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Enterprise

# **HPE Security ArcSight Connectors**

SmartConnector for IBM Tivoli Access  
Manager File

Configuration Guide

November 30, 2016

## Configuration Guide

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## Revision History

Date	Description
11/30/2016	Updated installation procedure for setting preferred IP address mode.
05/15/2013	Added support for version 6.1.
05/15/2012	Added new installation procedure.
02/11/2010	Added support for FIPS Suite B and CEF File transport.
06/30/2009	Global update to installation procedure for FIPS support.

## SmartConnector for IBM Tivoli Access Manager File

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This guide provides information for installing the SmartConnector for IBM Tivoli Access Manager File for event collection. IBM Tivoli Access Manager versions 5.1 and 6.1 are supported.

### Product Overview

IBM Tivoli Access Manager (TAM) is an authentication and authorization solution for corporate Web, client/server, and existing applications. Tivoli Access Manager lets you control user access to protected information and resources and supports authentication, authorization, data security, and resource management capabilities.

### Configuration

#### Assumptions

Installation instructions for Tivoli Access Manager can be found in the *IBM Tivoli Access Manager for e-business Web Security Installation Guide* for your supported version.

ArcSight assumes that IBM's recommendations have been followed in deploying the IBM Tivoli Access Manager system as described in this section.

The following servers have been installed on separate, standalone servers:

- Registry Server
- Policy Server
- WebSeal
- WebPortal

The following prerequisite software products are installed on these servers:

- Global Security Kit
- IBM JRE
- IBM Tivoli Directory

The following products (which can be installed together in one machine) have been installed:

- Authorization Server
- ADK System
- Java Run Time Environment
- Policy Proxy Server

- Run Time System
- Web Portal Manager
- WebSEAL

## Event Capturing and Logging

You can capture events for logging and auditing by using the Tivoli Access Manager event logging facility. Event logging provides a structured hierarchy for gathering messages for logging and auditing purposes.

The following configuration tasks are required for each audit trail file:

- 1 Enable auditing.
- 2 Specify type of audit event.
- 3 Specify audit file location.
- 4 Specify audit file size.
- 5 Specify file flush interval.

Configuration steps for the first three tasks are described in the following section. Steps for version 5.1 are provided; steps for version 6.1 may vary. See your IBM Tivoli Access Manager documentation for more information. Configuration steps for the last two tasks are described in "Maintaining Audit Log Files" later in this guide.

## Logging Events

This section provides instructions for enabling auditing, sending events to a log file, and changing the message log files location.

### Enabling Auditing

To configure Tivoli Access Manager server audit trail files:

- 1 Edit the appropriate server configuration file. Each server provides its own stanza entry values in its configuration file.
- 2 Locate the `[aznapi-configuration]` stanza.
- 3 Enable auditing by specifying **yes** or **true**: `logaudit = {yes|true}`. By default, auditing is disabled. When enabled, the `auditcfg` and `auditlog` stanza entries are also required.
- 4 Select the component-specific type of audit records that you want to capture:

```
auditcfg = azn
#auditcfg = authn
#auditcfg = mgmt
```

By default, when auditing is enabled for a process with no configured audit tags, all auditable events are captured. Another stanza entry is `auditcfg=http`, which is used for components other than the Base, such as WebSEAL. Each server provides its own value in its configuration file.

- 5 Specify the name and location of the audit trail file for the local client:

```
auditlog = fully_qualified_path
```

If no location and name are supplied, auditing will not be performed.

- 6 Save and exit the configuration file.

## Sending Events to a Log File

To configure Tivoli Access Manager to send event records to a log file:

- 1 Edit the appropriate server configuration file. Each server provides its own stanza entry values in its configuration file. Locate the `[aznapi-configuration]` stanza.
- 2 Specify that the category is to send event records to a log file using the format `category:file`. For example, a category might be to audit authorization events (`audit.azn`):  
`logcfg=audit.azn:file`
- 3 Specify the log file location: `path=fully_qualified_path`. The default directories are:

UNIX `/opt/PolicyDirector/log`

Windows `C:\Program Files\Tivoli\Policy Director\log`

The default file name depends upon the type of logging being performed, such as `audit.log`.

- 4 Specify the log file ID: `log_id=logid`

Use the `log_id` option to set the log file identifier (ID) explicitly; otherwise, it is given a default value. If the `path=` option is specified, the default value is the configured path name. If `path=` is not specified, the log ID defaults to the domain component of the event category being captured. For example, `logcfg = audit.azn:file` implies `log_id=audit`.

## Changing the Message Log Files Location

To change the directory for the Tivoli Access Manager server-specific message log files:

- 1 Go to the directory where the routing files are located. The default directory location is one of the following:
  - a UNIX: `/opt/PolicyDirector/etc/`
  - b Windows: `C:\Program Files\Tivoli\Policy Director\etc\`
- 2 Select one of the appropriate server-related routing files to edit:

`pdmgrd_routing` for the Tivoli Access Manager Policy Server

`pdacld_routing` for the Tivoli Access Manager authorization server

pdmgrproxyd\_routing for the Tivoli Access Manager policy proxy server  
routing for Tivoli Access Manager general serviceability information

- 3 Edit the file and locate the section entitled [Sequential Logging](#).
- 4 Change the default location for the message log files, as appropriate. In the following proxy server (pdmgrd) example, you can change from the default *routing\_path* installation location of [/var/PolicyDirector/log/](#):

```
FATAL:STDOUT:-;UTF8FILE:/var/PolicyDirector/log/msg_pdmrd_utf8.log
:644:ivmgr:ivmgr
ERROR:STDOUT:-;UTF8FILE:/var/PolicyDirector/log/msg_pdmgrd_utf8.log
:644:ivmgr:ivmgr
WARNING:STDOUT:-;UTF8FILE:/var/PolicyDirector/log/msg_pdmrd_utf8.log
:644:ivmgr:ivmgr
NOTICE:STDOUT:-;UTF8FILE:/var/PolicyDirector/log/msg_pdmgrd_utf8.log
:644:ivmgr:ivmgr
#NOTICE_VERBOSE:STDOUT:-;/var/PolicyDirector/log/
msg_pdmgrd_utf8.log:644:ivmgr:ivmgr
```

To a different directory location of /myTAMlogs/:

```
FATAL:STDOUT:-;UTF8FILE:/myTAMlogs/msg_pdmgrd_utf8.log:644:ivmgr:ivmgr
ERROR:STDOUT:-;UTF8FILE:/myTAMlogs/msg_pdmgrd_utf8.log:644:ivmgr:ivmgr
WARNING:STDOUT:-;UTF8FILE:/myTAMlogs/msg_pdmgrd_utf8.log:644:ivmgr:ivmgr
NOTICE::STDOUT:-;UTF8FILE:/myTAMlogs/msg_pdmgrd_utf8.log:644:ivmgr:ivmgr
#NOTICE_VERBOSE:STDOUT:-;/myTAMlogs/msg_pdmgrd_utf8.log
:644:ivmgr:ivmgr
```

- 5 Exit and save the routing file.

Remember to prune log files periodically to prevent them from becoming too large.

## Maintaining Audit Log Files

To maintain audit log files:

- 1 Edit the appropriate server configuration file.
- 2 Locate the [\[aznapi-configuration\]](#) stanza.
- 3 Specify the maximum size in bytes of the audit log file before the rollover occurs:

```
logsize = {0/neg_number_bytes/number_bytes}
```

The allowable range is from 1 byte to 2 megabytes. The default value is 2000000. Zero indicates that no rollover occurs and no rollover file is created. Any negative number indicates that the logs are rolled over daily, regardless of the size.

If the audit log file reaches its threshold, the original audit log file will be renamed and a new log file with the original name will be created.

- 4 Specify the frequency for flushing audit file buffers. This value will be the number of seconds allowed between log flushes. The valid range is from 1 second to 6 hours.

```
logflush = number_seconds
```

The default value is 20. If you specify a negative value, the absolute value is used to determine when the audit trail files are flushed.

- 5 Save and exit the configuration file.

The following example shows the stanza entries needed to specify 2000000 bytes as the maximum size for the log file and 20 seconds between the flushing of log file buffers:

```
[aznapi-configuration]
logsize = 2000000
logflush = 20
```

## Configuring HTTP Logging using Event Logging

HTTP logging using event logging can be configured in the `[aznapi-configuration]` stanza of the server configuration file. Use the `logcfg` event logging parameter to define one or more log agents (loggers) that gather a specific category of log information from the event pool and direct this information to a destination:

```
[aznapi-configuration] logcfg = category:{stdout|stderr|file|pipe|remote}
[ ,param[=value]] [ ,param[=value]]...
```

The values for category that are appropriate for HTTP logging include:

- `http`: All HTTP logging information
- `http.clf`: HTTP request information in common log format
- `http.ref`: HTTP Referer header information
- `http.agent`: HTTP User\_Agent header information
- `http.cof`: The NCSA combined format captures HTTP request information (with time stamp) and appends the quoted referer and agent strings to the standard common log format.

## Compatibility with Legacy Auditing Settings

The following log agent configurations are enabled when the legacy HTTP logging parameters are enabled. The log agent configurations accept the values of the `requests-file`, `referers-file`, `agents-file`, `flush-time`, and `max-size` parameters from the server configuration file `[logging]` stanza:

`request.log` (common log format):

```
logcfg = http.clf:file path=<requests-file>,flush=<flush-time>, \
rollover=<max-size>,log=clf,buffer_size=8192,queue_size=48
```

referer.log:

```
logcfg = http.ref:file path=<referers-file>,flush=<flush-time>, \
rollover=<max-size>,log=ref,buffer_size=8192,queue_size=48
```

agent.log (common log format):

```
logcfg = http.agent:file path=<agents-file>,flush=<flush-time>, \
rollover=<max-size>,log=agent,buffer_size=8192,queue_size=48
```

Because legacy HTTP logging is configured in a different stanza ([\[logging\]](#)) than event logging configuration ([\[aznapi-configuration\]](#)), it is possible to have two duplicate entries for each event appear in a log file when both logging mechanisms are enabled.

## Install the SmartConnector

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



Connector Appliance/ArcSight Management Center supports mounting for Network File System (NFS) and CIFS (Windows) shares. When you install this connector on one of these devices, establish a CIFS mount on the device before adding the connector. Provide this share name during connector configuration. For more information, see **Remote File Systems** in the Connector Appliance or ArcSight Management Center Administrator's Guide.

## 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). This configuration guide takes you through the installation process with **ArcSight Manager (encrypted)** as the destination.

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 HPE SSO and Protect 724 sites.

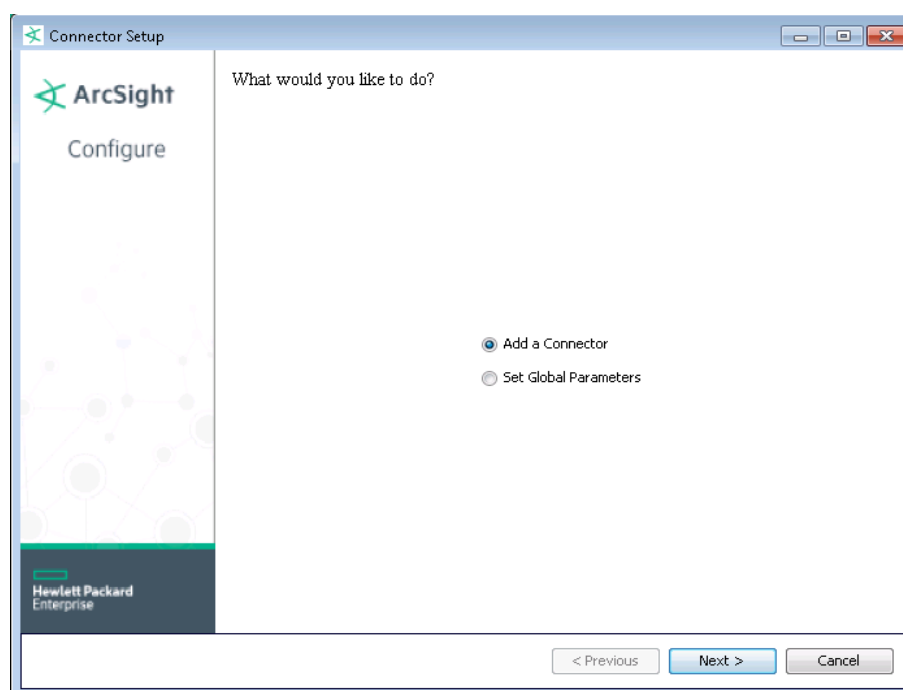


- 1 Download the SmartConnector executable for your operating system from the HPE SSO site.
- 2 Start the SmartConnector installation and configuration wizard by running the executable.

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:



## Set Global Parameters (optional)

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

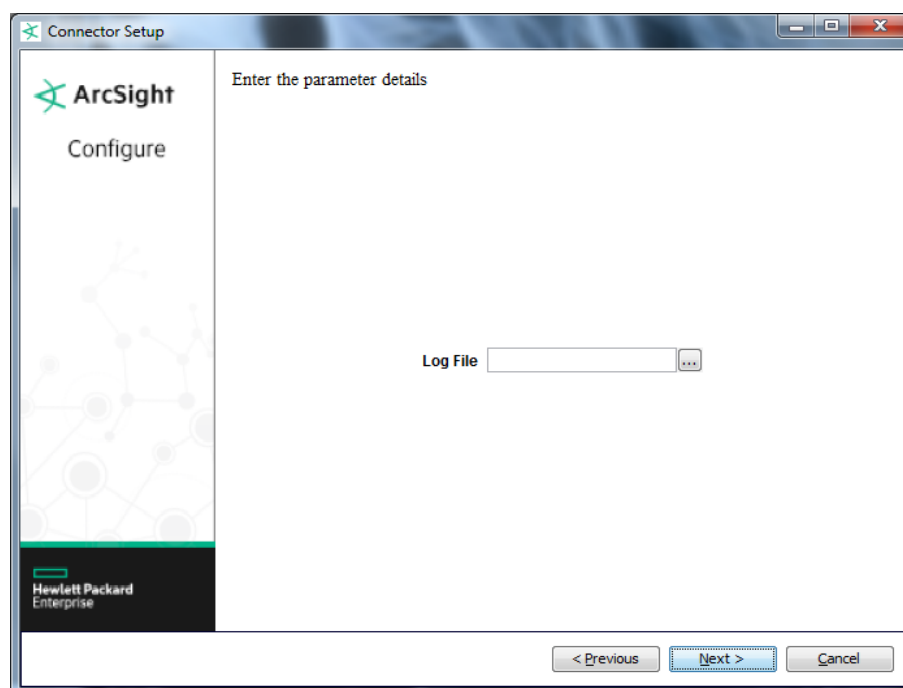
Global Parameter	Setting
Set FIPS mode	Set to 'Enable' to enable FIPS compliant mode. To enable FIPS Suite B Mode, see the SmartConnector User Guide under "Modifying Connector Parameters" for instructions. Initially, this value is set to 'Disable'.
Set Remote Management	Set to 'Enable' to enable remote 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 'Disable'.
Remote management listener port	The remote management device will listen to the port specified in this field. The default port number is 9001.

Global Parameter	Setting
Preferred IP Version	If 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. When both values are present, the initial setting is 'IPv4'.

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 the "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 **IBM Tivoli Access Manager File** and click **Next**.
- 3 Enter the required SmartConnector parameters to configure the SmartConnector, then click **Next**.



Parameter	Description
Log File	Full path to the log file.

## Select a Destination

- 1 The next window asks for the destination type; make sure **ArcSight Manager (encrypted)** is selected and click **Next**. (For information about this destination or any of the other destinations listed, see the *ArcSight SmartConnector User Guide*.)
- 2 Enter values for the **Manager Host Name**, **Manager Port**, **User** and **Password** required parameters. This is 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 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 some SmartConnectors, a system restart is required before the configuration settings you made take effect. If a **System Restart** window is displayed, read the information and initiate the system restart operation.



Save any work on your computer or desktop and shut down any other running applications (including the ArcSight Console, if it is running), then shut down the system.

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.

### IBM Tivoli Access Manager 6.1 Mappings

ArcSight ESM Field	Device-Specific Field
Agent (Connector) Severity	High = 400..599, Medium = 300..399, Low = 100..299
Application Protocol	service
Destination Address	address
Device Custom IPv6 Address 3	address (Destination IPv6 Address)
Device Custom Number 1	bytes
Device Custom String 1	serviceVersion (Http Version)
Device Event Category	'LegacyLog'
Device Event Class ID	one of (returnCode, 'Attempted URL request')
Device Product	'Tivoli Access Manager'
Device Receipt Time	date
Device Severity	returnCode
Device Vendor	'IBM'
Name	'TAM REQUEST'
Reason	returnCode
Request Client Application	useragent
Request Method	method
Request URL	request
Source User ID	authuser
Transport Protocol	'TCP'

### IBM Tivoli Access Manager 5.1 Mappings

ArcSight ESM Field	Device-Specific Field
Application Protocol	service
Destination Address	Address
Device Custom Number 1	Bytes
Device Custom String 1	Http Verion
Device Custom String 2	UserAgent

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<b>ArcSight ESM Field</b>	<b>Device-Specific Field</b>
Device Event Category	LegacyLog
Device Event Class Id	returnCode
Device Product	Tivoli Access Manager
Device Receipt Time	Date
Device Severity	returnCode
Device Vendor	IBM
Name	TAM REQUEST
Request Method	method
Request URL	Request
Source User ID	authuser
Transport Protocol	TCP

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