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# Virtual Chassis Feature Guide for EX9200 Switches

Release

15.1



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Modified: 2016-10-28

























- Download the latest versions of software and review release notes:  
<http://www.juniper.net/customers/csc/software/>
- Search technical bulletins for relevant hardware and software notifications:  
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## Opening a Case with JTAC

You can open a case with JTAC on the Web or by telephone.

- Use the Case Management tool in the CSC at <http://www.juniper.net/cm/>.
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, see <http://www.juniper.net/support/requesting-support.html>.





























































































**Table 7: Effect of Split Detection on Common Virtual Chassis Failure Scenarios (*continued*)**

| Type of Failure                         | Split Detection Setting | Results   |
|---|-------------------------|---|
| Virtual Chassis port interfaces go down | Disabled                | <p>When Virtual Chassis port interfaces are disconnected:</p> <ul style="list-style-type: none"> <li>• VC-M retains VC-M role, and VC-B also takes VC-M role. The result is a Virtual Chassis with two VC-M routers or switches, each of which maintains subscriber state information.</li> <li>• Initially, both VC-M routers or switches have a complete list of subscribers. Because the two routers or switches have the same configuration, the effect on subscribers, traffic patterns, behavior of external applications, and subscriber login and logout operations is unpredictable while the Virtual Chassis port interfaces are disconnected.</li> </ul> <p>When Virtual Chassis port interfaces are reconnected:</p> <ul style="list-style-type: none"> <li>• Original VC-M before the disconnection resumes VC-M role, and original VC-B before the disconnection resumes VC-B role.</li> <li>• Subscribers on the VC-M are preserved.</li> <li>• Subscribers on the VC-B are purged.</li> <li>• The subscribers preserved on the VC-M are unaffected, and all remaining subscribers are able to log back in to the router or switch.</li> </ul> |



**Table 7: Effect of Split Detection on Common Virtual Chassis Failure Scenarios (*continued*)**

| Type of Failure  | Split Detection Setting                           | Results  |
|--|---|--|
| Active access link between the VC-M and the access node, such as a digital subscriber line access multiplexer (DSLAM), goes down | Split detection setting has no effect on behavior | <ul style="list-style-type: none"> <li>• Previous standby access link becomes the active access link between the VC-B and the access node.</li> <li>• Traffic is routed through the new active access link.</li> <li>• The VC-M continues to maintain subscriber state information and route traffic.</li> </ul> |

**Related Documentation**

- [Virtual Chassis Components Overview](#)
- [Global Roles and Local Roles in a Virtual Chassis on page 55](#)
- [Mastership Election in a Virtual Chassis on page 53](#)
- [Switchover Behavior in an MX Series Virtual Chassis](#)
- [Disabling Split Detection in a Virtual Chassis Configuration on page 64](#)



## PART 2

# Troubleshooting

- [Acquiring Troubleshooting Information on page 67](#)























## PART 3

# Routine Monitoring

- [Monitoring a Virtual Chassis on page 79](#)











```
user@host> show virtual-chassis protocol statistics local
```

**Related  
Documentation**

- *Configuring Interchassis Redundancy for MX Series 3D Universal Edge Routers Using a Virtual Chassis*
- [Configuring an EX9200 Virtual Chassis on page 32](#)
- *Example: Configuring Interchassis Redundancy for MX Series 3D Universal Edge Routers Using a Virtual Chassis*



## PART 4

# Configuration Statements and Operational Commands

- [Configuration Statements on page 87](#)
- [Operational Commands: Administrative on page 103](#)
- [Operational Commands: Monitoring on page 111](#)



## CHAPTER 11

# Configuration Statements

- [aggregated-ether-options](#) on page 88
- [logical-interface-fpc-redundancy](#) (Aggregated Ethernet Subscriber Interfaces) on page 89
- [member](#) on page 90
- [no-split-detection](#) on page 91
- [preprovisioned](#) on page 92
- [role](#) on page 93
- [serial-number](#) on page 96
- [targeted-distribution](#) (Static Interfaces over Aggregated Ethernet) on page 97
- [traceoptions](#) (Virtual Chassis) on page 98
- [virtual-chassis](#) on page 101















- Related Documentation**
- *Autoprovisioning a Virtual Chassis Fabric*
  - *Preprovisioning a Virtual Chassis Fabric*
  - *Example: Configuring an EX4200 Virtual Chassis Using a Preprovisioned Configuration File*
  - *Example: Setting Up a Full Mesh EX8200 Virtual Chassis with Two EX8200 Switches and Redundant XRE200 External Routing Engines*
  - *Configuring an EX3300 Virtual Chassis (CLI Procedure)*
  - *Configuring an EX4200, EX4500, or EX4550 Virtual Chassis (CLI Procedure)*
  - *Configuring an EX8200 Virtual Chassis (CLI Procedure)*
  - [Configuring an EX9200 Virtual Chassis on page 32](#)
  - *Configuring a QFX Series Virtual Chassis (CLI Procedure)*
  - *Configuring a Virtual Chassis on an EX Series Switch (J-Web Procedure)*
  - *Adding a New EX4200 Switch to an Existing EX4200 Virtual Chassis (CLI Procedure)*
  - *Replacing a Member Switch of a Virtual Chassis Configuration (CLI Procedure)*









**size** *size*—(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named **trace-file** reaches its maximum size, it is renamed **trace-file.0**, then **trace-file.1**, and so on, until the maximum number of trace files is reached. Then the oldest trace file is overwritten. If you specify a maximum number of files, you also must specify a maximum file size with the **files** option.

**Syntax:** *xk* to specify KB, *xm* to specify MB, or *xg* to specify GB

**Range:** 10 KB through 1 GB

**Default:** 128 KB

**world-readable**—(Optional) Enable unrestricted file access.

|                                 |   |
|---------------------------------|---|
| <b>Required Privilege Level</b> | system—To view this statement in the configuration.<br>system-control—To add this statement to the configuration. |
|---------------------------------|---|

|                              |  |
|------------------------------|--|
| <b>Related Documentation</b> | <ul style="list-style-type: none"><li>• <i>Monitoring the Virtual Chassis Status and Statistics on EX Series Virtual Chassis</i></li><li>• <i>Verifying the Member ID, Role, and Neighbor Member Connections of a Virtual Chassis Member</i></li><li>• <i>Verifying That Virtual Chassis Ports Are Operational</i></li><li>• <i>Verifying Virtual Chassis Ports in an EX8200 Virtual Chassis</i></li><li>• <i>Troubleshooting an EX Series Virtual Chassis</i></li><li>• <i>Troubleshooting Virtual Chassis Fabric</i></li></ul> |
|------------------------------|--|

## virtual-chassis

```

Syntax  virtual-chassis {
            aliases {
                serial-number serial-number {
                    alias-name alias-name;
                }
            }
            auto-provisioned;
            auto-sw-update {
                (ex-4200 | ex-4300 | ex-4500 | ex-4600 | qfx-3 | qfx-5)
                package-name package-name;
            }
            fast-failover (ge | vcp disable | xe);
            graceful-restart {
                disable;
            }
            id id;
            mac-persistence-timer seconds;
            member member-id {
                fabric-tree-root;
                location location;
                mastership-priority number;
                no-management-vlan;
                serial-number;
                role;
            }
            no-split-detection;
            preprovisioned;
            traceoptions (Virtual Chassis) {
                file filename <files number> <size size> <world-readable | no-world-readable> <match
                    regex>;
                flag flag ;
            }
            vc-port {
                lag-hash (packet-based | source-port-based);
            }
            vcp-no-hold-time;
            vcp-snmp-statistics;
        }

```

**Hierarchy Level** [edit]

**Release Information** Statement introduced in Junos OS Release 9.0 for EX Series switches.  
Statement introduced in Junos OS Release 13.2X50-D15 for the QFX Series.  
Statement introduced in Junos OS Release 13.2X51-D20 for Virtual Chassis Fabric (VCF).

**Description** Configure a Virtual Chassis or a Virtual Chassis Fabric (VCF).

The remaining statements are explained separately.

**Default** A standalone EX Series switch is a Virtual Chassis by default. It has a default member ID of 0, a default mastership priority of 128, and a default role as master.

A QFX Series device configured in standalone mode is a Virtual Chassis by default. It has a default member ID of 0, a default mastership priority of 128, and a default role as master.

A standalone XRE200 External Routing Engine or EX8200 switch is not part of an EX8200 Virtual Chassis until a Virtual Chassis configuration is set up.

|                                 |   |
|---------------------------------|---|
| <b>Required Privilege Level</b> | system—To view this statement in the configuration.<br>system-control—To add this statement to the configuration. |
|---------------------------------|---|

|                              |   |
|------------------------------|---|
| <b>Related Documentation</b> | <ul style="list-style-type: none"><li>• <i>Autoprovisioning a Virtual Chassis Fabric</i></li><li>• <i>Preprovisioning a Virtual Chassis Fabric</i></li><li>• <i>Adding a Device to a Virtual Chassis Fabric</i></li><li>• <i>Configuring a QFX Series Virtual Chassis (CLI Procedure)</i></li><li>• <i>Example: Configuring an EX3300 Virtual Chassis with a Master and Backup</i></li><li>• <i>Example: Configuring an EX4200 Virtual Chassis with a Master and Backup in a Single Wiring Closet</i></li><li>• <i>Example: Setting Up a Full Mesh EX8200 Virtual Chassis with Two EX8200 Switches and Redundant XRE200 External Routing Engines</i></li><li>• <i>Configuring an EX3300 Virtual Chassis (CLI Procedure)</i></li><li>• <i>Configuring an EX4200, EX4500, or EX4550 Virtual Chassis (CLI Procedure)</i></li><li>• <i>Configuring an EX8200 Virtual Chassis (CLI Procedure)</i></li><li>• <a href="#">Configuring an EX9200 Virtual Chassis on page 32</a></li></ul> |
|------------------------------|---|

## CHAPTER 12

# Operational Commands: Administrative

- request virtual-chassis member-id delete (MX Series Virtual Chassis)
- request virtual-chassis member-id set
- request virtual-chassis routing-engine master switch
- request virtual-chassis vc-port

## request virtual-chassis member-id delete (MX Series Virtual Chassis)

---

**Syntax**    request virtual-chassis member-id delete

**Release Information**    Command introduced in Junos OS Release 11.2.  
Command introduced in Junos OS Release 13.2R2 for EX Series switches.

**Description**    Remove (**delete**) the member ID from a router or switch that you want to remove from a Virtual Chassis configuration.



**NOTE:** Issuing the command to remove the member ID causes the device to reboot, and requires you to confirm that you want to proceed with this operation. If you do not confirm the operation, the software cancels the command.

**Required Privilege Level**    system-control

**Related Documentation**

- [Deleting Member IDs in a Virtual Chassis Configuration on page 47](#)
- [Example: Deleting a Virtual Chassis Configuration for MX Series 3D Universal Edge Routers](#)

**List of Sample Output**    [request virtual-chassis member-id delete on page 104](#)

### Sample Output

request virtual-chassis member-id delete

```
user@host> request virtual-chassis member-id delete
This command will disable virtual-chassis mode and reboot the system.
Continue? [yes,no] (no)
```

## request virtual-chassis member-id set

|   |  |
|---|--|
| <b>Syntax</b>                                     | request virtual-chassis member-id set member <i>member-id</i>  |
| <b>Syntax (MX960, MX2010, and MX2020 Routers)</b> | request virtual-chassis member-id set member <i>member-id</i><br><slots-per-chassis <i>slot-count</i> >  |
| <b>Release Information</b>                        | Command introduced in Junos OS Release 11.2.<br>Command introduced in Junos OS Release 13.2R2 for EX Series switches.<br><b>slots-per-chassis</b> option added in Junos OS Release 15.1 for MX960 routers, MX2010 routers, and MX2020 routers. |
| <b>Description</b>                                | Assign ( <b>set</b> ) a member ID and, optionally, a slot count to a router or switch that you want to add as a member of a Virtual Chassis configuration.   |



**NOTE:** Issuing the **request virtual-chassis member-id set** command causes the device to reboot, and requires you to confirm that you want to proceed with this operation. If you do not confirm the operation, the software cancels the command. After the reboot all MPCs remain powered off until the Virtual Chassis port connection is configured.

**Options** **member *member-id***—Assign the numeric value that identifies a member router or switch in a Virtual Chassis configuration. When you assign a member ID to a router or switch, assign the same member ID defined for this device in the preprovisioned configuration. Replace ***member-id*** with the value 0 or 1.

**slots-per-chassis *slot-count***—(MX960, MX2010, and MX2020 routers) (Optional) Identify the number of chassis slots in the Virtual Chassis member router. To ensure that a Virtual Chassis consisting of an MX2020 member router and either an MX960 or MX2010 member router forms properly, you must explicitly set the *slot-count* value for the MX960 router or MX2010 router to 20 to match the slot count of the MX2020 router.

### Values:

The valid values for ***slot-count*** are as follows:

- MX960 router: 12 or 20
- MX2010 router: 12 or 20
- MX2020 router: 20

### Default:

The default values for ***slot-count*** are as follows:

- MX960 router: 12
- MX2010 router: 12

- MX2020 router: 20

**Required Privilege Level**    system-control

**Related Documentation**

- [Configuring Member IDs for a Virtual Chassis](#)
- [Configuring an EX9200 Virtual Chassis on page 32](#)
- [Example: Configuring Interchassis Redundancy for MX Series 3D Universal Edge Routers Using a Virtual Chassis](#)

**List of Sample Output**    [request virtual-chassis member-id set \(Assigning a Member ID\) on page 106](#)  
[request virtual-chassis member-id set \(Assigning a Member ID and Slot Count\) on page 106](#)

## Sample Output


### [request virtual-chassis member-id set \(Assigning a Member ID\)](#)

```
user@host> request virtual-chassis member-id set member 0
This command will enable virtual-chassis mode and reboot the system.
Continue? [yes,no] (no)
```

### [request virtual-chassis member-id set \(Assigning a Member ID and Slot Count\)](#)

```
user@host> request virtual-chassis member-id set member 1 slots-per-chassis 20
This command will enable virtual-chassis mode and reboot the system.
Continue? [yes,no] (no)
```

## request virtual-chassis routing-engine master switch

|                                 |   |
|---------------------------------|---|
| <b>Syntax</b>                   | <code>request virtual-chassis routing-engine master switch</code><br><code>&lt;check&gt;</code>   |
| <b>Release Information</b>      | Command introduced in Junos OS Release 11.2.<br>Option <b>check</b> introduced in Junos OS Release 12.2.<br>Command introduced in Junos OS Release 13.2R2 for EX Series switches.   |
| <b>Description</b>              | <p>Change the mastership in an MX Series Virtual Chassis or EX9200 Virtual Chassis by switching the global roles of the master router or switch and backup router or switch in the Virtual Chassis configuration. The <b>request virtual-chassis routing-engine master switch</b> command must be issued from the master router or switch (VC-Mm).</p> <p>(MX Series routers only) The local roles (<b>master</b> and <b>standby</b>, or <b>m</b> and <b>s</b>) of the Routing Engines in the Virtual Chassis master router change after a global switchover, but the local roles of the Routing Engines in the Virtual Chassis backup router do not change. For example, the master Routing Engine in the Virtual Chassis master router (VC-Mm) becomes the standby Routing Engine in the Virtual Chassis backup router (VC-Bs) after the global switchover. By contrast, the master Routing Engine in the Virtual Chassis backup router (VC-Bm) remains the master Routing Engine in the Virtual Chassis master router (VC-Mm) after the global switchover.</p> |
|                                 | <p> <b>NOTE:</b> Before you issue the <b>request virtual-chassis routing-engine master switch</b> command from the master router or switch in the Virtual Chassis, make sure that the system configuration is synchronized between the master and backup router or switch. If the configuration is not synchronized, or if you attempt to issue the <b>request virtual-chassis routing-engine master switch</b> command from the backup router or switch instead of from the master router or switch, the device displays an error message and rejects the command.</p> <p>If you issue the <b>request virtual-chassis routing-engine master switch</b> command when the Virtual Chassis is in a transition state (for example, the backup router or switch is disconnecting from the Virtual Chassis), the device does not process the command.</p>   |
| <b>Options</b>                  | <b>check</b> —(Optional) Perform a check from the master router or switch to determine whether the member routers or switches are ready for GRES from a database synchronization perspective, without initiating the GRES operation itself.   |
| <b>Required Privilege Level</b> | system-control  |
| <b>Related Documentation</b>    | <ul style="list-style-type: none"> <li>• <a href="#">Switching the Global Master and Backup Roles in a Virtual Chassis Configuration on page 57</a></li> <li>• <a href="#">Determining GRES Readiness in a Virtual Chassis Configuration on page 51</a></li> </ul>  |

- [Switchover Behavior in an MX Series Virtual Chassis](#)
- [Mastership Election in a Virtual Chassis](#) on page 53

**List of Sample Output**

- [request virtual-chassis routing-engine master switch \(From Master Router\)](#) on page 108
- [request virtual-chassis routing-engine master switch \(Error When Configuration Not Synchronized\)](#) on page 108
- [request virtual-chassis routing-engine master switch \(Error When Run from Backup Router\)](#) on page 108
- [request virtual-chassis routing-engine master switch check \(Ready for GRES\)](#) on page 108
- [request virtual-chassis routing-engine master switch check \(Not Ready for GRES\)](#) on page 108

## Sample Output

[request virtual-chassis routing-engine master switch \(From Master Router\)](#)

```
{master:member0-re0}
user@host> request virtual-chassis routing-engine master switch
Do you want to continue ? [yes,no] (no)
```

[request virtual-chassis routing-engine master switch \(Error When Configuration Not Synchronized\)](#)

```
{master:member0-re0}
user@host> request virtual-chassis routing-engine master switch
Error: mastership switch request NOT honored, backup not ready
```

[request virtual-chassis routing-engine master switch \(Error When Run from Backup Router\)](#)

```
{backup:member1-re0}
user@host> request virtual-chassis routing-engine master switch
error: Virtual Chassis member is not the protocol master
```

[request virtual-chassis routing-engine master switch check \(Ready for GRES\)](#)

```
{master:member0-re0}
user@host> request virtual-chassis routing-engine master switch check
Switchover Ready
```

[request virtual-chassis routing-engine master switch check \(Not Ready for GRES\)](#)

```
{master:member0-re0}
user@host> request virtual-chassis routing-engine master switch check
error: chassisd Not ready for mastership switch, try after 217 secs.
mastership switch request NOT honored, backup not ready
```

## request virtual-chassis vc-port

|                                 |  |
|---------------------------------|--|
| <b>Syntax</b>                   | <code>request virtual-chassis vc-port [set   delete] &lt;fpc-slot <i>fpc-slot</i>&gt; pic-slot <i>pic-slot</i> port <i>port-number</i> &lt;member <i>member-id</i>&gt;</code>  |
| <b>Release Information</b>      | <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>Option <b>fpc-slot</b> introduced in Junos OS Release 10.4 for EX Series switches.</p> <p>Command introduced in Junos OS Release 13.2X50-D15 for the QFX Series.</p> <p>Command introduced in Junos OS Release 13.2X51-D20 for Virtual Chassis Fabric (VCF).</p>  |
| <b>Description</b>              | <p>Enable or disable a port as a Virtual Chassis port (VCP).</p> <p>If you omit <b>member <i>member-id</i></b>, this command defaults to enabling or disabling the uplink VCP or SFP network port configured as a VCP on the switch where the command is issued.</p> <p>On an EX3300 switch, uplink ports 2 and 3 are configured as VCPs by default. No other uplink ports on any other EX Series switches are configured as VCPs by default.</p> <p>You might experience a temporary traffic disruption immediately after creating or deleting a user-configured VCP in an EX8200 Virtual Chassis.</p>    |
| <b>Options</b>                  | <p><b>set</b>—Set a network port into a VCP to convert a network port into a VCP.</p> <p><b>delete</b>—Delete the VCP setting on a port to convert a VCP into a network port.</p> <p><b>pic-slot <i>pic-slot</i></b>—Number of the PIC slot for the port on the switch.</p> <p><b>port <i>port-number</i></b>—Number of the port that is to be enabled or disabled as a VCP.</p> <p><b>member <i>member-id</i></b>—(Optional) Enable or disable the specified VCP on the specified member of the Virtual Chassis or VCF.</p>   |
| <b>Required Privilege Level</b> | system-control   |
| <b>Related Documentation</b>    | <ul style="list-style-type: none"> <li>• <a href="#">request virtual-chassis vc-port (dedicated port)</a></li> <li>• <a href="#">show virtual-chassis vc-port on page 145</a></li> <li>• <a href="#">show virtual-chassis vc-port statistics</a></li> <li>• <a href="#">clear virtual-chassis vc-port statistics</a></li> <li>• <a href="#">Virtual Chassis Port (VCP) Interface Names in an EX8200 Virtual Chassis</a></li> <li>• <a href="#">Understanding EX Series Virtual Chassis Components on page 16</a></li> <li>• <a href="#">Understanding QFX Series Virtual Chassis Components</a></li> </ul> |
| <b>List of Sample Output</b>    | <p><a href="#">request virtual-chassis vc-port set pic-slot 1 port 0 on page 110</a></p> <p><a href="#">request virtual-chassis vc-port set pic-slot 1 port 1 member 3 on page 110</a></p> <p><a href="#">request virtual-chassis vc-port delete pic-slot 1 port 1 member 3 on page 110</a></p>  |

## Sample Output

### `request virtual-chassis vc-port set pic-slot 1 port 0`

```
user@switch> request virtual-chassis vc-port set pic-slot 1 port 0
```

To check the results of this command, use the [show virtual-chassis vc-port](#) command.

### `request virtual-chassis vc-port set pic-slot 1 port 1 member 3`

```
user@switch> request virtual-chassis vc-port set pic-slot 1 port 1 member 3
```

To check the results of this command, use the [show virtual-chassis vc-port](#) command.

### `request virtual-chassis vc-port delete pic-slot 1 port 1 member 3`

```
user@switch> request virtual-chassis vc-port delete pic-slot 1 port 1 member 3
```

To check the results of this command, use the [show virtual-chassis vc-port](#) command.

## CHAPTER 13

# Operational Commands: Monitoring

- `show virtual-chassis active-topology`
- `show virtual-chassis device-topology`
- `show virtual-chassis protocol adjacency`
- `show virtual-chassis protocol database`
- `show virtual-chassis protocol interface`
- `show virtual-chassis protocol route`
- `show virtual-chassis protocol statistics`
- `show virtual-chassis`
- `show virtual-chassis vc-port`

## show virtual-chassis active-topology

|                                 |   |
|---------------------------------|---|
| <b>Syntax</b>                   | show virtual-chassis active-topology<br><all-members><br><local><br><member <i>member-id</i> >  |
| <b>Release Information</b>      | Command introduced in Junos OS Release 9.0 for EX Series switches.<br>Command introduced in Junos OS Release 13.2X50-D15 for the QFX Series.<br>Command introduced in Junos OS Release 13.2X51-D20 for Virtual Chassis Fabric (VCF).  |
| <b>Description</b>              | Display the active topology of the Virtual Chassis or VCF with next-hop reachability information.   |
| <b>Options</b>                  | <p><b>none</b>—Display the active topology of the member switch where the command is issued.</p> <p><b>all-members</b>—(Optional) Display the active topology of all members of the Virtual Chassis or VCF.</p> <p><b>local</b>—(Optional) Display the active topology of the switch or external Routing Engine on which this command is entered.</p> <p><b>member <i>member-id</i></b>—(Optional) Display the active topology of the specified member of the Virtual Chassis or VCF.</p> |
| <b>Required Privilege Level</b> | view  |
| <b>Related Documentation</b>    | <ul style="list-style-type: none"> <li>• <i>Monitoring the Virtual Chassis Status and Statistics on EX Series Virtual Chassis</i></li> <li>• <i>Understanding EX Series Virtual Chassis Configuration</i></li> </ul>  |
| <b>List of Sample Output</b>    | <a href="#">show virtual-chassis active-topology (EX4200 Virtual Chassis) on page 113</a><br><a href="#">show virtual-chassis active-topology (EX8200 Virtual Chassis) on page 113</a><br><a href="#">show virtual-chassis active-topology (Virtual Chassis Fabric) on page 114</a>   |
| <b>Output Fields</b>            | Table 9 on page 112 lists the output fields for the <b>show virtual-chassis active-topology</b> command. Output fields are listed in the approximate order in which they appear.  |

**Table 9: show virtual-chassis active-topology Output Fields**

| Field Name            | Field Description  |
|-----------------------|--|
| <b>Destination ID</b> | Specifies the member ID of the destination.  |
| <b>Next-hop</b>       | <p>Specifies the member ID and Virtual Chassis port (VCP) of the next hop to which packets for the destination ID are forwarded.</p> <p>The next hop can be more than one device in a VCF.</p> |

## Sample Output

### show virtual-chassis active-topology (EX4200 Virtual Chassis)

```

user@switch> show virtual-chassis active-topology
 1                      1(vcp-1)

 2                      1(vcp-1)

 3                      1(vcp-1)

 4                      1(vcp-1)

 5                      8(vcp-0) 1(vcp-1)

 6                      8(vcp-0)

 7                      8(vcp-0)

 8                      8(vcp-0)

```

### show virtual-chassis active-topology (EX8200 Virtual Chassis)

```

user@external-routing-engine> show virtual-chassis active-topology
member0:

```

| Destination ID | Next-hop           |
|----------------|--------------------|
| 1              | 1(vcp-4/0/4.32768) |
| 8              | 8(vcp-0/0.32768)   |
| 9              | 8(vcp-0/0.32768)   |

```

member1:

```

| Destination ID | Next-hop           |
|----------------|--------------------|
| 0              | 0(vcp-3/0/4.32768) |
| 8              | 8(vcp-0/0.32768)   |
| 9              | 8(vcp-0/0.32768)   |

```

member8:

```

| Destination ID | Next-hop         |
|----------------|------------------|
| 0              | 0(vcp-1/1.32768) |
| 1              | 1(vcp-1/2.32768) |
| 9              | 9(vcp-2/1.32768) |

member9:

| Destination ID | Next-hop         |
|----------------|------------------|
| 0              | 8(vcp-1/2.32768) |
| 1              | 8(vcp-1/2.32768) |
| 8              | 8(vcp-1/2.32768) |

#### show virtual-chassis active-topology (Virtual Chassis Fabric)

user@device> show virtual-chassis active-topology  
fpc0:

| Destination ID            | Next-hop                                  |
|---------------------------|---|
| 1<br>6(vcp-255/0/1.32768) | 4(vcp-255/0/2.32768) 5(vcp-255/0/3.32768) |
| 2<br>6(vcp-255/0/1.32768) | 4(vcp-255/0/2.32768) 5(vcp-255/0/3.32768) |
| 3<br>6(vcp-255/0/1.32768) | 4(vcp-255/0/2.32768) 5(vcp-255/0/3.32768) |
| 4                         | 4(vcp-255/0/2.32768)                      |
| 5                         | 5(vcp-255/0/3.32768)                      |
| 6                         | 6(vcp-255/0/1.32768)                      |

fpc1:

| Destination ID            | Next-hop                                  |
|---------------------------|---|
| 0<br>6(vcp-255/0/1.32768) | 4(vcp-255/0/2.32768) 5(vcp-255/0/3.32768) |
| 2<br>6(vcp-255/0/1.32768) | 4(vcp-255/0/2.32768) 5(vcp-255/0/3.32768) |
| 3<br>6(vcp-255/0/1.32768) | 4(vcp-255/0/2.32768) 5(vcp-255/0/3.32768) |
| 4                         | 4(vcp-255/0/2.32768)                      |
| 5                         | 5(vcp-255/0/3.32768)                      |
| 6                         | 6(vcp-255/0/1.32768)                      |

fpc2:

| Destination ID            | Next-hop                                  |
|---------------------------|---|
| 0<br>6(vcp-255/0/1.32768) | 4(vcp-255/0/2.32768) 5(vcp-255/0/3.32768) |
| 1<br>6(vcp-255/0/1.32768) | 4(vcp-255/0/2.32768) 5(vcp-255/0/3.32768) |
| 3<br>6(vcp-255/0/1.32768) | 4(vcp-255/0/2.32768) 5(vcp-255/0/3.32768) |
| 4                         | 4(vcp-255/0/2.32768)                      |
| 5                         | 5(vcp-255/0/3.32768)                      |
| 6                         | 6(vcp-255/0/1.32768)                      |

fpc3:

| Destination ID            | Next-hop                                  |
|---------------------------|---|
| 0<br>6(vcp-255/0/1.32768) | 4(vcp-255/0/2.32768) 5(vcp-255/0/3.32768) |
| 1<br>6(vcp-255/0/1.32768) | 4(vcp-255/0/2.32768) 5(vcp-255/0/3.32768) |
| 2<br>6(vcp-255/0/1.32768) | 4(vcp-255/0/2.32768) 5(vcp-255/0/3.32768) |
| 4                         | 4(vcp-255/0/2.32768)                      |
| 5                         | 5(vcp-255/0/3.32768)                      |
| 6                         | 6(vcp-255/0/1.32768)                      |

fpc4:

| Destination ID             | Next-hop   |
|----------------------------|--|
| 0                          | 0(vcp-255/0/48.32768)  |
| 1                          | 1(vcp-255/0/49.32768)  |
| 2                          | 2(vcp-255/0/50.32768)  |
| 3                          | 3(vcp-255/0/51.32768)  |
| 5<br>0(vcp-255/0/48.32768) | 3(vcp-255/0/51.32768) 2(vcp-255/0/50.32768)<br>1(vcp-255/0/49.32768) |
| 6<br>0(vcp-255/0/48.32768) | 3(vcp-255/0/51.32768) 2(vcp-255/0/50.32768)<br>1(vcp-255/0/49.32768) |

fpc5:

| Destination ID | Next-hop              |
|----------------|-----------------------|
| 0              | 0(vcp-255/0/48.32768) |

|                       |                       |                       |
|-----------------------|-----------------------|-----------------------|
| 1                     | 1(vcp-255/0/49.32768) |                       |
| 2                     | 2(vcp-255/0/50.32768) |                       |
| 3                     | 3(vcp-255/0/51.32768) |                       |
| 4                     | 3(vcp-255/0/51.32768) | 2(vcp-255/0/50.32768) |
| 0(vcp-255/0/48.32768) | 1(vcp-255/0/49.32768) |                       |
| 6                     | 3(vcp-255/0/51.32768) | 2(vcp-255/0/50.32768) |
| 0(vcp-255/0/48.32768) | 1(vcp-255/0/49.32768) |                       |

fpc6:

| Destination ID       | Next-hop                                  |
|----------------------|---|
| 0                    | 0(vcp-255/0/0.32768)                      |
| 1                    | 1(vcp-255/0/1.32768)                      |
| 2                    | 2(vcp-255/0/2.32768)                      |
| 3                    | 3(vcp-255/0/3.32768)                      |
| 4                    | 3(vcp-255/0/3.32768) 2(vcp-255/0/2.32768) |
| 0(vcp-255/0/0.32768) | 1(vcp-255/0/1.32768)                      |
| 5                    | 3(vcp-255/0/3.32768) 2(vcp-255/0/2.32768) |
| 0(vcp-255/0/0.32768) | 1(vcp-255/0/1.32768)                      |

## show virtual-chassis device-topology

|                                 |   |
|---------------------------------|---|
| <b>Syntax</b>                   | show virtual-chassis device-topology<br><all-members><br><local><br><member <i>member-id</i> >  |
| <b>Release Information</b>      | Command introduced in Junos OS Release 10.4 for EX Series switches.<br>Command introduced in Junos OS Release 13.2X50-D15 for the QFX Series.<br>Command introduced in Junos OS Release 13.2X51-D20 for Virtual Chassis Fabric (VCF).   |
| <b>Description</b>              | Display the device topology—the member and system IDs, the VCP numbers, and device status—for all hardware devices in the Virtual Chassis or VCF.   |
| <b>Options</b>                  | <p><b>none</b>—Display the device topology for all members of the Virtual Chassis or VCF.</p> <p><b>all-members</b>—(Optional) Display the device topology for all members of the Virtual Chassis or VCF.</p> <p><b>local</b>—(Optional) Display the device topology for the switch or external Routing Engine on which this command is entered.</p> <p><b>member <i>member-id</i></b>—(Optional) Display the device topology for the specified member of the Virtual Chassis or VCF.</p> |
| <b>Required Privilege Level</b> | clear   |
| <b>Related Documentation</b>    | <ul style="list-style-type: none"> <li>• <i>Understanding EX Series Virtual Chassis Port Link Aggregation</i></li> <li>• <i>Understanding EX8200 Virtual Chassis Topologies</i></li> </ul>  |
| <b>Output Fields</b>            | <a href="#">Table 10 on page 117</a> lists the output fields for the <b>show virtual-chassis device-topology</b> command. Output fields are listed in the approximate order in which they appear.   |

**Table 10: show virtual-chassis device-topology Output Fields**

| Field Name    | Field Description   |
|---------------|---|
| <b>Member</b> | Assigned member ID.   |
| <b>Device</b> | Assigned device ID.<br><br>For an EX8200 Virtual Chassis, the member ID and the device ID are always identical.   |
| <b>Status</b> | The status of the device within the Virtual Chassis or VCF. Outputs include: <ul style="list-style-type: none"> <li>• <b>Prsnt</b>—Device is currently connected to and participating in the Virtual Chassis or VCF.</li> <li>• <b>NotPrsnt</b>—Device is assigned but is not currently connected.</li> </ul> |

Table 10: show virtual-chassis device-topology Output Fields (*continued*)

| Field Name                       | Field Description  |
|----------------------------------|--|
| <b>System ID</b>                 | System ID of the device.<br><br>The system ID of the device is the device's MAC address.   |
| <b>Member (Neighbor List)</b>    | Assigned member ID of the neighbor device.   |
| <b>Device (Neighbor List)</b>    | Assigned device ID of the neighbor device.<br><br>For an EX8200 Virtual Chassis, the member ID and the device ID are always identical. |
| <b>Interface (Neighbor List)</b> | The interface connecting the device to the neighbor.   |

## Sample Output

### show virtual-chassis device-topology

```
user@switch> show virtual-chassis device-topology
```

```
member0:
```

```
-----
Member  Device  Status  System ID      Neighbor List
                                Member  Device  Interface
0         0      Prsnt   0021.59f7.d000  8         8      vcp-0/0
                                1         1      vcp-4/0/1
1         1      Prsnt   0026.888d.6800  8         8      vcp-0/0
                                9         9      vcp-0/1
                                0         0      vcp-3/0/4
8         8      Prsnt   0000.4a75.9b7c  9         9      vcp-1/0
                                0         0      vcp-1/1
                                1         1      vcp-1/2
9         9      Prsnt   0000.73e9.9a57  8         8      vcp-1/0
                                1         1      vcp-1/1
```

```
member1:
```

```
-----
Member  Device  Status  System ID      Neighbor List
                                Member  Device  Interface
0         0      Prsnt   0021.59f7.d000  8         8      vcp-0/0
                                1         1      vcp-4/0/1
1         1      Prsnt   0026.888d.6800  8         8      vcp-0/0
                                9         9      vcp-0/1
                                0         0      vcp-3/0/4
8         8      Prsnt   0000.4a75.9b7c  9         9      vcp-1/0
                                0         0      vcp-1/1
                                1         1      vcp-1/2
9         9      Prsnt   0000.73e9.9a57  8         8      vcp-1/0
                                1         1      vcp-1/1
```

```
member8:
```

```
-----
Member  Device  Status  System ID      Neighbor List
                                Member  Device  Interface
```

|   |   |       |                |   |   |           |
|---|---|-------|----------------|---|---|-----------|
| 0 | 0 | Prsnt | 0021.59f7.d000 | 8 | 8 | vcp-0/0   |
|   |   |       |                | 1 | 1 | vcp-4/0/1 |
| 1 | 1 | Prsnt | 0026.888d.6800 | 8 | 8 | vcp-0/0   |
|   |   |       |                | 9 | 9 | vcp-0/1   |
|   |   |       |                | 0 | 0 | vcp-3/0/4 |
| 8 | 8 | Prsnt | 0000.4a75.9b7c | 9 | 9 | vcp-1/0   |
|   |   |       |                | 0 | 0 | vcp-1/1   |
|   |   |       |                | 1 | 1 | vcp-1/2   |
| 9 | 9 | Prsnt | 0000.73e9.9a57 | 8 | 8 | vcp-1/0   |
|   |   |       |                | 1 | 1 | vcp-1/1   |

member9:

|        |        |        |                | Neighbor List |        |           |
|--------|--------|--------|----------------|---------------|--------|-----------|
| Member | Device | Status | System ID      | Member        | Device | Interface |
| 0      | 0      | Prsnt  | 0021.59f7.d000 | 8             | 8      | vcp-0/0   |
|        |        |        |                | 1             | 1      | vcp-4/0/1 |
| 1      | 1      | Prsnt  | 0026.888d.6800 | 8             | 8      | vcp-0/0   |
|        |        |        |                | 9             | 9      | vcp-0/1   |
|        |        |        |                | 0             | 0      | vcp-3/0/4 |
| 8      | 8      | Prsnt  | 0000.4a75.9b7c | 9             | 9      | vcp-1/0   |
|        |        |        |                | 0             | 0      | vcp-1/1   |
|        |        |        |                | 1             | 1      | vcp-1/2   |
| 9      | 9      | Prsnt  | 0000.73e9.9a57 | 8             | 8      | vcp-1/0   |
|        |        |        |                | 1             | 1      | vcp-1/1   |

#### show virtual-chassis device-topology (Virtual Chassis Fabric)

user@device> show virtual-chassis device-topology  
fpc0:

|        |        |        |                | Neighbor List |        |              |
|--------|--------|--------|----------------|---------------|--------|--------------|
| Member | Device | Status | System ID      | Member        | Device | Interface    |
| 0      | 0      | Prsnt  | 100e.7eb6.a900 | 4             | 4      | vcp-255/0/2  |
|        |        |        |                | 5             | 5      | vcp-255/0/3  |
|        |        |        |                | 6             | 6      | vcp-255/0/1  |
| 1      | 1      | Prsnt  | 100e.7eb8.3a40 | 4             | 4      | vcp-255/0/2  |
|        |        |        |                | 5             | 5      | vcp-255/0/3  |
|        |        |        |                | 6             | 6      | vcp-255/0/1  |
| 2      | 2      | Prsnt  | 100e.7eb5.d700 | 4             | 4      | vcp-255/0/2  |
|        |        |        |                | 5             | 5      | vcp-255/0/3  |
|        |        |        |                | 6             | 6      | vcp-255/0/1  |
| 3      | 3      | Prsnt  | 100e.7eb5.c440 | 4             | 4      | vcp-255/0/2  |
|        |        |        |                | 5             | 5      | vcp-255/0/3  |
|        |        |        |                | 6             | 6      | vcp-255/0/1  |
| 4      | 4      | Prsnt  | 100e.7eb5.7e40 | 3             | 3      | vcp-255/0/51 |
|        |        |        |                | 2             | 2      | vcp-255/0/50 |
|        |        |        |                | 0             | 0      | vcp-255/0/48 |
|        |        |        |                | 1             | 1      | vcp-255/0/49 |
| 5      | 5      | Prsnt  | 100e.7eb5.80c0 | 3             | 3      | vcp-255/0/51 |
|        |        |        |                | 2             | 2      | vcp-255/0/50 |
|        |        |        |                | 1             | 1      | vcp-255/0/49 |
|        |        |        |                | 0             | 0      | vcp-255/0/48 |
| 6      | 6      | Prsnt  | 100e.7eb6.3b00 | 3             | 3      | vcp-255/0/3  |
|        |        |        |                | 2             | 2      | vcp-255/0/2  |
|        |        |        |                | 0             | 0      | vcp-255/0/0  |
|        |        |        |                | 1             | 1      | vcp-255/0/1  |

fpc1:

Neighbor List

| Member | Device | Status | System ID      | Member | Device | Interface    |
|--------|--------|--------|----------------|--------|--------|--------------|
| 0      | 0      | Prsnt  | 100e.7eb6.a900 | 4      | 4      | vcp-255/0/2  |
|        |        |        |                | 5      | 5      | vcp-255/0/3  |
|        |        |        |                | 6      | 6      | vcp-255/0/1  |
| 1      | 1      | Prsnt  | 100e.7eb8.3a40 | 4      | 4      | vcp-255/0/2  |
|        |        |        |                | 5      | 5      | vcp-255/0/3  |
|        |        |        |                | 6      | 6      | vcp-255/0/1  |
| 2      | 2      | Prsnt  | 100e.7eb5.d700 | 4      | 4      | vcp-255/0/2  |
|        |        |        |                | 5      | 5      | vcp-255/0/3  |
|        |        |        |                | 6      | 6      | vcp-255/0/1  |
| 3      | 3      | Prsnt  | 100e.7eb5.c440 | 4      | 4      | vcp-255/0/2  |
|        |        |        |                | 5      | 5      | vcp-255/0/3  |
|        |        |        |                | 6      | 6      | vcp-255/0/1  |
| 4      | 4      | Prsnt  | 100e.7eb5.7e40 | 3      | 3      | vcp-255/0/51 |
|        |        |        |                | 2      | 2      | vcp-255/0/50 |
|        |        |        |                | 0      | 0      | vcp-255/0/48 |
|        |        |        |                | 1      | 1      | vcp-255/0/49 |
| 5      | 5      | Prsnt  | 100e.7eb5.80c0 | 3      | 3      | vcp-255/0/51 |
|        |        |        |                | 2      | 2      | vcp-255/0/50 |
|        |        |        |                | 1      | 1      | vcp-255/0/49 |
|        |        |        |                | 0      | 0      | vcp-255/0/48 |
| 6      | 6      | Prsnt  | 100e.7eb6.3b00 | 3      | 3      | vcp-255/0/3  |
|        |        |        |                | 2      | 2      | vcp-255/0/2  |
|        |        |        |                | 0      | 0      | vcp-255/0/0  |
|        |        |        |                | 1      | 1      | vcp-255/0/1  |

fpc2:

| Neighbor List |        |        |                |        |        |              |
|---------------|--------|--------|----------------|--------|--------|--------------|
| Member        | Device | Status | System ID      | Member | Device | Interface    |
| 0             | 0      | Prsnt  | 100e.7eb6.a900 | 4      | 4      | vcp-255/0/2  |
|               |        |        |                | 5      | 5      | vcp-255/0/3  |
|               |        |        |                | 6      | 6      | vcp-255/0/1  |
| 1             | 1      | Prsnt  | 100e.7eb8.3a40 | 4      | 4      | vcp-255/0/2  |
|               |        |        |                | 5      | 5      | vcp-255/0/3  |
|               |        |        |                | 6      | 6      | vcp-255/0/1  |
| 2             | 2      | Prsnt  | 100e.7eb5.d700 | 4      | 4      | vcp-255/0/2  |
|               |        |        |                | 5      | 5      | vcp-255/0/3  |
|               |        |        |                | 6      | 6      | vcp-255/0/1  |
| 3             | 3      | Prsnt  | 100e.7eb5.c440 | 4      | 4      | vcp-255/0/2  |
|               |        |        |                | 5      | 5      | vcp-255/0/3  |
|               |        |        |                | 6      | 6      | vcp-255/0/1  |
| 4             | 4      | Prsnt  | 100e.7eb5.7e40 | 3      | 3      | vcp-255/0/51 |
|               |        |        |                | 2      | 2      | vcp-255/0/50 |
|               |        |        |                | 0      | 0      | vcp-255/0/48 |
|               |        |        |                | 1      | 1      | vcp-255/0/49 |
| 5             | 5      | Prsnt  | 100e.7eb5.80c0 | 3      | 3      | vcp-255/0/51 |
|               |        |        |                | 2      | 2      | vcp-255/0/50 |
|               |        |        |                | 1      | 1      | vcp-255/0/49 |
|               |        |        |                | 0      | 0      | vcp-255/0/48 |
| 6             | 6      | Prsnt  | 100e.7eb6.3b00 | 3      | 3      | vcp-255/0/3  |
|               |        |        |                | 2      | 2      | vcp-255/0/2  |
|               |        |        |                | 0      | 0      | vcp-255/0/0  |
|               |        |        |                | 1      | 1      | vcp-255/0/1  |

fpc3:

| Neighbor List |        |        |                |        |        |             |
|---------------|--------|--------|----------------|--------|--------|-------------|
| Member        | Device | Status | System ID      | Member | Device | Interface   |
| 0             | 0      | Prsnt  | 100e.7eb6.a900 | 4      | 4      | vcp-255/0/2 |
|               |        |        |                | 5      | 5      | vcp-255/0/3 |

|   |   |       |                |   |   |              |
|---|---|-------|----------------|---|---|--------------|
| 1 | 1 | Prsnt | 100e.7eb8.3a40 | 6 | 6 | vcp-255/0/1  |
|   |   |       |                | 4 | 4 | vcp-255/0/2  |
|   |   |       |                | 5 | 5 | vcp-255/0/3  |
| 2 | 2 | Prsnt | 100e.7eb5.d700 | 6 | 6 | vcp-255/0/1  |
|   |   |       |                | 4 | 4 | vcp-255/0/2  |
|   |   |       |                | 5 | 5 | vcp-255/0/3  |
| 3 | 3 | Prsnt | 100e.7eb5.c440 | 6 | 6 | vcp-255/0/1  |
|   |   |       |                | 4 | 4 | vcp-255/0/2  |
|   |   |       |                | 5 | 5 | vcp-255/0/3  |
| 4 | 4 | Prsnt | 100e.7eb5.7e40 | 6 | 6 | vcp-255/0/1  |
|   |   |       |                | 3 | 3 | vcp-255/0/51 |
|   |   |       |                | 2 | 2 | vcp-255/0/50 |
| 5 | 5 | Prsnt | 100e.7eb5.80c0 | 0 | 0 | vcp-255/0/48 |
|   |   |       |                | 1 | 1 | vcp-255/0/49 |
|   |   |       |                | 3 | 3 | vcp-255/0/51 |
|   |   |       |                | 2 | 2 | vcp-255/0/50 |
|   |   |       |                | 1 | 1 | vcp-255/0/49 |
| 6 | 6 | Prsnt | 100e.7eb6.3b00 | 0 | 0 | vcp-255/0/48 |
|   |   |       |                | 3 | 3 | vcp-255/0/3  |
|   |   |       |                | 2 | 2 | vcp-255/0/2  |
|   |   |       |                | 0 | 0 | vcp-255/0/0  |
|   |   |       |                | 1 | 1 | vcp-255/0/1  |

fpc4:

|        |        |        |                | Neighbor List |        |              |
|--------|--------|--------|----------------|---------------|--------|--------------|
| Member | Device | Status | System ID      | Member        | Device | Interface    |
| 0      | 0      | Prsnt  | 100e.7eb6.a900 | 4             | 4      | vcp-255/0/2  |
|        |        |        |                | 5             | 5      | vcp-255/0/3  |
|        |        |        |                | 6             | 6      | vcp-255/0/1  |
| 1      | 1      | Prsnt  | 100e.7eb8.3a40 | 4             | 4      | vcp-255/0/2  |
|        |        |        |                | 5             | 5      | vcp-255/0/3  |
|        |        |        |                | 6             | 6      | vcp-255/0/1  |
| 2      | 2      | Prsnt  | 100e.7eb5.d700 | 4             | 4      | vcp-255/0/2  |
|        |        |        |                | 5             | 5      | vcp-255/0/3  |
|        |        |        |                | 6             | 6      | vcp-255/0/1  |
| 3      | 3      | Prsnt  | 100e.7eb5.c440 | 4             | 4      | vcp-255/0/2  |
|        |        |        |                | 5             | 5      | vcp-255/0/3  |
|        |        |        |                | 6             | 6      | vcp-255/0/1  |
| 4      | 4      | Prsnt  | 100e.7eb5.7e40 | 3             | 3      | vcp-255/0/51 |
|        |        |        |                | 2             | 2      | vcp-255/0/50 |
|        |        |        |                | 0             | 0      | vcp-255/0/48 |
|        |        |        |                | 1             | 1      | vcp-255/0/49 |
| 5      | 5      | Prsnt  | 100e.7eb5.80c0 | 3             | 3      | vcp-255/0/51 |
|        |        |        |                | 2             | 2      | vcp-255/0/50 |
|        |        |        |                | 1             | 1      | vcp-255/0/49 |
|        |        |        |                | 0             | 0      | vcp-255/0/48 |
| 6      | 6      | Prsnt  | 100e.7eb6.3b00 | 3             | 3      | vcp-255/0/3  |
|        |        |        |                | 2             | 2      | vcp-255/0/2  |
|        |        |        |                | 0             | 0      | vcp-255/0/0  |
|        |        |        |                | 1             | 1      | vcp-255/0/1  |

fpc5:

|        |        |        |                | Neighbor List |        |             |
|--------|--------|--------|----------------|---------------|--------|-------------|
| Member | Device | Status | System ID      | Member        | Device | Interface   |
| 0      | 0      | Prsnt  | 100e.7eb6.a900 | 4             | 4      | vcp-255/0/2 |
|        |        |        |                | 5             | 5      | vcp-255/0/3 |
|        |        |        |                | 6             | 6      | vcp-255/0/1 |
| 1      | 1      | Prsnt  | 100e.7eb8.3a40 | 4             | 4      | vcp-255/0/2 |
|        |        |        |                | 5             | 5      | vcp-255/0/3 |

|   |   |       |                |   |   |              |
|---|---|-------|----------------|---|---|--------------|
| 2 | 2 | Prsnt | 100e.7eb5.d700 | 6 | 6 | vcp-255/0/1  |
|   |   |       |                | 4 | 4 | vcp-255/0/2  |
|   |   |       |                | 5 | 5 | vcp-255/0/3  |
| 3 | 3 | Prsnt | 100e.7eb5.c440 | 6 | 6 | vcp-255/0/1  |
|   |   |       |                | 4 | 4 | vcp-255/0/2  |
|   |   |       |                | 5 | 5 | vcp-255/0/3  |
| 4 | 4 | Prsnt | 100e.7eb5.7e40 | 6 | 6 | vcp-255/0/1  |
|   |   |       |                | 3 | 3 | vcp-255/0/51 |
|   |   |       |                | 2 | 2 | vcp-255/0/50 |
| 5 | 5 | Prsnt | 100e.7eb5.80c0 | 0 | 0 | vcp-255/0/48 |
|   |   |       |                | 1 | 1 | vcp-255/0/49 |
|   |   |       |                | 3 | 3 | vcp-255/0/51 |
| 6 | 6 | Prsnt | 100e.7eb6.3b00 | 2 | 2 | vcp-255/0/50 |
|   |   |       |                | 1 | 1 | vcp-255/0/49 |
|   |   |       |                | 0 | 0 | vcp-255/0/48 |
|   |   |       |                | 3 | 3 | vcp-255/0/3  |
|   |   |       |                | 2 | 2 | vcp-255/0/2  |
|   |   |       |                | 0 | 0 | vcp-255/0/0  |
|   |   |       |                | 1 | 1 | vcp-255/0/1  |

fpc6:

|        |        |        |                | Neighbor List |        |              |
|--------|--------|--------|----------------|---------------|--------|--------------|
| Member | Device | Status | System ID      | Member        | Device | Interface    |
| 0      | 0      | Prsnt  | 100e.7eb6.a900 | 4             | 4      | vcp-255/0/2  |
|        |        |        |                | 5             | 5      | vcp-255/0/3  |
|        |        |        |                | 6             | 6      | vcp-255/0/1  |
| 1      | 1      | Prsnt  | 100e.7eb8.3a40 | 4             | 4      | vcp-255/0/2  |
|        |        |        |                | 5             | 5      | vcp-255/0/3  |
|        |        |        |                | 6             | 6      | vcp-255/0/1  |
| 2      | 2      | Prsnt  | 100e.7eb5.d700 | 4             | 4      | vcp-255/0/2  |
|        |        |        |                | 5             | 5      | vcp-255/0/3  |
|        |        |        |                | 6             | 6      | vcp-255/0/1  |
| 3      | 3      | Prsnt  | 100e.7eb5.c440 | 4             | 4      | vcp-255/0/2  |
|        |        |        |                | 5             | 5      | vcp-255/0/3  |
|        |        |        |                | 6             | 6      | vcp-255/0/1  |
| 4      | 4      | Prsnt  | 100e.7eb5.7e40 | 3             | 3      | vcp-255/0/51 |
|        |        |        |                | 2             | 2      | vcp-255/0/50 |
|        |        |        |                | 0             | 0      | vcp-255/0/48 |
| 5      | 5      | Prsnt  | 100e.7eb5.80c0 | 1             | 1      | vcp-255/0/49 |
|        |        |        |                | 3             | 3      | vcp-255/0/51 |
|        |        |        |                | 2             | 2      | vcp-255/0/50 |
| 6      | 6      | Prsnt  | 100e.7eb6.3b00 | 1             | 1      | vcp-255/0/49 |
|        |        |        |                | 0             | 0      | vcp-255/0/48 |
|        |        |        |                | 3             | 3      | vcp-255/0/3  |
|        |        |        |                | 2             | 2      | vcp-255/0/2  |
|        |        |        |                | 0             | 0      | vcp-255/0/0  |
|        |        |        |                | 1             | 1      | vcp-255/0/1  |

## show virtual-chassis protocol adjacency

|                                 |  |
|---------------------------------|--|
| <b>Syntax</b>                   | <pre>show virtual-chassis protocol adjacency &lt;brief   detail   extensive&gt; &lt;all-members&gt; &lt;local&gt; &lt;member member-id&gt; &lt;system-id&gt;</pre>   |
| <b>Release Information</b>      | <p>Command introduced in Junos OS Release 10.4 for EX Series switches.</p> <p>Command introduced in Junos OS Release 13.2X50-D15 for the QFX Series.</p> <p>Command introduced in Junos OS Release 13.2X51-D20 for Virtual Chassis Fabric (VCF).</p>   |
| <b>Description</b>              | Display the Virtual Chassis Control Protocol (VCCP) adjacency statistics in the Virtual Chassis or VCF for all hardware devices.   |
| <b>Options</b>                  | <p><b>none</b>—Display VCCP adjacency statistics in brief form for all members of the Virtual Chassis or VCF.</p> <p><b>brief   detail   extensive</b>—(Optional) Display the specified level of output. Using the <b>brief</b> option is equivalent to entering the command with no options (the default). The <b>detail</b> and <b>extensive</b> options provide identical displays.</p> <p><b>all-members</b>—(Optional) Display VCCP adjacency statistics in brief form for all members of the Virtual Chassis or VCF.</p> <p><b>local</b>—(Optional) Display VCCP adjacency statistics for the switch or external Routing Engine on which this command is entered.</p> <p><b>member member-id</b>—(Optional) Display VCCP adjacency statistics for the specified member of the Virtual Chassis or VCF.</p> <p><b>system-id</b>—(Optional) Display VCCP adjacency statistics for the specified member of the Virtual Chassis or VCF.</p> |
| <b>Required Privilege Level</b> | clear  |
| <b>Related Documentation</b>    | <ul style="list-style-type: none"> <li>• <i>Understanding EX Series Virtual Chassis Port Link Aggregation</i></li> <li>• <i>Understanding the Virtual Chassis Control Protocol in an EX8200 Virtual Chassis</i></li> </ul>   |
| <b>List of Sample Output</b>    | <p><a href="#">show virtual-chassis protocol adjacency on page 124</a></p> <p><a href="#">show virtual-chassis protocol adjacency detail on page 125</a></p>   |
| <b>Output Fields</b>            | Table 11 on page 124 lists the output fields for the <b>show virtual-chassis protocol adjacency</b> command. Output fields are listed in the approximate order in which they appear.   |

Table 11: show virtual-chassis protocol adjacency Output Fields

| Field Name                 | Field Description  | Level of Output |
|----------------------------|--|-----------------|
| <b>Interface</b>           | Name of the Virtual Chassis port (VCP) interface.  | All levels      |
| <b>System</b>              | The MAC address of the device on the receiving side of the VCP link.   | All levels      |
| <b>State</b>               | State of the link. Outputs include: <ul style="list-style-type: none"> <li>• <b>Up</b>—The link is up.</li> <li>• <b>Down</b>—The link is down.</li> <li>• <b>New</b>—The link is new.</li> <li>• <b>One-way</b>—The link is transmitting traffic in one direction.</li> <li>• <b>Initializing</b>—The link is initializing.</li> <li>• <b>Rejected</b>—The link is rejected.</li> </ul> | All levels      |
| <b>Hold, Expires in</b>    | Remaining holdtime of the adjacency.   | All levels      |
| <b>Priority</b>            | Priority to become the designated intermediary system.   | detail          |
| <b>Up/Down Transitions</b> | Count of adjacency status transition changes from up to down or down to up.  | detail          |
| <b>Last transition</b>     | Time of the last up/down transition.   | detail          |

## Sample Output

### show virtual-chassis protocol adjacency

```
user@switch> show virtual-chassis protocol adjacency
```

```
member0:
```

```
-----
Interface      System      State      Hold (secs)
vcp-0/0.32768  0000.4a75.9b7c Up          57
vcp-0/1.32768  0000.4a75.9b7c Up          59
vcp-4/0/1.32768 0026.888d.6800 Up          57
```

```
member1:
```

```
-----
Interface      System      State      Hold (secs)
vcp-0/0.32768  0000.4a75.9b7c Up          58
vcp-0/1.32768  0000.73e9.9a57 Up          59
vcp-3/0/4.32768 0021.59f7.d000 Up          58
```

```
member8:
```

```
-----
Interface      System      State      Hold (secs)
vcp-1/0.32768  0000.73e9.9a57 Up          58
vcp-1/1.32768  0021.59f7.d000 Up          58
vcp-1/2.32768  0026.888d.6800 Up          59
vcp-2/0.32768  0021.59f7.d000 Up          59
```

```
member9:
```

```
-----
Interface      System      State      Hold (secs)
```

|               |                   |    |
|---------------|-------------------|----|
| vcp-1/0.32768 | 0000.4a75.9b7c Up | 58 |
| vcp-1/1.32768 | 0026.888d.6800 Up | 59 |

### show virtual-chassis protocol adjacency detail

```
user@switch> show virtual-chassis protocol adjacency detail
```

```
member0:
```

```
-----
0000.4a75.9b7c
  interface-name: vcp-0/0.32768, State: Up, Expires in 57 secs
  Priority: 0, Up/Down transitions: 1, Last transition: 19:26:37 ago
```

```
0000.4a75.9b7c
  interface-name: vcp-0/1.32768, State: Up, Expires in 59 secs
  Priority: 0, Up/Down transitions: 1, Last transition: 19:26:37 ago
```

```
0026.888d.6800
  interface-name: vcp-4/0/1.32768, State: Up, Expires in 59 secs
  Priority: 0, Up/Down transitions: 1, Last transition: 22:06:39 ago
```

```
member1:
```

```
-----
0000.4a75.9b7c
  interface-name: vcp-0/0.32768, State: Up, Expires in 59 secs
  Priority: 0, Up/Down transitions: 1, Last transition: 19:26:38 ago
```

```
0000.73e9.9a57
  interface-name: vcp-0/1.32768, State: Up, Expires in 58 secs
  Priority: 0, Up/Down transitions: 1, Last transition: 22:17:36 ago
```

```
0021.59f7.d000
  interface-name: vcp-3/0/4.32768, State: Up, Expires in 58 secs
  Priority: 0, Up/Down transitions: 1, Last transition: 22:06:39 ago
```

```
member8:
```

```
-----
0000.73e9.9a57
  interface-name: vcp-1/0.32768, State: Up, Expires in 58 secs
  Priority: 0, Up/Down transitions: 1, Last transition: 19:26:38 ago
```

```
0021.59f7.d000
  interface-name: vcp-1/1.32768, State: Up, Expires in 59 secs
  Priority: 0, Up/Down transitions: 1, Last transition: 19:26:38 ago
```

```
0026.888d.6800
  interface-name: vcp-1/2.32768, State: Up, Expires in 59 secs
  Priority: 0, Up/Down transitions: 1, Last transition: 19:26:38 ago
```

```
0021.59f7.d000
  interface-name: vcp-2/0.32768, State: Up, Expires in 57 secs
  Priority: 0, Up/Down transitions: 1, Last transition: 19:26:38 ago
```

```
member9:
```

```
-----
0000.4a75.9b7c
  interface-name: vcp-1/0.32768, State: Up, Expires in 59 secs
  Priority: 0, Up/Down transitions: 1, Last transition: 19:26:38 ago
```

```
0026.888d.6800
  interface-name: vcp-1/1.32768, State: Up, Expires in 58 secs
  Priority: 0, Up/Down transitions: 1, Last transition: 22:17:36 ago
```

## show virtual-chassis protocol database

|                                 |  |
|---------------------------------|--|
| <b>Syntax</b>                   | show virtual-chassis protocol database<br><brief   detail   extensive><br><all-members><br><local><br><member <i>member-id</i> >   |
| <b>Release Information</b>      | Command introduced in Junos OS Release 10.4 for EX Series switches.<br>Command introduced in Junos OS Release 13.2X50-D15 for the QFX Series.<br>Command introduced in Junos OS Release 13.2X51-D20 for Virtual Chassis Fabric (VCF).  |
| <b>Description</b>              | Display the Virtual Chassis Control Protocol (VCCP) database statistics for all hardware devices within the Virtual Chassis or VCF.  |
| <b>Options</b>                  | <p><b>none</b>—Display VCCP database statistics in brief form for all members of the Virtual Chassis or VCF.</p> <p><b>brief   detail   extensive</b>—(Optional) Display the specified level of output. Using the <b>brief</b> option is equivalent to entering the command with no options (the default). The <b>detail</b> option provides more output than the <b>brief</b> option. The <b>extensive</b> option provides all output and is most useful for customer support personnel.</p> <p><b>all-members</b>—(Optional) Display VCCP database statistics in brief form for all members of the Virtual Chassis or VCF.</p> <p><b>local</b>—(Optional) Display VCCP database statistics for the switch or external Routing Engine on which this command is entered.</p> <p><b>member <i>member-id</i></b>—(Optional) Display VCCP database statistics for the specified member of the Virtual Chassis or VCF.</p> |
| <b>Required Privilege Level</b> | clear  |
| <b>Related Documentation</b>    | <ul style="list-style-type: none"> <li>• <a href="#">Understanding the Virtual Chassis Control Protocol in an EX8200 Virtual Chassis</a></li> <li>• <a href="#">Understanding EX Series Virtual Chassis Components on page 16</a></li> <li>• <a href="#">Understanding QFX Series Virtual Chassis Components</a></li> </ul>  |
| <b>List of Sample Output</b>    | <a href="#">show virtual-chassis protocol database on page 128</a><br><a href="#">show virtual-chassis protocol database detail on page 129</a>  |
| <b>Output Fields</b>            | <a href="#">Table 12 on page 127</a> lists the output fields for the <b>show virtual-chassis protocol database</b> command. Output fields are listed in the approximate order in which they appear.  |

Table 12: show virtual-chassis protocol database Output Fields

| Field Name | Field Description                               | Level of Output |
|------------|---|-----------------|
| LSP ID     | Link-state protocol (LSP) data unit identifier. | All levels      |

Table 12: show virtual-chassis protocol database Output Fields (*continued*)

| Field Name       | Field Description                                      | Level of Output |
|------------------|--|-----------------|
| <b>Sequence</b>  | Sequence number of the LSP.                            | All levels      |
| <b>Checksum</b>  | Checksum value of the LSP.                             | All levels      |
| <b>Lifetime</b>  | Remaining lifetime of the LSP, in seconds.             | All levels      |
| <b>Neighbor</b>  | MAC address of the neighbor on the advertising system. | detail          |
| <b>Interface</b> | Virtual Chassis port (VCP) interface name.             | detail          |
| <b>Metric</b>    | Metric of the prefix or neighbor.                      | detail          |

The **extensive** output was omitted from this list. The **extensive** output is useful for customer support personnel only.

## Sample Output

### show virtual-chassis protocol database

```
user@switch> show virtual-chassis protocol database
```

```
member0:
```

```
-----
LSP ID          Sequence Checksum Lifetime
0000.4a75.9b7c.00-00  0x1dd80  0xc2e3   116
0000.73e9.9a57.00-00  0xf361  0x27e8   113
0021.59f7.d000.00-00  0x16882  0x3993   118
0026.888d.6800.00-00  0x1691f  0x82b7   116
  4 LSPs
```

```
member1:
```

```
-----
LSP ID          Sequence Checksum Lifetime
0000.4a75.9b7c.00-00  0x1dd80  0xc2e3   116
0000.73e9.9a57.00-00  0xf361  0x27e8   114
0021.59f7.d000.00-00  0x16883  0x289    116
0026.888d.6800.00-00  0x1691f  0x82b7   118
  4 LSPs
```

```
member8:
```

```
-----
LSP ID          Sequence Checksum Lifetime
0000.4a75.9b7c.00-00  0x1dd80  0xc2e3   118
0000.73e9.9a57.00-00  0xf361  0x27e8   114
0021.59f7.d000.00-00  0x16883  0x289    116
0026.888d.6800.00-00  0x16920  0xa335   116
  4 LSPs
```

```
member9:
```

```
-----
LSP ID          Sequence Checksum Lifetime
0000.4a75.9b7c.00-00  0x1dd80  0xc2e3   116
0000.73e9.9a57.00-00  0xf361  0x27e8   116
0021.59f7.d000.00-00  0x16883  0x289    114
```

```
0026.888d.6800.00-00      0x16920   0xa335      116
4 LSPs
```

### show virtual-chassis protocol database detail

```
user@switch> show virtual-chassis protocol database detail
member0:
```

```
-----
0000.4a75.9b7c.00-00 Sequence: 0x1ddbc, Checksum: 0x3111, Lifetime: 115 secs
Neighbor: 0000.73e9.9a57.00 Interface: vcp-1/0.32768 Metric: 150
Neighbor: 0021.59f7.d000.00 Interface: vcp-1/1.32768 Metric: 150
Neighbor: 0026.888d.6800.00 Interface: vcp-1/2.32768 Metric: 150
```

```
0000.73e9.9a57.00-00 Sequence: 0xf381, Checksum: 0xe065, Lifetime: 114 secs
Neighbor: 0000.4a75.9b7c.00 Interface: vcp-1/0.32768 Metric: 150
Neighbor: 0026.888d.6800.00 Interface: vcp-1/1.32768 Metric: 150
```

```
0021.59f7.d000.00-00 Sequence: 0x168af, Checksum: 0x8b0b, Lifetime: 118 secs
Neighbor: 0000.4a75.9b7c.00 Interface: vcp-0/0.32768 Metric: 150
Neighbor: 0026.888d.6800.00 Interface: vcp-4/0/1.32768 Metric: 15
```

```
0026.888d.6800.00-00 Sequence: 0x1694e, Checksum: 0xca97, Lifetime: 115 secs
Neighbor: 0000.4a75.9b7c.00 Interface: vcp-0/0.32768 Metric: 150
Neighbor: 0000.73e9.9a57.00 Interface: vcp-0/1.32768 Metric: 150
Neighbor: 0021.59f7.d000.00 Interface: vcp-3/0/4.32768 Metric: 15
```

```
member1:
```

```
-----
0000.4a75.9b7c.00-00 Sequence: 0x1ddbc, Checksum: 0x3111, Lifetime: 115 secs
Neighbor: 0000.73e9.9a57.00 Interface: vcp-1/0.32768 Metric: 150
Neighbor: 0021.59f7.d000.00 Interface: vcp-1/1.32768 Metric: 150
Neighbor: 0026.888d.6800.00 Interface: vcp-1/2.32768 Metric: 150
```

```
0000.73e9.9a57.00-00 Sequence: 0xf381, Checksum: 0xe065, Lifetime: 116 secs
Neighbor: 0000.4a75.9b7c.00 Interface: vcp-1/0.32768 Metric: 150
Neighbor: 0026.888d.6800.00 Interface: vcp-1/1.32768 Metric: 150
```

```
0021.59f7.d000.00-00 Sequence: 0x168af, Checksum: 0x8b0b, Lifetime: 116 secs
Neighbor: 0000.4a75.9b7c.00 Interface: vcp-0/0.32768 Metric: 150
Neighbor: 0026.888d.6800.00 Interface: vcp-4/0/1.32768 Metric: 15
```

```
0026.888d.6800.00-00 Sequence: 0x1694e, Checksum: 0xca97, Lifetime: 117 secs
Neighbor: 0000.4a75.9b7c.00 Interface: vcp-0/0.32768 Metric: 150
Neighbor: 0000.73e9.9a57.00 Interface: vcp-0/1.32768 Metric: 150
Neighbor: 0021.59f7.d000.00 Interface: vcp-3/0/4.32768 Metric: 15
```

```
member8:
```

```
-----
0000.4a75.9b7c.00-00 Sequence: 0x1ddbd, Checksum: 0xfd83, Lifetime: 118 secs
Neighbor: 0000.73e9.9a57.00 Interface: vcp-1/0.32768 Metric: 150
Neighbor: 0021.59f7.d000.00 Interface: vcp-1/1.32768 Metric: 150
Neighbor: 0026.888d.6800.00 Interface: vcp-1/2.32768 Metric: 150
```

```
0000.73e9.9a57.00-00 Sequence: 0xf381, Checksum: 0xe065, Lifetime: 115 secs
Neighbor: 0000.4a75.9b7c.00 Interface: vcp-1/0.32768 Metric: 150
Neighbor: 0026.888d.6800.00 Interface: vcp-1/1.32768 Metric: 150
```

```
0021.59f7.d000.00-00 Sequence: 0x168af, Checksum: 0x8b0b, Lifetime: 116 secs
```

```
Neighbor: 0000.4a75.9b7c.00 Interface: vcp-0/0.32768 Metric: 150
Neighbor: 0026.888d.6800.00 Interface: vcp-4/0/1.32768 Metric: 15

0026.888d.6800.00-00 Sequence: 0x1694e, Checksum: 0xca97, Lifetime: 115 secs
Neighbor: 0000.4a75.9b7c.00 Interface: vcp-0/0.32768 Metric: 150
Neighbor: 0000.73e9.9a57.00 Interface: vcp-0/1.32768 Metric: 150
Neighbor: 0021.59f7.d000.00 Interface: vcp-3/0/4.32768 Metric: 15

member9:
-----

0000.4a75.9b7c.00-00 Sequence: 0x1ddbd, Checksum: 0xfd83, Lifetime: 116 secs
Neighbor: 0000.73e9.9a57.00 Interface: vcp-1/0.32768 Metric: 150
Neighbor: 0021.59f7.d000.00 Interface: vcp-1/1.32768 Metric: 150
Neighbor: 0026.888d.6800.00 Interface: vcp-1/2.32768 Metric: 150

0000.73e9.9a57.00-00 Sequence: 0xf381, Checksum: 0xe065, Lifetime: 117 secs
Neighbor: 0000.4a75.9b7c.00 Interface: vcp-1/0.32768 Metric: 150
Neighbor: 0026.888d.6800.00 Interface: vcp-1/1.32768 Metric: 150

0021.59f7.d000.00-00 Sequence: 0x168af, Checksum: 0x8b0b, Lifetime: 113 secs
Neighbor: 0000.4a75.9b7c.00 Interface: vcp-0/0.32768 Metric: 150
Neighbor: 0026.888d.6800.00 Interface: vcp-4/0/1.32768 Metric: 15

0026.888d.6800.00-00 Sequence: 0x1694f, Checksum: 0xa61a, Lifetime: 116 secs
Neighbor: 0000.4a75.9b7c.00 Interface: vcp-0/0.32768 Metric: 150
Neighbor: 0000.73e9.9a57.00 Interface: vcp-0/1.32768 Metric: 150
Neighbor: 0021.59f7.d000.00 Interface: vcp-3/0/4.32768 Metric: 15
```

## show virtual-chassis protocol interface

|                                 |  |
|---------------------------------|--|
| <b>Syntax</b>                   | <pre>show virtual-chassis protocol interface &lt;brief   detail&gt; &lt;all-members&gt; &lt;interface-name&gt; &lt;local&gt; &lt;member member-id&gt;</pre>  |
| <b>Release Information</b>      | <p>Command introduced in Junos OS Release 10.4 for EX Series switches.</p> <p>Command introduced in Junos OS Release 13.2X50-D15 for the QFX Series.</p> <p>Command introduced in Junos OS Release 13.2X51-D20 for Virtual Chassis Fabric (VCF).</p>   |
| <b>Description</b>              | Display information about Virtual Chassis Control Protocol (VCCP) statistics for VCCP-enabled interfaces within the Virtual Chassis or VCF.  |
| <b>Options</b>                  | <p><b>none</b>—Display the VCCP interface statistics in brief form for all members of the Virtual Chassis or VCF.</p> <p><b>brief   detail</b> —(Optional) Display the specified level of output. Using the <b>brief</b> option is equivalent to entering the command with no options (the default). The <b>detail</b> option provides more output than the <b>brief</b> option.</p> <p><b>all-members</b>—(Optional) Display VCCP interface statistics for all members of the Virtual Chassis or VCF.</p> <p><b>interface-name</b>—(Optional) Display VCCP interface statistics for the specified interface.</p> <p><b>local</b>—(Optional) Display VCCP interface statistics for the switch or external Routing Engine on which this command is entered.</p> <p><b>member member-id</b>—(Optional) Display VCCP interface statistics for the specified member of the Virtual Chassis or VCF.</p> |
| <b>Required Privilege Level</b> | clear  |
| <b>Related Documentation</b>    | <ul style="list-style-type: none"> <li>• <i>EX Series Virtual Chassis Overview</i></li> <li>• <i>Understanding QFX Series Virtual Chassis</i></li> <li>• <i>Understanding Virtual Chassis Ports in an EX8200 Virtual Chassis</i></li> <li>• <i>Understanding the Virtual Chassis Control Protocol in an EX8200 Virtual Chassis</i></li> </ul>  |
| <b>List of Sample Output</b>    | <a href="#">show virtual-chassis protocol interface on page 132</a>  |
| <b>Output Fields</b>            | <a href="#">Table 13 on page 132</a> lists the output fields for the <b>show virtual-chassis protocol interface</b> command. Output fields are listed in the approximate order in which they appear.   |

Table 13: show virtual-chassis protocol interface Output Fields

| Field Name       | Field Description  | Level of Output |
|------------------|--|-----------------|
| <b>Interface</b> | Name of the VCP.   | All levels      |
| <b>State</b>     | State of the link. Outputs include: <ul style="list-style-type: none"> <li>• <b>Up</b>—The link is up.</li> <li>• <b>Down</b>—The link is down.</li> </ul> | All levels      |
| <b>Metric</b>    | Metric of the prefix or neighbor.  | All levels      |

## Sample Output

### show virtual-chassis protocol interface

```
user@switch> show virtual-chassis protocol interface
```

```
member0:
```

```
-----
```

```
IS-IS interface database:
```

| Interface       | State | Metric |
|-----------------|-------|--------|
| vcp-0/0.32768   | Up    | 150    |
| vcp-0/1.32768   | Up    | 150    |
| vcp-4/0/1.32768 | Up    | 15     |
| vcp-4/0/7.32768 | Down  | 15     |

```
member1:
```

```
-----
```

```
IS-IS interface database:
```

| Interface       | State | Metric |
|-----------------|-------|--------|
| vcp-0/0.32768   | Up    | 150    |
| vcp-0/1.32768   | Up    | 150    |
| vcp-3/0/4.32768 | Up    | 15     |

```
member8:
```

```
-----
```

```
IS-IS interface database:
```

| Interface     | State | Metric |
|---------------|-------|--------|
| vcp-0/0.32768 | Down  | 150    |
| vcp-1/0.32768 | Up    | 150    |
| vcp-1/1.32768 | Up    | 150    |
| vcp-1/2.32768 | Up    | 150    |
| vcp-1/3.32768 | Down  | 150    |
| vcp-2/0.32768 | Up    | 150    |
| vcp-2/1.32768 | Down  | 150    |
| vcp-2/2.32768 | Down  | 150    |
| vcp-2/3.32768 | Down  | 150    |

```
member9:
```

```
-----
```

```
IS-IS interface database:
```

| Interface     | State | Metric |
|---------------|-------|--------|
| vcp-0/0.32768 | Down  | 150    |
| vcp-1/0.32768 | Up    | 150    |
| vcp-1/1.32768 | Up    | 150    |
| vcp-1/2.32768 | Down  | 150    |
| vcp-1/3.32768 | Down  | 150    |



## show virtual-chassis protocol route

|                                 |   |
|---------------------------------|---|
| <b>Syntax</b>                   | show virtual-chassis protocol route<br><all-members><br><destination-id><br><local><br><member member-id>   |
| <b>Release Information</b>      | Command introduced in Junos OS Release 10.4 for EX Series switches.<br>Command introduced in Junos OS Release 13.2X50-D15 for the QFX Series.<br>Command introduced in Junos OS Release 13.2X51-D20 for Virtual Chassis Fabric (VCF).   |
| <b>Description</b>              | Display the unicast and multicast Virtual Chassis Control Protocol (VCCP) routing tables within the Virtual Chassis or VCF.   |
| <b>Options</b>                  | <p><b>none</b>—Display the unicast and multicast routing tables for all members of the Virtual Chassis.</p> <p><b>all-members</b>—(Optional) Display the unicast and multicast routing tables for all members of the Virtual Chassis or VCF.</p> <p><b>destination-id</b>—(Optional) Display the unicast and multicast routing tables to the specified destination member ID for each member of the Virtual Chassis or VCF.</p> <p><b>local</b>—(Optional) Display the unicast and multicast routing tables on the device where this command is entered.</p> <p><b>member member-id</b>—(Optional) Display the unicast and multicast routing tables for the specified member of the Virtual Chassis or VCF.</p> |
| <b>Required Privilege Level</b> | clear   |
| <b>Related Documentation</b>    | <ul style="list-style-type: none"> <li>• <i>EX Series Virtual Chassis Overview</i></li> <li>• <i>Understanding QFX Series Virtual Chassis</i></li> <li>• <i>Understanding the Virtual Chassis Control Protocol in an EX8200 Virtual Chassis</i></li> </ul>  |
| <b>List of Sample Output</b>    | <a href="#">show virtual-chassis protocol route on page 135</a>   |
| <b>Output Fields</b>            | <a href="#">Table 14 on page 134</a> lists the output fields for the <b>show virtual-chassis protocol route</b> command. Output fields are listed in the approximate order in which they appear.  |

Table 14: show virtual-chassis protocol route Output Fields

| Field Name     | Field Description  |
|----------------|--|
| <b>Dev</b>     | MAC address of the member storing the VCCP routing table.                      |
| <b>Version</b> | Version of the shortest-path-first algorithm that generated the routing table. |

Table 14: show virtual-chassis protocol route Output Fields (*continued*)

| Field Name       | Field Description  |
|------------------|--|
| <b>System ID</b> | MAC address of the device.   |
| <b>Version</b>   | Version of the shortest-path-first (SPF) algorithm that generated the route. |
| <b>Metric</b>    | The metric number to get to that device.                                     |
| <b>Interface</b> | Name of the Virtual Chassis port (VCP) interface connecting the devices.     |
| <b>Via</b>       | MAC address of the next-hop device, if applicable.                           |

## Sample Output

### show virtual-chassis protocol route

```

user@switch> show virtual-chassis protocol route
member0:
-----
Dev 0021.59f7.d000 ucast routing table           Current version: 21
-----
System ID      Version  Metric Interface  Via
0000.4a75.9b7c    21      150 vcp-0/1.32768 0000.4a75.9b7c
0000.73e9.9a57    21      165 vcp-4/0/1.32768 0026.888d.6800
0021.59f7.d000    21        0
0026.888d.6800    21      15 vcp-4/0/1.32768 0026.888d.6800

Dev 0021.59f7.d000 mcast routing table           Current version: 21
-----
System ID      Version  Metric Interface  Via
0000.4a75.9b7c    21
0000.73e9.9a57    21
0021.59f7.d000    21          vcp-4/0/1.32768
                                vcp-0/1.32768
0026.888d.6800    21

member1:
-----
Dev 0026.888d.6800 ucast routing table           Current version: 25
-----
System ID      Version  Metric Interface  Via
0000.4a75.9b7c    25      150 vcp-0/0.32768 0000.4a75.9b7c
0000.73e9.9a57    25      150 vcp-0/1.32768 0000.73e9.9a57
0021.59f7.d000    25        15 vcp-3/0/4.32768 0021.59f7.d000
0026.888d.6800    25        0

Dev 0026.888d.6800 mcast routing table           Current version: 25
-----
System ID      Version  Metric Interface  Via
0000.4a75.9b7c    25
0000.73e9.9a57    25          vcp-3/0/4.32768
0021.59f7.d000    25          vcp-0/1.32768
0026.888d.6800    25          vcp-3/0/4.32768
                                vcp-0/0.32768

```

vcp-0/1.32768

member8:

-----

Dev 0000.4a75.9b7c ucast routing table Current version: 39

| System ID      | Version | Metric | Interface     | Via            |
|----------------|---------|--------|---------------|----------------|
| 0000.4a75.9b7c | 39      | 0      |               |                |
| 0000.73e9.9a57 | 39      | 150    | vcp-1/0.32768 | 0000.73e9.9a57 |
| 0021.59f7.d000 | 39      | 150    | vcp-2/0.32768 | 0021.59f7.d000 |
| 0026.888d.6800 | 39      | 150    | vcp-1/2.32768 | 0026.888d.6800 |

Dev 0000.4a75.9b7c mcast routing table Current version: 39

| System ID      | Version | Metric | Interface     | Via |
|----------------|---------|--------|---------------|-----|
| 0000.4a75.9b7c | 39      |        | vcp-1/0.32768 |     |
|                |         |        | vcp-2/0.32768 |     |
|                |         |        | vcp-1/2.32768 |     |
| 0000.73e9.9a57 | 39      |        |               |     |
| 0021.59f7.d000 | 39      |        |               |     |
| 0026.888d.6800 | 39      |        |               |     |

member9:

-----

Dev 0000.73e9.9a57 ucast routing table Current version: 31

| System ID      | Version | Metric | Interface     | Via            |
|----------------|---------|--------|---------------|----------------|
| 0000.4a75.9b7c | 31      | 150    | vcp-1/0.32768 | 0000.4a75.9b7c |
| 0000.73e9.9a57 | 31      | 0      |               |                |
| 0021.59f7.d000 | 31      | 165    | vcp-1/1.32768 | 0026.888d.6800 |
| 0026.888d.6800 | 31      | 150    | vcp-1/1.32768 | 0026.888d.6800 |

Dev 0000.73e9.9a57 mcast routing table Current version: 31

| System ID      | Version | Metric | Interface     | Via |
|----------------|---------|--------|---------------|-----|
| 0000.4a75.9b7c | 31      |        |               |     |
| 0000.73e9.9a57 | 31      |        | vcp-1/0.32768 |     |
|                |         |        | vcp-1/1.32768 |     |
| 0021.59f7.d000 | 31      |        |               |     |
| 0026.888d.6800 | 31      |        |               |     |

## show virtual-chassis protocol statistics

|                                 |   |
|---------------------------------|---|
| <b>Syntax</b>                   | show virtual-chassis protocol statistics<br><all-members><br><interface-name><br><local><br><member member-id>  |
| <b>Release Information</b>      | Command introduced in Junos OS Release 10.4 for EX Series switches.<br>Command introduced in Junos OS Release 13.2X50-D15 for the QFX Series.<br>Command introduced in Junos OS Release 13.2X51-D20 for Virtual Chassis Fabric (VCF).   |
| <b>Description</b>              | Display the Virtual Chassis Control Protocol (VCCP) statistics for all hardware devices within the Virtual Chassis or VCF.  |
| <b>Options</b>                  | <p><b>none</b>—Display VCCP statistics for all members of the Virtual Chassis or VCF.</p> <p><b>all-members</b>—(Optional) Display VCCP statistics for all members of the Virtual Chassis or VCF.</p> <p><b>interface-name</b>—(Optional) Display VCCP statistics for the specified interface.</p> <p><b>local</b>—(Optional) Display VCCP statistics for the switch or external Routing Engine on which this command is entered.</p> <p><b>member member-id</b>—(Optional) Display VCCP statistics for the specified member of the Virtual Chassis or VCF.</p> |
| <b>Required Privilege Level</b> | clear   |
| <b>Related Documentation</b>    | <ul style="list-style-type: none"> <li>• <i>EX Series Virtual Chassis Overview</i></li> <li>• <i>Understanding QFX Series Virtual Chassis</i></li> <li>• <i>Understanding the Virtual Chassis Control Protocol in an EX8200 Virtual Chassis</i></li> </ul>  |
| <b>List of Sample Output</b>    | <a href="#">show virtual-chassis protocol statistics on page 138</a>  |
| <b>Output Fields</b>            | <a href="#">Table 15 on page 137</a> lists the output fields for the <b>show virtual-chassis protocol interface</b> command. Output fields are listed in the approximate order in which they appear.  |

Table 15: show virtual-chassis protocol statistics Output Fields

| Field Name       | Field Description  |
|------------------|--|
| <b>PDU type</b>  | Protocol data unit type.   |
| <b>Received</b>  | Number of PDUs received since VCCP started or since the statistics were set to zero. |
| <b>Processed</b> | Number of PDUs received minus the number of PDUs dropped.                            |

Table 15: show virtual-chassis protocol statistics Output Fields (*continued*)

| Field Name                    | Field Description  |
|-------------------------------|--|
| <b>Drops</b>                  | Number of PDUs dropped.  |
| <b>Sent</b>                   | Number of PDUs transmitted since VCCP started or since the statistics were set to zero.  |
| <b>Rexmit</b>                 | Number of PDUs retransmitted since VCCP started or since the statistics were set to zero.  |
| <b>Total Packets Received</b> | Number of PDUs received since VCCP started or since the statistics were set to zero.   |
| <b>Total Packets Sent</b>     | Number of PDUs sent since VCCP started or since the statistics were set to zero.   |
| <b>LSP queue length</b>       | Number of link-state PDUs waiting in the queue for processing. This value is almost always 0.  |
| <b>SPF runs</b>               | Number of shortest-path-first (SPF) calculations that have been performed.   |
| <b>Fragments Rebuilt</b>      | Number of link-state PDU fragments that the local system has computed.   |
| <b>LSP Regenerations</b>      | Number of link-state PDUs that have been regenerated. A link-state PDU is regenerated when it is nearing the end of its lifetime and it has not changed. |
| <b>Purges initiated</b>       | Number of purges that the system initiated. A purge is initiated if the software determines that a link-state PDU must be removed from the network.      |

## Sample Output

### show virtual-chassis protocol statistics

```

user@switch> show virtual-chassis protocol statistics
member0:
-----
IS-IS statistics for 0021.59f7.d000:
PDU type      Received    Processed      Drops      Sent      Rexmit
LSP            8166        8166           0         4551         0
HELLO          1659        1659           0         1693         0
CSNP             2            2             0            3         0
PSNP           1909        1909           0         2293         0
Unknown         0            0             0            0         0
Totals        11736       11736           0         8540         0

Total packets received: 11736 Sent: 8540

LSP queue length: 0 Drops: 0
SPF runs: 9
Fragments rebuilt: 1640
LSP regenerations: 1
Purges initiated: 0

member1:
-----
IS-IS statistics for 0026.888d.6800:

```

| PDU type | Received | Processed | Drops | Sent  | Rexmit |
|----------|----------|-----------|-------|-------|--------|
| LSP      | 10909    | 10909     | 0     | 12088 | 0      |
| HELLO    | 1877     | 1877      | 0     | 2251  | 0      |
| CSNP     | 3        | 3         | 0     | 3     | 0      |
| PSNP     | 3846     | 3846      | 0     | 3732  | 0      |
| Unknown  | 0        | 0         | 0     | 0     | 0      |
| Totals   | 16635    | 16635     | 0     | 18074 | 0      |

Total packets received: 16635 Sent: 18074

LSP queue length: 0 Drops: 0  
 SPF runs: 13  
 Fragments rebuilt: 1871  
 LSP regenerations: 2  
 Purges initiated: 0

member8:

IS-IS statistics for 0000.4a75.9b7c:

| PDU type | Received | Processed | Drops | Sent  | Rexmit |
|----------|----------|-----------|-------|-------|--------|
| LSP      | 7935     | 7935      | 0     | 14865 | 0      |
| HELLO    | 2695     | 2695      | 0     | 7124  | 0      |
| CSNP     | 4        | 4         | 0     | 4     | 0      |
| PSNP     | 4398     | 4398      | 0     | 3666  | 0      |
| Unknown  | 0        | 0         | 0     | 0     | 0      |
| Totals   | 15032    | 15032     | 0     | 25659 | 0      |

Total packets received: 15032 Sent: 25659

LSP queue length: 0 Drops: 0  
 SPF runs: 26  
 Fragments rebuilt: 2666  
 LSP regenerations: 4  
 Purges initiated: 0

member9:

IS-IS statistics for 0000.73e9.9a57:

| PDU type | Received | Processed | Drops | Sent  | Rexmit |
|----------|----------|-----------|-------|-------|--------|
| LSP      | 10800    | 10800     | 0     | 6327  | 0      |
| HELLO    | 1492     | 1492      | 0     | 2356  | 0      |
| CSNP     | 2        | 2         | 0     | 2     | 0      |
| PSNP     | 2683     | 2683      | 0     | 3149  | 0      |
| Unknown  | 0        | 0         | 0     | 0     | 0      |
| Totals   | 14977    | 14977     | 0     | 11834 | 0      |

Total packets received: 14977 Sent: 11834

LSP queue length: 0 Drops: 0  
 SPF runs: 19  
 Fragments rebuilt: 1510  
 LSP regenerations: 6  
 Purges initiated: 0

## show virtual-chassis

|                                 |  |
|---------------------------------|--|
| <b>Syntax</b>                   | <b>show virtual-chassis</b><br><b>&lt;status&gt;</b>   |
| <b>Release Information</b>      | <p>Command introduced in Junos OS Release 9.2 for EX Series switches.</p> <p>Command introduced in Junos OS Release 13.2X50-D15 for the QFX Series.</p> <p>Command introduced in Junos OS Release 13.2X51-D20 for Virtual Chassis Fabric (VCF).</p> <p><b>Fabric ID</b>, <b>Fabric Mode</b>, and <b>Route Mode</b> output fields introduced in Junos OS Release 13.2X51-D20.</p> <p><b>Alias-Name</b> output field introduced in Junos OS Release 14.1X53-D10.</p> |
| <b>Description</b>              | Display information about all members of the Virtual Chassis or VCF.   |
| <b>Options</b>                  | <p><b>none</b>—Display information about all Virtual Chassis or VCF member devices.</p> <p><b>status</b>—Same output as for <b>show virtual-chassis</b>.</p>   |
| <b>Required Privilege Level</b> | view   |
| <b>Related Documentation</b>    | <ul style="list-style-type: none"> <li>• <a href="#">show virtual-chassis active-topology on page 112</a></li> <li>• <a href="#">show virtual-chassis protocol adjacency on page 123</a></li> <li>• <i>show virtual-chassis vc-path</i></li> <li>• <i>Monitoring the Virtual Chassis Status and Statistics on EX Series Virtual Chassis</i></li> </ul>   |
| <b>List of Sample Output</b>    | <p><a href="#">show virtual-chassis (EX4200 Virtual Chassis) on page 142</a></p> <p><a href="#">show virtual-chassis (EX8200 Virtual Chassis) on page 143</a></p> <p><a href="#">show virtual-chassis (Virtual Chassis Fabric) on page 143</a></p>   |
| <b>Output Fields</b>            | Table 16 on page 140 lists the output fields for the <b>show virtual-chassis</b> command. Output fields are listed in the approximate order in which they appear.  |

**Table 16: show virtual-chassis Output Fields**

| Field Name                | Field Description  |
|---------------------------|--|
| <b>Fabric ID</b>          | Assigned ID used to identify the VCF.                          |
| <b>Fabric Mode</b>        | Mode of the VCF: Enabled, Disabled, or Mixed.                  |
| <b>Virtual Chassis ID</b> | Assigned ID that applies to the entire Virtual Chassis or VCF. |

Table 16: show virtual-chassis Output Fields (*continued*)

| Field Name                  | Field Description   |
|-----------------------------|---|
| <b>Virtual Chassis Mode</b> | <p>Mode of the Virtual Chassis or VCF. This field indicates support for the Virtual Chassis feature and, if a Virtual Chassis is configured, if it is a mixed or homogenous Virtual Chassis. Values can be:</p> <ul style="list-style-type: none"> <li>• <b>Enabled</b>—The platform supports the Virtual Chassis feature. If a Virtual Chassis is currently configured, this is a homogenous Virtual Chassis (all members are the same type of switch).</li> <li>• <b>Disabled</b>—The switch does not support the Virtual Chassis feature.</li> </ul> <p><b>NOTE:</b> Switches that support the Virtual Chassis feature do not display this value. Even if a Virtual Chassis is not currently configured, those switches display <b>Enabled</b> in this field.</p> <ul style="list-style-type: none"> <li>• <b>Mixed</b>—The platform supports the Virtual Chassis feature, and is configured as a mixed mode Virtual Chassis (members consist of more than one type of switch).</li> </ul> |
| <b>Member ID</b>            | <p>Assigned member ID and FPC:</p> <ul style="list-style-type: none"> <li>• On all EX Series Virtual Chassis except EX8200 Virtual Chassis, and on a VCF, the FPC number refers to the member ID assigned to the switch.</li> <li>• On EX8200 Virtual Chassis, member IDs are numbered 0 through 9. The FPC number indicates the slot number of the line card within the Virtual Chassis. The FPC number on member 0 is always 0 through 15. The FPC number on member 1 is always 16 through 31. The FPC number on member 2 is always 32 through 47; and so on for the members.</li> </ul>  |
| <b>Status</b>               | <p>For a nonprovisioned configuration:</p> <ul style="list-style-type: none"> <li>• <b>Prsnt</b> for a member that is currently connected to the Virtual Chassis or VCF configuration.</li> <li>• <b>NotPrsnt</b> for a member ID that has been assigned but is not currently connected.</li> </ul> <p>For a preprovisioned configuration:</p> <ul style="list-style-type: none"> <li>• <b>Prsnt</b> for a member that is specified in the preprovisioned configuration file and is currently connected to the Virtual Chassis or VCF.</li> <li>• <b>Unprvsnd</b> for a member that is interconnected with the Virtual Chassis or VCF configuration but is not specified in the preprovisioned configuration file.</li> </ul>   |
| <b>Serial No</b>            | Serial number of the member device.   |
| <b>Alias-Name</b>           | <p>The user-configured alias of the member device.</p> <p>The <b>Alias-Name</b> field appears only if an alias has been configured for at least one device in the Virtual Chassis or VCF. Aliases are configured using the <b>alias-name</b> statement in the <code>[edit virtual-chassis aliases serial-number serial-number]</code> hierarchy.</p>  |
| <b>Model</b>                | Model number of the member device.  |
| <b>Mastership Priority</b>  | Mastership priority value of the member device.   |
| <b>Role</b>                 | Role of the member device: master, backup, or linecard.   |

Table 16: show virtual-chassis Output Fields (*continued*)

| Field Name           | Field Description   |
|----------------------|---|
| <b>Mixed Mode</b>    | Mixed mode configuration status: <ul style="list-style-type: none"> <li>• <b>Y</b> for a member device configured in mixed mode.</li> <li>• <b>N</b> for a member device not configured in mixed mode.</li> <li>• <b>NA</b> for a member device that cannot be configured in mixed mode.</li> </ul> |
| <b>Route Mode</b>    | The route mode of the member device: fabric (F) or Virtual Chassis (V).   |
| <b>Location</b>      | Location of the member device.<br><br>If this field is empty, the location field was not set for the device.  |
| <b>Neighbor List</b> | Member ID of the neighbor member to which this member's Virtual Chassis port (VCP) is connected.  |

## Sample Output

### show virtual-chassis (EX4200 Virtual Chassis)

```

user@switch> show virtual-chassis
Virtual Chassis ID: 0019.e250.47a0
Virtual Chassis Mode: Enabled

```

| Member ID | Status | Serial No    | Model      | Mastership<br>priority | Role     | Mixed<br>Mode | Neighbor List<br>ID | Interface |
|-----------|--------|--------------|------------|------------------------|----------|---------------|---------------------|-----------|
| 0 (FPC 0) | Prsnt  | AK0207360276 | ex4200-24t | 249                    | Master*  | N             | 8                   | vcp-0     |
|           |        |              |            |                        |          |               | 1                   | vcp-1     |
| 1 (FPC 1) | Prsnt  | AK0207360281 | ex4200-24t | 248                    | Backup   | N             | 0                   | vcp-0     |
|           |        |              |            |                        |          |               | 2                   | vcp-1     |
| 2 (FPC 2) | Prsnt  | AJ0207391130 | ex4200-48p | 247                    | Linecard | N             | 1                   | vcp-0     |
|           |        |              |            |                        |          |               | 3                   | vcp-1     |
| 3 (FPC 3) | Prsnt  | AK0207360280 | ex4200-24t | 246                    | Linecard | N             | 2                   | vcp-0     |
|           |        |              |            |                        |          |               | 4                   | vcp-1     |
| 4 (FPC 4) | Prsnt  | AJ0207391113 | ex4200-48p | 245                    | Linecard | N             | 3                   | vcp-0     |
|           |        |              |            |                        |          |               | 5                   | vcp-1     |
| 5 (FPC 5) | Prsnt  | BP0207452204 | ex4200-48t | 244                    | Linecard | N             | 4                   | vcp-0     |
|           |        |              |            |                        |          |               | 6                   | vcp-1     |
| 6 (FPC 6) | Prsnt  | BP0207452222 | ex4200-48t | 243                    | Linecard | N             | 5                   | vcp-0     |
|           |        |              |            |                        |          |               | 7                   | vcp-1     |
| 7 (FPC 7) | Prsnt  | BR0207432028 | ex4200-24f | 242                    | Linecard | N             | 6                   | vcp-0     |

```

8 vcp-1
8 (FPC 8) Prsnt BR0207431996 ex4200-24f 241 Linecard N 7 vcp-0
0 vcp-1

```

Member ID for next new member: 9 (FPC 9)

#### show virtual-chassis (EX8200 Virtual Chassis)

```
user@external-routing-engine> show virtual-chassis
```

Virtual Chassis ID: c806.0842.de51

Virtual Chassis Mode: Enabled

| Member ID       | Status | Serial No    | Model  | Mastership<br>priority | Role     | Neighbor List<br>ID Interface  |
|-----------------|--------|--------------|--------|------------------------|----------|--|
| 0 (FPC 0-15)    | Prsnt  | BA0908380001 | ex8216 | 0                      | Linecard | 8 vcp-0/0<br>8 vcp-0/1<br>1 vcp-4/0/4                                      |
| 1 (FPC 16-31)   | Prsnt  | BT0909411634 | ex8208 | 0                      | Linecard | 8 vcp-0/0<br>0 vcp-3/0/4   |
| 8 (FPC 128-143) | Prsnt  | 062009000021 | ex-xre | 128                    | Master   | 9 vcp-1/0<br>1 vcp-1/2<br>9 vcp-1/3<br>0 vcp-2/0<br>9 vcp-2/1<br>0 vcp-1/1 |
| 9 (FPC 144-159) | Prsnt  | 062009000022 | ex-xre | 128                    | Backup*  | 8 vcp-1/0<br>8 vcp-1/2<br>8 vcp-1/3<br>8 vcp-1/3                           |

#### show virtual-chassis (Virtual Chassis Fabric)

```
user@switch> show virtual-chassis
```

Preprovisioned Virtual Chassis Fabric

Fabric ID: 0282.5fa0.3f08

Fabric Mode: Enabled

| List        | Member ID | Status       | Serial No    | Model       | Mstr<br>prio | Role    | Mixed Route<br>Mode | Neighbor<br>Mode ID |
|-------------|-----------|--------------|--------------|-------------|--------------|---------|---------------------|---------------------|
| Interface   | 0 (FPC 0) | Prsnt        | AB3112430001 | qfx5100-48s | 129          | Master* | N F                 | 3                   |
| vcp-255/1/0 |           |              |              |             |              |         |                     | 2                   |
| vcp-255/1/1 |           |              |              |             |              |         |                     | 4                   |
| vcp-255/1/2 |           |              |              |             |              |         |                     | 4                   |
| vcp-255/1/3 |           |              |              |             |              |         |                     | 4                   |
| 1 (FPC 1)   | Prsnt     | AB3112230001 | qfx5100-48s  | 129         | Backup       | N F     | 3                   |                     |
| vcp-255/1/0 |           |              |              |             |              |         |                     | 2                   |
| vcp-255/1/1 |           |              |              |             |              |         |                     | 4                   |
| vcp-255/1/2 |           |              |              |             |              |         |                     | 4                   |
| vcp-255/1/3 |           |              |              |             |              |         |                     | 4                   |
| 2 (FPC 2)   | Prsnt     | AB3112460011 | qfx5100-48s  | 0           | Linecard     | N F     | 1                   |                     |
| vcp-255/1/0 |           |              |              |             |              |         |                     | 0                   |
| vcp-255/1/1 |           |              |              |             |              |         |                     | 0                   |

|                 |                          |   |          |   |   |   |
|-----------------|--------------------------|---|----------|---|---|---|
| 3 (FPC 3) Prsnt | AB3112460011 qfx5100-48s | 0 | Linecard | N | F | 1 |
| vcp-255/1/0     |                          |   |          |   |   | 0 |
| vcp-255/1/1     |                          |   |          |   |   |   |
| 4 (FPC 4) Prsnt | AB3112430011 qfx5100-48s | 0 | Linecard | N | F | 1 |
| vcp-255/1/0     |                          |   |          |   |   | 0 |
| vcp-255/1/1     |                          |   |          |   |   |   |

## show virtual-chassis vc-port

|                                 |  |
|---------------------------------|--|
| <b>Syntax</b>                   | show virtual-chassis vc-port<br><all-members><br><local><br><member <i>member-id</i> >   |
| <b>Release Information</b>      | Command introduced in Junos OS Release 9.0 for EX Series switches.<br>Command introduced in Junos OS Release 13.2X50-D15 for the QFX Series.<br>Command introduced in Junos OS Release 13.2X51-D20 for Virtual Chassis Fabric (VCF).   |
| <b>Description</b>              | Display the status of the Virtual Chassis ports (VCPs), including both the dedicated VCPs and the uplink ports configured as VCPs.   |
| <b>Options</b>                  | <p><b>none</b>—Display the operational status of all VCPs of the member switch where the command is issued.</p> <p><b>all-members</b>—(Optional) Display the operational status of all VCPs on all members of the Virtual Chassis or VCF.</p> <p><b>local</b>—(Optional) Display the operational status of the switch or external Routing Engine on which this command is entered.</p> <p><b>member <i>member-id</i></b>—(Optional) Display the operational status of all VCPs for the specified member of the Virtual Chassis or VCF.</p> |
| <b>Required Privilege Level</b> | view   |
| <b>Related Documentation</b>    | <ul style="list-style-type: none"> <li>• <i>show virtual-chassis vc-port statistics</i></li> <li>• <i>Monitoring the Virtual Chassis Status and Statistics on EX Series Virtual Chassis</i></li> <li>• <i>Verifying Virtual Chassis Ports in an EX8200 Virtual Chassis</i></li> </ul>  |
| <b>List of Sample Output</b>    | <a href="#">show virtual-chassis vc-port (EX4200 Virtual Chassis) on page 147</a><br><a href="#">show virtual-chassis vc-port (EX8200 Virtual Chassis) on page 147</a><br><a href="#">show virtual-chassis vc-port all-members on page 148</a>   |
| <b>Output Fields</b>            | Table 17 on page 145 lists the output fields for the <b>show virtual-chassis vc-port</b> command. Output fields are listed in the approximate order in which they appear.  |

Table 17: show virtual-chassis vc-port Output Fields

| Field Name       | Field Description                            |
|------------------|--|
| <b>fpcnumber</b> | The FPC number is the same as the member ID. |

Table 17: show virtual-chassis vc-port Output Fields (*continued*)

| Field Name            | Field Description   |
|-----------------------|---|
| Interface or PIC/Port | <p>VCP name.</p> <ul style="list-style-type: none"> <li>The dedicated VCPs in an EX4200 or EX4500 Virtual Chassis are <b>vcp-0</b> and <b>vcp-1</b>. The dedicated VCPs in an EX4550 Virtual Chassis are <b>VCP-1/0</b>, <b>VCP-1/1</b>, <b>VCP-2/0</b>, and <b>VCP-2/1</b>.</li> <li>Optical ports set as VCPs are named 1/0 and 1/1, representing the PIC number and the port number.</li> <li>The native VCP (port 0) on an XRE200 External Routing Engine in an EX8200 Virtual Chassis is named <b>vcp-0</b>.</li> <li>The VCPs on each Virtual Chassis Control Interface (VCCI) module in an XRE200 External Routing Engine are named using the <b>vcp-slot-number/port-number</b> convention; for instance, <b>vcp-1/0</b>.</li> <li>The VCPs on EX8200 member switches are named using the <b>vcp-slot-number/pic-number/interface-number</b> convention; for instance, <b>vcp-3/0/2</b>.</li> <li>A <b>255</b> as the first number in your port number indicates that your VCP is part of a Link Aggregation group (LAG) bundle. For instance, a display of <b>vcp-255/1/0</b> indicates that the dedicated VCP named <b>vcp-1/0</b> is part of a LAG bundle. A display of <b>vcp-255/1/0</b> indicates that an uplink port that was previously named <b>xe-0/1/0</b> is now part of a VCP LAG bundle.</li> </ul> |
| Type                  | <p>Type of VCP:</p> <ul style="list-style-type: none"> <li><b>Dedicated</b>—The rear panel VCP on an EX4200, EX4500, or EX4550 switch, or any VCP link connected to an XRE200 External Routing Engine in an EX8200 Virtual Chassis.</li> <li><b>Configured</b>—Optical port configured as a VCP.</li> <li><b>Auto-Configured</b>—Optical port autoconfigured as a VCP.</li> </ul> <p>See <i>Setting an Uplink Port on an EX Series Switch as a Virtual Chassis Port (CLI Procedure)</i> or <i>Setting a 10-Gigabit Ethernet Port as a Virtual Chassis Port in an EX8200 Virtual Chassis (CLI Procedure)</i> for information about configuring VCPs.</p>   |
| Trunk ID              | <p>A positive-number ID assigned to a link aggregation group (LAG) formed by the Virtual Chassis. The trunk ID value is –1 if no trunk is formed. A LAG between uplink VCPs requires that the link speed be the same on connected interfaces and that at least two VCPs on one member be connected to at least two VCPs on the other member in an EX4200 or EX4500 Virtual Chassis.</p> <p>Dedicated VCP LAGs are assigned trunk IDs 1 and 2. Trunk IDs for LAGs formed with uplink VCPs therefore have values of 3 or greater.</p> <p>The trunk ID value changes if the link-adjacency state between LAG members changes; trunk membership is then allocated or deallocated.</p>   |
| Status                | <p>Interface status:</p> <ul style="list-style-type: none"> <li><b>absent</b>—Interface is not a VCP link.</li> <li><b>down</b>—VCP link is down.</li> <li><b>up</b>—VCP link is up.</li> </ul>   |
| Speed (mbps)          | Speed of the interface in megabits per second.  |
| Neighbor ID/Interface | The Virtual Chassis member ID and interface of a VCP on a member that is connected to the interface or PIC/Port field in the same row as this interface.  |

## Sample Output

### show virtual-chassis vc-port (EX4200 Virtual Chassis)

```
user@switch> show virtual-chassis vc-port
```

```
fpc0:
```

| Interface<br>or<br>PIC / Port | Type            | Trunk<br>ID | Status | Speed<br>(mbps) | Neighbor<br>ID | Interface   |
|-------------------------------|-----------------|-------------|--------|-----------------|----------------|-------------|
| vcp-0                         | Dedicated       | 1           | Up     | 32000           | 1              | vcp-1       |
| vcp-1                         | Dedicated       | 2           | Up     | 32000           | 0              | vcp-0       |
| 1/0                           | Auto-Configured | 3           | Up     | 1000            | 2              | vcp-255/1/0 |
| 1/0                           | Auto-Configured | 3           | Up     | 1000            | 2              | vcp-255/1/1 |

### show virtual-chassis vc-port (EX8200 Virtual Chassis)

```
user@external-routing-engine> show virtual-chassis vc-port
```

```
member0:
```

| Interface<br>or<br>Slot/PIC/Port | Type       | Trunk<br>ID | Status | Speed<br>(mbps) | Neighbor<br>ID | Interface |
|----------------------------------|------------|-------------|--------|-----------------|----------------|-----------|
| vcp-0/0                          | Dedicated  | -1          | Up     | 1000            | 8              | vcp-1/1   |
| vcp-0/1                          | Dedicated  | -1          | Up     | 1000            | 8              | vcp-2/0   |
| 4/0/4                            | Configured | -1          | Up     | 10000           | 1              | vcp-3/0/4 |
| 4/0/7                            | Configured | -1          | Down   | 10000           |                |           |
| 4/0/3                            | Configured |             | Absent |                 |                |           |
| 4/0/2                            | Configured |             | Absent |                 |                |           |
| 4/0/5                            | Configured |             | Absent |                 |                |           |
| 4/0/6                            | Configured |             | Absent |                 |                |           |
| 4/0/1                            | Configured |             | Absent |                 |                |           |
| 4/0/0                            | Configured |             | Absent |                 |                |           |

```
member1:
```

| Interface<br>or<br>Slot/PIC/Port | Type       | Trunk<br>ID | Status | Speed<br>(mbps) | Neighbor<br>ID | Interface |
|----------------------------------|------------|-------------|--------|-----------------|----------------|-----------|
| vcp-0/0                          | Dedicated  | -1          | Up     | 1000            | 8              | vcp-1/2   |
| 3/0/0                            | Configured | -1          | Down   | 10000           |                |           |
| 3/0/1                            | Configured | -1          | Down   | 10000           |                |           |
| 3/0/4                            | Configured | -1          | Up     | 10000           | 0              | vcp-4/0/4 |
| 3/0/5                            | Configured |             | Absent |                 |                |           |
| 4/0/5                            | Configured |             | Absent |                 |                |           |
| 4/0/4                            | Configured |             | Absent |                 |                |           |

```
member8:
```

| Interface<br>or<br>Slot/PIC/Port | Type      | Trunk<br>ID | Status | Speed<br>(mbps) | Neighbor<br>ID | Interface |
|----------------------------------|-----------|-------------|--------|-----------------|----------------|-----------|
| vcp-0/0                          | Dedicated | -1          | Down   | 1000            |                |           |
| vcp-1/0                          | Dedicated | -1          | Up     | 1000            | 9              | vcp-1/0   |
| vcp-1/1                          | Dedicated | -1          | Up     | 1000            | 0              | vcp-0/0   |
| vcp-1/2                          | Dedicated | -1          | Up     | 1000            | 1              | vcp-0/0   |
| vcp-1/3                          | Dedicated | -1          | Up     | 1000            | 9              | vcp-1/3   |
| vcp-2/0                          | Dedicated | -1          | Up     | 1000            | 0              | vcp-0/1   |
| vcp-2/1                          | Dedicated | -1          | Up     | 1000            | 9              | vcp-1/2   |
| vcp-2/2                          | Dedicated | -1          | Down   | 1000            |                |           |

```
vcp-2/3      Dedicated      -1   Down      1000
```

```
member9:
```

```
-----
Interface    Type           Trunk   Status    Speed    Neighbor
or           or              ID      (mbps)    ID       Interface
Slot/PIC/Port
vcp-0/0      Dedicated      -1      Disabled  1000
vcp-1/0      Dedicated      -1      Up        1000      8   vcp-1/0
vcp-1/1      Dedicated      -1      Down      1000
vcp-1/2      Dedicated      -1      Up        1000      8   vcp-2/1
vcp-1/3      Dedicated      -1      Up        1000      8   vcp-1/3
```

### show virtual-chassis vc-port all-members

```
user@switch> show virtual-chassis vc-port all-members
```

```
fpc0:
```

```
-----
Interface    Type           Trunk   Status    Speed    Neighbor
or           or              ID      (mbps)    ID       Interface
PIC / Port
vcp-0        Dedicated      1       Up        32000    1   vcp-1
vcp-1        Dedicated      2       Up        32000    0   vcp-0
1/0          Auto-Configured 3       Up        1000     2   vcp-255/1/0
1/1          Auto-Configured 3       Up        1000     2   vcp-255/1/1
```

```
fpc1:
```

```
-----
Interface    Type           Trunk   Status    Speed    Neighbor
or           or              ID      (mbps)    ID       Interface
PIC / Port
vcp-0        Dedicated      1       Up        32000    0   vcp-1
vcp-1        Dedicated      2       Up        32000    0   vcp-0
1/0          Auto-Configured -1      Up        1000     3   vcp-255/1/0
```

```
fpc2:
```

```
-----
Interface    Type           Trunk   Status    Speed    Neighbor
or           or              ID      (mbps)    ID       Interface
PIC / Port
vcp-0        Dedicated      1       Up        32000    3   vcp-1
vcp-1        Dedicated      2       Up        32000    3   vcp-0
1/0          Auto-Configured 3       Up        1000     0   vcp-255/1/0
1/1          Auto-Configured 3       Up        1000     0   vcp-255/1/1
```

```
fpc3:
```

```
-----
Interface    Type           Trunk   Status    Speed    Neighbor
or           or              ID      (mbps)    ID       Interface
PIC / Port
vcp-0        Dedicated      1       Up        32000    2   vcp-0
vcp-1        Dedicated      2       Up        32000    2   vcp-1
1/0          Auto-Configured -1      Up        1000     1   vcp-255/1/0
```