Overview

About Interfaces

Cisco NX-OS supports multiple configuration parameters for each of the interface types supported. Most of these parameters are covered in this guide but some are described in other documents.

The following table shows where to get further information on the parameters you can configure for an interface.

Table 1: Interface Parameters

Feature	Parameters	Further Information
Basic parameters	description, duplex, error disable, flow control, MTU, beacon	"Configuring Basic Interface Parameters"
Layer 3	medium, IPv4 and IPv6 addresses	"Configuring Layer 3 Interfaces"
Layer 3	bandwidth, delay, IP routing, VRFs	*Cisco Nexus 9000 Series NX-OS Unicast Routing Configuration Guide* *Cisco Nexus 9000 Series NX-OS Multicast Routing Configuration Guide*
Port Channels	channel group, LACP	"Configuring Port Channels"
Security	EOU	*Cisco Nexus 9000 Series NX-OS Security Configuration Guide*

Ethernet Interfaces

Ethernet interfaces include routed ports.

Access Ports

An access port carries traffic for one VLAN. This type of port is a Layer 2 interface only.

For more information on routed ports, see the "Information About Access and Trunk Interfaces" section.

Routed Ports

A routed port is a physical port that can route IP traffic to another device. A routed port is a Layer 3 interface only.

For more information on routed ports, see the "Routed Interfaces" section.

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. The management port (mgmt0) is autosensing and operates in full-duplex mode at a speed of 10/100/1000 Mb/s.

For more information on the management interface, see the *Cisco Nexus 9000 Series NX-OS Fundamentals Configuration Guide*. You will also find information on configuring the IP address and default IP routing for the management interface in this document.

Port-Channel Interfaces

A port channel is a logical interface that is an aggregation of multiple physical interfaces. You can bundle up to 32 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 the "Configuring Port Channels" section.

Subinterfaces

You can create virtual subinterfaces on a parent interface configured as a Layer 3 interface. A parent interface can be a physical port. Subinterfaces divide the parent interface into two or more virtual interfaces on which you can assign unique Layer 3 parameters such as IP addresses and dynamic routing protocols. For more information about subinterfaces, see the "Subinterfaces" section.

Loopback Interfaces

A virtual loopback interface is a virtual interface with a single endpoint that is always up. Any packet that is transmitted over a virtual loopback interface is immediately received by that interface. Loopback interfaces emulate a physical interface. For more information about subinterfaces, see the "Loopback Interfaces" section.

Breakout Interfaces

Cisco NX-OS supports breakout interfaces. The breakout command works at the module level and splits the 40G interface of a module into four 10G interfaces. The module is reloaded and the configuration for the interface is removed when the command is executed.

The following is an example of the command:

```
switch# configure terminal
switch(config)# interface breakout module 1
Module will be reloaded. Are you sure you want to continue(yes/no)? yes
```

The **no interface breakout module** *module_number* command undoes the breakout configuration. It puts all the interfaces of the module in 40G mode and deletes the configuration for the previous 10G interfaces.

Virtual Device Contexts

Cisco NX-OS can segment operating system and hardware resources into virtual device contexts (VDCs) that emulate virtual devices. The Cisco Nexus 9000 Series switch does not support multiple VDCs. All switch resources are managed in the default VDC.

High Availability for Interfaces

Interfaces support stateful and stateless restarts. A stateful restart occurs on a supervisor switchover. After the switchover, Cisco NX-OS applies the runtime configuration.