Core Switch Data Mirroring Configuration



Overview

Switch Port Mirroring Explained: What is Mirror Port in Switch?

Learn what mirror port in switch means and how ethernet switch port mirroring works. Explore.

Key Takeaways

Port mirroring on a core switch allows you to replicate traffic from one or more source ports to a designated destination port for monitoring and analysis.

Overview of Port Mirroring

Port mirroring, also known as SPAN (Switched Port Analyzer), is a network management feature that copies traffic from source ports or VLANs to a destination port where monitoring devices, such as analyzers or intrusion detection systems, can inspect the traffic without affecting normal switch operations. It supports local mirroring (within the same switch) and remote mirroring (across multiple switches) and can handle ingress, egress, or both directions of traffic.

Key Considerations

Destination Port: Must be dedicated for monitoring; it cannot carry normal service traffic. Avoid using ports that are part of an Eth-Trunk unless bandwidth is sufficient. Source Ports: Can include physical interfaces or VLANs.

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Multiple source ports can be mirrored to a single destination port, but a single port cannot serve as a source for multiple mirroring groups simultaneously. Traffic Direction: You can mirror incoming (ingress), outgoing (egress), or both types of traffic. Bandwidth Limitations: Ensure the destination port has sufficient bandwidth to handle all mirrored traffic; otherwise, packet loss may occur.

Loop Avoidance: Disable STP/RSTP/MSTP on the destination port to prevent abnormal shutdowns. Configuration Steps (General)Enable Privileged Mode: Access the switch CLI and enter privileged EXEC mode. Enter Global Configuration Mode: Prepare the switch for configuration commands.

Configure Source Ports: Specify the ports or VLANs whose traffic you want to mirror. Multiple sources can be configured for a single session. Configure Destination Port: Assign a dedicated port to receive mirrored traffic.

Only one destination port is allowed per mirroring session. Select Traffic Direction: Choose ingress, egress, or both for the mirrored traffic. Verify Configuration: Display mirroring groups and ensure the correct ports are assigned as sources and destination.

Save Configuration: Commit the changes to ensure persistence across reboots.

Example Use Cases

Local Mirroring: Monitoring a single VLAN or port on the same switch for troubleshooting or performance analysis. Remote Mirroring: Aggregating traffic from multiple switches to a central monitoring device for network-wide analysis.

Policy-

Based Mirroring: Filtering traffic based on IP, TCP/UDP ports, or VLANs to reduce unnecessary mirrored traffic.

Best Practices

Dedicate a high-bandwidth port for monitoring to avoid packet drops. Avoid mirroring high-traffic ports to low-bandwidth destination ports.

Use VLA

N or policy-based mirroring to limit mirrored traffic to relevant packets. Regularly review and update mirroring sessions to match network changes. By following these steps and considerations, you can effectively configure core switch data mirroring to monitor network traffic, troubleshoot issues, and enhance security without impacting normal switch performance.

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Article Content

Switch Port Mirroring Explained: What is Mirror Port in Switch?

Learn what mirror port in switch means and how ethernet switch port mirroring works. Explore types of port mirroring, applications, and how to choose a network switch with port mirroring

PORT MIRRORING OVERVIEW

Port Mirroring, also known as SPAN (Switched Port Analyzer), is a method of monitoring network traffic. With port mirroring enabled, the switch sends a copy of all network packets seen on one port (or an

Configure Catalyst Switched Port Analyzer (SPAN): Example

This document describes the recent features of the Switched Port Analyzer (SPAN) that have been implemented.

Example for Configuring Local Port Mirroring (1:1 Mirroring)

In local port mirroring, an observing port is directly connected to a monitoring device and directly forwards the packets copied from a mirrored port to the monitoring device for fault location

Mirroring configuration examples

For this mirroring configuration, the administrator configures a mirroring destination (with a remote exit port of B10) on switch C, and a remote mirroring session on switch A.

Cisco SPAN, RSPAN & ERSPAN Configuration | Port Mirroring

This guide provides you with clear, step-by-step instructions on configuring SPAN port mirroring on Cisco switches, along with expert tips to help you avoid common pitfalls and achieve

01-04 MIRRORING CONFIGURATION

When flow mirroring, port mirroring, and VLAN mirroring are configured simultaneously on a device to mirror packets to different observing ports, the priorities are as follows: flow mirroring > port mirroring

Port Mirroring: What It Is, How It Works, and Why It''s Essential

Discover what port mirroring is, how it works, and how to implement it. Learn the challenges and how to manage the data effectively.

Configuring a source switch in a local mirroring session

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Enter the mirror port command on the source switch to configure an exit port on the same switch. To create the mirroring session, use the information gathered in High-level overview of the mirror

What is Port Mirroring or SPAN?

A port mirroring session sends a copy of packets from one switch to a port on the destination (or monitor) switch. Mirror individual ports whenever possible. Ideally, mirror ports that are directly

What is Port Mirroring? Purpose, Benefits, Setup, and Beyond

What is the Difference between Port Mirroring and Traffic Mirroring? The mirroring feature includes port mirroring and traffic mirroring. Traffic mirroring copies the specified traffic to the

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Overview This blog supplements the Migrate to Azure SQL documentation and tries to summarize the Microsoft first party ways to copy or migrate SQL Server...

Configure mirroring with a switch SPAN port

This article describes how to configure a SPAN port for traffic mirroring when monitoring OT networks with Microsoft Defender for IoT.

Cisco SPAN, RSPAN & ERSPAN Configuration | Port Mirroring

Learn how to configure SPAN, RSPAN, and ERSPAN for port mirroring on Cisco switches. Step-by-step CLI examples, troubleshooting tips, and best practices for network monitoring.

Configuring SPAN

Configuring SPAN The Switched Port Analyzer (SPAN) feature (sometimes called port mirroring or port monitoring) selects network traffic for analysis by a network analyzer. The network analyzer can be a

Switch Port Mirroring: A Comprehensive Guide to Monitor Network

Switch port mirroring is a vital tool for network monitoring and analysis. By configuring a switch port to mirror the traffic of other ports, network administrators can capture and analyze

The Platform Era Expands: MDEP at InfoComm 2026 | Microsoft

Last year at InfoComm 2025, we shared how the Microsoft Device Ecosystem Platform (MDEP) was growing into the most comprehensive and secure platform for enterprise collaboration.

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Mirroring configuration examples

Mirroring configuration examples Local mirroring using traffic-direction criteria An administrator wants to mirror the inbound traffic from workstation "X" on port A5 and workstation "Y" on port B17 to a traffic

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

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