



system cluster-switch commands

ONTAP 9.3 commands

NetApp

February 12, 2024

Table of Contents

- system cluster-switch commands 1
 - system cluster-switch create 1
 - system cluster-switch delete 2
 - system cluster-switch modify 3
 - system cluster-switch prepare-to-downgrade 4
 - system cluster-switch show-all 4
 - system cluster-switch show 6
 - system cluster-switch polling-interval modify 9
 - system cluster-switch polling-interval show 9
 - system cluster-switch threshold show 10

system cluster-switch commands

system cluster-switch create

Add information about a cluster switch or management switch

Availability: This command is available to *cluster* administrators at the *admin* privilege level.

Description

The `system cluster-switch create` command adds information about a cluster switch or management switch. The cluster switch health monitor uses this information to monitor the health of the switch.

Use this command if ONTAP cannot automatically discover a cluster or management switch. ONTAP relies on the Cisco Discovery Protocol (CDP) to discover the switches. CDP is always enabled on all cluster ports of a node by default, disabled on all non-cluster ports of a node. If the CDP is also enabled on your cluster switches, they will be automatically discovered.

If you want ONTAP to discover and monitor management switches, the CDP must be enabled on non-cluster ports. To verify whether the CDP is enabled or disabled, use the command `system node run -node <node_name>-command`options cdpd.enable``.

Use the `system cluster-switch show` command to identify switches that the cluster switch health monitor is monitoring.

Parameters

-device <text> - Device Name

Specifies the device name of the switch that you want to monitor. Data ONTAP uses the device name of the switch to identify the SNMP agent with which it wants to communicate.

-address <IP Address> - IP Address

Specifies the IP address of switch's management interface.

-snmp-version {SNMPv1|SNMPv2c|SNMPv3} - SNMP Version

Specifies the SNMP version that Data ONTAP uses to communicate with the switch. The default is SNMPv2c.

{ -community <text> - DEPRECATED-Community String or SNMPv3 Username



This parameter is deprecated and may be removed in a future release of Data ONTAP. Use `-community-or-username` instead.

Specifies the community string for SNMPv2 authentication or SNMPv3 user name for SNMPv3 security. The default community string for SNMPv2 authentication is cshm1!.

| -community-or-username <text> - Community String or SNMPv3 Username }

Specifies the community string for SNMPv2 authentication or SNMPv3 user name for SNMPv3 security. The default community string for SNMPv2 authentication is cshm1!.

-model

{NX5010|NX5020|CAT2960|OTHER|NX5596|CN1610|CN1601|NX3132|OT5548|NX3132V|OT9332|NX3132XL} - **Model Number**

Specifies the model number of the switch. You should not set this parameter to OTHER. Data ONTAP does not monitor switches that match this value. Data ONTAP sets this parameter to OTHER if a switch that it automatically discovers is not supported for health monitoring.

-type {cluster-network|management-network} - Switch Network

Specifies the switch type.

[-is-monitoring-enabled-admin {true|false}] - Enable Switch Monitoring

Specifies the switch admin monitoring status.

Examples

```
cluster1::> system cluster-switch create -device SwitchA -address 1.2.3.4
-snmpp-version SNMPv2c -community-or-username cshml! -model NX55596 -type
cluster-network
```

Creates a new switch configuration for a switch named SwitchA.

```
cluster2::> system cluster-switch create -device SwitchB -address 5.6.7.8
-snmpp-version SNMPv3 -community-or-username snmpv3u1 -model CN1601 -type
management-network
```

Creates a new switch configuration for a switch named SwitchB.

Related Links

- [system node run](#)
- [system cluster-switch show](#)

system cluster-switch delete

Delete information about a cluster switch or management switch

Availability: This command is available to *cluster* administrators at the *admin* privilege level.

Description

The `system cluster-switch delete` command disables switch health monitoring for a cluster or management switch.

Parameters

-device <text> - Device Name

Specifies the name of the switch.

[-force <true>] - Force Delete (privilege: advanced)

Specifies if force delete or not.

Examples

```
cluster1::> system cluster-switch delete -device SwitchA
```

Disables monitoring for the switch named SwitchA.

```
cluster1::> system cluster-switch delete -device SwitchA -force
```

Forcefully disables monitoring for the switch named SwitchA. (privilege: advanced)

system cluster-switch modify

Modify information about a switch's configuration

Availability: This command is available to *cluster* administrators at the *admin* privilege level.

Description

The `system cluster-switch modify` command modifies information about a cluster switch or management switch. The cluster switch health monitor uses this information to monitor the switch.

Parameters

-device <text> - Device Name

Specifies the device name of switch that you want to monitor.

[-address <IP Address>] - IP Address

Specifies the IP address of switch's management interface.

[-snmp-version {SNMPv1|SNMPv2c|SNMPv3}] - SNMP Version

Specifies the SNMP version that Data ONTAP uses to communicate with the switch. The default is SNMPv2c.

{ [-community <text>] - DEPRECATED-Community String or SNMPv3 Username



This parameter is deprecated and may be removed in a future release of Data ONTAP. Use `-community-or-username` instead.

Specifies the community string for SNMPv2 authentication or SNMPv3 username for SNMPv3 security.

[`-community-or-username <text>`] - Community String or SNMPv3 Username }

Specifies the community string for SNMPv2 authentication or SNMPv3 username for SNMPv3 security.

[`-type {cluster-network|management-network}`] - Switch Network

Specifies the switch type.

[`-is-monitoring-enabled-admin {true|false}`] - Enable Switch Monitoring

Specifies the switch admin monitoring status.

Examples

```
cluster1::> system cluster-switch modify -device SwitchA -address 2.3.4.5
```

Modifies the IP address for the switch named SwitchA.

```
cluster1::> system cluster-switch modify -device SwitchB -snmp-version  
SNMPv3 -community-or-username snmpv3u1
```

Modifies the SNMP parameters for the switch named SwitchB.

system cluster-switch prepare-to-downgrade

Remove unsupported switches in preparation for downgrade

Availability: This command is available to *cluster* administrators at the *advanced* privilege level.

Description

The `system cluster-switch prepare-to-downgrade` command changes switch information, so that it is compatible with older versions of ONTAP. When executed, it removes cluster switch entries that are not supported in versions earlier than ONTAP 9.1.

Examples

```
cluster1::> system cluster-switch prepare-to-downgrade
```

system cluster-switch show-all

Displays the list of switches that were added and deleted

Availability: This command is available to *cluster* administrators at the *advanced* privilege level.

Description

The `system cluster-switch show-all` command displays configuration details for discovered monitored cluster switches and management switches, including switches that are user-deleted. From the list of deleted switches, you can delete a switch permanently from the database to re-enable automatic discovery of that

switch.

Parameters

{ [-fields <fieldname>,...]

Selects the fields that have the specified name.

| [-instance] }

Selects detailed information for all the switches.

[-device <text>] - Device Name (privilege: advanced)

Selects the switches that match the specified device name.

[-address <IP Address>] - IP Address (privilege: advanced)

Selects the switches that match the specified IP address.

[-snmp-version {SNMPv1|SNMPv2c|SNMPv3}] - SNMP Version (privilege: advanced)

Selects the switches that match the specified SNMP version.

[-community <text>] - DEPRECATED-Community String or SNMPv3 Username (privilege: advanced)



This parameter is deprecated and may be removed in a future release of Data ONTAP. Use `-community-or-username` instead.

Selects the switches that match the specified community string or SNMPv3 username.

[-community-or-username <text>] - Community String or SNMPv3 Username (privilege: advanced)

Selects the switches that match the specified community string or SNMPv3 username.

[-discovered {true|false}] - Is Discovered (privilege: advanced)

Selects the switches that match the specified discovery setting.

[-model

{NX5010|NX5020|CAT2960|OTHER|NX5596|CN1610|CN1601|NX3132|OT5548|NX3132V|OT9332|NX3132XL}] - Model Number (privilege: advanced)

Selects the switches that match the specified model number.

[-type {cluster-network|management-network}] - Switch Network (privilege: advanced)

Selects the switches that match the specified switch type.

[-sw-version <text>] - Software Version (privilege: advanced)

Selects the switches that match the specified software version.

[-is-monitoring-enabled-operational {true|false}] - Switch Monitoring Status (privilege: advanced)

Selects the switches that match the specified operational monitoring status.

[-reason <text>] - Reason For Not Monitoring (privilege: advanced)

Selects the switches that match the specified reason.

[`-version-source <text>`] - Source Of Switch Version (privilege: advanced)

Selects the switches that match the specified version source (for example, from SNMP, CDP or ISDP).

[`-serial-number <text>`] - Serial Number of the Device (privilege: advanced)

Selects the switches that match the specified serial number.

Examples

```
cluster1::> system cluster-switch show-all
Switch                               Type                               Address                               Model
-----
SwitchA                             cluster                           1.2.3.4
Nexus5010

      Is Monitored: yes
      Reason:
Software Version: Cisco IOS 4.1N1
Version Source: CDP
```

The example above displays the configuration of all cluster switches and management switches.

system cluster-switch show

Display the configuration for cluster and management switches

Availability: This command is available to *cluster* administrators at the *admin* privilege level.

Description

The `system cluster-switch show` command displays configuration details for the monitored cluster switches and management switches.

Parameters

{ [`-fields <fieldname>`,...]

Selects the fields that have the specified name.

| [`-snmp-config`]

Displays the following information about a switch:

- Device Name
- SNMPv2c Community String or SNMPv3 Username
- SNMP Version

| **[-status]**

Displays the following status information about a switch:

- Is Discovered
- SNMPv2c Community String or SNMPv3 Username
- Model Number
- Switch Network
- Software Version
- Reason For Not Monitoring
- Source Of Switch Version
- Is Monitored ?

| **[-instance] }**

Selects detailed information for all the switches.

[-device <text>] - Device Name

Selects the switches that match the specified device name.

[-address <IP Address>] - IP Address

Selects the switches that match the specified IP address.

[-snmp-version {SNMPv1|SNMPv2c|SNMPv3}] - SNMP Version

Selects the switches that match the specified SNMP version.

[-is-discovered {true|false}] - Is Discovered

Selects the switches that match the specified discovery setting.

[-community <text>] - DEPRECATED-Community String or SNMPv3 Username



This parameter is deprecated and may be removed in a future release of Data ONTAP. Use `-community-or-username` instead.

Selects the switches that match the specified SNMPv2c community string or SNMPv3 username.

[-community-or-username <text>] - Community String or SNMPv3 Username

Selects the switches that match the specified SNMPv2c community string or SNMPv3 username.

[-model

{NX5010|NX5020|CAT2960|OTHER|NX5596|CN1610|CN1601|NX3132|OT5548|NX3132V|OT9332|NX3132XL}] - Model Number

Selects the switches that match the specified model number.

[-type {cluster-network|management-network}] - Switch Network

Selects the switches that match the specified switch type.

[-sw-version <text>] - Software Version

Selects the switches that match the specified software version.

[-reason <text>] - Reason For Not Monitoring

Selects the switches that match the specified reason.

[-version-source <text>] - Source Of Switch Version

Selects the switches that match the specified version source (for example, from SNMP, CDP or ISDP).

[-is-monitoring-enabled-operational {true|false}] - Is Monitored ?

Selects the switches that match the specified operational monitoring status.

[-serial-number <text>] - Serial Number of the Device

Selects the switches that match the specified serial number.

Examples

```
cluster1::> system cluster-switch show
Switch                               Type                               Address                               Model
-----
cn1610-143--234                      cluster-network                   10.238.143.234                      CN1610
    Serial Number: 20211200007
    Is Monitored: true
    Reason:
    Software Version: 1.1.0.1
    Version Source: ISDP
cn1601--143-230                      management-network               10.238.143.230                      CN1601
    Serial Number: 20210200019
    Is Monitored: false
    Reason: Monitoring Disabled by Default
    Software Version: 1.1.0.1
    Version Source: ISDP
cn1601--143-232                      management-network               10.238.143.232                      CN1601
    Serial Number: 20210200017
    Is Monitored: false
    Reason: Monitoring Disabled by Default
    Software Version: 1.1.0.1
    Version Source: ISDP
cn1610-143--231                      cluster-network                   10.238.143.231                      CN1610
    Serial Number: 20211200002
    Is Monitored: true
    Reason:
    Software Version: 1.1.0.1
    Version Source: ISDP
```

The example above displays the configuration of all cluster switches and management switches.

```
cluster1::> system cluster-switch show -snmp-config
                SNMPv2c Community
Switch          or SNMPv3 Username  SNMP Version
-----
SwitchA        public              SNMPv2c
```

The example above displays the SNMPv2c community string or SNMPv3 username and SNMP version for all cluster switches and management switches.

system cluster-switch polling-interval modify

Modify the polling interval for monitoring cluster and management switch health

Availability: This command is available to *cluster* administrators at the *advanced* privilege level.

Description

The `system cluster-switch polling-interval modify` command modifies the interval in which the cluster switch health monitor polls cluster and management switches.

Parameters

[-polling-interval <integer>] - Polling Interval

Specifies the interval in which the health monitor polls switches. The interval is in minutes. The default value is 5. The allowed range of values is 2 to 120.

Examples

```
cluster1::> system cluster-switch polling-interval modify -polling
-interval 41
```

Modifies the polling interval of the switches.

system cluster-switch polling-interval show

Display the polling interval for monitoring cluster and management switch health

Availability: This command is available to *cluster* administrators at the *admin* privilege level.

Description

The `system cluster-switch polling-interval show` command displays the polling interval used by the health monitor.

Examples

```
cluster1::> system cluster-switch polling-interval show
Polling Interval (in minutes): 40
```

The example above displays the polling interval period for the switches.

system cluster-switch threshold show

Display the cluster switch health monitor alert thresholds

Availability: This command is available to *cluster* administrators at the *admin* privilege level.

Description

The `system cluster-switch threshold show` command displays thresholds used by health monitor alerts.

Examples

```
cluster1::> system cluster-switch threshold show
Per 0.10% values: 1 = 0.10%, 5 = 0.50%
In Errors Threshold (%) Out Errors Threshold (%)
-----
                                1
```

Displays the inbound and outbound switch interface packet error thresholds are set at 0.1%. The node platform health monitor also shares the same thresholds in monitoring packet errors of cluster ports on the node.

Copyright information

Copyright © 2024 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.