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P Commands

pager

Syntax  pager on | off

Defaults None

Access  CLI

Usage  This command is used to paginate long show output in the CLI.

Examples  To set the pagination to on, use the following command:

    CLI network-admin@switch > pager on
ping
This command is used to verify connectivity on the network.

Syntax  ping [-s] host

Defaults  None.

Access  CLI

Usage  Ping another device on the network to ensure connectivity on the network.

Examples  Ping 192.10.10.1 using the following syntax:

CLI network-admin@switch > ping 192.10.10.1

192.10.1.1 is alive
**port-buffer-settings-modify**

You can modify the buffer utilization settings for ports on a switch.

**Syntax**

```
port-buffer-settings-modify enable|disable interval duration: #d#h#m#s disk-space disk-space-number
```

**Specify one or more of the following options:**

<table>
<thead>
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<th>Option</th>
<th>Description</th>
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<tr>
<td>enable</td>
<td>disable</td>
</tr>
<tr>
<td>interval duration:</td>
<td>#d#h#m#s</td>
</tr>
<tr>
<td>disk-space disk-space-number</td>
<td></td>
</tr>
</tbody>
</table>

**Defaults** None

**Access** CLI

**Usage** In some cases, you may want to buffer packets leaving and entering the ports on the switch.

**Examples** To modify the interval from the default value of 1 minute to 2 minutes, use the following command:

```
CLI network-admin@switch > port-buffer-settings-modify interval 2m
```

**See Also**

* port-buffer-settings-show
* port-buffer-show
**port-buffer-settings-show**

You can display the buffer utilization settings for ports on a switch.

Syntax  `port-buffer-settings-show`

### Formatting Options

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<th>Format Options</th>
<th>Description</th>
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<td><strong>format</strong></td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td><strong>fields-to-display</strong></td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td><strong>parsable-delim</strong></td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td><strong>character</strong></td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td><strong>sort-asc</strong></td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td><strong>show-dups</strong></td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
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<td><strong>show-interval</strong></td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td><strong>seconds-interval</strong></td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
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<td><strong>show-diff-interval</strong></td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td><strong>show-diff-interval</strong></td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td><strong>no-show-headers</strong></td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td><strong>count-output</strong></td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
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<tr>
<td><strong>unscaled</strong></td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td><strong>sum-by</strong></td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults** None

**Access** CLI

**Usage** In some cases, you may want to buffer packets leaving and entering the ports on the switch.

**Examples** To display the buffer information, use following command:

```
CLI network-admin@switch > port-buffer-settings-show
```

```
switch: pleiades24
enable: yes
interval: 1m
disk-space: 50M
```

See Also
- `port-buffer-settings-modify`
- `port-buffer-show`
**port-buffer-show**

You can display the buffer utilization, percentage and size, for ports on a switch.

```
Syntax  port-buffer-show time date/time: yyyy-mm-ddThh:mm:ss
       start-time date/time: yyyy-mm-ddThh:mm:ss
       end-time date/time: yyyy-mm-ddThh:mm:ss
       duration duration: #d#h#m#s
       interval duration: #d#h#m#s
       since-start older-than duration: #d#h#m#s
       within-last duration: #d#h#m#s
       port port-list
```

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<th>Description</th>
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<td>Specify a time to display port buffering.</td>
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<tr>
<td>yyyy-mm-ddThh:mm:ss</td>
<td></td>
</tr>
<tr>
<td>start-time</td>
<td>Specify a start time to display port buffering.</td>
</tr>
<tr>
<td>yyyy-mm-ddThh:mm:ss</td>
<td></td>
</tr>
<tr>
<td>end-time date/time:</td>
<td>Specify an end time to display port buffering.</td>
</tr>
<tr>
<td>yyyy-mm-ddThh:mm:ss</td>
<td></td>
</tr>
<tr>
<td>duration duration:</td>
<td>Specify a duration to display port buffering.</td>
</tr>
<tr>
<td>#d#h#m#s</td>
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<tr>
<td>interval duration:</td>
<td>Specify an interval to display port buffering.</td>
</tr>
<tr>
<td>#d#h#m#s</td>
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<tr>
<td>since-start</td>
<td>Specify a start time to display port buffering.</td>
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<td>older-than</td>
<td>Specify an older-than time period to display port buffering.</td>
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<tr>
<td>duration:</td>
<td>#d#h#m#s</td>
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<tr>
<td>within-last</td>
<td>Specify a within last time period to display port buffering.</td>
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<tr>
<td>duration:</td>
<td>#d#h#m#s</td>
</tr>
<tr>
<td>port port-list</td>
<td>Specify a port list.</td>
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</table>

**Formatting Options**

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<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
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<td>format fields-to-display</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout vertical</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td></td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

Defaults: None  
Access: CLI  
Usage: In some cases, you may want to buffer packets leaving and entering the ports on the switch.  
Examples: To display the buffer information, use following command:

```cli
network-admin@switch > port-buffer-show format all layout vertical
```

```
switch: Pleiades24  
port: 65  
ingress-used-buf: 0%  
ingress-used-buf-val: 0  
egress-used-buf: 0%  
egress-used-buf-val: 0  
switch: Pleiades24  
port: 66  
ingress-used-buf: 0%  
ingress-used-buf-val: 0  
egress-used-buf: 0%  
egress-used-buf-val: 0  
switch: Pleiades24  
port: 69  
ingress-used-buf: 0%  
ingress-used-buf-val: 0  
egress-used-buf: 0%  
egress-used-buf-val: 0  
switch: Pleiades24  
port: 70  
ingress-used-buf: 0%  
ingress-used-buf-val: 0  
egress-used-buf: 0%  
egress-used-buf-val: 0  
switch: Pleiades24  
port: 71  
ingress-used-buf: 0%  
ingress-used-buf-val: 0  
egress-used-buf: 0%  
egress-used-buf-val: 0  
switch: Pleiades24  
port: 72  
ingress-used-buf: 0%  
ingress-used-buf-val: 0  
egress-used-buf: 0%  
egress-used-buf-val: 0
```
port-config-modify

This command is used to modify port settings on the switch.

Syntax

```
port-config-modify port port-list [speed disable|10m|100m|1g|2.5g|10g|40g] [egress-rate-limit unlimited]
eth-mode 1000base-x|sgmii [autoneg|no-autoneg] [jumbo|no-jumbo]
[enable|disable] [lacp-priority integer] [reflect|no-reflect]
[edge-switch|no-edge-switch] [pause|no-pause] [description
description-string] loopback|no-loopback
mirror-receive-only|no-mirror-receive-only port-mac-address
mac-address vlag_failover_move_l2 true|false send-port
send-port-number
```

**port port-list**

Specify a single port or a list of ports.

**Note:** If more than one port is specified, the list must be comma-separated without spaces.

**Specify any of the following options:**

- **speed**
  - disable|10m|100m|1g|2.5g|10g|40g
  
  Specify the port speed. Ports configured for speeds of 1G must be equipped with SFP transceivers. Ports configured for 10G or higher must be equipped with SFP+ or QSFP+ transceivers.

- **egress-rate-limit**
  - unlimited
  
  Specify an egress rate limit for the port.

- **eth-mode**
  - 1000base-x|sgmii
  
  Specify the Ethernet mode as 1000 base or Serial Gigabit Media Independent Interface (SGMII).

- **autoneg|no-autoneg**
  
  Specify if the port auto-negotiates the port speed with a peer.

- **jumbo|no-jumbo**
  
  Specify if the port forwards jumbo frames. Jumbo frames are Ethernet frames with more than 1500 bytes of payload.

- **enable|disable**
  
  Specify if the port is enabled and forwards or drops frames.

- **lacp-priority integer**
  
  Specify the LACP priority for the port. If you specify a low value for the priority, the port has a higher priority. This is a value between 1 and 65535.

- **reflect|no-reflect**
  
  Specify if the port reflects frames received for loopback testing.

- **edge-switch|no-edge-switch**
  
  Specify if the port connects to another Pluribus Networks device or is an uplink to a third-party switch or host.

- **pause|no-pause**
  
  Specify if you want to pause traffic on the port.

- **description**
  
  Specify a description for the port.

- **loopback|no-loopback**
  
  Specify to use loopback or no loopback.

- **mirror-receive-only|no-mirror-receive-only**
  
  Specify if the port receives mirrored traffic only.

- **port-mac-address**
  
  Specify the MAC address for the port.

- **mac-address**
  
  Specify the MAC address for the port.

- **send-port**
  
  Specify the port to send traffic.

**Defaults**

The default port speed is 10G per second. Autonegotiation and jumbo frames are disabled by default. The port is enabled by default.
Access CLI

Usage Switches are equipped with network data ports for host or inter-switch communication. This command configures the settings of a specific network data port of all data ports on the local switch.

Examples To configure port 17 on a switch to operate at 1 Gbps without jumbo frames, use the following command:

```
CLI network-admin@switch > port-config-modify port 17 speed 1G autoneg off jumbo off
```

See Also
- port-show
- port-config-show
- port-phy-show
- port-stats-clear
- port-stats-show
- port-vlan-add
- port-vlan-remove
- port-vlan-show
port-config-show

This command is used to display port settings on the switch.

Syntax  port-config-show intf intf-number name name-string port
port-list [speed disable|100m|1g|10g|40g] [egress-rate-limit
unlimited] eth-mode
10G-XGMII|1G-RCMII|10G-SFI|10G- XFI [autoneg|no-autoneg]
[jumbo|no-jumbo] [enable|disable] [lacp-mode off|passive|active]
[lacp-priority integer] lacp-timeout slow|fast
[reflect|no-reflect] [edge-switch|no-edge-switch]
[pause|no-pause] [description description-string]
loopback|no-loopback mirror-receive-only|
no-mirror-receive-only port-mac-address mac-address

intf intf-number
Specifies the interface number.

name name-string
If configured, specifies the name of the port. Otherwise, the field is
blank.

port port-list
Specifies a port or list of ports.

speed
Specifies the port speed. Ports configured for speeds of 1G must be
equipped with SFP transceivers. Ports configured for 10G or higher
must be equipped with SFP+ or QSFP+ transceivers.

egress-rate-limit
Specifies the egress rate limit for the port.

unlimited

eth-mode
Specifies the Ethernet mode.

10G-XGMII|1G-RCMII|10G-SFI|10G-XFI [autoneg|no-autoneg]
[jumbo|no-jumbo] [enable|disable] [lacp-mode off|passive|active]
[lacp-priority integer] lacp-timeout slow|fast
[reflect|no-reflect] [edge-switch|no-edge-switch]
[pause|no-pause] [description description-string]
loopback|no-loopback mirror-receive-only|
no-mirror-receive-only port-mac-address mac-address

autoneg|no-autoneg
Specifies if the port auto-negotiates the port speed with a peer.

jumbo|no-jumbo
Specifies if the port forwards jumbo frames. Jumbo frames are
Ethernet frames with more than 1500 bytes of payload.

enable|disable
Specifies if the port is enabled and forwards or drops frames.

lacp-mode
If LACP is enabled, specifies the mode for the port. Passive indicates
that the port is in standby mode, and active indicates that the port is
actively participating in an aggregated trunk.

off|passive|active

lacp-priority integer
Specifies the LACP priority for the port. This is a value between 1 and
65535 with a default value of 32768.
**Pluribus Networks ONVL Version 2.3**

**Formatting Options**

- **format**
  - **fields-to-display**: Display output using a specific parameter. Use `all` to display all possible output.
- **parsable-delim**
  - **character**: Display output formatted for machine parsing using a specified delimiter.
- **sort-asc**: Display output in ascending order.
- **sort-desc**: Display output in descending order.
- **show dups**: Display duplicate entries in the output.
- **layout**
  - **vertical|horizontal**: Format the output in a vertical or horizontal layout.
- **show-interval**
  - **seconds-interval**: Repeat the show command at a specified interval.
- **show-diff-interval**: Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.
- **show-headers|no-show-headers**: Display column headers or not.
- **limit-output number**: Limit the display output to a specific number of entries.
- **count-output**: Display the number of entries in the output. This is useful with `vRouter show commands`.
- **unscaled**: Display full values in the output instead of scaled approximate values.
- **sum-by**: Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.

**Defaults**

- **None.**

**Access**

- **CLI**
Usage  Switches are equipped with network data ports for host or inter-switch communication. This command configures the settings of a specific network data port of all data ports on the local switch.

Examples  To display information about all ports on a switch, use the following command:

```
CLI network-admin@switch > port-config-show
```

```
switch: pleiades25
intf: 10
name:
port: 10
speed: 10g
autoneg: off
jumbo: off
enable: on
lacp-priority: 32768
reflect: off
edge-switch: no
pause: no
description:
loopback: default
mirror_only: default
lport: 0
rswitch-default-vlan: 0
port-mac-address: 06:b0:00:02:30:0a
```

See Also

- `port-show`
- `port-config-modify`
- `port-phy-show`
- `port-stats-clear`
- `port-stats-show`
- `port-vlan-add`
- `port-vlan-remove`
- `port-vlan-show`
**port-egress-check**

You can use this command to check fabric communications when a connection error occurs while using show commands.

**Syntax**  
port-egress-check

**Defaults**  
None

**Access**  
CLI

**Usage**  
Occasionally, the fabric returns a communication error when show commands are executed at the CLI. This command checks for possible communication on fabric ports.

**Examples**  
To use this command, use the following syntax:

```
CLI network-admin@switch > port-egress-check
```

```
pubdev02: Port 1 -> 1-68 but should be 1 -> 1-72  
pubdev02: Port 2 -> 1-68 but should be 2 -> 1-72  
pubdev02: Port 3 -> 1-68 but should be 3 -> 1-72  
pubdev02: Port 4 -> 1-68 but should be 4 -> 1-72  
pubdev02: Port 5 -> 1-68 but should be 5 -> 1-72  
pubdev02: Port 6 -> 1-68 but should be 6 -> 1-72  
pubdev02: Port 7 -> 1-68 but should be 7 -> 1-72  
pubdev02: Port 8 -> 1-68 but should be 8 -> 1-72  
pubdev02: Port 9 -> 1-68 but should be 9 -> 1-72  
pubdev02: Port 10 -> 1-68 but should be 10 -> 1-72  
pubdev02: Port 11 -> 1-68 but should be 11 -> 1-72  
pubdev02: Port 12 -> 1-68 but should be 12 -> 1-72  
pubdev02: Port 13 -> 1-68 but should be 13 -> 1-72  
pubdev02: Port 14 -> 1-68 but should be 14 -> 1-72  
pubdev02: Port 15 -> 1-68 but should be 15 -> 1-72  
pubdev02: Port 16 -> 1-68 but should be 16 -> 1-72  
pubdev02: Port 17 -> 1-68 but should be 17 -> 1-72  
pubdev02: Port 18 -> 1-68 but should be 18 -> 1-72  
pubdev02: Port 19 -> 1-68 but should be 19 -> 1-72  
pubdev02: Port 20 -> 1-68 but should be 20 -> 1-72  
pubdev02: Port 21 -> 1-68 but should be 21 -> 1-72
```
port-egress-fix

You can use this command to fix fabric communications when a connection error occurs while using show commands.

Syntax port-egress-fix

Defaults None

Access CLI

Usage Occasionally, the fabric returns a communication error when show commands are executed at the CLI. This command fixes communication errors on fabric ports.

Examples To use this command, use the following syntax:

```
CLI network-admin@switch > port-egress-fix

pubdev02: Port 1 -> 1-68 but should be 1 -> 1-72
pubdev02: Fixed port 1 -> 1-72
pubdev02: Port 2 -> 1-68 but should be 2 -> 1-72
pubdev02: Fixed port 2 -> 1-72
pubdev02: Port 3 -> 1-68 but should be 3 -> 1-72
pubdev02: Fixed port 3 -> 1-72
pubdev02: Port 4 -> 1-68 but should be 4 -> 1-72
pubdev02: Fixed port 4 -> 1-72
pubdev02: Port 5 -> 1-68 but should be 5 -> 1-72
pubdev02: Fixed port 5 -> 1-72
pubdev02: Port 6 -> 1-68 but should be 6 -> 1-72
pubdev02: Fixed port 6 -> 1-72
pubdev02: Port 7 -> 1-68 but should be 7 -> 1-72
pubdev02: Fixed port 7 -> 1-72
pubdev02: Port 8 -> 1-68 but should be 8 -> 1-72
pubdev02: Fixed port 8 -> 1-72
pubdev02: Port 9 -> 1-68 but should be 9 -> 1-72
pubdev02: Fixed port 9 -> 1-72
pubdev02: Port 10 -> 1-68 but should be 10 -> 1-72
pubdev02: Fixed port 10 -> 1-72
pubdev02: Port 11 -> 1-68 but should be 11 -> 1-72
pubdev02: Fixed port 11 -> 1-72
pubdev02: Port 12 -> 1-68 but should be 12 -> 1-72
pubdev02: Fixed port 12 -> 1-72
pubdev02: Port 13 -> 1-68 but should be 13 -> 1-72
pubdev02: Fixed port 13 -> 1-72
pubdev02: Port 14 -> 1-68 but should be 14 -> 1-72
pubdev02: Fixed port 14 -> 1-72
pubdev02: Port 15 -> 1-68 but should be 15 -> 1-72
pubdev02: Fixed port 15 -> 1-72
```
port-lacp-modify

This command allows you to run a port configured with LACP in test mode.

Syntax
port-lacp-modify [port port-list] [test-mode none|no-tx|no-rx|no-rx-or-tx]

- port port-list
  Specifies the switch network data port number, list of ports, or range of ports. Port numbers must be in the range of 1 to 64.
- test-mode
  none|no-tx|no-rx|no-rx-or-tx
  Specify the test mode for the port.

Defaults  None
Access   CLI
Usage   Use this command to modify a port and run it in test mode.
Examples  To modify port 54 and place it in test mode, no-tx, use the following command:

CLI network-admin@switch > port-lacp-modify port 54 test-mode no-tx

See Also
- port-config-modify
- port-config-show
- port-phy-show
- port-stats-clear
- port-stats-show
- port-vlan-add
- port-vlan-remove
- port-vlan-show
port-lacp-show

This command displays information about network LACP port status.

**Syntax**
```
port-lacp-show [port port-list] [neighbor|no-neighbor]
[name name-string] [port-type none|vlag|trunk] [mode
off|passive|active] timeout slow|fast [system-id mac-address]
[aggregatable yes|no] [sync yes|no] [coll yes|no] [dist yes|no]
[defaulted yes|no] [expired yes|no] [port-state
port-state-number] [test-mode none|no-tx|no-rx|no-rx-or-tx]
```

- **port port-list** Specifies the switch network data port number, list of ports, or range of ports. Port numbers must be in the range of 1 to 64.
- **neighbor|no-neighbor** Specify to display neighbors of the LACP port.
- **name name-string** Specifies the name of the LACP port.
- **port-type none|vlag|trunk** Specifies if the port is a VLAG or a trunk.
- **mode off|passive|active** Specifies the mode as off, passive, or active.
- **timeout slow|fast** Specifies the timeout for LACP connections. Slow timeout sends requests after 30 seconds and fast timeout sends requests after 3 seconds.
- **system-id mac-address** Specifies the MAC address as the system ID.
- **aggregatable yes|no** Specifies if you can aggregate the port or not.
- **sync yes|no** Specifies if the port is synchronized.
- **coll yes|no** Specifies if the port is collecting packets or not.
- **dist yes|no** Specifies if the port is distributing packets or not.
- **defaulted yes|no** Specifies if the port is defaulted or not.
- **expired yes|no** Specifies if the port is expired or not.
- **port-state port-state-number** Specifies a single port state instead of all ports.
- **test-mode none|no-tx|no-rx|no-rx-or-tx** Specifies if a port is in test mode.

**Formatting Options**

- **format**
  - **fields-to-display** Display output using a specific parameter. Use all to display all possible output.
- **parsable-delim**
  - **character** Display output formatted for machine parsing using a specified delimiter.
- **sort-asc** Display output in ascending order.
- **sort-desc** Display output in descending order.
- **show dupes** Display duplicate entries in the output.
- **layout**
  - **vertical|horizontal** Format the output in a vertical or horizontal layout.
### show-interval
Repeat the show command at a specified interval.

### seconds-interval

### show-diff-interval
Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.

### show-headers
Display column headers or not.

### no-show-headers

### limit-output number
Limit the display output to a specific number of entries.

### count-output
Display the number of entries in the output. This is useful with vRouter show commands.

### unscaled
Display full values in the output instead of scaled approximate values.

### sum-by
Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.

**Defaults**  None  

**Access**  CLI  

**Usage**  Use this command to display information about port status on the switch.

**Examples**  To display the port status for port 12, use the following command:

```sh
CLI network-admin@switch > port-show port 12 layout vertical
```

| switch: | pleiades25 |
| port: | 12 |
| ip: | 192.168.19.25 |
| mac: | fa:16:3e:ca:aa:82 |
| vlan: | 50 |
| vxlan: | 0 |
| hostname: | |
| status: | up,host,dhcp |
| config: | fd,10g |

**See Also**
- port-config-modify
- port-config-show
- port-phy-show
- port-stats-clear
- port-stats-show
- port-vlan-add
- port-vlan-remove
- port-vlan-show
**port-phy-show**

This command is used to display information about the physical Layer 1 status of the local switch.

```
Syntax port-phy-show port port-list [state
off|admin-down|adminpwrdown|bist|dfe-tuning|down|local-fault|
partially-up] [remote-fault] [up|failed] [mode
off|admin-down|adminpwrdown|bist|dfe-tuning|down|local-fault|
partially-up] [remote-fault] [up|failed] [autoneg autoneg-string]
[speed
speed-number] [eth-mode 100base-x|sgmii|disabled|1000base-kx|2500base-x|6Gbase-cr|10Gbase-cr|10Gbase-sr|A
10G-XGMII|1G-RGMII|10G-SFI|10G-XFI] [max-frame max-frame-number]
[link-quality link-quality-string] [learning on|off] [def-vlan
def-vlan-number] [dfe-mode static|one-shot|continuous|kr]
[dfe-coarse not-started|in-progress|complete|error] [dfe-fine
not-started|in-progress|complete|error]
```

```
port port-list

state
off|admin-down|adminpwrdown|bist|dfe-tuning|down|local-fault|
partially-up] [remote-fault] [up|failed
mode
off|admin-down|adminpwrdown|bist|dfe-tuning|down|local-fault|
partially-up] [remote-fault] [up|failed
autoneg autoneg-string
speed speed-number
eth-mode
100base-x|sgmii|disabled|1000base-kx|2500base-x|6Gbase-cr|10Gbase-cr|10Gbase-sr|A
TBI|10G-XGMII|1G-RGMII|10G-SFI|10G-XFI
```

- **port** port-list
  - Specifies the switch data port number, list of ports, or range of ports. Port numbers must be in the range of 1-64.

- **state**
  - Specifies the state of the port PHY.

- **mode**
  - Specifies the mode of the port PHY.

- **autoneg autoneg-string**
  - Specifies the auto-negotiation setting of the port PHY.

- **speed speed-number**
  - Specifies the speed of the port PHY.

Specify the Ethernet mode as 1000 base or Serial Gigabit Media Independent Interface (SGMII).
### Formatting Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>max-frame</td>
<td>Specifies the maximum number of frames.</td>
</tr>
<tr>
<td>max-frame-number</td>
<td></td>
</tr>
<tr>
<td>link-quality</td>
<td>Specifies the link quality of the port PHY.</td>
</tr>
<tr>
<td>link-quality-string</td>
<td></td>
</tr>
<tr>
<td>learning on</td>
<td>off</td>
</tr>
<tr>
<td>def-vlan</td>
<td>Specifies the default VLAN identifier of the port PHY.</td>
</tr>
<tr>
<td>def-vlan-number</td>
<td></td>
</tr>
<tr>
<td>dfe-mode</td>
<td>Specifies the Decision Feedback Equalizer (DFE) mode of the port PHY.</td>
</tr>
<tr>
<td>static</td>
<td>one-shot</td>
</tr>
<tr>
<td>dfe-coarse</td>
<td>Specifies the DFE status of the port PHY.</td>
</tr>
<tr>
<td>not-started</td>
<td>in-progress</td>
</tr>
<tr>
<td>dfe-fine</td>
<td>Specifies the DFE status of the port PHY.</td>
</tr>
<tr>
<td>not-started</td>
<td>in-progress</td>
</tr>
</tbody>
</table>

**Defaults** None.
Access CLI

Usage Switches are equipped with network data ports for host or inter-switch communication. Use this command to display the status of network data ports on the local switch.

Examples To display the status of network data ports on the switch, use the following command:

```
CLI network-admin@switch > port-phy-show
```

<table>
<thead>
<tr>
<th>port</th>
<th>state</th>
<th>speed</th>
<th>eth-mode</th>
<th>max-frame</th>
<th>link-quality</th>
<th>learning</th>
<th>def-vlan</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>up</td>
<td>1000</td>
<td>1000base-x</td>
<td>1540</td>
<td>n/a</td>
<td>on</td>
<td>1</td>
</tr>
<tr>
<td>19</td>
<td>up</td>
<td>10000</td>
<td>10Gbase-cr</td>
<td>10232</td>
<td>n/a</td>
<td>on</td>
<td>1</td>
</tr>
<tr>
<td>21</td>
<td>up</td>
<td>10000</td>
<td>10Gbase-cr</td>
<td>10232</td>
<td>n/a</td>
<td>on</td>
<td>1</td>
</tr>
<tr>
<td>23</td>
<td>up</td>
<td>10000</td>
<td>10Gbase-cr</td>
<td>10232</td>
<td>n/a</td>
<td>on</td>
<td>1</td>
</tr>
<tr>
<td>45</td>
<td>up</td>
<td>10000</td>
<td>10Gbase-cr</td>
<td>10232</td>
<td>n/a</td>
<td>on</td>
<td>1</td>
</tr>
<tr>
<td>65</td>
<td>up</td>
<td>10000</td>
<td>10Gbase-cr</td>
<td>10232</td>
<td>n/a</td>
<td>on</td>
<td>1</td>
</tr>
</tbody>
</table>

See Also
- port-show
- port-config-modify
- port-config-show
- port-stats-clear
- port-stats-show
- port-vlan-add
- port-vlan-remove
- port-vlan-show
port-show
This command displays information about network data port status.

Syntax: port-show [port port-list] [ip ip-address] [mac mac-address] [vlan vlan-id] vxlan vxlan-id [hostname hostname] [status phy-up|up|disabled|hw-nat-loop|mirror-loop|mirror-to|inuse|PN-switch|PN-fabric|PN-other|PN-cluster|PN-internal|PN-hypervisor|PN-guest|snmp-host|host|uplink|drop-pkts|no-pktin|no-fwd|no-flood|STP-BPDUs|LLDP|trunk|vdp|dhcp|dhcpsvr|blocked|no-BPDU|LACP-PDUs|vlag-active|vlag-blocked|stp-edge-port|LACP-wait|adjacency-wait|adjacency-check|vlag-wait|multicast-router] [lport lport-number] [rport rport-number] [config 100m|1g|10g|40g|autoneg|jumbo] [description description-string] [trunk trunk-name] [hide-connections]

port port-list
Specifies the switch network data port number, list of ports, or range of ports. Port numbers must be in the range of 1 to 64.

ip ip-address
Specifies the IP address of a host connected to a switch data port.

mac mac-address
Specifies the MAC address of a host connected to a switch data port.

vlan vlan-id
Specifies the VLAN identifier. This is a value between 0 and 4095.

vxlan vxlan-id
Specifies the VXLAN identifier. This is a value between 0 and 16777215.

hostname hostname
Specifies the name of a host connected to a switch data port.

status phy-up|up|disabled|hw-nat-loop|mirror-loop|mirror-to|inuse|PN-switch|PN-fabric|PN-other|PN-cluster|PN-internal|PN-hypervisor|PN-guest|snmp-host|host|uplink|drop-pkts|no-pktin|no-fwd|no-flood|STP-BPDUs|LLDP|trunk|vdp|dhcp|dhcpsvr|blocked|no-BPDU|LACP-PDUs|vlag-active|vlag-blocked|stp-edge-port|LACP-wait|adjacency-wait|adjacency-check|vlag-wait|multicast-router
Specifies the status of a switch data port.

lport lport-number
Specifies the port number on the local switch.

rport rport-number
Specifies the port number on the remote switch.
Specifies the settings of a switch data port.

`config fd|hd|10m|100m|lg|2.5g|10g|40g|loopback|mirror-only|autoneg|fiber|copper|qos|jumbo|pause|asymmetric-pause`

Specifies the description of the port.

`description description-string`

Specifies the identifier of the trunk that a switch data port is a member of.

`trunk trunk-name`

Specifies whether the connections on switch data ports should be displayed.

`hide-connections`

### Formatting Options

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<thead>
<tr>
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<td>show dupps</td>
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</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
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</tr>
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<td>show-interval</td>
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<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
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</table>

### Defaults

None

### Access

CLI

### Usage

Use this command to display information about port status on the switch.
Examples To display the port status for port 12, use the following command:

```bash
CLI network-admin@switch > port-show port 12 layout vertical
```

```
switch:        pubdev03
port:         45
ip:           192.168.42.10
mac:          64:0e:94:28:00:8e
hostname:     pubdev01
status:       up,PN-fabric,LLDP,trunk
lport:        45
rport:        45
config:       fd,10g
trunk:        trunk-info
```

See Also
- `port-config-modify`
- `port-config-show`
- `port-phy-show`
- `port-stats-clear`
- `port-stats-show`
- `port-vlan-add`
- `port-vlan-remove`
- `port-vlan-show`
**port-stats-clear**

This command is used to clear statistics from a port.

**Syntax**
```
port-stats-clear port port-list
```

`port port-list` Specify a list of ports to clear statistics.

**Defaults** None

**Access** CLI

**Usage** Use this command to clear statistics from a list of ports

**Examples** To clear statistics from ports 43-47, use the following command:

```
CLI network-admin@switch > port-stats-clear port 43-47
```

**See Also**
- `port-show`
- `port-config-modify`
- `port-config-show`
- `port-phy-show`
- `port-vlan-add`
- `port-vlan-remove`
- `port-vlan-show`
port-stats-show

This command displays packet count statistics for switch data ports.

Syntax

```
port-stats-show time date/time: yyyy-mm-ddThh:mm:ss
[start-time start-time] [end-time end-time] [duration duration]
interval duration: #d#h#m#s since-start|no-since-start
older-than duration: #d#h#m#s
port port-list counter counter-number timestamp date/time:
```

```
yyyy-mm-ddThh:mm:ss ibytes ibytes-number iUpkts iUpkts-number
iBpkts iBpkts-number iMpkts iMpkts-number iPauseFs
iPauseFs-number iCongDrops iCongDrops-number idiscards
idiscards-number ierrs ierrs-number obytes obytes-number oUpkts
oBpkts oBpkts-number oMpkts oMpkts-number oPauseFs
oPauseFs-number oCongDrops oCongDrops-number odiscards
odiscards-number oerrs oerrs-number
```

Specify any of the following options:

time date/time: Specifies a time for the packet count statistics using the timestamp
```
yyyy-mm-ddThh:mm:ss
```
format YYYY-MM-DDTHH:MM:SS, where:

- YYYY specifies the 4 digit calendar year;
- MM specifies the 2 digit month of the year;
- DD specifies the 2 digit day of the month;
- HH specifies the 2 digit time of the day (24H notation);
- MM specifies the 2 digit minute of the hour;
- SS specifies the 2 digit second of the minute.

start-time start-time Specifies a start time for the packet count statistics using the
```
timestamp format YYYY-MM-DDTHH:MM:SS, where:
```
format YYYY-MM-DDTHH:MM:SS, where:

- YYYY specifies the 4 digit calendar year;
- MM specifies the 2 digit month of the year;
- DD specifies the 2 digit day of the month;
- HH specifies the 2 digit time of the day (24H notation);
- MM specifies the 2 digit minute of the hour;
- SS specifies the 2 digit second of the minute.

end-time end-time Specifies an end time for the packet count statistics using the
```
timestamp format YYYY-MM-DDTHH:MM:SS, where:
```
timestamp format YYYY-MM-DDTHH:MM:SS, where:

- YYYY specifies the 4 digit calendar year;
- MM specifies the 2 digit month of the year;
- DD specifies the 2 digit day of the month;
- HH specifies the 2 digit time of the day (24H notation);
- MM specifies the 2 digit minute of the hour;
- SS specifies the 2 digit second of the minute.

duration duration Specifies the duration in seconds.
interval duration: #d#h#m#s Specifies the interval between statistics collection.
since-start| Specifies if the statistics are collected from the start of collecting
no-since-start statistics.
older-than duration: #d#h#m#s Specifies if the statistics are older than the duration in days, hours,
minutes, and seconds.
within-last duration: \#d\#h\#m\#s  
Specifies if the statistics are within the duration in days, hours, minutes, and seconds.

port port-list  
Specifies one or more switch network data port numbers. The port number must be in the range of 1 to 64. Multiple ports can be specified as a comma-separated list of numbers or a range (-).

counter counter-number  
Specifies the counter number.

ibytes ibytes-number  
Specifies the incoming number of bytes.

iUpkts iUpkts-number  
Specifies the number of incoming unicast packets.

iBpkts iBpkts-number  
Specifies the number of incoming broadcast packets.

IMpkts IMpkts-number  
Specifies the number of incoming multicast packets.

iPauseFs iPauseFs-number  
Specifies the number of incoming pause frames.

iCongDrops iCongDrops-number  
Specifies the number of incoming packets dropped due to congestion.

idiscards idiscards-number  
Specifies the number of incoming packets discarded.

ierrs ierrs-number  
Specifies the number of incoming errors.

obytes obytes-number  
Specifies the number of outgoing bytes.

oUpkts oUpkts-number  
Specifies the number of outgoing unicast packets.

oBpkts oBpkts-number  
Specifies the number of outgoing broadcast packets.

OMpkts OMpkts-number  
Specifies the number of outgoing multicast packets.

oPauseFs oPauseFs-number  
Specifies the number of outgoing pause frames.

oCongDrops oCongDrops-number  
Specifies the number of outgoing packets dropped due to congestion.

odiscards odiscards-number  
Specifies the number of outgoing discarded packets.

oerrs oerrs-number  
Specifies the number of outgoing errors.

Formatting Options

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<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval seconds-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
</tbody>
</table>
Defaults: None.

Access: CLI

Usage: Switches are equipped with network data ports for host or inter-switch communication. This command shows the status of a specific network data port or all network data ports on the local switch.

Examples: To display the packet count statistics for network data ports on the switch, use the following command:

```bash
CLI (network-admin@pleiades25) > port-stats-show format all layout vertical
```

<table>
<thead>
<tr>
<th></th>
<th>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</th>
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See Also

- port-show
- port-config-modify
- port-config-show
- port-phy-show
- port-stats-clear
- port-vlan-add
- port-vlan-remove
- port-vlan-show
**port-stats-settings-modify**

This command is used to modify collecting statistics from a port.

**Syntax**
```
port-stats-settings-modify enable|disable interval duration: #d#h#m#s disk-space disk-space-number
```

Specify one or more of the following options:
- **enable|disable**  Specify if you want to enable or disable statistics collection.
- **duration:** Specify the duration of the interval between collecting statistics.
- **#d#h#m#s**
- **disk-space** Specify the amount of disk space to store the port statistics.
- **disk-space-number**

**Defaults** None

**Access** CLI

**Usage** Use this command to clear statistics from a list of ports

**Examples** To clear statistics from ports 43-47, use the following command:

```
CLI network-admin@switch > port-stats-settings-modify port 43-47
```

**See Also**
- `port-show`
- `port-config-modify`
- `port-config-show`
- `port-phy-show`
- `port-vlan-add`
- `port-vlan-remove`
- `port-vlan-show`
port-stats-settings-show
This command is used to display the settings for collecting statistics on a port.

Syntax   port-stats-settings-show

Formatting Options

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</tr>
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</table>

Defaults   None
Access   CLI
Usage   Use this command to display the settings for collecting statistics from ports
Examples   To display settings for port statistics collection, use the following command:

CLI (network-admin@pleiades25) > port-stats-settings-show

switch: pleiades25
enable: yes
interval: 1m
disk-space: 8G

See Also

- port-show
- port-config-modify
- port-config-show
- port-phy-show
• port-vlan-add
• port-vlan-remove
• port-vlan-show
**port-storm-control-modify**

This command is used to modify the storm control configuration on a port.

Storm control prevents traffic on a LAN from being disrupted by a broadcast, multicast, or unicast storm on a port. A LAN storm occurs when packets flood the LAN, creating excessive traffic and degrading network performance.

Syntax
```
port-storm-control-modify port port-list
unknown-ucast-level unknown-ucast-level-string
unknown-mcast-level unknown-mcast-level-string broadcast-level
broadcast-level-string
```

**port** _port-list_ Specify the port list that you want to apply storm control.

Specify between one and three of the following options:

- **unknown-ucast-level**
  - **unknown-ucast-level-string** Specify the percentage of total available bandwidth that can be used by unicast traffic. The default value is 10%.

- **unknown-mcast-level**
  - **unknown-mcast-level-string** Specify the percentage of total available bandwidth that can be used by multicast traffic. The default value is 10%.

- **broadcast-level**
  - **broadcast-level-string** Specify the percentage of total available bandwidth that can be used by broadcast traffic. The default value is 10%.

**Defaults** None

**Access** CLI

**Usage** The thresholds can either be expressed as a percentage of the total available bandwidth that can be used by the broadcast, multicast, or unicast traffic.

**Examples**
```
CLI network-admin@switch > port-storm-control-modify port 11
unknown-ucast-level 1.1
```

<table>
<thead>
<tr>
<th>Switch</th>
<th>Intf</th>
<th>Speed</th>
<th>Unknown-ucast-level</th>
<th>Unknown-Mcast-level</th>
<th>Broadcast-level</th>
</tr>
</thead>
<tbody>
<tr>
<td>pl-12</td>
<td>11</td>
<td>10g</td>
<td>1.1%</td>
<td>2.2%</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

See Also

- *port-storm-control-modify*
**port-storm-control-show**

This command is used to display information about storm control on a port.

Storm control prevents traffic on a LAN from being disrupted by a broadcast, multicast, or unicast storm on a port. A LAN storm occurs when packets flood the LAN, creating excessive traffic and degrading network performance.

**Syntax**

```
port-storm-control-show port port-list
```

**port port-list** Specify a port or a list of ports.

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</table>

**Defaults** None

**Access** CLI

**Usage** Use this command to display information about ports configured for storm control.

**Examples** To display information about storm control, use the following syntax:

```
CLI network-admin@switch > port-storm-control-show port 11
```

<table>
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<tr>
<th>switch</th>
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See Also

• `port-storm-control-modify`
**port-vlan-add**

This command is used to add a VLAN to a specific port.

```
Syntax  port-vlan-add port port-number vlans vlans-list untagged-vlan vlan-id [ports port-list] [description description-string] [active-vlans vlan-list]
```

- **port** `port-number` Specify the port number for the VLAN.
- Specify one or both of the following options:
  - **vlans** `vlans-list` Specify the list of VLANs to apply to the port.
  - **untagged-vlan** `vlan-id` Specify an untagged VLAN to apply to the port. The value can be from 0-4095.
- Specify any of the following options:
  - **ports** `port-list` Specify the list of ports.
  - **description** `description-string` Specify a description for the configuration.
  - **active-vlans** `vlan-list` Specify a list of active VLANs.

**Defaults** None.

**Access** CLI

**Usage** Use this command to add a VLAN to a specific port.

**Examples** To add an untagged VLAN with the identifier 25 to port 11, use the following command:

```
CLI network-admin@switch > port-vlan-add port 11 untagged-vlan 25
```

**See Also**
- `port-show`
- `port-config-modify`
- `port-config-show`
- `port-phy-show`
- `port-stats-clear`
- `port-stats-show`
- `port-vlan-show`
- `port-vlan-remove`
**port-vlan-remove**

This command displays information about VLANs assigned to ports on the switch.

**Syntax**

```plaintext
port-vlan-remove port port-number vlans vlan-list
```

- **port**
  - Specify the port that you want to remove from the configuration.
- **port-number**
  - Specify the VLAN list to remove from the port.
- **vlans**
  - Specify the VLAN list to remove from the port.

**Defaults**  None.

**Access**  CLI

**Usage**  Used to remove existing ports or VLANs from the configuration.

**Examples**  To remove VLAN list, `vlan-remote`, from port 25, use the following command:

```plaintext
CLI network-admin@switch > port-vlan-remove port 25 vlans vlan-remote
```

**See Also**
- `port-show`
- `port-config-modify`
- `port-config-show`
- `port phy-show`
- `port stats-clear`
- `port stats-show`
- `port-vlan-add`
- `port-vlan-show`
**port-vlan-show**

This command is used to display information about VLANs assigned to ports.

```
Syntax  port-vlan-show port port-number vlans vlans-list
untagged-vlan vlan-id [ports port-list] [description
description-string] [active-vlans vlan-list]
```

- `port port-number` Specifies the port number for the VLAN.
- `vlans vlans-list` Specifies the list of VLANs to apply to the port.
- `untagged-vlan vlan-id` Specifies an untagged VLAN to apply to the port.
- `ports port-list` Specifies the list of ports.
- `description description-string` Specifies a description for the configuration.
- `active-vlans vlan-list` Specifies a list of active VLANs.

**Formatting Options**

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<tr>
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</thead>
<tbody>
<tr>
<td>format fields-to-display</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show-dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout vertical</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults** None.

**Access** CLI

**Usage** Use this command to display information about a VLAN on a specific port.
Examples To display information about an untagged VLANs, use the following command:

```
CLI network-admin@switch > port-vlan-show
```

<table>
<thead>
<tr>
<th>switch</th>
<th>port</th>
<th>vlans</th>
<th>untagged-vlan</th>
<th>description</th>
<th>active-vlans</th>
</tr>
</thead>
<tbody>
<tr>
<td>pubdev01</td>
<td>1</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>2</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>3</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>4</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>5</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>6</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>7</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>8</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>9</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>10</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>11</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>12</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>13</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>14</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>15</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>16</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>17</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>18</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>19</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>pubdev01</td>
<td>20</td>
<td>4,10,22</td>
<td>1</td>
<td>none</td>
<td>none</td>
</tr>
</tbody>
</table>

See Also

- port-show
- port-config-modify
- port-config-show
- port-stats-clear
- port-phy-show
- port-stats-show
- port-vlan-add
- port-vlan-remove
**port-xcvr-show**

This command is used to display information about a transceiver installed in a port on the switch.

**Syntax**

```
port-xcvr-show [port port-list] [vendor-name vendor-name-string] [part-number part-number-string] [serial-number serial-number-string] [supported Yes|Warning! Not supported] [temperature[C] temperature[C]-number] [vout[mV] vout[mV]-number] [tx-power[uW] tx-power[uW]-number] [rx-power[uW] rx-power[uW]-number]
```

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>port port-list</td>
<td>Displays the port list.</td>
</tr>
<tr>
<td>vendor-name vendor-name-string</td>
<td>Displays the vendor name for the transceiver.</td>
</tr>
<tr>
<td>part-number part-number-string</td>
<td>Displays the part number of the transceiver.</td>
</tr>
<tr>
<td>serial-number serial-number-string</td>
<td>Displays the serial number.</td>
</tr>
<tr>
<td>supported Yes</td>
<td>Warning! Not supported</td>
</tr>
<tr>
<td>temperature[C] temperature[C]-number</td>
<td>Displays the temperature in degrees Centigrade.</td>
</tr>
<tr>
<td>vout[mV] vout[mV]-number</td>
<td>Displays the voltage in millivolts.</td>
</tr>
<tr>
<td>tx-power[uW] tx-power[uW]-number</td>
<td>Displays the transmit power.</td>
</tr>
<tr>
<td>rx-power[uW] rx-power[uW]-number</td>
<td>Displays the receive power.</td>
</tr>
</tbody>
</table>

**Formatting Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval seconds-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Display header or not.</td>
</tr>
</tbody>
</table>

Pluribus Networks ONVL Version 2.3
Defaults  None.

Access  CLI

Usage  Used to display information about SFPs installed in ports on the switch.

Examples

CLI network-admin@switch > **port-xcvr-show**

<table>
<thead>
<tr>
<th>switch</th>
<th>port</th>
<th>vendor-name</th>
<th>part-number</th>
<th>serial-number</th>
</tr>
</thead>
<tbody>
<tr>
<td>pleiades24</td>
<td>9</td>
<td>FINISAR CORP.</td>
<td>FCLF8522P2BTL</td>
<td>PP2174W</td>
</tr>
<tr>
<td>pleiades24</td>
<td>10</td>
<td>FINISAR CORP.</td>
<td>FCLF8522P2BTL</td>
<td>PQM1LY2</td>
</tr>
<tr>
<td>pleiades24</td>
<td>11</td>
<td>Amphenol</td>
<td>571540002</td>
<td>APF113900206C9</td>
</tr>
<tr>
<td>pleiades24</td>
<td>12</td>
<td>Amphenol</td>
<td>571540002</td>
<td>APF1127002560D</td>
</tr>
</tbody>
</table>

See Also

- port-show
- port-config-modify
- port-config-show
- port-stats-clear
- port-phy-show
- port-stats-show
- port-vlan-add
- port-vlan-remove
- port-vlan-show
**ptp-modify**

This command is used to modify IEEE 1588v2 Precision Time Protocol (PTP) on a switch.

**Syntax**
```
ptp-modify [enabled|disabled] [slave-port slave-port-number] [master-ports port-list] [sync-interval seconds] [frequency-adjust-interval frequency-adjust-interval-number]
```

Specify one or more of the following options:

- `[enabled|disabled]` Specify the state of the PTP service.
- `slave-port slave-port-number` Specify the slave port number.
- `master-ports port-list` Specify the master ports list.
- `sync-interval seconds` Specify the interval in seconds. You can configure a value between 10 and 5000 seconds. The default value is 200 seconds.
- `frequency-adjust-interval frequency-adjust-interval-number` Specify the interval to adjust the frequency. The default value is 5.

**Defaults** Enabled.

**Access** CLI

**License** SDF

**Usage** PTP is a protocol used to synchronize clocks on a network. This command allows you to modify the state from enabled to disabled, and designate it as a slave, which means the switch receives its time from a master on the network.

**Examples** To set the PTP state to disabled, use the following command:

```
CLI network-admin@switch > ptp-modify state disabled
```

**See Also**
- `ptp-show`
ptp-show

This command is used to display information about IEEE 1588v2 Precision Time Protocol (PTP) on a switch.

Syntax  ptp-show

Formatting Options

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fields-to-display</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>parsable-delim</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show-dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

Defaults  None.

Access  CLI

License SDF

Usage  PTP is a protocol used to synchronize clocks on a network. This command allows you to display information about the state, and if it is designated it as a slave, which means the switch receives its time from a master on the network.

Examples  To display the PTP status, use the following command:

```
CLI network-admin@switch > ptp-show
```

```
switch:                       pubdev01
enable:                       yes
switch:                       pubdev03
enable:                       yes
switch:                       pubdev02
enable:                       yes
```
See Also

- ptp-modify
Q Commands

quit

This command allows you to leave ONVL command line interface (CLI).

Syntax  quit

Defaults  None.

Access  CLI

Usage  The quit command is equivalent to the exit command.

Examples  To leave the CLI, use the following command:

```
CLI network-admin@switch > quit
```
R Commands

role-create

This command creates roles and access controls for a switch.

Syntax

role-create name name-string scope [local|fabric] access read-only|read-write running-config|no-running-config

name name-string

Specify a name for the role.

scope [local|fabric]

Specify a scope for the role, either local or fabric.

Specify any of the following options:

access

Specify the access type for the role. The default role is read-write.

read-only|read-write

running-config|no-running-config

Specify if a user with this role can use the running-config-show command. You may want to limit which users can use running-config-show because the command can expose sensitive password information.

Defaults

None.

Access

CLI

Usage

In a multi-tenant environment, a switch or fabric can be divided into smaller logical segments known as virtual networks (VNETs) using role-based access control (RBAC). This command allows you to create roles and access controls for the local switch or fabric.

Examples

To create the role, network-admin with access to the fabric and running configuration, use the following command:

CLI  network-admin@switch > role-create name network-admin scope fabric access read-write running-config

See Also

• role-delete
• role-show
role-delete

This command is used to delete an existing role from the configuration.

Syntax  role-delete name name-string

name name-string  Specify the name of the role to delete from the configuration.

Defaults  None.

Access  CLI

Usage  You can remove previously created roles from the switch configuration.

Examples  To delete the role, network-admin, use the following command:

CLI network-admin@switch > role-delete name network-admin

See Also

• role-create
• role-show
role-modify

This command modifies roles and access controls for a switch.

Syntax  role-modify name name-string access read-only|read-write
        running-config|no-running-config delete-from-users

name name-string  Specify the name of the role to modify.
Specify one or more of the following options:

access  read-only|read-write
        Specify read-only or read-write access.
running-config|no-running-config  Specify if a user with this the role can use the
        running-config-show command.
delete-from-users  Specify if you want to remove the role from the list of users.

Defaults  None.
Access   CLI

Usage   In a multi-tenant environment, a switch or fabric can be divided into smaller logical
segments known as virtual networks (VNETs) using role-based access control (RBAC). This
command allows you to modify roles and access controls for the local switch or fabric.

Examples  To modify a role, from read-write to read-only, use the following command:

CLI network-admin@switch > role-modify local-admin access read-only

See Also
- role-delete
- role-show
role-show

This command is used to display roles in the switch configuration.

Syntax  role-show [id role-id] [name name-string] [scope local|fabric] [vnet-access vnet-name|all] access read-only|read-write running-config|no-running-config [delete-from-users yes|no]

| id role-id                | Displays the role identifier automatically assigned by ONVL. |
| name name-string          | Displays the name of the role.                               |
| scope local|fabric           | Displays the scope of the each role.                         |
| vnet-access vnet-name|all             | Displays the access level for each role.                      |
| access read-only|read-write       | Displays read-only or read-write access.                      |
| running-config|no-running-config| Displays running configuration or no running configuration.   |
| delete-from-users         | Displays if you want to remove the role from the list of users.|

Formatting Options

| format fields-to-display | Display output using a specific parameter. Use all to display all possible output. |
| parsable-delim character | Display output formatted for machine parsing using a specified delimiter.          |
| sort-asc                 | Display output in ascending order.                                                |
| sort-desc                | Display output in descending order.                                               |
| show dups                | Display duplicate entries in the output.                                          |
| layout vertical|horizontal | Format the output in a vertical or horizontal layout.                             |
| show-interval seconds-interval | Repeat the show command at a specified interval.                               |
| show-diff-interval       | Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats. |
| show-headers no-show-headers | Display column headers or not.                                                    |
| limit-output number      | Limit the display output to a specific number of entries.                         |
| count-output             | Display the number of entries in the output. This is useful with vRouter show commands. |
| unscaled                 | Display full values in the output instead of scaled approximate values.           |
| sum-by                   | Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record. |
Defaults None.
Access CLI
Usage You can view all configured roles in the switch configuration.
Examples To display all roles, use the following command:

```
CLI network-admin@switch > role-show format all layout
```

<table>
<thead>
<tr>
<th>id:</th>
<th>6000021:402</th>
</tr>
</thead>
<tbody>
<tr>
<td>name:</td>
<td>vlb-web-svr-admin</td>
</tr>
<tr>
<td>scope:</td>
<td>fabric</td>
</tr>
<tr>
<td>vnet-access:</td>
<td>vlb-web-svr</td>
</tr>
<tr>
<td>access:</td>
<td>read-write</td>
</tr>
<tr>
<td>running-config:</td>
<td>deny</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>id:</th>
<th>6000021:405</th>
</tr>
</thead>
<tbody>
<tr>
<td>name:</td>
<td>test-admin</td>
</tr>
<tr>
<td>scope:</td>
<td>fabric</td>
</tr>
<tr>
<td>vnet-access:</td>
<td>test</td>
</tr>
<tr>
<td>access:</td>
<td>read-write</td>
</tr>
<tr>
<td>running-config:</td>
<td>deny</td>
</tr>
</tbody>
</table>

See Also
- role-create
- role-delete
running-config-show

This command displays information about the current configuration on the switch.

Syntax  running-config-show

Formatting Options

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sortable</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show-dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>horizontal</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

Defaults  None
Access  CLI
Usage  Displays information about the current configuration on the switch.
Examples  To display the configuration, use the following command:

```
CLI network-admin@switch > running-config-show
```

The output is lengthy and includes port information, IP addresses, VNETs, etc.
S Commands

**service-stats-show**

This command is used to display service statistics for a switch.

**Syntax**

```
service-stats-show [service ftp-data|ftp-control|ssh|telnet|
http|https|rpc|sql|imap|ldap|
isCSI|oracle-db|nfs|cifs|iSCSI-target|lockd|openstack-nova|
openstack-keystone|openstack-metering|openstack-neutron|
```

**port service-port**

Specifies the port number for the service.
<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>Specifies the name of the service associated with the well-known UDP or TCP port number. HDFS entries indicate Hadoop services.</td>
</tr>
<tr>
<td>bytes byte-number</td>
<td>Specifies the number of bytes transferred for the UDP or TCP service.</td>
</tr>
</tbody>
</table>

**Formatting Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
</tbody>
</table>
sort-desc | Display output in descending order.
show-dups | Display duplicate entries in the output.
layout | Format the output in a vertical or horizontal layout.
vertical | horizontal
show-interval | Repeat the show command at a specified interval.
seconds-interval
show-diff-interval | Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.
show-headers | Display column headers or not.
o-show-headers
limit-output | Limit the display output to a specific number of entries.
number
count-output | Display the number of entries in the output. This is useful with vRouter show commands.
unscaled | Display full values in the output instead of scaled approximate values.
sum-by | Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.

Defaults | None.
Access | CLI
Usage | Unless otherwise specified, aggregate statistics are displayed for all UDP and TCP services on the switch. Each switch maintains a set of standard flow-based statistics that are continuously tracked and updated by the switch. Use this command to display traffic statistics for all UDP and TCP services on the switch.
Examples | To display service statistics, use the following command:

```
CLI network-admin@switch > service-stats-show
```

<table>
<thead>
<tr>
<th>port</th>
<th>name</th>
<th>bytes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>other</td>
<td>90983</td>
</tr>
<tr>
<td>22</td>
<td>ssh</td>
<td>9709</td>
</tr>
<tr>
<td>80</td>
<td>http</td>
<td>7326910</td>
</tr>
<tr>
<td>443</td>
<td>https</td>
<td>1755667</td>
</tr>
<tr>
<td>2049</td>
<td>nfs</td>
<td>5540</td>
</tr>
</tbody>
</table>

See Also

* system-stats-show*
sflow-create
This command is used to create an sFlow agent on the network. You can configure an sFlow agent with a scope of local or fabric.

Syntax  
```
sflow-create scope [local|fabric] name name-string [type ingress|egress] [sample-type raw|cooked] ports port-list [sample-rate sample-rate-number] [sample-interval sample-interval-number] [trunc-length trunc-length-number] [vlan vlan-id] agent-id ip-address
```

- **name name-string** Specify a name for the sFlow collector.
- **type ingress|egress** Specify the type of packet for the sFlow agent. Specify ingress to capture incoming packets and egress for outgoing packets.
- **sample-type raw|cooked** Specify the sample type for the sFlow agent. Raw indicates that the packet retains the link level header and cooked indicates that link level header is removed.
- **ports port-list** Specify the list of ports to capture packets.
- **sample-rate sample-rate-number** Specify the rate of packet sampling by the sFlow agent.
- **sample-interval sample-interval-number** Specify the interval between packet captures.
- **trunc-length trunc-length-number** Specify the truncated length of the captured packet.
- **vlan vlan-id** Specify the VLAN that applies to the sFlow agent. The value can be from 0 to 4095.
- **agent-id ip-address** Specify the IP address of the sFlow agent.

**Defaults** None.

**Access** CLI

**Usage** sFlow agents capture packets on the network and send them to the sFlow collector for analysis. Use this command to configure an sFlow agent.

**Examples** To configure an sFlow agent, SF-agent1, with the scope fabric, sample type raw on ports 21-25, use the following command:

```
CLI network-admin@switch > sflow-create scope fabric name SF-agent1 sample-type raw ports 21-25
```

**See Also**
- sflow-delete
- sflow-show
- sflow-collector-create
- sflow-collector-delete
- sflow-collector-show
- sflow-port-add
- sflow-port-remove
• sflow-port-show (deprecated)
sflow-delete

This command is used to delete an sFlow agent from the network configuration.

Syntax  sflow-delete name name-string

name name-string Specify the name of the sFlow agent to delete.

Defaults None.
Access CLI
Usage Use this command to delete an sFlow agent.
Examples To delete the sFlow agent, SF-agent1, use the following command:

CLI network-admin@switch > sflow-delete name SF-agent1

See Also
• sflow-create
• sflow-show
• sflow-collector-create
• sflow-collector-delete
• sflow-collector-show
• sflow-port-add
• sflow-port-remove
• sflow-port-show (deprecated)
sflow-show

This command is used to display information about a sFlow agent on the network.

Syntax

sflow-show name name-string [type ingress|egress] [sample-type raw|cooked] ports port-list [sample-rate sample-rate-number] [sample-interval sample-interval-number] [trunc-length trunc-length-number] [vlan vlan-id] agent-id ip-address sample-pkt-cnt sample-pkt-cnt-number sample-drops sample-drops-number

name name-string

Specifies a name for the sFlow collector.

type ingress|egress

Specifies the type of packet for the sFlow agent. Specify ingress to capture incoming packets and egress for outgoing packets.

sample-type raw|cooked

Specifies the sample type for the sFlow agent. Raw indicates that the packet retains the link level header and cooked indicates that link level header is removed.

ports port-list

Specifies the list of ports to capture packets.

sample-rate

Specifies the rate of packet sampling by the sFlow agent.

sample-rate-number

sample-interval

Specifies the interval between packet captures.

sample-interval-number

trunc-length

Specifies the truncated length of the captured packet.

trunc-length-number

vlan vlan-id

Specifies the VLAN that applies to the sFlow agent.

agent-id ip-address

Specifies the IP address of the sFlow agent.

sample-pkt-cnt

Specifies the number of sample packets.

sample-pkt-cnt-number

sample-drops

Specifies the number of sample packets dropped.

sample-drops-number

Formatting Options

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval seconds-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>limit-output</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults**  None.
**Access** CLI
**Usage** sFlow agents capture packets on the network and send them to the sFlow collector for analysis. Use this command to display information about an sFlow agent.
**Examples** To display the sFlow agent, SF-agent1, and display in a vertical format, use the following command:

```
CLI network-admin@switch > sflow-show name SF-agent1 layout vertical
```

**See Also**
- sflow-create
- sflow-delete
- sflow-collector-create
- sflow-collector-delete
- sflow-collector-show
- sflow-port-add
- sflow-port-remove
- sflow-port-show (deprecated)
sflow-collector-create

sFlow is an industry standard technology that monitors high speed switched networks. An sFlow collector gathers information from sFlow agents on the network. An sFlow collector can have a scope of local or fabric.

Syntax

```
sflow-collector-create collector-ip ip-address
    collector-port collector-port-number name name-string scope
    [local|fabric]
```

- **collector-ip ip-address** Specify the IP address of the sFlow collector.
- **collector-port** Specify the port number for the sFlow collector.
- **collector-port-number**
- **name name-string** Specify a name for the sFlow collector.
- **scope [local|fabric]** Specify a scope, either fabric or local.

Defaults None.

Access CLI

Usage This command is used to create an sFlow collector to gather information from the sFlow agents on the network.

Examples To create the sFlow collector, sFlow-local, with the IP address of 192.168.18.37 on port 44, and the scope local, use the following syntax:

```
CLI network-admin@switch > sflow-collector-create collector-ip 192.168.18.37 collector-port 37 name sflow-local scope local
```

See Also

- sflow-create
- sflow-delete
- sflow-show
- sflow-collector-delete
- sflow-collector-show
- sflow-port-add
- sflow-port-remove
- sflow-port-show (deprecated)
sflow-collector-delete

This command is used to delete an sFlow collector from your sFlow configuration.

Syntax sflow-collector-delete name name-string

name name-string Specify the name of the sFlow collector.

Defaults None.
Access CLI
Usage Use this command to delete an sFlow collector.
Examples To delete the sflow collector, sflow-local, use the following command:

CLI network-admin@switch > sflow-collector-delete name sflow-local

See Also
• sflow-create
• sflow-delete
• sflow-show
• sflow-collector-create
• sflow-collector-show
• sflow-port-add
• sflow-port-remove
• sflow-port-show (deprecated)
**sflow-collector-show**

This command is used to display the sFlow collector configuration.

**Syntax**
```
sflow-collector-show collector-ip ip-address
    collector-port collector-port-number name name-string scope
    [local|fabric]
```

- **collector-ip ip-address**: Specifies the IP address of the sFlow collector.
- **collector-port**: Specifies the port number of the sFlow collector.
- **collector-port-number**: Specifies the port number of the sFlow collector.
- **name name-string**: Specifies the name of the sFlow collector.
- **scope [local|fabric]**: Specifies the scope, either fabric or local.

**Formatting Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sortable</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sortable-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show-dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td></td>
</tr>
<tr>
<td>horizontal</td>
<td></td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td></td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td></td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults** None.

**Access** CLI

**Usage** Use this command to display information about the sFlow collector.
Examples  To display information about sFlow collector, use the following command:

```
CLI  network-admin@switch > sflow-collector-show layout vertical
```

See Also

• sflow-create
• sflow-delete
• sflow-show
• sflow-collector-create
• sflow-collector-delete
• sflow-port-add
• sflow-port-remove
• sflow-port-show (deprecated)
sflow-port-add

This command adds a port to the sflow-agent.

Syntax
sflow-port-show sflow-name name-string [switch switch-name] [ports port-list]

sflow-name name-string Specify the name of the sFlow to add the port.
Specify the following port arguments:
switch switch-name Specify the name of the switch with the port.
ports port-list Specify the list of ports to add to the sFlow agent.

Defaults None.
Access CLI
Usage Use this command to add specific ports on a switch to the sFlow agent.
Examples To add ports 31-33 on switch antares24, to sFlow agent SF-agent1, use the following command:

CLI network-admin@switch > sflow-port-add sflow-name SF-agent1 switch antares24 ports 31-33

See Also
• sflow-create
• sflow-delete
• sflow-show
• sflow-collector-create
• sflow-collector-delete
• sflow-collector-show
• sflow-port-remove
• sflow-port-show (deprecated)
**sflow-port-remove**

This command removes a port from the sFlow-agent.

Syntax

```
sflow-port-remove sflow-name name-string [switch switch-name] [ports port-list]
```

- `sflow-name name-string`: Specify the name of the sFlow to add the port.
- `switch switch-name`: Specify the name of the switch with the port.
- `ports port-list`: Specify the list of ports to add to the sFlow agent.

**Defaults** None.

**Access** CLI

**Usage** Use this command to remove specific ports on a switch to the sFlow agent.

**Examples** To remove ports 31-33 on switch antares24, from sFlow agent SF-agent1, use the following command:

```
CLI network-admin@switch > sflow-port-remove sflow-name SF-agent1 switch antares24 ports 31-33
```

**See Also**
- `sflow-create`
- `sflow-delete`
- `sflow-show`
- `sflow-collector-create`
- `sflow-collector-delete`
- `sflow-collector-show`
- `sflow-port-add`
- `sflow-port-show (deprecated)`
**snmp-community-create**

This command is used to create SNMP communities to support SNMPv1.

**Syntax**

```plaintext
snmp-community-create [community-string community-string-string] [community-type read-only|read-write]
```

- **community-string**
  Specify the name for the community string.

- **community-string-string**

- **community-type**
  Specify the access type for the community.

- **read-only|read-write**

**Defaults**

None

**Access**

CLI

**Usage**

Communities are used in SNMPv1 as a method of controlling access to information. Use this command to create a community for SNMPv1.

**Examples**

To create a community, `snmp-reader`, for read-only access, use the following command:

```
CLI network-admin@switch > snmp-community-create community-string snmp-reader community-type read-only
```

**See Also**

- `snmp-community-delete`
- `snmp-community-modify`
- `snmp-community-show`
- `snmp-engineid-show`
- `snmp-monitor-create (deprecated)`
- `snmp-monitor-delete (deprecated)`
- `snmp-monitor-show (deprecated)`
- `snmp-show`
- `snmp-trap-enable-show`
- `snmp-trap-enable-modify`
- `snmp-trap-sink-create`
- `snmp-trap-sink-delete`
- `snmp-trap-sink-modify`
- `snmp-trap-sink-show`
- `snmp-user-create`
- `snmp-user-delete`
- `snmp-user-modify`
- `snmp-user-show`
- `snmp-v3-trap-sink-create`
- `snmp-v3-trap-sink-delete`
- `snmp-v3-trap-sink-modify`
- `snmp-v3-trap-sink-show`
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
**snmp-community-delete**

This command is used to delete an SNMP community that supports SNMPv1.

**Syntax**
```
snmp-community-delete [community-string]
```

**community-string** Specify the name for the community string to delete.

**Defaults** None

**Access** CLI

**Usage** Communities are used in SNMPv1 as a method of controlling access to information. Use this command to delete a community for SNMPv1.

**Examples** To delete a community, **snmp-reader**, use the following command:

```
CLI network-admin@switch > snmp-community-delete community-string
```

**See Also**
- **snmp-community-create**
- **snmp-community-modify**
- **snmp-community-show**
- **snmp-engineid-show**
- **snmp-monitor-create (deprecated)**
- **snmp-monitor-delete (deprecated)**
- **snmp-monitor-show (deprecated)**
- **snmp-show**
- **snmp-trap-enable-show**
- **snmp-trap-enable-modify**
- **snmp-trap-sink-create**
- **snmp-trap-sink-delete**
- **snmp-trap-sink-modify**
- **snmp-trap-sink-show**
- **snmp-user-create**
- **snmp-user-delete**
- **snmp-user-modify**
- **snmp-user-show**
- **snmp-v3-trap-sink-create**
- **snmp-v3-trap-sink-delete**
- **snmp-v3-trap-sink-modify**
- **snmp-v3-trap-sink-show**
- **snmp-vacm-create**
- **snmp-vacm-delete**
• `snmp-vacm-modify`
**snmp-community-modify**

This command is used to modify an SNMP community to support SNMPv1.

**Syntax**  
```
snmp-community-modify [community-string community-string-string] [community-type read-only|read-write]
```

- **community-string**  
  Specify the name for the community string.

- **community-string-string**

- **community-type**  
  Specify the access type for the community.

- **read-only|read-write**

**Defaults**  
None

**Access**  
CLI

**Usage**  
Communities are used in SNMPv1 as a method of controlling access to information. Use this command to modify a community for SNMPv1.

**Examples**  
To modify a community, `snmp-reader`, for `read-write` access, use the following command:

```
CLI network-admin@switch > snmp-community-modify community-string snmp-reader community-type read-write
```

**See Also**
- `snmp-community-create`
- `snmp-community-delete`
- `snmp-community-show`
- `snmp-engineid-show`
- `snmp-monitor-create (deprecated)`
- `snmp-monitor-delete (deprecated)`
- `snmp-monitor-show (deprecated)`
- `snmp-show`
- `snmp-trap-enable-show`
- `snmp-trap-enable-modify`
- `snmp-trap-sink-create`
- `snmp-trap-sink-delete`
- `snmp-trap-sink-modify`
- `snmp-trap-sink-show`
- `snmp-user-create`
- `snmp-user-delete`
- `snmp-user-modify`
- `snmp-user-show`
- `snmp-v3-trap-sink-create`
- `snmp-v3-trap-sink-delete`
- `snmp-v3-trap-sink-modify`
- `snmp-v3-trap-sink-show`
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
snmp-community-show

This command is used to display SNMP communities that support SNMPv1.

Syntax

```
snmp-community-show [community-string [community-string-string]] [community-type read-only|read-write]
```

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>community-string</td>
<td>Specify the name for the community string.</td>
</tr>
<tr>
<td>community-string-string</td>
<td>Specify the name for the community string.</td>
</tr>
<tr>
<td>community-type</td>
<td>Specify the access type for the community.</td>
</tr>
<tr>
<td>read-only</td>
<td>read-write</td>
</tr>
</tbody>
</table>

Formatting Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>parsable-delim</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>character</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show-dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>horizontal</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>no-show-headers</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

Defaults

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

Access

<table>
<thead>
<tr>
<th>Access</th>
<th>CLI</th>
</tr>
</thead>
</table>

Usage

Communities are used in SNMPv1 as a method of controlling access to information. Use this command to display communities for SNMPv1.
Examples To display SNMPv1 communities, use the following command:

```
CLI network-admin@switch > snmp-community-show
```

<table>
<thead>
<tr>
<th>switch</th>
<th>community-string</th>
<th>community-type</th>
</tr>
</thead>
<tbody>
<tr>
<td>pleiades1 public</td>
<td>read-write</td>
<td></td>
</tr>
<tr>
<td>pleiades2 public</td>
<td>read-write</td>
<td></td>
</tr>
<tr>
<td>pleiades3 public</td>
<td>read-write</td>
<td></td>
</tr>
</tbody>
</table>

See Also

- `snmp-community-create`
- `snmp-community-delete`
- `snmp-community-modify`
- `snmp-engineid-show`
- `snmp-monitor-create (deprecated)`
- `snmp-monitor-delete (deprecated)`
- `snmp-monitor-show (deprecated)`
- `snmp-show`
- `snmp-trap-enable-show`
- `snmp-trap-enable-modify`
- `snmp-trap-sink-create`
- `snmp-trap-sink-delete`
- `snmp-trap-sink-modify`
- `snmp-trap-sink-show`
- `snmp-user-create`
- `snmp-user-delete`
- `snmp-user-modify`
- `snmp-user-show`
- `snmp-v3-trap-sink-create`
- `snmp-v3-trap-sink-delete`
- `snmp-v3-trap-sink-modify`
- `snmp-v3-trap-sink-show`
- `snmp-vacm-create`
- `snmp-vacm-delete`
- `snmp-vacm-modify`
### snmp-engineid-show

The SNMP engine ID is a unique string of 24 characters that identifies the device for administrative purposes. This command displays the identification of the local SNMP engine and all remote engines configured on the switch.

**Syntax**

```plaintext
snmp-engineid-show
```

**Formatting Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>format</code></td>
<td>Display output using a specific parameter. Use <code>all</code> to display all possible output.</td>
</tr>
<tr>
<td><code>fields-to-display</code></td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td><code>parsable-delim</code></td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td><code>sort-asc</code></td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td><code>sort-desc</code></td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td><code>show-dups</code></td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td><code>layout</code></td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td><code>vertical</code></td>
<td>Format the output in a vertical layout.</td>
</tr>
<tr>
<td><code>horizontal</code></td>
<td>Format the output in a horizontal layout.</td>
</tr>
<tr>
<td><code>show-interval</code></td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td><code>seconds-interval</code></td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td><code>show-diff-interval</code></td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td><code>show-headers</code></td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td><code>no-show-headers</code></td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td><code>limit-output</code></td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td><code>number</code></td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td><code>count-output</code></td>
<td>Display the number of entries in the output.</td>
</tr>
<tr>
<td><code>vRouter show</code></td>
<td>Display the number of entries in the output.</td>
</tr>
<tr>
<td><code>unscaled</code></td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td><code>sum-by</code></td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults** None

**Access** CLI

**Usage** Use this command to display the engine identification for the switch.

**Examples** To display the engine identification, use the following command:

```plaintext
CLI network-admin@switch > snmp-engineid-show
```

```
switch: pleiades24
engineid: 0x80001f8880f2af3c6a2528fc51
switch: pleiades26
engineid: 0x80001f8880f2af3c6a2528fc51
switch: pleiades28
engineid: 0x80001f8880f2af3c6a2528fc51
```

**See Also**
- snmp-community-create
- snmp-community-delete
- snmp-community-modify
- snmp-community-show
- snmp-monitor-create (deprecated)
- snmp-monitor-delete (deprecated)
- snmp-monitor-show (deprecated)
- snmp-show
- snmp-trap-enable-show
- snmp-trap-enable-modify
- snmp-trap-sink-create
- snmp-trap-sink-delete
- snmp-trap-sink-modify
- snmp-trap-sink-show
- snmp-user-create
- snmp-user-delete
- snmp-user-modify
- snmp-user-show
- snmp-v3-trap-sink-create
- snmp-v3-trap-sink-delete
- snmp-v3-trap-sink-modify
- snmp-v3-trap-sink-show
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
**snmp-show**

This command is used to display information about SNMP MIBs on the network.

Syntax
```
snmp-show community-string community-string-string-show
name snmp-oid name show-type walk|get|get-next
```

- **community-string**
  - Specify the community string for SNMP.

- **community-string-string**
  - Specify the Object Identifier (OID) to display.

- **-show**
  - Specify the display method for the SNMP MIBs. Use get to retrieve and display the next SNMP object values. Use get-next to retrieve and display the SNMP object values associated with the requested object identifier.

**Formatting Options**

- **format**
  - Display output using a specific parameter. Use all to display all possible output.

- **fields-to-display**
  - Display output formatted for machine parsing using a specified delimiter.

- **parsable-delim character**
  - Display output in ascending order.

- **sort-asc**
  - Display output in descending order.

- **sort-desc**
  - Display duplicate entries in the output.

- **show dups**
  - Format the output in a vertical or horizontal layout.

- **layout vertical|horizontal**
  - Repeat the show command at a specified interval.

- **show-interval seconds-interval**
  - Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.

- **show-diff-interval**
  - Display column headers or not.

- **show-headers|no-show-headers**
  - Limit the display output to a specific number of entries.

- **limit-output number**
  - Display the number of entries in the output. This is useful with vRouter show commands.

- **count-output**
  - Display full values in the output instead of scaled approximate values.

- **unscaled**
  - Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.

**Defaults**
- None.

**Access**
- CLI

**Usage**
- Use this command to display local SNMP MIB object values.
Examples  To display the community, snmp-com, use the following command:

CLI  network-admin@switch > show-snmp community-string snmp-com layout vertical

See Also
- snmp-community-create
- snmp-community-delete
- snmp-community-modify
- snmp-community-show
- snmp-engineid-show
- snmp-monitor-create (deprecated)
- snmp-monitor-delete (deprecated)
- snmp-monitor-show (deprecated)
- snmp-trap-enable-show
- snmp-trap-enable-modify
- snmp-trap-sink-create
- snmp-trap-sink-delete
- snmp-trap-sink-modify
- snmp-trap-sink-show
- snmp-user-create
- snmp-user-delete
- snmp-user-modify
- snmp-user-show
- snmp-v3-trap-sink-create
- snmp-v3-trap-sink-delete
- snmp-v3-trap-sink-modify
- snmp-v3-trap-sink-show
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
**snmp-trap-enable-modify**

This command is used to enable notifications about link conditions and common system errors.

Syntax

```
snmp-trap-enable-modify link-up-down|no-link-up-down
default-monitors|no-default-monitors
```

Specify one or more of the following options:

- `link-up-down|no-link-up-down` Specify if the traps use the link status for notification.
- `default-monitors|no-default-monitors` Specify the monitor to apply to the trap.

Defaults  None
Access  CLI
Usage  Use this command to use link status for notifications.
Examples  To use link status as the notification, use the following command:

```
CLI network-admin@switch > snmp-trap-enable-modify link-up-down
```

See Also

- `snmp-community-create`
- `snmp-community-delete`
- `snmp-community-modify`
- `snmp-community-show`
- `snmp-engineid-show`
- `snmp-monitor-create (deprecated)`
- `snmp-monitor-delete (deprecated)`
- `snmp-monitor-show (deprecated)`
- `snmp-show`
- `snmp-trap-enable-show`
- `snmp-trap-sink-create`
- `snmp-trap-sink-delete`
- `snmp-trap-sink-modify`
- `snmp-trap-sink-show`
- `snmp-user-create`
- `snmp-user-delete`
- `snmp-user-modify`
- `snmp-user-show`
- `snmp-v3-trap-sink-create`
- `snmp-v3-trap-sink-delete`
- `snmp-v3-trap-sink-modify`
- `snmp-v3-trap-sink-show`
- `snmp-vacm-create`
- `snmp-vacm-delete`
- `snmp-vacm-modify`
snmp-trap-enable-show

This command is used to display information about SNMP traps.

Syntax  snmp-trap-enable-show

Formatting Options

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td>vertical</td>
</tr>
<tr>
<td>horizontal</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
</tbody>
</table>

| show-diff-interval | Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats. |

| show-headers | Display column headers or not.                                              |
| no-show-headers | Display column headers or not.                                             |

| limit-output number | Limit the display output to a specific number of entries.                  |
| count-output | Display the number of entries in the output. This is useful with vRouter show commands. |

| unscaled | Display full values in the output instead of scaled approximate values. |
| sum-by | Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record. |

Defaults  None
Access  CLI
Usage  Use this command to display information about SNMP traps.
Examples  To display SNMP trap information, use the following command:

```bash
CLI network-admin@switch > snmp-trap-enable-show
```

```plaintext
switch:       pleiades24
link-up-down: no
default-monitors: no

switch:       pleiades26
link-up-down: no
default-monitors: no

switch:       pleiades29
link-up-down: no
default-monitors: no
```
See Also

- snmp-community-create
- snmp-community-delete
- snmp-community-modify
- snmp-community-show
- snmp-engineid-show
- snmp-monitor-create (deprecated)
- snmp-monitor-delete (deprecated)
- snmp-monitor-show (deprecated)
- snmp-show
- snmp-trap-enable-modify
- snmp-trap-sink-create
- snmp-trap-sink-delete
- snmp-trap-sink-modify
- snmp-trap-sink-show
- snmp-user-create
- snmp-user-delete
- snmp-user-modify
- snmp-user-show
- snmp-v3-trap-sink-create
- snmp-v3-trap-sink-delete
- snmp-v3-trap-sink-modify
- snmp-v3-trap-sink-show
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
snmp-trap-sink-create

This command is used to specify a SNMPv1 trap receiver for SNMP traps.

Syntax
```
snmp-trap-sink-create community community-string [type
TRAP_TYPE_V1_TRAP|TRAP_TYPE_V2C_TRAP|TRAP_TYPE_V2_INFORM|
TRAP_TYPE_V3_TRAP|TRAP_TYPE_V3_INFORM] dest-host
dest-host-string dest-port dest-port-number
```

- `community`
  Specify the community name to send traps.

- `community-string`
  Specify the type of SNMP trap.

- `type TRAP_TYPE_V1_TRAP|TRAP_TYPE_V2C_TRAP|TRAP_TYPE_V2_INFORM|
  TRAP_TYPE_V3_TRAP|TRAP_TYPE_V3_INFORM`
  Specify the destination host.

- `dest-host`
  Specify the destination port. The default port is 162.

- `dest-host-string`

- `dest-port`

- `dest-port-number`

Defaults None

Access CLI

Usage Use this command to send SNMP traps to a receiver.

Examples To send TRAP_TYPE_V1_TRAP, from community string, snmp-group, to the
destination, trap-recvr, on port 43, use the following command:

```
snmp-trap-sink-create community snmp-group dest-host trap-recvr
dest-port 43
```

See Also
- snmp-community-create
- snmp-community-delete
- snmp-community-modify
- snmp-community-show
- snmp-engineid-show
- snmp-monitor-create (deprecated)
- snmp-monitor-delete (deprecated)
- snmp-monitor-show (deprecated)
- snmp-show
- snmp-trap-enable-show
- snmp-trap-enable-modify
- snmp-trap-sink-delete
- snmp-trap-sink-modify
- snmp-trap-sink-show
- snmp-user-create
- snmp-user-delete
- snmp-user-modify
- snmp-user-show
- snmp-v3-trap-sink-create
- snmp-v3-trap-sink-delete
- snmp-v3-trap-sink-modify
- snmp-v3-trap-sink-show
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
**snmp-trap-sink-delete**

This command is used to delete a SNMPv1 trap receiver for SNMP traps.

**Syntax**

```
snmp-trap-sink-delete community community-string dest-host dest-host-string dest-port dest-port-number
```

- `community`            Specify the community name to send traps.
- `community-string`     Specify the destination host.
- `dest-host`            Specify the destination port.
- `dest-host-string`     Specify the destination port.
- `dest-port`            Specify the destination port.
- `dest-port-number`     Specify the destination port.

**Defaults**  None

**Access**     CLI

**Usage**     Use this command to delete an SNMP receiver.

**Examples**  To delete community string, `snmp-group`, and the destination, `trap-recvr`, on port `43`, use the following command:

```
CLI network-admin@switch > snmp-trap-sink-delete community snmp-group dest-host snmp-recvr dest-port 43
```

**See Also**

- `snmp-community-create`
- `snmp-community-delete`
- `snmp-community-modify`
- `snmp-community-show`
- `snmp-engineid-show`
- `snmp-monitor-create (deprecated)`
- `snmp-monitor-delete (deprecated)`
- `snmp-monitor-show (deprecated)`
- `snmp-show`
- `snmp-trap-enable-show`
- `snmp-trap-enable-modify`
- `snmp-trap-sink-create`
- `snmp-trap-sink-modify`
- `snmp-trap-sink-show`
- `snmp-user-create`
- `snmp-user-delete`
- `snmp-user-modify`
- `snmp-user-show`
- `snmp-v3-trap-sink-create`
- `snmp-v3-trap-sink-delete`
- `snmp-v3-trap-sink-modify`
- snmp-v3-trap-sink-show
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
**snmp-trap-sink-modify**

This command is used to modify a SNMPv1 trap receiver for SNMP traps.

**Syntax**
```
snmp-trap-sink-modify community community-string dest-host dest-host-string dest-port dest-port-number
```

- `community` Specify the community name to send traps.
- `community-string` Specify the community string.
- `dest-host` Specify the destination host.
- `dest-host-string` Specify the destination host.
- `dest-port` Specify the destination port.
- `dest-port-number` Specify the destination port number.

Specify one or more of the following options:

- `type TRAP_TYPE_V1_TRAP| TRAP_TYPE_V2C_TRAP| TRAP_TYPE_V2_INFORM| TRAP_TYPE_V3_TRAP| TRAP_TYPE_V3_INFORM` Specify the type of SNMP trap.

**Defaults** None

**Access** CLI

**Usage** Use this command to delete an SNMP receiver.

**Examples** To modify the destination port to 53 for community string, `snmp-group`, and the destination host, `trap-recvr`, use the following command:

```
CLI network-admin@switch > snmp-trap-sink-modify community snmp-group dest-host trap-recvr dest-port 53
```

**See Also**
- `snmp-community-create`
- `snmp-community-delete`
- `snmp-community-modify`
- `snmp-community-show`
- `snmp-engineid-show`
- `snmp-monitor-create (deprecated)`
- `snmp-monitor-delete (deprecated)`
- `snmp-monitor-show (deprecated)`
- `snmp-show`
- `snmp-trap-enable-show`
- `snmp-trap-enable-modify`
- `snmp-trap-sink-create`
- `snmp-trap-sink-delete`
- `snmp-trap-sink-show`
- `snmp-user-create`
- `snmp-user-delete`
- snmp-user-modify
- snmp-user-show
- snmp-v3-trap-sink-create
- snmp-v3-trap-sink-delete
- snmp-v3-trap-sink-modify
- snmp-v3-trap-sink-show
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
**snmp-trap-sink-show**

This command is used to display information about a SNMPv1 trap receiver for SNMP traps.

**Syntax**

```
snmp-trap-sink-show community community-string dest-host dest-host-string dest-port dest-port-number
```

- **community**
  - community-string: Specifies the community name to send traps.

- **type**
  - TRAP_TYPE_V1_TRAP|TRAP_TYPE_V2C_TRAP|TRAP_TYPE_V2_INFORM|TRAP_TYPE_V3_TRAP|TRAP_TYPE_V3_INFORM: Specifies the type of SNMP trap.

- **dest-host**
  - dest-host-string: Specifies the destination host.

- **dest-port**
  - dest-port-number: Specifies the destination port. The default port is 162.

**Formatting Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use <code>all</code> to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td></td>
</tr>
<tr>
<td>parsable-delim</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>character</td>
<td></td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td></td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td></td>
</tr>
<tr>
<td>limit-output</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with <code>vRouter show commands</code>.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults** None

**Access** CLI
Usage  
Use this command to display information about an SNMP receiver.

Examples  
To modify the destination port to 53 for community string, `snmp-group`, and the destination host, `trap-recvr`, use the following command:

```
CLI network-admin@switch > snmp-trap-sink-show community snmp-group
```

See Also
- `snmp-community-create`
- `snmp-community-delete`
- `snmp-community-modify`
- `snmp-community-show`
- `snmp-engineid-show`
- `snmp-monitor-create (deprecated)`
- `snmp-monitor-delete (deprecated)`
- `snmp-monitor-show (deprecated)`
- `snmp-show`
- `snmp-trap-enable-show`
- `snmp-trap-enable-modify`
- `snmp-trap-sink-create`
- `snmp-trap-sink-delete`
- `snmp-trap-sink-modify`
- `snmp-trap-sink-show`
- `snmp-user-create`
- `snmp-user-delete`
- `snmp-user-modify`
- `snmp-user-show`
- `snmp-v3-trap-sink-create`
- `snmp-v3-trap-sink-delete`
- `snmp-v3-trap-sink-modify`
- `snmp-v3-trap-sink-show`
- `snmp-vacm-create`
- `snmp-vacm-delete`
- `snmp-vacm-modify`
**snmp-user-create**

SNMPv3 creates users as access control mechanisms, and creating users is more complex but also more secure and more flexible. You can also require that users must authenticate and use encryption.

**Syntax**

```
snmp-user-create user-name name-string auth-password auth-password-string auth|no-auth priv-password priv-password-string priv|no-priv
```

- `user-name name-string` Specify the user name.
- `auth-password auth-password-string` Specify the authentication password.
- `auth|no-auth` Specify if authentication is required or not.
- `priv-password priv-password-string` Specify the password for privileges mode.
- `priv|no-priv` Specifies if privileges are assigned or not.

**Defaults** None

**Access** CLI

**Usage** Use this command to create users for SNMPv3.

**Examples** To create SNMPv3 users, use the following command:

```
CLI network-admin@switch > snmp-user-create
```

**See Also**
- `snmp-community-create`
- `snmp-community-delete`
- `snmp-community-modify`
- `snmp-community-show`
- `snmp-engineid-show`
- `snmp-monitor-create (deprecated)`
- `snmp-monitor-delete (deprecated)`
- `snmp-monitor-show (deprecated)`
- `snmp-show`
- `snmp-trap-enable-show`
- `snmp-trap-enable-modify`
- `snmp-trap-sink-create`
- `snmp-trap-sink-delete`
- `snmp-trap-sink-modify`
- `snmp-trap-sink-show`
- `snmp-user-delete`
- `snmp-user-modify`
- `snmp-user-show`
- `snmp-v3-trap-sink-create`
- `snmp-v3-trap-sink-delete`
- snmp-v3-trap-sink-modify
- snmp-v3-trap-sink-show
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
- snmp-vacm-show

See Also
snmp-user-delete

SNMPv3 creates users as access control mechanisms, and creating users is more complex but also more secure and more flexible. You can also require that users must authenticate and use encryption.

Syntax

```plaintext
snmp-user-delete user-name name-string
```

user-name name-string  Specifies the user name.

Defaults  None

Access   CLI

Usage   Use this command to delete a user configured for SNMPv3.

Examples  To display SNMPv3 user information, use the following command:

```
CLI network-admin@switch > snmp-user-delete
```

See Also

- snmp-community-create
- snmp-community-delete
- snmp-community-modify
- snmp-community-show
- snmp-engineid-show
- snmp-monitor-create (deprecated)
- snmp-monitor-delete (deprecated)
- snmp-monitor-show (deprecated)
- snmp-show
- snmp-trap-enable-show
- snmp-trap-enable-modify
- snmp-trap-sink-create
- snmp-trap-sink-delete
- snmp-trap-sink-modify
- snmp-trap-sink-show
- snmp-user-create
- snmp-user-modify
- snmp-user-show
- snmp-v3-trap-sink-create
- snmp-v3-trap-sink-delete
- snmp-v3-trap-sink-modify
- snmp-v3-trap-sink-show
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
- snmp-vacm-show
snmp-user-modify

SNMPv3 creates users as access control mechanisms, and creating users is more complex but also more secure and more flexible. You can also require that users must authenticate and use encryption.

**Syntax**
```
snmp-user-create user-name name-string auth-password auth-password-string auth|no-auth priv-password priv-password-string priv|no-priv
```

- **user-name name-string**: Specify the user name.
- Specify one or more of the following options:
  - **auth-password auth-password-string**: Specify the authentication password.
  - **auth|no-auth**: Specify if authentication is required or not.
  - **priv-password priv-password-string**: Specify the password for privileges mode.
  - **priv|no-priv**: Specifies if privileges are assigned or not.

**Syntax** None

**Access** CLI

**Usage** Use this command to modify parameters configured for SNMPv3 users.

**Examples** To modify SNMPv3 user information, use the following command:

```
CLI network-admin@switch > snmp-user-modify
```

**See Also**
- snmp-community-create
- snmp-community-delete
- snmp-community-modify
- snmp-community-show
- snmp-engineid-show
- snmp-monitor-create (deprecated)
- snmp-monitor-delete (deprecated)
- snmp-monitor-show (deprecated)
- snmp-show
- snmp-trap-enable-show
- snmp-trap-enable-modify
- snmp-trap-sink-create
- snmp-trap-sink-delete
- snmp-trap-sink-modify
- snmp-trap-sink-show
- snmp-user-create
- snmp-user-delete
- snmp-user-modify
- snmp-user-show
- snmp-v3-trap-sink-create
- snmp-v3-trap-sink-delete
- snmp-v3-trap-sink-modify
- snmp-v3-trap-sink-show
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
- snmp-vacm-show
**snmp-user-show**

SNMPv3 creates users as access control mechanisms, and creating users is more complex but also more secure and more flexible. You can also require that users must authenticate and use encryption.

**Syntax**

```
snmp-user-show user-name name-string auth|no-auth priv|no-priv
```

- **user-name** `name-string` Specifies the user name.
- **auth|no-auth** Specifies if authentication is required or not.
- **priv|no-priv** Specifies if privileges are assigned or not.

**Formatting Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td></td>
</tr>
<tr>
<td>parsable-delim</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>character</td>
<td></td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
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<tr>
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</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
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<td>vertical</td>
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</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td></td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
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</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults** None

**Access** CLI

**Usage** Use this command to display information about users configured for SNMPv3.

**Examples** To display SNMPv3 user information, use the following command:

```
CLI> network-admin@switch > snmp-user-show
```

**See Also**

- **snmp-community-create**
- snmp-community-delete
- snmp-community-modify
- snmp-community-show
- snmp-engineid-show
- snmp-monitor-create (deprecated)
- snmp-monitor-delete (deprecated)
- snmp-monitor-show (deprecated)
- snmp-show
- snmp-trap-enable-show
- snmp-trap-enable-modify
- snmp-trap-sink-create
- snmp-trap-sink-delete
- snmp-trap-sink-modify
- snmp-trap-sink-show
- snmp-user-create
- snmp-user-delete
- snmp-user-modify
- snmp-v3-trap-sink-create
- snmp-v3-trap-sink-delete
- snmp-v3-trap-sink-modify
- snmp-v3-trap-sink-show
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
- snmp-vacm-show
**snmp-v3-trap-sink-create**

This command is used to specify a SNMPv3 trap receiver for SNMP traps.

**Syntax**

```
snmp-trap-sink-create user-name user-name-string engine-id engine-id-string trap type TRAP_TYPE_V1_TRAP|TRAP_TYPE_V2C_TRAP|TRAP_TYPE_V2_INFORM|TRAP_TYPE_V3_TRAP|TRAP_TYPE_V3_INFORM dest-host dest-host-string dest-port dest-port-number auth-password auth-password-string auth|no-auth priv-password priv-password-string priv|no-priv
```

- **user-name**: Specify the user name to send traps.
- **user-name-string**: Specify the user name.
- **engine-id**: Specify the engine ID. The SNMP engine ID is a unique string of 24 characters that identifies the device for administrative purposes.
- **engine-id-string**: Specify the engine ID.
- **type**: Specify the type of SNMP trap.
- **TRAP_TYPE_V1_TRAP|TRAP_TYPE_V2C_TRAP|TRAP_TYPE_V2_INFORM|TRAP_TYPE_V3_TRAP|TRAP_TYPE_V3_INFORM**: The type of SNMP trap.
- **dest-host**: Specify the destination host.
- **dest-host-string**: Specify the destination host.
- **dest-port**: Specify the destination port.
- **dest-port-number**: Specify the destination port.
- **auth-password**: Specify an authentication password.
- **auth-password-string**: Specify an authentication password.
- **auth|no-auth**: Specify if the user requires authentication or not.
- **priv-password**: Specify a privileges password for the user.
- **priv-password-string**: Specify a privileges password for the user.
- **priv|no-priv**: Specify if the user has privileges or not.

**Defaults** None

**Access** CLI

**Usage** Use this command to send SNMPv3 traps to a receiver.

**Examples** To send TRAP_TYPE_V1_TRAP, from community string, snmp-group, to the destination, trap-recvr, on port 43, use the following command:

```
CLI network-admin@switch > snmp-v3-trap-sink-create community snmp-group dest-host snmp-recvr dest-port 43
```

See Also

- `snmp-community-create`
- `snmp-community-delete`
- `snmp-community-modify`
- `snmp-community-show`
- `snmp-engineid-show`
- `snmp-monitor-create (deprecated)`
- `snmp-monitor-delete (deprecated)`
- snmp-monitor-show (deprecated)
- snmp-show
- snmp-trap-enable-show
- snmp-trap-enable-modify
- snmp-trap-sink-create
- snmp-trap-sink-delete
- snmp-trap-sink-modify
- snmp-trap-sink-show
- snmp-user-create
- snmp-user-delete
- snmp-user-modify
- snmp-user-show
- snmp-v3-trap-sink-delete
- snmp-v3-trap-sink-modify
- snmp-v3-trap-sink-show
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
- snmp-vacm-show
snmp-v3-trap-sink-delete

This command is used to remove an SNMPv3 trap receiver from the configuration.

Syntax

```plaintext
snmp-v3-trap-sink-delete user-name user-name-string
   engine-id engine-id-string dest-host dest-host-string dest-port
   dest-port-number
```

- **user-name**
  - **user-name-string**
  - Specify the user name to send traps.

- **engine-id**
  - **engine-id-string**
  - Specify the engine ID. The SNMP engine ID is a unique string of 24 characters that identifies the device for administrative purposes.

- **dest-host**
  - **dest-host-string**
  - Specify the destination host.

- **dest-port**
  - **dest-port-number**
  - Specify the destination port.

Defaults

None

Access

CLI

Usage

Use this command to remove an SNMPv3 trap receiver from the configuration.

Examples

To remove the user, snmp-admin, and destination host, snmpv3-receiver, from destination port 67, use the following command:

```plaintext
CLI network-admin@switch > snmp-v3-trap-sink-delete user-name
   user-name snmp-admin dest-host snmpv3-receiver dest-port 67
```

See Also

- snmp-community-create
- snmp-community-delete
- snmp-community-modify
- snmp-community-show
- snmp-engineid-show
- snmp-monitor-create (deprecated)
- snmp-monitor-delete (deprecated)
- snmp-monitor-show (deprecated)
- snmp-show
- snmp-trap-enable-show
- snmp-trap-enable-modify
- snmp-trap-sink-create
- snmp-trap-sink-delete
- snmp-trap-sink-modify
- snmp-trap-sink-show
- snmp-user-create
- snmp-user-delete
- snmp-user-modify
- snmp-user-show
- `snmp-v3-trap-sink-create`
- `snmp-v3-trap-sink-modify`
- `snmp-v3-trap-sink-show`
- `snmp-vacm-create`
- `snmp-vacm-delete`
- `snmp-vacm-modify`
- `snmp-vacm-show`
snmp-v3-trap-sink-modify

This command is used to modify a SNMPv3 trap receiver for SNMP traps.

Syntax

```text
snmp-trap-sink-modify user-name user-name-string engine-id engine-id-string
   trap TRAP_TYPE_V1_TRAP|TRAP_TYPE_V2C_TRAP|TRAP_TYPE_V2_INFORM |
   dest-host dest-host-string dest-port dest-port-number auth-password auth-password-string auth|no-auth priv-password priv-password-string priv|no-priv
```

Specify one or more of the following options:

- `user-name` Specify the user name to send traps.
- `user-name-string` Specify the user name string.
- `engine-id` Specify the engine ID.
- `engine-id-string` Specify the engine ID string.
- `dest-host` Specify the destination host.
- `dest-host-string` Specify the destination host string.
- `dest-port` Specify the destination port.
- `dest-port-number` Specify the destination port number.
- `type TRAP_TYPE_V1_TRAP|TRAP_TYPE_V2C_TRAP|TRAP_TYPE_V2_INFORM|TRAP_TYPE_V3_TRAP|TRAP_TYPE_V3_INFORM` Specify the type of SNMP trap.
- `auth-password` Specify an authentication password.
- `auth-password-string` Specify the authentication password string.
- `auth|no-auth` Specify if the user requires authentication or not.
- `priv-password` Specify a privileges password for the user.
- `priv-password-string` Specify the privileges password string.
- `priv|no-priv` Specify if the user has privileges or not.

Defaults

None

Access

CLI

Usage

Use this command to modify an SNMPv3 receiver configuration.

Examples

To modify the user, snmp-admin, to send TRAP_TYPE_V2C_TRAP, to the destination, trapv3-recvr, on port 43, use the following command:

```text
CLI network-admin@switch > snmp-v3-trap-sink-modify user-name snmp-admin dest-host trapv3-recvr dest-port 43
```

See Also

- snmp-community-create
- snmp-community-delete
- snmp-community-modify
- snmp-community-show
- snmp-engineid-show
- snmp-monitor-create (deprecated)
- snmp-monitor-delete (deprecated)
- snmp-monitor-show (deprecated)
- snmp-show
- snmp-trap-enable-show
- snmp-trap-enable-modify
- snmp-trap-sink-create
- snmp-trap-sink-delete
- snmp-trap-sink-modify
- snmp-trap-sink-show
- snmp-user-create
- snmp-user-delete
- snmp-user-modify
- snmp-user-show
- snmp-v3-trap-sink-create
- snmp-v3-trap-sink-delete
- snmp-v3-trap-sink-show
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
- snmp-vacm-show
**snmp-v3-trap-sink-show**

This command is used to display information about a SNMPv3 trap receiver for SNMP traps.

**Syntax**
```
snmp-trap-sink-modify user-name user-name-string engine-id engine-id-string
TRAP_TYPE_V1_TRAP|TRAP_TYPE_V2C_TRAP|TRAP_TYPE_V2_INFORM|
TRAP_TYPE_V3_TRAP|TRAP_TYPE_V3_INFORM dest-host -
dest-host-string dest-port dest-port-number auth-password auth-password-string auth|no-auth priv-password priv-password-string priv|no-priv
```

- **user-name**
  Specify the user name to send traps.

- **user-name-string**
  Specify the user name string.

- **engine-id**
- **engine-id-string**
  Specify the engine ID. The SNMP engine ID is a unique string of 24 characters that identifies the device for administrative purposes.

- **type**
  Specify the type of SNMP trap.
  - TRAP_TYPE_V1_TRAP
  - TRAP_TYPE_V2C_TRAP
  - TRAP_TYPE_V2_INFORM
  - TRAP_TYPE_V3_TRAP
  - TRAP_TYPE_V3_INFORM

- **dest-host**
  Specify the destination host.

- **dest-host-string**
  Specify the destination host string.

- **dest-port**
- **dest-port-number**
  Specify the destination port.

- **auth-password**
- **auth-password-string**
  Specify an authentication password.

- **auth|no-auth**
  Specify if the user requires authentication or not.

- **priv-password**
- **priv-password-string**
  Specify a privileges password for the user.

- **priv|no-priv**
  Specify if the user has privileges or not.

**Formatting Options**

- **format**
  Display output using a specific parameter. Use all to display all possible output.

- **fields-to-display**
  Display output formatted for machine parsing using a specified delimiter.

- **parsable-delim**

- **character**
  Display output in ascending order.

- **sort-asc**
  Display output in descending order.

- **sort-desc**
  Display duplicate entries in the output.

- **show dups**
  Display the output in a vertical or horizontal layout.

- **layout**
  Format the output at a specified interval.

- **show-interval**
  Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.

- **show-diff-interval**
### Defaults

None

### Access

CLI

### Usage

Use this command to display information about an SNMPv3 receiver configuration.

### Examples

To display information about an SNMPv3 receiver, use the following command:

```bash
CLI network-admin@switch > snmp-v3-trap-sink-show
```

### See Also

- snmp-community-create
- snmp-community-delete
- snmp-community-modify
- snmp-community-show
- snmp-engineid-show
- snmp-monitor-create (deprecated)
- snmp-monitor-delete (deprecated)
- snmp-monitor-show (deprecated)
- snmp-show
- snmp-trap-enable-show
- snmp-trap-enable-modify
- snmp-trap-sink-create
- snmp-trap-sink-delete
- snmp-trap-sink-modify
- snmp-trap-sink-show
- snmp-user-create
- snmp-user-delete
- snmp-user-modify
- snmp-user-show
- snmp-v3-trap-sink-create
- snmp-v3-trap-sink-delete
- snmp-v3-trap-sink-modify
- snmp-vacm-create
- snmp-vacm-delete
- `snmp-vacm-modify`
- `snmp-vacm-show`
snmp-vacm-create

After you create SNMP users, you must grant permission, using View Access Control Model (VACM) to allow the user to view SNMP objects.

Syntax

```
snmp-vacm-create [user-type rouser|rwuser] [user-name snmp-user user-name] [oid-restrict oid-restrict-string] [auth|no-auth] [priv|no-priv]
```

user-type rouser|rwuser Specify the type of permission to grant to the user. You can select from read-only or read-write.
user-name snmp-user Specify the user name to apply the permission.
oid-restrict Specify any OID restrictions. The parameter, oid-restrict, is an optional argument that specifies a MIB sub-tree that the view is restricted. In other words, if you specify an OID, only that OID and the descendants in the tree are visible in this view.
oid-restrict-string
auth|no-auth Specify if the user is authenticated or not.
priv|no-priv Specify if the view is private or not.

Defaults None
Access CLI
Usage Use this command to create access to SNMP objects.
Examples To create a read-only user type for user name, snmp-admin, and restrict the OID to sysContact, and use authentication, use the following command:

```
CLI network-admin@switch > snmp-vacm-create user-type rouser user-name snmp-admin oid-restrict sysContact auth
```

See Also
- snmp-community-create
- snmp-community-delete
- snmp-community-modify
- snmp-community-show
- snmp-engineid-show
- snmp-monitor-create (deprecated)
- snmp-monitor-delete (deprecated)
- snmp-monitor-show (deprecated)
- snmp-show
- snmp-trap-enable-show
- snmp-trap-enable-modify
- snmp-trap-sink-create
- snmp-trap-sink-delete
- snmp-trap-sink-modify
- snmp-trap-sink-show
- snmp-user-create
- snmp-user-delete
- snmp-user-modify
- snmp-user-show
- snmp-v3-trap-sink-create
- snmp-v3-trap-sink-delete
- snmp-v3-trap-sink-modify
- snmp-v3-trap-sink-show
- snmp-vacm-delete
- snmp-vacm-modify
- snmp-vacm-show
**snmp-vacm-delete**

After you create SNMP users, you must grant permission, using View Access Control Model (VACM) to allow the user to view SNMP objects. This command allows you to delete VACM configuration.

**Syntax**

```
snmp-vacm-delete user-name name-string
```

**user-name name-string**  Specify the user name to delete from the configuration.

**Defaults**  None

**Access**  CLI

**Usage**  Use this command to delete a VACM user from the configuration.

**Examples**  To delete the user, snmp-admin, use the following command:

```
CLI network-admin@switch > snmp-vacm-delete user-name snmp-admin
```

**See Also**

- `snmp-community-create`
- `snmp-community-delete`
- `snmp-community-modify`
- `snmp-community-show`
- `snmp-engineid-show`
- `snmp-monitor-create (deprecated)`
- `snmp-monitor-delete (deprecated)`
- `snmp-monitor-show (deprecated)`
- `snmp-show`
- `snmp-trap-enable-show`
- `snmp-trap-enable-modify`
- `snmp-trap-sink-create`
- `snmp-trap-sink-delete`
- `snmp-trap-sink-modify`
- `snmp-trap-sink-show`
- `snmp-user-create`
- `snmp-user-delete`
- `snmp-user-modify`
- `snmp-user-show`
- `snmp-v3-trap-sink-create`
- `snmp-v3-trap-sink-delete`
- `snmp-v3-trap-sink-modify`
- `snmp-v3-trap-sink-show`
- `snmp-vacm-create`
- `snmp-vacm-modify`
- `snmp-vacm-show`
**snmp-vacm-modify**

After you create SNMP users, you must grant permission, using View Access Control Model (VACM) to allow the user to view SNMP objects. This command is used to modify an existing model.

**Syntax**

```bash
snmp-vacm-modify [user-type rouser|rwuser] [user-name snmp-user user-name] [oid-restrict oid-restrict-string] [auth|no-auth] [priv|no-priv]
```

- **user-name snmp-user user-name**
  Specify the user name to apply the permission.

- **user-type rouser|rwuser**
  Specify the type of permission to grant to the user. You can select from read-only or read-write.

- **oid-restrict oid-restrict-string**
  Specify any OID restrictions. The parameter, `oid-restrict`, is an optional argument that specifies a MIB sub-tree that the view is restricted. In other words, if you specify an OID, only that OID and the descendants in the tree are visible in this view.

- **auth|no-auth**
  Specify if the user is authenticated or not.

- **priv|no-priv**
  Specify if the view is private or not.

**Defaults** None

**Access** CLI

**Usage** Use this command to delete a VACM object.

**Examples** To modify a read-only user for user name, `snmp-admin`, and the user-type to read-write, use the following command:

```bash
CLI network-admin@switch > snmp-vacm-modify user-type rwuser user-name snmp-admin
```

**See Also**

- `snmp-community-create`
- `snmp-community-delete`
- `snmp-community-modify`
- `snmp-community-show`
- `snmp-engineid-show`
- `snmp-monitor-create (deprecated)`
- `snmp-monitor-delete (deprecated)`
- `snmp-monitor-show (deprecated)`
- `snmp-show`
- `snmp-trap-enable-show`
- `snmp-trap-enable-modify`
- `snmp-trap-sink-create`
- `snmp-trap-sink-delete`
- `snmp-trap-sink-modify`
- `snmp-trap-sink-show`
- snmp-user-create
- snmp-user-delete
- snmp-user-modify
- snmp-user-show
- snmp-v3-trap-sink-create
- snmp-v3-trap-sink-delete
- snmp-v3-trap-sink-modify
- snmp-v3-trap-sink-show
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-show
After you create SNMP users, you must grant permission, using View Access Control Model (VACM) to allow the user to view SNMP objects. This command is used to display information about user VACMs.

**Syntax**
```
snmp-vacm-show [user-type rouser|rwuser] [user-name] [oid-restrict] [auth|no-auth] [priv|no-priv]
```

- **user-type rouser|rwuser**: Specify the type of permission to grant to the user. You can select from read-only or read-write.
- **user-name snmp-user**: Specify the user name to apply the permission.
- **oid-restrict oid-restrict-string**: Specify any OID restrictions. The parameter, oid-restrict, is an optional argument that specifies a MIB sub-tree that the view is restricted. In other words, if you specify an OID, only that OID and the descendants in the tree are visible in this view.
- **auth|no-auth**: Specify if the user is authenticated or not.
- **priv|no-priv**: Specify if the view is private or not.

**Formatting Options**
- **format fields-to-display**: Display output using a specific parameter. Use all to display all possible output.
- **parsable-delim character**: Display output formatted for machine parsing using a specified delimiter.
- **sort-asc**: Display output in ascending order.
- **sort-desc**: Display output in descending order.
- **show-dups**: Display duplicate entries in the output.
- **layout vertical|horizontal**: Format the output in a vertical or horizontal layout.
- **show-interval seconds-interval**: Repeat the show command at a specified interval.
- **show-diff-interval**: Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.
- **show-headers|no-show-headers**: Display column headers or not.
- **limit-output number**: Limit the display output to a specific number of entries.
- **count-output**: Display the number of entries in the output. This is useful with vRouter show commands.
- **unscaled**: Display full values in the output instead of scaled approximate values.
- **sum-by**: Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.

**Defaults**
None
Access CLI
Usage Use this command to display information about VACMs.
Examples To display information about all VACMs on the switch, use the following command:

```
CLI network-admin@switch > snmp-vacm-show
```

<table>
<thead>
<tr>
<th>switch</th>
<th>user-type</th>
<th>user-name</th>
<th>oid-restrict</th>
<th>view</th>
<th>auth</th>
<th>priv</th>
</tr>
</thead>
<tbody>
<tr>
<td>pleiades1</td>
<td>rwuser</td>
<td><strong>RWUSER</strong></td>
<td></td>
<td>yes</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>pleiades2</td>
<td>rwuser</td>
<td><strong>RWUSER</strong></td>
<td></td>
<td>yes</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>pleiades3</td>
<td>rwuser</td>
<td><strong>RWUSER</strong></td>
<td></td>
<td>yes</td>
<td>no</td>
<td></td>
</tr>
</tbody>
</table>

See Also
- snmp-community-create
- snmp-community-delete
- snmp-community-modify
- snmp-community-show
- snmp-engineid-show
- snmp-monitor-create (deprecated)
- snmp-monitor-delete (deprecated)
- snmp-monitor-show (deprecated)
- snmp-show
- snmp-trap-enable-show
- snmp-trap-enable-modify
- snmp-trap-sink-create
- snmp-trap-sink-delete
- snmp-trap-sink-modify
- snmp-trap-sink-show
- snmp-user-create
- snmp-user-delete
- snmp-user-modify
- snmp-user-show
- snmp-v3-trap-sink-create
- snmp-v3-trap-sink-delete
- snmp-v3-trap-sink-modify
- snmp-v3-trap-sink-show
- snmp-vacm-create
- snmp-vacm-delete
- snmp-vacm-modify
```
software-license-import-product-ids

This command is used to import product identification used with software licenses.

Syntax
software-license-import-product-ids [pid-file <file>] [sftp-files <file>]

name
Specify the name of the product ID file to import into the switch.

Defaults
None

Access
CLI

Usage
In order for licensing to work on the switch, you have to import the product ID file.

Examples
To import the product ID file named, nvos-pids, use the following command:

CLI network-admin@switch > software-license-import-product-ids pid-file nvos-pids

See Also
• software-license-install
• software-license-show
• software-modify
• software-show
• software-track-show
• software-upgrade
```
software-license-install

This command is used to install software licenses on the switches.

Syntax  software-license-install key key-string

key-string  Specify the key string for the license.

Defaults  None
Access    CLI
Usage     Some features in ONVL require license keys in order to activate them.
Examples  To install the license key, 9887437728289472972897ghg, use the following command:

```
CLI network-admin@switch > software-license-install key 9887437728289472972897ghg
```

See Also
• software-license-import-product-ids
• software-license-show
• software-modify
• software-show
• software-track-show
• software-upgrade
**software-license-show**

This command is used to display information about software licenses installed on the switch.

```
Syntax  software-license-show [license-id license-id-string][id id-number] [description description-string] [prompt prompt-string] [key key-string] [feature feature-string] [upgrade yes|no] [upgrade-from upgrade-from-string] [sysconfig yes|no] [pending yes|no] [pid-file sftp-files name]
```

- **license-id**
  - Specifies the license ID string.
- **license-id-string**
  - Specifies the ID.
- **id id-number**
  - Specifies the ID.
- **description**
  - Specifies the description of the license.
- **description-string**
  - Specifies the description of the license.
- **prompt prompt-string**
  - Specifies the prompt string.
- **key key-string**
  - Specifies the generated keys.
- **feature feature-string**
  - Specifies the licensed features.
- **upgrade yes|no**
  - Specifies if the license is upgradeable.
- **upgrade-from upgrade-from-string**
  - Specifies the software version to upgrade from.
- **sysconfig yes|no**
  - Specifies the system configuration.
- **pending yes|no**
  - Specifies if the verification of the license is pending.
- **pid-file sftp-files name**
  - Specifies the PID file name.

**Formatting Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format fields-to-display</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>Parsable-delim character</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval seconds-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>no-show-headers</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

Defaults: None

Access: CLI

Usage: Use this command to display information about software licenses installed on a switch.

Examples: To display the license information, use the following command:

```
CLI (network-admin@pleiades25) > software-license-show
switch:       pleiades25
license-id:   F-ASDF-NVOS2.0
description:  Freedom F-Line Advanced Software Defined Fabric License for Netvisor 2.x
key:          sung,decrypt,true,airdrop
feature:      all
upgrade-from: |
```
**ssh**
This command allows you to use the protocol, Secure Shell (SSH) to remotely log into a host from a switch.

Syntax  `ssh host -l user`

**host**
Specifies the hostname or IP address of a host.

**user**
Specifies a configured user on the host.

**Defaults**  None.

**Access**

**Usage**  A switch can remotely log into another host. This command initiates a remote login using a secure, encrypted communication with the SSH protocol.

**Examples**  To remotely log into the switch at 10.1.1.1 as the admin, use the following command:

```plaintext
CLI network-admin@switch > ssh admin@10.1.1.1
```

**See Also**

* ssh-known-hosts-delete*
ssh-known-hosts-delete

This command allows you to delete outdated SSH fingerprints from the known_hosts file on a switch.

Syntax  ssh-known-hosts-delete

Defaults  None.

Usage  Allows you to delete SSH fingerprints from previous logins.

Examples  To delete the fingerprint from the switch, use the following command:

CLI network-admin@switch > ssh-known-hosts-delete

See Also

* ssh
stack-hex-led-modify

On Dell ONVL platforms, you can modify the behavior of the LED on the front of the switch.

Syntax  stack-hex-led-modify hex-value hex-digit hex-disable hex-enable blink-disable blink-enable dot-disable dot-enable

hex-value hex-digit  Specify a hex digit to display. This is a decimal value between 0 and 15 which the switch displays as a hexadecimal value between 0 and F.

hex-disable  Turn off the hex LED.
hex-enable  Turn on the hex LED.
blink-disable  Disable blinking of the hex LED.
blink-enable  Enable blinking of the hex LED.
dot-disable  Disable the dot display.
dot-enable  Enable the dot display.

Defaults  Solid 1 hex LED.
Access  CLI
History  Command introduced in Version 2.3
Usage  Use this command on Dell ONVL platforms only to affect the LED behavior.
Examples  To enable the blinking hex LED, use the following command:

```bash
CLI network-admin@switch > stack-hex-led-modify blink-enable
```
stack-hex-led-show

On Dell ONVL platforms, you can modify the behavior of the LED on the front of the switch.

Syntax  

    stack-hex-led-show hex-value hex-digit hex-disable
    hex-enable blink-disable blink-enable dot-disable
    dot-enableSolid 1 hex LED.

Access  

    CLI

History  Command introduced in Version 2.3

Usage  

    Use this command on Dell ONVL platforms only to display the LED behavior.

Examples  

    To display LED behavior, use the following command:

    CLI network-admin@switch > stack-hex-led-show
stp-modify

This command is used to configure Spanning Tree Protocol (STP).

Syntax  
```
stp-modify enable {yes|no}  
bpdus-bridge-ports|bpdus-all-ports bridge-priority  
bridge-priority-number hello-time seconds forwarding-delay  
seconds max-age seconds
```

enable|disable Specify if you want to enable or disable STP.

Specify one or more of the following options:

- bpdus-bridge-ports|bpdus-all-ports Specify if you want BPDU packets to bridge specific ports or all ports.
- bridge-priority Specify the bridge priority.
- bridge-priority-number
- hello-time seconds Specify the hello time in seconds. This is a value between 1 and 10 seconds. The default value is 2 seconds.
- forwarding-delay seconds Specify the forwarding delay in seconds. This is a value between 4 and 30 seconds.
- max-age seconds Specify the maximum age of the bridge. This is a value between 6 and 40 seconds. The default value is 20 seconds.

Defaults  None.

Access  CLI

Usage  STP is a standard inter-switch protocol is used to ensure that an ad hoc network topology is loop-free at Layer 2, on a per VLAN basis. If your network connections form loops, and STP is disabled, packets recirculate between the switches and causes a decrease in network performance. If you are certain that your network is loop-free, you do not need to enable STP. One drawback of STP is that it does not allow for Layer 2 multipathing and may result in suboptimal utilization of available network links. Therefore, a fabric of Pluribus Networks switches does not use STP within the boundaries of the fabric. The use of STP is recommended for ad hoc networks that interoperate in a heterogeneous, multi-vendor switch environment. Use this command to enable or disable STP on the network.

Examples  To enable STP, use the following command:

```
CLI network-admin@switch > stp-modify enable
```

See Also  
- stp-show
- stp-port-modify
- stp-port-show
- stp-state-show
**stp-show**

This command is used to display information about Spanning Tree Protocol (STP) state.

**Syntax**
```plaintext
stp-show
```

**Formatting Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use <code>all</code> to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>parsable-delim</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>character</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Show duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Repeat the show command at a specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>limit-output</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with <code>vRouter show</code> commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults** None.

**Access** CLI

**History** Command introduced in nvOS Version 1.2.

**Usage** STP is a standard inter-switch protocol used to ensure that an ad hoc network topology is loop-free at Layer 2, on a per VLAN basis. If your network connections form loops, and STP is disabled, packets recirculate between the switches and causes a decrease in network performance. If you are certain that your network is loop-free, you do not need to enable STP. One drawback of STP is that it does not allow for Layer 2 multipathing and may result in suboptimal utilization of available network links. Therefore, a fabric of Pluribus Networks switches does not use STP within the boundaries of the fabric. The use of STP is recommended for ad hoc networks that interoperate in a heterogeneous, multi-vendor switch environment. Use this command to enable or disable STP on the network.
Examples  To display STP information, use the following command:

```
CLI network-admin@switch > stp-show
```

<table>
<thead>
<tr>
<th>switch:</th>
<th>pleiades25</th>
</tr>
</thead>
<tbody>
<tr>
<td>enable:</td>
<td>yes</td>
</tr>
<tr>
<td>bpdus-bridge-ports:</td>
<td>yes</td>
</tr>
<tr>
<td>bridge-priority:</td>
<td>32768</td>
</tr>
<tr>
<td>hello-time:</td>
<td>2</td>
</tr>
<tr>
<td>forwarding-delay:</td>
<td>15</td>
</tr>
<tr>
<td>max-age:</td>
<td>20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>switch:</th>
<th>pleiades24</th>
</tr>
</thead>
<tbody>
<tr>
<td>enable:</td>
<td>yes</td>
</tr>
<tr>
<td>bpdus-bridge-ports:</td>
<td>yes</td>
</tr>
<tr>
<td>bridge-priority:</td>
<td>32768</td>
</tr>
<tr>
<td>hello-time:</td>
<td>2</td>
</tr>
<tr>
<td>forwarding-delay:</td>
<td>15</td>
</tr>
<tr>
<td>max-age:</td>
<td>20</td>
</tr>
</tbody>
</table>

See Also
- stp-modify
- stp-port-modify
- stp-port-show
- stp-state-show
**stp-port-event-show**

This command is used to display information about port events on the switch.

**Syntax**

```
stp-port-event-show
```

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>time date/time:</td>
<td>Specifies a specific time for an event.</td>
</tr>
<tr>
<td>yyyy-mm-ddTh:hh:mm:ss</td>
<td></td>
</tr>
<tr>
<td>start-time date/time:</td>
<td>Specifies the time that the event began.</td>
</tr>
<tr>
<td>yyyy-mm-ddTh:hh:mm:ss</td>
<td></td>
</tr>
<tr>
<td>end-time date/time:</td>
<td>Specifies the time that the event ended.</td>
</tr>
<tr>
<td>yyyy-mm-ddTh:hh:mm:ss</td>
<td></td>
</tr>
<tr>
<td>duration duration:</td>
<td>Specifies the duration in days, hours, minutes, and</td>
</tr>
<tr>
<td>#d#h#m#s</td>
<td>seconds.</td>
</tr>
<tr>
<td>interval duration:</td>
<td>Specifies the interval between the events.</td>
</tr>
<tr>
<td>#d#h#m#s</td>
<td></td>
</tr>
<tr>
<td>since-start</td>
<td>Specifies if the event is requested since the start</td>
</tr>
<tr>
<td></td>
<td>time.</td>
</tr>
<tr>
<td>older-than duration:</td>
<td>Specifies if the event is older than the requested</td>
</tr>
<tr>
<td>#d#h#m#s</td>
<td>duration.</td>
</tr>
<tr>
<td>within-last duration:</td>
<td>Specifies if the event is within the last requested</td>
</tr>
<tr>
<td>#d#h#m#s</td>
<td>duration.</td>
</tr>
<tr>
<td>port port-number</td>
<td>Specifies the port number of the event.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>vlan vlan-list</td>
<td>Specifies the VLAN list for the event.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>count count-number</td>
<td>Specifies the number of events.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>initial-state Disabled</td>
<td>Specifies the initial state of the event.</td>
</tr>
<tr>
<td>Listening</td>
<td>Learning</td>
</tr>
<tr>
<td>other-state Disabled</td>
<td>Blocking</td>
</tr>
<tr>
<td></td>
<td>Specifies if the event had other states.</td>
</tr>
<tr>
<td>final-state Disabled</td>
<td>Blocking</td>
</tr>
<tr>
<td></td>
<td>Specifies the final state of the event.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>display all possible output.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output formatted for machine parsing using a</td>
</tr>
<tr>
<td></td>
<td>specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
</tbody>
</table>

**Formatting Options**
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td></td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>no-show-headers</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

Defaults  None
Access   CLI
Usage   Use this command to display port event information for STP.
Examples  To display STP port events, use the following command:

```plaintext
CLI network-admin@switch > stp-port-event-show
```
**stp-port-modify**

This command is used to configure Bridge Protocol Data Unit (BPDU) processing by one or more ports on a switch.

**Syntax**

```
stp-port-modify port port-list [block|no-block] [filter|no-filter] [edge|no-edge][guard|no-guard]
```

**port** *port-list*  
Specify the switch network data port number, list of ports, or a range of ports. The range must be a port number between 1 to 64.

Specify one or more of the following options:

- **block|no-block**  
  Specify if the port blocks BPDU.

- **filter|no-filter**  
  Specify if the port filters BPDU.

- **edge|no-edge**  
  Specify if the port is an Edge port. The port can transition directly to a forwarding state but lose Edge port status as soon as any BPDU packets are received.

- **guard|no-guard**  
  Specify if the port uses guard or no guard.

**Defaults**  None.

**Access**  CLI

**History**

- **Version 1.2**  Command introduced.
- **Version 2.2**  The parameter edge|no-edge added to support RSTP. The parameter, guard|no-guard, added.

**Usage**  STP is a standard inter-switch protocol is used to ensure that an ad hoc network topology is loop-free at Layer 2, on a per VLAN basis. If your network connections form loops, and STP is disabled, packets recirculate between the switches and causes a decrease in network performance. If you are certain that your network is loop-free, you do not need to enable STP. One drawback of STP is that it does not allow for Layer 2 multi-pathing and may result in suboptimal utilization of available network links. Therefore, a fabric of Pluribus Networks switches does not use STP within the boundaries of the fabric. The use of STP is recommended for ad hoc networks that inter-operate in a heterogeneous, multi-vendor switch environment. Use this command to enable or disable STP on the network.

BPDU are used in the election of the STP root switch and should not be received from an end host port. This command can block one port or multiple ports from processing BPDU to prevent a malicious end host from masquerading as a switch and participating in the STP root election. If a BPDU is received by a port that is configured to block BPDU, the port is shut down. Alternatively, you can filter BPDU on a port. If the port is configured to filter BPDU, the BPDU packet is dropped but the port is not shut down.

**Examples**  To block BPDU and shut down port 17, use the following command:

```
CLI network-admin@switch > stp-port-modify port 17 block on
```

**See Also**

- stp-modify
- stp-show
- stp-port-show
• stp-state-show
**stp-port-show**

This command is used to display the configuration for Bridge Protocol Data Unit (BPDU) processing by one or more ports on a switch.

Syntax: `$ stp-port-show port port-list [block off|on] [filter off|on] [port-fast|no-port-fast] [edge|no-edge]`

- **port** `port-list`: Specify the switch network data port number, list of ports, or a range of ports. The range must be a port number between 1 to 64.
- **block** `off|on`: Specify if the port blocks BPDU.
- **filter** `off|on`: Specify if the port filters BPDU.
- **port-fast** `| no-port-fast`: Specify if the port is enabled for PortFast. PortFast allows a port to enter the forwarding state almost immediately by dramatically decreasing the time of the listening and learning states.
- **edge** `| no-edge`: Specify if the port is an Edge port. The port can transition directly to a forwarding state but lose Edge port status as soon as any BPDU packets are received.
- **guard** `| no-guard`: Specify if the port uses guard or no guard.

**Formatting Options**

- **format**
- **fields-to-display**: Display output using a specific parameter. Use `all` to display all possible output.
- **parsable-delim**
- **character**: Display output formatted for machine parsing using a specified delimiter.
- **sort-asc**: Display output in ascending order.
- **sort-desc**: Display output in descending order.
- **show-dups**: Display duplicate entries in the output.
- **layout**
- **vertical** `| horizontal**: Format the output in a vertical or horizontal layout.
- **show-interval**
- **seconds-interval**: Repeat the show command at a specified interval.
- **show-diff-interval**: Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.
- **show-headers** `| no-show-headers`: Display column headers or not.
- **limit-output** `number`: Limit the display output to a specific number of entries.
- **count-output**: Display the number of entries in the output. This is useful with `vRouter show` commands.
- **unscaled**: Display full values in the output instead of scaled approximate values.
- **sum-by**: Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.
Defaults

None.

Access

CLI

Usage

STP is a standard inter-switch protocol used to ensure that an ad hoc network topology is loop-free at Layer 2, on a per VLAN basis. If your network connections form loops, and STP is disabled, packets recirculate between the switches and causes a decrease in network performance. If you are certain that your network is loop-free, you do not need to enable STP. One drawback of STP is that it does not allow for Layer 2 multi-pathing and may result in suboptimal utilization of available network links. Therefore, a fabric of Pluribus Networks switches does not use STP within the boundaries of the fabric. The use of STP is recommended for ad hoc networks that inter-operate in a heterogeneous, multi-vendor switch environment. Use this command to enable or disable STP on the network.

BPDUs are used in the election of the STP root switch and should not be received from an end host port. This command can block one port or multiple ports from processing BPDUs to prevent a malicious end host from masquerading as a switch and participating in the STP root election. If a BPDU is received by a port that is configured to block BPDUs, the port is shut down. Alternatively, you can filter BPDUs on a port. If the port is configured to filter BPDUs, the BPDU packet is dropped but the port is not shut down.

Examples

To display configuration information, use the following command:

```
CLI network-admin@switch > stp-port-show port 17
```

```
switch: pubdev01
port: 55
block: off
filter: off
edge: yes
guard: no
switch: pubdev01
port: 65
block: off
filter: off
guard: no
switch: pubdev01
port: 66
block: off
filter: off
guard: no
```

See Also

- `stp-modify`
- `stp-show`
- `stp-port-modify`
- `stp-state-show`
**stp-state-show**

This command is used to display information about Spanning Tree Protocol (STP).

Syntax: `stp-state-show [vlan vlan-id] [name name-string] [bridge-id mac-address] [bridge-priority bridge-priority-number] [root-id mac-address] [root-priority root-priority-number] [root-port root-port-number] [root-port(peer) root-port(peer)-number] [hello-time hello-time-number] [forwarding-delay forwarding-delay-number] [max-age max-age-number] [disabled port-list] [learning port-list] [forwarding port-list] [discarding port-list] [edge port-list] [designated port-list] [alternate port-list] [backup port-list] [vlag-mirror port-list] [internal|no-internal] [peer|no-peer]

- **vlan vlan-id**: Displays the VLAN identifier for the STP instance.
- **name name-string**: Specifies the name of the Spanning Tree Group (STG) for the STP instance.
- **bridge-id mac-address**: Specifies the MAC address of the bridge switch.
- **bridge-priority bridge-priority-number**: Specifies the priority for the bridge switch.
- **root-id mac-address**: Specifies the MAC address of the root switch.
- **root-priority root-priority-number**: Specifies the priority for the root switch.
- **root-port root-port-number**: Specifies the root port for STP.
- **root-port(peer) root-port(peer)-number**: Specifies the peer root port for STP.
- **hello-time hello-time-number**: Specifies the interval, in seconds, between the generation of configuration messages by the root switch.
- **forwarding-delay forwarding-delay-number**: Specifies the number of seconds that the interface waits before changing from its spanning-tree learning and listening states to the forwarding state.
- **max-age max-age-number**: Specifies the amount of time that the switch stores protocol information received on an interface.
- **disabled port-list**: Displays a list of ports disabled for STP.
- **learning port-list**: Displays a list of ports learning STP.
- **forwarding port-list**: Displays a list of ports forwarding STP packets.
- **discarding port-list**: Displays a list of ports discarding STP packets.
- **edge port-list**: Displays a list of edge ports.
- **designated port-list**: Displays a list of designated ports.
- **alternate port-list**: Displays a list of alternate ports.
- **backup port-list**: Displays a list of backup ports.
- **vlag-mirror port-list**: Displays a list of ports used as VLAG mirrored ports.
### Formatting Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>internal</td>
<td>no-internal</td>
</tr>
<tr>
<td>[peer</td>
<td>no-peer]</td>
</tr>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td></td>
</tr>
<tr>
<td>parsable-delim</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>character</td>
<td></td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show-dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td></td>
</tr>
<tr>
<td>vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td></td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>no-show-headers</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults** None.

**Access** CLI

**Usage** STP is a standard inter-switch protocol is used to ensure that an ad hoc network topology is loop-free at Layer 2, on a per VLAN basis. If your network connections form loops, and STP is disabled, packets recirculate between the switches and causes a decrease in network performance. If you are certain that your network is loop-free, you do not need to enable STP.

One drawback of STP is that it does not allow for Layer 2 multipathing and may result in suboptimal utilization of available network links. Therefore, a fabric of Pluribus Networks switches does not use STP within the boundaries of the fabric. The use of STP is recommended for ad hoc networks that interoperate in a heterogeneous, multi-vendor switch environment. Use this command to enable or disable STP on the network.
Examples  To display STP information, use the following command:

```
CLI network-admin@switch > stp-state-show
```

<table>
<thead>
<tr>
<th>switch:</th>
<th>pleiades25</th>
</tr>
</thead>
<tbody>
<tr>
<td>vlan:</td>
<td>1</td>
</tr>
<tr>
<td>name:</td>
<td>stg-default-stg</td>
</tr>
<tr>
<td>bridge-id:</td>
<td>64:0e:94:18:00:8f</td>
</tr>
<tr>
<td>bridge-priority:</td>
<td>32769</td>
</tr>
<tr>
<td>root-id:</td>
<td>64:0e:94:18:00:8f</td>
</tr>
<tr>
<td>root-priority:</td>
<td>32769</td>
</tr>
<tr>
<td>root-port:</td>
<td>0</td>
</tr>
<tr>
<td>hello-time:</td>
<td>2</td>
</tr>
<tr>
<td>forwarding-delay:</td>
<td>15</td>
</tr>
<tr>
<td>max-age:</td>
<td>20</td>
</tr>
<tr>
<td>disabled:</td>
<td>none</td>
</tr>
<tr>
<td>learning:</td>
<td>none</td>
</tr>
<tr>
<td>forwarding:</td>
<td>12,56,65-66,255</td>
</tr>
<tr>
<td>discarding:</td>
<td>none</td>
</tr>
<tr>
<td>edge:</td>
<td>65-66</td>
</tr>
<tr>
<td>designated:</td>
<td>12,56,65-66,255</td>
</tr>
<tr>
<td>alternate:</td>
<td>none</td>
</tr>
<tr>
<td>backup:</td>
<td>none</td>
</tr>
<tr>
<td>vlag-mirror:</td>
<td>none</td>
</tr>
</tbody>
</table>

See Also
- stp-modify
- stp-show
- stp-port-modify
- stp-port-show
**switch**

This command is used to login remotely to another switch in the fabric.

**Syntax**

```
switch switch-name name-string id switch-id command
```

- **switch-name name-string** Specify the name of the switch in the fabric.
- **id switch-id** Specify the identifier of the switch.
- **command** Specify the command and arguments to execute on the remote switch.

**Defaults** None.

**Access** CLI

**Usage** The ONVL Command Line Interface (CLI) can be used to login remotely from any switch to another switch in the fabric. Use this command to remotely log into another switch and execute commands on it.

**Examples** To log into switch-ops from switch-eng, use the following command:

```
CLI (network-admin@switch-eng)> switch name switch-ops
```

To log into switch-ops and execute the command node-info, use the following command:

```
CLI (network-admin@switch-eng) > switch name switch-ops node-info
```

```
Name: switch-ops
fab-name: pn-fab
mgmt-ip: 10.9.9.137/16
mgmt-vlan: 0
out-port: 0
version: 1.2.2633,pn-nvos-b144a-kvm
state: enabled
ports: 72
```

**See Also**

- `switch-config-export`
- `switch-config-import`
- `switch-config-show`
- `switch-config-copy-to-export`
- `switch-config-copy-to-import`
- `switch-info-show`
- `switch-reboot`
- `switch-setup-modify`
- `switch-setup-show`
**switch-info-show**

This command displays information about the switch.

**Syntax**  
```
switch-info-show
```

**Formatting Options**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use <code>all</code> to display all possible output.</td>
</tr>
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<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
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<td>Display output in ascending order.</td>
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</tr>
<tr>
<td>show-dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
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</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>no-show-headers</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults**  
None.

**Access**  
CLI

**Usage**  
Use this command to display information about the switch.
Examples To display information about the switch, use the following command:

```
CLI network-admin@switch > switch-info-show
```

```
switch: pleiades25
model: F64-L
chassis-serial: 1414KJ9000012
cpu1-type: Intel(R) Xeon(R) CPU E5-2620 0 @ 2.00GHz
cpu2-type: Intel(R) Xeon(R) CPU E5-2620 0 @ 2.00GHz
system-mem: 128G
switch-device: ok
switch-version: a0
polaris-device: ok
gandalf-version: caff0044
fan1-status: ok
fan2-status: ok
fan3-status: ok
fan4-status: ok
ps1-status: ok
ps2-status: n/a
```

See Also

- `switch`
- `switch-config-export`
- `switch-config-import`
- `switch-config-copy-to-export`
- `switch-config-copy-to-import`
- `switch-reboot`
- `switch-setup-modify`
- `switch-setup-show`
switch-poweroff

This command is used to power off the switch.

Syntax  switch-poweroff

Defaults  None.

Access  CLI

Usage  Use this command to power off the switch.

Examples  To power off the switch, use the following command:

CLI network-admin@switch > switch-poweroff

See Also
• switch
• switch-config-export
• switch-config-import
• switch-config-copy-to-export
• switch-config-copy-to-import
• switch-info-show
• switch-setup-modify
• switch-setup-show
• switch-status-show
switch-reboot

This command is used to reboot the switch.

Syntax  switch-reboot

Defaults None.

Access   CLI

Usage   Use this command to reboot the switch.

Examples To reboot the switch, use the following command:

```
CLI network-admin@switch > switch-reboot
```

See Also

- switch
- switch-config-export
- switch-config-import
- switch-config-copy-to-export
- switch-config-copy-to-import
- switch-info-show
- switch-setup-modify
- switch-setup-show
**switch-config-copy-to-import**

This command is used to create a configuration file to import onto another switch.

**Syntax**
```
switch-config-copy-to-import export-file switch-config name-string
```

- `export-file` Specify a name for the exported configuration file.
- `switch-config` Specify the switch configuration file.
- `name-string` Specify a name for the exported configuration file.

**Defaults** None.

**Access** CLI

**Usage** Use this command to copy a configuration and export it to another switch.

**Examples** To copy the configuration, use the following command:

```
CLI network-admin@switch > switch-config-copy-to-import export-file conf080113
```

**See Also**
- `switch`
- `switch-config-export`
- `switch-config-import`
- `switch-config-show`
- `switch-config-copy-to-export`
- `switch-info-show`
- `switch-reboot`
- `switch-setup-modify`
- `switch-setup-show`
**switch-config-export**

This command is used to create a configuration file to import onto another switch.

**Syntax**

```
switch-config-copy-export export-file name-string
```

Specify any of the following options:

- **export-file** *name-string* Specify a name for the exported configuration file.

**Defaults** None.

**Access** CLI

**History** Command introduced in nvOS Version 1.2.

**Usage** Use this command to export a configuration file.

**Examples** To export a file, use the following command:

```
CLI network-admin@switch > switch-config-copy-export export-file config800113
```

**See Also**

- switch
- switch-config-import
- switch-config-show
- switch-config-copy-to-export
- switch-info-show
- switch-reboot
- switch-setup-modify
- switch-setup-show
switch-config-import

This command is used to import a configuration file.

Syntax switch-config-import import-file name-string
apply-system-config|ignore-system-config
do-fabric-join|skip-fabric-join replace-switch|no-replace-switch

import-file name-string Specify a name for the exported configuration file.
Specify any of the following options:
apply-system-config| Specify to apply the imported configuration or ignore the
ignore-system-config imported file and keep the current configuration.
do-fabric-join| Specify if you want to join a fabric or skip this step.
skip-fabric-join replace-switch| Specify if you want to replace the current switch or not.
no-replace-switch

Defaults None.
Access CLI
Usage Use this command to import a configuration file.
Examples To import a copy of the existing configuration, use this command:

CLI network-admin@switch > switch-config-import import-file switch10

See Also
• switch
• switch-config-export
• switch-config-show
• switch-config-copy-to-export
• switch-config-copy-to-import
• switch-info-show
• switch-reboot
• switch-setup-modify
• switch-setup-show
switch-config-reset
This command is used to reset the configuration on a switch.

Syntax  switch-config-reset

Defaults None.

Access CLI

Usage Use this command to reset the configuration on the switch.

Examples To reset the configuration, use the following command:

```console
CLI network-admin@switch > switch-config-reset
```

CAUTION!
Using this command resets the configuration back to default settings.

See Also
- switch
- switch-config-export
- switch-config-import
- switch-config-copy-to-export
- switch-config-copy-to-import
- switch-info-show
- switch-reboot
- switch-setup-modify
- switch-setup-show
**switch-config-show**

This command is used to display configuration information about a switch.

Syntax

```
switch-config-show import-file name-string export-file name-string
```

import-file **name-string** Specifies the name of the imported configuration file.

export-file **name-string** Specifies the name of the exported configuration file.

apply-system-config|ignore-system-config|do-fabric|skip-fabric-join|replace-switch|no-replace-switch Specifies the action to take place after importing the configuration file.

**Formatting Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>parsable-delim</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>character</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-dups</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>layout</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Display column headers or not.</td>
</tr>
</tbody>
</table>

Defaults  None.

Access  CLI

Usage  Use this command to display information about import and export file settings on the switch.
Examples

To display the configuration, use the following command:

CLI

network-admin@switch > **switch-config-show**

```
switch   export-file
-------- -----------------------------------------------------
pubdev01 test.2014-02-24T09.06.51.tar.gz
pubdev01 switch-config-reset-backup.2014-06-30T12.23.10.tar.gz
pubdev01 ext13base.2013-12-11T06.05.45.tar.gz
pubdev02 switch-config-reset-backup.2014-06-30T13.11.43.tar.gz
pubdev02 mantis-switch-config.2013-10-10T10.13.23.tar.gz
pubdev02 switch-config-reset-backup.2015-01-21T10.55.14.tar.gz
pubdev03 switch-config-reset-backup.2014-12-08T16.35.58.tar.gz
pubdev03 switch-config-reset-backup.2014-12-08T17.30.42.tar.gz
```

See Also

- switch
- switch-config-export
- switch-config-import
- switch-config-copy-to-export
- switch-config-copy-to-import
- switch-info-show
- switch-reboot
- switch-setup-modify
- switch-setup-show
**switch-setup-modify**

This command is used to modify the setup of a switch.

```
Syntax switch-setup-modify switch-name name-string mgmt-ip ip-address
mgmt-netmask netmask mgmt-ip-assignment none
[mgmt-ip6 ip-address] [mgmt-netmask-ip6 netmask]
[in-band-ip ip-address] [in-band-netmask netmask] [gateway ip-address] [dns ip-address]
[dns-secondary-ip ip-address] [domain-name domain-name-string]
[ntp-server ntp-server-string] [timezone timezone-name]
eula-accepted true|false eula_timestamp date/time:
yyyy-mm-ddThh:mm:ss [password password-string] [date
yyyy-mm-ddThh:mm:ss] [phone-home|no-phone-home] analytics-store
default|optimized motd motd-string banner banner-string
```

Specify one or more of the following options:

- **switch-name name-string** Specify the name of the switch.
- **mgmt-ip ip-address** Specify the IP address that allows you to connect to the management interface through the dedicated 1000/100/10 Mbps mgmt0 or mgmt1 RJ45 management ports of the switch.
- **mgmt-netmask netmask** Specify the netmask for the IP address.
- **mgmt-ip-assignment none** Specify the IP assignment type for the management interface.
- **mgmt-ip6 ip-address** Specify the IPv6 IP address.
- **mgmt-netmask-ip6 netmask** Specify the IPv6 netmask.
- **mgmt-ip6-assignment none** Specify the IPv6 assignment type for the management interface.
- **in-band-ip ip-address** Specify the IP address to connect to the management interface through the network data ports of the switch.
- **in-band-netmask netmask** Specify the netmask for the IP address.
- **gateway ip-address** Specify the IP address of the gateway that connects to the outside IP network.
- **gateway-ip6 ip-address** Specify the IPv6 address of the gateway that connects to the outside IP network.
- **dns ip-address** Specify the IP address of the primary DNS for the switch.
- **dns-secondary-ip ip-address** Specify the IP address of a secondary DNS for the switch.
- **domain-name domain-name-string** Specify the domain name for the switch.
- **ntp-server ntp-server-string** Specify the name or IP address of the NTP server.
- **timezone timezone-name** Specify the timezone for the switch.
- **eula-accepted true|false** Specify if the EULA is accepted or not.
- **eula_timestamp date/time:** Specify the timestamp for the EULA.
- **password password-string** Specify a password for the switch.
- **date yyyy-mm-ddThh:mm:ss** Specify the date using the designated format.
phone-home

<table>
<thead>
<tr>
<th>Default</th>
<th>Access</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>CLI</td>
<td>Each switch must be setup when initially installed on the network. Use this command to modify the switch parameters.</td>
</tr>
</tbody>
</table>

Examples

To set up the switch with the name, PN-switch-1, IP address 10.9.9.71 on a /16 subnet with the gateway 10.9.9.1, DNS servers 10.9.9.11 and 10.9.9.1, the domain name pluribusnetworks.com, and NTP server, 0.us.pool.ntp.org. The switch is located in the US/Pacific timezone and the administrator is network-admin.

CLI network-admin@switch > switch-setup-modify name PN-switch-1 mgmt-ip 10.9.9.71 mgmt-netmask 16 gateway 10.9.9.1 dns 10.9.9.11 dns-secondary 10.9.9.1 domain-name pluribusnetworks.com ntp-server 0.us.pool.ntp.org username network-admin password adm1n

See Also

- switch
- switch-config-export
- switch-config-import
- switch-config-copy-to-export
- switch-config-copy-to-import
- switch-info-show
- switch-reboot
- switch-setup-show
**switch-local**

This command is used to execute CLI commands on the local switch. In some network topologies, complex names may be assigned to switches. switch-local executes commands on a local switch without specifying the switch name.

**Syntax**

```
switch-local
```

**Defaults** None.

**Access** CLI

**Usage** Use this command to execute commands on a local switch. Once you enter a specific CLI command, you can revert to the scope local.

**Examples** To execute a command on a local switch, use the following example:

```
CLI network-admin@switch > switch-local port-config
```

To execute commands on the fabric, enter a command without `switch-local` specified in the command line.

```
CLI network-admin@switch > vlan-modify
```

**See Also**

- `switch-config-export`
- `switch-config-import`
- `switch-config-show`
- `switch-config-copy-to-export`
- `switch-config-copy-to-import`
- `switch-info-show`
- `switch-reboot`
- `switch-setup-modify`
- `switch-setup-show`
**switch-route-create**

This command is used to modify the routing setup of a switch.

```
Syntax  switch-route-create network ip-address netmask netmask
        gateway-ip ip-address nic switch-nic nic
```

- **network ip-address**
- **netmask netmask**

Specify one or more of the following options:

- **gateway-ip ip-address**
- **nic switch-nic nic**

**Defaults**  None.
**Access**  CLI
**Usage**  Each switch must be setup when initially installed on the network. Use this command to modify the switch parameters.

**Examples**  TBD

```
CLI  network-admin@switch > switch-route-create
```

**See Also**
- switch
- switch-config-export
- switch-config-import
- switch-config-copy-to-export
- switch-config-copy-to-import
- switch-info-show
- switch-reboot
- switch-setup-show
switch-route-delete

This command is used to delete the routing setup of a switch.

Syntax

```
switch-route-delete network ip-address netmask netmask
```

None.

Access CLI

Usage This command is useful for Layer 3 communication on the fabric.

Examples TBD

```
CLI network-admin@switch > switch-route-delete
```

See Also

• switch
• switch-config-export
• switch-config-import
• switch-config-copy-to-export
• switch-config-copy-to-import
• switch-info-show
• switch-reboot
• switch-setup-show
switch-route-modify

This command is used to modify the routing setup of a switch.

Syntax

switch-route-modify network ip-address netmask netmask
gateway-ip ip-address nic switch-nic nic

network ip-address
netmask netmask

Specify one or more of the following options:
gateway-ip ip-address
nic switch-nic nic

Defaults None.
Access CLI
Usage This command is useful for Layer 3 communication on the fabric.
Examples TBD

CLI network-admin@switch > switch-route-modify

See Also
• switch
• switch-config-export
• switch-config-import
• switch-config-copy-to-export
• switch-config-copy-to-import
• switch-info-show
• switch-reboot
• switch-setup-show
**switch-route-show**

This command is used to display basic setup parameters for a switch.

**Syntax**

switch-route-show

**Formatting Options**

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fields-to-display</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>parsable-delim</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td></td>
<td>show-interval seconds-interval Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td></td>
<td>show-diff-interval Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td></td>
<td>show-headers</td>
</tr>
<tr>
<td></td>
<td>limit-output number Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td></td>
<td>count-output</td>
</tr>
<tr>
<td></td>
<td>unscaled</td>
</tr>
<tr>
<td></td>
<td>sum-by</td>
</tr>
</tbody>
</table>

**Defaults** None.

**Access**

**Usage** This command is useful for Layer 3 communication on the fabric.

**Examples** To display basic parameters, use the following command:

CLI network-admin@switch > switch-route-show

**See Also**

- switch
- switch-config-export
- switch-config-import
- switch-config-copy-to-export
- switch-config-copy-to-import
• switch-info-show
• switch-reboot
• switch-setup-modify
**switch-setup-show**

This command is used to display basic setup parameters for a switch.

**Syntax**

```
switch-setup-show
```

**Formatting Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>format</code></td>
<td>Display output using a specific parameter. Use <code>all</code> to display all possible output.</td>
</tr>
<tr>
<td><code>fields-to-display</code></td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td><code>parsable-delim character</code></td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td><code>sort-desc</code></td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td><code>show-dups</code></td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>`layout vertical</td>
<td>horizontal`</td>
</tr>
<tr>
<td><code>show-interval seconds-interval</code></td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td><code>show-diff-interval</code></td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>`show-headers</td>
<td>no-show-headers`</td>
</tr>
<tr>
<td><code>limit-output number</code></td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td><code>count-output</code></td>
<td>Display the number of entries in the output. This is useful with <code>vRouter show commands</code>.</td>
</tr>
<tr>
<td><code>unscaled</code></td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td><code>sum-by</code></td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults** None.

**Access**

**Usage** Each switch requires an initial setup before installing on the network. Use this command to display basic parameters for the local switch.
Examples  To display basic parameters, use the following command:

```
CLI network-admin@switch > switch-setup-show
```

```
name: pleiades24
mgmt-ip 10.13.11.107/16
in-band-ip: 192.168.2.6/24
gateway: 10.13.11.1
dns: 10.13.12.1
dns-secondary: 8.8.8.8
domain-name: pluribusnetworks.com
ntp-server: 0.us.pool.ntp.org
timezone: US/Pacific
date: 2015-05-26,09:48:43
phone-home: yes
hostid: 167772208
analytics-store: default
```

See Also

- switch
- switch-config-export
- switch-config-import
- switch-config-copy-to-export
- switch-config-copy-to-import
- switch-info-show
- switch-reboot
- switch-setup-modify
switch-status-show

This command is used to display the status of the switch.

Syntax

switch-status-show [start-time date/time: yyyy-mm-ddThh:mm:ss] [end-time date/time: yyyy-mm-ddThh:mm:ss] [duration duration: #d#h#m#s] [interval duration: #d#h#m#s] [since-start|no-since-start] [older-than duration: #d#h#m#s] [within-last duration: #d#h#m#s] [name name-string] [value value-number] [units degrees-C|volts|rpm] [state ok|fault]

Formatting Options

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fields-to-display</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval seconds-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>no-show-headers</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

Defaults

None

Access

CLI

Usage

Use this command to display the status of a switch.
Examples  To display the status, use the following command:

CLI network-admin@switch > **switch-status-show**

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Units</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>pleiades25 Switch Temp</td>
<td>37</td>
<td>degrees-C</td>
<td>ok</td>
</tr>
<tr>
<td>pleiades25 CPU1 Temp</td>
<td>41</td>
<td>degrees-C</td>
<td>ok</td>
</tr>
<tr>
<td>pleiades25 CPU2 Temp</td>
<td>45</td>
<td>degrees-C</td>
<td>ok</td>
</tr>
<tr>
<td>pleiades25 System Temp</td>
<td>39</td>
<td>degrees-C</td>
<td>ok</td>
</tr>
<tr>
<td>pleiades25 Peripheral Temp</td>
<td>30</td>
<td>degrees-C</td>
<td>ok</td>
</tr>
<tr>
<td>pleiades25 PCH Temp</td>
<td>45</td>
<td>degrees-C</td>
<td>ok</td>
</tr>
<tr>
<td>pleiades25 switch-5.0v volts</td>
<td></td>
<td></td>
<td>ok</td>
</tr>
<tr>
<td>pleiades25 switch-2.5v volts</td>
<td></td>
<td></td>
<td>ok</td>
</tr>
<tr>
<td>pleiades25 switch-0.95v volts</td>
<td></td>
<td></td>
<td>ok</td>
</tr>
<tr>
<td>pleiades25 switch-1.8v volts</td>
<td></td>
<td></td>
<td>ok</td>
</tr>
<tr>
<td>pleiades25 switch-1.2v volts</td>
<td></td>
<td></td>
<td>ok</td>
</tr>
<tr>
<td>pleiades25 fan-1 rpm</td>
<td>7050</td>
<td>rpm</td>
<td>ok</td>
</tr>
<tr>
<td>pleiades25 fan-2 rpm</td>
<td>8057</td>
<td>rpm</td>
<td>ok</td>
</tr>
<tr>
<td>pleiades25 fan-3 rpm</td>
<td>8057</td>
<td>rpm</td>
<td>ok</td>
</tr>
<tr>
<td>pleiades25 fan-4 rpm</td>
<td>7050</td>
<td>rpm</td>
<td>ok</td>
</tr>
</tbody>
</table>

See Also

- switch
- switch-config-export
- switch-config-import
- switch-config-copy-to-export
- switch-config-copy-to-import
- switch-info-show
- switch-reboot
- switch-setup-modify
- switch-setup-show
Examples  To display the status of a switch, use the following command:

```
switch-status-show
Switch: netops-1
x86-system-temp[C]: 37
x86-peripheral-temp[C]: 27
x86-pch-temp[C]: 43
x86-s-vtt: ok
x86-1p1v: ok
x86-1p5v: ok
x86-3p3v: ok
x86-3p3vsb: ok
x86-5p0v: ok
x86-5p0vsb: ok
x86-12p0v: ok
x86-vbat: ok
switch-temp[C]: 45
switch-0p95v: ok
switch-1p8v: 45
switch-t1p2v: fault
fan1-speed[RPM]: 3525
fan2-speed[RPM]: 3525
fan3-speed[RPM]: 3525
fan4-speed[RPM]: 3760
```
**switch-status-settings-modify**

This command is used to modify the settings for a switch status.

**Syntax**

```
switch-status-settings-modify enable|disable interval duration: #d#h#m#s disk-space disk-space-number
```

**Specify one or more of the following options:**

- **enable|disable**
  
  Specify if you want to enable or disable collecting information about the switch status.

- **interval duration:** #d#h#m#s
  
  Specify an interval duration to collect status information.

- **disk-space disk-space-number**
  
  Specify the disk size for the status information.

**Defaults** None

**Access** CLI

**Usage** Use this command to modify the settings for collecting status information on the switch.

**Examples** To modify the disk space to 4Gb, use the following command:

```
CLI network-admin@switch > switch-status-settings-modify disk-space 4g
```

**See Also**

- `system-stats-show`
- `system-stats-settings-show`
### switch-status-settings-show

This command is used to modify the settings for a switch status.

**Syntax**
```
switch-status-settings-modify enable|disable interval
duration: #d#h#m#s disk-space disk-space-number
```

####.enable|disable
Specify if you want to enable or disable collecting information about the switch status.

#### interval duration:
Specify an interval duration to collect status information.

#### disk-space
Specify the disk size for the status information.

#### Formatting Options

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use <code>all</code> to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>no-show-headers</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

#### Defaults
None

#### Access
CLI

#### Usage
Use this command to modify the settings for collecting status information on the switch.
Examples  To modify the disk space to 4Gb, use the following command:

```
CLI network-admin@switch > switch-status-settings-show
```

```
switch:       pubdev01
enable:       yes
interval:     1m
disk-space:   50M
switch:       pubdev03
enable:       yes
interval:     1m
disk-space:   50M
switch:       pubdev02
enable:       yes
interval:     1m
disk-space:   50M
```

See Also

- `switch`
- `switch-config-export`
- `switch-config-import`
- `switch-config-copy-to-export`
- `switch-config-copy-to-import`
- `switch-info-show`
- `switch-reboot`
- `switch-setup-modify`
- `switch-setup-show`
system-stats-show

This command is used to display information about system statistics.

Syntax
system-stats-show [time date/time: yyyy-mm-ddThh:mm:ss] [start-time date/time: yyyy-mm-ddThh:mm:ss] [end-time date/time: yyyy-mm-ddThh:mm:ss] [duration duration: #d#h#m#s] [interval duration: #d#h#m#s] [older-than duration: #d#h#m#s] [within-last duration: #d#h#m#s s] [uptime duration: #d#h#m#s] [paging duration: #d#h#m#s]

time date/time: yyyy-mm-ddThh:mm:ss
Specifies a specific time and date to display statistics.

start-time date/time: yyyy-mm-ddThh:mm:ss
Specifies the start time of the system stats.

end-time date/time: yyyy-mm-ddThh:mm:ss
Specifies the end time of the system stats.

duration duration: #d#h#m#s
Specifies the duration in the format #d#h#m#s

interval duration: #d#h#m#s
Specifies the number of seconds to reprint the system stats to the CLI.

older-than duration: #d#h#m#s
Specifies stats older than a specific duration.

within-last duration: #d#h#m#s s
Specifies stats that occurred within the last duration.

uptime duration: #d#h#m#s
Specifies the uptime of the switch.

paging paging-number
Specifies the number pages collected.

Formatting Options

format
Display output using a specific parameter. Use all to display all possible output.

fields-to-display

parsable-delim character
Display output formatted for machine parsing using a specified delimiter.

sort-asc
Display output in ascending order.

sort-desc
Display output in descending order.

show-dups
Display duplicate entries in the output.

layout
Format the output in a vertical or horizontal layout.

vertical|horizontal

show-interval seconds-interval
Repeat the show command at a specified interval.

show-diff-interval
Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.

show-headers|no-show-headers
Display column headers or not.
Defaults  None.

Access  CLI

Usage  Use this command to display system statistics.

Examples  To display system statistics, use the following command:

```
CLI network-admin@switch > system-stats-show format all layout vertical
```

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>switch:</td>
<td>pleiades24</td>
</tr>
<tr>
<td>uptime:</td>
<td>5d19h39m36s</td>
</tr>
<tr>
<td>used-mem:</td>
<td>42%</td>
</tr>
<tr>
<td>used-mem-val:</td>
<td>54.8G</td>
</tr>
<tr>
<td>used-swap:</td>
<td>0%</td>
</tr>
<tr>
<td>used-swap-val:</td>
<td>0</td>
</tr>
<tr>
<td>paging:</td>
<td>0</td>
</tr>
<tr>
<td>cpu-user:</td>
<td>0%</td>
</tr>
<tr>
<td>cpu-sys:</td>
<td>4%</td>
</tr>
<tr>
<td>cpu-idle:</td>
<td>95%</td>
</tr>
<tr>
<td>log-alerts:</td>
<td>48</td>
</tr>
</tbody>
</table>

See Also  
- service-stats-show
system-stats-settings-modify

This command is used to modify the settings for collecting switch stats.

Syntax

```
switch-stats-settings-modify enable|disable interval duration: #d#h#m#s disk-space disk-space-number
```

Specify one or more of the following options:

- **enable|disable**
  - Specify if you want to enable or disable collecting information about the switch status.

- **interval duration:**
  - Specify an interval duration to collect status information.
  - Format: #d#h#m#s

- **disk-space**
  - Specify the disk size for the status information.

**Defaults**: None

**Access**: CLI

**Usage**: Use this command to modify the settings for collecting status information on the switch.

**Examples**: To modify the disk space to 4GB, use the following command:

```
CLI network-admin@switch > switch-stats-settings-modify disk-space 4g
```

**See Also**

- `system-stats-settings-show`
- `system-stats-show`
system-stats-settings-show

This command is used to display the settings for collecting switch statistics.

Syntax
system-stats-settings-show enable|disable interval duration: #d#h#m#s disk-space disk-space-number

enable|disable
Specifies if statistics collection is enabled or disabled.

interval duration: #d#h#m#s
Specify an interval duration to collect status information.

disk-space
disk-space-number
Specify the disk size for the status information.

Formatting Options

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format fields-to-display</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
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<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval seconds-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>no-show-headers</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

Defaults None
Access CLI
Usage Use this command to display the settings for collecting statistics on the switch.
Examples  To modify the disk space to 4Gb, use the following command:

```
CLI network-admin@switch > system-stats-settings-show
```

```
switch: pleiades24
enable: yes
interval: 1m
disk-space: 50M
```

See Also

- `switch`
- `switch-config-export`
- `switch-config-import`
- `switch-config-copy-to-export`
- `switch-config-copy-to-import`
- `switch-info-show`
- `switch-reboot`
- `switch-setup-modify`
- `switch-setup-show`
T Commands

**tech-support-show**

This command is used to assist Pluribus Networks Technical Assistance Center (TAC) with troubleshooting a switch.

**Syntax**

```
  tech-support-show
```

**Defaults** None

**Access** CLI

**Usage** Information in the show output provides TAC with insight to the switch if there are problems at a customer site. The output is a compilation of all show commands.

**Examples** To display information about a switch, use the following command:

```
CLI network-admin@switch > tech-support-show
```

```
==================== admin-service-show ======================  
if:           mgmt  
ssh:          on   
nfs:          on   
web:          on   
web-ssl:      off  
web-ssl-port: 443  
web-port:     80   
snmp:         off  
net-api:      on   
icmp:         on   
if:           data  
ssh:          on   
nfs:          on   
web:          on   
web-ssl:      off  
web-ssl-port: 443  
web-port:     80   
snmp:         off  
net-api:      on   
icmp:         on   

==================== admin-sftp-show =========================  
sftp-user:     sftp  
enable:        yes  
```

traceroute
This command is used to identify routes between hosts.

Syntax  traceroute options host

Defaults  None

Access  CLI

Usage  Use this command to identify hops between hosts on the network.
Examples  To see the routes between a switch and yodel.com, use the following command:

```
CLI network-admin@switch > traceroute yodel.com
```

```
traceroute: Warning: yodel.com has multiple addresses; using 98.138.253.109
traceroute: Warning: Multiple interfaces found; using 10.9.100.100 @ igb0
traceroute to yodel.com (98.138.253.109), 30 hops max, 40 byte packets
1  router.pluribusnetworks.com (10.11.11.1)  0.712 ms  0.636 ms  0.659 ms
2  10.23.5.2 (10.23.5.2)  0.704 ms  0.654 ms  0.613 ms
3  xe-8-0-0-3465-sur01.santaclara.ca.sfba.comcast.net (50.203.11.17)  1.117 ms  1.102 ms  1.093 ms
4  te-0-10-0-2-ar01.sfsutro.ca.sfba.comcast.net (68.85.86.17)  3.343 ms  3.859 ms  3.959 ms
5  he-0-9-0-0-ar01.santaclara.ca.sfba.comcast.net (69.139.198.138)  4.360 ms  4.464 ms  4.379 ms
6  * * *
7  be-10910-cr01.sanjose.ca.ibone.comcast.net (68.86.86.102)  6.956 ms  7.639 ms  9.245 ms
8  50.242.148.34 (50.242.148.34)  6.606 ms  6.567 ms  6.728 ms
9  * * *
10 * * *
11 4.34.50.38 (4.34.50.38)  30.548 ms  135.574 ms  53.269 ms
12 ae-0.pat1.nez.yodel.com (216.115.100.8)  55.840 ms
    ae-6.pat2.nez.yodel.com (216.115.104.116)  55.689 ms  55.324 ms
13 ae-1.msr2.ne1.yodel.com (216.115.100.7)  54.939 ms
    ae-1.msr1.ne1.yodel.com (216.115.100.5)  58.989 ms
    ae-0.msr1.ne1.yodel.com (216.115.100.1)  40.204 ms
14 ae-1.clr2-a-gdc.ne1.yodel.com (98.138.0.19)  55.725 ms
    unknown-98-138-97-x.yodel.com (98.138.97.3)  55.829 ms
    ae-0.clr1-a-gdc.ne1.yodel.com (98.138.144.21)  55.886 ms
15 et-18-25.fab3-1-gdc.ne1.yodel.com (98.138.0.89)  55.507 ms
    et-17-1.fab1-1-gdc.ne1.yodel.com (98.138.0.79)  40.852 ms
    et-18-25.fab3-1-gdc.ne1.yodel.com (98.138.0.89)  55.513 ms
16 po-17.bas1-7-prd.ne1.yodel.com (98.138.240.20)  41.726 ms
    po-11.bas1-7-prd.ne1.yodel.com (98.138.240.8)  63.368 ms
    po-16.bas2-7-prd.ne1.yodel.com (98.138.240.34)  56.676 ms
17 * * *
18 * * *
19 * * *
20 * * *
21 * * *
22 * * *
23 * * *
24 * * *
25 * * *
26 * * *
27 * * *
28 * * *
29 * * *
30 * * *
```
transaction-rollback-to

This command is used to roll back the fabric to a specific fabric transaction number. If a failure occurs on the fabric, transactions on nodes in the fabric can become out of synch. Once transactions are out of synch, no further transactions can be executed across the scope of local, fabric, or cluster. Unjoining and rejoining the fabric causes the node to lose its configuration.

As part of a single node transaction recovery, you can roll back the transaction number to a previous one.

**Syntax**

```
transaction-rollback-to scope local|cluster|fabric tid tid-number
```

**scope**

Specify if you want to rollback the transaction number on a local, cluster, or fabric scope.

**tid tid-number**

Specify the transaction number to rollback the transaction.

**Defaults**

None

**Access**

CLI

**Usage**

Use this command to roll back the fabric to a specific transaction ID number. This may be necessary to resynchronize the fabric without forcing nodes to unjoin and rejoin the fabric. If multiple nodes are out of synch, you must recover each node separately.

**Examples**

To roll back to the fabric transaction ID to 14, use the following syntax:

```cli
CLI network-admin@switch > transaction-rollback-to scope fabric tid 14
```

This command produces output only if an error has occurred during the transaction.

```cli
CLI network-admin@switch > transaction-rollback-to scope fabric tid 5
```

Warning: rolled back transactions are unrecoverable unless another fabric node has them. Proceed? [y/n] y

**See Also**

- transaction-rollforward-to
- transaction-show
transaction-rollforward-to

This command is used to roll forward the fabric to a specific fabric transaction number.

Syntax

```
transaction-rollforward-to scope local|cluster|fabric tid tid-number
```

**scope**

Specify if you want to roll forward the transaction number on a local, cluster, or fabric scope.

**tid tid-number**

Specify the transaction number to roll forward the transaction.

Defaults   None

Access   CLI

Usage   Use this command to roll forward the fabric to a specific transaction ID number. This may be necessary to resynchronize the fabric without forcing nodes to unjoin and rejoin the fabric. If multiple nodes are out of synch, you must recover each node separately.

Examples   To roll forward to the fabric transaction ID to 14, use the following syntax:

```
CLI network-admin@switch > transaction-forward-to scope fabric tid 14
```

This command produces output only if an error has occurred during the transaction.

See Also

- transaction-rollback-to
- transaction-show
transaction-show

This command is used to display information about fabric transaction status for the current node.

Syntax

```
transaction-show [start-time date/time: yyyy-mm-ddThh:mm:ss] [end-time date/time: yyyy-mm-ddThh:mm:ss ]
[scope local|cluster|fabric] [tid tid-number] [start-tid start-tid-number] [end-tid end-tid-number] [state start|commit-request|commit|commit-done|abort-start|abort-done|remote-start|remote-commit-request|
remote-commit|remote-commit-prep|remote-commit-done|remote-abort-start|remote-abort-done undo-info]
[command command-string] [undo-command undo-command-string]
```

start-time date/time: yyyy-mm-ddThh:mm:ss
Specify the start time to show transactions.

date-time: yyyy-mm-ddThh:mm:ss
Specify the end time to show transactions.

scope
local|cluster|fabric
Specify if you want to display the transaction numbers on a local, cluster, or fabric scope.

tid tid-number
Displays the transaction number.

start-tid start-tid-number
Displays the starting transaction ID number.

end-tid end-tid-number
Displays the end transaction ID number.

state
start|commit-request|commit|commit-done|abort-start|
abort-done|remote-start|remote-commit-request|
remote-commit|remote-commit-prep|remote-commit-done|
remote-abort-start|remote-abort-done undo-info
Displays the final state of the transaction. Typically, this is a type of commit to indicate that the transaction is completed. Abort indicates that the transaction did not complete.

command command-string
Specify the command used by the transaction code to roll forward the transaction.

undo-command undo-command-string
Specify the command used by the transaction code to roll back the transaction.

Formatting Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
</tbody>
</table>
Defaults   None
Access   CLI
Usage   Use this command to display the changes that occur when the
        transaction-rollforward-to or transaction-rollback-to commands are used.
        This may be necessary to resynchronize the fabric without forcing nodes to unjoin and
        rejoin the fabric. If multiple nodes are out of synch, you must recover each node separately.

        The scope parameter indicates which set of transactions to display as each scope has an
        independent set of transactions associated with it. The default scope is fabric unless another scope is
        specified.

        You cannot copy and paste commands and undo-commands because they include information that
        cannot apply to new commands. These fields are informational-only and allow you to see exactly what
        happens to the configuration when you roll forward or roll back the transaction ID.

        Once you decide which node you want to modify and the transaction that you want to roll forward
        or roll back, you use the transaction-rollforward-to or transaction-rollback-to commands to re-run the command (roll forward) or undo the command (rollback) on the node. This applies only to the local node.
Examples  To display information about transactions, use the following syntax:

```
CLI network-admin@switch > transaction-show
```

<table>
<thead>
<tr>
<th>start-time</th>
<th>tid</th>
<th>state</th>
<th>command</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:51:29</td>
<td>1</td>
<td>commit-done</td>
<td>vnet-create id a000014:1 name vnet1 scope fabric vrg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>a000014:0 vlans 5 config-admin vnet_mgr_id a000014:0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>vnet_mgr_zone_id a000014:1 vnet_mgr_location 167772180</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>vrg_created_by_vnet true admin_role a000014:400</td>
</tr>
<tr>
<td>14:51:45</td>
<td>2</td>
<td>commit-done</td>
<td>vnet-manager-interface-add vnet-manager-name vnet1-mgr nic eth0.11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ip 11.11.11.11 netmask 24 vlan 11 no-exclusive nic-enable vrrp-priority</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>255</td>
</tr>
<tr>
<td>14:51:51</td>
<td>3</td>
<td>commit-done</td>
<td>vlan-create id 11 scope fabric stats</td>
</tr>
</tbody>
</table>

See Also
- transaction-rollback-to
- transaction-rollforward-to
**trunk-create**

This command creates a new trunk for link aggregation on a switch.

```
trunk-create name name-string trunk-id port port-list
    [speed disable|100m|1g|10g|40g][egress-rate-limit unlimited]
    [auto-neg|no-autoneg] [jumbo|no-jumbo] [lacp-mode
    off|passive|active]lacp-priority number lacp-timeout slow|fast
    reflect|no-reflect edge-switch|no-edge-switch pause|no-pause
    description description-string loopback|no-loopback
    mirror-receive-only|no-mirror-receive-only unknown-ucast-level
    unknown-ucast-level-string unknown-mcast-level
    unknown-mcast-level-string broadcast-level
    broadcast-level-string port-mac-address mac-address send-port
    send-port-number
```

**Defaults**

- **name name-string**
  - Specify the name for the trunk configuration.

- **port port-list**
  - Specify the port number(s) for the link(s) to aggregate into the trunk.

**Specify any of the following options:**

- **speed**
  - Specify the port speed or disable the port.

- **egress-rate-limit unlimited**
  - Specify an egress rate limit for the configuration.

- **eth-mode 1000base-x|sgmii**
  - Specify the Ethernet mode, either 1000base-x or sgmii.

- **auto-neg|no-autoneg**
  - Specify if the port auto negotiates network traffic or does not.

- **jumbo|no-jumbo**
  - Specify if the port can receive jumbo frames.

- **enable|disable**
  - Specify if the trunk is enabled or disabled. The trunk is enabled by default.

- **lacp-mode off|passive|active**
  - Specify the Link Aggregation Control Protocol (LACP) mode for the configuration.

- **lacp-priority number**
  - Specify the LACP priority. This is a number between 1 and 65535 with a default value of 32768.

- **lacp-timeout slow|fast**
  - Specify the LACP time out as slow (30 seconds) or fast (4 seconds).

- **reflect|no-reflect**
  - Specify reflect or no reflect.

- **edge-switch|no-edge-switch**
  - Specify if the switch is an edge switch.

- **pause|no-pause**
  - Specify if pause frames are sent.

- **description description-string**
  - Specify a description for the trunk configuration.

- **loopback|no-loopback**
  - Specify loopback if you want to use loopback.

- **mirror-receive-only|no-mirror-receive-only**
  - Specify if the configuration receives mirrored traffic.
Defaults  None.
Access  CLI
Usage  Trunks can be used to aggregate network links at Layer 2 on the local switch. Use this command to create a new trunk.
Examples  To create a trunk with the name, trunk-12, and aggregate the links connected to ports 1, 2, and 3:

```
CLI network-admin@switch > trunk-create name trunk-12 port 1,2,3
```
trunk-delete

This command is used to delete an existing trunk from the configuration.

Syntax  
```
trunk-delete name name-string
```

name name-string    Specify the trunk name.

Defaults   None.
Access   CLI
Usage   Trunks can be used to aggregate network links at Layer 2 on the local switch. Use this command to delete an existing trunk.

Examples   To delete the existing trunk, 476, use the following command:

```
CLI network-admin@switch > trunk-delete name trunk-476
```

See Also
- trunk-create
- trunk-modify
- trunk-show
trunk-modify

This command modifies a trunk for link aggregation on a switch.

Syntax

```
trunk-modify name name-string trunk-id port port-list
  [speed disable|100m|1g|10g|40g]
  [egress-rate-limit unlimited]
  [auto-neg|no-autoneg]
  [lacp-mode off|passive|active]
  [lacp-priority number lacp-timeout slow|fast]
  [reflect|no-reflect]
  [edge-switch|no-edge-switch]
  [pause|no-pause]
  [description description-string]
  [loopback|no-loopback]
  [mirror-receive-only|no-mirror-receive-only]
  [unknown-ucast-level unknown-ucast-level-string]
  [unknown-mcast-level unknown-mcast-level-string]
  [broadcast-level broadcast-level-string]
  [port-mac-address mac-address send-port send-port-number]
```

**Parameters**

- **name** *name-string*
  
  Specify the name for the trunk configuration.

- **port** *port-list*
  
  Specify the port number(s) for the link(s) to aggregate into the trunk.

- **speed**

  Specify the port speed or disable the port.

- **egress-rate-limit**

  Specify an egress rate limit for the configuration.

- **eth-mode**

  Specify the Ethernet mode, either 1000base-x or sgmii.

- **auto-neg** *

  Specify if the port auto negotiates network traffic or does not.

- **jumbo** *

  Specify if the port can receive jumbo frames.

- **enable** *

  Specify if the trunk is enabled or disabled. The trunk is enabled by default.

- **lacp-mode**

  Specify the Link Aggregation Control Protocol (LACP) mode for the configuration.

- **lacp-priority** *

  Specify the LACP priority. This is a number between 1 and 65535.

- **lacp-timeout**

  Specify the LACP time out as slow (30 seconds) or fast (4 seconds).

- **reflect** *

  Specify reflect or no reflect.

- **edge-switch** *

  Specify if the switch is an edge switch.

- **pause** *

  Specify if pause frames are sent.

- **description** *

  Specify a description for the trunk configuration.

- **loopback** *

  Specify loopback if you want to use loopback.

- **mirror-receive-only** *

  Specify if the configuration receives mirrored traffic.

- **unknown-ucast-level** *

  Specify an unknown unicast level in percent. The default value is 100%.
Defaults   None
Access   CLI
Usage   Trunks can be used to aggregate network links at Layer 2 on the local switch. Use this command to modify the links for a trunk.

Examples  To modify a trunk with the name trunk-476, and to aggregate the links connected to ports 11, 21, and 31.

CLI   network-admin@switch > trunk-modify name trunk-476 port 11,21,31

See Also
- trunk-create
- trunk-delete
- trunk-show
trunk-show

This command displays the list of links aggregated into a trunk.

Syntax

intf intf-number
  Specifies the interface number.
name name-string
  Specifies the name for the trunk configuration.
port port-list
  Specifies the port number(s) for the link(s) to aggregate into the trunk.
speed disable|100m|1g|10g|40g
  Specifies the port speed or disable the port.
egress-rate-limit unlimited
  Specifies if an egress rate limit is configured.
  Specifies the Ethernet mode for the trunk.
auto-neg|no-autoneg
  Specifies if the port auto negotiates network traffic or does not.
jumbo|no-jumbo
  Specifies if the port can receive jumbo frames.
enable|disable
  Specifies if the trunk is enabled or disabled. The trunk is enabled by default.
lACP Mode
- **off**, **passive**, or **active**

LACP Priority
- `number` specifies the LACP priority. This is a number between 1 and 65535.

LACP Timeout
- `slow` or `fast` specifies the LACP timeout as slow (30 seconds) or fast (4 seconds).

Reflect or No-Reflect
- `reflect` or `no-reflect`

Edge Switch or No-Edge Switch
- `edge-switch` or `no-edge-switch`

Pause or No-Pause
- `pause` or `no-pause`

Description
- `description` specifies a description for the trunk configuration.

Loopback or No-Loopback
- `loopback` or `no-loopback`

Mirror Receive Only or No Mirror Receive Only
- `mirror-receive-only` or `no-mirror-receive-only`

Unknown Unicast Level
- `unknown-ucast-level` or `no-unknown-ucast-level`

Unknown Multicast Level
- `unknown-mcast-level` or `no-unknown-mcast-level`

Broadcast Level
- `broadcast-level` or `no-broadcast-level`

Port MAC Address
- `port-mac-address` or `mac-address`

Send Port
- `send-port` or `send-port-number`

Formatting Options

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<td>Display output using a specific parameter. Use <strong>all</strong> to display all possible output.</td>
</tr>
<tr>
<td><strong>fields-to-display</strong></td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
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<td>Display output in ascending order.</td>
</tr>
<tr>
<td><strong>sort-asc</strong></td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td><strong>sort-desc</strong></td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td><strong>show dups</strong></td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td><strong>layout vertical</strong></td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td><strong>layout horizontal</strong></td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td><strong>show-interval seconds-interval</strong></td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
</tbody>
</table>

Pluribus Networks ONVL Version 2.3
show-headers | no-show-headers
---|---
Display column headers or not.

limit-output number
Limit the display output to a specific number of entries.

count-output
Display the number of entries in the output. This is useful with `vRouter show` commands.

unscaled
Display full values in the output instead of scaled approximate values.

sum-by
Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.

### Defaults
None.

### Access
CLI

### Usage
Trunks can be used to aggregate network links at Layer 2 on the local switch. Use this command to modify the links for a trunk.

### Examples
To display a list of all trunks and the aggregated links, use the following command:

```
CLI network-admin@switch > trunk-show
```

```
switch:               pubdev01
intf:                 128
name:                 trunk-top
port:                 26,47-48
speed:                10g
autoneg:              off
jumbo:                off
enable:               off
lacp-mode:            off
lacp-priority:        32768
lacp-timeout:         slow
reflect:              off
edge-switch:          no
pause:                no
description:          description:
loopback:             off
mirror-only:          off
unknown-ucast-level:  100%
unknown-mcast-level:  100%
broadcast-level:      100%
lport:                0
rswitch-default-vlan: 0
port-mac-address:     06:a0:00:03:00:80
status:               up,PN-switch,PN-fabric,PN-cluster
config:               fd
send-port:            26
```
U Commands

user-create

This command is used to create users on the local switch or fabric.

Syntax

user-create name name-string scope local|fabric
initial-role role name

name name-string
Specify a name for the user.
scope local|fabric
Specify a scope for the user. Select local to allow access to the local switch only. Selecting fabric allows access to the fabric.
password
password-string
Specify a password for the user.
initial-role role name
Optionally, specify the initial role for the user.

Defaults None.
Access CLI
Usage Use this command to create users on the local switch or fabric. When you specify a role, it is a role defined using the role- commands.

Examples To create the user, net-access, password, sw0rdf1ght, on the fabric, use the following command:

CLI network-admin@switch > user-create name netaccess scope fabric
password:
Confirm password:

See Also
• user-delete
• user-modify
• user-show
• user-role-add
• user-role-remove
• user-role-show
• user-password-set
user-delete

This command is used to delete users on the local switch or fabric.

Syntax
user-delete name name-string

name name-string Specify a name for the user.

Defaults None.

Access CLI

Usage Use this command to delete users on the local switch or fabric.

Examples To delete the user, net-access, use the following command:

CLI network-admin@switch > user-delete name netaccess

See Also
• user-create
• user-modify
• user-show
• user-role-add
• user-role-remove
• user-role-show
• user-password-set
user-modify
This command is used to modify users on the local switch or fabric.

Syntax  user-modify name name-string password password-string

name name-string Specify a name for the user.
Specify one or more of the following options:
password Specify a password for the user. You are prompted for the
password-string password after you press the enter key.

Defaults  None.
Access  CLI
Usage  Use this command to modify users on the local switch or fabric.
Examples  To change the password the user, net-access user, use the following command:

CLI network-admin@switch > user-modify name netaccess

See Also
• user-create
• user-delete
• user-show
• user-role-add
• user-role-remove
• user-role-show
• user-password-set
user-show

This command is used to display a list of users on the local switch or fabric.

Syntax user-show name name-string scope local|fabric [uid uid-number] server aaa-tacacs name initial-role role name

- **name name-string**: Displays the name of the user.
- **scope local|fabric**: Filters the scope for the user. Select local to allow access to the local switch only. Selecting fabric allows access to the fabric.
- **uid uid-number**: Filters the user identifier.
- **server aaa-tacacs name**: Filters the AAA TACACS server name.

Formatting Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>parseable-delim</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>character</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>horizontal</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Repeat the show command at a specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

Defaults: None

Access: CLI

Usage: Use this command to display users on the local switch or fabric.
Examples  To display the list of users, use the following command:

```
CLI network-admin@switch > user-show
```

<table>
<thead>
<tr>
<th>switch</th>
<th>name</th>
<th>scope</th>
<th>uid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>network-admin</td>
<td>fabric</td>
<td>39999</td>
</tr>
<tr>
<td></td>
<td>vlb-web-svr-admin</td>
<td>fabric</td>
<td>40000</td>
</tr>
<tr>
<td></td>
<td>test-admin</td>
<td>fabric</td>
<td>40002</td>
</tr>
<tr>
<td></td>
<td>vlan-test-admin</td>
<td>fabric</td>
<td>40003</td>
</tr>
<tr>
<td>pleiades24</td>
<td>laurap</td>
<td>fabric</td>
<td>40004</td>
</tr>
<tr>
<td>pleiades24</td>
<td>ops-vnet-admin</td>
<td>fabric</td>
<td>40005</td>
</tr>
<tr>
<td>pleiades24</td>
<td>ops-testl-admin</td>
<td>fabric</td>
<td>40006</td>
</tr>
<tr>
<td>pleiades24</td>
<td>java-api-admin</td>
<td>local</td>
<td>20000</td>
</tr>
<tr>
<td>pleiades24</td>
<td>tester</td>
<td>local</td>
<td>20001</td>
</tr>
</tbody>
</table>

See Also
- user-create
- user-delete
- user-modify
- user-role-add
- user-role-remove
- user-role-show
- user-password-set
user-password-set

This command is used to set a password for a user on the switch.

Syntax  user-password-set name name-string scope local|fabric uid uid-number server aaa-tacacs-name initial-role role-name

name name-string Specify the name of the user to set the password.

Specify any of the following options:

scope local|fabric Specify the scope for the user.

uid uid-number Specify the user ID.

server aaa-tacacs-name Specify the name of the TACACS+ server.

initial-role role-name Specify the initial role of the user.

Defaults None

Access CLI

Usage You can set the password for the user.

Examples To set the password for user, admin-net, on the TACACS+ server, aaa-tacacs, with the user ID 23, with the initial role, admin, use the following command:

```
CLI network-admin@switch > user-password-set name admin-net scope local uid 23 server aaa-tacacs initial-role admin
```
user-role-add

This command is used to create a user role on the switch.

Syntax
user-role-add user-name name-string scope role role-name

user-name  name-string Specify a name for the user.
Specify the following role arguments:
role  role-name Specify a role for the user.

Defaults None.
Access  CLI
Usage  Use this command to create user roles on the switch.
Examples  To create the user, net-access, with the role, net-admin, use the following command:

```
CLI  network-admin@switch > user-role-add user-name net-access role net-admin
```

See Also
•  user-create
•  user-delete
•  user-modify
•  user-show
•  user-role-remove
•  user-role-show
•  user-set-password
user-role-remove

This command is used to remove a user role from the switch.

Syntax

user-role-remove user-name name-string scope role role-name

Defaults
None.

Access
CLI

Usage
Use this command to remove user roles on the switch.

Examples
To remove the user, net-access, with the role, net-admin, use the following command:

CLI network-admin@switch > user-role-remove user-name net-access role net-admin

See Also
- user-create
- user-delete
- user-modify
- user-show
- user-role-add
- user-role-show
user-role-show

This command is used to display a list of users and the assigned roles.

Syntax  user-role-show user-name name-string role role-name

user-name name-string  Specify the user name.

Specify the following role arguments:

role role-name  Specify the user role.

Formatting Options

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<td>show-interval seconds-interval</td>
<td>Repeat the show command at a specified interval.</td>
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</tr>
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<td>show-headers</td>
<td>no-show-headers  Display column headers or not.</td>
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</tr>
</tbody>
</table>

Defaults  None.

Access  CLI

Usage  Users must hold the proper credentials to manage a switch, cluster, or fabric. Use this command to display roles assigned to users.
Examples  To display a list of users and their roles, use the following command:

```cli
network-admin@switch > user-role-show
```

```
switch   user-name     role
-------- ------------- -------------
network-admin network-admin
pubdev02  lab-admin    lab-admin
```

See Also

- `user-create`
- `user-delete`
- `user-modify`
- `user-show`
- `user-role-add`
- `user-role-remove`
- `user-role-show`
- `user-set-password`
vflow-create

This command is used to create a flow definition for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) packet traffic.

Syntax: `vflow-create name name-string scope local|fabric [type system|ofp|vflow|analytics|reserved] [vlan vlan-id] [vnet vnet-name] [in-port port-list] [out-port port-list] [ether-type ipv4|arp|wake|rarp|vlan|ipv6|mpls-uni|mpls-multi|jumbo|aoe|dot1X|lldp|ecp|macsec|ptp|fcoe|fcoe-init|qinq] [src-mac mac-address] [src-mac-mask mac-address] [dst-mac mac-address] [dst-mac-mask mac-address] [src-ip ip-address] [src-ip-mask ip-address] [dst-ip ip-address] [dst-ip-mask ip-address] [src-port src-port-number] [dst-port dst-port-number] [dscp-start dscp-number] [dscp-end dscp-number] [tos-start tos-start-number] [tos-end tos-end-number] [vlan-pri number] [vlan-vlan-vxlan-name] [vlan-vlan-ether-type ipv4|arp|wake|rarp|vlan|ipv6|mpls-uni|mpls-multi|jumbo|aoe|dot1X|lldp|ecp|macsec|ptp|fcoe|fcoe-init|qinq] [vlan-vlan-vxlan-ether-type ipv4|arp|wake|rarp|vlan|ipv6|mpls-uni|mpls-multi|jumbo|aoe|dot1X|lldp|ecp|macsec|ptp|fcoe|fcoe-init|qinq] [vlan-vlan-vxlan-proto tcp|udp|icmp|igmp|ip] [flow-class vflow-class name] [bw-min bw-min-number] [bw-max bw-max-number] [precedence default] [action none|drop|to-port|to-ip-port|to-cpu|copy-to-cpu|check|set-vlan|set-tunnel|set-tunnel-id|set-dmac|set-tunnel-pkt|set-dmac-to-port] [mirror-name] [process-mirror|no-process-mirror] [log-packets|no-log-packets] [stats disable|enable] [Stats-interval 1..604800] [dur dur-number] [transient|no-transient] [vxlan vxlan-name] [vxlan-ether-type ipv4|arp|wake|rarp|vlan|ipv6|mpls-uni|mpls-multi|jumbo|aoe|dot1X|lldp|ecp|macsec|ptp|fcoe|fcoe-init|qinq] [vxlan-ether-type ipv4|arp|wake|rarp|vlan|ipv6|mpls-uni|mpls-multi|jumbo|aoe|dot1X|lldp|ecp|macsec|ptp|fcoe|fcoe-init|qinq]

name name-string

Specify the flow name.

scope local|fabric

Specify the scope for the flow.

Specify any of the following options:

- **vlan vlan-id**
  Specify the VLAN identifier for the flow.

- **vnet vnet-name**
  Specify the virtual network (VNET) for the flow.

- **in-port port-list**
  Specify the ingress (input) port for the flow.

- **out-port port-list**
  Specify the egress (output) port for the flow.

- **ether-type**
  Specify the EtherType for the flow.

- **ipv4|arp|wake|rarp|vlan|ipv6|mpls-uni|mpls-multi|jumbo|aoe|dot1X|lldp|ecp|macsec|ptp|fcoe|fcoe-init|qinq**
  Specify the source MAC address for the flow.

- **src-mac mac-address**
  Specify the source MAC address for the flow.

- **src-mac-mask mac-address**
  Specify the source MAC address wildcard mask for the flow.
dst-mac  mac-address  Specify the destination MAC address for the flow.
dst-mac-mask  mac-address  Specify the destination MAC address wildcard mask for the flow.
src-ip  ip-address  Specify the source IP address for the flow.
src-ip-mask  ip-address  Specify the source IP address wildcard mask for the flow.
dst-ip  ip-address  Specify the destination IP address for the flow.
dst-ip-mask  ip-address  Specify the destination IP address wildcard mask for the flow.
src-port  src-port-number  Specify the Layer 3 protocol source port for the flow.
dst-port  dst-port-number  Specify the Layer 3 protocol destination port for the flow.
dscp-start  number  Specify the starting DSCP number. This is a value between 0 and 63.
dscp-end  number  Specify the ending DSCP number. This is a value between 0 and 63.
dscp  dscp-number  Specify the 6-bit Differentiated Services Code Point (DSCP) of the flow.
tos-start  tos-start-number  Specify the starting ToS number.
tos-end  tos-end-number  Specify the ending ToS number.
tos  tos-number  Specify the Type of Service (ToS) number for the flow.
vlan-pri  number  Specify the priority for the VLAN. This is a value between 0 (lowest) and 7 (highest).
ttl  ttl-number  Specify the time to live in seconds.
proto  tcp|udp|icmp|igmp|ip  Specify the Layer 3 protocol for the flow.
flow-class  vflow-class  name  Specify the vflow class.
uplink-ports  ports-list  Specify the uplink ports for the vflow.
bw-min  bw-min-number  Specify the minimum bandwidth for the vflow.
bw-max  bw-max-number  Specify the maximum bandwidth for the vflow.
precedence  default  Specify the traffic priority for the flow (between 0 and 10).
Defaults None.

Access CLI

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command initiates flow statistics capture for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) packet traffic that matches defined characteristics.

Examples This example shows how to initiate statistics for a flow named flow1 defined as the Internet Protocol (IP) traffic on VLAN 4091 within the local switch.

```
CLI network-admin@switch > vflow-create name flow1 scope local vlan 4091
```
This example shows how to initiate statistics for a flow, flow2, defined as the fabric-wide Internet Protocol (IP) traffic sourced by the host with IP address 172.168.18.2 classified as dropless.

```
CLI network-admin@switch > vflow-create name flow2 scope fabric src-ip 172.168.18.2 class dropless stats enable
```

This example shows how to initiate statistics for a flow flow3 defined as the Internet Protocol (IP) traffic on VLAN 99 destined for the host with IP address 172.168.24.1 within the local switch. An action is specified to drop all traffic matching these flow attributes.

```
CLI network-admin@switch > vflow-create name flow3 scope local vlan 99 dst-ip 172.168.24.1 action drop stats enable
```

See Also
- vflow-delete
- vflow-modify
- vflow-show
- vflow-class-create
- vflow-class-delete
- vflow-class-show
- vflow-snoop
- vflow-stats-show
vflow-delete

This command allows you to delete an existing definition for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) packet traffic.

Syntax
vflow-delete name name-string id flow-id

name name-string Specify the flow name.
id flow-id Specify the flow identifier.

Defaults None.

Access

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command initiates flow statistics capture for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) packet traffic that matches defined characteristics.

Examples To delete the vflow definition called flow1, use the following command:

CLI network-admin@switch > vflow-delete name flow1

See Also
• vflow-create
• vflow-modify
• vflow-show
• vflow-class-create
• vflow-class-delete
• vflow-class-show
• vflow-snoop
• vflow-stats-show
**vflow-modify**

This command is used to modify an existing vflow configuration.

Syntax:
```
vflow-modify name name-string [vlan-pri number]
[flow-class vflow-class name] [bw-min bw-min-number bw-max
bw-max-number] [action none|drop|to-port|
to-ip-port|to-cpu|copy-to-cpu|check|meter| setvlan|setvlan2|
tunnel-pkt|set-tunnel-id] [action-value value]
[mirror|no-mirror] [process-mirror|no-process-mirror]
[log-packets|no-log-packets] [packet-log-max
packet-log-max-number] [stats disable|enable|log]
[stats-interval seconds] [flow-class vflow-class name]
```

- **name**  
  Specify the flow name.

- **name-string**  
  Specify any of the following options:

- **bw-min bw-min-number**  
  Specify the minimum bandwidth for the vflow.

- **vlan-pri number**  
  Specify the VLAN priority. This is a value from 0 (lowest) to 7 (highest).

- **ttl ttl-number**  
  Specify a time-to-live (TTL) value.

- **flow-class vflow-class name**  
  Specify the name of the flow class to modify.

- **bw-max bw-max-number**  
  Specify the maximum bandwidth for the vflow.

- **action none|drop|to-port|to-ip-port|to-cpu|copy-to-cpu|check|
  setvlan|tunnel-pkt|set-tunnel-id|u-rx|cpu-rx-tx|set-dscp
  |set-vlan-pr|to-port-set-nat|cpu-rx|cpu-rx-tx|set-ds
cp|to-ports-and-cpu|set-vlan-pri|set-dmac|
  set-dmac-to-port**  
  Specify the forwarding action to apply to the flow.

- **action-value number**  
  Specify an optional value argument for the forwarding action above (for example, a switch port number to forward the packet to). This is a value between 1 and 4096.

- **action-set-mac-value mac-address**  
  Specify a MAC address to apply the action.

- **action-to-ports-value port-list**  
  Specify a port list to apply the action.

- **mirror mirror-name**  
  Specify the name of the mirror configuration.

- **process-mirror|no-process-mirror**  
  Specify to mirror traffic for the vflow.

- **process-mirror|no-process-mirror**  
  Specify to process mirrored traffic.
Defaults   None.
Access   CLI
Usage   Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command initiates flow statistics capture for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) packet traffic that matches defined characteristics.
Examples  This example shows how to modify the flow statistics capture for a flow named flow3 to specify that a duplicate of all matching traffic be forwarded to the switch controller for further analysis.

```
CLI network-admin@switch > vflow-modify name flow3 action copy-to-cpu
```

See Also  • vflow-create
         • vflow-delete
         • vflow-show
         • vflow-class-create
         • vflow-class-delete
         • vflow-class-show
         • vflow-snoop
         • vflow-stats-show
vflow-show
This command is used to display information about configured vflows.

Syntax
vflow-show name name-string id scope local|fabric [type system|ofp|vflow|acl-ip|acl-mac] [hidden true|false] [vlan vlan-id] [vnet vnet-name] [in-port port-list] [out-port port-list] [ether-type ipv4|arp|wake|rarp|vlan|ipv6|mpls-uni|mpls-multi|jumbo|aoe|dot1X|lldp|ecp|macsec|ptp|fcoe|fcoe-init|qinq] [src-mac mac-address] [src-mac-mask mac-address] [dst-mac mac-address] [dst-mac-mask mac-address] [src-ip ip-address] [src-ip-mask ip-address] [dst-ip ip-address] [dst-ip-mask ip-address] [src-port src-port-number] [dst-port dst-port-number] [dscp dscp-number] [proto tcp|udp|icmp|igmp] [flow-class vflow-class name] [bw-max bw-max-number] [precedence 0..10] [action none|drop|to-port|to-ip-port|to-cpu|copy-to-cpu|check|meter|setvlan|setvlan2|tunnel-pkt|set-tunnel-id to-span|to-port-set-nat|cpu-rx|cpu-rx-tx] [action-value default] [log-packets|no-log-packets] [packet-log-max packet-log-max-number] [stats disable|enable|log] [stats-interval number] [dur dur-number] [metadata metadata-number] [metadata-mask metadata-mask-number] [vxlan vxlan-name] [vxlan-ether-type ipv4|arp|wake|rarp|vlan|ipv6|mpls-uni|mpls-multi|jumbo|aoe|dot1X|lldp|ecp|macsec|ptp|fcoe|fcoe-init|qinq]

name name-string
Specifies the flow name.

id
The identification number assigned by ONVL.

scope
Specifies the scope for the flow.

local|fabric|cluster
Specifies the type of vflow.

type system|ofp|vflow|acl-ip|acl-mac
Specifies if the vFlow is hidden or not.

hidden true|false
Specifies the VLAN identifier for the flow.

vlan vlan-id
Specifies the virtual network (VNET) for the flow.

vnet vnet-name
Specifies the ingress (input) port for the flow.

in-port port-list
Specifies the egress (output) port for the flow.

out-port port-list
ether-type
Specifies the EtherType for the flow.

ipv4|arp|wake|rarp|vlan
Specify the source MAC address for the flow.

ipv6|mpls-uni|mpls-multi|jumbo|aoe|dot1X|lldp|ecp|macsec|ptp|fcoe|fcoe-init|qinq
Specify the source MAC address wildcard mask for the flow.

src-mac mac-address
Specify the destination MAC address for the flow.

src-mac-mask

mac-address

dst-mac mac-address
dst-mac-mask
mac-address
Specifies the destination MAC address wildcard mask for the flow.

src-ip ip-address
Specifies the source IP address for the flow.

src-ip-mask ip-address
Specifies the source IP address wildcard mask for the flow.

dst-ip ip-address
dst-ip-mask ip-address
dst-port
src-port
dst-port-number
dst-port
Specifies the destination IP address for the flow.

Specifies the Layer 3 protocol source port for the flow.

src-port-number
dst-port

dst-port-number
dst-port

dscp-start number
dscp-end number
dscp dscp-number
dscp
Specifies the 6-bit Differentiated Services Code Point (DSCP) of the flow.

Specifies the starting DSCP number. This is a value between 0 and 63.

Specify the ending DSCP number. This is a value between 0 and 63.

Specifies the Type of Service (ToS) number for the flow.

tos tos-number
tos
vlan-pri number

vlan-pri
Specifies the priority for the VLAN. This is a value between 0 (lowest) and 7 (highest).

proto
tcp|udp|icmp|igmp|ip
flow-class vflow-class
name
Specifies the vflow class.

uplink-ports ports-list
bw-min bw-min-number
bw-max bw-max-number
precedence priority
Specifies the traffic priority for the flow (between 0 and 10)

action
none|drop|to-port|
to-ip-port|to-cpu|
copy-to-cpu|check|
Specifies the forwarding action to apply to the flow.
meter|
setvlan|setvlan2|
tunnel-pkt|set-tunnel-id
to-span|to-port-set-nat|
cpu-rx|cpu-rx-tx
to-cpu-l2-miss|set-meta
data| flow-flood|
set-dscp|to-ports-and-cpu|set-vlan-pri|
specifies the minimum bandwidth for the vflow.
set-dmac|set-dmac-to-port
set-vlan2|tunnel-pkt|set-tunnel-id
to-span|to-port-set-nat|
cpu-rx|cpu-rx-tx
to-cpu-l2-miss|set-meta
data| flow-flood|
set-dscp|to-ports-and-cpu|set-vlan-pri|
specifies the minimum bandwidth for the vflow.
specifies the maximum bandwidth for the vflow.
action-value number  
Specifies an optional value argument for the forwarding action above (for example, a switch port number to forward the packet to). This is a value between 1 and 64, but is set to default.

action-value number  
Specify an optional value argument for the forwarding action above (for example, a switch port number to forward the packet to). This is a value between 1 and 4096.

action-set-mac-value mac-address  
Specify a MAC address to apply the action.

action-to-ports-value port-list  
Specify a port list to apply the action.

mirror mirror-name  
Specify the name of the mirror configuration.

process-mirror| no-process-mirror  
Specify to mirror traffic for the vflow.

log-packets| no-log-packets  
Specifies whether to log the packets in the flow.

packet-log-max packet-log-max-number  
Specifies the maximum packet count for log rotation in the flow.

stats disable|enable|log  
Specifies whether to enable packet statistics or logs for the flow.

stats-interval seconds  
Specifies the interval to update packet statistics for the log (in seconds). This is a value between 1 and 604800.

dur dur-number  
Specifies the minimum duration required for the flow to be captured (in seconds).

[metadata metadata-number]  
Specifies the metadata number and mask for the vflow.

[metadata-mask metadata-mask-number]  

transient|no-transient  
Specifies whether to capture transient flows.

vxlan vxlan-name  
Specifies the name of the VXLAN.

vxlan-ether-type ipv4|arp|wake|rarp|vlan |ipv6|mpls-uni|mpls-multi
til| jumbo|aoe| dot1x|lldp|ecp|macsec|p
tp|fcoe|fcoe-init|qinq

vxlan-proto tcp|udp|icmp|igmp|ip  
Specifies the Layer 3 protocol for the flow.

Formatting Options

<table>
<thead>
<tr>
<th>format</th>
<th>Display output using a specific parameter. Use all to display all possible output.</th>
</tr>
</thead>
<tbody>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show-dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>limit-output</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

Defaults **None.**

Access **CLI**

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command displays information about vflows configured on the switch.

Examples To display vflow information, use the following command:

```plaintext
CLI network-admin@switch > vflow-show name flow1
```

```
name id scope vlan vnet src dst subnet class bw pri action stats dur mask
flow1 64 local 4091 :: :: :: normal 0 0 flow_normal no 0 13
```

See Also

- vflow-create
- vflow-delete
- vflow-modify
- vflow-class-create
- vflow-class-delete
- vflow-class-show
- vflow-snoop
- vflow-stats-show
vflow-snoop

This command is used to display the packet headers of flows directed to the switch CPU.

Syntax:
```
vflow-snoop count count-number display-packets-bytes name name-string scope local|fabric [type system|ofp|vflow|analytics|reserved] [vlan vlan-id] [vnet vnet-name] [in-port port-list] [out-port port-list] [ether-type ipv4|arp|wake|rarp|vlan|ipv6|mpls-uni|mpls-multi|jumbo|aoe|dot1X|lldp|ecp|macsec|ptp|fcoe|fcoe-init|qinq] [src-mac mac-address] [src-mac-mask mac-address] [dst-mac mac-address] [dst-mac-mask mac-address] [src-ip ip-address] [src-ip-mask] [dst-ip ip-address] [dst-ip-mask] [src-port src-port-number] [dst-port dst-port-number] [dscp-start number] [dscp-end number] [tos-start tos-number] [tos-end] [tos tos-number] [local-subnet|no-local-subnet] [proto tcp|udp|icmp|igmp|ip] [flow-class vflow-class name] [bw-max bw-max-number] [precedence value] [action none|drop|to-port|to-ip-port|to-cpu|copy-to-cpu|check|meter|setvlan|setvlan2|tunnel-pkt|set-tunnel-id action-value value] [log-packets|no-log-packets] [packet-log-max packet-log-max-number] [stats disable|enable] [log [stats-interval 1..604800] [dur dur-number] [transient|no-transient] [vxlan vxlan-name] [vxlan-ether-type ipv4|arp|wake|rarp|vlan|ipv6|mpls-uni|mpls-multi|jumbo|aoe|dot1X|lldp|ecp|macsec|ptp|fcoe|fcoe-init|qinq] [vxlan-proto tcp|udp|icmp|igmp|ip]
```

count count-number
   Specify the packet count.

display-packets-bytes
   Specify the number packet bytes.

display-packets-bytes
   Specify the flow name.

Specify any of the following options:

scope local|fabric
   Specify the scope for the flow.

type system|ofp|vflow|analytics|reserved
   Specify the type of vflow.

vlan vlan-id
   Specify the VLAN identifier for the flow.

vnet vnet-name
   Specify the virtual network (VNET) for the flow.

in-port port-list
   Specify the ingress (input) port for the flow.

out-port port-list
   Specify the egress (output) port for the flow.

ether-type
   Specify the EtherType for the flow.

ipv4|arp|wake|rarp|vlan|ipv6|mpls-uni|mpls-multi|jumbo|aoe|dot1X|lldp|ecp|macsec|ptp|fcoe|fcoe-init|qinq
   Specify the source MAC address for the flow.

src-mac mac-address
   Specify the source MAC address wildcard mask for the flow.

dst-mac mac-address
   Specify the destination MAC address for the flow.
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>dst-mac-mask mac-address</td>
<td>Specify the destination MAC address wildcard mask for the flow.</td>
</tr>
<tr>
<td>src-ip ip-address</td>
<td>Specify the source IP address for the flow.</td>
</tr>
<tr>
<td>src-ip-mask ip-address</td>
<td>Specify the source IP address wildcard mask for the flow.</td>
</tr>
<tr>
<td>dst-ip ip-address</td>
<td>Specify the destination IP address for the flow.</td>
</tr>
<tr>
<td>dst-ip-mask ip-address</td>
<td>Specify the destination IP address wildcard mask for the flow.</td>
</tr>
<tr>
<td>src-port src-port-number</td>
<td>Specify the Layer 3 protocol source port for the flow.</td>
</tr>
<tr>
<td>dst-port dst-port-number</td>
<td>Specify the Layer 3 protocol destination port for the flow.</td>
</tr>
<tr>
<td>dscp-start number</td>
<td>Specify the starting DSCP number. This is a value between 0 and 63.</td>
</tr>
<tr>
<td>dscp-end number</td>
<td>Specify the ending DSCP number. This is a value between 0 and 63.</td>
</tr>
<tr>
<td>dscp dscp-number</td>
<td>Specify the 6-bit Differentiated Services Code Point (DSCP) of the flow.</td>
</tr>
<tr>
<td>[tos-start tos-start-number]</td>
<td>Specify the starting ToS number.</td>
</tr>
<tr>
<td>[tos-end tos-end-number]</td>
<td>Specify the ending ToS number.</td>
</tr>
<tr>
<td>tos tos-number</td>
<td>Specify the Type of Service (ToS) number for the flow.</td>
</tr>
<tr>
<td>vlan-pri number</td>
<td>Specify the priority for the VLAN. This is a value between 0 (lowest) and 7 (highest).</td>
</tr>
<tr>
<td>proto</td>
<td>Specify the Layer 3 protocol for the flow.</td>
</tr>
<tr>
<td>tcp</td>
<td>udp</td>
</tr>
<tr>
<td>local-subnet</td>
<td>no-local-subnet</td>
</tr>
<tr>
<td>flow-class vflow-class name</td>
<td>Specify the uplink ports for the vflow.</td>
</tr>
<tr>
<td>action</td>
<td>Specify the forwarding action to apply to the flow.</td>
</tr>
<tr>
<td>none</td>
<td>drop</td>
</tr>
<tr>
<td>action-value number</td>
<td>Specify an optional value argument for the forwarding action above (for example, a switch port number to forward the packet to). This is a value between 1 and 64.</td>
</tr>
<tr>
<td>action-value1 number</td>
<td>Specify a VLAN ID from 1 to 4096.</td>
</tr>
<tr>
<td>mirror mirror name</td>
<td>Specify a mirror name for the configuration.</td>
</tr>
<tr>
<td>process-mirror</td>
<td>no-process-mirror</td>
</tr>
</tbody>
</table>
pluribus networks

Defaults None.

Access CLI

Usage Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command displays a running output of headers as they are directed to the switch CPU based on flow definitions specified for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) packet traffic. The display output is stopped by pressing Control-C in the CLI.

Examples This example displays the packet headers as they are directed to the switch CPU based on one or several flow definitions created with the command vflow-create and the action set to copy-to-cpu:

CLI network-admin@switch > vflow-snoop

vflow-snoop
switch: 471aac, flow: 40, port: 25, size: 64
switch: 471aac, flow: 40, port: 13, size: 68
smac: 00:0c:fc:00:b9:6e, dmac: ff:ff:ff:ff:ff:ff, vlan: 1, etype: arp
switch: 471aac, flow: 40, port: 15, size: 68
smac: 00:0c:fc:00:b6:71, dmac: ff:ff:ff:ff:ff:ff, vlan: 1, etype: arp

See Also
- vflow-create
- vflow-delete
- vflow-modify
• vflow-show
• vflow-class-create
• vflow-class-delete
• vflow-class-show
• vflow-stats-show
vflow-stats-show

This command displays flow statistics for Layer 2 Ethernet or Layer 3 Internet Protocol (IP) traffic.

Syntax

vflow-stats-show [name Flow_Name] [id Flow_ID] [start-time yyyy-mm-ddThh:mm:ss] [end-time yyyy-mm-ddThh:mm:ss] [dur duration-number] interval duration: #d#h#m#s since-start|no-since-start older-than duration: #d#h#m#s within-last duration: #d#h#m#s name vflow name id

Specify any of the following options:

- **name Flow_Name**: Displays the flow name.
- **id Flow_ID**: Displays the flow identifier.
- **start-time yyyy-mm-ddThh:mm:ss**: Specifies the start time of the flow using the notation yyyy-mm-ddThh:mm:ss.
- **end-time yyyy-mm-ddThh:mm:ss**: Specifies the start time of the flow using the notation yyyy-mm-ddThh:mm:ss.
- **dur duration-number**: Specifies the duration of the flow (in seconds).
- **interval duration: #d#h#m#s**: Specifies the length of time between collection intervals.
- **since-start|no-since-start**: Specifies if the statistics are collected from the start of the vflow.
- **older-than duration: #d#h#m#s**: Specifies if the statistics are older than the stated duration.
- **within-last duration: #d#h#m#s**: Specifies the statistics collected within the last duration.
- **name vflow name**: Specifies the name of the vflow.
- **id**: Specifies the ID assigned by ONVL.

**Formatting Options**

- **format fields-to-display**: Display output using a specific parameter. Use all to display all possible output.
- **parsable-delim character**: Display output formatted for machine parsing using a specified delimiter.
- **sort-asc**: Display output in ascending order.
- **sort-desc**: Display output in descending order.
- **show_dups**: Display duplicate entries in the output.
- **layout vertical|horizontal**: Format the output in a vertical or horizontal layout.
- **show-interval seconds-interval**: Repeat the show command at a specified interval.
- **show-diff-interval**: Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.
Defaults | None.  
Access | CLI  
Usage | Each fabric, cluster, standalone switch, or virtual network can track application flow statistics. This command displays flow statistics.  
Examples | This example shows how to display flow statistics.

```
CLI network-admin@switch > vflow-stats-show
```

<table>
<thead>
<tr>
<th>switch</th>
<th>name</th>
<th>packets</th>
<th>bytes</th>
<th>cpu-packets</th>
<th>cpu-bytes</th>
</tr>
</thead>
<tbody>
<tr>
<td>pleiades24</td>
<td>IGMP-Flow</td>
<td>1.98M</td>
<td>130M</td>
<td>1.99M</td>
<td>123M</td>
</tr>
<tr>
<td>pleiades24</td>
<td>LLDP-Flow</td>
<td>218K</td>
<td>24.2M</td>
<td>218K</td>
<td>23.4M</td>
</tr>
<tr>
<td>pleiades24</td>
<td>Host-Agent-Discover</td>
<td>3.92K</td>
<td>251K</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>pleiades24</td>
<td>ECP</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>pleiades24</td>
<td>Fabric-Discovery</td>
<td>282K</td>
<td>159M</td>
<td>273K</td>
<td>157M</td>
</tr>
<tr>
<td>pleiades24</td>
<td>SYSTEM-S</td>
<td>777K</td>
<td>60.2M</td>
<td>763K</td>
<td>56.0M</td>
</tr>
<tr>
<td>pleiades24</td>
<td>SYSTEM-F</td>
<td>719K</td>
<td>67.3M</td>
<td>711K</td>
<td>63.5M</td>
</tr>
<tr>
<td>pleiades24</td>
<td>SYSTEM-R</td>
<td>288K</td>
<td>18.0M</td>
<td>285K</td>
<td>16.7M</td>
</tr>
<tr>
<td>pleiades24</td>
<td>System-A</td>
<td>36.5M</td>
<td>2.28G</td>
<td>36.5M</td>
<td>2.14G</td>
</tr>
<tr>
<td>pleiades24</td>
<td>DHCP-client</td>
<td>83.6K</td>
<td>40.7M</td>
<td>37.9K</td>
<td>19.3M</td>
</tr>
<tr>
<td>pleiades24</td>
<td>DHCP-server</td>
<td>53.2K</td>
<td>23.0M</td>
<td>31.4K</td>
<td>10.5M</td>
</tr>
</tbody>
</table>

See Also
- vflow-create
- vflow-delete
- vflow-modify
- vflow-show
- vflow-class-create
• vflow-class-delete
• vflow-class-show
• vflow-snoop
vflow-stats-settings-modify
This command allows you to modify the settings for collection vFlow statistics.

Syntax  
vflow-stats-settings-modify enable|disable interval duration:#d#h#m#s disk-space disk-space-number

enable|disable  Specify to enable or disable statistics collection.
interval  Specify the interval between statistics collection.
duration:#d#h#m#s  Specify the interval between statistics collection.
disk-space  Specify the amount of disk space to reserve for the statistics.
disk-space-number

Defaults  None
Access  CLI
Usage  Use this command to modify the setting for statistics collection.
Examples  To modify the vFlow statistics disk size to 8G, use the following command:

CLI network-admin@switch > vflow-stats-settings-modify disk-space 8g

See Also
• vflow-create
• vflow-delete
• vflow-modify
• vflow-show
• vflow-class-create
• vflow-class-delete
• vflow-class-show
• vflow-snoop
vflow-stats-settings-show
This command allows to display the settings for collection vFlow statistics.

Syntax  vflow-stats-settings-show

Formatting Options

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show-dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval seconds-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td></td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

Defaults  None
Access  CLI
Usage  Use this command to display the settings for statistics collection.
Examples  To display the vFlow statistics, use the following command:

```
CLI network-admin@switch > vflow-stats-settings-show
```

```
switch: pleiades25
enable: yes
interval: 1m
disk-space: 50M
```

See Also
- vflow-create
- vflow-delete
- vflow-modify
• vflow-show
• vflow-class-create
• vflow-class-delete
• vflow-class-show
• vflow-snoop
vflow-table-show
This command displays vFlow table information.

Syntax  vflow-table-show

Formatting Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>parsable-delim</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>character</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show-dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>limit-output</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

Defaults  None
Access  CLI
Usage  Use this command to display vFlow table information.
Examples  To display the vFlow statistics, use the following command:

```
CLI network-admin@switch > vflow-table-show
```

See Also
- vflow-create
- vflow-delete
- vflow-modify
- vflow-show
- vflow-class-create
• vflow-class-delete
• vflow-class-show
• vflow-snoop
vlag-create
To create a new virtual link aggregation group (VLAG), use this command.

### Syntax

```
vlag-create name name-string mode port vlag-usable-port peer-port vlag-usable-port
local-port port-number peer-switch fabric-node-name peer-port port-number
failover-move-L2|failover-ignore-L2 lacp-mode
off|passive|active lacp-timeout slow|fast
```

- **name name-string**: Specify the name of the VLAG.
- **port vlag-usable-port**: Specify the local VLAG port.
- **peer-port vlag-usable-port**: Specify the peer VLAG port.
- **mode active-standby|active-active**: Specify the mode for the VLAG. Active-standby indicates one side is active and the other is in standby mode. Active-Active indicates that both sides of the VLAG are up by default.
- **peer-switch fabric-node-name**: Specify the fabric name of the peer switch.
- **peer-port port-number**: Specify the port number on the peer switch.
- **failover-move-L2|failover-ignore-L2**: Specify the failover action as move or ignore.
- **lacp-mode off|passive|active**: Specify the LACP mode.
- **lacp-timeout slow|fast**: Specify the LACP timeout as slow (30 seconds) or fast (4 seconds).

### Defaults

None.

### Access

CLI

### Usage

A virtual link aggregation group (VLAG) allows links that are physically connected to two different Pluribus Networks devices to appear as a single trunk to a third device. The third device can be a switch, server, or any Ethernet device. A VLAG can provide Layer 2 multipathing, which allows you to create redundancy by increasing bandwidth, enabling multiple parallel paths between nodes and loadbalancing traffic where alternative paths exist. This command creates a new VLAG.

### Examples

This example shows how to create a VLAG with identifier 1 to aggregate the links connected to port 1 of both the local and peer switch.

```
CLI network-admin@switch > vlag-create id 1 port 1 peer-switch a1634:b peer-port 1
```

### See Also

- vlag-modify
- vlag-delete
• vlag-show
vlag-delete

This command deletes an existing VLAG from the configuration.

Syntax  vlag-delete name name-string

name name-string Specify the VLAG name.

Defaults None.

Access CLI

Usage A virtual link aggregation group (VLAG) allows links that are physically connected to two different Pluribus Networks devices to appear as a single trunk to a third device. The third device can be a switch, server, or any Ethernet device. A VLAG can provide Layer 2 multipathing, which allows you to create redundancy by increasing bandwidth, enabling multiple parallel paths between nodes and loadbalancing traffic where alternative paths exist. This command deletes a VLAG.

Examples To delete a VLAG with the identifier, 34, use the following command:

CLI network-admin@switch > vlag-delete 34

See Also

- vlag-create
- vlag-modify
- vlag-show
vlag-modify
To modify an existing virtual link aggregation group (VLAG), use this command.

Syntax
vlag-modify name name-string mode
failover-move-L2|failover-ignore-L2 lacp-mode off|passive|active
lacp-timeout slow|fast

name name-string Specify the name of the VLAG.
Specify one or both of the following options:
failover-move-L2|failover-ignore-L2 Specify the failover action as move or ignore.
lacp-timeout slow|fast Specify the LACP timeout as slow (30 seconds) or fast (4 seconds).

Defaults None.
Access CLI
Usage A virtual link aggregation group (VLAG) allows links that are physically connected to two
different Pluribus Networks devices to appear as a single trunk to a third device. The third
device can be a switch, server, or any Ethernet device. A VLAG can provide Layer 2 multipathing,
which allows you to create redundancy by increasing bandwidth, enabling multiple parallel
paths between nodes and loadbalancing traffic where alternative paths exist. This command
modifies an existing VLAG configuration.

Examples This example shows how to modify a VLAG named spine1-vlag to
lacp-timeout fast.

CLI network-admin@switch > vlag-modify name spine1-vlag lacp-timeout fast

See Also
• vlag-create
• vlag-delete
• vlag-show
vlag-show

This command displays current VLAG configurations on the fabric.

vlag-show id vlag-id name name-string [status peer-down|normal cluster cluster-name mode active-standby|active-active failover-move-L2|failover-ignore-L2 comm-ports port-list peer-comm-ports port-list lACP-mode off|passive|active lACP-timeout slow|fast lACP-key lACP-key-number lACP-system-id lACP-system-id-number

id vlag-id Specifies the VLAG identifier.
name name-string Specifies the name of the VLAG.
cluster cluster-name Specifies the name of the cluster.
mode active-standby|active-active Specifies the mode for the VLAG. Active-standby indicates one side is active and the other is in standby mode. Active-Active indicates that both sides of the VLAG are up by default.
failover-move-L2|failover-ignore-L2 Specifies the behavior in the event of a failover.
status peer-down|normal Specifies the status of the VLAG.
local-state enabled|up|coming-up Specifies the local state of the VLAG.
lACP-mode off|passive|active Specifies the LACP mode.
lACP-timeout slow|fast Specifies the LACP timeout.
lACP-key lACP-key-number Specifies the generated LACP key.
lACP-system-id lACP-system-id-number Specifies the LACP system ID generated by ONVL.

Formatting Options

<table>
<thead>
<tr>
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<tbody>
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<td>format fields-to-display</td>
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</tr>
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<td>parsable-delim character</td>
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</tr>
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</tr>
<tr>
<td>show dupps</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval seconds-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
</tbody>
</table>
A virtual link aggregation group (VLAG) allows links that are physically connected to two different Pluribus Networks devices to appear as a single trunk to a third device. The third device can be a switch, server, or any Ethernet device. A VLAG can provide Layer 2 multi-pathing, which allows you to create redundancy by increasing bandwidth, enabling multiple parallel paths between nodes and load-balancing traffic where alternative paths exist. This command deletes a VLAG.

Examples

To display all VLAGs, use the following command:

```plaintext
CLI network-admin@switch > vlag-show format all layout vertical
```

```
id:               a000030:0
name:             fh2
cluster:          pubdev
mode:             active-active
switch:           pubdev01
port:             55
peer-switch:      pubdev02
peer-port:        55
failover-move-L2: no
status:           normal
local-state:      enabled
lacp-mode:        off
lacp-timeout:     slow
lacp-key:         13811
lacp-system-id:   110013777969294
```

See Also

- `vlag-create`
- `vlag-modify`
- `vlag-delete`
vlan-create

This command is used to create a new VLAN on the network.

Syntax

```
vlan-create id vlan-id scope local|fabric [name vlan-name] [stats|no-stats] [ports port-list] [untagged-ports untagged-port-list]
```

**id** vlan-id
---
Specify a VLAN identifier for the VLAN. This is a value between 2 and 4092.

**scope** local|fabric
---
Specify a scope for the VLAN.

Specify any of the following options:

**name** vlan-name
---
Specify a name for the VLAN.

**stats|no-stats**
---
Specify if you want to collect statistics for a VLAN. Statistic collection is enabled by default.

**ports** port-list
---
Specifies the switch network data port number, list of ports, or range of ports. Port numbers must be in the range of 1 to 64.

**untagged-ports**
---
Specifies the ports that should have untagged packets mapped to the VLAN. Untagged packets are packets that do not contain IEEE 802.1Q VLAN tags.

**untagged-port-list**
---

Defaults
---
None.

Access
---
CLI

Usage
---
VLANs are used to isolate network traffic at Layer 2. Use this command to create a new VLAN.

**Informational Note:**
---
The VLAN identifiers 0 and 4095 are reserved and cannot be used per the IEEE 802.1Q standard.

The range of configurable VLAN identifiers is 2 through 4092.

Usage
---

Examples
---
To create a new fabric-wide VLAN named finance VLAN with an identifier of 7, use the following command:

```
CLI network-admin@switch > vlan-create id 7 name finance-VLAN scope fabric
```

See Also
---
- vlan-delete
- vlan-show
- vlan-port-add
- vlan-port-remove
- vlan-stats-show
vlan-delete
This command deletes an existing VLAN.

Syntax  vlan-delete id vlan-id

id vlan-id  Specify the VLAN identifier. This is a value between 2 and 4092.

Defaults  None.

Access  CLI

Usage  VLANs can be used to isolate network traffic at Layer 2. Use this command to delete an existing VLAN.

Informational Note:  The VLAN identifiers 0 and 4095 are reserved and cannot be used per the IEEE 802.1Q standard.

The range of configurable VLAN identifiers is 2 through 4092.

Examples  To delete a VLAN with the identifier 7, use the following command:

CLI network-admin@switch > vlan-delete id 7

See Also  •  vlan-create
          •  vlan-show
          •  vlan-port-add
          •  vlan-port-remove
          •  vlan-stats-show
**vlan-modify**

This command is used to modify a VLAN on the network.

**Syntax**

```
vlan-modify id vlan-id [name vlan-name]
```

**id vlan-id**
Specify a VLAN identifier for the VLAN. This is a value between 2 and 4092.

Specify any of the following options:

**name vlan-name**
Specify a name for the VLAN.

**Defaults**
None.

**Access**
CLI

**Usage**
VLANs are used to isolate network traffic at Layer 2. Use this command to modify a VLAN.

---

**Informational Note:**

The VLAN identifiers 0 and 4095 are reserved and cannot be used per the IEEE 802.1Q standard.

The range of configurable VLAN identifiers is 2 through 4092.

---

**Usage**

**Examples**
To create a modify a VLAN named finance to the name finance-2, use the following command:

```
CLI network-admin@switch > vlan-modify id 7 name finance-2
```

**See Also**

- `vlan-delete`
- `vlan-show`
- `vlan-port-add`
- `vlan-port-remove`
- `vlan-stats-show`
**vlan-show**

This command displays a list of existing VLANs on the switch.

```
Syntax vlan-show [id vlan-id] [nvid] [scope local|fabric] [name name-string] [active yes|no] [stats|no-stats] [vrg vrg-name] [ports port-list] [untagged-ports port-list] [active-edge-ports port-list]
```

- **id vlan-id**: Specifies the VLAN ID as a value from 2 to 4092.
- **nvid**: Specifies the ID assigned to ONVL.
- **scope local|fabric**: Specifies the scope of the VLAN.
- **name name-string**: Specifies an optional name of the VLAN.
- **active yes|no**: Specifies if the VLAN is active on the network.
- **stats|no-stats**: Specifies if stats collection is enabled.
- **vrg vrg-name**: Specifies the name of the VRG assigned to the VLAN.
- **ports port-list**: Specifies the list of ports assigned to the VLAN.
- **untagged-ports port-list**: Specifies the list of untagged ports assigned to the VLAN.
- **active-edge-ports port-list**: Specifies any active edge ports for the VLAN.

**Formatting Options**

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<td>parsable-delim character</td>
<td>Display output in ascending order.</td>
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<tr>
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<td>show-dups</td>
<td>Display duplicate entries in the output.</td>
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<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
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</tr>
<tr>
<td>show-headers</td>
<td>no-show-headers</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
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</tbody>
</table>
unscaled  Display full values in the output instead of scaled approximate values.
sum-by    Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.

Defaults  None.
Access    CLI
Usage     .

Informational Note: The VLAN identifiers 0 and 4095 are reserved and cannot be used per the IEEE 802.1Q standard.
The range of configurable VLAN identifiers is 2 through 4092.

Examples  To display a list of VLANs, use the following command:

```
CLI network-admin@switch > vlan-show
```

```
switch:             pleiades24
id:                5
nvid:              6000021:5
scope:             fabric
name:              vlan-5
active:            yes
stats:             yes
vrg:               tester-1-vrg
ports:             1-72,255
untagged-ports:    none
active-edge-ports: none

switch:             pleiades24
id:                6
nvid:              6000021:6
scope:             fabric
name:              vlan-6
active:            yes
stats:             yes
vrg:               tester-1-vrg
ports:             1-72,255
untagged-ports:    none
active-edge-ports: none
```

See Also  
- `vlan-create`
- `vlan-delete`
- `vlan-port-add`
- `vlan-port-remove`
- `vlan-stats-show`
**vlan-port-add**

This command is used to add a port to an existing VLAN.

**Syntax**

```plaintext
vlan-port-add vlan-id vlan-id [switch switch-name] [ports port-list] [untagged yes|no] [module module-number]
```

- **vlan-id vlan-id** Specifies the identifier of the VLAN in the range from 2 to 4092.
- **Specify the following port arguments:**
  - **switch switch-name** Specify the name of the switch with the port.
  - **ports port-list** Specifies the switch network data port number, list of ports, or range of ports. Port numbers must be in the range of 1 to 64.
  - **untagged yes|no** Specifies if the ports tag packets with the IEEE 802.1Q VLAN header or untagged packets should automatically be mapped to the VLAN. This means that both ingress and egress packets do not contain the 802.1Q VLAN header.
  - **module module-number** This argument is not used at this time.

**Defaults** None.

**Access** CLI

**Usage** VLANs can be used to isolate network traffic at Layer 2. This command adds a new port to a VLAN.

---

**Informational Note:** The VLAN identifiers 0 and 4095 are reserved and cannot be used per the IEEE 802.1Q standard.

The range of configurable VLAN identifiers is 2 through 4092.

---

**Examples** To add ports 17 and 18 and set them to transmit and receive untagged Ethernet packets on VLAN 7, use the following command:

```plaintext
CLI network-admin@switch > vlan-port-add vlan-id 7 ports 17,18 untagged yes
```

**See Also**
- `vlan-create`
- `vlan-delete`
- `vlan-show`
- `vlan-port-remove`
- `vlan-stats-show`
**vlan-port-remove**

This command removes an existing port from a VLAN.

```plaintext
Syntax:
```
```
  vlan-port-remove vlan-id vlan-id [switch switch-name]
  ports port-list
```
```

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>vlan-id</td>
<td>Specifies the identifier of the VLAN in the range from 2 to 4092.</td>
</tr>
<tr>
<td>switch</td>
<td>Specify the name of the switch with the port.</td>
</tr>
<tr>
<td>ports</td>
<td>Specifies the switch network data port number, list of ports, or range of</td>
</tr>
<tr>
<td></td>
<td>ports. Port numbers must be in the range of 1 to 64.</td>
</tr>
</tbody>
</table>

**Defaults** None.

**Access** CLI

**Usage** VLANs can be used to isolate network traffic at Layer 2. This command creates a new VLAN.

---

**Informational Note:** The VLAN identifiers 0 and 4095 are reserved and cannot be used per the IEEE 802.1Q standard. The range of configurable VLAN identifiers is 2 through 4092.

**Examples** To remove ports 17 and 18 from VLAN 7, use the following command:

```
CLI network-admin@switch > vlan-port-remove vlan-id 7 ports 17,18
```

**See Also**

- `vlan-create`
- `vlan-delete`
- `vlan-show`
- `vlan-port-add`
- `vlan-stats-show`
**vlan-stats-show**

This command displays traffic statistics per VLAN.

**Syntax**

```
vlan-stats-show [time date/time: yyyy-mm-ddThh:mm:ss]
[start-time start-time] [end-time end-time] [duration duration:
#d#h#m#s] [interval duration: #d#h#m#s]
since-start|no-since-start older-than duration: #d#h#m#s
within-last duration: #d#h#m#s vlan vlan-id
```

- **time date/time:** Specifies the time for the statistics.
- **yyyy-mm-ddThh:mm:ss**
- **start-time start-time** Specifies the start time for the statistics display using the notation `yyyy-mm-ddThh:mm:ss`.
- **end-time end-time** Specifies the end time for the statistics display using the notation `yyyy-mm-ddThh:mm:ss`.
- **duration duration:** Specify the duration for the traffic statistics.
- **#d#h#m#s**
- **interval duration:** Specifies the time interval for the statistics display.
- **#d#h#m#s**
- **since-start|no-since-start** Specifies if the statistics are collected from the start of the VLAN.
- **older-than duration:** Specifies if the statistics are older than the stated duration.
- **#d#h#m#s**
- **within-last duration:** Specifies the statistics collected within the last duration.
- **#d#h#m#s**
- **vlan vlan-id** Specify a specific VLAN to display statistics.

**Formatting Options**

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<tr>
<td>parsable-delim</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>character</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
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<tr>
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<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

** Defaults  ** None.  

** Access  ** CLI  

** Usage  ** VLANs can be used to isolate network traffic at Layer 2. This command displays traffic statistics per VLAN.

** Examples  ** This example shows how to display traffic statistics logs between the times of 8:00 am and 8:01 am on January 31, 2013.

```
CLI network-admin@switch > vlan-stats-log-show start-time 12:00:00 end-time 12:25:00
```

```
switch:     pleiades24  
time:      12:20:42  
vlan:       1  
ibytes:     546M  
ipkts:      1.64M  
idrops-bytes: 256  
idrops-pkts: 4  
obytes:      0  
opkts:       0  
odrops-bytes: 0  
odrops-pkts: 0
```

```
switch:     pleiades25  
time:      12:20:42  
vlan:       100  
ibytes:     305M  
ipkts:      4.41M  
idrops-bytes: 64  
idrops-pkts: 1  
obytes:      0  
opkts:       0  
odrops-bytes: 0  
odrops-pkts: 0
```

** See Also  **
- vlan-create  
- vlan-delete  
- vlan-show  
- vlan-port-add  
- vlan-port-remove
**vlan-stats-settings-modify**

This command allows you to modify the settings for collection of VLAN statistics.

**Syntax**
```
vlan-stats-settings-modify enable|disable interval
duration:
#d#h#m#s
disk-space
```

Specify one or more of the following options:
- **enable|disable**    Specify to enable or disable statistics collection.
- **interval**         Specify the interval between statistics collection.
- **duration:**        Specify the amount of disk space to reserve for the statistics.
- **disk-space**       Specify the amount of disk space to reserve for the statistics.

**Defaults**  None

**Access**  CLI

**Usage**   Use this command to modify the setting for statistics collection.

**Examples**  To modify the VLAN statistics disk size to 8G, use the following command:
```
vlan-stats-settings-modify disk-space 8g
```

**See Also**
- **vlan-create**
- **vlan-delete**
- **vlan-port-add**
- **vlan-port-remove**
- **vlan-stats-show**
**vlan-stats-settings-show**

This command allows to display the settings for collecting VLAN statistics.

**Syntax**

```
vlan-stats-settings-show
```

**Formatting Options**

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Display output using a specific parameter. Use <code>all</code> to display all possible output.</td>
</tr>
<tr>
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<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td><code>parsable-delim character</code></td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td><code>sort-asc</code></td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td><code>sort-desc</code></td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>`layout vertical</td>
<td>horizontal`</td>
</tr>
<tr>
<td><code>show-interval seconds-interval</code></td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td><code>show-diff-interval</code></td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>`show-headers</td>
<td>no-show-headers`</td>
</tr>
<tr>
<td><code>limit-output number</code></td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td><code>count-output</code></td>
<td>Display the number of entries in the output. This is useful with <code>vRouter show</code> commands.</td>
</tr>
<tr>
<td><code>unscaled</code></td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td><code>sum-by</code></td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults** None

**Access** CLI

**Usage** Use this command to display the settings for statistics collection.

**Examples**

To display the VLAN statistics, use the following command:

```
CLI network-admin@switch > vlan-stats-settings-show
```

```plaintext
switch:   pleiades25
enable:  yes
interval:  1m
disk-space:  50M
```

**See Also**

- `vlan-create`
- `vlan-delete`
- `vlan-port-add`
• vlan-port-remove
• vlan-stats-show
vrouter-create

This command creates a new virtual router (vRouter) service for a fabric, cluster, or standalone switch.

Syntax

vrouter-create name name-string vnet vnet-name
[dedicated-vnet-service|shared-vnet-service] [disable|enable]
[storage-pool storage-pool-name] [router-type hardware|software]
[hw-vrrp-id hw-vrrp-id-number] [bgp-as bgp-as-number]
[router-id ip-address] [proto-multi none|vmrp|pim-ssm|pim-sparse]
[bgp-redistribute static|connected|rip|ospf] [bgp-redist-static-metric none]
[bgp-redist-connected-metric none] [bgp-redist-rip-metric none]
[bgp-redist-ospf-metric none] [bgp-cluster-id ip-address]
[bgp-max-paths bgp-max-paths-number] [bgp-ibgp-multipath bgp-ibgp-multipath-number]
[bgp-bestpath-as-path none|ignore]
[bgp-dampening|no-bgp-dampening]
[bgp-graceful-restart|no-bgp-graceful-restart]
[bgp-stalepath-time seconds] [rip-redistribute static|connected|ospf|bgp]
[ospf-redistribute static|connected|rip|bgp] [vrrp-track-port port-list]
[ospf-redist-static-metric none] [ospf-redist-static-metric-type 1|2]
[ospf-redist-connected-metric none] [ospf-redist-connected-metric-type 1|2]
[ospf-redist-rip-metric none] [ospf-redist-rip-metric-type 1|2]
[ospf-redist-bgp-metric none] [ospf-redist-bgp-metric-type 1|2]

name name-string Specify the name of the vRouter.

vnet vnet-name Specify the name of the VNET.

Any of the following options:

dedicated-vnet-service|share-vnet-service Specify if the vRouter is a dedicated or shared VNET service.
disable|enable Specify to enable or disable the vRouter service.
storage-pool Specify the storage pool.
router-type hardware|software Specify if the vRouter uses hardware or software. Note that if you specify hardware as the router type, you cannot assign IP addresses using DHCP. You must specify a static IP address.

hw-vrrp-id
hw-vrrp-id-number Specifies the VRRP ID for a hardware router.

bgp-as bgp-as-number Specify the Autonomous System Number (ASN) if the vRouter runs Border Gateway Protocol (BGP).

router-id ip-address Specify the vRouter IP address.

proto-multi none|vmrp|pim-ssm|pim-sparse Specify the optional multicast protocol for the vRouter service. Select none, Vector Multicast Routing Protocol (VMRP), Protocol Independent Multicast-source specific mode (PIM-SIM), or PIM-Sparse mode.

bgp-redistribute static|connected|rip|ospf Specify how BGP routes are redistributed.

bgp-redist-static-metric none Specify a static metric for BGP route redistribution. This is a number between 0 and 4294967295 or specify none to unset.
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bgp-redist-connected-metric none</td>
<td>Specify a connected metric for BGP route redistribution. This is a number between 0 and 4294967295 or specify none to unset.</td>
</tr>
<tr>
<td>bgp-redist-rip-metric none</td>
<td>Specify a RIP metric for BGP route redistribution. This is a number between 0 and 4294967295 or specify none to unset.</td>
</tr>
<tr>
<td>bgp-redist-ospf-metric none</td>
<td>Specify a OSPF metric for BGP route redistribution. This is a number between 0 and 4294967295 or specify none to unset.</td>
</tr>
<tr>
<td>bgp-cluster-id ip-address</td>
<td>Specify an IP address for a BGP cluster.</td>
</tr>
<tr>
<td>bgp-max-paths bgp-max-paths-number</td>
<td>Specify the maximum number of paths for BGP. This is a number between 1 and 255 or 0 to unset.</td>
</tr>
<tr>
<td>bgp-ibgp-multipath bgp-ibgp-multipath-number</td>
<td>Specify the number of multipaths for BGP. This is a number between 1 and 255 or 0 to unset.</td>
</tr>
<tr>
<td>bgp-bestpath-as-path none</td>
<td>ignore</td>
</tr>
<tr>
<td>bgp-dampening no-bgp-dampening</td>
<td>Specify a BGP damp</td>
</tr>
<tr>
<td>bgp-graceful-restart</td>
<td>no-bgp-graceful-restart</td>
</tr>
<tr>
<td>bgp-stalepath-time second</td>
<td>Specify the length of time before a BGP path becomes stale. This is a value between 0 and 3600 or 0 to unset.</td>
</tr>
<tr>
<td>rip-redistribute static</td>
<td>connected</td>
</tr>
<tr>
<td>vrrp-track-port port-list</td>
<td>Specify a port to track a VRRP configuration.</td>
</tr>
<tr>
<td>ospf-redistribute static</td>
<td>connected</td>
</tr>
<tr>
<td>ospf-redist-static-metric-type 1</td>
<td>2</td>
</tr>
<tr>
<td>ospf-redist-connected-metric none</td>
<td>Specify a connected metric type for OSPF route redistribution.</td>
</tr>
<tr>
<td>ospf-redist-connected-metric-type 1</td>
<td>2</td>
</tr>
<tr>
<td>ospf-redist-rip-metric none</td>
<td>Specify a RIP metric type for OSPF route redistribution. This is a number between 0 and 16777214 or 'none' to unset.</td>
</tr>
<tr>
<td>ospf-redist-rip-metric-type 1</td>
<td>2</td>
</tr>
<tr>
<td>ospf-redist-bgp-metric none</td>
<td>Specify a BGP metric type for OSPF route redistribution. This is a number between 0 and 16777214 or 'none' to unset.</td>
</tr>
<tr>
<td>ospf-redist-bgp-metric-type 1</td>
<td>2</td>
</tr>
</tbody>
</table>
Defaults None.
Access CLI
Usage Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command creates a new vRouter service.
Examples To create a vRouter, MyvService, for the VNET, net-ops, as a shared service, with the IP address of 208.74.182.1, use the following command:

```
vrouter-create name MyvService vnet net-ops shared-vnet-services router-id 208.74.182.1
```

See Also

- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-add
- vrouter-interface-modify
- vrouter-interface-remove
- vrouter-interface-show
- vrouter-ospf-add
- vrouter-ospf-remove
- vrouter-ospf-show
- vrouter-ospf-neighbor-show
- vrouter-rip-add
- vrouter-rip-remove
- vrouter-rip-show
- vrouter-static-route-add
- vrouter-static-route-remove
- vrouter-static-route-show
vrouter-delete

This command deletes a virtual router (vRouter) service for a fabric, cluster, or standalone switch.

Syntax  vrouter-delete name name-string

name name-string  Specify the name of the vRouter service.

Defaults  None.

Access   CLI

Usage   Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its
tenants with a virtual router (vRouter) service that forwards traffic between networks and
implements Layer 3 protocols. This command deletes a vRouter service.

Examples  To delete the vRouter service, MyvService, use the following command:

CLI network-admin@switch > vrouter-delete name MyvService

See Also
• vrouter-create
• vrouter-migrate
• vrouter-modify
• vrouter-show
• vrouter-bgp-add
• vrouter-bgp-remove
• vrouter-bgp-show
• vrouter-igmp-static-join-add
• vrouter-igmp-static-join-remove
• vrouter-igmp-static-join-show
• vrouter-interface-add
• vrouter-interface-modify
• vrouter-interface-remove
• vrouter-interface-show
• vrouter-ospf-add
• vrouter-ospf-remove
• vrouter-ospf-show
• vrouter-ospf-neighbor-show
• vrouter-rip-add
• vrouter-rip-remove
• vrouter-rip-show
• vrouter-static-route-add
• vrouter-static-route-remove
• vrouter-static-route-show
vrouter-migrate

The command migrates a vRouter service.

Syntax
vrouter-migrate name name-string location fabric-node-name
storage-pool storage-pool-name

name name-string
Specify the name of the vRouter.

Between one or two of the following options:

location
Specify the location name.
fabric-node-name
storage-pool
Specify the storage pool name.
storage-pool-name

Defaults None.

Access CLI.

Usage Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its
tenants with a virtual router (vRouter) service that forwards traffic between networks and
implements Layer 3 protocols. This command migrates a vRouter service.

Examples To migrate the vRouter service, MyvService, on fabric, pn-fabric, to the
storage pool, keep-all, use the following command:

CLI network-admin@switch > vrouter-migrate name MyvService location
pn-fabric storage-pool keep-all

See Also
• vrouter-create
• vrouter-delete
• vrouter-modify
• vrouter-show
• vrouter-bgp-add
• vrouter-bgp-remove
• vrouter-bgp-show
• vrouter-igmp-static-join-add
• vrouter-igmp-static-join-remove
• vrouter-igmp-static-join-show
• vrouter-interface-add
• vrouter-interface-modify
• vrouter-interface-remove
• vrouter-interface-show
• vrouter-ospf-add
• vrouter-ospf-remove
• vrouter-ospf-show
• vrouter-ospf-neighbor-show
• vrouter-rip-add
• vrouter-rip-remove
• vrouter-rip-show
• vrouter-static-route-add
• vrouter-static-route-remove
• vrouter-static-route-show
vrouter-modify

This command modifies a virtual router (vRouter) services for a fabric, cluster, or standalone switch.

Syntax
vrouter-modify name name-string [disable|enable] [gateway ip-address] [storage-pool storage-pool-name] [bgp-as bgp-as-number] [router-id ip-address] [proto-multi none|vmrp|pim-ssm] [bgp-redistribute static|connected|rip|ospf] [bgp-redist-static-metric none] [bgp-redist-connected-metric none] [bgp-redist-rip-metric none] [bgp-redist-ospf-metric none] [bgp-cluster-id ip-address] [bgp-max-paths bgp-max-paths-number] [bgp-ibgp-multipath bgp-ibgp-multipath-number] [bgp-bestpath-as-path none|ignore] [bgp-dampening|no-bgp-dampening] [bgp-graceful-restart|no-bgp-graceful-restart] [bgp-stalepath-time seconds] [rip-redistribute static|connected|ospf|bgp] [vrrp-track-port port-list] [ospf-redistribute static|connected|rip|bgp] [ospf-redist-static-metric-type 1|2] [ospf-redist-connected-metric none] [ospf-redist-connected-metric-type 1|2] [ospf-redist-rip-metric none] [ospf-redist-ospf-metric none] [ospf-redist-bgp-metric none] [ospf-redist-bgp-metric-type 1|2]

name name-string
Specify the name of the vRouter.

Any of the following options:

disable|enable
Specify to enable or disable the vRouter service.
gateway ip-address
Specify the IP address of the gateway.
storage-pool storage-pool-name
Specify the storage pool.
bgp-as bgp-as-number
Specify the Autonomous System Number (ASN) if the vRouter runs Border Gateway Protocol (BGP).
router-id ip-address
Specify the vRouter IP address
proto-multi none|vmrp|pim-ssm
Specify the optional multicast protocol for the vRouter service. Select none, Vector Multicast Routing Protocol (VMRP), or Protocol Independent Multicast-source specific mode (PIM-SIM).
bgp-redistribute static|connected|rip|ospf
Specify how BGP routes are redistributed.
bgp-redist-static-metric none
Specify a static metric for BGP route redistribution.
bgp-redist-connected-metric none
Specify a connected metric for BGP route redistribution.
bgp-redist-rip-metric none
Specify a RIP metric for BGP route redistribution.
bgp-redist-ospf-metric none
Specify an OSPF metric for BGP route redistribution.
bgp-cluster-id ip-address
Specify an IP address for a BGP cluster.
bgp-max-paths bgp-max-paths-number
Specify the maximum number of paths for BGP.
bgp-ibgp-multipath bgp-ibgp-multipath-number
Specify the number of multipaths for BGP.
### Defaults

None.

### Access

CLI

### Usage

Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command modifies a vRouter service.

### Examples

To modify a vRouter, MyvService, for the VNET, net-ops, as a shared service, and disable it, use the following command:

```
vrouter-modify name MyvService vnet net-ops shared-vnet-services disable
```

### See Also

- `vrouter-create`
- `vrouter-delete`
- `vrouter-migrate`
- `vrouter-show`
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-add
- vrouter-interface-modify
- vrouter-interface-remove
- vrouter-interface-show
- vrouter-ospf-add
- vrouter-ospf-remove
- vrouter-ospf-show
- vrouter-ospf-neighbor-show
- vrouter-rip-add
- vrouter-rip-remove
- vrouter-rip-show
- vrouter-static-route-add
- vrouter-static-route-remove
- vrouter-static-route-show
vrouter-show

This command displays a virtual router (vRouter) service for a fabric, cluster, or standalone switch.

Syntax

```
vrouter-show [id <id-number> | name <name-string>] [type \n  vnet-mgr|vrouter|vib|dhcpp|dns|netzone| \n  ofpd|orphaned|netvm|nat|openstack|netvmm] scope [local|fabric] \n  vnet \n  vnet-name [location fabric-node-name] [router-type \n  hardware|software] [hw-router-mac mac-address] [hw-vrid \n  hw-vrid-number] [hw-vrrp-id hw-vrrp-id-number] [[bgp-as \n  bgp-as-number] [router-id ip-address] [proto-multi \n  none|vmrp|pim-ssm][bgp-redistribute \n  static|connected|rip|ospf][bgp-redist-static-metric none] \n  [bgp-redist-connected-metric none] [bgp-redist-rip-metric none] \n  [bgp-redist-ospf-metric none] [bgp-cluster-id ip-address] \n  [bgp-max-paths bgp-max-paths-number] [bgp-ibgp-multipath \n  bgp-ibgp-multipath-number] [bgp-bestpath-as-path none|ignore] \n  [bgp-dampening no-bgp-dampening] \n  [bgp-graceful-restart no-bgp-graceful-restart] \n  [bgp-stalepath-time seconds] [rip-redistribute \n  static|connected|ospf|bgp] [ospf-redistribute \n  static|connected|rip|bgp] [vrrp-track-port port-list] \n  [ospf-redist-static-metric-type 1|2] \n  [ospf-redist-connected-metric-type 1|2] [ospf-redist-rip-metric \n  none] [ospf-redist-rip-metric-type 1|2] [ospf-redist-bgp-metric \n  none] [ospf-redist-bgp-metric-type 1|2]```

id

The ID number assigned by nvOS to the configuration.

name name-string

Specifies the name of the vRouter.

type

Specifies the type of vRouter.

vnet-name

Specifies the name of the VNET.

location fabric-node-name

Specifies the location of the vRouter on the fabric.

router-type hardware|software

Specifies the router type as hardware or software.

hw-router-mac mac-address

Specifies the MAC address of the hardware router.

hw-vrid hw-vrid-number

Specifies the virtual router ID of the hardware router.

hw-vrrp-id hw-vrrp-id-number

Specifies the VRRP ID for a hardware router.

bgp-as bgp-as-number

Specifies the Autonomous System Number (ASN) if the vRouter runs Border Gateway Protocol (BGP).

router-id ip-address

Specifies the vRouter IP address.
proto-multi
none|vmrp|pim-ssm

Specifies the optional multicast protocol for the vRouter service. Select none, Vector Multicast Routing Protocol (VMRP), or Protocol Independent Multicast-source specific mode (PIM-SIM).

bgp-redistribute
static|connected|rip|ospf

Specify how BGP routes are redistributed.

bgp-redist-static-metric
none

Specify a static metric for BGP route redistribution.

bgp-redist-connected-metric
none

Specify a connected metric for BGP route redistribution.

bgp-redist-rip-metric
none

Specify a RIP metric for BGP route redistribution.

bgp-redist-ospf-metric
none

Specify a OSPF metric for BGP route redistribution.

bgp-cluster-id
ip-address

Specify an IP address for a BGP cluster.

bgp-max-paths
bgp-max-paths-number

Specify the maximum number of paths for BGP.

bgp-ibgp-multipath
bgp-ibgp-multipath-number

Specify the number of multipaths for BGP.

bgp-bestpath-as-path
none|ignore

Specify a parameter for a best path as path.

bgp-dampening|no-bgp-dampening

Specify a BGP damp

bgp-graceful-restart|no-bgp-graceful-restart

Specify a graceful restart for BGP routing.

bgp-stalepath-time
second

Specify the length of time befor a BGP path becomes stale. This is a value between 0 and 3600.

rip-redistribute
static|connected|ospf|bgp

Specify how RIP routes are redistributed.

ospf-redistribute
static|connected|rip|bgp

Specify how OSPF routes are redistributed.

vrrp-track-port
port-list

Specify a port to track a VRRP configuration.

ospf-redist-static-metric-type 1|2

Specify a static metric type for OSPF route redistribution.

ospf-redist-connected-metric none

Specify a connected metric type for OSPF route redistribution.

ospf-redist-connected-metric-type 1|2

Specify a connected metric type for OSPF route redistribution.
ospf-redist-rip-metric
none
Specify a RIP metric type for OSPF route redistribution.

ospf-redist-rip-metric-type 1|2
Specify a RIP metric type for OSPF route redistribution.

ospf-redist-bgp-metric
none
Specify a BGP metric type for OSPF route redistribution.

ospf-redist-bgp-metric-type 1|2
Specify a BGP metric type for OSPF route redistribution.

Formatting Options

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dupes</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dupes</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Repeat the show command at a specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>no-show-headers</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

Defaults  None.
Access  CLI
History

Version 1.2  Command introduced.
Version 2.0  Parameter type added.
Usage
Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command displays vRouter service.

Examples
To display all vRouter services, use the following command:

```cli
CLI (network-admin@techpubs-aquila1) > vrouter-show format all layout vertical
id:                 a0000dd:7
name:               vrrp-rtr1
type:               vrouter
scope:              fabric
vnet:               vrrp-router
vnet-service:       shared
state:              enabled
location:           techpubs-aquila1
storage-pool:       rpool
template:           no
router-type:        software
proto-multi:        none
id:                 6000021:c
name:               vrrp-rfr2
type:               vrouter
scope:              fabric
vnet:               vrrp-router
vnet-service:       dedicated
state:              enabled
location:           techpubs-aquila2
storage-pool:       rpool
template:           no
router-type:        software
proto-multi:        none
```

See Also
- `vrouter-create`
- `vrouter-delete`
- `vrouter-migrate`
- `vrouter-modify`
- `vrouter-bgp-add`
- `vrouter-bgp-remove`
- `vrouter-bgp-show`
- `vrouter-igmp-static-join-add`
- `vrouter-igmp-static-join-remove`
• vrouter-igmp-static-join-show
• vrouter-interface-add
• vrouter-interface-modify
• vrouter-interface-remove
• vrouter-interface-show
• vrouter-ospf-add
• vrouter-ospf-remove
• vrouter-ospf-show
• vrouter-ospf-neighbor-show
• vrouter-rip-add
• vrouter-rip-remove
• vrouter-rip-show
• vrouter-static-route-add
• vrouter-static-route-remove
• vrouter-static-route-show
vrouter-bfd-neighbor-show

Bidirectional Forwarding Detection (BFD) provides fast BFD peer failure detection times independently of all media types, encapsulations, topologies, and routing protocols BGP, EIGRP, IS-IS, and OSPF. By sending rapid failure detection notices to the routing protocols in the local router to initiate the routing table recalculation process, BFD contributes to greatly reduced overall network convergence time.

Syntax
vrouter-bfd-neighbor-show vrouter-name name-string
out-addr ip-address neighbor ip-address local-discr
local-discr-number remote-discr remote-discr-number holdown
holdown-number(ms) multiplier multiplier-number state
unknown|admin-down|down|init|up interface interface-string

vrouter-name name-string
Specifies a name for the vRouter service.

Specify the following BFD arguments:

out-addr ip-address
Specifies the outgoing IP address.

neighbor ip-address
Specifies a neighbor IP address.

local-discr
Specifies the local discriminator.

local-discr-number

remote-discr
Specifies the remote discriminator.

remote-discr-number

holdown
Specifies the detection time if the BFD session is established.

holdown-number(ms)

multiplier
Specifies a detection time multiplier.

multiplier-number

state
Specifies the state of the BFD session.

unknown|admin-down|down

|init|up

interface
Specifies the interface of the connection.

interface-string

Defaults None.

Access CLI

Usage Displays information about Bidirectional Forwarding Direction neighbors.

Examples To display information about BFD, use the following command:

CLI network-admin@switch > vrouter-bfd-neighbor-show

See Also
- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
• vrouter-igmp-static-join-add
• vrouter-igmp-static-join-remove
• vrouter-igmp-static-join-show
• vrouter-interface-add
• vrouter-interface-modify
• vrouter-interface-remove
• vrouter-interface-show
• vrouter-ospf-add
• vrouter-ospf-remove
• vrouter-ospf-show
• vrouter-ospf-neighbor-show
• vrouter-rip-add
• vrouter-rip-remove
• vrouter-rip-show
• vrouter-static-route-add
• vrouter-static-route-remove
• vrouter-static-route-show
vrouter-bgp-add

This command adds Border Gateway Protocol (BGP) to a virtual router (vRouter) service on a fabric, cluster, or standalone switch.

Syntax  
```
vrouter-bgp-add vrouter-name name-string [neighbor ip-address] [remote-as remote-as-number] [remote-as | no-remote-as] [next-hop-self|no-next-hop-self] [password password-string] [ebgp-multihop number] [update-source vrouter loopback-interface ip [prefix-list-in vrouter prefix-list name] [prefix-list-out vrouter prefix-list name] [route-reflector-client|no-route-reflector-client] [override-capability|no-override-capability] [soft-reconfig-inbound|no-soft-reconfig-inbound] [max-prefix max-prefix-number] [max-prefix-warn-only|no-max-prefix-warn-only] [bfd|no-bfd]
```

**vrouter-name name-string** Specify a name for the vRouter service.

**Specify the following BGP arguments:**

**neighbor ip-address** Specify a neighbor IP address to use for BGP filtering.

**remote-as remote-as-number** Specify the remote Autonomous System (AS) number. This is a value between 1 and 4294967295.

**Specify any of the following BGP options:**

**next-hop-self|** Specify if the next-hop is the same router or not.

**no-next-hop-self**

**password password-string** Specify a password, if desired.

**ebgp-multihop number** Specify a value for external BGP to accept or attempt BGP connections to external peers, not directly connected, on the network. This is a value between 1 and 255.

**update-source vrouter loopback-interface ip** Specify the source IP address of BGP packets sent by the router. This parameter is required if you want BGP to perform peering over a loopback interface.

**prefix-list-in vrouter prefix-list name** Specify the prefix list to filter traffic inbound.

**prefix-list-out vrouter prefix-list name** Specify the prefix list to filter traffic outbound.

**route-reflector-client|** Specify if a route reflector client is used.

**no-route-reflector-client**

**override-capability|** Specify if you want to override capability.

**no-override-capability**

**soft-reconfig-inbound|** Specify if you want a soft reconfiguration of inbound routes.

**no-soft-reconfig-inbound**

**max-prefix max-prefix-number** Specify the maximum number of prefixes.

**max-prefix-warn-only|** Specify if you want a warning message when the maximum number of prefixes is exceeded.

**no-max-prefix-warn-only**

**bfd|no-bfd** Specify if you want BFD protocol support for fault detection.
Defaults

None.

Access CLI

Usage Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a vRouter service that forwards traffic between networks and implements Layer 4 protocols. Use this command to add BGP to the vRouter service.

Examples To add BGP to the vRouter service, BGP-vService, the neighbor IP address of 209.75.183.3, remote AS 45, and network address of 172.26.21.7/32, use the following command:

```
CLI network-admin@switch > vrouter-bgp-add vrouter-name BGP-vService neighbor 209.75.183.3 remote-as 45 network 172.26.21.7/32
```

See Also

- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-add
- vrouter-interface-modify
- vrouter-interface-remove
- vrouter-interface-show
- vrouter-ospf-add
- vrouter-ospf-remove
- vrouter-ospf-show
- vrouter-ospf-neighbor-show
- vrouter-rip-add
- vrouter-rip-remove
- vrouter-rip-show
- vrouter-static-route-add
- vrouter-static-route-remove
- vrouter-static-route-show
vrouter-bgp-remove

This command removes Border Gateway Protocol (BGP) from a virtual router (vRouter) service on a fabric, cluster, or standalone switch.

Syntax

vrouter-bgp-remove vrouter-name name-string ip ip-address

vrouter-name Specify the name of the vRouter service.
name-string

Specify the following BGP arguments:
ip ip-address Specify the IP address of the route to remove from the vRouter.
This is either the neighbor IP address or network IP address.

Defaults None.

Access CLI

Usage Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a vRouter service that forwards traffic between networks and implements Layer 4 protocols. Use this command to remove BGP to the vRouter service.

Examples To remove the neighbor BGP route from the vRouter service, BGP-vService, use the following command:

CLI network-admin@switch > vrouter-bgp-remove vrouter-name BGP-vService
name 209.75.183.3

See Also

• vrouter-create
• vrouter-delete
• vrouter-migrate
• vrouter-modify
• vrouter-show
• vrouter-bgp-add
• vrouter-bgp-show
• vrouter-igmp-static-join-add
• vrouter-igmp-static-join-remove
• vrouter-igmp-static-join-show
• vrouter-interface-add
• vrouter-interface-modify
• vrouter-interface-remove
• vrouter-interface-show
• vrouter-ospf-add
• vrouter-ospf-remove
• vrouter-ospf-show
• vrouter-ospf-neighbor-show
• vrouter-rip-add
• vrouter-rip-remove
• vrouter-rip-show
• vrouter-static-route-add
• vrouter-static-route-remove
• vrouter-static-route-show
vrouter-bgp-show

This command displays Border Gateway Protocol (BGP) information for a virtual router (vRouter) service on a fabric, cluster, or standalone switch.

Syntax:
```
vrouter-bgp-show vrouter-name name-string name name-string
[neighbor ip-address] [update-source vrouter loopback-interface ip] [remote-as remote-as-number] [next-hop-self] [no-next-hop-self] [ebgp-multihop number] [update-source vrouter loopback-interface ip] [prefix-list-in vrouter prefix-list name] [prefix-list-out vrouter prefix-list name] [route-reflector-client|no-route-reflector-client] [override-capability|no-override-capability] [soft-reconfig-inbound|no-soft-reconfig-inbound] [max-prefix max-prefix-number] [max-prefix-warn-only|no-max-prefix-warn-only] [network ip-address] [network ip-address] [netmask netmask]
```

`vrouter-name name-string` Specifies a name for the vRouter service.

Displays the following BGP arguments:

- `ip ip-address` Specifies an IP address for the BGP route.
- `neighbor ip-address` Specifies a neighbor IP address to use for BGP filtering.
- `remote-as remote-as-number` Specifies the remote Autonomous System (AS) number.
- `next-hop-self|no-next-hop-self` Specifies if the next-hop is the same router or not.
- `password password-string` Specifies a password, if desired.
- `ebgp-multihop number` Specifies a value for external BGP to accept or attempt BGP connections to external peers, not directly connected, on the network. This is a value between 1 and 255.
- `update-source vrouter loopback-interface ip` Specifies the source IP address of BGP packets sent by the router. This parameter is required if you want BGP to perform peering over a loopback interface.
- `prefix-list-in vrouter prefix-list name` Specifies the prefix list to filter traffic inbound.
- `prefix-list-out vrouter prefix-list name` Specifies the prefix list to filter traffic outbound.
- `route-reflector-client|no-route-reflector-client` Specifies if a route reflector client is used.
- `override-capability|no-override-capability` Specifies if you want to override capability.
- `soft-reconfig-inbound|no-soft-reconfig-inbound` Specifies if you want a soft reconfiguration of inbound routes.
- `max-prefix max-prefix-number` Specifies the maximum number of prefixes.
max-prefix-warn-only | no-max-prefix-warn-only
Specifies if you want a warning message when the maximum number
of prefixes is exceeded.

bfd | no-bfd
Specifies if BFD is enabled.

network ip-address
Specifies the network IP address.

netmask netmask
Specifies the netmask.

### Formatting Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show-dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

### Defaults

**None.**

### Access

**CLI**

### Usage

Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a vRouter service that forwards traffic between networks and implements Layer 4 protocols. Use this command to display information about BGP on the vRouter service.

### Examples

To display all BGP vRouter service information, use the following command:

```
CLI network-admin@switch > vrouter-bgp-show layout vertical
```

### See Also

- vrouter-create
- vrouter-delete

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• vrouter-migrate
• vrouter-modify
• vrouter-show
• vrouter-bgp-add
• vrouter-bgp-remove
• vrouter-igmp-static-join-add
• vrouter-igmp-static-join-remove
• vrouter-igmp-static-join-show
• vrouter-interface-add
• vrouter-interface-modify
• vrouter-interface-remove
• vrouter-interface-show
• vrouter-ospf-add
• vrouter-ospf-remove
• vrouter-ospf-show
• vrouter-ospf-neighbor-show
• vrouter-rip-add
• vrouter-rip-remove
• vrouter-rip-show
• vrouter-static-route-add
• vrouter-static-route-remove
• vrouter-static-route-show
vrouter-bgp-neighbor-reset

This command is used to reset a BGP neighbor in the configuration.

Syntax

vrouter-bgp-neighbor-reset vrouter-name name-string neighbor ip-address

vrouter-name

Specify the name of the vRouter to reset.

name-string

neighbor ip-address

Specify the IP address of the BGP neighbor.

Defaults None

Access CLI

Usage Use this command to reset a BGP neighbor on the network.

Examples To reset the BGP neighbor with the IP address, 10.9.31.234, use the following syntax:

CLI network-admin@switch > vrouter-bgp-neighbor-reset neighbor 10.9.31.234
**vrouter-bgp-neighbor-show**

This command displays information about Border Gateway Protocol (BGP) neighbors.

**Syntax**

```
vrouter-bgp-neighbor-show vrouter-name name-string
neighbor ip-address ver ver-number remote-as remote-as-number
msg_rcvd msg_rcvd-number msg_sent msg_sent-number tblver
tblver-number inQ inQ-number outQ outQnumber up/down
up/down-string state/pfxrcd state/pfxrcd-string
```

- **vrouter-name name-string**
  Specifies the name of the vRouter.
- **neighbor ip-address**
  Specifies the IP address of the neighbor.
- **ver ver-number**
  Specifies the BGP version.
- **remote-as remote-as-number**
  Specifies the AS number of the remote connection.
- **msg_rcvd msg_rcvd-number**
  Specifies the number of messages received from the receive socket buffer.
- **msg_sent msg_sent-number**
  Specifies the number of messages written to the transmit socket buffer.
- **tblver tblver-number**
  Specifies the version of the routing table.
- **inQ inQ-number**
  Specifies the number of BGP packets queued for a neighbor.
- **outQ outQ-number**
  Specifies the number of BGP packets queued for transmission to a neighbor.
- **up/down up/down-string**
  Specifies if the neighbor is up or down.
- **state/pfxrcd state/pfxrcd-string**
  Specifies the current state of the BGP session. The state can be any of the following types:
  - 1 — Idle
  - 2 — Connect
  - 3 — Active
  - 4 — OpenSent
  - 5 — OpenConfirm
  - 6 — Established

**Formatting Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sortable</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dupes</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td></td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>no-show-headers</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults**  None  
**Access**  CLI  
**Usage**  Use this command to display information about BGP neighbors configured on a vRouter.  
**Examples**  To display all information about BGP neighbors, use the following command:

```bash
CLI  network-admin@switch > vrouter-bgp-neighbor-show
```

```
vrouter-name: vrouter33  
neighbor: 10.9.100.200  
ver: 4  
remote-as: 100  
msg_rcvd: 324  
msg_sent: 330  
tblver: 0  
inQ: 0  
outQ: 0  
up/down: 00:31:25  
state/pfxrcd: 1
```

```
vrouter-name: vrouter55  
neighbor: 10.9.100.100  
ver: 4  
remote-as: 100  
msg_rcvd: 325  
msg_sent: 330  
tblver: 0  
inQ: 0  
outQ: 0  
up/down: 00:31:26  
state/pfxrcd: 1
```
vrouter-cached-routes-show

This command is used to display the cached routes for a vRouter.

Syntax

```
vrouter-cached-routes-show [vrid vrid-number] [ip ip-address] [prelen prelen-number] [vlan vlan-number] [vxlan vxlan-number] [nexthop ip-address] [age-in-seconds age-in-seconds-number]
```

**vrid vrid-number**
Specifies the vRouter ID assigned by ONVL.

**ip ip-address**
Specifies the IP address.

**prelen prelen-number**
Specifies the prefix length.

**vlan vlan-number**
Specifies the VLAN number.

**vxlan vxlan-number**
Specifies the VXLAN number.

**nexthop ip-address**
Specifies the IP address for the next hop on the route.

**age-in-seconds age-in-seconds-number**
Specifies the age of the cached route.

### Formatting Options

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format fields-to-display</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
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<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
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<td>show-headers</td>
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<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
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<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults** None

**Access** CLI
Usage  Use this command to display cached routes which can be helpful when troubleshooting a connection.

Examples  To display cached routes, use the following command:

```
CLI network-admin@switch > vroutercached-routes-show
```
**vrouter-fib-arps-show**

This command is used to display information about Address Resolution Protocol (ARP) in the forwarding information database. Before using this command, the switch must be part of a fabric.

**Syntax**
```
vrouter-fib-arps-show vrid vrid-number ip ip-address if-id if-id-number port port-number vlan vlan-id mac mac-address egress-id egress-id-number flags ECMP|Trunk
```

- `vrid vrid-number` Displays the virtual router identifier.
- `ip ip-address` Displays the IP address.
- `if-id if-id-number` Displays the interface identifier.
- `port port-number` Displays the port number.
- `vlan vlan-id` Displays the VLAN identifier.
- `mac mac-address` Displays the MAC address.
- `egress-id egress-id-number` Displays the egress identifier.
- `flags ECMP|Trunk` Displays hardware flags.

**Formatting Options**

- `format fields-to-display` Display output using a specific parameter. Use all to display all possible output.
- `parsable-delim character` Display output formatted for machine parsing using a specified delimiter.
- `sort-asc` Display output in ascending order.
- `sort-desc` Display output in descending order.
- `show-dups` Display duplicate entries in the output.
- `layout vertical|horizontal` Format the output in a vertical or horizontal layout.
- `show-interval seconds-interval` Repeat the show command at a specified interval.
- `show-diff-interval` Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.
- `show-headers|no-show-headers` Display column headers or not.
- `limit-output number` Limit the display output to a specific number of entries.
- `count-output` Display the number of entries in the output. This is useful with vRouter show commands.
- `unscaled` Display full values in the output instead of scaled approximate values.
- `sum-by` Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.

**Defaults** None
Access CLI

Usage Use this command to display ARP information in the forwarding information database.

Examples To display ARP information, use the following syntax:

```
CLI network-admin@switch > vrouter-fib-arps-show format all layout vertical
```

```plaintext
switch: aquila22-m
ip: 10.16.113.1
if-id: 0
vlan: 113
mac: 66:0e:94:9f:30:aa
flags:

switch: aquila22-m
ip: 10.16.113.2
if-id: 0
vlan: 113
flags:

switch: aquila22-m
ip: 10.16.115.1
if-id: 1
vlan: 115
flags:
```
vrouter-fib-routes-show

This command displays information about routes in the forwarding information database.

Syntax vrouter-fib-routes-show vrid vrid-number ip ip-address prelen prelen-number nexthop ip-address if-ip ip-address intf-id intf-id-number vlan vlan-id port port-number nexthop-mac mac-address flags ECMP|Trunk egress-id egress-id-number ecmp-group ecmp-group-number state up|admin-down|if-admin-down|if-vlan-down|nexthop-up|nexthop-down

vrid vrid-number Display the virtual router identifier.
ip ip-address Display the IP address of the route.
prelen prelen-number Display the prefix length.
nexthop ip-address Display the IP address for the next hop in the network.
if-ip ip-address Displays the IP address of the interface.
intf-id intf-id-number Displays the interface identifier.
vlan vlan-id Displays the VLAN identifier.
port port-number Displays the port number.
nexthop-mac mac-address Displays the MAC address of the next hop on the network.
flags ECMP|Trunk Displays hardware router flags.
egress-id Displays the egress identifier.
ecmp-group Displays the ECMP group.
ecmp-group-number
state up|admin-down|if-admin-down|if-vlan-down|nexthop-up|nexthop-down Displays the route state.

Formatting Options

<table>
<thead>
<tr>
<th>Command</th>
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</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>parsable-delim</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>character</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>no-show-headers</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

Defaults   None
Access   CLI
Usage   Use this command to display routes in the forwarding information database.
Examples  To display routes in the forwarding information database, use the following syntax:

```
CLI network-admin@switch > vrouter-fib-routes-show format all layout vertical
```

```
switch: pleiades-24
vrid: 0
ip: 10.17.123.1
prelen: 32
nexthop: 10.17.123.1
if-ip: 10.17.123.2
vlan: 123
port: 0
flags:
ecmp-group: -1
state: up
switch: pleiades-24
vrid: 0
ip: 10.17.125.1
prelen: 32
nexthop: 10.17.125.1
if-ip: 10.17.125.1
vlan: 125
port: 0
flags:
ecmp-group: -1
state: up
```

See Also
* vrouter-fib-arps-show
vrouter-igmp-static-join-add

This command adds Internet Group Management Protocol (IGMP) to a virtual router (vRouter) service on a fabric, cluster, or standalone switch.

Syntax
vrouter-igmp-static-join-add vrouter-name name-string
[name name-string] [group-ip ip-address] [source-ip ip-address]
[interface nic]

vrouter-name Specify the name of the vRouter service.
name-string

Specify the following IGMP static join arguments:

name name-string Specify the name of the IGMP configuration.
group-ip ip-address Specify the group IP address used to statically bind to the interface.
source-ip ip-address Specify the source IP address for the IGMP query.
interface nic Specify the type of interface for IGMP.

Defaults None.

Access CLI.

Usage Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a vRouter service that forwards traffic between networks and implements IPv4 protocols.

Examples To add this parameter to a vRouter service, MyvService, with group IP address 232.0.0.1 and source IP address 192.0.2.3, on a vrouter interface, use the following command:

CLI network-admin@switch > vrouter-igmp-static-join-add vrouter-name MyvService name IGMP-vrouter group-ip 232.0.0.1 source-ip 192.0.2.3 interface vrouter

See Also
- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show

Informational Note: IGMPv1 is not supported by ONVL. If you are using IGMPv1, you must disable IGMP snooping on the Pluribus Networks switch.
• vrouter-interface-add
• vrouter-interface-modify
• vrouter-interface-remove
• vrouter-interface-show
• vrouter-ospf-add
• vrouter-ospf-remove
• vrouter-ospf-show
• vrouter-ospf-neighbor-show
• vrouter-rip-add
• vrouter-rip-remove
• vrouter-rip-show
• vrouter-static-route-add
• vrouter-static-route-remove
• vrouter-static-route-show
vrouter-igmp-static-join-remove
This command adds Internet Group Management Protocol (IGMP) to a virtual router (vRouter) service on a fabric, cluster, or standalone switch.

**Informational Note:** IGMPv1 is not supported in ONVL. If you are using IGMPv1, you must disable IGMP snooping on the Pluribus Networks switch.

Syntax
```
vrouter-igmp-static-join-remove vrouter-name name-string
```

**vrouter-name**
Specify the name of the vRouter service.

**name-string**
Specify the name of the IGMP configuration.

Defaults
None.

Access
CLI

Usage
Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a vRouter service that forwards traffic between networks and implements IPv4 protocols.

Examples
To remove the IGMP-vRouter configuration from the vRouter service, MyvService, use the following command:

```
CLI network-admin@switch > vrouter-igmp-static-join-remove
vrouter-name MyvService name IGMP-vRouter
```

See Also
- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-show
- vrouter-interface-add
- vrouter-interface-modify
- vrouter-interface-remove
- vrouter-interface-show
- vrouter-ospf-add
- vrouter-ospf-remove
- vrouter-ospf-show
• vrouter-ospf-neighbor-show
• vrouter-rip-add
• vrouter-rip-remove
• vrouter-rip-show
• vrouter-static-route-add
• vrouter-static-route-remove
• vrouter-static-route-show
vrouter-igmp-static-join-show

This command displays the Internet Group Management Protocol (IGMP) on a virtual router (vRouter) service on a fabric, cluster, or standalone switch.

Syntax

vrouter-igmp-static-join-show vrouter-name name-string [name name-string] [group-ip ip-address] [source-ip ip-address] [interface nic]

vrouter-name name-string Specifies the name of the vRouter service.

Specify the following IGMP static join arguments:

ame name-string Specifies the name of the IGMP configuration.
group-ip ip-address Specifies the group IP address used to statically bind to the interface.
source-ip ip-address Specifies the source IP address for the IGMP query.
interface nic Specifies the type of interface for IGMP.

Formatting Options

format fields-to-display Display output using a specific parameter. Use all to display all possible output.
parseable-delim character Display output formatted for machine parsing using a specified delimiter.
sort-asc Display output in ascending order.
sort-desc Display output in descending order.
show dupes Display duplicate entries in the output.
layout vertical|horizontal Format the output in a vertical or horizontal layout.
show-interval seconds-interval Repeat the show command at a specified interval.
show-diff-interval Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.
show-headers|no-show-headers Display column headers or not.
limit-output number Display the number of entries to a specific number of entries.
count-output Display the number of entries in the output. This is useful with vRouter show commands.

Informational Note: IGMPv1 is not supported in ONVL. If you are using IGMPv1, you must disable IGMP snooping on the Pluribus Networks switch.
Defaults  None.

Access  CLI.

Usage  Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants
with a vRouter service that forwards traffic between networks and implements IPv4 protocols.
This command displays information about IGMP on a vRouter.

Examples  To display all IGMP information on all vRouter services, use the following command:

```
CLI network-admin@switch > vrouter-igmp-static-join-show layout vertical
```

See Also
- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-interface-add
- vrouter-interface-modify
- vrouter-interface-remove
- vrouter-interface-show
- vrouter-ospf-add
- vrouter-ospf-remove
- vrouter-ospf-show
- vrouter-ospf-neighbor-show
- vrouter-rip-add
- vrouter-rip-remove
- vrouter-rip-show
- vrouter-static-route-add
- vrouter-static-route-remove
- vrouter-static-route-show

unscaled  Display full values in the output instead of scaled approximate values.

sum-by  Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.
**vrouter-interface-add**

This command is used to add interfaces to virtual router (vRouter) services on a fabric, cluster, standalone switch, or virtual network (VNET).

Syntax

```
vrouter-interface-add vrouter-name name-string [ip ip-address] [netmask netmask] [assignment none|dhcp|dhcpv6] [vlan vlan-id] [vxlan vxlan-id] [if mgmt|data|span] [alias-on alias-on-string] [exclusive|no-exclusive] [nic-enable|nic-disable] vrrp-id id-number vrrp-primary string [secondary-macs secondary-macs-string]
```

**vrouter-name**

Specify the name for the vRouter interface.

**name-string**

Specify any of the following options:

- **ip ip-address**
  - Specify the IP address of the interface.
- **netmask netmask**
  - Specify the netmask.
- **assignment**
  - Specify the DHCP method for IP address assignment. Note that if you specify hardware as the router type, you cannot assign IP addresses using DHCP. You must specify a static IP address.
- **vlan vlan-id**
  - Specify the VLAN identifier. This is a value between 1 and 4094.
- **vxlan vxlan-id**
  - Specify the VXLAN identifier. This is a value between 0 and 16777215.
- **if mgmt|data|span**
  - Specify if the interface is a management, data or span interface.
- **alias-on alias-on-string**
  - Specify an alias for the interface.
- **exclusive|no-exclusive**
  - Specify if the interface is exclusive to the configuration. Exclusive means that other configurations cannot use the interface. Exclusive is specified when you configure the interface as a span interface and allows higher throughput through the interface.
- **nic-enable|nic-disable**
  - Specify if the NIC is enabled or disabled.
- **vrrp-id id-number**
  - Specify the ID for the VRRP interface. The IDs on both vRouters must be the same ID number.
- **vrrp-primary string**
  - Specifies the primary interface for VRRP failover.
- **vrrp-priority number**
  - Specifies the priority for the VRRP interface. This is a value between 1 (lowest) and 255 (highest).
- **l3-port l3port-usable-port name**
  - Specify a Layer 3 port for the interface.
- **secondary-macs secondary-macs-string**
  - Specify a secondary MAC address for the interface.

**Defaults**

None.

**Access**

CLI

**Usage**

You can add interfaces to the vRouter services on a fabric, cluster, standalone switch, or virtual network (VNET). This command adds an interface to a vRouter service.
Examples  To add an interface with the IP address, 192.168.10.11/32, VLAN 25, and data to vRouter service, MyvService, use the following command:

```bash
CLI network-admin@switch > vrouter-interface-add vrouter-name MyvService
 ip 192.168.10.11/32 assigment none vlan 25 if data
```

See Also
- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-modify
- vrouter-interface-remove
- vrouter-interface-show
- vrouter-ospf-add
- vrouter-ospf-remove
- vrouter-ospf-show
- vrouter-ospf-neighbor-show
- vrouter-rip-add
- vrouter-rip-remove
- vrouter-rip-show
- vrouter-static-route-add
- vrouter-static-route-remove
- vrouter-static-route-show
vrouter-interface-modify

This command is used to modify interfaces on the virtual router (vRouter) service on a fabric, cluster, standalone switch, or virtual network (VNET).

Syntax: vrouter-interface-modify vrouter-name name-string [nic nic-string] [ip ip-address] [netmask netmask] [assignment none|dhcp|dhcpv6] [vlan vlan-id] [vxlan vxlan-id] [if mgmt|data|span] [alias-on alias-on-string] [exclusive|no-exclusive] [nic-enable|nic-disable] vrrp-id id-number vrrp-primary string vrrp-priority number [l3-port l3port-usable-port name] [secondary-macs secondary-macs-string]

vrouter-name name-string
Specify the name for the vRouter interface.

nic nic-string
Specify the type of NIC.

Specify any of the following interface arguments:
ip ip-address
Specify the IP address of the interface.
netmask netmask
Specify the netmask.
assignment none|dhcp|dhcpv6
Specify the DHCP method. Note that if you specify hardware as the router type, you cannot assign IP addresses using DHCP. You must specify a static IP address.

vlan vlan-id
Specify the VLAN identifier. This is a value between 1 and 4094.

vxlan vxlan-id
Specify the VXLAN identifier. This is a value between 0 and 16777215.

if mgmt|data|span
Specify if the interface is a management, data or span interface.
alias-on alias-on-string
Specify an alias for the interface.

exclusive|no-exclusive
Specify if the interface is exclusive to the configuration. Exclusive means that other configurations cannot use the interface.
nic-enable|nic-disable
Specify if the NIC is enabled or disabled.
vrrp-id id-number
Specify the ID for the VRRP interface.
vrrp-primary string
Specifies the primary interface for VRRP failover.
vrrp-priority number
Specifies the priority for the VRRP interface. This is a value between 1 (lowest) and 255 (highest).

l3-port l3port-usable-port name
Specify a Layer 3 port for the interface.
secondary-macs
Specify a secondary MAC address for the interface.

Defaults: None.

Access: CLI

Usage: You can modify the interfaces on the vRouter service on a fabric, cluster, standalone switch, or virtual network (VNET). This command modifies an interface to a vRouter service.
Examples  To modify an interface with the IP address, 192.168.10.11/32, VLAN 25, and data to vRouter service, MyvService and change the VLAN to 21, use the following command:

```bash
CLI network-admin@switch > vrouter-interface-add vrouter-name MyvService
ip 192.168.10.11/32 assignment none vlan 21 if data
```

See Also
- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-add
- vrouter-interface-remove
- vrouter-interface-show
- vrouter-ospf-add
- vrouter-ospf-remove
- vrouter-ospf-show
- vrouter-ospf-neighbor-show
- vrouter-rip-add
- vrouter-rip-remove
- vrouter-rip-show
- vrouter-static-route-add
- vrouter-static-route-remove
- vrouter-static-route-show
vrouter-interface-remove

This command is used to remove interfaces on the virtual router (vRouter) service in a fabric, cluster, standalone switch, or virtual network (VNET).

Syntax

```
vrouter-interface-remove vrouter-name name-string [nic nic-string]
```

- **vrouter-name**
  - Specify the name for the vRouter interface.
- **name-string**
  - Specify the following interface arguments:
- **nic**
  - **nic-string**
    - Specify the name of the NIC.

Defaults  None.

Access  CLI

Usage  You can remove the interfaces on the vRouter service from a fabric, cluster, standalone switch, or virtual network (VNET). This command removes an interface to a vRouter service.

Examples  To remove eth1 NIC from the vRouter service, MyvService, use the following command:

```
CLI network-admin@switch > vrouter-interface-remove vrouter-name MyvService nic eth1
```

See Also

- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-add
- vrouter-interface-modify
- vrouter-interface-show
- vrouter-ospf-add
- vrouter-ospf-remove
- vrouter-ospf-show
- vrouter-ospf-neighbor-show
- vrouter-rip-add
- vrouter-rip-remove
- vrouter-rip-show
- vrouter-static-route-add
• vrouter-static-route-remove
• vrouter-static-route-show
•
vrouter-interface-show

This command is used to display the interfaces on the virtual router (vRouter) service on a fabric, cluster, standalone switch, or virtual network (VNET).

Syntax

vrouter-interface-show vrouter-name name-string [nic nic-string] [ip ip-address] [netmask netmask] [assignment none|dhcp|dhcpv6] [vlan vlan-id] [vxlan vxlan-id] [if mgmt|data|span] [alias-on alias-on-string] [vm-nic-type e1000|virtio] [exclusive|no-exclusive] [nic-enable|nic-disable] [nic-state down|up] vrrp-id id-number vrrp-primary string vrrp-priority number [l3-port l3port-usable-port name] [secondary-macs secondary-macs-string]

vrouter-name
name-string

Specifies the name for the vRouter interface.

Specify the following interface arguments:

nic nic-string

Specifies the type of NIC.

ip ip-address

Specifies the IP address of the interface.

netmask netmask

Specifies the netmask.

assignment none|dhcp|dhcpv6

Specifies the DHCP method.

vlan vlan-id

Specifies the VLAN identifier. This is a value between 1 and 4094.

vxlan vxlan-id

Specifies the VXLAN identifier. This is a value between 0 and 16777215.

if mgmt|data|span

Specifies if the interface is a management, data or span interface.

alias-on

Specifies an alias for the interface.

alias-on-string

vm-nic-type e1000|virtio

Specifies the type of VM NIC.

exclusive|no-exclusive

Specifies if the interface is exclusive to the configuration. Exclusive means that other configurations cannot use the interface.

nic-enable|nic-disable

Specifies if the NIC is enabled or disabled.

nic-state down|up

Specifies the NIC state as up or down. If the NIC is disabled, the state is down.

vrrp-id id-number

Specify the ID for the VRRP interface.

vrrp-primary string

Specifies the primary interface for VRRP failover.

vrrp-priority number

Specifies the priority for the VRRP interface. This is a value between 1 (lowest) and 255 (highest).

l3-port l3port-usable-port name

Specify a Layer 3 port for the interface.

secondary-macs secondary-macs-string

Specify a secondary MAC address for the interface.

Defaults

None.
Access CLI

Usage You can display information about the interfaces on the vRouter service on a fabric, cluster, standalone switch, or virtual network (VNET).

Examples To display information about all interfaces on vRouter services, use the following command:

```plaintext
CLI network-admin@switch > vrouter-interface-show interface layout
```

See Also
- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-add
- vrouter-interface-modify
- vrouter-interface-remove
- vrouter-ospf-add
- vrouter-ospf-remove
- vrouter-ospf-show
- vrouter-ospf-neighbor-show
- vrouter-rip-add
- vrouter-rip-remove
- vrouter-rip-show
- vrouter-static-route-add
- vrouter-static-route-remove
- vrouter-static-route-show
vrouter-interface-config-add

This command is used to add additional routing protocol configuration to a vRouter.

Syntax

vrouter-interface-config-add vrouter-name name-string nic
vrouter-interface-nic [ospf-hello-interval number]
[ospf-dead-interval number] [ospf-priority number]
[ospf-auth-key ospf-auth-key-string] [ospf-cost number]
[ospf-msg-digest-id id] [ospf-msg-digest-key
ospf-msg-digest-key-string]
[ospf-passive-if|no-ospf-passive-if] [bfd-interval interval]
[bfd-min-rx interval] [bfd-multiplier integer]

vrouter-name name-string
Specify the vRouter name to add the interface.

Specify the following interface configuration arguments:

nic
vrouter-interface-nic
Specify the NIC to add to the interface.

ospf-hello-interval number
Specify the OSPF hello interval with a number between 1 and 65535. This configures the interval between sending OSPF hello messages on an interface. The default value is 10.

ospf-dead-interval number
Specify the OSPF dead interval with a number between 2 and 65535. This configures the interval in which the vRouter must receive an OSPF hello message before the state of the neighbor changes to down. The default interval is 5.

ospf-priority number
Specify the OSPF priority with a number between 0 and 255. A vRouter with a priority of 0 does not participate in the designated router decision. The default value is 1.

ospf-auth-key ospf-auth-key-string
Specify an authorization key string for the vRouter interface.

ospf-cost number
Specify the OSPF cost with a value between 0 and 655365.

ospf-msg-digest-id id
Specify a value between 0 and 255. If you specify 0, then OSPF MD5 authentication is not set.

ospf-msg-digest-key ospf-msg-digest-key-string
Specify a string for the OSPF message digest key.

ospf-passive-if|no-ospf-passive-if
Specify if the OSPF interface is passive or not.

bfd-interval interval
Specify the desired Bidirectional Forwarding Detection (BFD) transmit interval from 200 ms to 3000 ms. The default value is 750 ms. 200 ms to 3000 ms. The default value is 500 ms

bfd-min-rx interval
Specify the required BFD receive interval from

bfd-multiplier integer
Specify the BFD detection multiplier from 1 to 20. The default value is 3.

Defaults None
Access CLI
Usage This command is used to add additional routing protocol configuration to a vRouter.
Examples  To add an interface to vRouter, vroute-int, interface eth0.11, hello interval 10, dead interval 20, with priority 5, use the following command:

```
CLI network-admin@switch > vrouter-interface-config-add vrouter-name vroute-int nic eth0.11 ospf-hello-interval 10 ospf-dead-interval 20 ospf-priority 5
```

See Also

- `vrouter-interface-config-modify`
- `vrouter-interface-config-remove`
- `vrouter-interface-config-show`
vrouter-interface-config-modify

This command is used to modify routing protocol configuration to a vRouter.

Syntax  
```
vrouter-interface-config-modify vrouter-name name-string
   nic vrouter-interface-nic
   [ospf-hello-interval number]
   [ospf-dead-interval number] [ospf-priority number]
   [ospf-auth-key ospf-auth-key-string] ospf-cost number
   [ospf-msg-digest-id id] [ospf-msg-digest-key]
   [ospf-msg-digest-key-string] [ospf-passive-if|no-ospf-passive-if]
   [bfd-interval interval] [bfd-min-rx interval] [bfd-multiplier integer]
```

vrouter-name  Specify the vRouter name to add the interface.
name-string

Specify the following interface configuration arguments:

nic  Specify the NIC to add to the interface.
vrouter-interface-nic
ospf-hello-interval number  Specify the OSPF hello interval with a number between 1 and 65535. This configures the interval between sending OSPF hello messages on an interface. The default value is 10.
ospf-dead-interval number  Specify the OSPF dead interval with a number between 2 and 65535. This configures the interval in which the vRouter must receive an OSPF hello message before the state of the neighbor changes to down. The default value is 5.
ospf-priority number  Specify the OSPF priority with a number between 0 and 255. A vRouter with a priority of 0 does not participate in the designated router decision. The default value is 1.
ospf-auth-key ospf-auth-key-string  Specify an authorization key string for the vRouter interface.
ospf-cost number  Specify the OSPF cost with a value between 0 and 655365.
ospf-msg-digest-id id  Specify a value between 1 and 255. If you specify 0, then OSPF MD5 authentication is not set.
ospf-msg-digest-key ospf-msg-digest-key-string  Specify a string for the OSPF message digest key.
ospf-passive-if|no-ospf-passive-if  Specify if the OSPF interface is passive or not.
bfd-interval interval  Specify the desired BFD transmit interval from 200 ms to 3000 ms. The default value is 750 ms. 200 ms to 3000 ms. The default value is 500 ms
bfd-min-rx interval  Specify the required BFD receive interval from
bfd-multiplier integer  Specify the BFD detection multiplier from 1 to 20. The default value is 3.

Defaults  None
Access  CLI
Usage  This command is used to modify a routing protocol configuration to a vRouter.
Examples  To modify an interface to vRouter, vroute-int, interface eth0.11, hello interval 10, dead interval 20, with priority 5, use the following command:

```
CLI network-admin@switch > vrouter-interface-config-modify vrouter-name
vroute-int nic eth0.11 ospf-hello-interval 10 ospf-dead-interval 20
ospf-priority 5
```

See Also

- `vrouter-interface-config-add`
- `vrouter-interface-config-remove`
- `vrouter-interface-config-show`
vrouter-interface-config-remove

This command is used to remove additional routing protocol information in a vRouter configuration.

Syntax  
vrouter-interface-config-remove vrouter-name name-string
        nic vrouter-interface-nic

vrouter-name  Specifies the vRouter name on the interface.
name-string

Specify the following interface configuration arguments:
nic  Specifies the NIC to add to the interface.
vrouter-interface-nic

Defaults  None

Access  CLI

Usage  You can use vRouter interfaces to separate traffic on the vRouter.

Examples  To remove an interface on vRouter, vroute-int, with interface eth0.11, use the following command:

        CLI network-admin@switch > vrouter-interface-config-remove
        vrouter-name vroute-int nic eth0.11

See Also

• vrouter-interface-config-add
• vrouter-interface-config-modify
• vrouter-interface-config-show
vrouter-interface-config-show

This command is used to display routing protocol information on a vRouter.

Syntax
vrouter-interface-config-show vrouter-name name-string nic
vrouter-interface-nic [ospf-hello-interval number]
[ospf-dead-interval number] [ospf-priority number]
[ospf-auth-key ospf-auth-key-string] ospf-cost number
[ospf-msg-digest-id id] [ospf-msg-digest-key
ospf-cost number] [ospf-passive-if|no-ospf-passive-if]
[bfd-interval interval] [bfd-min-rx interval] [bfd-multiplier
integer]

vrouter-name
name-string
Specifies the vRouter name to add the interface.

Specify the following interface configuration arguments:

nic
vrouter-interface-nic
Specifies the NIC to add to the interface.

ospf-hello-interval
number
Specifies the OSPF hello interval with a number between 1 and 65535. This configures the interval between sending OSPF hello messages on an interface.

ospf-dead-interval
number
Specifies the OSPF dead interval with a number between 2 and 65535. This configures the interval in which the vRouter must receive an OSPF hello message before the state of the neighbor changes to down.

ospf-priority
number
Specifies the OSPF priority with a number between 0 and 255. A vRouter with a priority of 0 does not participate in the designated router decision. The default value is 1.

ospf-auth-key
ospf-auth-key-string
Specifies an authorization key string for the vRouter interface.

ospf-cost
number
Specify the OSPF cost with a value between 0 and 655365.

ospf-msg-digest-id
id
Specify a value between 1 and 255. If you specify 0, then OSPF MD5 authentication is not set.

ospf-msg-digest-key
ospf-msg-digest-key-string
Specify a string for the OSPF message digest key.

ospf-passive-if|no-ospf-passive-if
ospf-passive-if|no-ospf-passive-if
Specify if the OSPF interface is passive or not.

bfd-interval
interval
Specify the desired BFD transmit interval from 200 ms to 3000 ms. The default value is 750 ms. 200 ms to 3000 ms. The default value is 500 ms

bfd-min-rx
interval
Specify the required BFD receive interval from

bfd-multiplier
integer
Specify the BFD detection multiplier from 1 to 20. The default value is 3.
### Formatting Options

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</table>

### Defaults
- None

### Access
- CLI

### Usage
You can display additional routing information for a vRouter configuration.

### Examples
To modify an interface on vRouter, vroute-int, interface eth0.11, hello interval 10, dead interval 20, and change the priority to 10, use the following command:

```
CLI network-admin@switch > vrouter-interface-config-show
```

### See Also
- `vrouter-interface-config-add`
- `vrouter-interface-config-modify`
- `vrouter-interface-config-remove`
vrouter-loopback-interface-add
This command adds a loopback address to a virtual router (vRouter) service for a fabric, cluster, virtual network (VNET), or standalone switch. The maximum number of loopback interfaces is 255.

Syntax
vrouter-loopback-interface-add vrouter-name name-string index number ip-address

vrouter-name Specify the name of the vRouter.
name-string
index number Specify the interface index from 1 to 255.
ip-address Specify the network IP address.

Defaults None.

Access CLI

Usage Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command adds a loopback address for an existing vRouter service.

Examples To add the loopback interface of 192.168.11.13 to vRouter, MyvService, use the following command:

CLI network-admin@switch > vrouter-loopback-interface-add vrouter-name MyvService index 1 ip-address 192.168.11.13

See Also
• vrouter-create
• vrouter-delete
• vrouter-migrate
• vrouter-modify
• vrouter-show
• vrouter-bgp-add
• vrouter-bgp-remove
• vrouter-bgp-show
• vrouter-igmp-static-join-add
• vrouter-igmp-static-join-remove
• vrouter-igmp-static-join-show
• vrouter-interface-add
• vrouter-interface-modify
• vrouter-interface-remove
• vrouter-interface-show
• vrouter-ospf-remove
• vrouter-ospf-show
• vrouter-ospf-neighbor-show
• vrouter-rip-add
- vrouter-rip-remove
- vrouter-rip-show
- vrouter-static-route-add
- vrouter-static-route-remove
- vrouter-static-route-show
**vrouter-loopback-interface-remove**

This command removes a loopback address to a virtual router (vRouter) service for a fabric, cluster, virtual network (VNET), or standalone switch.

**Syntax**

```
vrouter-loopback-interface-add vrouter-name name-string
index number
```

- **vrouter-name**
  Specify the name of the vRouter.

- **name-string**
  Specify the following loopback interface arguments:

- **index number**
  Specify the interface index from 1 to 255.

**Defaults** None.

**Access** CLI.

**Usage** Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command removes a loopback interface from an existing Router service.

**Examples** To remove the loopback interface of 192.168.11.13 to vRouter, MyvService, use the following command:

```
CLI network-admin@switch > vrouter-loopback-interface-remove vrouter-name MyvService index 1
```

**See Also**

- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-add
- vrouter-interface-modify
- vrouter-interface-remove
- vrouter-interface-show
- vrouter-ospf-remove
- vrouter-ospf-show
- vrouter-ospf-neighbor-show
- vrouter-rip-add
- vrouter-rip-remove
• vrouter-rip-show
• vrouter-static-route-add
• vrouter-static-route-remove
• vrouter-static-route-show
vrouter-loopback-interface-show

This command displays information about a loopback address added to a virtual router (vRouter) service for a fabric, cluster, virtual network (VNET), or standalone switch.

Syntax
vrouter-loopback-interface-show vrouter-name name-string index number ip-address

vrouter-name name-string
Specify the name of the vRouter.

index number
Specify the interface index from 1 to 255.

ip-address
Specify the network IP address.

Defaults None.
Access CLI.
Usage Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command adds a loopback address for an existing vRouter service.

Examples To add the loopback interface of 192.168.11.13 to vRouter, MyvService, use the following command:

```
CLI network-admin@switch > vrouter-loopback-interface-show

vrouter-name index ip-address
-------------- ----- ---------------
MyvService 1 192.168.11.13
```

See Also
- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-add
- vrouter-interface-modify
- vrouter-interface-remove
- vrouter-interface-show
- vrouter-ospf-remove
- vrouter-ospf-show
• vrouter-ospf-neighbor-show
• vrouter-rip-add
• vrouter-rip-remove
• vrouter-rip-show
• vrouter-static-route-add
• vrouter-static-route-remove
• vrouter-static-route-show
vrouter-ospf-add

This command adds Open Shortest Path First (OSPF) routing protocol to a virtual router (vRouter) service for a fabric, cluster, virtual network (VNET), or standalone switch.

Syntax

vrouter-ospf-add vrouter-name name-string network ip-address netmask netmask ospf-area ospf-area-number

vrouter-name

Specify the name of the vRouter.

name-string

Specify the following OSPF arguments:

network ip-address

Specify the network IP address.

netmask netmask

Specify the netmask of the IP address.

ospf-area ospf-area-number

Specify the OSPF area number in dotted decimal format.

Defaults

None.

Access

CLI.

Usage

Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command adds OSPF for an existing Router service.

Examples

To add OSPF to vRouter, MyvService, with the IP address of 192.168.11.3, netmask 32, and OSPF area 1.0.0.0, use the following command:

vrouter-ospf-add vrouter-name MyvService network 192.168.11.3/32 ospf-area 1.0.0.0

See Also

• vrouter-create
• vrouter-delete
• vrouter-migrate
• vrouter-modify
• vrouter-show
• vrouter-bgp-add
• vrouter-bgp-remove
• vrouter-bgp-show
• vrouter-igmp-static-join-add
• vrouter-igmp-static-join-remove
• vrouter-igmp-static-join-show
• vrouter-interface-add
• vrouter-interface-modify
• vrouter-interface-remove
• vrouter-interface-show
• vrouter-ospf-remove
• vrouter-ospf-show
• vrouter-ospf-neighbor-show
- vrouter-rip-add
- vrouter-rip-remove
- vrouter-rip-show
- vrouter-static-route-add
- vrouter-static-route-remove
- vrouter-static-route-show
vrouter-ospf-remove

This command is used to remove an OSPF configuration from a vRouter service on a fabric, cluster, virtual network (VNET), or standalone switch.

Syntax

vrouter-ospf-remove vrouter-name name-string network ip-address

vrouter-name Specify the name of the vRouter service.
name-string
network Specify the following OSPF arguments:
ip-address Specify the IP address of the OSPF configuration.

Defaults None

Access CLI

Usage Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command removes OSPF for an existing Router service.

Examples To remove ospf-route from the vRouter, MyvService, use the following command:

CLI network-admin@switch > vrouter-ospf-remove vrouter-name MyvService name ospf-route

See Also

• vrouter-create
• vrouter-delete
• vrouter-migrate
• vrouter-modify
• vrouter-show
• vrouter-bgp-add
• vrouter-bgp-remove
• vrouter-bgp-show
• vrouter-igmp-static-join-add
• vrouter-igmp-static-join-remove
• vrouter-igmp-static-join-show
• vrouter-interface-add
• vrouter-interface-modify
• vrouter-interface-remove
• vrouter-interface-show
• vrouter-ospf-add
• vrouter-ospf-show
• vrouter-ospf-neighbor-show
• vrouter-rip-add
• vrouter-rip-remove
• vrouter-rip-show
• vrouter-static-route-add
• vrouter-static-route-remove
• vrouter-static-route-show
•
vrouter-ospf-show

This command displays information about OSPF on a virtual router (vRouter) service for a fabric, cluster, virtual network (VNET), or standalone switch.

Syntax
vrouter-ospf-show vrouter-name name-string
name-string [network ip-address] [netmask netmask] [ospf-area ospf-area-number] [stub-area stub-area-number] [stub-type stub|nssa]

vrouter-name name-string
Specifies the name of the vRouter.

Specify the following OSPF arguments:
name name-string Specify the IP address of the OSPF configuration.
network ip-address Specifies the network IP address.
etmask netmask Specifies the netmask of the IP address.
ospf-area ospf-area-number Specifies the OSPF area number in dotted decimal format.

Formatting Options

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<td>Format the output in a vertical or horizontal layout.</td>
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</tr>
<tr>
<td>sum-by</td>
<td>None.</td>
</tr>
</tbody>
</table>

Defaults

None.
Access CLI

Usage Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command displays OSPF for an existing Router service.

Examples To display information about all OSPF instances configured on vRouters, use the following command:

```
CLI network-admin@switch > vrouter-ospf-show layout vertical
```

See Also
- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-add
- vrouter-interface-modify
- vrouter-interface-remove
- vrouter-interface-show
- vrouter-ospf-add
- vrouter-ospf-remove
- vrouter-ospf-neighbor-show
- vrouter-rip-add
- vrouter-rip-remove
- vrouter-rip-show
- vrouter-static-route-add
- vrouter-static-route-remove
- vrouter-static-route-show
vrouter-ospf-area-add

This command is used to add areas and stubs as well as prefixes to an OSPF configuration.

Syntax

vrouter-ospf-area-add vrouter-name name-string area area-number [stub-type
none|stub|stub-no-summary|nssa|nssa-no-summary] [prefix-list-in
vrouter prefix-list name][prefix-list-out vrouter prefix-list
name]

vrouter-name name-string Specify the name of the vRouter.

Specify the following OSPF area arguments:

area area-number Specify the stub area number for the configuration. Stub areas
are shielded from external routes but receive information about
networks that belong to other areas of the same OSPF domain

stub-type none|stub|stub-no-
summary|nssa|nssa-no-
summary Specify the stub type as stubby or not-so-stubby areas (NSSA).
You can define totally stubby areas. Routers in totally stubby
areas keep their Link State Database (LSDB)-only information
about routing within their area, plus the default route.

Not-so-stubby areas (NSSAs) are an extension of OSPF stub areas.
Like stub areas, they prevent the flooding of AS-external
link-state advertisements (LSAs) into NSSAs, relying instead on
default routing to external destinations. As a result, NSSAs (like
stub areas) must be placed at the edge of an OSPF routing
domain. NSSAs are more flexible than stub areas in that an NSSA
can import external routes into the OSPF routing domain,
thereby providing transit service to small routing domains that
are not part of the OSPF routing domain

prefix-list-in vrouter prefix-list name Specify an inbound prefix list name to filter incoming packets.

prefix-list-out vrouter prefix-list name Specify an outbound prefix list name to filter outgoing packets.

Defaults None

Access CLI

Usage An OSPF network can be divided into sub-domains called areas. An area is a logical
collection of OSPF networks, routers, and links that have the same area identification. A router
within an area must maintain a topological database for the area to which it belongs. The router
doesn’t have detailed information about network topology outside of its area, thereby reducing
the size of its database.

Areas limit the scope of route information distribution. It is not possible to do route update
filtering within an area. The link-state database (LSDB) of routers within the same area must be
synchronized and be exactly the same. However, route summarization and filtering is possible between
different areas. The main benefit of creating areas is a reduction in the number of routes to propagate
through the filtering and the summarization of routes.

Examples To add an OSPF area, 0, with the stub type, stub, use the following syntax:

```bash
CLI network-admin@switch > vrouter-ospf-area-add vrouter-name
vrouter-ospf area 0 stub-type stub
```

See Also
• vrouter-ospf-area-modify
• vrouter-ospf-area-remove
• vrouter-ospf-area-show
vrouter-ospf-area-modify

This command is used to modify areas and stubs as well as prefixes to an OSPF configuration.

Syntax

```
vrouter-ospf-area-modify vrouter-name name-string area
area-number [stub-type
none|stub|stub-no-summary|nssa|nssa-no-summary] [prefix-list-in
vrouter prefix-list name][prefix-list-out vrouter prefix-list
name]
```

vrouter-name

Specify the name of the vRouter.

name-string

Specify the following OSPF area argument:

area area-number

Specify the area number.

Specify the one or more of the following options:

stub-type

Specify the OSPF stub type.

none|stub|stub-no-
summary|nssa|nssa-no-
summary

prefix-list-in vrouter

Specify an inbound prefix list name.

prefix-list name

prefix-list-out vrouter

Specify an outbound prefix list name.

prefix-list name

Defaults

None

Access CLI

Usage

An OSPF network can be divided into sub-domains called areas. An area is a logical
collection of OSPF networks, routers, and links that have the same area identification. A router
within an area must maintain a topological database for the area to which it belongs. The router
doesn't have detailed information about network topology outside of its area, thereby reducing
the size of its database.

Areas limit the scope of route information distribution. It is not possible to do route update
filtering within an area. The link-state database (LSDB) of routers within the same area must be
synchronized and be exactly the same. However, route summarization and filtering is possible between
different areas. The main benefit of creating areas is a reduction in the number of routes to propagate
through the filtering and the summarization of routes.

Examples

To modify an OSPF area, 0, and change the stub type to nssa, use the following syntax:

```
CLI network-admin@switch > vrouter-ospf-area-modify vrouter-name
vrouter-ospf area 0 stub-type nssa
```

See Also

- `vrouter-ospf-area-add`
- `vrouter-ospf-area-remove`
- `vrouter-ospf-area-show`
vrouter-ospf-area-remove

This command is used to remove an areas from an OSPF configuration.

Syntax vrouter-ospf-area-remove vrouter-name name-string area area-number

vrouter-name
name-string
area area-number

Specify the name of the vRouter.
Specify the following OSPF area arguments:
Specify the area number.

Defaults None
Access CLI
Usage An OSPF network can be divided into sub-domains called areas. An area is a logical
collection of OSPF networks, routers, and links that have the same area identification. A router
within an area must maintain a topological database for the area to which it belongs. The router
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Areas limit the scope of route information distribution. It is not possible to do route update
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synchronized and be exactly the same. However, route summarization and filtering is possible between
different areas. The main benefit of creating areas is a reduction in the number of routes to propagate
through the filtering and the summarization of routes.

Examples To remove an OSPF area, 0, use the following syntax:

CLI network-admin@switch > vrouter-ospf-area-remove vrouter-name vrouter-ospf area 0

See Also
- vrouter-ospf-add
- vrouter-ospf-area-modify
- vrouter-ospf-area-show
vrouter-ospf-area-show

This command is used to display information about areas and stubs as well as prefixes in an OSPF configuration.

Syntax
```
vrouter-ospf-area-show vrouter-name name-string area area-number [stub-type none|stub|stub-no-summary|nssa|nssa-no-summary] [prefix-list-in vrouter prefix-list name][prefix-list-out vrouter prefix-list name]
```

vrouter-name Specify the name of the vRouter.
name-string

Specify the following OSPF area arguments:

area area-number Specify the area number.
stub-type none|stub|stub-no-summary|nssa|nssa-no-summary Specify the OSPF stub type.
prefix-list-in vrouter prefix-list name Specify an inbound prefix list name.
prefix-list-out vrouter prefix-list name Specify an outbound prefix list name.

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</table>
An OSPF network can be divided into sub-domains called areas. An area is a logical collection of OSPF networks, routers, and links that have the same area identification. A router within an area must maintain a topological database for the area to which it belongs. The router doesn’t have detailed information about network topology outside of its area, thereby reducing the size of its database.

Areas limit the scope of route information distribution. It is not possible to do route update filtering within an area. The link-state database (LSDB) of routers within the same area must be synchronized and be exactly the same. However, route summarization and filtering is possible between different areas. The main benefit of creating areas is a reduction in the number of routes to propagate through the filtering and the summarization of routes.

Examples

To display information about an OSPF area, use the following syntax:

```
CLI network-admin@switch > vrouter-ospf-area-show vrouter-name
vrouter-ospf area 0 stub-type stub
```

See Also
**vrouter-ospf-neighbor-show**

This command is used to display OSPF neighbors for a vRouter configured for OSPF.

**Syntax**
```
vrouter-ospf-neighbor-show vrouter-name name-string
[neighbor ip-address] [pri pri-number] [state state-string]
[dead-time dead-time] [address ip-address] [interface interface-string]
```

- **vrouter-name** name-string: Specifies the name of the vRouter.
- **neighbor ip-address**: Specifies the IP address of the OSPF neighbor.
- **pri pri-number**: Specifies the priority.
- **state state-string**: Specifies the current state of the OSPF neighbor.
- **dead-time dead-time**: Specifies the dead-time. Dead-time is the interval of time that the vRouter waits before declaring a neighbor is down.
- **address ip-address**: Specifies the IP address of the vRouter.
- **interface interface-string**: Specifies the interface on the vRouter.

**Defaults** None.

**Access** CLI

**Usage** Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command displays OSPF information for an existing Router service.

**Examples** To display information about all OSPF neighbors on the network, use the following command:

```
CLI network-admin@switch > vrouter-ospf-neighbor-show layout vertical
```

**See Also**
- `vrouter-create`
- `vrouter-delete`
- `vrouter-migrate`
- `vrouter-modify`
- `vrouter-show`
- `vrouter-bgp-add`
- `vrouter-bgp-remove`
- `vrouter-bgp-show`
- `vrouter-igmp-static-join-add`
- `vrouter-igmp-static-join-remove`
- `vrouter-igmp-static-join-show`
- `vrouter-interface-add`
- `vrouter-interface-modify`
- `vrouter-interface-remove`
- `vrouter-interface-show`
vrouter-ospf-add
vrouter-ospf-remove
vrouter-ospf-show
vrouter-rip-add
vrouter-rip-remove
vrouter-rip-show
vrouter-static-route-add
vrouter-static-route-remove
vrouter-static-route-show
vrouter-packet-relay-add

This command is used to forward packets to a DHCP server.

Syntax
vrouter-packet-relay-add vrouter-name name-string
forward-proto dhcp forward-ip ip-address nic vrouter interface nic

vrouter-name
Specify the name of the vRouter.

name-string
Specify the following packet relay arguments:
forward-proto dhcp
Specify the forwarding protocol.
forward-ip ip-address
Specify the IP address to forward packets.
nic vrouter interface nic
Specify the interface of the vRouter.

Defaults None

Access CLI

Usage Using the vrouter-packet-relay command configures the Layer3 interface which receives the client’s DHCP broadcast. You can change the broadcast request into a unicast and send it to a centralized DHCP server that is located to a different subnet in your network. The unicast DHCP request is normally routed to the destination DHCP Server within the network, even if the server is far away from the DHCP client.

Examples To forward DHCP packets to a DHCP server with the IP address, 10.30.21.11, and vRouter interface eth0, use the following syntax:

CLI network-admin@switch > vrouter-packet-relay-add vrouter-name
vrouter-dhcp forward-proto dhcp forward-ip 10.30.21.11 nic eth0

See Also
- vrouter-packet-relay-remove
- vrouter-packet-relay-show
vrouter-packet-relay-remove

This command is used to remove a packet forwarding configuration.

Syntax
vrouter-packet-relay-remove vrouter-name name-string forward-proto dhcp forward-ip ip-address nic vrouter interface

vrouter-name

name-string

Specify the name of the vRouter.

Specify the following packet relay arguments:

forward-proto dhcp

Specify the forwarding protocol.

forward-ip ip-address

Specify the IP address to forward packets.

nic vrouter interface

Specify the interface of the vRouter.

Defaults  None

Access  CLI

Usage  Using the vrouter-packet-relay command configures the Layer3 interface which receives the client’s DHCP broadcast. You can change the broadcast request into a unicast and send it to a centralized DHCP server that is located to a different subnet in your network. The unicast DHCP request is normally routed to the destination DHCP Server within the network, even if the server is far away from the DHCP client.

Examples  To remove the configuration with a DHCP server with the IP address, 10.30.21.11, and vRouter interface eth0, use the following syntax:

```cli
CLI network-admin@switch > vrouter-packet-relay-remove vrouter-name vrouter-dhcp forward-proto dhcp forward-ip 10.30.21.11 nic eth0
```

See Also

- vrouter-packet-relay-add
- vrouter-packet-relay-show
**vrouter-packet-relay-show**

This command is used to display information about a packet forwarding configuration.

**Syntax**
```
vrouter-packet-relay-show vrouter-name name-string
   forward-proto dhcp forward-ip ip-address nic vrouter interface nic
```

- **vrouter-name**
  - Specifies the name of the vRouter.

- **name-string**
  - Specify the following packet relay arguments:
    - **forward-proto dhcp**
      - Specifies the forwarding protocol.
    - **forward-ip ip-address**
      - Specifies the IP address to forward packets.
    - **nic vrouter interface nic**
      - Specifies the interface of the vRouter.

**Formatting Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sortable-delim</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dup</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>limit-output</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
</tr>
<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults** None

**Access** CLI
Usage  Using the `vrouter-packet-relay` command configures the Layer3 interface which receives the client’s DHCP broadcast. You can change the broadcast request into a unicast and send it to a centralized DHCP server that is located to a different subnet in your network. The unicast DHCP request is normally routed to the destination DHCP Server within the network, even if the server is far away from the DHCP client.

Examples  To remove the configuration with a DHCP server with the IP address, 10.30.21.11, and vRouter interface `eth0`, use the following syntax:

```
CLI network-admin@switch > vrouter-packet-relay-show vrouter-name
vrouter-dhcp forward-proto dhcp forward-ip 10.30.21.11 nic eth0
```

See Also

- `vrouter-packet-relay-add`
- `vrouter-packet-relay-remove`
vrouter-prefix-list-add

Prefix lists are used by BGP and OSPF to filter route advertisements.

Syntax  
```
vrouter-prefix-list-add vrouter-name name-string name 
name-string action permit|deny prefix ip-address netmask netmask 
seq number min-prefix-len number max-prefix-len number
```

-vrouter-name name-string  Specify the name of the vRouter.

Specify the following prefix-list arguments:

- name name-string  Specify a name for the prefix list.
- action permit|deny  Specify the type of action, permit or deny.
- prefix ip-address  Specify the IP address used as the prefix.
- netmask netmask  Specify the netmask of the IP address.

Specify any of the following options:

- seq number  Specify a sequence number. This is a number between 1 and 4294967295.
- min-prefix-len number  Specify the minimum prefix length. This is a value between 0 and 32.
- max-prefix-len number  Specify the maximum prefix length. This is a value between 0 and 32.

Defaults  
None

Access  
CLI

Usage  
Use this command to specify prefix lists used with BGP and OSPF.

Examples  
To configure a prefix list, no-ads, with the action, deny, prefix, 10.9.11.13/32, and minimum prefix length 15, use the following syntax:

```cl
CLI network-admin@switch > vrouter-prefix-list-add vrouter-name vrouter-ospf name no-ads action deny prefix 10.9.11.13 netmask 255.255.255.0 min-prefix-len 15
```

See Also  
- vrouter-prefix-list-modify
- vrouter-prefix-list-remove
- vrouter-prefix-list-show
vrouter-prefix-list-modify

Prefix lists are used by BGP and OSPF to filter route advertisements.

Syntax  vrouter-prefix-list-modify vrouter-name name-string name-string action permit|deny prefix ip-address netmask netmask seq number min-prefix-len number max-prefix-len number apply

vrouter-name
name-string

Specify the name of the vRouter.

Specify the following prefix-list arguments:
name name-string Specify a name for the prefix list.
action permit|deny Specify the type of action, permit or deny.
prefix ip-address Specify the IP address used as the prefix.
netmask netmask Specify the netmask of the IP address.

Specify any of the following options:
seq number Specify a sequence number. This is a number between 1 and 4294967295.
min-prefix-len number Specify the minimum prefix length. This is a value between 0 and 32.
max-prefix-len number Specify the maximum prefix length. This is a value between 0 and 32.
any Apply to any prefix list.

Defaults None

Access CLI

Usage Use this command to modify prefix lists used with BGP and OSPF.

Examples To modify a prefix list, no-ads, and change the action to permit, use the following syntax:

CLI network-admin@switch > vrouter-prefix-list-modify vrouter-name vrouter-ospf name no-ads action permit

See Also
• vrouter-prefix-list-add
• vrouter-prefix-list-remove
• vrouter-prefix-list-list-show
vrouter-prefix-list-remove

Prefix lists are used by BGP and OSPF to filter route advertisements.

Syntax

vrouter-prefix-list-remove vrouter-name name-string name

Specify the name of the vRouter.

name-string

Specify the following prefix-list arguments:

name name-string

Specify a name for the prefix list.

seq number

Specify a sequence number. This is a number between 1 and 4294967295.

Defaults   None

Access   CLI

Usage   Use this command to remove prefix lists used with BGP and OSPF.

Examples  To remove a prefix list, no-ads, use the following syntax:

CLI network-admin@switch > vrouter-prefix-list-remove vrouter-name
vrouter-ospf name no-ads

See Also

- vrouter-prefix-list-add
- vrouter-prefix-list-modify
- vrouter-prefix-list-show
**vrouter-prefix-list-show**

Prefix lists are used by BGP and OSPF to filter route advertisements.

Syntax: `vrouter-prefix-list-modify vrouter-name name-string name name-string action permit|deny prefix ip-address netmask netmask seq number min-prefix-len number max-prefix-len number any`

- **vrouter-name**
  Specify the name of the vRouter.

- **name-string**
  Specify a name for the prefix list.

- **action permit|deny**
  Specify the type of action, permit or deny.

- **prefix ip-address**
  Specify the IP address used as the prefix.

- **netmask netmask**
  Specify the netmask of the IP address.

Specify any of the following options:

- **seq number**
  Specify a sequence number. This is a number between 1 and 4294967295.

- **min-prefix-len number**
  Specify the minimum prefix length. This is a value between 0 and 32.

- **max-prefix-len number**
  Specify the maximum prefix length. This is a value between 0 and 32.

- **any**
  Apply to any prefix list.

**Formatting Options**

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</tr>
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<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
<tr>
<td>seconds-interval</td>
<td>Repeat the show command at a specified interval.</td>
</tr>
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</tr>
<tr>
<td>show-headers</td>
<td>no-show-headers</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
</tbody>
</table>
Defaults   None
Access     CLI
Usage      Use this command to modify prefix lists used with BGP and OSPF.
Examples   To modify a prefix list, no-ads, and change the action to permit, use the following syntax:

```
CLI network-admin@switch > vrouter-prefix-list-modify vrouter-name
vrouter-ospf name no-ads action permit
```

See Also
- vrouter-prefix-list-add
- vrouter-prefix-list-modify
- vrouter-prefix-list-remove
vrouter-rib-routes-show

This command is used to display the Routing Information database (RIB) for vRouter routes.

Syntax

```
vrouter-cached-routes-show [vrid vrid-number] [ip ip-address] [prelen prelen-number] [num-of-nexthops num-of-nexthops-number] [nexthops-in-hw nexthops-in-hw-number] [vlan vlan-number] [vxlan vxlan-number] [nexthop ip-address] [ecmp-group ecmp-group-number] [egress-id egress-id-number] [flags ECMP|in-hw|in-cache|local-subnet] [vlan vlan-number] [intf_ip ip-address] [intf_id vrouter-hw-if hw-id]
```

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>vrid vrid-number</td>
<td>Specifies the vRouter ID assigned by ONVL.</td>
</tr>
<tr>
<td>ip ip-address</td>
<td>Specifies the IP address.</td>
</tr>
<tr>
<td>prelen prelen-number</td>
<td>Specifies the prefix length.</td>
</tr>
<tr>
<td>num-of-nexthops</td>
<td>Specifies the number of next hops for the route.</td>
</tr>
<tr>
<td>num-of-nexthops-number</td>
<td>Specifies the number of next hops for hardware routing.</td>
</tr>
<tr>
<td>nexthops-in-hw</td>
<td>Specifies the number of next hops for hardware routing.</td>
</tr>
<tr>
<td>nexthops-in-hw-number</td>
<td>Specifies the number of next hops for hardware routing.</td>
</tr>
<tr>
<td>nexthop ip-address</td>
<td>Specifies the IP address for the next hop on the route.</td>
</tr>
<tr>
<td>ecmp-group</td>
<td>Specifies the Equal Cost Multipath (ECMP) group number.</td>
</tr>
<tr>
<td>ecmp-group-number</td>
<td>Specifies the Equal Cost Multipath (ECMP) group number.</td>
</tr>
<tr>
<td>egress-id egress-id-number</td>
<td>Specifies the egress ID assigned by ONVL to an outgoing route.</td>
</tr>
<tr>
<td>flags</td>
<td>Specifies the flags for the routes.</td>
</tr>
<tr>
<td>ECMP</td>
<td></td>
</tr>
<tr>
<td>in-hw</td>
<td></td>
</tr>
<tr>
<td>local-subnet</td>
<td></td>
</tr>
<tr>
<td>vlan vlan-number</td>
<td>Specifies the VLAN of the routes.</td>
</tr>
<tr>
<td>intf_ip ip-address</td>
<td>Specifies the IP address of the interface participating in the routing table.</td>
</tr>
<tr>
<td>intf_id vrouter-hw-if hw-id</td>
<td>Specifies the hardware ID if the router interface is hardware.</td>
</tr>
</tbody>
</table>

**Formatting Options**

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<tr>
<td>parsable-delim</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show dupes</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
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<td>vertical</td>
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<tr>
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<td>Repeat the show command at a specified interval.</td>
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<tr>
<td>seconds-interval</td>
<td></td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-diffs</td>
<td></td>
</tr>
<tr>
<td>show-diff-interval</td>
<td></td>
</tr>
<tr>
<td>show-headers</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td></td>
</tr>
<tr>
<td>limit-output</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>number</td>
<td></td>
</tr>
<tr>
<td>count-output</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>unscaled</td>
<td>Display full values in the output instead of scaled approximate values.</td>
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<tr>
<td>sum-by</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Defaults**  None  
**Access**  CLI  
**Usage**  Use this command to display the RIB for vRouters which can be helpful when troubleshooting a connection.  
**Examples**  To display the RIB, use the following command:  

```
CLI network-admin@switch > vrouter-rib-routes-show
```
vrouter-rip-add

This command adds Routing Information Protocol (RIP) to a virtual router (vRouter) service on a fabric, cluster, virtual network (VNET), or standalone switch.

Syntax

```
vrouter-rip-add vrouter-name name-string network ip-address netmask netmask
```

- **vrouter-name**: Specify the name of the vRouter service.
- **name-string**: Specify the name of the vRouter service.
- **network ip-address**: Specify the IP address.
- **netmask netmask**: Specify the netmask of the IP address.

Defaults  None.

Access   CLI.

Usage   Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command displays adds RIP to an existing Router service.

Examples  To add RIP with an IP address of 172.16.0.0/16 to the vRouter service, MyvService, use the following command:

```
CLI network-admin@switch > vrouter-rip-add vrouter-name MyvService network 172.16.0.0/16
```

See Also

- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-add
- vrouter-interface-modify
- vrouter-interface-remove
- vrouter-interface-show
- vrouter-ospf-add
- vrouter-ospf-remove
- vrouter-ospf-show
- vrouter-ospf-neighbor-show
- vrouter-rip-remove
- vrouter-rip-show
- vrouter-static-route-add
- vrouter-static-route-remove
- vrouter-static-route-show
**vrouter-rip-remove**

This command removes a RIP instance from a vRouter service on a fabric, cluster, virtual network (VNET), or standalone switch.

**Syntax**

```
vrouter-rip-remove vrouter-name name-string network ip-address
```

- **vrouter-name**  
  Specify the name of the vRouter service.

- **name-string**  
  Specify the name of the vRouter service.

- **network**  
  Specify the IP address.

- **ip-address**  
  Specify the IP address.

**Defaults**  
None.

**Access**  
CLI

**Usage**  
Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command removes a RIP instance on an existing Router service.

**Examples**  
To remove RIP with an IP address of 172.16.0.0/16 from the vRouter service, MyvService, use the following command:

```
CLI network-admin@switch > vrouter-rip-remove vrouter-name MyvService network 172.16.0.0
```

**See Also**

- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-add
- vrouter-interface-modify
- vrouter-interface-remove
- vrouter-interface-show
- vrouter-ospf-add
- vrouter-ospf-remove
- vrouter-ospf-show
- vrouter-ospf-neighbor-show
- vrouter-rip-add
- vrouter-rip-show
- vrouter-static-route-add
- vrouter-static-route-remove
- vrouter-static-route-show
vrouter-rip-show

This command displays RIP information on vRouter services on a fabric, cluster, virtual network (VNET), or standalone switch.

**Syntax**

```
vrouter-rip-show vrouter-name name-string network ip-address netmask netmask
```

- `vrouter-name` Specifies the name of the vRouter service.
- `name-string` Specifies the IP address.
- `network ip-address` Specifies the netmask of the IP address.
- `netmask netmask` Specifies the next hop IP address.

**Formatting Options**

- `format fields-to-display` Display output using a specific parameter. Use `all` to display all possible output.
- `parsable-delim character` Display output formatted for machine parsing using a specified delimiter.
- `sort-asc` Display output in ascending order.
- `sort-desc` Display output in descending order.
- `show dups` Display duplicate entries in the output.
- `layout vertical|horizontal` Format the output in a vertical or horizontal layout.
- `show-interval seconds-interval` Repeat the show command at a specified interval.
- `show-diff-interval` Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.
- `show-headers|no-show-headers` Display column headers or not.
- `limit-output number` Limit the display output to a specific number of entries.
- `count-output` Display the number of entries in the output. This is useful with vRouter `show` commands.
- `unscaled` Display full values in the output instead of scaled approximate values.
- `sum-by` Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.

**Defaults** None.

**Access** CLI.

**Usage** Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command displays information about RIP instances on existing vRouter services.
Examples  To display RIP information on all vRouter services, use the following command:

```
vrouter-rip-show layout vertical
```

See Also

- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-add
- vrouter-interface-modify
- vrouter-interface-remove
- vrouter-interface-show
- vrouter-ospf-add
- vrouter-ospf-remove
- vrouter-ospf-show
- vrouter-ospf-neighbor-show
- vrouter-rip-add
- vrouter-rip-remove
- vrouter-static-route-add
- vrouter-static-route-remove
- vrouter-static-route-show
vrouter-rip-routes-show

This command displays RIP routes currently installed on vRouter services on a fabric, cluster, virtual network (VNET), or standalone switch.

Syntax:
```
vrouter-rip-routes-show vrouter-name name-string network ip-address netmask [next-hop ip-address] [metric metric-number] [source ip-address] [tag tag-number] [type rip|connected|static|ospf|bgp|missing|kernel-route|igmp|babel|pim] [attribute normal|static|default|redistribute|interface]
```

- **vrouter-name**: Specifies the name of the vRouter service.
- **name-string**: Specifies the IP address.
- **network**: Specifies the netmask of the IP address.
- **ip-address**: Specifies the next hop IP address.
- **netmask**: Specifies the metric assigned to the route.
- **next-hop ip-address**: Specifies the source IP address.
- **metric metric-number**: Specifies the tag number.
- **source ip-address**: Specifies the type of connection.
- **tag tag-number**: Specifies the attribute for the connection.
- **type**: Specifies the attribute for the connection.
- **rip|connected|static|ospf|bgp|missing|kernel-route|igmp|babel|pim**: Specifies the attribute for the connection.

**Formatting Options**

- **format fields-to-display**: Display output using a specific parameter. Use all to display all possible output.
- **parsable-delim character**: Display output formatted for machine parsing using a specified delimiter.
- **sort-asc**: Display output in ascending order.
- **sort-desc**: Display output in descending order.
- **show dupes**: Display duplicate entries in the output.
- **layout vertical|horizontal**: Format the output in a vertical or horizontal layout.
- **show-interval seconds-interval**: Repeat the show command at a specified interval.
- **show-diff-interval**: Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.
- **show-headers|no-show-headers**: Display column headers or not.
- **limit-output number**: Limit the display output to a specific number of entries.
count-output: Display the number of entries in the output. This is useful with `vRouter show` commands.

unscaled: Display full values in the output instead of scaled approximate values.

sum-by: Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.

Defaults: None.

Access: CLI.

Usage: This command displays information about RIP routes installed on the vRouter.

Examples: To display RIP information on all vRouter services, use the following command:

```
CLI network-admin@switch > vrouter-rip-show layout vertical
```

See Also:
- `vrouter-create`
- `vrouter-delete`
- `vrouter-migrate`
- `vrouter-modify`
- `vrouter-show`
- `vrouter-bgp-add`
- `vrouter-bgp-remove`
- `vrouter-bgp-show`
- `vrouter-igmp-static-join-add`
- `vrouter-igmp-static-join-remove`
- `vrouter-igmp-static-join-show`
- `vrouter-interface-add`
- `vrouter-interface-modify`
- `vrouter-interface-remove`
- `vrouter-interface-show`
- `vrouter-ospf-add`
- `vrouter-ospf-remove`
- `vrouter-ospf-show`
- `vrouter-ospf-neighbor-show`
- `vrouter-rip-add`
- `vrouter-rip-remove`
- `vrouter-static-route-add`
- `vrouter-static-route-remove`
- `vrouter-static-route-show`
vrouter-routes-show

This command is used to display information about all routes on one or all configured vRouters.

Syntax

vrouter-routes-show vrouter-name name-string network ip-address netmask netmask [type rip|connected|static|ospf|bgp|missing|kernel-route|igmp|babel|pim] interface interface-string next-hop ip-address distance number metric metric-number

vrouter-name
name-string

Specifies the name of a vRouter.

Any of the routes arguments:

network ip-address
netmask netmask

does any of the routes arguments:

Specifies the IP address of the vRouter.
Specifies the netmask.

Specifies the type of route on the vRouter.

interface interface-string

Specifies the interface for the route.

next-hop ip-address
distance number

Specifies the next-hop IP address.
Specifies the administrative distance in a number from 0 to 255.

metric metric-number

Specifies the cost of advertised routes on the network.

Formatting Options

format fields-to-display

Display output using a specific parameter. Use all to display all possible output.

parsable-delim character

Display output formatted for machine parsing using a specified delimiter.

sort-asc

Display output in ascending order.

sort-desc

Display output in descending order.

show-dups

Display duplicate entries in the output.

layout vertical|horizontal

Format the output in a vertical or horizontal layout.

show-interval seconds-interval

Repeat the show command at a specified interval.

show-diff-interval

Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.
<table>
<thead>
<tr>
<th>show-headers</th>
<th>Display column headers or not.</th>
</tr>
</thead>
<tbody>
<tr>
<td>no-show-headers</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>count-output</td>
<td>Aggregate output by specific parameters. If sum-by fields are specified, records that have the same value in sum-by fields are combined and displayed as one aggregate record.</td>
</tr>
</tbody>
</table>

**Usage**

Use this command to identify routes on vRouters configured on the switch.

**Examples**

To display all route information for all vRouters, use the following command:

```
vrouter-routes-show
```

<table>
<thead>
<tr>
<th>vrovr-router-name</th>
<th>network</th>
<th>type</th>
<th>interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>vr-ext-50</td>
<td>10.121.1.0/24</td>
<td>connected</td>
<td>ext.50.mgr.eth0</td>
</tr>
<tr>
<td>vr-ext-50</td>
<td>10.111.1.0/24</td>
<td>rip</td>
<td>ext.50.mgr.eth0</td>
</tr>
<tr>
<td>vr-ext-50</td>
<td>127.0.0.0/8</td>
<td>connected</td>
<td>lo0</td>
</tr>
<tr>
<td>vr-www-51</td>
<td>10.121.1.0/24</td>
<td>connected</td>
<td><a href="http://www.51.mgr.eth1">www.51.mgr.eth1</a></td>
</tr>
<tr>
<td>vr-www-51</td>
<td>10.111.1.0/24</td>
<td>connected</td>
<td><a href="http://www.51.mgr.eth0">www.51.mgr.eth0</a></td>
</tr>
<tr>
<td>vr-www-51</td>
<td>127.0.0.0/8</td>
<td>connected</td>
<td>lo0</td>
</tr>
</tbody>
</table>
**vrouter-static-route-add**

This command adds a static route entry for an existing virtual router (vRouter) service for a fabric, cluster, standalone switch, or virtual network (VNET).

**Syntax**

```
vrouter-static-route-add vrouter-name name-string network ip-address netmask gateway-ip ip-address distance number
```

- **vrouter-name**  
  Specify the name of the vRouter service.

- **name-string**  
  Specify the name of the vRouter service.

- **network ip-address**  
  Specify the IP subnet of the network that you want to add a static router.

- **netmask netmask**  
  Specify the netmask of the IP subnet.

- **gateway-ip ip-address**  
  Specify the IP address of the gateway that you want to route packets destined for the network IP address.

- **distance number**  
  Specifies the administrative distance in a number from 0 to 255.
  - 0 — Connected interface
  - 1 — Static route
  - 110 — OSPF
  - 120 — RIP
  - 200 — Internal BGP

**Defaults**  
None.

**Access**  
CLI

**Usage**  
Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command adds a static route entry for an existing Router service.

**Examples**  
To add a static route entry for the vRouter service, MyvService, use the following command:

```
CLI network-admin@switch > vrouter-static-route-add vrouter-name MyvService network 10.1.0.0/16 gateway-ip 10.0.0.1
```

**See Also**

- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-add
• vrouter-interface-modify
• vrouter-interface-remove
• vrouter-interface-show
• vrouter-ospf-add
• vrouter-ospf-remove
• vrouter-ospf-show
• vrouter-ospf-neighbor-show
• vrouter-rip-add
• vrouter-rip-remove
• vrouter-rip-show
• vrouter-static-route-remove
• vrouter-static-route-show
**vrouter-static-route-remove**

This command removes a static route entry for an existing virtual router (vRouter) service for a fabric, cluster, standalone switch, or virtual network (VNET).

**Syntax**

```
vrouter-static-route-remove vrouter-name name-string network ip-address gateway-ip ip-address
```

- **vrouter-name**
  Specify the name of the vRouter service.

- **name-string**
  Specify the name of the vRouter service.

- **network ip-address**
  Specify the IP subnet of the network that you want to add a static router.

- **gateway-ip ip-address**
  Specify the IP address of the gateway that you want to route packets destined for the network IP address.

**Defaults**

None.

**Access**

CLI

**Usage**

Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command removes a static route entry for an existing Router service.

**Examples**

To remove static route, 10.0.0.0/16 from the vRouter service, MyvRouter, use the following command:

```
CLI network-admin@switch > vrouter-static-route-remove vrouter-name MyvService network 10.0.0.0/16
```

**See Also**

- `vrouter-create`
- `vrouter-delete`
- `vrouter-migrate`
- `vrouter-modify`
- `vrouter-show`
- `vrouter-bgp-add`
- `vrouter-bgp-remove`
- `vrouter-bgp-show`
- `vrouter-igmp-static-join-add`
- `vrouter-igmp-static-join-remove`
- `vrouter-igmp-static-join-show`
- `vrouter-interface-add`
- `vrouter-interface-modify`
- `vrouter-interface-remove`
- `vrouter-interface-show`
- `vrouter-ospf-add`
- `vrouter-ospf-remove`
- `vrouter-ospf-show`
- `vrouter-ospf-neighbor-show`
• vrouter-rip-add
• vrouter-rip-remove
• vrouter-rip-show
• vrouter-static-route-add
• vrouter-static-route-show
**vrouter-static-route-show**

This command displays static route entries for an existing virtual router (vRouter) service for a fabric, cluster, standalone switch, or virtual network (VNET).

**Syntax**

```
vrouter-static-route-show vrouter-name name-string
ip-address netmask netmask gateway-ip ip-address gateway-ip
ip-address distance number
```

- **vrouter-name**
  Specifies the name of the vRouter service.

- **name-string**
  Specifies the IP subnet of the network that you want to add a static router.

- **network ip-address**
  Specifies the netmask of the IP subnet.

- **netmask netmask**
  Specify the IP address of the gateway that you want to route packets destined for the network IP address.

- **gateway-ip ip-address**
  Specifies the administrative distance in a number from 0 to 255.

  - 0 — Connected interface
  - 1 — Static route
  - 110 — OSPF
  - 120 — RIP
  - 200 — Internal BGP

**Formatting Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Display output using a specific parameter. Use all to display all possible output.</td>
</tr>
<tr>
<td>fields-to-display</td>
<td>Display output formatted for machine parsing using a specified delimiter.</td>
</tr>
<tr>
<td>parsable-delim character</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-asc</td>
<td>Display output in ascending order.</td>
</tr>
<tr>
<td>sort-desc</td>
<td>Display output in descending order.</td>
</tr>
<tr>
<td>show-dups</td>
<td>Display duplicate entries in the output.</td>
</tr>
<tr>
<td>layout</td>
<td>Format the output in a vertical or horizontal layout.</td>
</tr>
<tr>
<td>vertical</td>
<td>horizontal</td>
</tr>
<tr>
<td>show-interval</td>
<td>Repeat the show command at the specified interval and display the difference against the previous output. This is useful to see incremental changes in real-time stats.</td>
</tr>
<tr>
<td>show-diff-interval</td>
<td>Display column headers or not.</td>
</tr>
<tr>
<td>no-show-headers</td>
<td>Limit the display output to a specific number of entries.</td>
</tr>
<tr>
<td>limit-output number</td>
<td>Display the number of entries in the output. This is useful with vRouter show commands.</td>
</tr>
<tr>
<td>count-output</td>
<td></td>
</tr>
</tbody>
</table>
Defaults

None.

Access

CLI

Usage

Each fabric, cluster, standalone switch, or virtual network (VNET) can provide its tenants with a virtual router (vRouter) service that forwards traffic between networks and implements Layer 3 protocols. This command displays static route entries for an existing Router service.

Examples

To display all static routes for all vRouter services, use the following command:

```
CLI network-admin@switch > vrouter-static-route-show layout vertical
```

See Also

- vrouter-create
- vrouter-delete
- vrouter-migrate
- vrouter-modify
- vrouter-show
- vrouter-bgp-add
- vrouter-bgp-remove
- vrouter-bgp-show
- vrouter-igmp-static-join-add
- vrouter-igmp-static-join-remove
- vrouter-igmp-static-join-show
- vrouter-interface-add
- vrouter-interface-modify
- vrouter-interface-remove
- vrouter-interface-show
- vrouter-ospf-add
- vrouter-ospf-remove
- vrouter-ospf-show
- vrouter-ospf-neighbor-show
- vrouter-rip-add
- vrouter-rip-remove
- vrouter-rip-show
- vrouter-static-route-remove
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The Pluribus Networks nvOS® Command Line Interface (CLI) used the following Open Source Software:

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bean.js - copyright Jacob Thornton 2011

https://github.com/fat/bean

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@summary DataTables
@description Paginate, search and sort HTML tables
@version 1.9.4
@file jquery.dataTables.js
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@contact www.sprymedia.co.uk/contact
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**jquery.hotkeys.js**

jQuery Hotkeys Plugin
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Based upon the plugin by Tzury Bar Yochay:
http://github.com/tzuryby/hotkeys
Original idea by:

**jquery.validate.min.js**

Query Validation Plugin 1.8.1
http://bassistance.de/jquery-plugins/jquery-plugin-validation/
http://docs.jquery.com/Plugins/Validation
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jsTree 1.0-rc3
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Eve 0.4.2 - JavaScript Events Library
Author Dmitry Baranovskiy (http://dmitry.baranovskiy.com/)

Rickshaw v1.1.2
Adapted from https://github.com/Jakobo/PTClass */
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Based on Alex Arnell's inheritance implementation.

section: Language

class Class
Manages Prototype's class-based OOP system.

Refer to Prototype's web site for a [tutorial on classes and
inheritance](http://prototypejs.org/learn/class-inheritance).

science.js 1.7.0
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