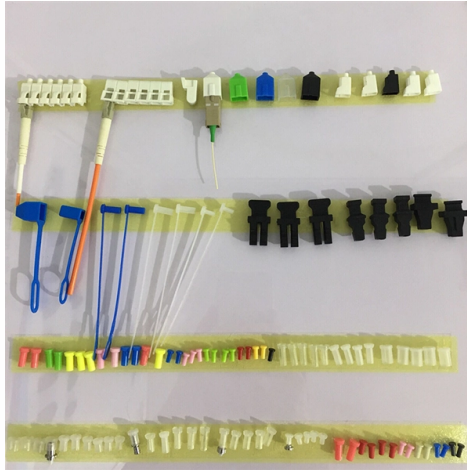


A core switch is experiencing continuous packet loss



Overview

When I connect my router straight with the modem (so not via the network switch), I have no packet loss.

Key Takeaways

Continuous packet loss on a core switch can result from hardware issues, network congestion, misconfigurations, or interface failures, and requires systematic diagnosis to identify the root cause.

- **Interface or Port Issues:** Faulty or overloaded ports, damaged Ethernet cables, or misconfigured interfaces can drop packets intermittently or continuously .
- **Network Congestion:** High traffic, such as backup jobs or large data transfers, can saturate uplinks or EtherChannels, causing packet loss .
- **CPU or Memory Overload:** Excessive CPU or memory usage on the switch can prevent timely packet processing, leading to dropped packets .
- **Configuration Problems:** Misconfigured VLANs, spanning-tree loops, or incorrect STP/portfast settings can create broadcast storms or loops that result in packet loss .



- **Hardware or Firmware Failures:** Overheating, power supply issues, or outdated firmware can cause intermittent switch failures and packet drops .

Diagnostic Steps

- **Monitor Interfaces:** Check switch logs and interface statistics for errors, drops, or flapping ports. Use commands like `show interface` or `show etherchannel summary` to identify problematic links .
 - **Ping and Traceroute Tests:** Perform continuous ping tests to local devices and use traceroute to identify where packets are being lost .
 - **Packet Capture:** Use a packet sniffer (e.g., Wireshark) to analyze traffic for malformed packets or retransmissions .
 - **Check CPU and Memory:** Monitor switch resource utilization to detect spikes that correlate with packet loss events .
 - **Isolate Traffic Sources:** Temporarily disable non-critical ports or high-traffic devices to determine if specific servers or applications are causing congestion .
- #### Corrective Actions
- **Replace Faulty Hardware:** Swap out damaged cables, ports, or modules and ensure proper cooling and power supply .
 - **Optimize Traffic:** Balance load across multiple links, configure QoS to prioritize critical traffic, and schedule heavy backups during off-peak hours .
 - **Update Firmware:** Apply the latest stable firmware to fix known bugs and improve switch performance .
 - **Review Configurations:** Verify VLANs, STP settings, and port security to prevent loops and broadcast storms .
 - **Continuous Monitoring:** Implement monitoring tools to track packet loss, CPU, and memory usage for proactive detection . By systematically following these steps, you can identify the root cause of packet loss on a core switch and implement targeted solutions to restore network stability.

Article Content

How to Fix Packet Loss: Step-by-Step Troubleshooting Guide

Fix packet loss on Wi-Fi or Ethernet with this troubleshooting guide. Covers router issues, bufferbloat, bad cables, ISP faults, and

What causes my packet loss: network switch or ethernet cable?

When I connect my router straight with the modem (so not via the network switch), I have no packet loss. So: the cause

How to Troubleshoot and Resolve Packet Loss

Packet loss on a 10 Gigabit Ethernet (10GbE) switch can significantly impact network performance, leading to slow

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

