Cisco IOS Data Connector

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Overview

Forward events from Cisco Internetworking Operating System (IOS) hosts to Falcon Next-Gen SIEM for investigation and analysis.

Requirements

Subscription: Falcon Next-Gen SIEM or Falcon Next-Gen SIEM 10GB

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

Additional requirements:

- Administrator access to the Cisco device console.
- Administrator access to the Falcon console and a Falcon LogScale Collector (FLC) host.
- Linux syslog server or Windows server (on-premises or VM) for installing and configuring the data shipper.
- Network routing between the Cisco IOS hosts and the FLC host on TCP port 514.
- Availability of the Cisco IOS Data Connector app in the CrowdStrike Store.

Note: If the app is not available, contact your sales engineer to have it enabled or provisioned

Configuring data ingestion

Set up data ingestion for Cisco IOS using the Falcon LogScale Collector.

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.

Expected Log Structure

Syslog headers with one of the following formats:

- $\bullet < \log.syslog.priority > ios Message Count: \ log.syslog.host name \ ios Sequence: \ timestamp: facility-severity-mnemonic: \ message to the control of th$
- timestamp hostname iosSequence: timestamp: facility-severity-mnemonic: message
- <log.syslog.priority>iosSequence: timestamp: facility-severity-mnemonic: message

Timestamp Format

- MMM dd HH:mm:ss.SSS. For example, Aug 3 08:11:02.204 (UTC).
- MMM dd HH:mm:ss.SSS Z. For example, Mar 24 18:06:03.424 UTC.

Step 1: Configure and activate the Cisco IOS Data Connector

- 1. Go to Next-Gen SIEM > Log management > Data onboarding [/data-connectors/] or to Data connectors > Data sources [/data-connectors/].
- 2. Click the Cisco IOS Data Connector tile.
- 3. Enter a name and optional description to identify the connector.
- 4. After reading the terms and conditions, check the box to agree.
- 5 Click Save
- 6. Click Close
- 7. Click Generate API key to generate your API key and URL.

Note: If you don't see Generate API key, refresh the page

8. Save the API key and URL values displayed in the Connection setup dialog. These values will be required later to set up Falcon LogScale Collector.

Important: Record your API key somewhere safe as it displayed only once during connector setup.

9. Click Close

Step 2: Configure your data shipper

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 Support and resources > Resources and tools > Tool downloads [/support/tool-downloads]

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 ${\it 3.}\ {\it Open the LogScale Collector configuration file in a text editor.}\ {\it For file location, see}$

Create a configuration - Local [https://library.humio.com/falcon-logscale-collector/log-collector-config.html#log-collector-config-editing-local].

 ${\bf 4.} \ {\bf Edit} \ {\bf the} \ {\bf config}. {\bf yaml} \ {\bf file.} \ {\bf Examples} \ {\bf of} \ {\bf configuration} \ {\bf files} \ {\bf for} \ {\bf syslog} \ {\bf servers} :$

• 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.
- 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. vaml 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 Cisco IOS syslog forwarding

In the Cisco IOS appliance, enter these commands with admin privileged EXEC mode: $\frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{2} \left(\frac{1}{2} \right) \left(\frac{1}{2} \right$

- 1. configure terminal
- 2.logging host

Note: For host specify the name or IP address of the FLC host to be used as the syslog server.

3. service timestamps type datetime

Note: This command enables timestamps set to UTC by default.

4. service sequence-numbers

5. end

 $For additional info, see \underline{System\ Message\ Logging\ [https://www.cisco.com/c/en/us/td/docs/routers/access/wireless/software/guide/SysMsgLogging.htm]]}.$

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:

#repo = "3pi_cisco_ios_hec" | #event.module = "ios"

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Data reference

Next-Gen SIEM events

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]
- $\bullet \ \underline{\text{Authentication:Start:} (failure, success, unknown)} \ \underline{\text{I/documentation/page/q1f14b54/next-gen-siem-data\#v3639xkr}}] \\$
- $\bullet \ \ \, \underline{\text{Authentication:End:}(\underline{\text{failure}},\underline{\text{success}},\underline{\text{unknown}})}\, \underline{\text{[/documentation/page/q1f14b54/next-gen-siem-data\#v9a3adya]}}$
- Network:Denied:(failure,success,unknown) [/documentation/page/q1f14b54/next-gen-siem-data#o1co06s5]
- Network:Allowed:(failure,success,unknown) [/documentation/page/q1f14b54/next-gen-siem-data#d44jz11k]
- Configuration:Change(failure.success.unknown) [/documentation/page/q1f14b54/next-gen-siem-data#t8jh2vkl]
 Network:End(failure.success.unknown) [/documentation/page/q1f14b54/next-gen-siem-data#i0vqvx1w]
- Network:Connection:(failure,success,unknown) [/documentation/page/q1f14b54/next-gen-siem-data#i0veu97i]

For more information about Next-Gen SIEM events, see Next-Gen SIEM Data Reference [/documentation/page/q1f14b54/next-gen-siem-data]

Cisco Identity Services Engine[/documentation/page/i21475 Cisco Meraki Data Connector > [/documentation/page/y1bc15f9/cisco-meraki-data-connector]