Huawei switch indicates excessive optical attenuation



Overview

Possible causes include: The connector attenuation of the optical fiber exceeds the attenuation threshold, or the optical fiber is bent seriously.

Key Takeaways

Excessive optical attenuation on a Huawei switch usually indicates that the optical signal is too weak due to fiber issues, connector problems, or a faulty optical module.

Common Causes

Fiber Connector or Cable Issues: The optical fiber may be bent, damaged, or have a connector with attenuation exceeding the threshold, reducing signal strength and triggering the alarm. Optical Module Faults: The SFP or other optical transceiver may be malfunctioning, causing transmit (Tx) or receive (Rx) power to fall outside the allowed range. Incompatible or Mismatched Components: Using single-mode vs. multi-mode fibers incorrectly, or mismatched optical modules and port speeds, can lead to excessive attenuation.

Dirty or Misaligned Ports: Dust, dirt, or misalignment at the optical port can reduce signal quality and increase attenuation.

Troubleshooting Steps

Check Transceiver Parameters: Run display transceiver interface or display interface transceiver verbose to view Tx/Rx power, wavelength, and module type. Inspect Fiber and Connectors: Ensure fibers are not bent, damaged, or reversed. Clean connectors and verify proper insertion.

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Swap Optical Modules: Replace the module with a known good one to determine if the original module is faulty. Verify Compatibility: Confirm that the fiber type, module type, and interface speed match. Avoid using a 10G module on a 1G port.

Adjust Alarm Thresholds: If the interface is functioning normally but the alarm persists, you can adjust the receive or transmit power thresholds using transceiver diagnosis threshold rx-power or tx-power commands. Loopback Test: Connect the fiber jumper to the same module to check for abnormal conditions on the port.

Additional Considerations

If the interface is in shutdown, errordown, or loopback state, some optical power alarms may not be generated. Persistent issues after these checks may require collecting alarm and configuration information and contacting Huawei technical support. By systematically checking the fiber, connectors, and optical modules, and verifying compatibility and power levels, you can identify the root cause of excessive optical attenuation and restore normal switch operation.

Article Content

Displaying Optical Module Information

What Is the Impact of Using Non-Huawei-Certified Switch Optical Modules? When certifying an optical module, Huawei comprehensively verifies the functions of the optical module to ensure the optical

Typical Troubleshooting Cases of Optical Module

Possible causes include: The connector attenuation of the optical fiber exceeds the attenuation threshold, or the optical fiber is bent seriously. Install another optical module on the port and check

Huawei Switch Optical Attenuation Information

A switch must use optical or copper modules that have been certified for use on Huawei S switches. Non-certified optical or copper modules cannot ensure transmission reliability and may affect service

Troubleshooting for Optical Modules on Huawei Switch

Check whether the optical module is Huawei-certified. If it is not certified by Huawei, replace it with a Huawei certified one. Remove and reinstall the optical module. ...

How To View Optical Transceiver Information On Huawei Switches

Optical transceivers are widely applied in switches, network cards, routers and other communication devices. Checking transceiver parameters allows users to monitor real-time

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Common GPON network problems and solutions

Common GPON network problems are mainly divided into several categories, including optical path failure, equipment hardware failure, ONU management abnormality, service performance

Optical Module Solutions for Huawei S5700/S5720 Series Switches

This article summarizes several solutions for using optical modules with switches and common problems encountered during usage, along with specific solutions.

How to Troubleshoot transceiver issue in Huawei switch/router/devices

Receiving power too high (Current RX Power > Default RX Power High Threshold): May caused by using long distance module in short distance, add Optical attenuators/Fiber optic

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

OLT Alarm and Troubleshooting Guide | PDF | Optical Fiber | Attenuation

An ONT was frequently disconnecting due to unmatched optical fiber connectors between the ONT and fiber patch cord, causing high optical attenuation. Using a properly matched fiber patch cord resolved

Optical Signal Attenuation and Network Performance

Introduction Excessive signal attenuation can cause link failure. However, understanding signal levels, selecting the right split ratio on devices, and carefully managing the location of repeaters can prevent

Checking the Working Modes

Replace the optical module or fiber. Check whether the optical module and fiber meet requirements. Use an optical power meter to measure the attenuation of each part of links and

Optical Interface Interconnection Is Abnormal on CE Switches ...

Depending on the transmit optical power and overload optical power, optical modules are classified into short-distance and long-distance optical modules. Optical signals of different

Optical Module Solutions for Huawei S5700/S5720 Series Switches

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When using switches, we may encounter many confusions, such as what types of optical modules are needed for different models of Huawei switches, and how to resolve issues encountered

Optical Module Troubleshooting

Interfaces that use optical modules that are not certified for Huawei data center switches may be unable to go Up. If an optical module that is not certified for Huawei data center switches is used, replace it

OLT Alarm and Troubleshooting Guide | PDF | Optical Fiber | Attenuation

This indicates that the mismatching fiber connector causes abnormal attenuation on ODN lines and consequently causes the ONU to go online and offline frequently.

Using the OTDR to Locate Abnormal Attenuation Points on the Optical

The optical time domain reflectometer (OTDR) is usually used for locating abnormal attenuation points on the optical line.

Troubleshooting for Optical Modules on Huawei Switch

Many friends feedback that one problems occurred when using optical modules on switches, now we are providing the troubleshooting for the typical issues. All firmware should be provided by the client and

Contact Us

Continue your research online:

Website: https://aboutkitchens.biz
Technical inquiry: https://aboutkitchens.biz/project-desk.html
North American project location: Research Triangle Park, North Carolina, United States

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

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