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CHAPTER 10

Vpc Commands

This chapter describes the Cisco NX-OS Vpc commands available on Cisco Nexus 5000 Series switches.

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show running-config vpc

To display the running configuration information for virtual port channels (vPCs), use the **show running-config vpc** command.

show running-config vpc [all]

Syntax Description	all (Optional) Displays running configuration for vPC with defaults.	
Defaults	None	
Command Modes	Any command mode.	
Command History	Release	Modification
	4.1(3)N1(1)	This command was introduced.
Usage Guidelines	This command does not require a license.	
Examples	This example shows how to display the running configuration for a vPC: <pre> switch (config)# show running-config vpc version 4.1(3)N1(1) feature vpc vpc domain 1000 role priority 9000 peer-keepalive destination 10.193.183.56 peer-config-check-bypass interface port-channel1 vpc peer-link interface port-channel3 vpc 4096 interface port-channel5 vpc 4001 interface port-channel12 vpc 4000 interface port-channel24 vpc 2000 interface port-channel41 vpc 41 interface port-channel48 vpc 48 </pre>	
Related Commands	Command	Description
	show vpc brief	Displays information about vPCs. If the feature is not enabled, this command returns an error.

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show startup-config vpc

To display virtual port-channel (vPC) configuration information in the startup-configuration, use the **show startup-config vpc** command.

show startup-config vpc [all]

Syntax Description	all (Optional) Displays startup-configuration information for all vPCs.
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Defaults	None
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Command Modes	Any command mode.
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Command History	Release	Modification
	4.1(3)N1(1)	This command was introduced.

Usage Guidelines	This command does not require a license.
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Examples	This example shows how to display the vPC information in the startup configuration:
-----------------	---

```
switch(config)# show startup-config vpc
version 4.1(3)N1(1)
feature vpc
vpc domain 1000
  peer-keepalive destination 10.193.183.56
  peer-config-check-bypass
interface port-channel1
  vpc peer-link
interface port-channel3
  vpc 4096
interface port-channel5
  vpc 4001
interface port-channel12
  vpc 4000
interface port-channel24
  vpc 2000
```

Related Commands	Command	Description
	show vpc brief	Displays information about vPCs. If the feature is not enabled, the system displays an error when you enter this command.

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show tech-support vpc

To display detailed technical support information for virtual port-channel (vPC), use the show **show tech-support vpc** command.

show tech-support vpc

Syntax Description	None This command has no arguments or keywords.				
Defaults	None				
Command Modes	Any command mode.				
Command History	<table> <tr> <th>Release</th><th>Modification</th></tr> <tr> <td>4.1(3)N1(1)</td><td>This command was introduced.</td></tr> </table>	Release	Modification	4.1(3)N1(1)	This command was introduced.
Release	Modification				
4.1(3)N1(1)	This command was introduced.				
Usage Guidelines	This command does not require a license.				
Examples	This example shows how to display the technical support information for virtual port-channel (vPC): <pre>switch(config)# show tech-support vpc version 4.1(3)N1(1) Cisco Nexus Operating System (NX-OS) Software TAC support: http://www.cisco.com/tac Copyright (c) 2002-2010, Cisco Systems, Inc. All rights reserved. The copyrights to certain works contained herein are owned by other third parties and are used and distributed under license. Some parts of this software are covered under the GNU Public License. A copy of the license is available at http://www.gnu.org/licenses/gpl.html. Software BIOS: version 1.3.0 loader: version N/A kickstart: version 4.2(1)N1(1) [build 4.2(1)N1(0.318)] system: version 4.2(1)N1(1) [build 4.2(1)N1(0.318)] power-seq: version v1.2 BIOS compile time: 09/08/09 kickstart image file is: bootflash:/n5000-uk9-kickstart.4.2.1.N1.latest.bin kickstart compile time: 4/7/2010 8:00:00 [04/07/2010 15:03:41] system image file is: bootflash:/n5000-uk9.4.2.1.N1.latest.bin system compile time: 4/7/2010 8:00:00 [04/07/2010 16:14:32] Hardware cisco Nexus5020 Chassis ("40x10GE/Supervisor") Intel(R) Celeron(R) M CPU with 2074284 kB of memory. Processor Board ID JAB1231025V Device name: d14-switch-2 bootflash: 1003520 kB Kernel uptime is 0 day(s), 16 hour(s), 31 minute(s), 28 second(s) Last reset at 349684 usecs after Wed Apr 7 21:37:27 2010 Reason: Reset Requested by CLI command reload System version: 4.2(1)N1(1) Service:</pre>				

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Related Commands	Command	Description
	show vpc brief	Displays information about vPCs. If the feature is not enabled, the system displays an error when you enter this command.

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show vpc brief

To display brief information about the virtual port channels (vPCs), use the **show vpc brief** command.

show vpc brief [*vpc number*]

Syntax Description	<i>vpc number</i>	(Optional) Displays the brief information for the specified vPC. The range is from 1 to 4096.
--------------------	-------------------	---

Defaults	None
----------	------

Command Modes	Any command mode.
---------------	-------------------

Command History	Release	Modification
	4.1(3)N1(1)	This command was introduced.

Usage Guidelines

The **show vpc brief** command displays the vPC domain ID, the peer-link status, the keepalive message status, whether the configuration consistency is successful, and whether peer-link formed or the failure to form.

This command is not available if you have not enabled the vPC feature. See **feature vpc** for information on enabling vPCs.

You can display the track object, if you have configured a tracked object for running vPCs on a single module under the vpc-domain configuration mode. This command does not require a license.

Examples

This example shows how to display brief information about the vPCs:

```
switch(config)# show vpc brief
```

Legend:

(*) - local vpc is down, forwarding via vPC peer-link

```
vPC domain id           : 10
Peer status             : peer adjacency formed ok
vPC keep-alive status   : peer is alive
Configuration consistency status: success
vPC role                : primary
Number of vPC configured : 1
```

vPC Peer-link status

```
-----
id   Port   Status Active vlans
--   ---
1    Po10   up      1-100
```

vPC status

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id	Port	Status	Consistency	Reason	Active vlans
20	Po20	up	success	success	1-100

This example also shows how to display brief information about the vPCs. In this example, the port channel failed the consistency check, and the device displays the reason for the failure:

```
switch(config)# show vpc brief
```

Legend:

(*) - local vpc is down, forwarding via vPC peer-link

```
vPC domain id           : 10
Peer status             : peer adjacency formed ok
vPC keep-alive status   : peer is alive
Configuration consistency status: failed
Configuration consistency reason: vPC type-1 configuration incompatible - STP interface
port type inconsistent
vPC role                : secondary
Number of vPC configured : 1
```

vPC Peer-link status

id	Port	Status	Active vlans
1	Po10	up	1-100

vPC status

id	Port	Status	Consistency	Reason	Active vlans
20	Po20	up	failed	vPC type-1 configuration incompatible - STP interface port type inconsistent	-

This example also shows how to display information about the tracked objects in the vPCs:

```
switch(config)# show vpc brief
```

Legend:

(*) - local vpc is down, forwarding via vPC peer-link

```
vPC domain id           : 1
Peer status             : peer adjacency formed ok
vPC keep-alive status   : peer is alive
Configuration consistency status: success
vPC role                : secondary
Number of vPC configured : 3
Track object            : 12
```

vPC Peer-link status

id	Port	Status	Active vlans
1	Po10	up	1-100

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Related Commands

Command	Description
show tech-support vpc	Displays detailed technical support information for virtual port-channel (vPC).

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show vpc peer-keepalive

To display the destination IP for the virtual port-channel (vPC) peer keepalive message and the status of the messages, use the **show vpc peer-keepalive** command.

show vpc peer-keepalive

Syntax Description	This command has no arguments or keywords.
---------------------------	--

Defaults	None
-----------------	------

Command Modes	Any command mode.
----------------------	-------------------

Command History	Release	Modification
	4.1(3)N1(1)	This command was introduced.

Usage Guidelines	The show vpc peer-keepalive command displays the destination IP of the peer keepalive message for the vPC. The command also displays the send and receive status as well as the last update from the peer in seconds and milliseconds
-------------------------	--



Note

We recommend that you create a separate VRF on the peer devices to send and receive the vPC peer keepalive messages. Do not use the peer link itself to send the vPC peer-keepalive messages.

This command does not require a license.

Examples	This example shows how to display information about the peer-keepalive message:
-----------------	---

```
switch(config)# show vpc peer-keepalive
vPC keep-alive status           : peer is alive
--Peer is alive for             : (41024) seconds, (592) msec
--Send status                   : Success
--Last send at                  : 2010.04.08 14:53:00 976 ms
--Sent on interface             : mgmt0
--Receive status                : Success
--Last receive at               : 2010.04.08 14:53:01 5 ms
--Received on interface         : mgmt0
--Last update from peer         : (0) seconds, (818) msec
vPC Keep-alive parameters
--Destination                   : 10.193.183.56
--Keepalive interval            : 1000 msec
--Keepalive timeout              : 5 seconds
--Keepalive hold timeout        : 3 seconds
--Keepalive vrf                 : management
--Keepalive udp port            : 3200
--Keepalive tos                 : 192
```

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Related Commands	Command	Description
	show vpc brief	Displays information about vPCs. If the feature is not enabled, the system displays an error when you enter this command.

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show vpc role

To display information about the virtual port-channel (vPC) role of the peer device, use the **show vpc role** command.

show vpc role

Syntax Description	This command has no arguments or keywords.
---------------------------	--

Defaults	None
-----------------	------

Command Modes	Any command mode.
----------------------	-------------------

Command History	Release	Modification
	4.1(3)N1(1)	This command was introduced.

Usage Guidelines	The show vpc role command displays the following information about the vPC status:
-------------------------	---

- Status of peer adjacency
- vPC role of the VDC that you are working on
- vPC MAC address
- vPC system priority
- MAC address of the device that you are working on
- System priority for the device that you are working on

This command is not available if you have not enabled the vPC feature. See **feature vpc** for information on enabling vPCs.

This command does not require a license.

Examples	This example shows how to display the vPC role information of the device that you are working on:
-----------------	---

```
switch (config)# show vpc role
vPC Role status
-----
vPC role                               : secondary
Dual Active Detection Status           : 0
vPC system-mac                         : 00:23:04:ee:c1:e8
vPC system-priority                     : 32667
vPC local system-mac                   : 00:0d:ec:a3:9d:bc
vPC local role-priority                 : 9000
```

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Related Commands	Command	Description
	show vpc brief	Displays information about vPCs. If the feature is not enabled, the system displays an error when you enter this command.

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show vpc statistics peer-keepalive

To display virtual port-channel (vPC) statistics, use the **show vpc statistics peer-keepalive** command.

show vpc statistics peer-keepalive

Syntax Description	peer-keepalive	Displays statistics about the peer-keepalive message.
---------------------------	-----------------------	---

Defaults	None
-----------------	------

Command Modes	Any command mode.
----------------------	-------------------

Command History	Release	Modification
	4.1(3)N1(1)	This command was introduced.

Usage Guidelines	This command does not require a license.
-------------------------	--

Examples This example shows how to display statistics about the peer-keepalive message:

```
switch# show vpc statistics peer-keepalive

vPC keep-alive status          : peer is alive

VPC keep-alive statistics
-----
peer-keepalive tx count:      1036
peer-keepalive rx count:      1028
average interval for peer rx: 995
Count of peer state changes:  1
```

This example shows how to display statistics about the peer-link message:

Related Commands	Command	Description
	show vpc brief	Displays information about vPCs. If the feature is not enabled, the system displays an error when you enter this command.
	show port channel summary	Displays information about port channels.

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show vpc statistics

To display virtual port-channel (vPC) statistics, use the **show vpc statistics** command.

show vpc statistics {vpc <vpc_num> | peer-link}

Syntax Description	peer-link	Displays statistics about the peer link. the peer-keepalive message.
	vpc_num	Displays statistics about the specified vPC. The range is from 1 to 4096.

Defaults None

Command Modes Any command mode.

Command History	Release	Modification
	4.1(3)N1(1)	This command was introduced.

Usage Guidelines The **peer-link** parameter displays the same information as the **show interface port-channel *channel number*** command for the vPC peer-link port channel.

This command does not require a license.

Examples This example shows how to display statistics about the peer-link message:

```
d14-switch-2# show vpc statistics peer-link
port-channel1 is up
  Hardware: Port-Channel, address: 000d.eca3.9da5 (bia 000d.eca3.9da5)
  MTU 1500 bytes, BW 160000000 Kbit, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA
  Port mode is trunk
  full-duplex, 10 Gb/s
  Beacon is turned off
  Input flow-control is off, output flow-control is off
  Switchport monitor is off
  Members in this channel: Eth1/1, Eth1/2, Eth1/3, Eth1/4, Eth1/21, Eth1/22, Eth1/23,
Eth1/24, Eth1/25, Eth1/26, Eth1/27
, Eth1/28, Eth1/29, Eth1/30, Eth1/31, Eth1/32
  Last clearing of "show interface" counters never
  30 seconds input rate 2645539776 bits/sec, 4842090 packets/sec
  30 seconds output rate 1184009112 bits/sec, 2177802 packets/sec
  Load-Interval #2: 5 minute (300 seconds)
    input rate 2.48 Gbps, 4.55 Mpps; output rate 1.22 Gbps, 2.24 Mpps
RX
  356216924324 unicast packets 11366280385 multicast packets 0 broadcast packets
  367583204709 input packets 25317981509171 bytes
```

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```

0 jumbo packets 0 storm suppression packets
0 runts 0 giants 0 CRC 0 no buffer
0 input error 0 short frame 0 overrun 0 underrun 0 ignored
0 watchdog 0 bad etype drop 0 bad proto drop 0 if down drop
0 input with dribble 0 input discard
81372137 Rx pause
TX
95309974177 unicast packets 2491785887 multicast packets 0 broadcast packets
97801760066 output packets 6605708744882 bytes
0 jumbo packets
2 output errors 0 collision 0 deferred 0 late collision
0 lost carrier 0 no carrier 0 babble
377039096 Tx pause
7 interface resets

```

Related Commands

Command	Description
show vpc brief	Displays information about vPCs. If the feature is not enabled, the system displays an error when you enter this command.
show port channel summary	Displays information about port channels.

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show vpc consistency-parameters

To display the consistency of parameters that must be compatible across the virtual port-channel (vPC) interfaces, use the **show vpc consistency-parameters** command.

show vpc consistency-parameters { **global** | **interface <if>** }

Syntax Description	global	(Optional) Displays the configuration of all Type 1 global parameters on both sides of the vPC peer link.
	interface <if> <i>channel- number</i>	(Optional) Displays the configuration of all Type 1 interface parameters on both sides of the vPC peer link.

Defaults	None
-----------------	------

Command Modes	Any command mode.
----------------------	-------------------

Command History	Release	Modification
	4.1(3)N1(1)	This command was introduced.

Usage Guidelines	The show vpc consistency-parameters command displays the configuration of all the vPC Type 1 parameters on both sides of the vPC peer link.
-------------------------	--



Note

All the Type 1 configurations must be identical on both sides of the vPC peer link, or the link will not come up.

The vPC Type 1 configuration parameters are as follows:

- Port-channel mode: on, off, or active
- Link speed per channel
- Duplex mode per channel
- Trunk mode per channel
 - Native VLAN
 - VLANs allowed on trunk
 - Tagging of native VLAN traffic
- Spanning Tree Protocol (STP) mode
- STP region configuration for Multiple Spanning Tree
- Enable/disable state the same per VLAN
- STP global settings
 - Bridge Assurance setting

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- Port type setting—We recommend that you set all vPC peer link ports as network ports.
- Loop Guard settings
- STP interface settings:
 - Port type setting
 - Loop Guard
 - Root Guard
- Maximum transmission unit (MTU)
- Allowed VLAN bit set

This command is not available if you have not enabled the vPC feature. See **feature vpc** for information on enabling vPCs.

This command does not require a license.

Examples

This example shows how to display the vPC consistency parameters for the specified port channel:

```
switch (config)# show vpc consistency-parameters global
```

Legend:

Type 1 : vPC will be suspended in case of mismatch

Name	Type	Local Value	Peer Value
-----	----	-----	-----
QoS	1	([], [3], [0], [1-2], [4-5], [6])	([], [3], [0], [1-2], [4-5], [6])
Network QoS (MTU)	1	(1538, 2240, 5038, 4038, 9216, 9216)	(1538, 2240, 5038, 4038, 9216, 9216)
Network Qos (Pause)	1	(F, T, T, F, F, F)	(F, T, T, F, F, F)
Input Queuing (Bandwidth)	1	(5, 10, 20, 0, 20, 40)	(5, 10, 20, 0, 20, 40)
Input Queuing (Absolute Priority)	1	(F, F, T, F, F, F)	(F, F, T, F, F, F)
Output Queuing (Bandwidth)	1	(5, 10, 20, 0, 20, 40)	(5, 10, 20, 0, 20, 40)
Output Queuing (Absolute Priority)	1	(F, F, T, F, F, F)	(F, F, T, F, F, F)
STP Mode	1	Rapid-PVST	Rapid-PVST
STP Disabled	1	None	None
STP MST Region Name	1	" "	" "
STP MST Region Revision	1	0	0
STP MST Region Instance to VLAN Mapping	1		
STP Loopguard	1	Disabled	Disabled
STP Bridge Assurance	1	Enabled	Enabled
STP Port Type, Edge BPDUGuard	1	Normal, Disabled, Disabled	Normal, Disabled, Disabled
STP MST Simulate PVST	1	Enabled	Enabled
Allowed VLANs	-	1-330,333-450,1000-1023,2000-2023	1-330,333-447,1000-1028,2000-2018
Local suspended VLANs	-	331-332,448-450,2019-2023	-

This example shows how to display the vPC consistency parameters for the specified port channel:

```
switch (config)# show vpc consistency-parameters interface port-channel 20
```

Legend:

Type 1 : vPC will be suspended in case of mismatch

Name	Type	Local Value	Peer Value
------	------	-------------	------------

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-----	-----	-----	-----
STP Port Type	1	Default	Default
STP Port Guard	1	None	None
mode	1	on	on
Speed	1	10 Gb/s	10 Gb/s
Duplex	1	full	full
Port Mode	1	trunk	trunk
Native Vlan	1	1	1
MTU	1	1500	1500
Allowed VLAN	-	1-100	1-100
bitset			

Related Commands

Command	Description
show vpc brief	Displays information about vPCs. If the feature is not enabled, the system displays an error when you enter this command.
show port channel summary	Displays information about port channels.

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show vpc orphan-ports

To display ports that are not part of the virtual port channel (vPC) but have common VLANs, use the **show vpc orphan-ports** command.

show vpc orphan-ports

Syntax Description	This command has no arguments or keywords.
---------------------------	--

Defaults	None
-----------------	------

Command Modes	Any command mode.
----------------------	-------------------

Command History	Release	Modification
	4.1(3)N1(1)	This command was introduced.

Usage Guidelines	The show vpc orphan-ports command displays those ports that are not part of the vPC but that share common VLANs with ports that are part of the vPC. This command is not available if you have not enabled the vPC feature. See feature vpc for information on enabling vPCs. This command does not require a license.
-------------------------	---

Examples	This example shows how to display vPC orphan ports:
-----------------	---

```
switch(config)# show vpc orphan ports
```

Note:

```
-----::Going through port database. Please be patient.::-----
```

VLAN	Orphan Ports
1	Po600
2	Po600
3	Po600
4	Po600
5	Po600
6	Po600
7	Po600
8	Po600
9	Po600
10	Po600
11	Po600
12	Po600
13	Po600
14	Po600
15	Po600

 show vpc orphan-ports

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Related Commands

Command	Description
show vpc brief	Displays brief information about vPCs.

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clear vpc statistics

To clear virtual port-channel (vPC) statistics, use the **clear vpc statistics** command.

clear vpc statistics {**all** | **peer-keepalive** | **peer-link** | **vpc number**}

Syntax Description	all	Clears all vPC statistics on the local vPC peer device.
	peer-keepalive	Clears the vPC peer-keepalive statistics on the local vPC peer device.
	peer-link	Clears statistics on the local vPC peer device.
	vpc number	Clears vPC statistics on the specified vPC. The range is from 1 to 4096.

Defaults	None
-----------------	------

Command Modes	Any command mode
----------------------	------------------

SupportedUserRoles	network-admin
	vdc-admin

Command History	Release	Modification
	4.1(3)	This command was introduced.

Usage Guidelines	Use the clear vpc statistics command to clear the vPC statistics. If the feature is not enabled, this command is unavailable.
	The clear vpc statistics peer-link and clear vpc statistics vpc number commands are redirected to the appropriate port channel and the clear statistics port-channel channel-number command.
	This command does not require a license.

Examples	This example shows how to clear the statistics for vPC 10:
	<pre>switch(config)# clear vpc statistics vpc 10 switch(config) #</pre>

Related Commands	Command	Description
	show vpc statistics	Displays vPC statistical information on vPCs. If the feature is not enabled, the system displays an error when you enter this command.

■ clear vpc statistics

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