

Example: Configuring Fast Failover on Uplink Module VCPs to Reroute Traffic When a Virtual Chassis Member Switch or Inter-Member Link Fails

The Virtual Chassis fast failover feature is a hardware-assisted failover mechanism that automatically reroutes traffic and reduces traffic loss in the event of a link or switch failure. If a link between two members fails, traffic flow between those members must be rerouted quickly so that there is minimal traffic loss.

Fast failover is enabled by default on all dedicated Virtual Chassis ports (VCPs).

This example describes how to configure fast failover on uplink module VCPs in a Virtual Chassis configuration:

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Requirements

This example uses the following hardware and software components:

- JUNOS Release 9.3 or later for EX-series switches
- Six EX 4200-24T switches
- Four EX-UM-4SFP uplink modules

Before you begin configuring fast failover, be sure you have:

1. Mounted the switches. See *Mounting an EX3200 or EX4200 Switch on Two Posts in a Rack or Cabinet, Mounting an EX3200 or EX4200 Switch on a Desk or Other Level Surface, or Mounting an EX3200 or EX4200 Switch on a Wall.*
2. Cabled the switches in a multiple-ring topology to create the Virtual Chassis configuration. See *Connecting a Virtual Chassis Cable to an EX4200 Switch and Example: Configuring a Virtual Chassis Interconnected Across Multiple Wiring Closets.* See Figure 1 for an illustration of a multiple-ring topology.

Overview and Topology

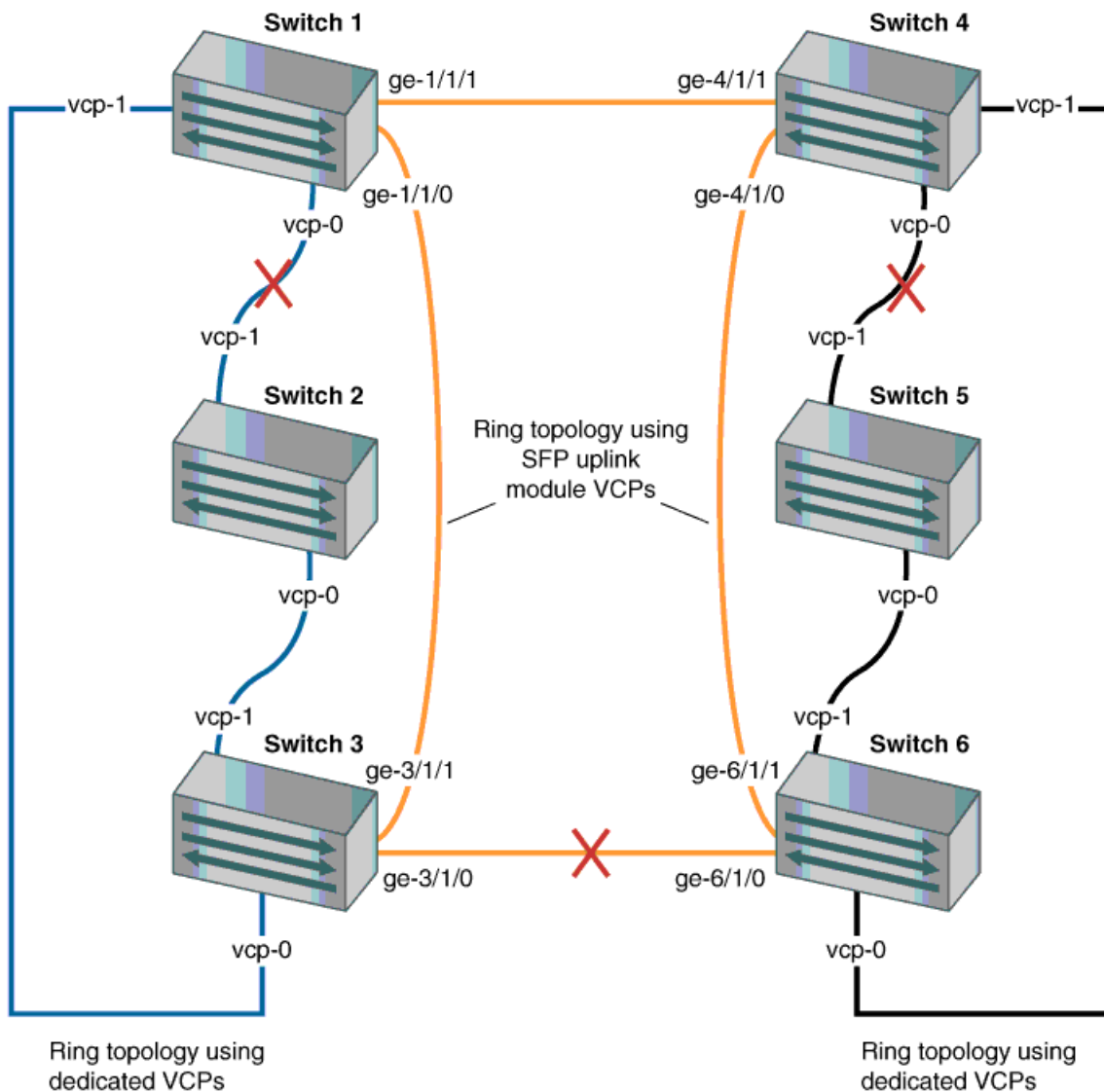
In a Virtual Chassis configuration, fast failover automatically reroutes traffic and reduces traffic loss in the event of a link failure or a member switch failure. By default, fast failover is enabled on all dedicated Virtual Chassis ports (VCPs). If you configure uplink module ports as VCPs, you must manually configure fast failover on these ports.

For fast failover to be effective, the Virtual Chassis members must be configured in a ring topology. The ring topology can be formed by using either dedicated Virtual Chassis ports (VCPs) or user-configured uplink module VCPs. Fast failover is supported only in a ring topology that uses identical port types, for example, either a topology

that uses all dedicated VCPs or one that uses all uplink module VCPs. Fast failover is not supported in a ring topology that includes both dedicated VCPs and uplink module VCPs. Fast failover is supported, however, in a Virtual Chassis configuration that consists of multiple rings.

Figure 1 shows an example of a multiple-ring topology.

Figure 1: Traffic Redirected by Fast Failover After VCP Link Failures in a Topology with Multiple Rings



This example shows how to enable fast failover on uplink module VCPs.

The topology for this example consists of six switches:

- Six EX 4200-24T switches, four of which have an EX-UM-4SFP uplink module installed (switches 1, 3, 4, and 6)

Configuration

To configure the fast failover feature on uplink module VCPs:

CLI Quick Configuration To configure fast failover on all SFP uplink module VCPs, copy the following command and paste it into the terminal window on switch 1:

```
[edit]  
set virtual-chassis fast-failover ge
```

Step-by-Step Procedure To configure fast failover on SFP uplink module VCPs:

1. Enable fast failover on all SFP uplink module VCPs in the Virtual Chassis configuration:

```
[edit]  
user@switch1# set virtual-chassis fast-failover ge
```



NOTE: We recommend that you use the `commit synchronize` command to save any configuration changes that you make to a multimember Virtual Chassis.

Results Check the results of the configuration:

```
[edit virtual-chassis]  
user@switch1# show  
fast-failover {  
  ge;  
}
```

Verification

To confirm that fast failover is enabled on SFP uplink module VCPs in the Virtual Chassis configuration, perform these tasks:

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Verifying That Fast Failover Is Enabled

Purpose Verify that fast failover has been enabled in a Virtual Chassis configuration.

- Action**
1. Issue the `show virtual-chassis fast-failover` command.
 2. Check to see that fast failover is enabled.

```
user@switch1 > show virtual-chassis fast-failover
```

Fast failover on dedicated VCP ports: Enabled
Fast failover on XE uplink VCP ports: Disabled
Fast failover on GE uplink VCP ports: Enabled

Meaning Fast failover is enabled on all dedicated VCPs and SFP uplink module VCPs in the Virtual Chassis configuration.

- Related Topics**
- Configuring Fast Failover in a Virtual Chassis Configuration
 - Disabling Fast Failover in a Virtual Chassis Configuration
 - Configuring a Virtual Chassis (CLI Procedure)
 - Configuring a Virtual Chassis (J-Web Procedure)

Published: 2009-07-07