported and the **Add connector Summary** window is displayed.

Complete Installation and Configuration

1 Review the **Add Connector Summary** and click **Next**. If the summary is incorrect, click **Previous** to make changes.

2 The wizard now prompts you to choose whether you want to run the SmartConnector as a stand-alone process or as a service. If you choose to run the connector as a stand-alone process, select **Leave as a standalone application**, click **Next**, and continue with step 5.

3 If you chose to run the connector as a service, with **Install as a service** selected, click **Next**. The wizard prompts you to define service parameters. Enter values for **Service Internal Name** and **Service Display Name** and select **Yes** or **No** for **Start the service automatically**. The **Install Service Summary** window is displayed when you click **Next**.

4 Click **Next** on the summary window.

5 To complete the installation, choose **Exit** and Click **Next**.

For instructions about upgrading the connector or modifying parameters, see the *SmartConnector User Guide*.

Run the SmartConnector

SmartConnectors can be installed and run in stand-alone mode, on Windows platforms as a Windows service, or on UNIX platforms as a UNIX daemon, depending upon the platform supported. On Windows platforms, SmartConnectors also can be run using shortcuts and optional Start menu entries.

If the connector is installed in stand-alone mode, it must be started manually and is not automatically active when a host is restarted. If installed as a service or daemon, the connector runs automatically when the host is restarted. For information about connectors running as services or daemons, see the *ArcSight SmartConnector User Guide*.

To run all SmartConnectors installed in stand-alone mode on a particular host, open a command window, go to `$ARCSIGHT_HOME\current\bin` and run: `arcsight connectors`

To view the SmartConnector log, read the file `$ARCSIGHT_HOME\current\logs\agent.log`; to stop all SmartConnectors, enter `Ctrl+C` in the command window.

Device Event Mapping to ArcSight Fields

The following section lists the mappings of ArcSight data fields to the device's specific event definitions. See the *ArcSight Console User's Guide* for more information about the ArcSight data fields.

Apache Tomcat File Mappings to ArcSight ESM Fields

ArcSight ESM Field	Device-Specific Field
Connector (Agent) Severity	High = SEVERE, Medium = WARNING, Low = INFO, CONFIG, FINE, FNER, FINEST, ALL
Destination Host Name	hostname
Device Action	action
Device Custom Number 1	Process Time
Device Custom Number 2	Server Startup Time
Device Custom String 1	Packet Name
Device Custom String 2	Class Name
Device Custom String 3	Servlet Container
Device Custom String 4	Catalina Type
Device Custom String 5	Protocol Handler
Device Custom String 6	Servlet Engine
Device Event Class ID	message
Device Product	'Tomcat'
Device Receipt Time	Timestamp(DateTime,"MMM dd, yyyy HH:mm:ss a")
Device Severity	severity
Device Vendor	'Apache'
File Path	filePath
FileName	fileName
Message	MessageContent
Name	message

Apache Access File Mappings to ArcSight ESM Fields

ArcSight ESM Field	Device-Specific Field
Application Protocol	http
Connector (Agent) Severity	High = 400..599, Medium = 300..399, Low = 0..299
Destination Process Name	'apache'
Device Custom IPv6 Address 2	Source IPv6 Address
Device Custom Number 1	_safeToLong(Token12)
Device Custom String 3	Length
Device Custom String 4	Referer
Device Custom String 5	Token13
Device Event Class ID	ReturnCode
Device Process Name	'apache'
Device Product	'Tomcat'
Device Receipt Time	Date
Device Severity	ReturnCode
Device Vendor	'Apache'
Name	message
Request Client Application	UserAgent
Request Method	Method
Request URL	URL
Source Address	One of Address(SourceHost)
Source User ID	UserID
Transport Protocol	TCP

Apache Tomcat File Version 8 and 9 Mappings to ArcSight ESM Fields

ArcSight ESM Field	Device-Specific Field
Connector (Agent) Severity	High = SEVERE, Medium = WARNING, Low = INFO, CONFIG, FINE, FNER,FINEST, ALL
Destination Host Name	hostname
Device Action	Action
Device Custom Number 1	Process Time
Device Custom Number 2	Server Startup Time
Device Custom String 1	Packet Name
Device Custom String 2	Class Name
Device Custom String 3	Servlet Container
Device Custom String 4	Thread Name
Device Custom String 5	Protocol Handler
Device Custom String 6	Servlet Engine
Device Product	'Tomcat'
Device Receipt Time	Timestamp(DateTime,"MMM dd, yyyy HH:mm:ss a")
Device Severity	Severity
Device Vendor	'Apache'
Message	MessageContent

Log Rotation - File Name Pattern

You can use the File Name Pattern parameter to get data rotation. A typical scenario could be, the device writes to xyz.timestamp.log on a daily basis. At a specified time, the device creates a new daily log and begins to write to it. The connector detects the new log and terminates the reader thread to the previous log after processing is complete. The connector then creates a new reader thread to the new xyz.timestamp.log and begins processing that file. To enable this log rotation, set the `File Name Pattern` parameter to a date format, as shown in the example below:

```
FileName.'yyyy-MM-dd'.FileSuffix
```

Where for a data file name of `foo.2013-09-23.log`

```
fileName = foo
'yyyy-mm-dd' = current date
FileSuffix = .log
```