

Optical ports on different switches cannot communicate



AI Overview

Optical ports on different switches may fail to communicate due to module incompatibility, fiber type mismatch, incorrect port configuration, or insufficient optical power. Common Causes

1. Optical Module Compatibility Switches often require certified or compatible optical modules. Using third-party or non-certified SFP/GBIC modules can prevent the port from coming up, even if physically connected. Always verify that the optical module is supported by the switch model.
2. Fiber Type Mismatch Single-mode modules (typically 1310 nm or 1550 nm) must connect to single-mode fiber (yellow), while multimode modules (typically 850 nm) must connect to multimode fiber (orange or aqua green). Mismatched fiber types or core diameters can cause high attenuation and prevent communication.
3. Port Configuration Issues Some switches do not auto-negotiate optical speeds. Using a 1G SFP in a 10G port may require disabling auto-negotiation and manually setting the speed. Ports may be administratively shut down; ensure the interface is enabled using commands like `no shutdown` on Cisco or equivalent commands on other vendors. Multi-rate or combo ports may need manual configuration to match the module speed (e.g., 10G vs 25G).
4. Optical Power Problems Transmit or receive power that is too low or too high can prevent the link from coming up. Use switch commands (e.g., `display interface transceiver` on Huawei or `show interface transceiver` on Cisco) to check optical power levels and alarms.
5. Physical Layer Issues Check for broken or loose connectors, damaged cables, or faulty patch panels. Swap the optical module or fiber with a known good one to isolate the problem.

Troubleshooting Steps

- Verify that both switches recognize the optical module.
- Confirm fiber type and core diameter match the module specifications.
- Ensure the interface is administratively up and configure...

Article Content

Can't see other switch via Fiber connection

Coming from the main server rack via Cisco 9300, we have a fiber optic cable going to a building across the parking lot to a rack of Cisco 9300 switches. From there, we have another fiber

What Can I Do If Interconnected Optical Modules on Different ...

What Can I Do If Interconnected Optical Modules on Different CloudEngine Series Data Center Switches Cannot Communicate with Each Other? Context Theoretically, optical modules of

What is Differences Between Switch Optical Ports and Ethernet Ports

Common Ethernet port types for switches include 10M/100M/1000M and 10G. Ethernet speeds up to 1000M can be supported by Cat5 or Cat6 cables, while 10G networks require cables of

Optical Modules on the Local and Remote Devices Cannot

To ensure normal communication between two optical interfaces, check for transmit and receive power alarms after the two interfaces have optical modules installed and connected using an

My switches do not communicate

Hi everyone ! I have a problem with the communication between two switches, here is the simplified configuration: My PC1 and 3 cannot

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

Optical Module Application: Common Problems & Troubleshooting

Based on typical issues encountered with optical modules in daily switch applications, this document summarizes basic troubleshooting steps for resolving common faults:

Single mode and multimode SFP's on the same switch

As long as speed and duplex match, it should work. The switch shouldn't care if you use singlemode, multi mode, or copper. As long as they're the same transceiver on both ends of the link and the same

Troubleshoot Switch Port and Interface Problems

This document describes how to determine why a port or interface experiences problems.

What Can I Do If Interconnected Optical Modules on Different ...

Two optical interfaces on different switches are interconnected through optical fibers. The local optical interface is Down, leading to a communication failure between the two corresponding

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Troubleshoot Fiber Links on Catalyst 9000 Series Switches

Related Information Troubleshoot Port Flaps on Catalyst 9000 Series Switches Cisco Optics-to-Device Compatibility Matrix Inspection and Cleaning Procedures for Fiber-Optic

Missing connection for optical transmission paths between several ...

When establishing an optical connection, the core diameters on the transceiver of both communication partners must match. If two different fiber diameters are used, communication

SFP Ports and Switch Compatibility: What You Need to

Ports were disabled: The ports might have been disabled administratively or auto-disabled by the switch due to a fault or issue.

Optical Link Failure Troubleshooting: Switch-to-Switch (SMF/MMF)

Learn how to troubleshoot optical link failures between network switches. Essential guide covers checking optical modules, single-mode (SMF) vs. multimode (MMF) fiber integrity, and

SFP Compatibility Test | SFP Compatibility Problem Solved I Can ...

□□ In this video, I show you how to connect two different branded switches using SFP modules and fiber optic cables. Whether you're using Cisco, Planet, TP-Link, D-Link, Ubiquiti, or any other ...

Troubleshoot LAN Switching Environments

This document describes common LAN switch features and how to troubleshoot any LAN switching problems.

Dell Networking PowerSwitch Layer 1 optical troubleshooting

The purpose of this guide is to provide general guidelines for troubleshoot layer 1 connectivity issues when using transceivers in Ethernet switches.

Devices in the same vlan cannot communicate

I have a 2960X 24 ports switch, ports 1-12 are divided to vlan41, ports 13-20 are vlan42. PC1 is in vlan41, PC2 and PC3 are in vlan42. PC2 and PC3 are both able to communicate with PC1,

5 Most Common Failures Of Switches And Their Solutions

Knowledge 5 Most Common Failures Of Switches And Their Solutions The problem of switch failure generally includes physical layer failure,

Why Devices on Different VLANs but on the Same

5. The Issue: Devices on Different VLANs but Same Subnet Let's consider a scenario where two devices are assigned IP addresses in the same

Solved: One VLAN won't communicate between switches even though

Cisco Community Technology and Support Networking Switching One VLAN won't communicate between switches even though the others do.

How To Check If Interconnected Optical Ports Cannot Go Up?

If the problem is not caused by the optical modules, fibers, or intermediate device, connect the switch to another interface or replace the switch to check whether the problem ...

Extremes 2 Switches can't see each other

Solved: I can't connect 2 switches via optical port, The primary switch is ExtremeSwitching 5520-24X - SFP Module 10051H. Second switch: - 98324

No communication across devices in same native vlan

I have defined native vlan 10 and 20 across two access switches. Vlan 10 is defined as a native vlan. I connected a hub to one of the access switch and connected two PC's and given IP Add

Contact Us

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