P Commands

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

peer-config-check-bypass

To ignore type checks on the primary vPC device when the multichassis EtherChannel trunk (MCT) is down, use the **peer-config-check-bypass** command. To stop ignoring type checks, use the **no** form of this command.

peer-config-check-bypass

no peer-config-check-bypass

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

vPC domain configuration mode

Command History

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

Usage Guidelines

The peer link, also known as the multichassis EtherChannel trunk (MCT), connects the vPC peer switches. The peer link is always forwarding. The bridge protocol data units (BPDUs) or Link Aggregation Control Protocol (LACP) packets that are received by the secondary vPC peer on a vPC port are forwarded to the primary vPC peer through the peer link for processing.

The peer link is used to synchronize the MAC addresses of the vPC peer switches to provide the necessary transport for multicast traffic. It is also used for forwarding traffic that originates at, or is destined for, orphan ports (that is, a non-vPC port).

Examples

This example shows how to configure the primary vPC device to ignore type checks when the MCT is down:

```
switch(config-vpc-domain)# peer-config-check-bypass
switch(config-vpc-domain)#
```

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 brief information about each vPC domain.

Command	Description
show vpc peer-keepalive	Displays the status of the peer-keepalive link.
show vpc statistics	Displays information about the configuration for the keepalive messages.

peer-gateway

To enable Layer 3 forwarding for packets destined to the gateway MAC address of the virtual Port Channel (vPC), use the **peer-gateway** command. To disable Layer 3 forwarding packets, use the **no** form of this command.

peer-gateway

no peer-gateway

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

vPC domain configuration mode

Command History

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

Usage Guidelines

The vPC peer-gateway functionality allows a vPC switch to act as the active gateway for packets that are addressed to the router MAC address of the vPC peer. This feature enables local forwarding of such packets without the need to cross the vPC peer-link. In this scenario, the feature optimizes use of the peer-link and avoids potential traffic loss.

You must configure the peer-gateway functionality on both vPC peer switches.

Note This command is applicable to a Cisco Nexus 5548 switch and Cisco Nexus 5596 switch.

This command does not require a license.

Examples

This example shows how to enable the vPC peer gateway:

```
switch(config)# vpc domain 20
switch(config-vpc-domain)# peer-gateway
switch(config-vpc-domain)#
```

Related Commands

Command	Description
copy running-config startup-config	Copies the running configuration to the startup configuration.
show vpc	Displays information about the vPCs.

peer-keepalive

To configure the IPv4 address for the remote end of the vPC peer keepalive link that carries the keepalive messages, use the **peer-keepalive** command. To disassociate the peer keepalive link, use the **no** form of this command.

peer-keepalive destination *ipv4_address* [**hold-timeout** *holdtime_seconds* | **interval** *mseconds* {**timeout** *seconds*} | {**precedence** {*prec_value* | **critical** | **flash** | **flash-override** | **immediate** | **internet** | **network** | **priority** | **routine**}} | **source** *ipv4_address* | **tos** {*tos_value* | **max-reliability** | **max-throughput** | **min-delay** | **min-monetary-cost** | **normal**} | **tos-byte** *tos_byte_value* | **udp-port** *udp_port* | **vrf** {*vrf_name* | **management**}]

no peer-keepalive destination *ipv4_address* [**hold-timeout** *holdtime_seconds* | **interval** *mseconds* {**timeout** *seconds*} | {**precedence** {*prec_value* | **critical** | **flash** | **flash-override** | **immediate** | **internet** | **network** | **priority** | **routine**}} | **source** *ipv4_address* | **tos** {*tos_value* | **max-reliability** | **max-throughput** | **min-delay** | **min-monetary-cost** | **normal**} | **tos-byte** *tos_byte_value* | **udp-port** *udp_port* | **vrf** {*vrf_name* | **management**}]

Syntax Description

destination	Specifies the remote (secondary) vPC device interface.
ipv4_address	IPv4 address of the vPC device in the *A.B.C.D* format.
hold-timeout *holdtime_seconds*	(Optional) Specifies the hold-timeout period (in seconds) for the secondary vPC peer device to ignore vPC peer-keepalive messages. The range is from 3 to 10. The default hold-timeout value is 3 seconds.
interval *mseconds*	(Optional) Specifies the time interval (in milliseconds) at which the vPC device receives peer-keepalive messages. The range is from 400 to 10000. The default interval time for the vPC peer-keepalive message is 1 second.
timeout *seconds*	(Optional) Specifies the timeout (in seconds) between retransmissions to the remote (secondary) vPC device. The range is from 3 to 20. The default timeout value is 5 seconds.
precedence	(Optional) Classifies the vPC peer-keepalive interface traffic based on the precedence value in the type of service (ToS) byte field of the IP header. The precedence value can be one of the following: • *prec_value*—IP precedence value. The range is from 0 to 7. The default precedence value is 6. • **critical**—Critical precedence (5) • **flash**—Flash precedence (3) • **flash-override**—Flash-override precedence (4) • **immediate**—Immediate precedence (2) • **internet**—Internet precedence (6) • **network**—Network precedence (7) • **priority**—Priority precedence (1) • **routine**—Routine precedence (0)
source	(Optional) Specifies the source (primary) vPC device interface.

tos	(Optional) Specifies the type of service (ToS) value. The ToS value can be one of the following: • *tos_value*—A 4-bit TOS value. The range is from 0 to 15. • **max-reliability**—Max-reliability (2) • **max-throughput**—Max-throughput (4) • **min-delay**—Min-delay (8) • **min-monetary-cost**—Min-monetary-cost (1) • **normal**—Normal (0)
tos-byte *tos_byte_value*	(Optional) Specifies a 8-bit TOS value. The range is from 0 to 255.
udp-port *udp_port*	(Optional) Specifies the UDP port number to be used for the peer keepalive link. The range is from 1024 to 65000.
vrf *vrf_name*	(Optional) Specifies the Virtual Routing and Forwarding (VRF) name to be used for the peer keepalive link. The name is case sensitive and can be a maximum of 32 alphanumeric characters.
management	Specifies the management VRF. This is the default VRF.

Command Default

Management port and VRF

Command Modes

vPC domain configuration mode

Command History

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

Usage Guidelines

You must configure the vPC peer-keepalive link before the system can form the vPC peer link. Ensure that both the source and destination IP addresses used for the peer-keepalive message are unique in your network and these IP addresses are reachable from the Virtual Routing and Forwarding (VRF) associated with the vPC peer-keepalive link.

The Cisco NX-OS software uses the peer-keepalive link between the vPC peers to transmit periodic, configurable keepalive messages. You must have Layer 3 connectivity between the peer devices to transmit these messages. The system cannot bring up the vPC peer link unless the peer-keepalive link is already up and running.

Note We recommend that you configure a separate VRF instance and put a Layer 3 port from each vPC peer device into that VRF for the vPC peer-keepalive link. Do not use the peer link itself to send vPC peer-keepalive messages.

Examples

This example shows how to set up the peer keepalive link connection between the primary and secondary vPC device:

```
switch(config)# vpc domain 100
```

```
switch(config-vpc-domain)# peer-keepalive destination 192.168.2.2 source 192.168.2.1
Note:
 --------:: Management VRF will be used as the default VRF ::--------
switch(config-vpc-domain)#
```

Related Commands

Command	Description
copy running-config startup-config	Copies the running configuration to the startup configuration.
vpc peer-link	Creates the vPC peer link between the vPC peer devices.
show running-config vpc	Displays the running configuration information for vPCs.
show vpc peer-keepalive	Displays the status of the peer-keepalive link.
show vpc statistics	Displays information about the configuration for the keepalive messages.

port-profile

To create or configure a port profile, use the **port-profile** command. To delete a port profile, use the **no** form of this command.

port-profile {*port-profile-name* | **type** {**ethernet** | **interface-vlan** | **port-channel** | **vethernet**} *port-profile-name*}

no port-profile {*port-profile-name* | **type** {**ethernet** | **interface-vlan** | **port-channel** | **vethernet**} *port-profile-name*}

Syntax Description

port-profile-name	Name of the port profile. The name is case sensitive, can be a maximum of 80 alphanumeric characters and can include an underscore and hyphen. The name cannot contain spaces or special characters.
type	Specifies the type of port profile to configure.
ethernet	Specifies that the port profile is to be applied to an Ethernet interface.
interface-vlan	Specifies that the port profile is to be applied to a VLAN interface.
port-channel	Specifies that the port profile is to be applied to a port channel.
vethernet	Specifies that the port profile is to be applied to a virtual Ethernet (vEth) interface.

Command Default

Ethernet type port profile

Command Modes

Global configuration mode

Command History

Release	Modification
5.0(2)N1(1)	This command was introduced.
5.1(3)N1(1)	The **vethernet** keyword was added.

Usage Guidelines

Note

- You must enable virtual interfaces on the switch by using the **feature-set virtualization** command to see the **vethernet** keyword.
- You must enable interface VLANs by using the **feature interface-vlan** command to see the **interface-vlan** keyword.

You can create a port profile that contains a batch of repetitive interface commands and apply that port profile to a range of interfaces on the switch. You can configure and apply port profiles to the following interface types:

- Ethernet

- VLAN interface
- Port channel
- Virtual Ethernet (vEth) interface

The port profile is configured for an interface so that the commands that are applicable to one interface do not show up when you configure a port profile for another interface. For example, the commands that are applicable to port channel interfaces do not show up when you configure a port profile that is attached to an Ethernet interface.

Each port profile must have a unique name across the interface types.

When you delete a port profile, the commands that are configured within the port profile are removed from the interfaces that have inherited the port profile. If you want to delete a port profile that has been inherited by other port profiles, you must remove the inheritance before you can delete the port profile.

Examples

This example shows how to create a port profile named ppEth for Ethernet interfaces:

```
switch# configure terminal
switch(config)# port-profile type Ethernet ppEth
switch(config-port-prof)#
```

This example shows how to create a port profile named ppVEth for virtual Ethernet interfaces:

```
switch# configure terminal
switch(config)# port-profile type vethernet ppVEth
switch(config-port-prof)#
```

This example shows how to delete an Ethernet type port profile named ppEth:

```
switch# configure terminal
switch(config)# no port-profile type Ethernet ppEth
switch(config)#
```

Related Commands

Command	Description
command (port profile)	Adds commands to a port profile.
copy running-config startup-config	Copies the running configuration to the startup configuration.
description	Adds a description for a port profile.
feature-set virtualization	Enables the Cisco virtual machine features on the switch.
feature interface-vlan	Enables VLAN interfaces.
inherit port-profile	Inherits a port profile.
interface vethernet	Configures a virtual Ethernet (vEth) interface.
show port-profile	Displays information about a port profile.
show running-config port-profile	Displays the running configuration information for a port profile.