
Micro Focus Security ArcSight SmartConnectors

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Configuration Guide for F5 BIG-IP Syslog SmartConnector

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Configuration Guide for F5 BIG-IP Syslog SmartConnector

This guide provides information for installing the SmartConnector for F5 BIG-IP Syslog and configuring the device for event collection. Access Policy Module (APM) v11.3 is also supported.



For correct parsing of BIG-IP version 11.6 TMOS events, go to https://downloads.f5.com/esd/product.jsp?sw=BIG-IP&pro=big-ip_v11.x, log in to the F5 site, and download and install F5's Hotfix-BIGIP-11.6.0.4.0.420-HF4.

Intended Audience

This guide provides information for IT administrators who are responsible for managing the ArcSight SmartConnectors.

Additional Documentation

The ArcSight SmartConnectors documentation library includes the following resources:

- *Installation Guide for ArcSight SmartConnectors*, which provides detailed information about installing SmartConnectors.
- *Configuration Guides for ArcSight SmartConnectors*, which provide information about configuring SmartConnectors to collect events from different sources.
- *Release Notes for ArcSight SmartConnectors*, which provides information about the latest release

For the most recent version of this guide and other ArcSight SmartConnector documentation resources, visit the [documentation site for ArcSight SmartConnectors](#).

Contact Information

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Product Overview

The BIG-IP system is a set of application delivery products that work together to ensure high availability, improved performance, application security, and access control. The BIG-IP system directs different types of protocol and application traffic to an appropriate destination server, as well as applying security policies to network traffic.

The foundation of the BIG-IP system from a software perspective is the F5 Networks Traffic Management Operation System (TMOS). TMOS is a real-time, event-driven operating system designed specifically for application delivery networking. Through TMOS, you can configure all of the basic BIG-IP system routing and switching functions, as well as enhancements such as clusters, user roles, and administrative partitions. On top of TMOS runs a set of independent BIG-IP modules that you can configure.

Configuration

Configuring BIG-IP

Using the `syslog-ng` utility, the BIG-IP system logs many different types of events related to the operating system, packet filtering, local traffic management, and auditing. You can use the Configuration utility to display each type of event as well as to configure logging. The types of events that the BIG-IP system logs include system, packet filter, local traffic, and audit events. See "Logging BIG-IP System Events" in the *TMOS Management Guide for BIG-IP Systems* for complete configuration information. The `/etc/syslog-ng/syslog-ng.conf` file stores the system log configuration settings.

Adding Remote Syslog Servers

The BIG-IP Syslog connector can connect to remote Syslog servers without adversely affecting system performance.

To add a single remote syslog server:

1. Enter the following command to log into the Traffic Management Shell.
`tmsh`
2. Add the server using the following command syntax:
`modify /sys syslog remote-servers add { <name> { host <IP_address>
remote-port <port> } }`
3. For example, to add remote syslog server **172.28.31.40** on port **514** and name **mysyslog**, enter the following command:
`modify /sys syslog remote-servers add { mysyslog { host 172.28.31.40
remote-port 514 } }`
4. To save the configuration, enter the following command:
`save/sys config`

To add multiple remote syslog servers:

1. Enter the following command to log into the Traffic Management Shell:
`tmsh`

2. Add the servers using the following command syntax:

```
modify /sys syslog remote-servers add { <name> { host <IP address>  
remote-port <port> } <name> { host <IP address> remote-port <port> } }
```

For example, to add remote syslog server **172.28.31.40** on port **514** and name **mysyslogA** and remote syslog server **172.28.31.37** on port **514** and name **mysyslogB**, enter the following command:

```
modify /sys syslog remote-servers add { mysyslogA { host 172.28.31.40  
remote-port 514 } mysyslogB { host 172.28.31.37 remote-port 514 } }
```

3. To save the configuration, enter the following command:

```
save/sys config
```

Configuring for the Syslog SmartConnectors

The syslog SmartConnectors use a sub-connector architecture that lets them receive and process syslog events from multiple devices. There is a unique regular expression that identifies the device. For example, the same SmartConnector can process events from a Cisco Router and a NetScreen Firewall simultaneously. The SmartConnector inspects all incoming messages and automatically detects the type of device that originated the message.

You can install the syslog SmartConnector as a syslog daemon, pipe, or file connector. You can use the Syslog Daemon, Syslog Daemon NG, or Syslog File connector types depending on your requirement. The Syslog File type SmartConnectors also support Syslog Pipe.

Syslog Daemon SmartConnector

The Syslog Daemon SmartConnector is a syslogd-compatible daemon designed to work in operating systems that have no syslog daemon in their default configuration, such as Microsoft Windows. The SmartConnector for Syslog Daemon implements a UDP receiver on port 514 by default, or can be configured on another port to receive syslog events. You can also configure to use the TCP protocol.

To use the SmartConnector for Syslog Daemon, add the following statement in the *rsyslog.conf* file:

```
*.* @@(remote/local-host-IP):514
```

Example: local1.warning @@10.0.0.1:514

- To read all Syslog events, use *.*.
- To filter specific events, replace regex with the specific event name.
- For example: *.* @@(remote/local-host-IP):514 and local1.warning @@10.0.0.1:514.

- To send events over a TCP connection, use @@ and to send events over an UDP connection, use @.

If you are running SmartConnector for Syslog Daemon on the same machine as the server, you must provide the IP address of the local host. If you want to forward events to other machines, you must provide the IP address of the same.

Messages longer than 1024 bytes might be split into multiple messages on syslog daemon. No such restriction exists on syslog file or pipe.

Syslog Pipe and File SmartConnectors

When a syslog daemon is already in place and configured to receive syslog messages, an extra line in the syslog configuration file *rsyslog.conf* can be added to write the events to either a file or a system pipe and the ArcSight SmartConnector can be configured to read the events from it. In this scenario, the ArcSight SmartConnector runs on the same machine as the syslog daemon. The additional configurations for the ArcSight syslog file or syslog pipe SmartConnectors in the system where all Syslog Daemon SmartConnector configurations are done.

The Syslog Pipe SmartConnector is designed to work with an existing syslog daemon. This SmartConnector is especially useful when storage is a factor. In this case, syslogd is configured to write to a named pipe, and the Syslog Pipe SmartConnector reads from it to receive events.

The Syslog File SmartConnector is similar to the Pipe SmartConnector. However, this SmartConnector monitors events written to a syslog file such as messages.log rather than to a system pipe.

Using the SmartConnector for Syslog Pipe or File

This section provides information to set up your existing syslog infrastructure to send events to the ArcSight Syslog Pipe or File SmartConnector.

The standard UNIX implementation of a syslog daemon reads the configuration parameters from the */etc/rsyslog.conf* file, which contains specific details about which events to write to files, write to pipes, or send to another host.

For Syslog Pipe:

1. Execute the following command to create a pipe:

```
mkfifo /var/tmp/syspipe
```

2. Add one of the following lines depending on your OS to the */etc/rsyslog.conf* file:

```
*.debug /var/tmp/syspipe
```

or

```
*.debug | /var/tmp/syspipe
```

3. Restart the syslog daemon in one of the following methods:

Enter the following commands:

```
/etc/init.d/syslogd stop  
/etc/init.d/syslogd start
```

or

Execute the following command to send a configuration restart signal:

On RedHat Linux:

```
service syslog restart
```

On Solaris:

```
kill -HUP `cat /var/run/syslog.pid`
```

For Syslog File:

1. Create a file or use the default file into which log messages must be written.
2. Modify the /etc/rsyslog.conf file

The syslog daemon is forced to reload the configuration and start writing to the pipe.

3. Restart the syslog daemon in one of the following methods:

- a. Restart the syslog daemon in one of the following methods:

Enter the following commands:

```
/etc/init.d/syslogd stop  
/etc/init.d/syslogd start
```

or

Execute the following command to send a configuration restart signal:

On RedHat Linux:

```
service syslog restart
```

On Solaris:

```
kill -HUP `cat /var/run/syslog.pid`
```

Installing the SmartConnector

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

Preparing to Install the SmartConnector

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

For complete product information, refer to the *Administrator's Guide to ArcSight Platform*, available on [ArcSight Documentation](#).

If you are adding a connector to the ArcSight Management Center, see the *ArcSight Management Center Administrator's Guide* available on [ArcSight Documentation](#) for instructions.

Before installing the SmartConnector, make sure that the following are available:

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

Installing and Configuring the SmartConnector

Unless specified otherwise at the beginning of this guide, this SmartConnector can be installed on all ArcSight supported platforms.

1. Start the installation wizard.
2. Follow the instructions in the wizard to install the core software.
3. Specify the relevant Global Parameters, when prompted.
4. Do one of the following depending on your requirement:

- Select **Syslog Daemon** from the **Type** drop-down:
 - a. Click **Next**, then specify the following parameters:

Parameters	Description
Network port	The SmartConnector for Syslog Daemon listens for syslog events from this port.
IP Address	The SmartConnector for Syslog Daemon listens for syslog events only from this IP address, apart from the default (ALL) to bind to all available IP addresses.
Protocol	Specify whether to read files in batch mode or real-time mode. In batch mode, all files are read from the beginning.
Forwarder	This option applies to Batch Mode only. Specify None , Rename , or Delete as the action to be performed to the file when the connector finishes reading and reaches end of file. For the real-time mode, retain the default value None .

- b. Click **Next**.
- Select **Syslog File** from the **Type** drop-down:

a. Click **Next**, then specify the following parameters:

Parameters	Description
Pipe Absolute Path Name	Specify an absolute path to the pipe, or accept the default value: <code>/var/tmp/syspipe</code> .
File Absolute Path Name	<p>Specify the full path name for the file from which this connector will read events. The following are default values:</p> <ul style="list-style-type: none"> • Solaris: <code>\var\adm\messages</code> • Linux: <code>\var\log\messages</code> <p>You can use a wildcard pattern in the file name.</p> <p>In the real-time mode, rotation can occur only if the file is over-written or removed from the folder. The real-time processing mode assumes the following external rotation:</p> <ul style="list-style-type: none"> • Date format log rotation: The device creates a new log at a specified time in the with the naming convention <code>filename.timestamp.log</code>. The connector detects the new log and terminates the reader thread to the previous log after the processing is complete. The connector then creates a new reader thread to the new <code>filename.timestamp.log</code> and begins processing that file. To enable this log rotation, specify timestamp in <code>yyyy-MM-dd</code> date format. For example, <code>filename.yyyy-MM-dd.log</code> • Index log rotation: The device writes to indexed files in the following format: <code>filename.log.001</code>, <code>filename.log.002</code>, <code>filename.log.003</code>, and so on. At startup, the connector processes the log with highest index. When the device creates a log with a greater index, the connector terminates the reader thread to the previous log after processing completes, creates a thread to the new log, and begins processing that log. To enable this log rotation, use an index format, as shown in the following example: <code>filename'%d,1,99,true'.log</code>; Specifying <code>true</code> indicates that the index can be skipped. For example, if 5 appears before 4, processing proceeds with 5 and will not read 4. Use of <code>true</code> is optional.
Reading Events Real Time or Batch	Specify whether to read files in batch mode or real-time mode. In batch mode, all files are read from the beginning.
Action Upon Reaching EOF	This option applies to Batch Mode only. Specify None , Rename , or Delete as the action to be performed to the file when the connector finishes reading and reaches end of file . For the real-time mode, retain the default value None .
File Extension If Rename Action	This option applies to Batch Mode only. Specify the extension to be added to the file name if the action on reaching the end of file is specified as Rename . The default value is Processed , which adds a <code>.processed</code> extension.

b. Click **Next**.

5. Select a destination and configure parameters.
6. Specify a name for the connector.
7. If you have selected ArcSight Manager as the destination, the certificate import window for the ArcSight Manager is displayed. Select **Import the certificate to the connector from destination** and click **Next**. (If you select **Do not import the certificate to connector from destination**, the connector installation will end.) The certificate is imported and the **Add connector Summary** window is displayed.
8. Select whether you want to run the connector as a service or in the standalone mode.
9. Complete the installation.
10. Run the SmartConnector.

For instructions about upgrading the connector or modifying parameters, see [SmartConnector Installation and User Guide](#).

Device Event Mapping to ArcSight Fields

The following section lists the mappings of ArcSight data fields to the device's specific event definitions. See *ArcSight 101* for more information about the ArcSight data fields.



Device Vendor and Device Product fields may show 'UNIX' rather than the actual vendor and product names, even for events parsed correctly. This value means the events exist in generic UNIX syslogs and have been sent by the native OS.

F5 BIG-IP Mappings to ArcSight Fields

ArcSight ESM Field	Device-Specific Field
Agent (Connector) Severity	Very High = critical, emerg, error, err; High = major, alert; Medium = minor, warning, unknown; Low = notice, clear, info, debug
Device Custom IPv6 Address 2	Source IPv6 Address
Device Custom IPv6 Address 3	Destination IPv6 Address
Device Custom Number 2	Log Level
Device Custom String 2	Facility
Device Custom String 3	Log Code
Device Custom String 6	Policy
Device Event Class ID	Oneof (LogFacility," : Debug Message",LogFacility)
Device Process ID	ProcessID
Device Process Name	One of (TMM, LogFacility)
Device Product	'Big IP'
Device Severity	One of (Severity, 'unknown')
Device Vendor	'F5'
Message	One of (Message, Information)
Name	message string

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