監控交換器健全狀況
Cluster and storage switches

NetApp
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監控交換器健全狀況

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設定交換器健全狀況監控

組態總覽

乙太網路交換器健全狀況監視器（ CSHM ）負責確保叢集與儲存網路交換器的作業健全狀況、並收集交換器記錄以供偵錯之用。

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設定記錄收集

乙太網路交換器健全狀況監視器（ CSHM ）負責確保叢集與儲存網路交換器的作業健全狀況、並收集交換器記錄以供偵錯之用。本程序將引導您完成設定收集、要求詳細的 * 支援 * 記錄、以及啟用 AutoSupport 所收集 * 定期 * 資料的每小時收集。

- 注意： * 如果您啟用 FIPS 模式、則必須完成下列步驟：

1. 根據廠商指示、在交換器上重新產生 ssh 金鑰。
2. 使用在 ONTAP 端重新產生 ssh 金鑰 `debug system regenerate-systemshell-key-pair`
3. 使用重新執行記錄收集設定例行程序 `system switch ethernet log setup-password`

開始之前

- 使用者必須能夠存取交換器 `show` 命令。如果這些權限不可用、請建立新使用者、並將必要的權限授予使用者。
- 必須為交換器啟用交換器健全狀況監控。請務必確認 `Is Monitored:` 欄位在的輸出中設為 * 真 * `system switch ethernet show` 命令。
- 對於 NVIDIA 交換器、必須允許記錄收集的使用者執行記錄收集命令、而不顯示密碼提示。若要允許這種使用方式、請執行命令： `echo '<username> ALL = NOPASSWD: /usr/cumulus/bin/cl-support, /usr/sbin/csmgrctl' | sudo EDITOR='tee -a' visudo -f /etc/sudoers.d/cumulus`

步驟

ONTAP 9.14.1 及更早版本

1. 若要設定記錄收集、請針對每個交換器執行下列命令。系統會提示您輸入用於記錄收集的交換器名稱、使用者名稱和密碼。

```
system switch ethernet log setup-password
```

```
cluster1::*> system switch ethernet log setup-password
Enter the switch name: <return>
The switch name entered is not recognized.
Choose from the following list:
cs1
cs2

cluster1::*> system switch ethernet log setup-password

Enter the switch name: cs1
Would you like to specify a user other than admin for log
collection? {y|n}: n

Enter the password: <enter switch password>
Enter the password again: <enter switch password>

cluster1::*> system switch ethernet log setup-password

Enter the switch name: cs2

Would you like to specify a user other than admin for log
collection? {y|n}: n

Enter the password: <enter switch password>
Enter the password again: <enter switch password>
```

2. 若要要求支援記錄收集並啟用定期收集、請執行下列命令。這會同時啟動記錄收集的兩種類型：詳細 `Support` 記錄和每小時收集 `Periodic` 的資料。

```
system switch ethernet log modify -device <switch-name> -log-request
true
```

```
cluster1::*> system switch ethernet log modify -device cs1 -log
-request true

Do you want to modify the cluster switch log collection
configuration? {y|n}: [n] y

Enabling cluster switch log collection.

cluster1::*> system switch ethernet log modify -device cs2 -log
-request true

Do you want to modify the cluster switch log collection
configuration? {y|n}: [n] y

Enabling cluster switch log collection.
```

等待 10 分鐘、然後檢查記錄收集是否完成：

```
system switch ethernet log show
```

ONTAP 9.15.1 及更新版本

1. 若要設定記錄收集、請針對每個交換器執行下列命令。系統會提示您輸入用於記錄收集的交換器名稱、使用者名稱和密碼。

```
system switch ethernet log setup-password
```

```
cluster1::*> system switch ethernet log setup-password
Enter the switch name: <return>
The switch name entered is not recognized.
Choose from the following list:
cs1
cs2

cluster1::*> system switch ethernet log setup-password

Enter the switch name: cs1
Would you like to specify a user other than admin for log
collection? {y|n}: n

Enter the password: <enter switch password>
Enter the password again: <enter switch password>

cluster1::*> system switch ethernet log setup-password

Enter the switch name: cs2

Would you like to specify a user other than admin for log
collection? {y|n}: n

Enter the password: <enter switch password>
Enter the password again: <enter switch password>
```

2. 啟用定期記錄收集：

```
system switch ethernet log modify -device <switch-name> -periodic
-enabled true
```

```
cluster1::*> system switch ethernet log modify -device cs1 -periodic
-enabled true

Do you want to modify the cluster switch log collection
configuration? {y|n}: [n] y

cs1: Periodic log collection has been scheduled to run every hour.

cluster1::*> system switch ethernet log modify -device cs2 -periodic
-enabled true

Do you want to modify the cluster switch log collection
configuration? {y|n}: [n] y

cs2: Periodic log collection has been scheduled to run every hour.

cluster1::*> system switch ethernet log show
                                          Periodic    Periodic
Support
Switch                                    Log Enabled Log State
Log State

cs1                                       true        scheduled
never-run
cs2                                       true        scheduled
never-run
2 entries were displayed.
```

3. 要求支援記錄收集：

```
system switch ethernet log collect-support-log -device <switch-name>
```

```
cluster1::*> system switch ethernet log collect-support-log -device
cs1

cs1: Waiting for the next Ethernet switch polling cycle to begin
support collection.

cluster1::*> system switch ethernet log collect-support-log -device
cs2

cs2: Waiting for the next Ethernet switch polling cycle to begin
support collection.

cluster1::*> *system switch ethernet log show
                                          Periodic    Periodic
Support
Switch                                    Log Enabled Log State
Log State

cs1                                       false       halted
initiated
cs2                                       true        scheduled
initiated
2 entries were displayed.
```

4. 若要檢視記錄收集的所有詳細資料、包括啟用、狀態訊息、定期收集的先前時間戳記和檔名、要求狀態、狀態訊息、以及支援集合的先前時間戳記和檔名、請使用下列項目：

```
system switch ethernet log show -instance
```

```
cluster1::*> system switch ethernet log show -instance

                      Switch Name: cs1
            Periodic Log Enabled: true
             Periodic Log Status: Periodic log collection has been
scheduled to run every hour.
    Last Periodic Log Timestamp: 3/11/2024 11:02:59
           Periodic Log Filename: cluster1:/mroot/etc/log/shm-
cluster-info.tgz
          Support Log Requested: false
             Support Log Status: Successfully gathered support logs
- see filename for their location.
     Last Support Log Timestamp: 3/11/2024 11:14:20
            Support Log Filename: cluster1:/mroot/etc/log/shm-
cluster-log.tgz

                      Switch Name: cs2
            Periodic Log Enabled: false
             Periodic Log Status: Periodic collection has been
halted.
    Last Periodic Log Timestamp: 3/11/2024 11:05:18
           Periodic Log Filename: cluster1:/mroot/etc/log/shm-
cluster-info.tgz
          Support Log Requested: false
             Support Log Status: Successfully gathered support logs
- see filename for their location.
     Last Support Log Timestamp: 3/11/2024 11:18:54
            Support Log Filename: cluster1:/mroot/etc/log/shm-
cluster-log.tgz
2 entries were displayed.
```

如果記錄收集功能報告任何錯誤狀態（在的輸出中可見 `system switch ethernet log show`）、請參閱 "疑難排解記錄收集" 以取得進一步詳細資料。

接下來呢？

"設定 SNMPv3 （選用）"。

選用：為交換器設定 **SNMPv3**

SNMP 用於監控交換器。乙太網路交換器健全狀況監視器（ CSHM ）使用 SNMP 來監控叢集和儲存交換器的健全狀況和效能。根據預設、 SNMPv2c 會透過參考組態檔案（ RCF ）自動設定。

SNMPv3 比 SNMPv2 更安全、因為它引進強大的安全功能、例如驗證、加密和訊息完整性、可防止未經授權的存取、並確保傳輸期間資料的機密性和完整性。

僅 ONTAP 9.12.1 及更新版本支援 SNMPv3 。

請遵循此程序、為支援 CSHM 的特定交換器設定 SNMPv3 。

關於這項工作

以下命令用於在 **Broadcom** 、 **Cisco** 和 *NVidia 交換機上配置 SNMPv3 用戶名：

Broadcom 交換器

在 Broadcom BS-53248 交換器上設定 SNMPv3 使用者名稱網路操作員。

- 若為 * 無驗證 * ：

```
snmp-server user SNMPv3UserNoAuth NETWORK-OPERATOR noauth
```

- 對於 *MD5/SHA 驗證 * ：

```
snmp-server user SNMPv3UserAuth NETWORK-OPERATOR [auth-md5|auth-sha]
```

- 對於採用 AES/DES 加密的 * MD5/SHA 驗證 * ：

```
snmp-server user SNMPv3UserAuthEncrypt NETWORK-OPERATOR [auth-
md5|auth-sha] [priv-aes128|priv-des]
```

下列命令可在 ONTAP 端設定 SNMPv3 使用者名稱：

```
security login create -user-or-group-name SNMPv3_USER -application snmp
-authentication-method usm -remote-switch-ipaddress ADDRESS
```

下列命令會使用 CSHM 建立 SNMPv3 使用者名稱：

```
cluster1::*> system switch ethernet modify -device DEVICE -snmp-version
SNMPv3 -community-or-username SNMPv3_USER
```

步驟

1. 設定交換器上的v3使用者使用驗證和加密：

```
show snmp status
```

```
(sw1)(Config)# snmp-server user <username> network-admin auth-md5
<password> priv-aes128 <password>

(cs1)(Config)# show snmp user snmp

     Name            Group Name      Auth Priv
                                     Meth Meth    Remote Engine ID
---------------- ------------------ ---- ------
-------------------------
<username>        network-admin      MD5  AES128
8000113d03d8c497710bee
```

2. 設定位在邊上的v3使用者ONTAP ：

```
security login create -user-or-group-name <username> -application
snmp -authentication-method usm -remote-switch-ipaddress
10.231.80.212
```

```
cluster1::*> security login create -user-or-group-name <username>
-application snmp -authentication-method usm -remote-switch
-ipaddress 10.231.80.212

Enter the authoritative entity's EngineID [remote EngineID]:

Which authentication protocol do you want to choose (none, md5, sha,
sha2-256)
[none]: md5

Enter the authentication protocol password (minimum 8 characters
long):

Enter the authentication protocol password again:

Which privacy protocol do you want to choose (none, des, aes128)
[none]: aes128

Enter privacy protocol password (minimum 8 characters long):
Enter privacy protocol password again:
```

3. 設定 CSHM 以監控新的 SNMPv3 使用者：

```
system switch ethernet show-all -device "sw1" -instance
```

```
cluster1::*> system switch ethernet show-all -device "sw1
(b8:59:9f:09:7c:22)" -instance

                                  Device Name: sw1
                                   IP Address: 10.228.136.24
                                 SNMP Version: SNMPv2c
                                Is Discovered: true
DEPRECATED-Community String or SNMPv3 Username: -
           Community String or SNMPv3 Username: cshm1!
                                 Model Number: BES-53248
                               Switch Network: cluster-network
                             Software Version: 3.9.0.2
                      Reason For Not Monitoring: None  <---- should
display this if SNMP settings are valid
                       Source Of Switch Version: CDP/ISDP
                                 Is Monitored ?: true
                   Serial Number of the Device: QTFCU3826001C
                                   RCF Version: v1.8X2 for
Cluster/HA/RDMA

cluster1::*>
cluster1::*> system switch ethernet modify -device "sw1" -snmp
-version SNMPv3 -community-or-username <username>
```

4. 驗證要與新建立的 SNMPv3 使用者查詢的序號、是否與 CSHM 輪詢期間結束後上一步所述相同。

```
system switch ethernet polling-interval show
```

```
cluster1::*> system switch ethernet polling-interval show
         Polling Interval (in minutes): 5

cluster1::*> system switch ethernet show-all -device "sw1" -instance
                                  Device Name: sw1
                                   IP Address: 10.228.136.24
                                 SNMP Version: SNMPv3
                                Is Discovered: true
DEPRECATED-Community String or SNMPv3 Username: -
           Community String or SNMPv3 Username: <username>
                                 Model Number: BES-53248
                               Switch Network: cluster-network
                             Software Version: 3.9.0.2
                       Reason For Not Monitoring: None  <---- should
display this if SNMP settings are valid
                        Source Of Switch Version: CDP/ISDP
                                  Is Monitored ?: true
                    Serial Number of the Device: QTFCU3826001C
                                   RCF Version: v1.8X2 for
Cluster/HA/RDMA
```

Cisco交換器

在 Cisco 9336C-FX2 交換器上設定 SNMPv3 使用者名稱 SNMPv3 使用者：

- 若為 * 無驗證 * ：

```
snmp-server user SNMPv3_USER NoAuth
```

- 對於 *MD5/SHA 驗證 * ：

```
snmp-server user SNMPv3_USER auth [md5|sha] AUTH-PASSWORD
```

- 對於採用 AES/DES 加密的 * MD5/SHA 驗證 * ：

```
snmp-server user SNMPv3_USER AuthEncrypt  auth [md5|sha] AUTH-
PASSWORD priv aes-128 PRIV-PASSWORD
```

下列命令可在 ONTAP 端設定 SNMPv3 使用者名稱：

```
security login create -user-or-group-name SNMPv3_USER -application snmp
-authentication-method usm -remote-switch-ipaddress ADDRESS
```

下列命令會使用 CSHM 建立 SNMPv3 使用者名稱：

```
system switch ethernet modify -device DEVICE -snmp-version SNMPv3
-community-or-username SNMPv3_USER
```

步驟

1. 設定交換器上的v3使用者使用驗證和加密：

```
show snmp user
```

```
(sw1)(Config)# snmp-server user SNMPv3User auth md5 <auth_password>
priv aes-128 <priv_password>

(sw1)(Config)# show snmp user

-----------------------------------------------------------------------
---------
                              SNMP USERS
-----------------------------------------------------------------------
---------

User              Auth            Priv(enforce)   Groups
acl_filter
----------------- --------------- --------------- ---------------
-----------
admin             md5             des(no)         network-admin
SNMPv3User        md5             aes-128(no)     network-operator

-----------------------------------------------------------------------
---------
     NOTIFICATION TARGET USERS (configured  for sending V3 Inform)
-----------------------------------------------------------------------
---------

User              Auth                Priv
----------------- ------------------ ------------

(sw1)(Config)#
```

2. 設定位在邊上的v3使用者ONTAP ：

```
security login create -user-or-group-name <username> -application
snmp -authentication-method usm -remote-switch-ipaddress
10.231.80.212
```

```
cluster1::*> system switch ethernet modify -device "sw1
(b8:59:9f:09:7c:22)" -is-monitoring-enabled-admin true

cluster1::*> security login create -user-or-group-name <username>
-application snmp -authentication-method usm -remote-switch
-ipaddress 10.231.80.212

Enter the authoritative entity's EngineID [remote EngineID]:

Which authentication protocol do you want to choose (none, md5, sha,
sha2-256)
[none]: md5

Enter the authentication protocol password (minimum 8 characters
long):

Enter the authentication protocol password again:

Which privacy protocol do you want to choose (none, des, aes128)
[none]: aes128

Enter privacy protocol password (minimum 8 characters long):
Enter privacy protocol password again:
```

3. 設定 CSHM 以監控新的 SNMPv3 使用者：

```
system switch ethernet show-all -device "sw1" -instance
```

```
cluster1::*> system switch ethernet show-all -device "sw1" -instance

                                  Device Name: sw1
                                   IP Address: 10.231.80.212
                                 SNMP Version: SNMPv2c
                                Is Discovered: true
   SNMPv2c Community String or SNMPv3 Username: cshm1!
                                 Model Number: N9K-C9336C-FX2
                               Switch Network: cluster-network
                             Software Version: Cisco Nexus
Operating System (NX-OS) Software, Version 9.3(7)
                     Reason For Not Monitoring: None  <---- displays
when SNMP settings are valid
                      Source Of Switch Version: CDP/ISDP
                                Is Monitored ?: true
                   Serial Number of the Device: QTFCU3826001C
                                   RCF Version: v1.8X2 for
Cluster/HA/RDMA

cluster1::*>
cluster1::*> system switch ethernet modify -device "sw1" -snmp
-version SNMPv3 -community-or-username <username>
cluster1::*>
```

4. 驗證要與新建立的 SNMPv3 使用者查詢的序號、是否與 CSHM 輪詢期間結束後上一步所述相同。

```
system switch ethernet polling-interval show
```

```
cluster1::*> system switch ethernet polling-interval show
         Polling Interval (in minutes): 5

cluster1::*> system switch ethernet show-all -device "sw1" -instance

                                  Device Name: sw1
                                   IP Address: 10.231.80.212
                                 SNMP Version: SNMPv3
                                Is Discovered: true
   SNMPv2c Community String or SNMPv3 Username: SNMPv3User
                                   Model Number: N9K-C9336C-FX2
                                 Switch Network: cluster-network
                               Software Version: Cisco Nexus
Operating System (NX-OS) Software, Version 9.3(7)
                     Reason For Not Monitoring: None  <---- displays
when SNMP settings are valid
                      Source Of Switch Version: CDP/ISDP
                                Is Monitored ?: true
                   Serial Number of the Device: QTFCU3826001C
                                   RCF Version: v1.8X2 for
Cluster/HA/RDMA

cluster1::*>
```

NVIDIA - CLI 5.4

在執行 CLI 5.4 的 NVIDIA SN2100 交換器上設定 SNMPv3 使用者名稱 SNMPv3 使用者：

- 若為 * 無驗證 * ：

```
net add snmp-server username SNMPv3_USER auth-none
```

- 對於 *MD5/SHA 驗證 * ：

```
net add snmp-server username SNMPv3_USER [auth-md5|auth-sha] AUTH-
PASSWORD
```

- 對於採用 AES/DES 加密的 * MD5/SHA 驗證 * ：

```
net add snmp-server username SNMPv3_USER [auth-md5|auth-sha] AUTH-
PASSWORD [encrypt-aes|encrypt-des] PRIV-PASSWORD
```

下列命令可在 ONTAP 端設定 SNMPv3 使用者名稱：

```
security login create -user-or-group-name SNMPv3_USER -application snmp
-authentication-method usm -remote-switch-ipaddress ADDRESS
```

下列命令會使用 CSHM 建立 SNMPv3 使用者名稱：

```
system switch ethernet modify -device DEVICE -snmp-version SNMPv3
-community-or-username SNMPv3_USER
```

步驟

1. 設定交換器上的v3使用者使用驗證和加密：

```
net show snmp status
```

```
cumulus@sw1:~$ net show snmp status
Simple Network Management Protocol (SNMP) Daemon.
----------------------------------  ----------------
Current Status                      active (running)
Reload Status                       enabled
Listening IP Addresses              all vrf mgmt
Main snmpd PID                      4318
Version 1 and 2c Community String   Configured
Version 3 Usernames                 Not Configured
----------------------------------  ----------------
cumulus@sw1:~$
cumulus@sw1:~$ net add snmp-server username SNMPv3User auth-md5
<password> encrypt-aes <password>
cumulus@sw1:~$ net commit
--- /etc/snmp/snmpd.conf        2020-08-02 21:09:34.686949282 +0000
+++ /run/nclu/snmp/snmpd.conf   2020-08-11 00:13:51.826126655 +0000
@@ -1,26 +1,28 @@
 # Auto-generated config file: do not edit. #
 agentaddress udp:@mgmt:161
 agentxperms 777 777 snmp snmp
 agentxsocket /var/agentx/master
 createuser _snmptrapusernameX
+createuser SNMPv3User MD5 <password> AES <password>
 ifmib_max_num_ifaces 500
 iquerysecname _snmptrapusernameX
 master agentx
 monitor -r 60 -o laNames -o laErrMessage "laTable" laErrorFlag != 0
```

```
 pass -p 10 1.3.6.1.2.1.1.1 /usr/share/snmp/sysDescr_pass.py
 pass_persist 1.2.840.10006.300.43
/usr/share/snmp/ieee8023_lag_pp.py
 pass_persist 1.3.6.1.2.1.17 /usr/share/snmp/bridge_pp.py
 pass_persist 1.3.6.1.2.1.31.1.1.1.18
/usr/share/snmp/snmpifAlias_pp.py
 pass_persist 1.3.6.1.2.1.47 /usr/share/snmp/entity_pp.py
 pass_persist 1.3.6.1.2.1.99 /usr/share/snmp/entity_sensor_pp.py
 pass_persist 1.3.6.1.4.1.40310.1 /usr/share/snmp/resq_pp.py
 pass_persist 1.3.6.1.4.1.40310.2
/usr/share/snmp/cl_drop_cntrs_pp.py
 pass_persist 1.3.6.1.4.1.40310.3 /usr/share/snmp/cl_poe_pp.py
 pass_persist 1.3.6.1.4.1.40310.4 /usr/share/snmp/bgpun_pp.py
 pass_persist 1.3.6.1.4.1.40310.5 /usr/share/snmp/cumulus-status.py
 pass_persist 1.3.6.1.4.1.40310.6 /usr/share/snmp/cumulus-sensor.py
 pass_persist 1.3.6.1.4.1.40310.7 /usr/share/snmp/vrf_bgpun_pp.py
+rocommunity cshm1! default
 rouser _snmptrapusernameX
+rouser SNMPv3User priv
 sysobjectid 1.3.6.1.4.1.40310
 sysservices 72
-rocommunity cshm1! default


net add/del commands since the last "net commit"

User        Timestamp                   Command
----------  --------------------------
-------------------------------------------------------------------
-----
SNMPv3User  2020-08-11 00:13:51.826987  net add snmp-server username
SNMPv3User auth-md5 <password> encrypt-aes <password>

cumulus@sw1:~$
cumulus@sw1:~$ net show snmp status
Simple Network Management Protocol (SNMP) Daemon.
---------------------------------  ----------------
Current Status                     active (running)
Reload Status                      enabled
Listening IP Addresses             all vrf mgmt
Main snmpd PID                     24253
Version 1 and 2c Community String  Configured
Version 3 Usernames                Configured     <---- Configured
here
---------------------------------  ----------------
cumulus@sw1:~$
```

2. 設定位在邊上的v3使用者ONTAP ：

```
security login create -user-or-group-name SNMPv3User -application
snmp -authentication-method usm -remote-switch-ipaddress
10.231.80.212
```

```
cluster1::*> security login create -user-or-group-name SNMPv3User
-application snmp -authentication-method usm -remote-switch
-ipaddress 10.231.80.212

Enter the authoritative entity's EngineID [remote EngineID]:

Which authentication protocol do you want to choose (none, md5, sha,
sha2-256)
[none]: md5

Enter the authentication protocol password (minimum 8 characters
long):

Enter the authentication protocol password again:

Which privacy protocol do you want to choose (none, des, aes128)
[none]: aes128

Enter privacy protocol password (minimum 8 characters long):
Enter privacy protocol password again:
```

3. 設定 CSHM 以監控新的 SNMPv3 使用者：

```
system switch ethernet show-all -device "sw1 (b8:59:9f:09:7c:22)"
-instance
```

```
cluster1::*> system switch ethernet show-all -device "sw1
(b8:59:9f:09:7c:22)" -instance
                                  Device Name: sw1
(b8:59:9f:09:7c:22)
                                   IP Address: 10.231.80.212
                                SNMP Version: SNMPv2c
                               Is Discovered: true
DEPRECATED-Community String or SNMPv3 Username: -
           Community String or SNMPv3 Username: cshm1!
                                 Model Number: MSN2100-CB2FC
                               Switch Network: cluster-network
                             Software Version: Cumulus Linux
version 4.4.3 running on Mellanox Technologies Ltd. MSN2100
                     Reason For Not Monitoring: None
                      Source Of Switch Version: LLDP
                                Is Monitored ?: true
                   Serial Number of the Device: MT2110X06399  <----
serial number to check
                                   RCF Version: MSN2100-RCF-v1.9X6-
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cluster1::*>
cluster1::*> system switch ethernet modify -device "sw1
(b8:59:9f:09:7c:22)" -snmp-version SNMPv3 -community-or-username
SNMPv3User
```

4. 驗證要與新建立的 SNMPv3 使用者查詢的序號、是否與 CSHM 輪詢期間結束後上一步所述相同。

```
system switch ethernet polling-interval show
```

```
cluster1::*> system switch ethernet polling-interval show
         Polling Interval (in minutes): 5

cluster1::*> system switch ethernet show-all -device "sw1
(b8:59:9f:09:7c:22)" -instance
                                  Device Name: sw1
(b8:59:9f:09:7c:22)
                                   IP Address: 10.231.80.212
                                 SNMP Version: SNMPv3
                                Is Discovered: true
DEPRECATED-Community String or SNMPv3 Username: -
           Community String or SNMPv3 Username: SNMPv3User
                                 Model Number: MSN2100-CB2FC
                               Switch Network: cluster-network
                             Software Version: Cumulus Linux
version 4.4.3 running on Mellanox Technologies Ltd. MSN2100
                      Reason For Not Monitoring: None
                       Source Of Switch Version: LLDP
                                 Is Monitored ?: true
                   Serial Number of the Device: MT2110X06399  <----
serial number to check
                                   RCF Version: MSN2100-RCF-v1.9X6-
Cluster-LLDP Aug-18-2022
```

檢查交換器健全狀況

健全狀況檢查總覽

健全狀況監視器會主動監控叢集中的特定關鍵情況、並在偵測到故障或風險時發出警示。

若要檢視目前提出的乙太網路交換器健全狀況監視器警示、請執行命令： `system health alert show -monitor ethernet-switch`

若要檢視可用的乙太網路交換器健全狀況監視器警示、請執行命令： `system health alert definition show -monitor ethernet-switch`

疑難排解警示

如果叢集中的乙太網路交換器偵測到故障、風險或嚴重狀況、就會發出警示。

如果有發出警示、系統健全狀況狀態會報告叢集的降級狀態。所發出的警示包括回應降級系統健全狀況所需的資訊。

若要檢視可用的乙太網路交換器健全狀況監視器警示、請執行命令： `system health alert definition`

```
show -monitor ethernet-switch
```

如需警示的進階解決方案詳細資料、請參閱知識庫 "交換器健全狀況監視器警示解析指南" 文件。

記錄收集

記錄集合總覽

設定記錄收集後、您可以啟用 AutoSupport 每小時收集的定期資料、並要求詳細的支援記錄。

如需詳細資訊、請參閱 "設定記錄收集" 。

疑難排解記錄收集

如果您遇到記錄收集功能報告的下列任何錯誤狀態（在命令輸出中可見 `system switch ethernet log show`）、請嘗試對應的偵錯步驟：

* 記錄收集錯誤狀態 *	* 解決方法 *
• 不存在 RSA 金鑰 *	重新產生 ONTAP SSH 金鑰。
• 切換密碼錯誤 *	驗證認證、測試 SSH 連線、並重新產生 ONTAP SSH 金鑰。請參閱交換器說明文件、或聯絡 NetApp 支援部門以取得相關指示。
• FIPS 不存在 ECDSA 金鑰 *	如果啟用 FIPS 模式、則必須先在交換器上產生 ECDSA 金鑰、然後再重新嘗試。
• 找到預先存在的記錄 *	移除交換器上先前的記錄集合檔案。
• 交換器傾印記錄錯誤 *	確保交換器使用者擁有記錄收集權限。請參閱上述先決條件。

如果解決方案詳細資料無法運作、請聯絡 NetApp 支援部門。