Force optical port configuration on the switch

Overview

Four SFP28 Ethernet optical interfaces (25GE by default) and two QSFP28 Ethernet optical interfaces (40GE by default) have been configured using the set device port-config-mode enable command.

Key Takeaways

You can force an optical port to come up by manually configuring its link state, speed, duplex mode, and interface type, using either CLI commands or the switch's management interface. Forced Port Link-UpSome switches allow forcing a port link-up even if the RX fiber is not connected, which is useful for unidirectional traffic or security purposes. On platforms supporting this feature (e.g., NetVisor OS 7.

0+), you can use the CLI command: CodeCopyport-force-linkup-add Specify the port number(s) to force link-up. Default is TX side; RX can also be specified if needed. This disables fault detection on the TX port and allows the RX port on the peer switch to come up.

Forced link-up settings persist across reboots. To remove forced link-up, use: CodeCopyport-force-linkup-remove port-id This ensures the port remains operational even without a full duplex connection or auto-negotiation success.

Optical Interface Configuration

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Optical ports often have fixed duplex mode (full duplex) and may not support simultaneous gigabit and full-duplex settings. To configure an optical port: Enter layer-2 interface configuration mode. Set the speed (e.g., 100M, 1G) using the interface command.

Set duplex mode to full: CodeCopyduplex full Configure flow control if needed: CodeCopyflow-control on orCodeCopyflow-control auto Auto mode sends flow control frames only when negotiation succeeds. Electrical interfaces may support auto-negotiation, but optical interfaces typically require manual configuration.

Combo Interface Considerations

For switches with combo interfaces (one electrical and one optical port sharing the same interface): Only one interface can be active at a time. If an optical module is installed, the interface will operate in fiber mode after a reboot. Configure the interface attributes (speed, duplex) in the same interface view regardless of whether electrical or optical mode is active.

Ensure the remote interface type matches the local interface mode; otherwise, communication will fail.

Verification

After configuration, verify the port and optical module status: Check link state, transmit/receive optical power, and temperature. Confirm module identification and compatibility. On Extreme switches, commands like show port or DDM diagnostics provide real-time operational data.

Summary

To force an optical port configuration: Use forced link-up commands if RX/TX is partially connected or auto-negotiation fails. Manually set speed and duplex for optical interfaces. For combo ports, ensure the correct interface mode is selected and matches the remote device.

Verify the port status and module diagnostics to confirm proper operation. This approach ensures reliable optical connectivity even in non-standard or security-sensitive deployments.

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Article Content

Example for Configuring a Combo Interface

If FORCE FIBER is displayed, the combo interface is configured to work as an optical interface. If FORCE COPPER is displayed, the combo interface is configured to work as an electrical

Ethernet Interface Configuration Commands

Four SFP28 Ethernet optical interfaces (25GE by default) and two QSFP28 Ethernet optical interfaces (40GE by default) have been configured using the set device port-config-mode enable command.

Cisco Business 250 Series Switches Administration Guide

The Port Settings page displays the global and per port setting of all the ports. Here, you can select and configure the desired ports from the Edit Port Settings page.

Port Basic Configuration

Configuring speed control: For every 2-Gigabits ports that are connected, and speeds configured in force mode, you need to configure one port in primary mode and the other in secondary mode to enable

Dell EMC PowerSwitch S5248F-ON Port Groups

This document provides Dell EMC SmartFabric OS10 Full Switch mode configuration examples for a VxRail 4.7 cluster or a VxRail 7.0 cluster deployment using Dell EMC PowerSwitch S5248F-ON

Ports blocked when moving LACP connection to new switches

However, when we move the cables to the new switches, XOS is disabling the ports. We don''t have spanning tree enabled, so that isn''t the issue. I opened a case and the best guess is

Easy Ways to Enable a Port on a Cisco Switch: 8 Steps

This wikiHow teaches you how to turn on any port on your Cisco switch. In most cases, your Cisco switch''s ports will all be enabled by default unless you''ve specifically disabled them.

Pluggable Transceivers Installation Guide

Holding the SFP module by its sides, insert the SFP module into the port on the switch. Slide the SFP module into the port until you hear it click. If the SFP module has a handle, push up on the handle to

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CCF & DMF Interface Optics Troubleshooting

If you are unsure whether the optics is faulty or not, try making a connection between a pair of BCF/DMF switches (With same optics on both ends) and the interface should come up if it is

How to Manage the QSFP Ports on a Dell EMC Networking S4810

Verify the QSFP port has a default configuration before splitting it into 4x10Gb ports, quad mode. Please contact ProSupport for default configuration assistance if needed.

SEL-2730M Managed 24-Port Ethernet Switch

The SEL-2730M is a managed 24-port layer-2 switch. Apply the switch to build reliable, safe Ethernet networks in electrical substations, plants, and other

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Port Basic Configuration

Entering interface configuration mode: Interface configuration mode is supported only on Ethernet ports. Enabling a port: By default, all device ports are enabled or in link-up state when a device is online.

Configuring Port Channels

Note Cisco Nexus 5500 Series NX-OS Interfaces Configuration Guide, Release 7.x 2 OL-30891-01 Configuring Port Channels Guidelines and Limitations for Port Channel Configuration

Switch Port Configuration and Troubleshooting

A port that forwards "up" to the root, possibly via intermediate switches, is identified as a root port. Ports that can forward traffic "down" through the network with the least cost are identified

Extreme SLX-OS Management Configuration Guide, 20.3.4

You can manually configure the port speed. In manual mode, the inserted optic must match the configured speed. Otherwise, the link will not come up. You can configure 1G mode with or without

CX320 Switch Module V100R001 Configuration Guide 14

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The configuration personnel can pre-configure the transmission medium type on optical interfaces and configure functions on the interfaces. These functions take effect after the installation

Configuring SNCP

Configuring SNCP SNCP is a protection mechanism for SDH networks that enables SDH connections to switch to another SDH circuit when a circuit failure occurs. A protection interface serves as the

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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