Force optical port on optical switch

Overview

Troubleshoot Fiber Links on Catalyst 9000 Series SwitchesThis document describes how to troubleshoot fiber optic interfaces by addressing some of the fiber.

Key Takeaways

You can force an optical port to come up by using the switch's forced link-up feature or configuring the combo interface to operate in fiber mode, depending on the switch model and port type.

Forcing Link-

Up on Optical PortsSome switches allow you to force a port link-up even if the RX fiber is not connected. This is useful in scenarios where only unidirectional traffic is required or for testing purposes. On platforms supporting this feature, such as NetVisor OS 7.

0. 0 and certain network packet brokers, you can enable it using a command like: CodeCopyport-force-linkup-add This command is applied on the TX port, which disables fault detection and allows the RX port on the peer device to come up, even if the RX strand is not connected. The port speed can typically be set to 1, 10, 25, 40, or 100 Gbps.

Considerations for Combo Interfaces

Many switches have combo interfaces, which combine a copper (electrical) and fiber (optical) port in a single interface view. Only one interface can be active at a time. To force the optical port: Ensure the optical module is installed in the SFP slot.

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Configure the interface to operate in fiber mode. Match the remote interface type; if the remote side is electrical, the local optical interface must be disabled or the two cannot communicate.

SFP Compatibility and Speed Settings

Before forcing a port up, verify that the SFP transceiver is compatible with the switch and supports the desired speed. Commands like: CodeCopyshow interface capabilitiesshow idprom interface allow you to check supported speeds, duplex, and transceiver type. Using incompatible SFPs can lead to unpredictable behavior.

Monitoring Optical Ports

After forcing the port up, monitor the link status and optical power to ensure proper operation. Commands such as: CodeCopyshow interface display link status, transmit/receive power, and traffic statistics. This helps detect issues even when the port is forced up.

Summary

To force an optical port on a switch: Use the forced link-up feature if supported. For combo interfaces, configure the optical mode and ensure the SFP is installed.

Verify SF

P compatibility and speed settings. Monitor the port using standard interface commands to confirm operation. Following these steps ensures the optical port operates correctly even in non-standard or testing scenarios.

Article Content

Troubleshoot Fiber Links on Catalyst 9000 Series Switches

This document describes how to troubleshoot fiber optic interfaces by addressing some of the fiber optic module and cabling specifications.

How to easily assess Optical Received Power on all Force10 Ports

The following article describes how to quickly and easily assess the optical receive power from any transceiver installed in any Force10 switch (C/E/Z/S-Series, MXL and IOA)

How to Connect an Optical Cable to a Switch: A Step-by-Step Guide

For those who are new to the world of optical cables or simply looking to connect one to a switch, this step-by-step guide will provide you with all the necessary information and instructions to

Example for Configuring a Combo Interface

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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

Configuring Forced Port Link-up

You can configure the forced port link-up feature by using the port-force-linkup-add command. Note: Run the above command only on the switch with the TX connection port. That disables fault detection on

Replacing an Optical Module

Do not insert an optical module reversely. If an optical module cannot be completely inserted into an optical port, do not push it with force. Turn the optical module over and try again. Observe the

Configuration Guide for Cisco NCS 1001, IOS XR Release 7.9.x

This chapter describes how to configure the Optical Amplifier Module and Protection Switching Module (PSM). When you plan to replace a configured optical module with a different type

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

What Is an SFP Module? — Complete Guide to SFP, SFP+ & SFP28

The same switch port can support single-mode fiber, multimode fiber, or copper simply by swapping the module, making it easier to adapt to evolving link requirements.

How To View Port Status And Optical Module Information On Extreme

This document uses the Moduletek SFP-10G-LR-BIDI optical module installed on an Extreme X690-48x-2q-4c switch as an example to demonstrate how to view port status and optical

3 FAQs of Connecting Switches by Fiber Optical Ports

Switch optical port intercommunication means that the optical fiber ports of two switches are connected to each other to achieve the purpose of

Configuring Forced Port Link-up

Port speed of 1, 10, 25, 40, or 100 Gbps. Optical LC cable type Any optical transceiver (QSFP and SFP) with an LC connector You can configure a port (s) to be forced link-up even when its RX

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What Are Optical Switches and How Do They Work?

An optical switch is a device engineered to selectively redirect incoming optical signals from one fiber-optic input port to a chosen output port. Its primary function is to route data carried by

Optical Switches Principles Classifications and Applications

Optical Cross-Connects (OXC): Dynamically reroute wavelengths in backbone networks Reconfigurable Optical Add-Drop Multiplexers (ROADM): MEMS switches enable bandwidth-on

Differences Between Switch Optical Ports and Electrical Ports

Switches come in three types: those with only electrical ports, those with only optical ports, and those with a mix of both electrical and optical ports. There are two main port types: optical

Optical Switch Tutorial | by FiberStore | Medium

An optical switch may operate by mechanical means, such as physically shifting an optical fiber to drive one or more alternative fibers, or by electro-optic effects, magneto-optic effects, or ...

Introduction of Two Optical Ports and the Role of

The optical port of an industrial Ethernet switch refers to the optical fiber interface, which has single-mode, multi-mode, gigabit, and gigabit

Fiber-optic Prism Optical Switches

These component-style fiber-optic prism optical switches utilize moving prisms between fixed collimator pairs, which allows bi-directional switch operation independent of data rate and signal format.

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