

# **SmartConnector™ Configuration Guide for**

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ArcSight™ Forwarding Connector  
v5.1.7.6154.0 for ArcSight ESM™ - 32-bit  
v5.1.7.6151.0 for ArcSight ESM™ - 64 bit

February, 2012



## SmartConnector™ Configuration Guide for ArcSight™ Forwarding Connector

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### Revision History

Date	Product Version	Description
02/15/2012	5.1.7.6154.0 (32-bit)	Added support for 64-bit JVM.
	5.1.7.6151.0 (64-bit)	
11/15/2011	5.1.7.6085.0	SNMP Interceptor policies for HP OM and HP OMi are decoupled from the connector.
09/27/2011	5.1.5.5973.0	Added support for McAfee ePO 4.6.
08/15/2011	5.1.5.5973.0	Added support for JRE 1.6.0_26.
06/20/2011	5.1.4.5941.0	Added support for HP OMi.
05/19/2011		Restructured guide to include multiple chapters, added instructions for using multiple destinations and added a chapter on HP OM configuration.
12/15/2010		Added supported versions for McAfee ePO (4.0 and 4.5), removed build number from the guide, and fixed reported document bugs.
05/26/2010		Updated information on upgrades and forwarding base events.
01/18/2010		Merged FIPS and non-FIPS information.
12/29/2009		Updated screen shots to reflect the current UI.

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### Contact Information

Phone	1-866-535-3285 (North America) +44 (0)870 141 7487 (EMEA)
Support Web Site	<a href="http://support.openview.hp.com">http://support.openview.hp.com</a>
Protect 724 Community	<a href="https://protect724.arcsight.com">https://protect724.arcsight.com</a>

# Contents

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<b>Chapter 1: Overview and Installation</b>	<b>7</b>
Product Overview	7
The ArcSight ESM Source Manager	7
Sending Events to an ArcSight ESM Destination Manager	8
Sending Events to ArcSight Logger	8
Sending Events to a Non-ESM Location	8
Standard Installation Procedures	9
Verifying that ArcSight ESM is Correctly Installed	9
Assigning Privileges on the ESM Source Manager	10
Forwarding Correlation Events	11
Increasing the FileStore size (Enhanced version only)	13
Installing the Forwarding Connector	14
Uninstalling a Forwarding Connector	15
Upgrading a Forwarding Connector	15
Reverting to a Previous Version of the Forwarding Connector	16
<b>Chapter 2: Configuration for Forwarding Events</b>	<b>17</b>
Forwarding Events to an ArcSight Manager	17
Forwarding Events to ArcSight Logger	21
Forwarding Events to NSP Device Poll Listener	22
Forwarding CEF Syslog Events	23
Forwarding Events to a CSV File	24
Forwarding Events to McAfee ePolicy Orchestrator	25
Installing the Microsoft SQL Server 2005 Driver for JDBC	27
ArcSight Event to McAfee CEF Mappings	27
Configuring Multiple Destinations	28
<b>Chapter 3: Configuration for HP Operations Manager and HP Operations Manager i</b>	<b>31</b>
The ArcSight ESM Source Manager	32
Supported Versions of HP OM and HP OMi	32
HP OM and HP OMi and Correlation Events	32
Installing the Connector	32
Creating an SNMP Interceptor Policy for HP Operations Manager (HP OM)	36

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Uploading Interceptor Template .....	37
Deploying the Policy .....	37
Creating an SNMP Interceptor Policy for HP Operations Manager i (HP OMi) .....	37
Uploading Interceptor Template .....	37
Troubleshooting Tips .....	37
Duplicate Events (for HP OMi) .....	37
Dropped Events .....	38
Adjusting the Event Processing Rate for HP OM and HP OMi .....	38

<b>Appendix A: Using the Forwarding Connector in FIPS mode .....</b>	<b>41</b>
What is FIPS? .....	41
ArcSight ESM Installation .....	41
FIPS-Enabled Forwarding Connector Installation .....	42
Enable FIPS Suite B Support .....	47
Using Logger in FIPS Mode .....	47

# Chapter 1

## Overview and Installation

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This chapter provides information for installing an ArcSight Forwarding Connector for event collection from an ArcSight Manager installation. The following topics are discussed.

[“Product Overview” on page 7](#)

[“The ArcSight ESM Source Manager” on page 7](#)

[“Standard Installation Procedures” on page 9](#)

[“Uninstalling a Forwarding Connector” on page 15](#)

[“Upgrading a Forwarding Connector” on page 15](#)

[“Reverting to a Previous Version of the Forwarding Connector” on page 16](#)

The ArcSight Forwarding Connector is supported on Windows, Linux, Solaris, and AIX platforms.

ArcSight recommends using the Forwarding Connector installer included with the corresponding ESM or HP integration release. The Forwarding Connector is released as part of the ESM release, however its build version might not match that of other ESM components within the release.

## Product Overview

The ArcSight Forwarding Connector lets you receive events from a source Manager installation and send them to a secondary destination Manager, a non-ESM location or to an ArcSight Logger.

## The ArcSight ESM Source Manager

The ESM Source Manager is the installation from which events originate on a network using the ArcSight Forwarding Connector. The Forwarding Connector sends on (or “forwards”) events to a destination Manager, a non-ESM location or a Logger appliance.



The ESM Source Manager must be of the same version as the ESM Destination Manager.

With data originating from an ArcSight ESM Source Manager, the ArcSight Forwarding Connector provides these destination options for forwarding events:

- An ArcSight ESM destination Manager

- ArcSight Logger
- NSP Device Poll Listener
- CEF Syslog
- A CSV file
- McAfee ePolicy Orchestrator v4.0, v4.5, or v4.6
- HP Operations Manager
- HP Operations Manager i

## Sending Events to an ArcSight ESM Destination Manager

The ArcSight Forwarding Connector logs into the source Manager and then forwards events to a destination Manager. For configuration instructions, see [“Forwarding Events to an ArcSight Manager” on page 17](#).



The ESM Destination Manager must be of the same version as the ESM Source Manager.

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## Sending Events to ArcSight Logger

ArcSight Logger is a hardware storage solution optimized for high event throughput. A typical use for Logger is to collect firewall data and then forward a subset of that data to an ArcSight Manager for realtime monitoring and correlation. Logger now supports the Federal Information Processing Standard 140-2 (FIPS 140-2). See [“Using Logger in FIPS Mode” on page 47](#) for details.

**SmartMessage** is an ArcSight technology that provides a secure channel between ArcSight SmartConnectors and Logger. SmartMessage provides an end-to-end encrypted secure channel. One end is an ArcSight SmartConnector that receives events from the many devices supported by ArcSight SmartConnectors, and the other is a SmartMessage Receiver housed on the Logger appliance.

Before configuring the Forwarding Connector that sends events to the Receiver, you must create a Receiver of type **SmartMessage**. After you create this Receiver, you can configure the SmartConnector to send events to Logger.

For information on configuring a Forwarding Connector to forward events to Logger, see [“Forwarding Events to ArcSight Logger” on page 21](#).

Refer to the *ArcSight Logger Administrator's Guide* for complete instructions about:

- Receivers
- Configuring a SmartConnector to Send Events to Logger
- Configuring SmartConnectors to Send Events to Both Logger and a Manager
- Sending Events from ArcSight ESM to Logger
- Using Logger in FIPS mode

## Sending Events to a Non-ESM Location

The ArcSight Forwarding Connector logs into the source Manager and then forwards events to a non-ESM location.

When configuring the Forwarding Connector to send events to a non-ESM destination, you might encounter a problem with certificate validation during connector setup. Perform the following steps to ensure that the demo CA is added to the client trust store to validate the Manager's demo certificate.

**To make sure the demo CA is added to the client trust store:**

- 1 Install the connector as usual, but stop at the screen that prompts you to select a destination type.
- 2 After the screen prompting you to select the destination type is displayed, run the following command from the `$ARCSIGHT_HOME\current\bin` directory
 

```
arcsight connector tempca -ac
```
- 3 Return to the wizard and complete the installation.

For configuration instructions on forwarding events to NSP, see [Chapter 2, Forwarding Events to NSP Device Poll Listener, on page 22](#).

For configuration instructions on forwarding CEF Syslog events, see [Chapter 2, Forwarding CEF Syslog Events, on page 23](#).

For configuration instructions on forwarding events to a `.csv` file, see [Chapter 2, Forwarding Events to a CSV File, on page 24](#).

For configuration instructions on forwarding events to McAfee ePolicy Orchestrator (ePO), see [Chapter 2, Forwarding Events to McAfee ePolicy Orchestrator, on page 25](#).



Use of ePO requires installation of **MS SQL Server 2005 for JDBC driver**. For downloading instructions, see ["Installing the Microsoft SQL Server 2005 Driver for JDBC" on page 27](#).

For detailed configuration instructions on forwarding events to HP Operations Manager (HP OM) and HP Operations Manager i (HP OMi), see [Chapter 3, Configuration for HP Operations Manager and HP Operations Manager i, on page 31](#).

## Standard Installation Procedures

This section describes the standard installation procedures for the ArcSight Forwarding Connector.

### Verifying that ArcSight ESM is Correctly Installed

Before you install the ArcSight Forwarding Connector, make sure that ArcSight Manager and Console has already been installed correctly. Review the *ArcSight Installation and Configuration Guide* before attempting a new ArcSight Forwarding Connector installation.

**To ensure a successful ArcSight ESM installation:**

- 1 Make sure that the ArcSight Manager, Database, and Console are installed and functioning.
- 2 Run the ArcSight Manager; the ArcSight Manager command prompt window or terminal box displays a **Ready** message when the Manager has started successfully. You can also monitor the `server.std.log` file located in `ARCSIGHT_HOME\logs\default`.

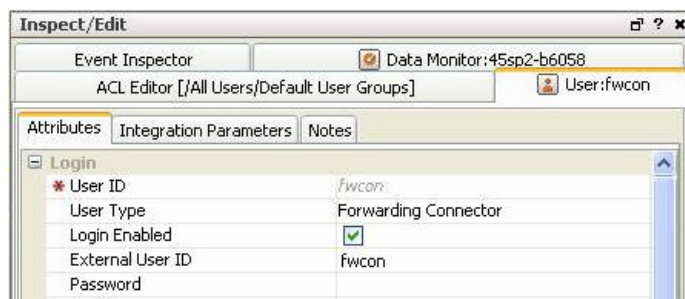
- 3 Run the ArcSight Console. Although not necessary, it is helpful to have the ArcSight Console running when installing the SmartConnector to verify successful installation.

## Assigning Privileges on the ESM Source Manager

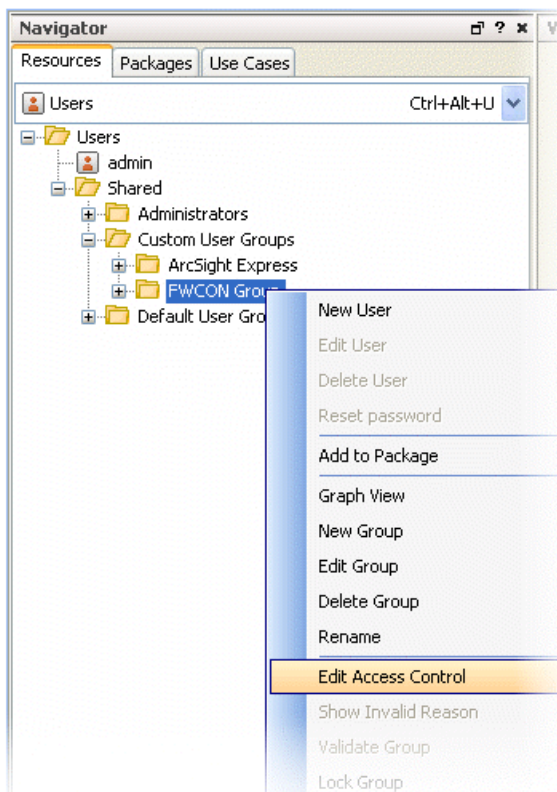
Before installing the ArcSight Forwarding Connector, you need to create a **Forwarding Connector** account on the source Manager. You can then assign filters for incoming events.

### To assign privileges in the Manager:

- 1 Run the ArcSight Console and log in to the ArcSight Manager.
- 2 From the Navigator **Resources** tab, choose **Users**.
- 3 Create a user group under the **Custom User Group**.
- 4 Under the group created in **step 3**, create a user account of user type **Forwarding Connector**, as shown below.

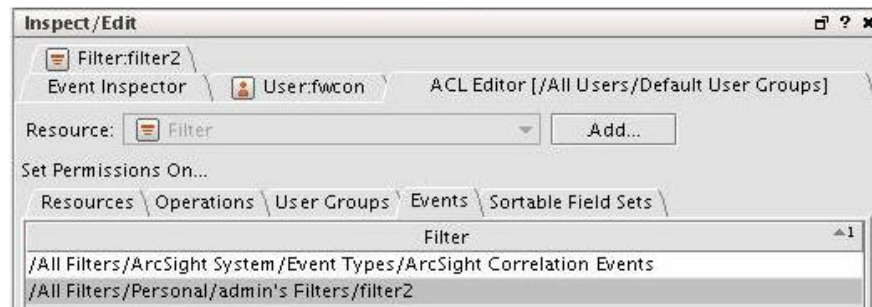


- 5 Return to the Navigator **Resources** tab and right-click your chosen user group.
- 6 From the menu, choose **Edit Access Control**.





- 7 From the **Inspect/Edit** window, click the **Events** tab under the new user type and assign the filters.



For detailed instructions on creating filters and users using ArcSight Console, refer to the *ArcSight ESM User's Guide*.

## Forwarding Correlation Events

The ArcSight Forwarding Connector can forward events based upon the ACL assigned to the User Group on the source Manager. The connector can be configured to allow forwarding of ArcSight correlation events from the source Manager to the target (or destination) Manager. The ACL can also be configured to allow for viewing of the detailed chain of the forwarded correlation event, including the original correlated event.



**Caution**

HP OM users commonly require only correlated events to be retrieved from ESM. In such cases, HP OM users can specify the selection of correlated events. To allow for only correlated events and restrict the retrieval of base events, configure ESM to **retrieve correlated events**, then **allow the forwarding of correlated events**, as described below. These steps should be performed in sequence, then restart the source Manager.

Perform the following steps to retrieve correlated events.

### Configuring to Retrieve Correlated Events

To configure the source Manager to send both correlation events and on-demand correlated events to the destination Manager, the ACL must contain two separate filters:

- 1 Note Filter 1, which is provided with the latest version of ArcSight ESM:  
`/All Filters/ArcSight System/Event Types/ArcSight Correlation Events`
- 2 Create Filter 2, using the condition, `Event Annotation Flags ContainsBits correlated`.

- 3 Both filters need to be applied to the Event Permissions of the User Group ACL to be able to extract correlated events from the correlation events that are forwarded to the target Manager.



Correlated events retrieved on-demand are for viewing only. They do not persist in the destination Manager.

---

- 4 Restart the manager.

### Configuring to Allow Forwarding of Correlated Events

The Forwarding Connector can also be configured to automatically forward correlated events irrespective of the User Group ACL. Only one Forwarding Connector per Manager can be configured to work in this mode. This configuration can aid in hierarchical deployment scenarios in which you need to automatically forward correlated events for further correlation and reporting on the destination Manager.

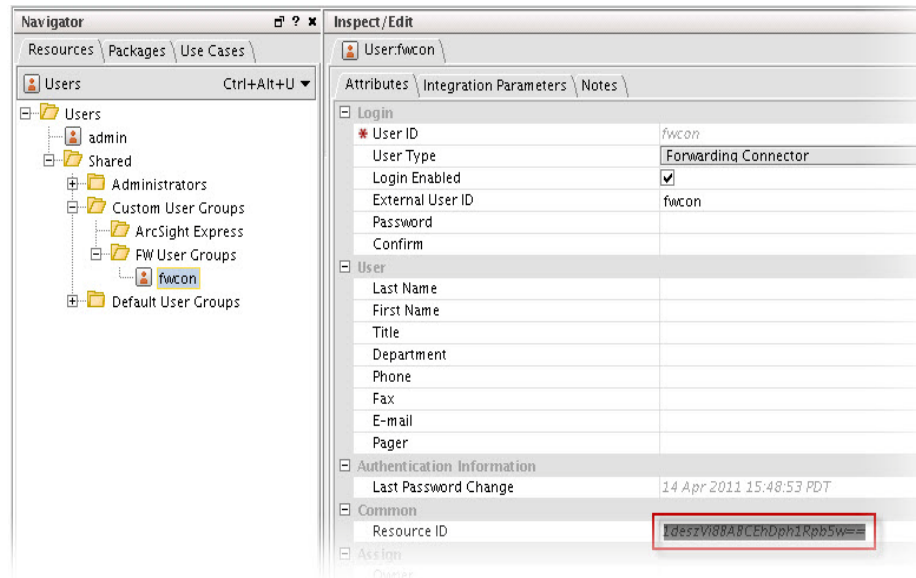
The source Manager keeps track of the events that have been previously forwarded by using the “Forwarded” annotation, disallowing duplicates.

To configure the source Manager to send both correlation events and correlated events automatically, you must specify the **container ID**. The container ID consists of two elements, the **entityid** and the **userid**. To begin the configuration, you must locate these two elements and combine them in the `server.properties` file.

- 1 To find the **entityID**, go to `$AGENT_HOME/user/agent/agent.properties` and search for `agents[0].entityid`. Copy the text string starting in `3w` to a text editing program, such as Notepad.

`agents[0].entityid=3w+05uiYBABCCLKvzx0stdQ\==`

- 2 To find the **userid**, go to the Console of the **source Manager**.
  - a From to the **Navigator** panel, choose the **Resources** tab.
  - b Choose **Users** to find your Forwarding Connector user.
  - c Locate the **Resource ID** and copy the text string from the second column, as shown below.



In the `$Arcsight_HOME/config/server.properties` file on the source Manager, add the **entityid** and **userid** to the `eventstream.cfc` property, as shown below.

`eventstream.cfc=EntityID.UserID`

- 3 Restart the source Manager and, if still running, the Forwarding Connector.

## Increasing the FileStore size (Enhanced version only)

Installation of the ArcSight Forwarding Connector (Enhanced) option provides fault-tolerance, enabling events to be saved in the event of a failure.

The capacity of events that can be stored during a system failure is dependent on the amount of disk space the FileStore can use on the source Manager. Although the default size of 1024 MB (1 GB) is suitable for most installations, you can increase the size of your FileStore.

### To increase the size of the FileStore:

- 1 Open the `server.defaults.properties` file, located under `$ARCSIGHT_HOME\config`.

The file displays the default file size:

`filestore.disksize.max.megabytes.int=1024`

- 2 Use this formula to determine appropriate rates for minutes of storage on your system:

$$\text{MinutesOfStorage} = (((\#MB / 1024) * 21,474,833) / \text{EPS}) / 60$$

- ◆ Given the most typical event sizes, a FileStore of 1 GB can store approximately 21,474,833 events, and at a rate of 5000 events per second, the default size provides approximately 71 minutes of storage.
- ◆ When the FileStore fills up, the oldest events are purged to make room for recent ones.

## Installing the Forwarding Connector

Before installing the Forwarding Connector, you need to assign privileges on your Manager. For instructions on how to do this, see [“Assigning Privileges on the ESM Source Manager”](#) on page 10.



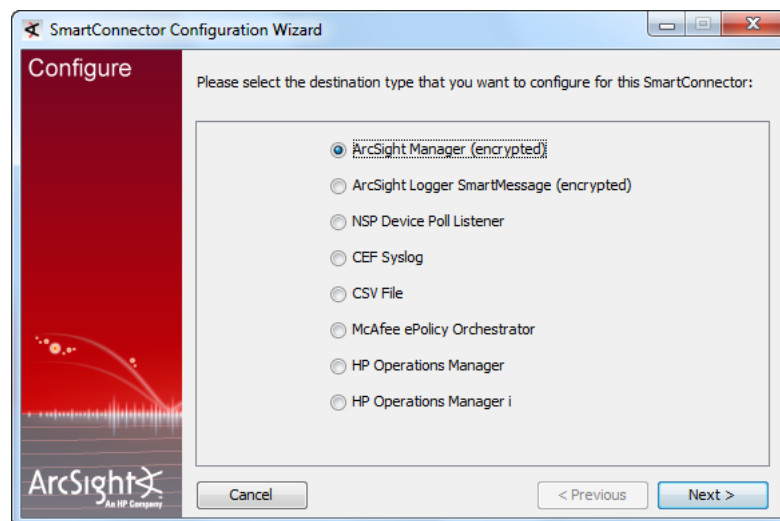
Note

For information regarding operating systems and platforms supported, refer to *SmartConnector Product and Platform Support*, available from ArcSight Technical Support with each SmartConnector release.

### To install the Forwarding Connector:

- 1 Download the install executable for your operating system from the HP SSO site.
- 2 Start the installer by running the executable for your operating system, then follow the folder selection tasks and installation of the core SmartConnector software:
  - ◆ Introduction
  - ◆ Choose Install Folder
  - ◆ Choose Install Set
  - ◆ Choose Shortcut Folder
  - ◆ Pre-Installation Summary
  - ◆ Installing...

When installation of the connector core component is complete, the following dialog is displayed:



### 3 Choose your ArcSight Forwarding Connector destination.

- ◆ To forward events to an **ArcSight ESM Manager**, proceed with [“Forwarding Events to an ArcSight Manager” on page 17.](#)
- ◆ To forward events to an **ArcSight Logger**, proceed with [“Forwarding Events to ArcSight Logger” on page 21.](#)
- ◆ To forward events to an **NSP appliance**, proceed with [“Forwarding Events to NSP Device Poll Listener” on page 22.](#)
- ◆ To forward events to a **CEF Syslog**, proceed with [“Forwarding CEF Syslog Events” on page 23.](#)
- ◆ To forward events to a **.csv file**, proceed with [“Forwarding Events to a CSV File” on page 24.](#)
- ◆ To forward events to **McAfee ePolicy Orchestrator (ePO)**, proceed with [“Forwarding Events to McAfee ePolicy Orchestrator” on page 25.](#)



Use of ePO requires installation of **MS SQL Server 2005 for JDBC driver**. For instructions on downloading, see [“Installing the Microsoft SQL Server 2005 Driver for JDBC” on page 27.](#)

- ◆ For configuration instructions about forwarding events to **HP Operations Manager (HP OM)**, see [Chapter 3, Configuration for HP Operations Manager and HP Operations Manager i](#), on page 31.
- ◆ To install the Forwarding Connector in FIPS-compliant mode, proceed with [“FIPS-Enabled Forwarding Connector Installation” on page 42.](#)

## Uninstalling a Forwarding Connector

Before uninstalling a Forwarding Connector that is running as a service or daemon, first stop the service or daemon. To uninstall on Windows, open the **Start** menu. Run the **Uninstall SmartConnectors** program located under **All Programs, ArcSight SmartConnectors**. If Connectors are not installed on the **Start** menu, locate the `$ARCSIGHT_HOME\UninstallerData` folder and run:

```
Uninstall ArcSightAgents.exe
```

To uninstall on UNIX hosts, open a command window on the `$ARCSIGHT_HOME/UninstallerData` directory and run the command:

```
./Uninstall_ArcSightAgents
```



The UninstallerData directory contains the file `.com.zerog.registry.xml` with Read, Write, and Execute permissions for all users. On Windows platforms, these permissions are required for the uninstaller to work. However, on UNIX platforms, you can change the permissions to Read and Write for everyone (that is, 666).

The Uninstaller does not remove all the files and directories under the ArcSight SmartConnector home folder. After completing the uninstall procedure, delete these folders manually.

## Upgrading a Forwarding Connector

### To locally upgrade the Forwarding Connector:

- 1 Stop the running connector.

- 2 Run the installer for the ArcSight Forwarding Connector, which prompts you for an installation location.
- 3 Select the location of the Forwarding Connector you want to upgrade; you will receive the message "Previous Version Found - Upgrade Possible". Select the option to continue and upgrade the connector.

The original installation is renamed by prefacing characters to the original folder name; the upgraded connector is installed in the location

`$ARCSIGHT_HOME\current`



Caution

During upgrade, the "Default User Groups" user group is updated and adds the `/All Filters/ArcSight System/Core/No Events` filter to the events ACL. If the Forwarding Connector user is in that group, the connector cannot send events to the destination Manager. To prevent this problem, edit the access control for the Forwarding Connector's parent user group and select a filter that gives permission to the subset of events for which the user has access.

Alternatively, if the user has access to all the events, delete the `/All Filters/ArcSight System/Core/No Events` filter.



Note

The ArcSight Forwarding Connectors must be the same version as the source ESM.

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## Reverting to a Previous Version of the Forwarding Connector

### To revert to a previous version of the Forwarding Connector:

- 1 Stop the upgraded Forwarding Connector, which is in the folder named `current`.
- 2 Rename the `current` folder to a name based on the build version of the upgraded connector.
- 3 Rename the build folder that contains the previous version of the Forwarding Connector to `current`.
- 4 Start the Forwarding Connector.



Caution

Rolling back the connector to **build 5116** or earlier disallows use of the McAfee ePolicy Orchestrator destination.

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# Configuration for Forwarding Events

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This chapter provides step-by-step instructions for configuring various Forwarding Connector destinations and contains these topics:

- ["Forwarding Events to an ArcSight Manager" on page 17](#)
- ["Forwarding Events to ArcSight Logger" on page 21](#)
- ["Forwarding Events to NSP Device Poll Listener" on page 22](#)
- ["Forwarding CEF Syslog Events" on page 23](#)
- ["Forwarding Events to a CSV File" on page 24](#)
- ["Forwarding Events to McAfee ePolicy Orchestrator" on page 25](#)
- ["Configuring Multiple Destinations" on page 28](#)



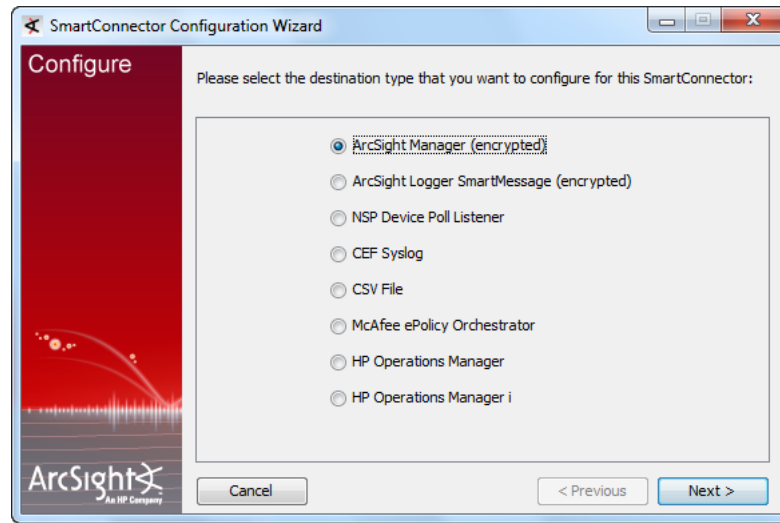
Event fields that refer to local resources in the manager are not forwarded to the next manager. Instead those fields are repopulated based upon the local resources present on the next manager. For example, the **Target Asset** field is recalculated and can have a different value based upon what resources exist on each manager.

## Forwarding Events to an ArcSight Manager

To continue connector configuration for forwarding events to a Manager, follow the procedure below.

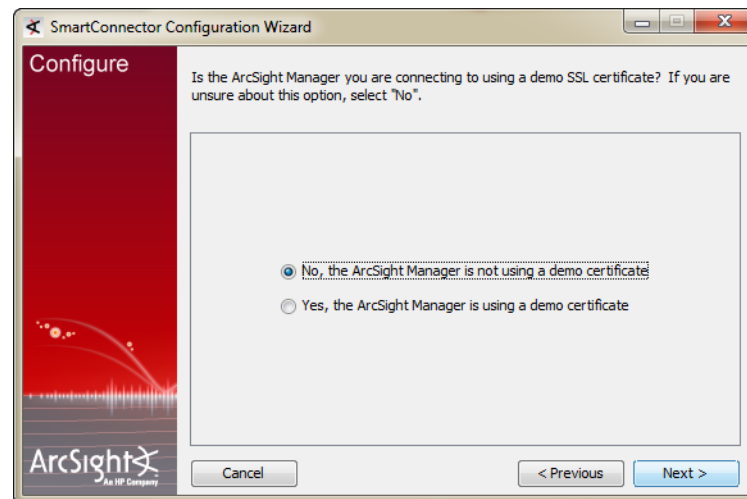
To continue connector configuration:

- 1 Select **ArcSight Manager (encrypted)**, and click **Next**.



The Wizard first prompts you for Manager certificate information.

- 2 Verify whether the Manager is using a demo certificate. Choose **Yes**, if it is; otherwise accept the default option of **No**. Then, click **Next**.

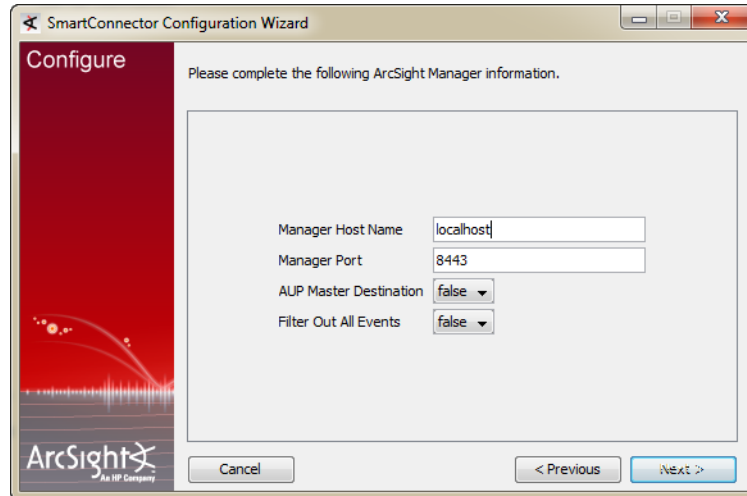


**Note**

After completing the SmartConnector installation wizard, remember to configure the connector for the type of SSL certificate your Manager is using manually. Refer to the *ArcSight ESM Administrator's Guide* for instructions about configuring your SmartConnector when the Manager is using a self-signed or CA-signed certificate, and for instructions about enabling SSL client authentication on SmartConnectors so that the connectors and the Manager authenticate each other before sending data.



- 3 You are prompted for **Manager Host Name** and **Manager Port**. This is your destination Manager. Enter the information and click **Next**.



The screenshot shows the 'SmartConnector Configuration Wizard' window, specifically the 'Configure' step. The window has a red sidebar with the ArcSight logo. The main area contains the text 'Please complete the following ArcSight Manager information.' Below this are four fields: 'Manager Host Name' with 'localhost' entered, 'Manager Port' with '8443' entered, 'AUP Master Destination' with a dropdown set to 'false', and 'Filter Out All Events' with a dropdown set to 'false'. At the bottom are 'Cancel', '< Previous', and 'Next >' buttons.

- 4 Enter a valid ArcSight **User Name** and **Password** and click **Next**.

This is the user name and password for the user account you created on the destination Manager.



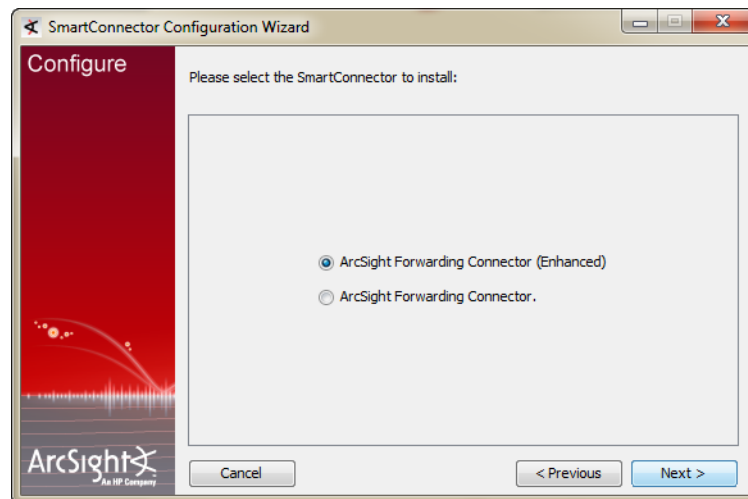
The screenshot shows the 'SmartConnector Configuration Wizard' window, specifically the 'Configure' step. The window has a red sidebar with the ArcSight logo. The main area contains the text 'In order to configure SmartConnectors, you must login as a user with the appropriate privileges.' Below this are two fields: 'User Name' with 'Admin' entered and 'Password' with a masked password (dots). At the bottom are 'Cancel', '< Previous', and 'Next >' buttons.

- 5 You are given a choice of Forwarding Connector versions to install.

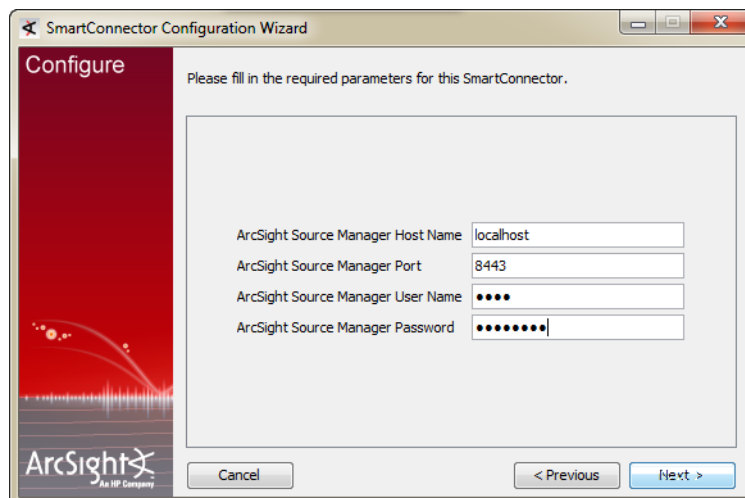
If you are currently using ESM **v4.0 SP3** or later, ArcSight recommends choosing the **ArcSight Forwarding Connector (Enhanced)** option. When choosing which version to use, note the following:

- ◆ The **ArcSight Forwarding Connector** option supports the previous software version and does not include the increased event rate and recoverability features of **ArcSight Forwarding Connector (Enhanced)**. ArcSight recommends using the older option only when communicating with a pre-v4.0 SP3 ESM installation.
- ◆ The capacity of events that can be stored during a system failure depends on the FileStore size of your source Manager. Choosing the **ArcSight Forwarding Connector (Enhanced)** version requires configuration adjustments on your source Manager.

For instructions about how to determine and change your source disk settings, see [“Increasing the FileStore size \(Enhanced version only\)” on page 13](#). Click **Next**.



- 6 Enter the information to configure the Forwarding Connector, then click **Next** to continue. This is information about your source Manager, as described in the table below.



Parameter	Description
<b>ArcSight Source Manager Host Name</b>	The host name where the ArcSight ESM Source Manager is installed.
<b>ArcSight Source Manager Port</b>	The network port where the ArcSight ESM Source Manager is accepting requests.
<b>ArcSight Source Manager User Name</b>	The ArcSight user name created with permissions for the Forwarding Connector on the ArcSight ESM Source Manager.
<b>ArcSight Source Manager Password</b>	The ArcSight password that will be used to log this Connector into the ArcSight ESM Source Manager.

- 7 Enter a name for the connector and provide other information identifying the connector's use in your environment. Click **Next**.

- 8 Read the connector summary; if it is correct, click **Next**. If it is not correct, click **Previous** to make changes before continuing.
- 9 When the connector completes its configuration, click **Next**. The wizard now prompts you to choose whether to run the connector as a process or as a service. If you choose to run the connector as a service, the wizard prompts you to define service parameters for the connector.
- 10 After making your selections, click **Next**. The wizard displays a dialog confirming the connector's setup and service configuration.
- 11 Click **Finish**.
- 12 Click **Done**.

## Forwarding Events to ArcSight Logger

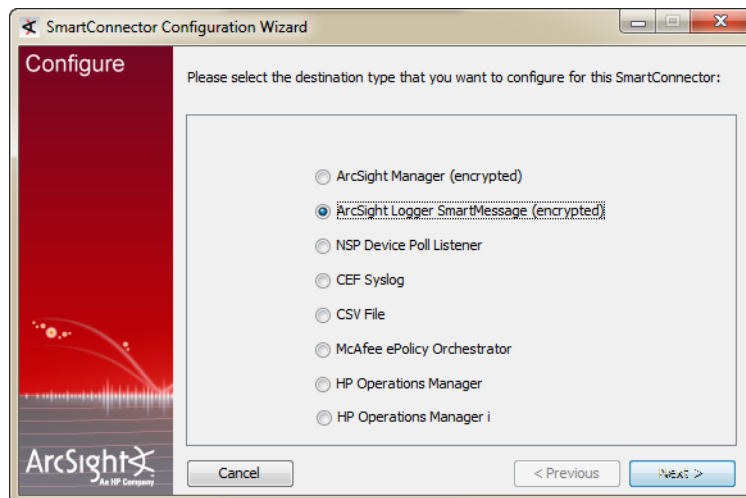


When configuring the Forwarding Connector to send events to a non-ESM destination, you might encounter problems with certificate validation during connector setup. See ["Sending Events to a Non-ESM Location" on page 8](#) for information about certificate validation.

Before you continue connector configuration for forwarding events to an ArcSight Logger, ensure that a SmartMessage Receiver has been set up on ArcSight Logger for the Forwarding Connector (Refer to the *ArcSight Logger Administrator's Guide* for details).

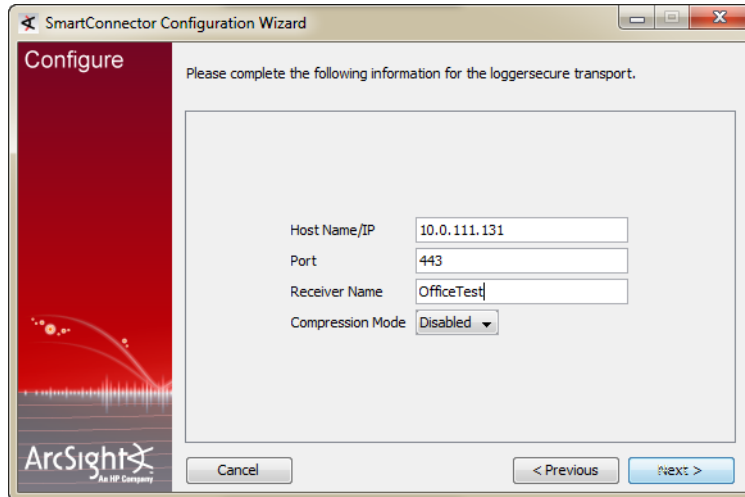
### To continue connector configuration:

- 1 Select **ArcSight Logger SmartMessage (encrypted)** from the following dialog and click **Next**:



- 2 Enter the Logger **Host Name/IP** address, leave the port number at the default value of **443**, and enter the **Receiver Name**. This Receiver Name is the name of the

SmartMessage Receiver you set up on ArcSight Logger for the Forwarding Connector. Click **Next** to continue.



The screenshot shows the 'Configure' step of the SmartConnector Configuration Wizard. The title bar reads 'SmartConnector Configuration Wizard'. The main area contains the text 'Please complete the following information for the loggersecure transport.' Below this, there are four input fields: 'Host Name/IP' with the value '10.0.111.131', 'Port' with the value '443', 'Receiver Name' with the value 'OfficeTest', and 'Compression Mode' with a dropdown menu set to 'Disabled'. At the bottom left is the ArcSight logo. At the bottom right are three buttons: 'Cancel', '< Previous', and 'Next >'.

- 3 Click **Next** and continue following steps 5 through 12 in the procedure [“Forwarding Events to an ArcSight Manager” on page 17.](#)

## Forwarding Events to NSP Device Poll Listener



**Caution**

When configuring the Forwarding Connector to send events to a non-ESM destination, you might encounter problems with certificate validation during connector setup. See [“Sending Events to a Non-ESM Location” on page 8](#) for information on certificate validation.

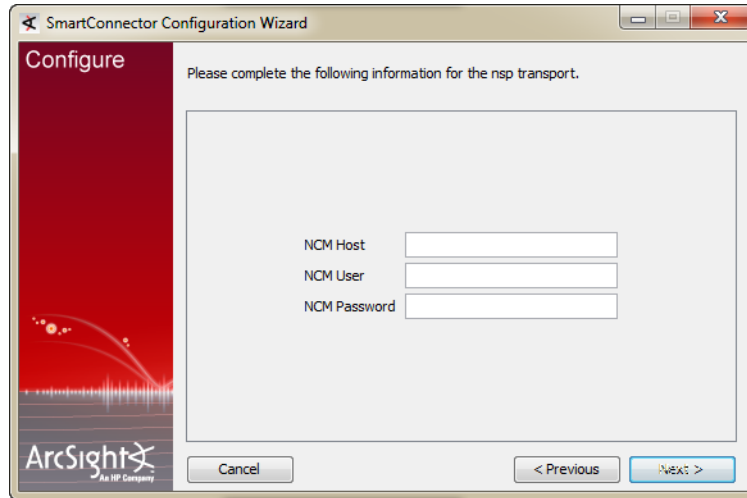
**To continue connector configuration for forwarding events to NSP:**

- 1 Select **NSP Device Poll Listener** from the selections and click **Next**.



The screenshot shows the 'Configure' step of the SmartConnector Configuration Wizard, specifically the destination selection screen. The title bar reads 'SmartConnector Configuration Wizard'. The main area contains the text 'Please select the destination type that you want to configure for this SmartConnector:'. Below this, there is a list of destination types with radio buttons next to them: 'ArcSight Manager (encrypted)', 'ArcSight Logger SmartMessage (encrypted)', 'NSP Device Poll Listener' (which is selected), 'CEF Syslog', 'CSV File', 'McAfee ePolicy Orchestrator', 'HP Operations Manager', and 'HP Operations Manager i'. At the bottom left is the ArcSight logo. At the bottom right are three buttons: 'Cancel', '< Previous', and 'Next >'.

- 2 Provide the NCM/TRM Host name or IP address, and login credentials for the NCM/TRM that will interact with the Syslog Connector.



The image shows the 'Configure' step of the SmartConnector Configuration Wizard. The window title is 'SmartConnector Configuration Wizard'. The left sidebar has a red background with the ArcSight logo and the text 'An HP Company'. The main area has a light gray background with the text 'Please complete the following information for the nsp transport.' Below this text are three input fields: 'NCM Host', 'NCM User', and 'NCM Password'. At the bottom of the window are three buttons: 'Cancel', '< Previous', and 'Next >'.

- 3 Click **Next** and continue following steps 5 through 12 in the procedure [“Forwarding Events to an ArcSight Manager” on page 17.](#)

For more information about NSP, refer to the *ArcSight™ NSP Installation and Administration Guide*.

## Forwarding CEF Syslog Events

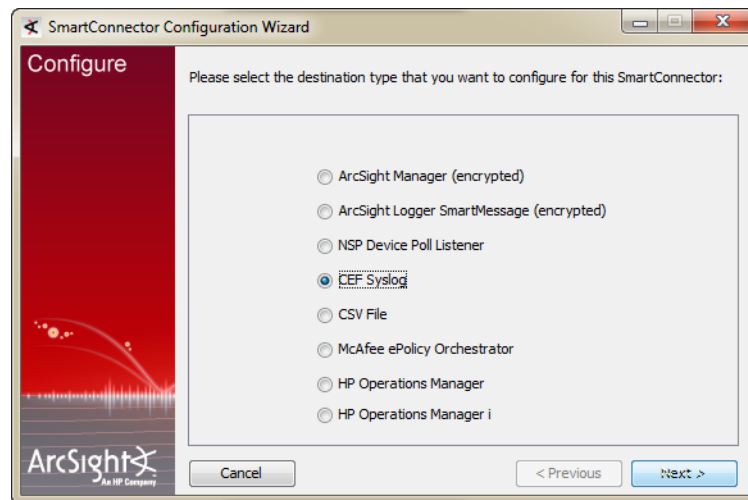
You can configure the ArcSight Forwarding Connector to send CEF Syslog events to any Syslog receiver (including ArcSight Logger).



When configuring the Forwarding Connector to send events to a non-ESM destination, you might encounter problems with certificate validation during connector setup. See [“Sending Events to a Non-ESM Location” on page 8](#) for information on certificate validation.

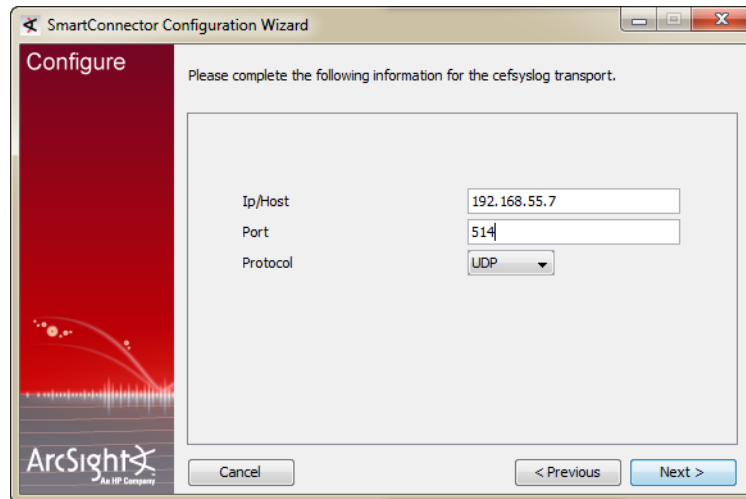
### To configure the connector to send CEF Syslog events:

- 1 Select **CEF Syslog** from the following dialog:



The image shows the 'Configure' step of the SmartConnector Configuration Wizard. The window title is 'SmartConnector Configuration Wizard'. The left sidebar has a red background with the ArcSight logo and the text 'An HP Company'. The main area has a light gray background with the text 'Please select the destination type that you want to configure for this SmartConnector:'. Below this text are several radio button options: 'ArcSight Manager (encrypted)', 'ArcSight Logger SmartMessage (encrypted)', 'NSP Device Poll Listener', 'CEF Syslog' (which is selected), 'CSV File', 'McAfee ePolicy Orchestrator', 'HP Operations Manager', and 'HP Operations Manager i'. At the bottom of the window are three buttons: 'Cancel', '< Previous', and 'Next >'.

- 2 Enter the Logger **host name** or **IP address**, the desired port, and choose **UDP**, **TLS**, or **TCP** output. Click **Next** to continue.



The image shows the 'Configure' step of the SmartConnector Configuration Wizard. The window title is 'SmartConnector Configuration Wizard'. The main area is titled 'Configure' and contains the text 'Please complete the following information for the cefsyslog transport.' Below this, there are three input fields: 'Ip/Host' with the value '192.168.55.7', 'Port' with the value '514', and 'Protocol' with a dropdown menu set to 'UDP'. At the bottom, there are three buttons: 'Cancel', '< Previous', and 'Next >'. The ArcSight logo is visible in the bottom left corner.

- 3 Click **Next** and continue following steps 5 through 12 in the procedure [“Forwarding Events to an ArcSight Manager” on page 17.](#)

## Forwarding Events to a CSV File

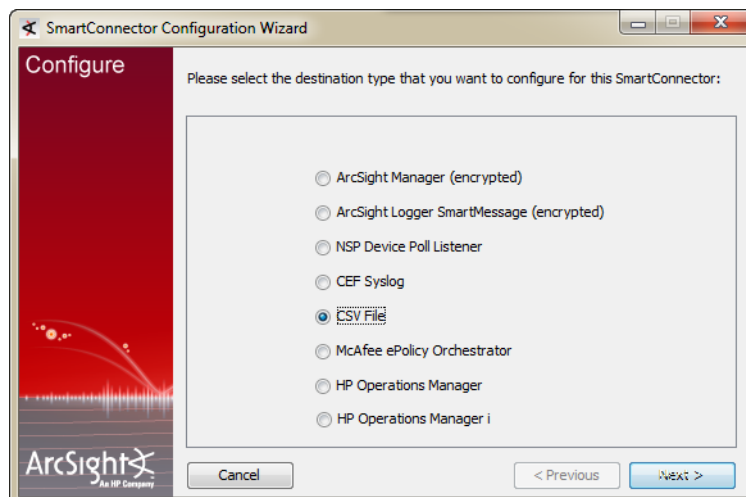
You can capture events a SmartConnector would normally send to the ArcSight Manager and write them to a **.csv** file. The Excel-compatible comma-separated values (CSV) format allows for comments prefixed by #.



When configuring the Forwarding Connector to send events to a non-ESM destination, you might encounter problems with certificate validation during connector setup. See [“Sending Events to a Non-ESM Location” on page 8](#) for information on certificate validation.

### To forward events to a **.csv** file:

- 1 Select **CSV File** and click **Next**.



The image shows the 'Configure' step of the SmartConnector Configuration Wizard. The window title is 'SmartConnector Configuration Wizard'. The main area is titled 'Configure' and contains the text 'Please select the destination type that you want to configure for this SmartConnector:'. Below this, there are several radio button options: 'ArcSight Manager (encrypted)', 'ArcSight Logger SmartMessage (encrypted)', 'NSP Device Poll Listener', 'CEF Syslog', 'CSV File' (which is selected), 'McAfee ePolicy Orchestrator', 'HP Operations Manager', and 'HP Operations Manager i'. At the bottom, there are three buttons: 'Cancel', '< Previous', and 'Next >'. The ArcSight logo is visible in the bottom left corner.

- 2 Enter values as described in the table below.

Parameter	Description
<b>CSV Path</b>	The path to the output folder. If one does not exist, a folder is created.
<b>Fields</b>	A comma-delimited string of field names to be sent to the <code>.csv</code> file. Field names are in the form <code>event.&lt;FieldName&gt;</code> .
<b>File rotation interval</b>	The desired file rotation interval, in seconds. The default is 3,600 seconds (one hour).
<b>Write format header</b>	Select <b>true</b> to send a header row with labels for each column, as described above.

- 3 Click **Next** and continue following steps 5 through 12 in the procedure [“Forwarding Events to an ArcSight Manager” on page 17](#).

For more information about capturing events and `.csv` files, refer to the section titled “Capturing Events from SmartConnectors” in the *SmartConnector User's Guide*.

## Forwarding Events to McAfee ePolicy Orchestrator

This option allows you to forward events to McAfee ePolicy Orchestrator (ePO), a scalable tool for centralized anti-virus and security policy management and enforcement. ePO leverages ESM event filtering/correlation and auditing capabilities to create a single view into security events within ePO.

McAfee ePO v4.0, v4.5, and v.4.6 are currently supported.

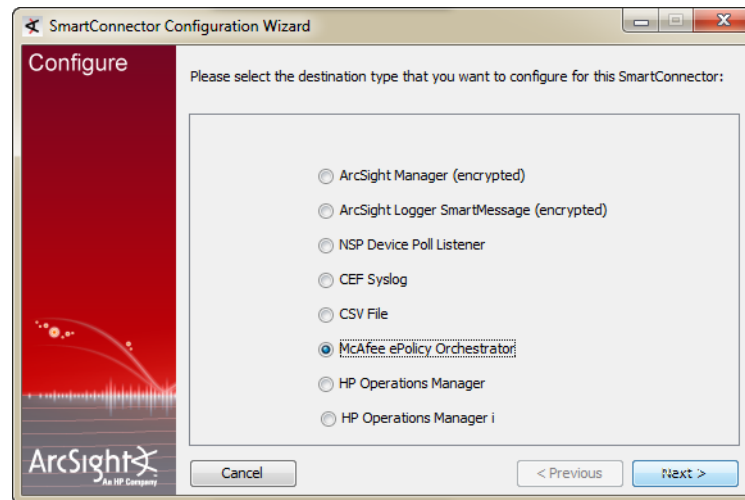


**Caution**

Use of ePO requires installation of **MS SQL Server 2005 for JDBC driver**. For instructions on downloading, see [“Installing the Microsoft SQL Server 2005 Driver for JDBC” on page 27](#).

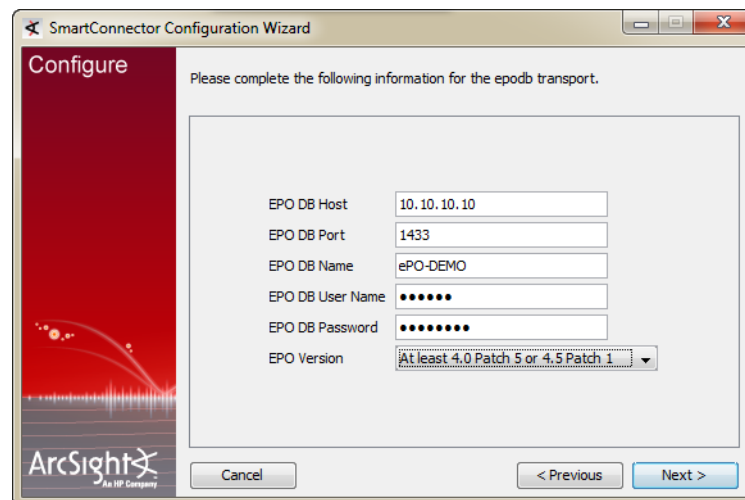
**To forward events to McAfee ePO:**

- 1 In the destination selection dialog, select **McAfee ePolicy Orchestrator** and click **Next**.

**Caution**

When using this transport, the Forwarding Connector is automatically configured to limit the outgoing event rate to 10 events per minute. This is due to a limitation on McAfee ePO's database as specified by McAfee.

- 2 Enter or select values for the ePO database connectivity:

**Note**

- To log on to the database at this point, only Microsoft SQL Server authentication is supported (Windows authentication is not).
- ArcSight recommends that you create a user dedicated to ArcSight with permissions to execute the stored procedure.

- 3 Click **Next** and continue following steps 5 through 12 in the procedure [“Forwarding Events to an ArcSight Manager”](#) on page 17.



## Installing the Microsoft SQL Server 2005 Driver for JDBC

### To download and install a JDBC driver:

- 1 Download the **MS SQL Server 2005 JDBC Driver 1.2** from Microsoft at:  
<http://www.microsoft.com/downloads/details.aspx?FamilyId=C47053EB-3B64-4794-950D-81E1EC91C1BA&displaylang=en>
- 2 Install the driver.
- 3 Copy the `sqljdbc.jar` file from the folder `C:\Program Files\Microsoft SQL Server 2005 JDBC Driver\sqljdbc_1.2\enu` to `$ARCSIGHT_HOME/current/user/agent/lib`, where `$ARCSIGHT_HOME` refers to the connector install folder, such as `c:\ArcSight\SmartConnectors`.
- 4 From `$ARCSIGHT_HOME/current/bin`, double-click `runagentsetup` to return to the SmartConnector Configuration Wizard.

## ArcSight Event to McAfee CEF Mappings

The Forwarding Connector translates ArcSight events into McAfee's Common Event Format.



The McAfee CEF field column shown in the following table does not represent fields seen in the Console GUI of McAfee ePolicy Orchestrator. This column represents fields within the database.

The following table lists the field mappings.

McAfee CEF Field	ArcSight Field
AgentGUID	agented (converted to match the AgentGUID format; guaranteed to be unique ONLY within ArcSight)
Analyzer	Fixed value: S_ARST__1000
AnalyzerDATVersion	deviceCustomString6
AnalyzerHostName	deviceHostName
AnalyzerIPV4	deviceAddress
AnalyzerMAC	deviceMacAddress
AnalyzerName	deviceProduct
AnalyzerVersion	deviceVersion
DetectedUTC	deviceReceiptTime
SourceHostName	sourceHostName
SourceIPV4	sourceAddress
SourceMAC	sourceMacAddress
SourceProcessName	sourceProcessName
SourceURL	requestUrl
SourceUserName	sourceUserName
TargetFileName	fileName
TargetHostName	destinationHostName

McAfee CEF Field	ArcSight Field
TargetIPV4	destinationAddress
TargetMAC	destinationMacAddress
TargetPort	destinationPort
TargetProcessName	destinationProcessName
TargetProtocol	applicationProtocol
TargetUserName	destinationUserName
ThreatActionTaken	deviceAction
ThreatCategory	deviceEventCategory
ThreatEventID	agentSeverity 200300 – Unknown 200301 – Low 200302 – Medium 200303 – High 200304 – Very High
ThreatName	name
ThreatType	deviceEventClassId

For more details regarding McAfee ePolicy Orchestrator, refer to the *SmartConnector™ Configuration Guide for McAfee ePolicy Orchestrator DB*.

## Configuring Multiple Destinations

It is also possible to configure multiple destinations, after installation of the Forwarding Connector, using the ArcSight SmartConnector Configuration Wizard.

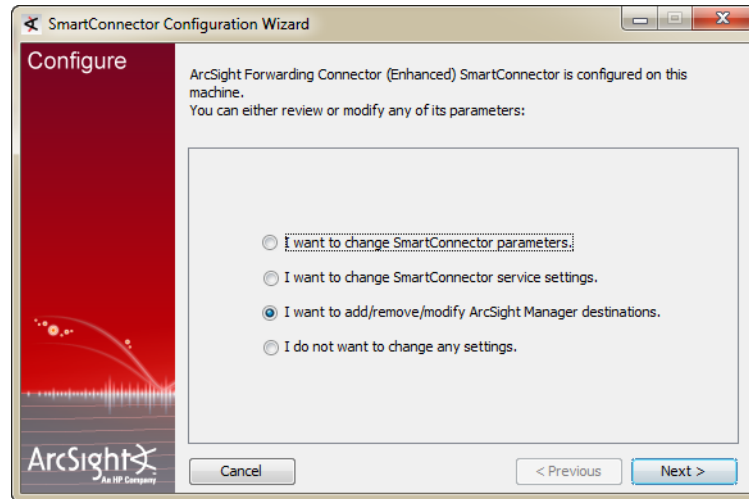
### To configure multiple destinations:

**1** To start the wizard, execute the following command:

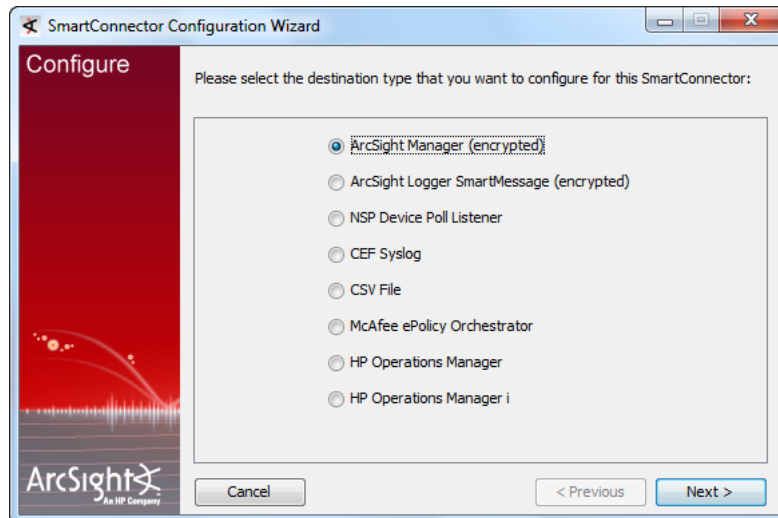
```
$ARCSIGHT_HOME\current\bin\runagentsetup
```

You can either modify the existing destination or add a new destination. The following example shows how to add a second ArcSight Manager.

- 2 Select **I want to add/remove/modify ArcSight Manager destinations** and click **Next**.

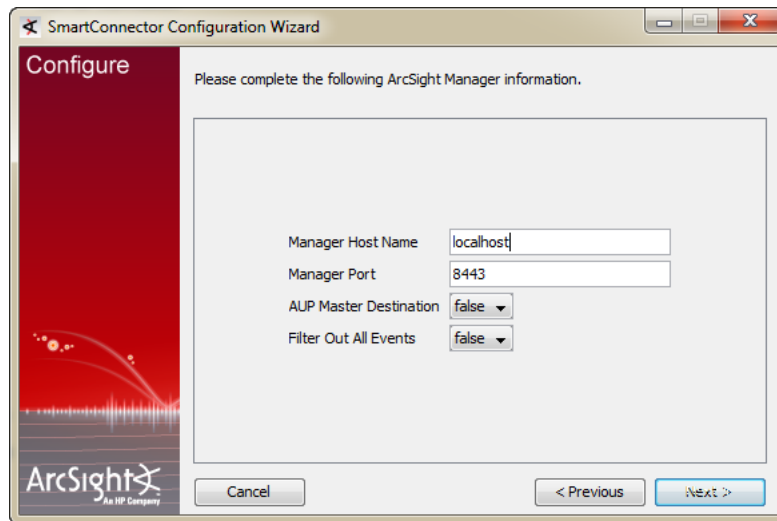


- 3 Select the destination type. Click **ArcSight Manager (encrypted)**, then **Next**.



- 4 Choose **Add new destination** to add a new SmartConnector destination and click **Next**.

- 5 Enter or select in the parameters for the destination being added and click **Next**.



The image shows the 'SmartConnector Configuration Wizard' window, specifically the 'Configure' step. The window has a title bar with standard Windows controls. On the left is a red sidebar with the 'Configure' title and the ArcSight logo. The main area contains the instruction 'Please complete the following ArcSight Manager information.' Below this are four configuration fields: 'Manager Host Name' with a text box containing 'localhost', 'Manager Port' with a text box containing '8443', 'AUP Master Destination' with a dropdown menu set to 'false', and 'Filter Out All Events' with a dropdown menu set to 'false'. At the bottom of the window are three buttons: 'Cancel', '< Previous', and 'Next >'.

Parameter	Value
Manager Host Name	localhost
Manager Port	8443
AUP Master Destination	false
Filter Out All Events	false

- 6 To apply your changes, restart the SmartConnector.

## Chapter 3

# Configuration for HP Operations Manager and HP Operations Manager i

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This guide provides information on installing and configuring the ArcSight Forwarding Connector.

- ["The ArcSight ESM Source Manager" on page 32](#)
- ["Supported Versions of HP OM and HP OMi" on page 32](#)
- ["Installing the Connector" on page 32](#)
- ["Creating an SNMP Interceptor Policy for HP Operations Manager \(HP OM\)" on page 36](#)
- ["Creating an SNMP Interceptor Policy for HP Operations Manager i \(HP OMi\)" on page 37](#)
- ["Troubleshooting Tips" on page 37](#)
- ["Adjusting the Event Processing Rate for HP OM and HP OMi" on page 38](#)

**ArcSight ESM** sends correlated security events to IT operation teams to investigate and take measures to reduce or eliminate security risks. The ArcSight Forwarding Connector logs into the source manager, then sends system events and network health information to HP OM from non-SNMP event sources. The ArcSight Forwarding Connector can be used to collect from event sources that support syslog, file, database, API, and other collection methods through ESM.

**HP Operations Manager (HP OM)** provides comprehensive event management, proactive performance monitoring, and automated alerting, reporting, and graphing for operating systems, middleware, and applications. It is designed to provide service-driven event and performance management of business-critical enterprise systems, applications, and services. The following topics are described.

**HP Operations Manager i (HP OMi)** enables the HP BSM Operations Management component in BSM. BSM Operations Management provides a complete monitoring solution, consolidating all IT infrastructure monitoring in a central event console, and relating the events to the IT services that depend on that infrastructure. See the *HP Business Service Management Operations Manager i Concepts Guide* for details on BSM.

HP BSM Integration Adapter is an integration solution that enables you to monitor event sources, and, if certain conditions apply, to forward the detected events as HP Business Service Management (BSM) events directly to BSM Operations Management. See the *Using HP BSM Integration Adapter Guide* for details on HP BSM Integration Adapter.

## The ArcSight ESM Source Manager

Before installing the Forwarding Connector, create a Forwarding Connector account on the Manager. For instructions, see [Chapter 1, Assigning Privileges on the ESM Source Manager](#), on page 10.

## Supported Versions of HP OM and HP OMi

The supported versions of HP OM and HP OMi include:

- HP OM for Windows v9.0 and 8.16 (patch level 90)
- HP OM for UNIX v9.10
- HP OM for Linux v9.10
- HP OMi v9.0.1.



OMi users are strongly encouraged to apply the latest patch, OMI\_00005 (build 09.01.210), to obtain critical fixes before running this integration.

- HP OMi v9.10

## HP OM and HP OMi and Correlation Events

When all rule conditions and thresholds are met, ESM generates an internal event called a **correlation event**. A correlation event represents the events that contributed to the rule being triggered and the relevant data contained in them.

Although most ESM users can use the default settings available for retrieving events, HP OM and HP OMi users commonly require only correlated events to be retrieved from ESM. In such cases, HP OM and HP OMi users can select correlated events. To allow for only correlated events and restrict the retrieval of base events, configure ESM to **retrieve correlated events**, then **allow the forwarding of correlated events**, in that order. For instructions, see [Chapter 1, Forwarding Correlation Events](#), on page 11.

HP OM and HP OMi use a SNMP trap policy to allow ArcSight events to be accepted within the HP OM or HP OMi environment. For instructions on how to create an SNMP interceptor, see [“Creating an SNMP Interceptor Policy for HP Operations Manager \(HP OM\)” on page 36](#) or [“Creating an SNMP Interceptor Policy for HP Operations Manager i \(HP OMi\)” on page 37](#).

## Installing the Connector

Before you install the connector, make sure that the ArcSight products with which the connectors will communicate have already been installed correctly and you have assigned appropriate privileges. For data security, ArcSight recommends that you install the connector and the HP Operations Agent on the same system.

### To install the Forwarding Connector

- 1 Download the install executable for your operating system from the HP SSO site.
- 2 Start the ArcSight Installer by running the executable.

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

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

- 3 The destination selection window is displayed. If you are using the Manager Demo License, continue with steps A through C below. Otherwise, click Next and continue with step 4.

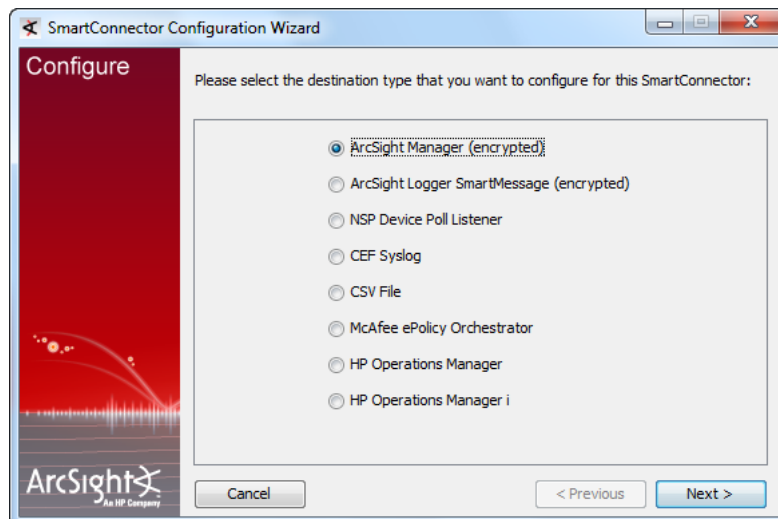
When configuring the connector to send events to a non-ESM destination, you could encounter a problem with certificate validation during connector setup when using the Manager Demo certificate.

- 4 To verify that the demo CA is added to the client trust store:
- a Click **Cancel** to exit the configuration wizard.
  - b From the `$ARCSIGHT_HOME\current\bin` directory, run the following command:  

```
arcsight connector tempca -ac -n <1.1.1.1>
```

 where `<1.1.1.1>` is the IP address of the ArcSight Manager.
  - c Enter the following command from the same location to return to the wizard:  

```
arcsight connectorsetup
```
- 5 Choose **HP Operations Manager** or **HP Operations Manager i**. Click **Next** to continue.



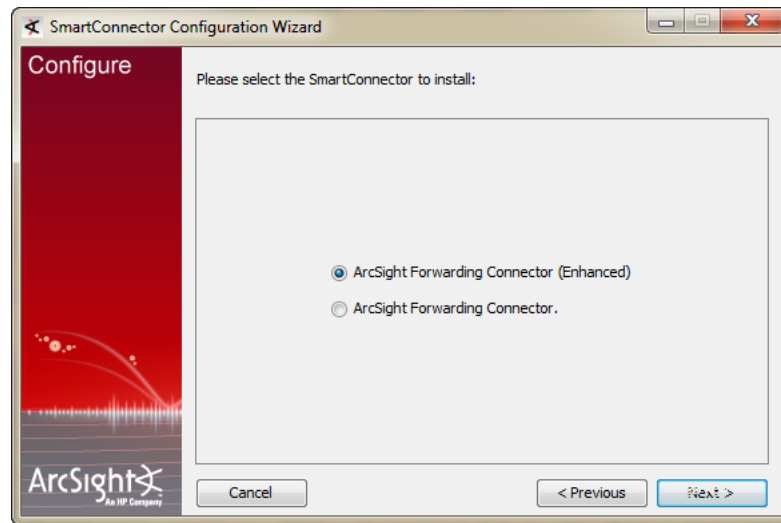
- 6 Fill in the parameter information required for connector configuration. Click **Next** to continue.

The image shows the 'SmartConnector Configuration Wizard' dialog box. The title bar says 'SmartConnector Configuration Wizard'. The main window has a red sidebar on the left with the word 'Configure' at the top and the ArcSight logo at the bottom. The main area has a light gray background with the text 'Please complete the following information for the om transport.' Below this is a list of configuration fields: Host (text box with '127.0.0.1'), Port (text box with '162'), Version (dropdown menu with 'SNMP\_VERSION\_2'), Read Community(v2) (text box with 'public'), Write Community(v2) (text box with 'public'), Authentication Username(v3) (text box), Authentication Password(v3) (text box), Security Level(v3) (dropdown menu with 'AuthNoPriv'), Authentication Scheme(v3) (dropdown menu with 'MD5'), Privacy Password(v3) (text box), and Context Engine Id(v3) (text box). At the bottom are three buttons: 'Cancel', '< Previous', and 'Next >'.

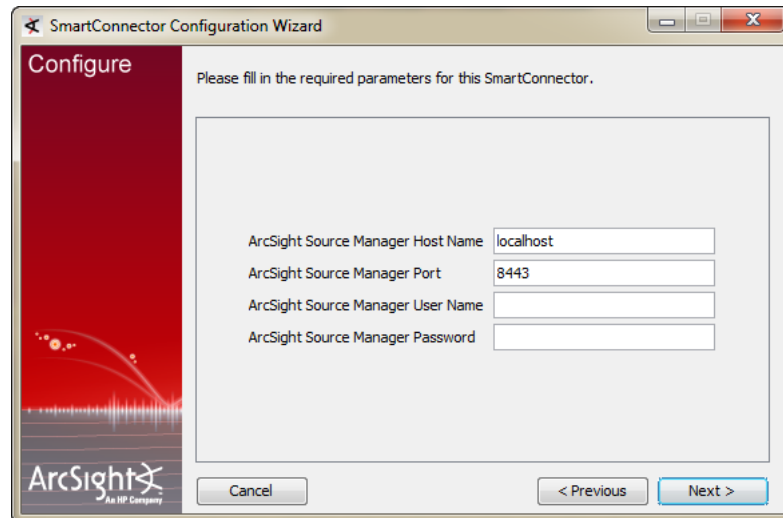
Parameter	Description
<b>Host</b>	For HP OM, enter the Host name or IP address of the HP OM device. This is the HP OM managed node (the system where the HP Operations Agent is installed, and to which the SNMP interceptor policy is deployed). For HP OMI, enter the Host name or IP address of the HP BSM Integration Adapter.
<b>Port</b>	For HP OM and HP OMI, enter the port to be used by the device to monitor for events by the HP Operations Agent or by the BSM Integration Adapter monitoring for SNMP traps from the ArcSight Logger.
<b>Version</b>	Accept the default value of <b>SNMP_VERSION_2</b> . <b>SNMP_VERSION_3</b> is not currently available.
<b>Read Community(v2)</b>	Enter the SNMP Read Community name.
<b>Write Community(v2)</b>	Enter the SNMP Write Community name.
<b>Authentication Username(v3)</b>	For use with SNMP v3. Not currently available.
	Authentication Password(v3)
	Security Level(v3)
	Authentication Scheme(v3)
	Privacy Password(v3)
	Context Engine Id(v3)
	Context name(v3)



- 7 Choose **ArcSight Forwarding Connector (Enhanced)**. Click **Next**.

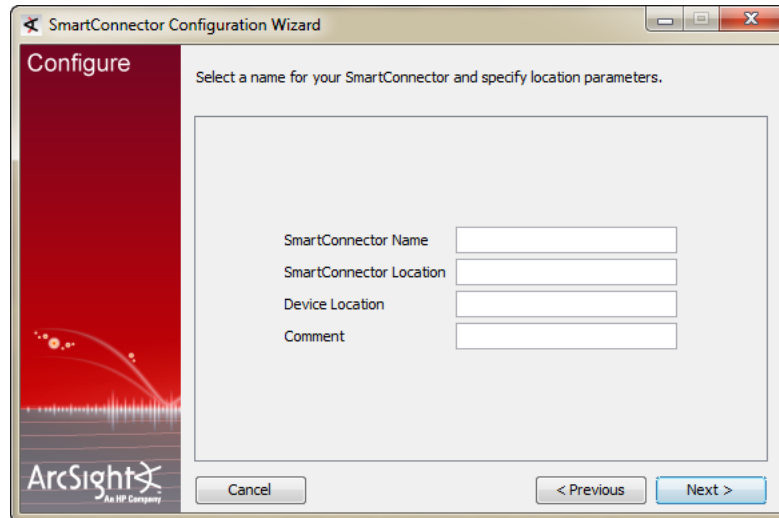


- 8 Enter the Source Manager information. Click **Next**.



Parameter	Description
<b>ArcSight Source Manager Host Name</b>	Enter the name of the host on which the ESM Source Manager is installed.
<b>ArcSight Source Manager Port</b>	Enter the network port from which the ESM Source manager is accepting requests. The default port is 8443.
<b>ArcSight Source Manager User Name</b>	Enter the ArcSight user name created with permissions for the adaptor on the ArcSight ESM Source Manager.
<b>ArcSight Source Manager Password</b>	Enter the ArcSight password that will be used to log this adaptor into the ArcSight ESM Source Manager.

- 9 Enter a name for the connector and provide other information identifying the connector's use in your environment. Click **Next**.



The image shows a screenshot of the 'SmartConnector Configuration Wizard' window, specifically the 'Configure' step. The window has a title bar with the text 'SmartConnector Configuration Wizard'. On the left side, there is a red vertical banner with the 'ArcSight' logo and the text 'An HP Company'. The main area of the window contains the text 'Select a name for your SmartConnector and specify location parameters.' Below this text are four input fields: 'SmartConnector Name', 'SmartConnector Location', 'Device Location', and 'Comment'. At the bottom of the window, there are three buttons: 'Cancel', '< Previous', and 'Next >'.

- 10 Read the installation summary and click **Next**. If it is incorrect, click **Previous** to make changes.
- 11 When the connector completes its configuration, click **Next**. The Wizard prompts you to choose whether to run the connector as a process or as a service.
- If you run the connector as a service, the Wizard prompts you to define service parameters for the connector.

- 12 After making your selections, click **Next**. The Wizard displays a dialog confirming the connector's setup and service configuration.

- 13 Click **Finish**.

For some connectors, a system restart is required before the configuration settings take effect. If a **System Restart** window is displayed, read the information and restart the system.

- 14 Click **Done**.

## Creating an SNMP Interceptor Policy for HP Operations Manager (HP OM)

An SNMP interceptor policy is a type of HP OM policy, with rules, conditions, and actions. Rules define what a policy should do in response to a specific type of event. Each rule consists of a condition and an action. SNMP interceptor policies monitor SNMP events, and can start actions when an SNMP event contains a specified character pattern. The Logger Forwarding Connector sends security events as SNMP traps to an HP OM SNMP interceptor policy that you will create.

SNMP interceptor policies can be configured on either HP OM UI, HP OM for Windows, or HP OM for UNIX or Linux.

See ["Troubleshooting Tips" on page 37](#) for details if you encounter duplicate or dropped events.

## Uploading Interceptor Template

Download the latest policy files from the download site where you obtained the connector.

Refer to the *ArcSight™ HP OM and HP OMi SNMP Interceptor Policy Readme* for details on uploading the template for Operations Manager for Windows and Operations Manager for UNIX or Linux.

## Deploying the Policy

Once you have created your customized SNMP interceptor policy, deploy or assign the policy through the HP OM for Windows or HP OM for UNIX or Linux Administration UI. For details, refer to the HP Operations Manager online help and documentation.

The systems that send the SNMP traps to the logger must also be set up as nodes in HP OM, because HP OM discards messages from unknown systems. Set up an external node or an SNMP node. For details, refer to the HP Operations Manager online help and documentation.

Also, configure the HP Operations Agent for SNMPv2 by setting the **SNMP\_SESSION\_MODE** variable using the **ovconfchg** command line tool. Refer to the HP Operations Manager or HP Operations Agent online help and documentation for more information.

## Creating an SNMP Interceptor Policy for HP Operations Manager i (HP OMi)

HP BSM Integration Adapter SNMP interceptor policies monitor SNMP events, and respond when a character pattern that you choose is found in an SNMP trap. ArcSight provides a template SNMP interceptor policy for use in creating your own customized SNMP interceptor policy. This template policy should be customized and enhanced to satisfy different needs and requirements with HP BSM Integration Adapter's powerful policy edit features.

See ["Troubleshooting Tips" on page 37](#) for details if you encounter duplicate or dropped events.

## Uploading Interceptor Template

Download the latest policy files from the download site where you obtained the connector.

Refer to the *ArcSight™ HP OM and HP OMi SNMP Interceptor Policy Readme* for details on uploading the template.

## Troubleshooting Tips

### Duplicate Events (for HP OMi)

If there appear to be duplicate events forwarded to the HP OMi console:

- 1 Check and adjust deduplication options as needed.
- 2 If, after modifying deduplication options, there still appear to be duplicate events, check the Custom Message Attributes (event details and data), and apply rules to differentiate the events.

For HP OMi, Refer to the *HP Business Service Management Using Operations Management Guide* and help for details.

For HP OM, refer to the HP Operations Manager online help for details.

## Dropped Events

If you notice that some events forwarded from ArcSight ESM/Logger are dropped, verify whether the Agent Severity is set correctly in those events. The default SNMP interceptor policy provided by ArcSight in the connector distribution has rules to pick up and forward SNMP Traps from ArcSight ESM/Logger based on the Agent Severity. Events that do not have Agent Severity set are dropped and not forwarded by the SNMP interceptor policy. If the dropped events are correlated events from ESM, make sure that the rules on ESM are set for the correct Agent Severity in the correlated events they generate. If the dropped events are normalized events from devices, then verify that the originating connector that has normalized the event has mapped the Agent Severity correctly from the Device Severity. If the originating connector (that is not setting the Agent Severity) is a FlexConnector, review the mappings and map all of the device severities to one of these Agent Severity values: Low, Medium, High, or Very-High. If the connector is a supported connector, contact customer support.

## Adjusting the Event Processing Rate for HP OM and HP OMi

The default event processing rate for forwarding events from ESM to HP OM is **50 eps**. For HP OMi, the default processing rate is **10 eps**. If this rate proves excessive for your system, HP OM or HP OMi might drop some incoming events. If events are being dropped, decrease the event processing rate until you find that all events have arrived.

If this occurs, you can adjust the rate at which events are forwarded to HP OM or HP OMi. To do so, you will need to change the event processing rate within your XML properties file.

To adjust the event processing rate,

- 1 Stop the currently running SmartConnector from operating.
- 2 From a Windows command line, access your XML properties file using the command

```
cd %ARCSIGHT_HOME%/current/user/agent
```

- 3 Use WordPad or any XML Editor to open the .xml file for your HP OM or HP OMi destination, similar to the example below:

```
0Ajv5S8BABCAeabNXP5Rw==.xml
```

- 4 From within the .xml file, search for the following for HP OM:

```
ProcessingSettings.ThrottleRate="50"
```

or, for HP OMi:

```
ProcessingSettings.ThrottleRate="10"
```

This value controls the current processing event rate.

- 5 Change this value to the desired rate of events per second. For example, to lower the rate of events to 5 eps, change the value after the string to 5:

`ProcessingSettings.ThrottleRate="5"`



If there are multiple destinations, repeat the steps above to change the rate for each destination, as required.

---

- 6 Save the .xml file and exit the XML editor.
- 7 Restart the SmartConnector.



## Appendix A

# Using the Forwarding Connector in FIPS mode

---

The following topics provide information and instructions for enabling FIPS compliance in the use of the Forwarding Connector.

[“What is FIPS?” on page 41](#)

[“ArcSight ESM Installation” on page 41](#)

[“FIPS-Enabled Forwarding Connector Installation” on page 42](#)

[“Enable FIPS Suite B Support” on page 47](#)

[“Using Logger in FIPS Mode” on page 47](#)

## What is FIPS?

Under the Information Technology Management Reform Act (Public Law 104-106), the Secretary of Commerce approves standards and guidelines that are developed by the National Institute of Standards and Technology (NIST) for Federal computer systems. These standards and guidelines are issued by NIST as Federal Information Processing Standards (FIPS) for use government-wide. NIST develops FIPS when there are compelling Federal government requirements such as for security and interoperability and there are no acceptable industry standards or solutions.



FIPS compatibility applies only to standard ESM and Logger destinations.

## ArcSight ESM Installation

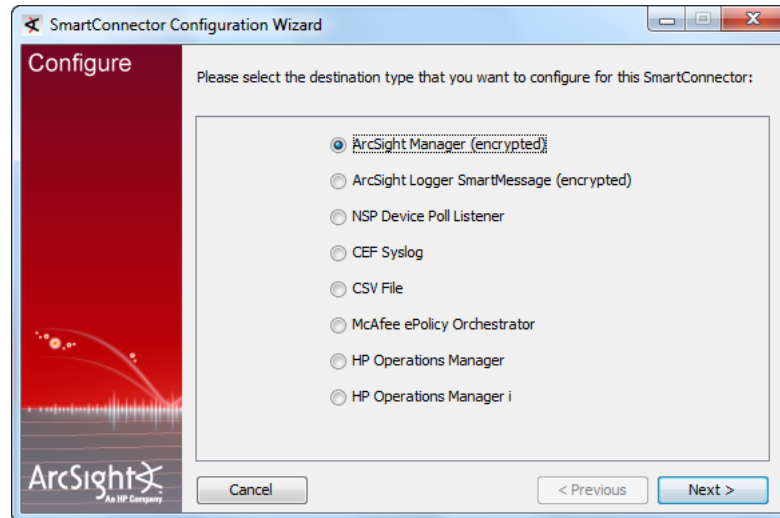
Before you install an ArcSight Forwarding Connector, make sure that ArcSight ESM has already been installed correctly for FIPS compliance. See [“Standard Installation Procedures” on page 9](#) for instructions. Also, ArcSight recommends reading the *ArcSight ESM Installation and Configuration Guide* before attempting to install a new Forwarding Connector.

For information regarding operating systems and platforms supported, see *SmartConnector Product and Platform Support*, available from ArcSight Technical Support with each SmartConnector release.

## FIPS-Enabled Forwarding Connector Installation

After completion of ArcSight ESM installation (which includes assigning privileges on the ESM source manager, allowing the forwarding of correlation events, and so on), follow the instructions under [“Installing the Forwarding Connector” on page 14](#) up to and including step 2.

When the installation is complete after step 2, the following dialog is displayed:



### To Install a FIPS-enabled Forwarding connector:

- 1 Click **Cancel** to exit connector setup in order to perform configuration of the NSS DB, a necessary step for installing the connector in FIPS-compliant mode. (You will return to the wizard after performing these configuration steps.)

- 2 Create a properties file using the following location:

```
$ARCSIGHT_HOME/user/agent/agent.properties
```

- 3 Add the following line within the file: `fips.enabled=true`

- 4 Copy your key files for source and destination Managers (in this example, `srcmgrkey.cert` and `destmgrkey.cert`) into the `$ARCSIGHT_HOME\current\bin` directory.

- 5 Turn off FIPS enablement on the new installation using the following command:

```
arcsight runmodutil -fips false -dbdir user/agent/nssdb.client
```

- 6 Import the certificates for the source and destination Managers. Where `srcmgrkey` and `destmgrkey` are alias names and `srcmgrkey.cert` and `destmgrkey.cert` are the names with which the certificates from the Managers were saved, import the certificates for the source and destination Managers, using the following commands:

This command imports the source Manager's certificate: `arcsight runcertutil -A -n srcmgrkey -t "CT,C,C" -d user/agent/nssdb.client -i bin/srcmgrkey.cert`

This command will display, in plain text (as shown below), the contents of the source Manager's certificate and can be used to determine the name put into the connector



configuration for the source Manager: `arcsight runcertutil -L -n srcmgrkey -t "CT,C,C" -d user/agent/nssdb.client`



To confirm the Manager's certificate name, look under `Subject: "CN=*`", as shown in the following example.

This command imports the destination Manager's certificate: `arcsight runcertutil -A -n destmgrkey -t "CT,C,C" -d user/agent/nssdb.client -i bin/destmgrkey.cert`

This command displays, in plain text, the contents of the destination Manager's certificate and can be used to determine the name put into the connector configuration for the destination manager: `arcsight runcertutil -L -n destmgrkey -t "CT,C,C" -d user/agent/nssdb.client`

ArcSight certutil starting...

```
Certificate:
  Data:
    Version: 3 (0x2)
    Serial Number: 4524 (0x11ac)
    Signature Algorithm: PKCS #1 MD5 with RSA Encryption
    Issuer: "CN=solar"
    Validity:
      Not Before: Tue Nov 10 03:45:06 2009
      Not After : Wed Feb 10 03:45:06 2010
    Subject: "CN=solar"
    Subject Public Key Info:
      Public Key Algorithm: PKCS #1 RSA Encryption
      RSA Public key:
        Modulus:
          cd:f2:24:ac:7d:12:f8:3e:0c:42:c8:12:d9:33:1b:b0:
          fd:07:fd:f2:6d:38:5d:e0:9c:1a:e8:10:a7:87:ca:f4:
          7e:21:be:b1:58:f4:d9:f5:7f:8c:a9:49:81:1c:75:48:
          23:10:30:d9:06:15:7a:6c:40:f2:fd:ba:62:0c:e5:81:
          23:09:e7:34:74:3a:00:30:99:a6:8d:3f:fe:e6:8d:45:
          c9:55:78:d5:a6:ef:3b:04:2d:7b:45:c8:0f:9f:d4:9c:
          a2:a6:9d:ca:3a:46:2a:0c:49:cd:c0:82:6b:bc:0f:cd:
          99:e1:ca:a0:b9:d7:84:51:5e:76:39:3b:59:82:2b:dd
        Exponent: 65537 (0x10001)
```



Your **host name** must match the **Manager's certificate name** (circled above as an example) and must be DNS resolvable. If these fields do not match, the connection will fail.

- 7 Re-enable FIPS using the following command:

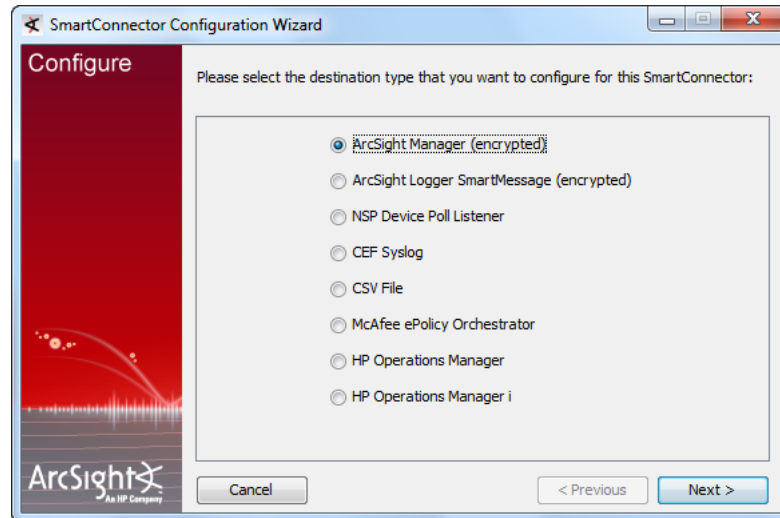
```
arcsight runmodutil -fips true -dbdir user/agent/nssdb.client
```

- 8 Return to connector setup by entering the following command from the `$ARCSIGHT_HOME\current\bin` directory:

```
arcsight connectorsetup
```

- 9 When prompted to start in Wizard Mode, click **Yes**.

- 10 The Destination selection dialog displays. Make sure **ArcSight Manager (encrypted)** is selected and click **Next**.

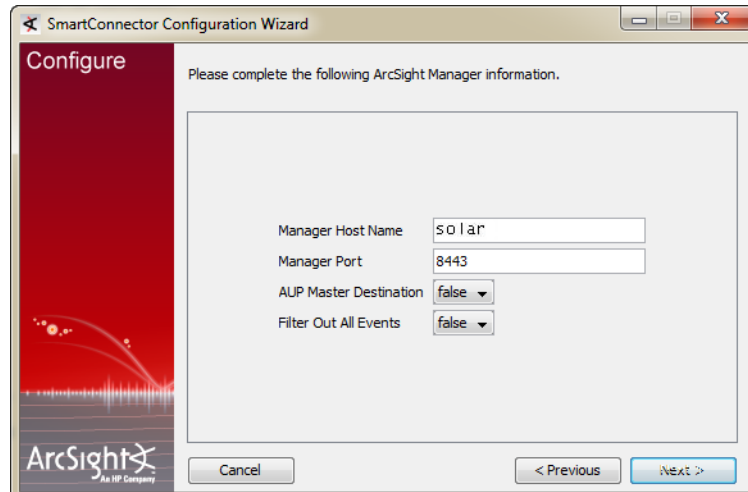


You are prompted for **Manager Host Name** and **Manager Port**.

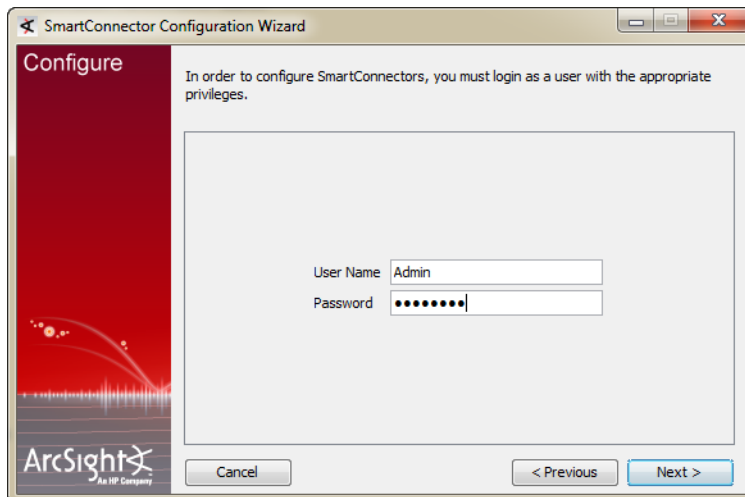


The **host name** and **manager's certificate name** must match and must be DNS resolvable. If these fields do not match, the connection will fail.

- 11 Enter the information and click **Next**.



- 12** Enter a valid ArcSight **User Name** and **Password**, and click **Next**. This should be the user name and password for the user account you created on the destination ArcSight Manager.

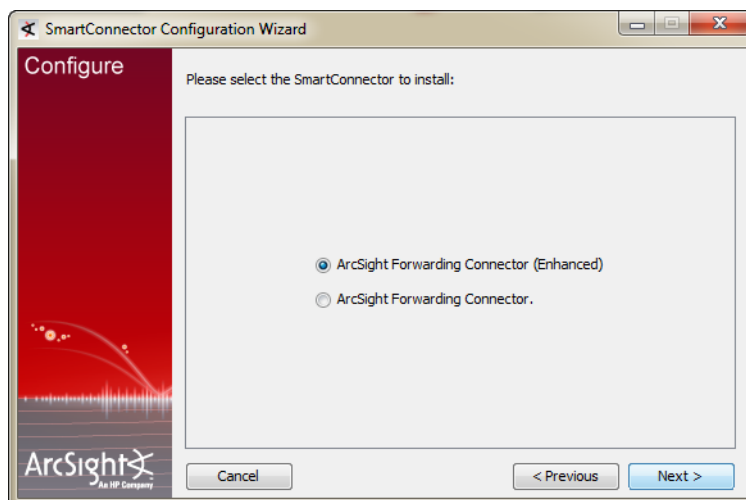


- 13** You are given a choice of Forwarding Connector versions to install. If you are currently using ESM **v4.0 SP3** or later, ArcSight recommends choosing the **ArcSight Forwarding Connector (Enhanced)** option.

When choosing which version to use, note:

- ◆ The **ArcSight Forwarding Connector** option supports the previous software version and does not include the increased event rate and recoverability features of **ArcSight Forwarding Connector (Enhanced)**. ArcSight recommends using the older option only when communicating with a pre-v4.0 SP3 ESM installation.
- ◆ The capacity of events that can be stored during a system failure is dependent on the FileStore size of your source ArcSight Manager. Choosing the **ArcSight Forwarding Connector (Enhanced)** version requires configuration adjustments on your source Manager.

For instructions on how to determine and change your source disk settings, see [“Increasing the FileStore size \(Enhanced version only\)” on page 13](#). Click **Next**.



- 14 Enter the information to configure the Forwarding Connector.



The **host name** and **manager certificate name** must match and must be DNS resolvable. If these fields do not match, the connection will fail.

This is information about your source Manager, as described in the table below.

Click **Next** to continue.

Parameter	Description
<b>ArcSight Source Manager Host Name</b>	Hostname where the ArcSight ESM Source Manager is installed.
<b>ArcSight Source Manager Port</b>	Network Port where the ArcSight ESM Source Manager is accepting requests.
<b>ArcSight Source Manager User Name</b>	The ArcSight user name created with permissions for the Forwarding Connector on the ArcSight ESM Source Manager.
<b>ArcSight Source Manager Password</b>	ArcSight's password that will be used to log this Connector into the ArcSight ESM Source Manager.
<b>Fips Cipher Suites</b>	<b>fipsDefault:</b> Standard Fips <b>SuiteB 128:</b> Fips Suite B with 128Bit encryption <b>SuiteB 192:</b> Fips Suite B with 192Bit encryption

- 15 Enter a name for the connector and provide other information identifying the connector's use in your environment. Click **Next**.
- 16 Read the connector summary; if it is correct, click **Next**. If it is not correct, click **Previous** to make changes before continuing.
- 17 When the connector completes its configuration, click **Next**. The wizard now prompts you to run the connector as a process or as a service. If you choose to run the connector as a service, the wizard prompts you to define service parameters for the connector.

- 18 After making your selections, click **Next**. The wizard displays a dialog confirming the connector's setup and service configuration.
- 19 Click **Finish**.

## Enable FIPS Suite B Support

If you have installed a SmartConnector in FIPS-compliant mode, you can enable FIPS Suite B support by modifying the ESM destination parameters.



The ArcSight Manager must also be installed in FIPS Suite B mode.

### To enable FIPS Suite B support:

- 1 From `$ARCSIGHT_HOME\current\user\agent`, open the `agent.properties` file.
- 2 Locate the following property for ESM destination parameters (approximately, line 10 in the file):

```
agents[0].destination[0].params=<?xml version="1.0"
encoding="UTF-8"?>\n<ParameterValues>\n    <Parameter
Name="port" Value="8443"/>\n    <Parameter
Name="filterevents" Value="false"/>\n    <Parameter
Name="host" Value="samplehost.sv.arcsight.com"/>\n
<Parameter Name="aupmaster" Value="false"/>\n    <Parameter
Name="fipsciphers"
Value="fipsDefault"/>\n</ParameterValues>\n
```

The destination parameters are specified here as an XML string where each element is one parameter. Based on the Suite B mode of the Manager, change `fipsDefault` to `suiteb128` (for 128-bit security) or `suiteb192` (for 192-bit security).

- 3 Save and exit the `agent.properties` file.

## Using Logger in FIPS Mode

ArcSight Logger supports the Federal Information Processing Standard 140-2 (FIPS 140-2). To use Logger in the FIPS mode, refer to the *ArcSight Logger Administrator's Guide* and see "Installing or Updating a SmartConnector to be FIPS-compliant" in Chapter 7, "System Admin" for instructions.

