CHAPTER 1

Overview

This chapter provides an overview of the interface types supported in Cisco Nexus 1000V.

This chapter includes the following sections:

- Information About Interfaces, page 1-1
- Simplifying Interface Configuration with Port Profiles, page 1-3
- High Availability for Interfaces, page 1-3

Information About Interfaces

This section includes the following topics:

- Ethernet Interfaces, page 1-1
- Virtual Ethernet Interfaces, page 1-2
- Management Interface, page 1-2
- Port Channel Interfaces, page 1-2
- VEM Management of LACP, page 1-3

Ethernet Interfaces

All interfaces on the Cisco Nexus 1000V are Layer 2 Ethernet interfaces, which include access ports, trunk ports, private VLAN, and promiscuous ports.

This section includes the following topics:

- Access Ports, page 1-1
- Trunk Ports, page 1-2
- Private VLAN Ports, page 1-2
- Promiscuous Ports, page 1-2

Access Ports

An access port carries traffic for one VLAN. This type of port is a Layer 2 interface only. For more information about access-port interfaces, see Chapter 3, "Configuring Layer 2 Interfaces."

Trunk Ports

A trunk port carries traffic for two or more VLANs. This type of port is a Layer 2 interface only. For more information about trunk-port interfaces, see Chapter 3, "Configuring Layer 2 Interfaces."

Private VLAN Ports

Private VLANs (PVLANs) are used to segregate Layer 2 ISP traffic and convey it to a single router interface. PVLANs achieve device isolation by applying Layer 2 forwarding constraints that allow end devices to share the same IP subnet while being Layer 2 isolated. In turn, the use of larger subnets reduces address management overhead. Three separate port designations are used. Each has its own unique set of rules that regulate the ability of each connected endpoint to communicate with other connected endpoints within the same private VLAN domain.

For more information about PVLANs, see the *Cisco Nexus 1000V Layer 2 Switching Configuration Guide, Release 4.2(1)SV1(4)*.

Promiscuous Ports

A promiscuous port can talk to all other types of ports. A promiscuous port can talk to isolated ports as well as community ports, and those ports can also talk to promiscuous ports.

For more information about promiscuous ports, see the *Cisco Nexus 1000V Layer 2 Switching Configuration Guide, Release 4.2(1)SV1(4)*

Virtual Ethernet Interfaces

Virtual Ethernet (vEthernet or vEth) interfaces are logical interfaces. Each vEthernet interface corresponds to a switch interface that is connected to a virtual port. The interface types are as follows:

- VM (interfaces connected to VM NICs)
- Service console
- vmkernel

vEthernet interfaces are created on the Cisco Nexus 1000V to represent virtual ports in use on the distributed virtual switch.

Management Interface

You can use the management Ethernet interface to connect the device to a network for remote management using a Telnet client, the Simple Network Management Protocol (SNMP), or other management agents. For more information on the management interface, see the *Cisco Nexus 1000V Getting Started Guide, Release 4.2(1)SV1(4)*.

Port Channel Interfaces

A port channel is a logical interface that aggregates multiple physical interfaces. You can bundle up to eight individual links to physical ports into a port channel to improve bandwidth and redundancy. You can also use port channeling to load balance traffic across these channeled physical interfaces. For more information about port channel interfaces, see Chapter 5, "Configuring Port Channels."

VEM Management of LACP

You can offload operation of the LACP protocol from the VSM to the VEMs. This prevents a situation where LACP cannot be negotiated with the upstream switch when the VEM is disconnected from the VSM (referred to as headless mode). VEM management of LACP allows the re-establishment of port channels after the reboot of a headless VEM.

Simplifying Interface Configuration with Port Profiles

A port profile is a mechanism for simplifying interface configuration. You can configure a port profile, and then assign it to multiple interfaces to give them all the same configuration. Changes to the port profile are propagated to the configuration of any interface that is assigned to it.

> **Note** We do not recommend that you override port profile configurations by making changes to the assigned interface configurations. Only make configuration changes to interfaces to quickly test a change or to disable a port.

For more information about port profiles, see the *Cisco Nexus 1000V Port Profile Configuration Guide, Release 4.2(1)SV1(4)*.

High Availability for Interfaces

Interfaces support stateful and stateless restarts. A stateful restart occurs during a supervisor switchover. After the switchover, Cisco Nexus 1000V applies the runtime configuration.

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