

Intersight Device Connector

This chapter describes how to connect devices in a secure way to send information and receive control instructions on Cisco MDS 9000 Family switches.

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Device Connector

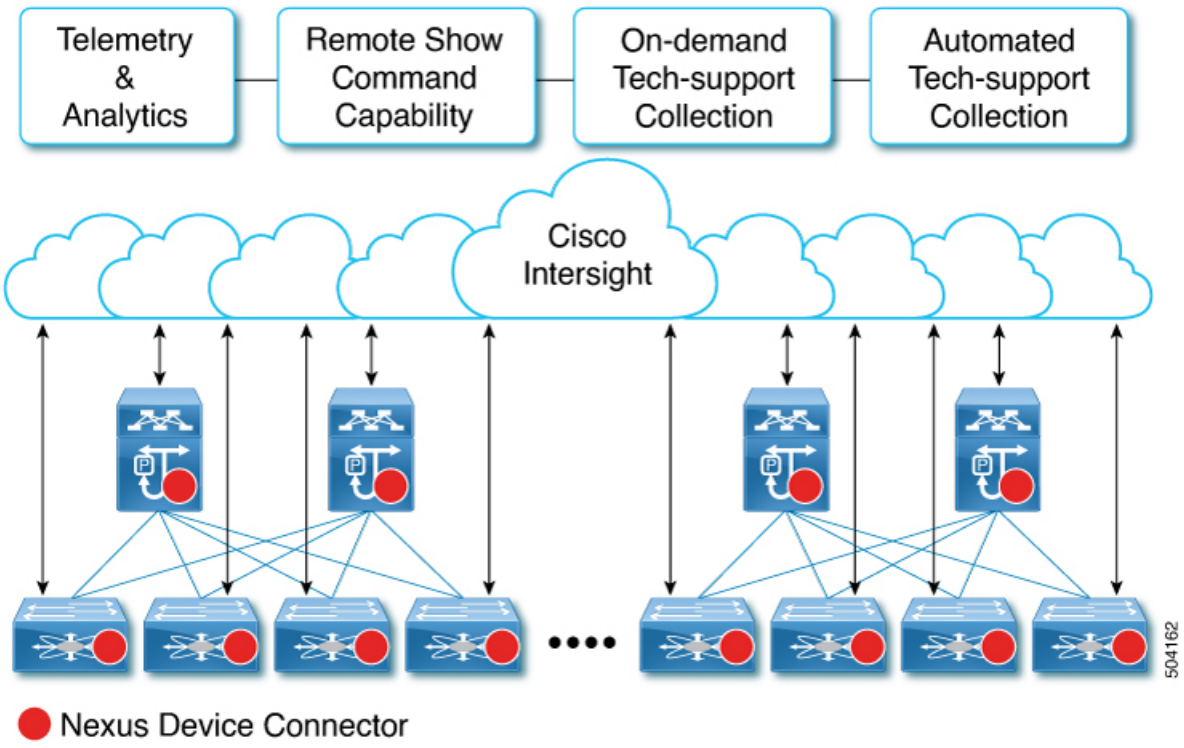
Beginning with Cisco NX-OS MDS 9000 Release 9.3(2), the Device Connector on NX-OS feature is supported which provides a secure way for the connected devices to send information and receive control instructions from the Cisco Intersight portal, using a secure Internet connection.

The Cisco MDS 9000 switch must properly resolve svc.intersight.com and allow outbound initiated HTTPS connections on port 443. To resolve svc.intersight.com, you must configure DNS on the Cisco MDS 9000 devices. If a proxy is required for an HTTPS connection to svc.intersight.com, the proxy can be configured in the NXDC user interface. .

The NXDC is enabled by default on all Cisco MDS 9000 series switches and it starts at boot by default, and attempts to connect to the cloud service. Once a secure connection has been established and the device connector is registered with the Intersight service, the device connector collects detailed inventory, health status and sends the adoption telemetry data to the Intersight database. Inventory is refreshed once in a day.

The NXDC feature integration resolves not managed switches with the following capabilities:

- It provides fast and quick solution to gather basic data from unmanaged switches.
- It stores private and organized data of all devices in a single location.
- It manages the data securely in the cloud.
- It is flexible for future extensions and upgradability.



Guidelines and Limitations for Device Connector

The following are the guidelines and limitations for Device Connector.

- Extra port may be displayed during a port scan. The ports are seen only in the local IPv4 or IPv6.

Supported Platforms

The supported Cisco MDS platforms for Intersight Device Connector/Intersight Assist include the following:

- Cisco MDS 9124V 64 Gbps 24-Port Fibre Channel Switch
- Cisco MDS 9132T 32 Gbps 32-Port Fibre Channel Switch
- Cisco MDS 9148T 32 Gbps 48-Port Fibre Channel Switch
- Cisco MDS 9148V 64 Gbps 48-Port Fibre Channel Switch
- Cisco MDS 9396T 32 Gbps 96-Port Fibre Channel Switch
- Cisco MDS 9396V 64 Gbps 96-Port Fibre Channel Switch
- Cisco MDS 9220I Fabric Switch
- Cisco MDS 9706 Director Switch
- Cisco MDS 9710 Director Switch
- Cisco MDS 9718 Director Switch

Additionally, the following IBM OEM switches also support the Intersight Device Connector feature:

- IBM SAN24C-7 (MDS 9124V)
- IBM SAN32C-6 (MDS 9132T)
- IBM SAN48C-6 (MDS 9148T)
- IBM SAN48C-7 (MDS 9148V)
- IBM SAN96C-6 (MDS 9396T)
- IBM SAN96C-7 (MDS 9396V)
- IBM SAN16C-R (MDS 9220I)
- IBM SAN192C-6 (MDS 9706)
- IBM SAN384C-6 (MDS 9710)
- IBM SAN768C-6 (MDS 9718)

Configuring NXDC

To configure NXDC, follow the below steps:



Note By default the NXDC feature is enabled.

Procedure

Step 1 Configure **terminal**

Example:

```
switch# configure terminal
switch(config)#
```

Step 2 **feature intersight**

Example:

```
switch(config)# feature intersight
```

Step 3 (Optional)**intersight proxy** <*proxy-name*> **port** <*proxy-port*>

Example:

```
switch(config)# intersight proxy proxy.esl.cisco.com port 8080
```

Configures the proxy server for intersight connection.

- *proxy-name*: IPv4 or IPv6 address or DNS name of proxy server.
- *proxy-port*: Proxy port number. The range is 1-65535. The default value is 8080.

Note
If Proxy is enabled with the smart license configuration on Cisco MDS 9000 switches, the NXDC inherits this configuration and attempts to connect with Cisco Intersight Cloud.

Step 4 (Optional)**intersight connection** <*name*>

Example:

```
switch(config)# intersight connection qaconnect.starshipcloud.com
```

Sets the DNS name for intersight connection. It can be used to change from intersight to NDSaaS.

- *name*: Name value is string. The maximum size is 128.

Step 5 (Optional)**intersight trustpoint** <*trustpoint-label*>

Example:

```
switch(config)#intersight trustpoint mds-stage-onprem
```

Configures certificates for intersight connection.

trustpoint-label: Crypto ca truspoint label. For more information refer to *Cisco MDS 9000 Series NX-OS Security Configuration Guide*.

Verify Intersight

Verify the Intersight feature for these components:

- device connector system information: system status and connectivity
- device connections: network path and status
- device details: specifications and operation details

Verify NXDC

Use **show system internal intersight info** to display the device connector system information.

```
switch(config)# show system internal intersight info
Intersight connector.db Info:
AccountOwnershipState   :Not Claimed
AccountOwnershipUser    :
AccountOwnershipTime    :0001-01-01T00:00:00Z
AccountOwnershipId      :
DomainGroupMoid         :1234567890abcd
AccountMoid             :1234567890abcd
CloudDns                :svc.example.com
CloudDnsList:
        1.              :svc-static1.ucs-connect.com
        2.              :svc.ucs-connect.com
        3.              :svc.intersight.com
        4.              :svc-static1.intersight.com
Identity                :1234567890
CloudEnabled            :true
ReadOnlyMode            :false
LocalConfigLockout      :false
```

```
TunneledKVM             :false
HttpProxy:
        ProxyHost       :proxy.example.com
        ProxyPort       :80
        Preferenc       :0
        ProxyType       :Manual
    Target[1]:
        ProxyHost       :proxy.example.com
        ProxyPort       :80
        Preference      :0
LogLevel                :info
DbVersion               :1
AutoUpgradeAdminState   :Automatic
```

Use **show system internal intersight connection-state** to display the device connections.

```
switch(config)# show system internal intersight connection-state
AdminState                :  true
ReadOnlyMode              :  false
ConnectionState           :  Connected
ConnectionStateQualifier  :
ConnectionLastDownTimeTs  :  2022-12-09T11:21:33.653652476Z
AccountOwnershipState     :  Not Claimed
AccountOwnershipUser      :
AccountOwnershipTime      :  0001-01-01T00:00:00Z
AccountOwnershipName      :
Leadership                :  Primary
DeviceRegistrationMoid    :  1234567890abcd
```

Verify device details

Use **show system device-connector claim-info** to display the device details such as device id and claim code.

```
switch# show system device-connector claim-info
  SerialNumber: ABCD1234
  SecurityToken: XYZ1234
  Duration: 599
  Message:
  Claim state: Not Claimed
```

Telemetry data collected for Intersight

Telemetry data from the switch is sent to Intersight as described in the table:

Table 1: Telemetry collected for Intersight

Type	Data
Inventory	Device Name
	Product Type
	Version
	Serial number
	CPU average load
	Memory usage
	Disk name, usage
	Device Up Time
	Device ID
	Interface information such as: • **name** • **up count** • **down count** • **operational state** • **transceiver status**
	Telnet enable status
	Bootflash model, serial number
	Last Reboot Time
	Last Reset Reason
	System Up Time
License details	List of activated licenses
Feature details	List of activated features
Power Supply details	Product Id
	Serial Number
	Vendor Id

Type	Data
Fan details	Product Id
	Serial Number
	Vendor Id
Module details	Product Id
	Serial Number
	Vendor Id
Transceiver Details	Product Id
	Serial Number
	Vendor Id
	Part Number
Neighbor details	WWN of the neighbor switches in the fabric