

Network card cannot be enabled without optical module inserted



AI Overview

Some fiber network cards cannot be enabled or show a link unless a compatible optical module (SFP/SFP28) is inserted. Why This Happens Certain network interface cards (NICs), especially fiber or SFP-based cards, are designed to detect the presence of an optical module before activating the interface. Without a module, the card may remain in a disabled state or report "no link" because the hardware cannot establish a physical connection. This behavior is common in cards like Mellanox ConnectX-4 Lx EN or other SFP28 adapters, where the NIC firmware checks for a valid transceiver before enabling the port.

Troubleshooting Steps

- Verify Optical Module Compatibility** Ensure the optical module is certified for your NIC. Non-certified modules may not be recognized, preventing the NIC from enabling.
- Check Physical Connections** Insert the optical module fully into the NIC port. Confirm that the fiber cable is properly connected and not damaged. Use a loopback test if necessary to verify the port can go "Up".
- Update Firmware and Drivers** Some NICs require the latest firmware to recognize certain optical modules. Update the NIC firmware using the vendor's tools (e.g., mlxfwmanager for Mellanox cards) and install the latest drivers from the manufacturer.
- Inspect BIOS/PCIe Settings** For PCIe NICs, ensure the slot is enabled and configured correctly. Some motherboards require specific PCIe generation settings (Gen2/Gen3) for proper detection. Hot-plugging may temporarily allow detection, but proper BIOS configuration is recommended.
- Test with a Known Good Module** If the NIC still does not enable, try a different optical module that is confirmed to work with the card. This helps isolate whether the issue is with the module or the NIC itself.
- Check NIC Status in Software** Use tools like ethtool (Linux) or Device Manager (Windows) to verify the NIC status. If the NIC appears but shows "Cable un...

Article Content

Solved: SFP port troubleshooting

I cannot see the second switch (SwitchB) from the core switch (SwitchA). The fibre cable has been tested and light can be seen at each end, so we know the cabling is good.

Optical Module: Typical Optical Module Troubleshooting Procedure

Use an optical power meter to test the receive power of the port and check whether the optical fiber is disconnected. Use one optical fiber to form a loop on the port to check whether the port goes Up. If

Optical Module: The Device Cannot Display Any Optical Module ...

Services on the device are affected when the optical module is removed and inserted, or the device is restarted or upgraded. It is recommended that customer's permission be obtained before performing

PowerEdge: How to troubleshoot Network Interface Card (NIC ...

Network cards with SFP ports cannot be connected to the network without the use of a Direct Attachment Cable (DAC) or an SFP module. The difference is that DAC cables come for SFP

Force a Cisco Switch to Use Non-Cisco SFP Modules

If you're setting up a Cisco Catalyst switch, such as 1000, 2960X, 3560X, 9200, 9300, etc, and you insert a non-Cisco branded SFP into one of the SFP slots you will likely receive one of

Troubleshooting Common SFP Module Issues

Learn how to troubleshoot common SFP module issues including physical faults, hardware damage, compatibility, and configuration errors. This guide provides step-by-step solutions to maintain

How to Install and Remove SFP Transceiver Modules?

Verify that the transceiver is securely inserted and seated in the port. After inspect and clean the fiber-optic end-faces, you can now remove the dust plugs from the SFP modules bores and

How To Enable Support For Third-Party Modules On Cisco Switches

If a module is identified as non-Cisco original, the switch may shut down the port, trigger an alarm, or display a warning message. Cisco also provides hidden commands to allow the use of

no wifi option in the network and internet option help me resolve the ...

The Wi-Fi option is missing from Network & Internet can be incredibly frustrating, especially when everything else seems to be in place. A missing Wi-Fi option is a classic driver or

Troubleshoot Unsupported Transceiver in Catalyst 3850 Switch Sub

Consult the Cisco Optics Interoperability Matrix to ensure the SFP is supported by your specific switch model, sub-module, and software version. Some SFPs need configuration and actions

Troubleshooting SFP Transceiver Issues

Problem: The SFP transceiver is inserted into the switch or router, but the device does not recognize it. Causes & Solutions: Check Compatibility – Not all SFP modules work with every switch or router.

Troubleshooting SFP Connectivity Issues

This article provides a basic understanding and layer 1 troubleshooting steps for when case links do not come ON-LINE while using small form-factor pluggable (SFP) modules.

Configuration Guide for Cisco NCS 1001, IOS XR Release 7.1.1

Configure Optical Modules When you plan to replace a configured optical module with a different type of optical module, you must clear the configurations of the old module before you install

Your CD or DVD drive is not recognized by Windows or other programs

This article describes a problem with CD or DVD drives not work, or is missing, or not recognized after installing or uninstalling programs.

DS110DF111: the SFP optical port fails to be inserted and removed ...

Hi Lucas, When the optical module is inserted and removed repeatedly and the optical port links down, the system needs to reboot before the optical module recovers Now, I will answer

Monitoring Interfaces and Transceivers Using ethtool

Monitoring Interfaces and Transceivers Using ethtool The ethtool command enables you to query or control the network driver and hardware settings. It takes the device name (like swp1) as an

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SFP+ compatibility issues? Here are 5 troubleshooting tips!

There are several possible reasons for failure. We've listed the five most common ones. First of all, let's briefly recap what SFP and SFP+ stand for. SFPs – short for "small form-factor pluggable" – are

BitLocker Could Not Be Enabled Error: Causes and Solutions

Are you experiencing the frustrating "BitLocker could not be enabled. C was not encrypted" error? Stay with us to learn about the culprits and how to fix it.

Troubleshooting SFP Transceiver Issues

Troubleshooting SFP Transceiver Issues SFP transceivers are essential components in modern networking, enabling seamless communication between switches, routers, and optical fibre networks.

Activating or Deactivating Interface Module

Activating or Deactivating Interface Module This chapter provides information about activating or deactivating interface module (IM) on the Cisco ASR-920-24SZ-IM and Cisco ASR-920-12SZ-IM

Checking that the Optical Modules Are Inserted Properly

Context Optical modules and optical fibers are equipped with clips. The optical module or optical fiber is inserted properly when you hear a clack. After making sure that the optical module is inserted

Troubleshooting Optical Pass-Thru Module (OPM) issues

Optical Pass-thru Module may not power up on insertion Pass-through modules enable daughter cards to access external switches without the need to place switches into the BladeCenter switch bays.

Why Is My SFP Port Not Working? Common Issues and Fixes

When a module appears to be inserted but the switch still won't detect it, the issue usually comes down to three things: it isn't fully seated, the electrical contact isn't consistent, or the

Solved: SFP port troubleshooting

Hi All, I am hoping that someone may be able to shed some light on a strange issue we have. We have two new Catalyst 2960-48PST-S switches both of which have an 1000BaseSX SFP

Contact Us

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