EX Series Switches Interfaces Overview

Juniper Networks EX Series Ethernet Switches have two types of interfaces: network interfaces and special interfaces. This topic provides brief information on these interfaces. For additional information, see the *JUNOS Software Network Interfaces Configuration Guide* at http://www.juniper.net/techpubs/software/junos/junos96/index.html.

Network Interfaces

Network interfaces connect to the network and carry network traffic. EX Series switches support the following types of network interfaces:

- LAN access interfaces—Use these EX Series ports to connect a personal computer, laptop, file server, or printer to the network. When you power on an EX Series switch and use the factory-default configuration, the software automatically configures interfaces in access mode for each of the network ports. The default configuration also enables autonegotiation for both speed and link mode.
- Trunk interfaces—EX Series access switches can be connected to a distribution switch or customer edge (CE) router. To use a port for this type of connection, you must explicitly configure the port interface for trunk mode. The interfaces from the distribution switch to the access switches must also be configured for trunk mode.
- Power over Ethernet (PoE) interfaces—Juniper Networks EX3200 and EX4200 Ethernet Switches provide PoE network ports with the various switch models providing either 8, 24, or 48 PoE ports. These ports can be used to connect voice over IP (VoIP) telephones, wireless access points, video cameras, and point-of-sale devices to safely receive power from the same access ports that are used to connect personal computers to the network. PoE interfaces are enabled by default in the factory configuration.
- Aggregated Ethernet interfaces—All EX Series switches allow you to group Ethernet interfaces at the physical layer to form a single link layer interface, also known as a *link aggregation group (LAG)* or *bundle*. These aggregated Ethernet interfaces help to balance traffic and increase the uplink bandwidth.

Special Interfaces

Special interfaces include:

- Virtual Chassis port (VCP) interfaces—Each Juniper Networks EX4200 Ethernet Switch has two dedicated *Virtual Chassis ports (VCPs)* on its rear panel. These ports can be used to interconnect two to ten EX4200 Ethernet switches as a *Virtual Chassis*, which functions as a single network entity. See Understanding the High-Speed Interconnection of the Virtual Chassis Members. When you power on EX Series switches that are interconnected in this manner, the software automatically configures the VCP interfaces for the dedicated ports that have been interconnected. These VCP interfaces are not configurable or modifiable. You can also interconnect EX4200 Switches across distances of up to 25 miles (40 km) by using the SFP, SFP+, or XFP uplink module ports. To do so, you must explicitly set the uplink module ports on the members you want to connect as VCPs. See Setting an Uplink Module Port as a Virtual Chassis Port (CLI Procedure). When you set the uplink module ports as uplink VCPs and connect member switches through those uplink VCPs, a LAG is automatically formed when the link speed is the same on connected VCPs and at least two VCPs on one member are connected to at least two VCPs on another member. See Understanding Virtual Chassis Configurations and Link Aggregation.
- Management interface—The Juniper Networks JUNOS Software for EX Series switches automatically creates the switch's management Ethernet interface, me0. The management Ethernet interface provides an out-of-band method for connecting to the switch. To use me0 as a management port, you must configure its logical port, me0.0, with a valid IP address. You can connect to the management interface over the network using utilities such as SSH or Telnet. SNMP can use the management interface to gather statistics from the switch. (The management interface me0 is analogous to the fxp0 interfaces on routers running JUNOS Software.)
- Virtual management Ethernet (VME) interface— EX4200 switches have a VME interface. This is a logical interface that is used for Virtual Chassis configurations and allows you to manage all the members of the Virtual Chassis through the master. For more information on the VME interface, see Understanding Global Management of a Virtual Chassis Configuration.
- Console port—Each EX Series switch has a serial port, labeled CON or CONSOLE, for connecting tty-type terminals to the switch using standard PC-type tty cables. The console port does not have a physical address or IP address associated with it. However, it is an interface in the sense that it provides access to the switch. On EX4200 switches that are configured as a Virtual Chassis, you can access the master and configure all members of the Virtual Chassis through any member's console port. For more information on the console port in a Virtual Chassis, see Understanding Global Management of a Virtual Chassis Configuration.
- Loopback—All EX Series switches have this software-only virtual interface that is always up. The loopback interface provides a stable and consistent interface and IP address on the switch.

Related Topics

- EX3200 and EX4200 Switches Hardware Overview
- EX8208 Switch Hardware Overview
- EX8216 Switch Hardware Overview
- PoE and EX Series Switches Overview
- Understanding Interface Naming Conventions on EX Series Switches

- Understanding Aggregated Ethernet Interfaces and LACP
- Understanding Layer 3 Subinterfaces

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