Configuring Reflective Relay for Layer 2 Switching

About Reflective Relay 802.1Qbg

Beginning with Cisco Nexus Release 9.2(1), Cisco Nexus N9K-C93180YC-FX and N9K-C93180TC-FX switches support the switching option, reflective relay. The current release continues the support to Cisco Nexus N9K-C93180YC-EX and N9K-C93180TC-EX switches also. This feature is a tagless approach of IEEE standard 802.1Qbg. It forwards all traffic to an external switch that applies policy and sends the traffic back to the destination or target VM on the server as needed. There is no local switching. For broadcast or multicast traffic, reflective relay provides packet replication to each VM locally on the server.

Beginning with Cisco Nexus Release 7.0(3)I7(1), Cisco Nexus N9K-C93180YC-EX and N9K-C93180TC-EX switches support the switching option, reflective relay. This feature is a tagless approach of IEEE standard 802.1Qbg. It forwards all traffic to an external switch that applies policy and sends the traffic back to the destination or target VM on the server as needed. There is no local switching. For broadcast or multicast traffic, reflective relay provides packet replication to each VM locally on the server.

Reflective relay leverages the external switch for switching features and management capabilities, freeing server resources to support the VMs. Reflective relay applies the policies you configure on the Cisco Nexus switches to traffic between the VMs on the same server.

You can enable reflective relay to turn back traffic out of the same port it came in on. You can enable reflective relay on a Layer 2 physical port or port-channel interface policy using the NX-OS CLI. This feature is disabled by default.

The term Virtual Ethernet Port Aggregator (VEPA) is also used to describe 802.1Qbg functionality.

Reflective Relay Support

Reflective relay supports the following:

- Cisco Nexus N9K-C93180YC-EX, N9K-C93180TC-EX, N9K-93180YC-FX and N9K-C93180TC-FX series switches.

- IEEE standard 802.1Qbg tagless approach, known as reflective relay. However, Cisco Nexus Release 7.0(3)I7(1) does not support the IEEE standard 802.1Qbg S-tagged approach with multichannel technology.

- IEEE standard 802.1Qbg tagless approach, known as reflective relay.

- Physical domains—virtual domains are not supported.

- Physical ports and port channels—Does not support Cisco Fabric Extender (FEX) and blade servers. If reflective relay is enabled on an unsupported interface, a fault is raised, and the last valid configuration is retained. Disabling reflective relay on the port clears the fault.

Guidelines and Limitations for Reflective Relay

Reflective relay has the following configuration guideline or limitation:

- Beginning with Cisco Nexus Release 7.0(3)I7(1), Cisco Nexus N9K-C93180YC-EX and N9K-C93180TC-EX switches support the switching option, reflective relay.

- ARP- suppression must be disabled before using the reflective relay feature.

- Beginning with Cisco Nexus Release 9.2(1), Cisco Nexus N9K-C93180YC-FX and N9K-C93180TC-FX switches support the switching option, reflective relay.

- Beginning with Cisco Nexus Release 9.3(2), Cisco Nexus N9K-9336C-FX2 switch support reflective relay.

- You must configure all server facing interfaces to support reflective relay.

- Beginning with Cisco NX-OS Release 10.2(2)F, the Virtual Ethernet Port Aggregator (VEPA) feature is supported on Cisco N9K-9332D-GX2B platform switches.

Configuring Reflective Relay Using the NX-OS CLI

Reflective relay is disabled by default; however, you can enable it on a port or port channel as a Layer 2 interface policy on the switch. In the NX-OS CLI, you can use a template to enable reflective relay on multiple ports or you can enable it on individual ports.

Step 1   **configure terminal**

Example:

```
switch# configure terminal
switch(config)#
```

Enters global configuration mode.

Step 2   **interface ethernet 1/2**

Example:

```
switch(config)# interface ethernet 1/2
switch(config-if)#
```

Enables the port.

Step 3 **switchport mode virtual-ethernet-bridge**

Example:

```
switch(config-if)# switchport mode virtual-ethernet-bridge
switch(config-if)#
```

Configures the Layer 2 port as a host port for the reflective relay feature.

Step 4 **[no] switchport virtual-ethernet-bridge**

Example:

```
switch(config-if)# switchport virtual-ethernet-bridge
```

Enables the reflective relay feature.

Note The reflective relay feature is only supported on access or trunk ports.