F5 BIG-IP Data Connector

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Overview

F5 BIG-IP is a comprehensive platform that combines software and hardware solutions to enhance application security, availability, and access control. It provides centralized management and monitoring across multiple modules, including Application Security Manager (ASM), Advanced Firewall Manager (AFM), Access Policy Manager (APM), Domain Name System (DNS), Local Traffic Manager (LTM), and system information. With its robust integration capabilities, BIG-IP enables organizations to streamline access to applications, APIs, and data while ensuring a secure and seamless user experience, regardless of location or hosting

Use this connector to ingest the following log types:

- ASM logs
- AFM logs
- APM logs
- DNS logs
- LTM logs
- System & OS logs

Requirements

CrowdStrike subscription: Falcon Next-Gen SIEM or Falcon Next-Gen SIEM 10GB.

CrowdStrike clouds: Available in US-1, US-2, EU-1, and US-GOV-1.

CrowdStrike access and permissions:

• Administrator or Connector Manager access to the Falcon console for the respective CID.

Vendor requirements:

- Administrator access to the F5 portal (MyF5)
- The default parser for this data connector requires logs in syslog format before ingestion. For more info, see Parser

System requirements:

- For the Falcon LogScale Collector, see the list of supported operating system versions [https://library.humio.com/falcon-logscale-collector/log-collector-install.html#log-collector-install-compatibility].
- The size of your Falcon LogScale Collector instance depends on workload. See the LogScale Collector sizing guide [https://library.humio.com/falcon-logscale-collector/log-collector-install-sizing.html].

Setup

Important: Some of these steps are performed in third-party products. CrowdStrike does not validate any third-party configurations in customer environments. Perform the following steps with care, and validate your settings and values before finalizing configurations in the Falcon console.

Step 1: Configure and activate the F5 BIG-IP Data Connector

- 1. In the Falcon console, go to <u>Data connectors > Data connectors > Data connections [/data-connectors]</u>.
- 2. Click + Add connection.
- In the Data Connectors page, filter or sort by Connector name, Vendor, Product, Connector Type, Author, or Subscription to find and select the connector you want to configure.
- 4. In the New connection dialog, review connector metadata, version, and description. Click Configure.

Note: For connectors that are in a Pre-production state, a warning dialogue appears. Click Accept to continue configuration.

5. In the Add new connector page, enter a name and optional description to identify the connector.

- 6. Click the Terms and Conditions box, then click Save.
- 7. A banner message appears in the Falcon console when your API key and API URL are ready to be generated. To generate the API key, go to

 <u>Data connectors > Data connectors > My connectors [/data-connectors/connectors]</u>, click **Open menu** for the data connector, and click **Generate API key**.
- 8. Copy and safely store the API key and API URL to use during connector configuration.

Important: Record your API key somewhere safe as it displays only once during connector setup. For more information about vendor-specific connector setup, see the Third-party data source integration guides.

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You can use any data shipper that supports the HEC API [https://library.humio.com/logscale-api/log-shippers-hec.html] to complete this step. We recommend using the Falcon LogScale Collector.

- 1. In the Falcon console, navigate to <u>Support and resources > Resources and tools > Tool downloads [/support/tool-downloads]</u>.
- $2. \, \text{Install the LogScale Collector based on your operating system. For example, LogScale Collector for Windows X64 \, \text{vx.} \, \text{x.} \, \text{x.} }$
- 3. Open the LogScale Collector configuration file in a text editor. For file location, see

 Create a configuration Local [https://library.humio.com/falcon-logscale-collector/log-collector-config.html#log-collector-config-editing-local].
- 4. Edit the config.yaml file. Examples of configuration files for syslog servers:
 - Linux

```
dataDirectory: /var/lib/humio-log-collector

sources:

syslog_udp_514:

type: syslog

mode: udp

port: 514

sink: humio

sinks:

humio:

type: hec

proxy: none

token: <generated_during_data_connector_setup>

url: <generated_during_data_connector_setup>
```

• Windows

```
dataDirectory: C:\ProgramData\LogScale Collector\
sources:
syslog_port_514:
type: syslog
mode: udp
port: 514
sink: humio
sinks:
humio:
type: hec
proxy: none
token: <generated_during_data_connector_setup>
url: <generated_during_data_connector_setup>
```

• Mac

```
dataDirectory: /var/local/logscale-collector

sources:

syslog_port_514:

type: syslog

mode: udp

port: 514

sink: humio

sinks:
humio:

type: hec

proxy: none
token: <generated_during_data_connector_setup>
url: <generated_during_data_connector_setup>
```

- 5. Verify the sources and sinks sections are correct.
 - Check that no other services are listening on port 514. For example, this command is commonly used to check for listening ports on Linux:

```
sudo netstat -lpn
```

- $\circ~$ If port 514 is not available, select a different port and confirm it is not in use. Update the port number.
- o If you're configuring multiple sources in the same configuration file, each sink must have a distinct port. For example, you cannot have two Humio sinks listening on port 514.
- Check the local firewall and confirm that the configured port is not being blocked.

```
Important: For Windows Firewall, add the LogScale Collector to your traffic allowlist.
```

• Add the token and url generated during data connector setup. Remove /services/collector from the end of the url.

6. Save and exit the config.yaml file.

- 7. Restart the Falcon LogScale Collector.
 - For Linux, run this command in your terminal:

```
sudo systemctl start humio-log-collector
```

- For Windows, look for Services from the search bar, open Services, find Humio Log Collector and right-click Restart.
- For Mac, run this command in your terminal:

```
sudo launchctl kickstart -k system/com.crowdstrike.logscale-collector □
```

Step 3: Configure F5 Networks BIG-IP Syslog Forwarding

The BIG-IP system allows you to log process-related information and send log messages to remote high-speed log servers. You can also filter the logged data based on alert level and source. To set up the F5 BIG-IP environment, you can use either the browser-based Configuration Utility or command-line tools.

Follow the steps below to configure BIG-IP system logging using the browser-based Configuration Utility:

1. Open https://BIG_IP_SERVER_IP

Note: Replace BIG_IP_SERVER_IP with the IP address of your device.

- 2. Log in to your BIG-IP Management Interface.
- 3. Continue with the next configuration steps.

Step 3.1: Create a pool of remote logging servers

Create a pool of remote log servers to which the BIG-IP system can send log messages.

A logging pool allows you to define a pool of servers that receive syslog events. The pool contains the IP address, port, and a node name that you provide.

- 1. At the top of the screen, click Configuration.
- 2. On the Main tab, click Local Traffic > Pools.
- 3. Click Create
- 4. In the Name field, enter a unique name for the pool.
- 5. Using the **New Members** setting, add the IP address for each remote logging server that you want to include in the pool:
 - Type an IP address in the Address field, or select a node address from the Node List.
 - Type a service number in the Service Port field, or select a service name from the list.

Note: Remote logging servers require port 514.

- Click Add.
- 6. Click Finished

Step 3.2: Create a remote high-speed log destination

Create a log destination of the Remote High-Speed Log type to specify that log messages are sent to a pool of remote log servers

Note: Before creating a remote high-speed log destination, ensure that at least one pool of remote log servers exists on the BIG-IP system.

- 1. On the Main tab, click System > Logs > Configuration > Log Destinations.
- 2. Click **Create**
- 3. In the Name field, enter a unique, identifiable name for this destination.
- 4. From the **Type** list, select **Remote High-Speed Log**.

The BIG-IP system is configured to send an unformatted string of text to the log servers.

- 5. From the **Pool Name** list, select the pool of remote log servers which was created in
- $\underline{Step~3.1: Create~a~pool~of~remote~logging~servers~[/documentation/page/ob38708b/f5-big-ip-data-connector\#p69857ab]}.$
- 6. From the **Protocol** list, select the UDP protocol (default protocol used by the high-speed logging pool members).
- 7. Click Finished

Step 3.3: Create a formatted remote high-speed log destination

Create a formatted logging destination to specify that log messages are sent to a pool of remote log servers, such as Remote Syslog server.

Note: Ensure that at least one remote high-speed log destination exists on the BIG-IP system. The formatted log destination allows you to specify any special formatting required on the events forwarded to the high-speed logging destination.

- 1. On the Main tab, click System > Logs > Configuration > Log Destinations.
- 2. Click Create
- 3. In the Name field, enter a unique, identifiable name for this destination.
- 4. From the **Type** list, select **Remote Syslog**.

The BIG-IP system is configured to send a formatted string of text to the log servers.

- 5. From the Syslog Format list, select a format for the logs.
- 6. From the Forward To list, select the High-Speed Log Destination created in

Step 3.2: Create a remote high-speed log destination [/documentation/page/ob38708b/f5-big-ip-data-connector#m2415275].

Important: For logs coming from Access Policy Manager (APM), only the BSD Syslog format is supported

7. Click Finished

Step 3.4: Create a publisher

 $\label{thm:continuous} \textbf{Create a publisher to specify where the BIG-IP system sends log messages for specific resources}$

Note: Ensure that at least one destination associated with a pool of remote log servers exists on the BIG-IP system. It allows the BIG-IP appliance to publish the formatted log message to the local syslog database.

- 1. On the Main tab, click System > Logs > Configuration > Log Publishers.
- 2. Click Create
- 3. In the Name field, enter a unique, identifiable name for this publisher.
- 4. From the available list of **Destinations** setting, select the formatted remote high-speed log destination which was created in Step 3.3: Create a formatted remote high-speed log destination [/documentation/page/ob38708b/f5-big-ip-data-connector#kc324b95] and click << to move the destination to the **Selected** list.
- 5. Click Finished

Step 3.5: Creating a logging filter

Create a custom log filter to specify the system log messages that you want to publish to a particular log.

Note: Ensure that at least one log publisher is configured on the BIG-IP system.

- 1. On the Main tab, click System > Logs > Configuration > Log Filters.
- 2. In the Name field, enter a unique, identifiable name for this filter.
- 3. From the Severity list, select the level of alerts that you want the system to use for this filter.

Note: The severity level that you select includes all of the severity levels that display above your selection in the list. For example, if you select Emergency, the system publishes only emergency messages to the log. If you select Critical, the system publishes critical, alert, and emergency-level messages in the log.

- 4. From the Source list, select "All system processes" from the available list of event log sources.
- 5. In the Message ID field, enter the first eight hex-digits of the specific message ID that you want the system to include in the log. Use this field when you want a log to contain only each instance of one specific log message.

Note: BIG-IP system log messages contain message ID strings in the format: xxxxxxxxxxx.. For example, in this log message: Oct 31 11:06:27 olgavmmgmt notice mcpd[5641]: 01070410:5: Removed subscription with subscriber id lind, the message ID string is: 01070410:5:. You enter only the first eight hex-digits: 01070410.

- 6. From the Log Publisher list, identify the publisher created in step 4 that contains the destinations you wish to send log messages to
- 7. Click Finished

Step 4: Verify successful data ingestion

Important: Search results aren't generated until an applicable event occurs. Before verifying successful data ingestion, wait until data connector status is **Active** and an event has occurred. Note that if an event timestamp is greater than the retention period, the data is not visible in search.

Verify that data is being ingested and appears in Next-Gen SIEM search results:

- 1. In the Falcon console, go to Data connectors > Data connections [/data-connectors].
- 2. In the Status column, verify data connection status is Active.
- 3. In the Actions column, click Open menu: and select Show events to see all events related to this data connection in Advanced Event Search
- 4. Confirm that at least one match is generated.

If you need to run a manual search, use this query in Advanced Event Search:

#Vendor = f5networks | #repo = "3pi_f5_bigip" | #event.module = "bigip"

Data reference

Parser

The default parser recommended to parse incoming data for this data connector is **f5networks-bigip**. This parser requires logs in syslog format before using this data connector.

Timestamp

Timestamp Format: MMM []d HH:mm:ss

Example: Feb 10 05:35:26

Structure

F5 Networks BIG-IP LTM sample event messages. The following sample event message shows a Pool member's monitor status.

<133>Nov 5 14:01:50 f5networks.bigip.test notice mcpd[5281]: 01070638:5: Pool member
2001:20:5004:1606::89:8790 monitor status down.

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Next-Gen SIEM events that can be generated by this data connector:

- Network:Info:(failure,success,unknown) [/documentation/page/q1f14b54/next-gen-siem-data#j0rcmxhx]
- $\bullet \ \underline{\text{Network:Start:}(failure,success,unknown)}\ \underline{\text{I/documentation/page/q1f14b54/next-gen-siem-data\#j2mj0bj0]}}$
- Network:End:(failure,success,unknown) [/documentation/page/q1f14b54/next-gen-siem-data#j0vgvx1w]
- $\bullet \ \underline{\text{Network:Connection:} (\underline{\text{failure}, \text{success,} \underline{\text{unknown}})} \, [\underline{\text{/documentation/page/q1f14b54/next-gen-siem-data\#i0veu97i}}]$
- Network:Denied:(failure,success,unknown) [/documentation/page/q1f14b54/next-gen-siem-data#o1co06s5]
- $\bullet \ \underline{\text{lam:Info:}(\underline{\text{failure},} \underline{\text{success,} \underline{\text{unknown}})} \ \underline{\text{[/documentation/page/q1f14b54/next-gen-siem-data\#e3wbhf1h]}}$
- $\bullet \ \ \underline{\text{lam:Change:}(failure, success, unknown)} \, \underline{\text{[/documentation/page/q1f14b54/next-gen-siem-data\#w2o4xy4u]}} \\$
- lam:User:(failure,success,unknown) [/documentation/page/q1f14b54/next-gen-siem-data#u8x1u9jm]
- <u>Authentication:Start:(failure,success,unknown)</u> [/documentation/page/q1f14b54/next-gen-siem-data#v3639xkr]
- $\bullet \ \ \underline{ \text{Authentication:End:} (failure, success, unknown)} \ \ \underline{ \text{I/documentation/page/q1f14b54/next-gen-siem-data\#v9a3adya}}]$
- <u>Authentication:Info:(failure,success,unknown)</u> [/documentation/page/q1f14b54/next-gen-siem-data#d6asyl12]
- $\bullet \ \ \underline{Process:Info:(failure,success,unknown)} \ \ \underline{[/documentation/page/q1f14b54/next-gen-siem-data\#p5eme1kf]}$
- <u>Process:Start:(failure,success,unknown) [/documentation/page/q1f14b54/next-gen-siem-data#b1nwxnx3]</u>
- $\bullet \ \underline{Process:End:(\underline{failure_success_unknown}}[\underline{/documentation/page/g1f14b54/next_gen_siem_data\#m7os2kgj}]$
- File:Access:(failure,success,unknown) [/documentation/page/q1f14b54/next-gen-siem-data#i2xbijpg]
- $\bullet \ \ \, \underline{\text{File:Info:}(\underline{\text{failure}},\underline{\text{success}},\underline{\text{unknown}})\,[\underline{\text{/documentation}}/\underline{\text{page}}/\underline{\text{q1f14b54}}/\underline{\text{next-gen-siem-data}}\#\underline{\text{y4016g3a}}]}$
- $\bullet \ \underline{Configuration: Change: (\underline{failure, success, unknown})} \ \underline{I/documentation/page/\underline{q1f14b54/next-gen-siem-data\#t8jh2vkl}]}$
- $\bullet \ \underline{Configuration: Info: (failure, success, unknown)} \ [\underline{/documentation/page/q1f14b54/next-gen-siem-data\#e1mjpydj}]$
- $\bullet \ \ \, \underline{\text{Host:Info:}(\underline{\text{failure},}\underline{\text{success},}\underline{\text{unknown}})}\, [\underline{\text{/documentation/page/g1f14b54/next-gen-siem-data\#w5nxhce9}}]$
- $\bullet \ \underline{Session:Start:} (\underline{failure,success,unknown}) \ \underline{[/documentation/page/q1f14b54/next-gen-siem-data\#n0esexy6]}$
- $\bullet \ \underline{Session:End:(failure,success,unknown)} \ \underline{[/documentation/page/q1f14b54/next-gen-siem-data\#p03v6mbn]}$
- $\bullet \ \underline{Session:Info:(failure.success.unknown)} \ \underline{I/documentation/page/q1f14b54/next-gen-siem-data\#x0113sk8}]$
- $\bullet \ \underline{ Threat: Indicator: (failure, success, unknown)} \ \underline{ [/documentation/page/q1f14b54/next-gen-siem-data\#s455fd5m] }$

For more information about Next-Gen SIEM events, see $\underline{\text{Next-Gen SIEM Data Reference }[\underline{\textit{I}}\underline{\textit{documentation}}\underline{\textit{page}}\underline{\textit{q1f14b54}}\underline{\textit{next-gen-siem-data}}].$

ExtraHop RevealX 360[/documentation/page/d724e73b/extrahop· Falcon LogScale Collector > [/documentation/page/u496e28e/falcon-logscale-collector]