V Commands

This chapter describes the Cisco NX-OS virtual port channel (vPC) commands that begin with V.

verify

To verify the buffered configuration of a switch profile, use the **verify** command.

verify

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Switch profile configuration mode

Command History

Release	Modification
5.0(2)N1(1)	This command was introduced.

Usage Guidelines

When you use the **verify** command, the commands in the configuration are verified for mutual exclusion locally on the switch and on the peer switch, and then a merge check occurs on the peer switch to verify that the switch profile configurations are identical on both switches.

Note Only one peer can initiate the verification at a time.

Merge checks are done on the peer switch whenever the switch receives a new configuration. The merge checks ensure that the received configuration does not conflict with the switch profile configuration that already exists on the receiving switch. The merge check occurs during the merge or commit process. Errors are reported as merge failures and must be manually corrected.

A command that is included in a switch profile cannot be configured outside of the switch profile or on a peer switch. Ensure that the new configuration in the switch profile does not conflict with the configurations that might exist outside the switch profile or inside another switch profile. This process is called a mutual exclusion (mutex) check.

The following exceptions apply to mutual exclusion checks:

- Interface configuration—An interface configuration is exempted from mutual exclusion checks because it can exist both inside and outside a switch profile. For example, interface ethernet 1/1 can be present inside and outside the switch profile.
- Port shutdown—For operational or debugging reasons, a port may be shut down only on one of the switches. The **shutdown** and **no shutdown** commands are exempted from mutual exclusion checks.
- Port Channel command—When the first member interface is added to a port channel, the port channel inherits certain configurations from the member interface. Mutual exclusion checks are exempted.
- Port profiles—Port profiles are applied on interfaces using the **inherit** command. The inherit command allows you to apply a set of configurations on the interface at once. These commands can be overridden on the interface.

- Switchport trunk allowed vlan—The **switchport trunk allowed vlan add** and **switchport trunk allowed vlan remove** command modifies a command instead of replacing the command. These commands are exempted from mutual exclusion checks.

If the configuration verification fails, you see the following error message:

```
Failed: Verify Failed
```

Use the **show switch-profile status** or **show switch-profile peer** command to view the reason for the mutual check failure, merge failure, or the peer switch status.

Examples

This example shows how to verify a configuration on a switch profile named s5010 on switch 1 of the peer:

```
switch# config sync
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config-sync)# switch-profile s5010
Switch-Profile started, Profile ID is 1
switch(config-sync-sp)# interface ethernet 1/1
switch(config-sync-sp-if)# switchport mode trunk
switch(config-sync-sp-if)# speed 1000
switch(config-sync-sp-if)# exit
switch(config-sync-sp)# verify
Verification Successful
switch(config-sync-sp)#
```

Related Commands

Command	Description
commit	Commits a switch profile configuration.
copy running-config startup-config	Copies the running configuration to the startup configuration.
show switch-profile peer	Displays information about the peer switch.
show switch-profile status	Displays information about the switch profile status.
show running-config switch-profile	Displays the running configuration for a switch profile.

vpc

To move other port channels into a virtual port channel (vPC) to connect to the downstream device, use the **vpc** command. To remove the port channels from the vPC, use the **no** form of this command.

vpc *number*

no vpc *number*

Syntax Description

number	Port channel number to connect to the downstream device. The range is from 1 and 4096. **Note** The vPC number that you assign to the port channel that connects to the downstream device from the vPC peer device must be identical on both vPC peer devices.

Command Default

None

Command Modes

Interface configuration mode

Command History

Release	Modification
4.2(1)N1(1)	This command was introduced.

Usage Guidelines

You can use any module in the device for the port channels.

Note We recommend that you attach the vPC domain downstream port channel to two devices for redundancy.

To connect to the downstream device, you create a port channel from the downstream device to the primary vPC peer device, and you create another port channel from the downstream device to the secondary peer device. Finally, working on each vPC peer device, you assign a vPC number to the port channel that connects to the downstream device. You will experience minimal traffic disruption when you are creating vPCs.

Note The port channel number and vPC number can be different, but the vPC number must be the same on both Cisco Nexus 5000 Series switches.

Examples

This example shows how to configure the selected port channel into the vPC to connect to the downstream device:

```
switch(config)# interface port-channel 20
switch(config-if)# vpc 5
switch(config-if)#
```

Related Commands

Command	Description
copy running-config startup-config	Copies the running configuration to the startup configuration.
show running-config vpc	Displays the running configuration information for vPCs.
show vpc brief	Displays information about each vPC, including information about the vPC peer link.
show vpc consistency-parameters	Displays the status of those parameters that must be consistent across all vPC interfaces.

vpc bind-vrf

To bind a virtual routing and forwarding (VRF) instance to a virtual Port Channel (vPC), use the **vpc bind-vrf** command. To remove the static binding between the vPC and VRF, use the **no** form of this command.

vpc bind-vrf *vrf-name* **vlan** *vlan-id*

no vpc bind-vrf *vrf-name* **vlan** *vlan-id*

Syntax Description

vrf-name	VRF name.
vlan *vlan-id*	Specifies the VLANs to bind to the vPC. The VLAN ID range is from 1 to 3967, and 4049 to 4093.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines

To bind the VRF to the vPC, you must use a VLAN that is not already in use. Use the sh**ow interfaces brief** command to view the interfaces that are in use on the switch.

Examples

This example shows how to bind a vPC to the default VRF using VLAN 2:

```
switch(config)# vpc bind-vrf default vlan 2
switch(config)#
```

Related Commands

Command	Description
show interfaces brief	Displays the configuration information about all interfaces.
show vpc	Displays vPC configuration information.

vpc domain

To create a virtual port channel (vPC) domain and assign a domain ID, use the **vpc domain** command. To revert to the default vPC configuration, use the **no** form of this command.

vpc domain *domain_id*

no vpc domain *domain_id*

Syntax Description

domain_id	vPC domain ID. The range is from 1 to 1000.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
4.2(1)N1(1)	This command was introduced.

Usage Guidelines

Before you can create a vPC domain and configure vPC on the switch, you must enable the vPC feature using the **feature vpc** command.

The vPC domain includes both vPC peer devices, the vPC peer keepalive link, the vPC peer link, and all the port channels in the vPC domain connected to the downstream device. You can have only one vPC domain ID on each device.

When configuring the vPC domain ID, make sure that the ID is different from the ID used by a neighboring vPC-capable device with which you may configure a double-sided vPC. This unique ID is needed because the system ID is derived from the MAC address ID of the switch. For a vPC, this MAC address is derived from the domain ID. As a result, in a peer-to-peer vPC configuration, if the neighboring switches use the same domain ID, a system ID conflict may occur in the LACP negotiation that may cause an unsuccessful LACP negotiation.

Under the vPC domain, make sure to configure the primary vPC device to ignore type checks by using the **peer-config-check-bypass** command.

Examples

This example shows how to create a vPC domain:

```
switch# configure terminal
switch(config)# vpc domain 5
switch(config-vpc-domain)#
```

Related Commands

Command	Description
copy running-config startup-config	Copies the running configuration to the startup configuration.
feature vpc	Enables or disables a vPC on the switch.
peer-config-check-bypass	Ignores type checks on primary when the MCT is down.
peer-keepalive	Configures the vPC peer keepalive link.
reload restore	Restores the vPC peer links after a specified period of time.
role priority	Configures the role priority for the vPC device.
show vpc brief	Displays brief information about each vPC domain.

vpc orphan-port suspend

To suspend a nonvirtual port channel (vPC) port when the peer link of a vPC secondary goes down, use the **vpc orphan-port suspend** command. To resume the non-vPC port, use the **no** form of this command.

vpc orphan-port suspend

no vpc orphan-port suspend

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Interface configuration mode

Command History

Release	Modification
5.0(3)N2(1)	This command was introduced.

Usage Guidelines

A non-vPC port, also known as an orphaned port, is a port that is not part of a vPC.

Examples

This example shows how to suspend an orphan port:

```
switch(config)# interface ethernet 1/20
switch(config-if)# vpc orphan-port suspend
switch(config-if)#
```

Related Commands

Command	Description
show vpc brief	Displays brief information about the vPCs.
show vpc orphan-ports	Displays information about orphan ports.

vpc peer-link

To create a virtual port channel (vPC) peer link by designating the port channel that you want on each device as the peer link for the specified vPC domain, use the **vpc peer-link** command. To remove the peer link, use the **no** form of this command.

vpc peer-link

no vpc peer-link

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Interface configuration mode

Command History

Release	Modification
4.2(1)N1(1)	This command was introduced.

Usage Guidelines

We recommend that you configure the Layer 2 port channels that you are designating as the vPC peer link in trunk mode and that you use two ports on separate modules on each vPC peer device for redundancy.

The Cisco Nexus 5000 Series switch supports 768 hardware port channels. Use the **show port-channel capacity** command to display the total number of port channels supported by the hardware.

Examples

This example shows how to select the port channel that you want to use as the vPC peer link for this device and configure the selected port channel as the vPC peer link:

```
switch(config)# interface port-channel 20
switch(config-if)# vpc peer-link
switch(config-if)#
```

Related Commands

Command	Description
copy running-config startup-config	Copies the running configuration to the startup configuration.
reload restore	Restores the vPC peer links after a specified period of time.
show port-channel capacity	Reports the number of port channels that are configured and the number of port channels that are still available on the device.
show running-config vpc	Displays the running configuration information for vPCs.

Command	Description
show vpc brief	Displays brief information about the vPCs.
show vpc brief	Displays information about each vPC, including information about the vPC peer link.
show vpc peer-keepalive	Displays information on the peer-keepalive messages.