

Mirroring of Core Switches



AI Overview

Mirroring on a core switch is the process of copying network traffic from selected ports or VLANs to a designated monitoring port for analysis without affecting normal switch operations.

What Mirroring Means Mirroring, often called port mirroring, allows a network administrator to replicate packets from a source port, VLAN, or flow on a switch to a destination port connected to a monitoring device. This enables real-time traffic analysis for troubleshooting, performance monitoring, or security inspection without disrupting the normal data flow on the network.

How It Works on a Core Switch A core switch is a high-capacity, high-performance Layer 3 switch that forms the backbone of an enterprise network, aggregating traffic from distribution switches and ensuring ultra-low latency and high throughput. When mirroring is configured on a core switch:

- Mirrored Port (Source):** The port or VLAN whose traffic is to be monitored.
- Observing Port (Destination):** The port where the copied traffic is sent, typically connected to a network analyzer, intrusion detection system, or monitoring server.
- Traffic Duplication:** The switch replicates inbound, outbound, or both directions of traffic from the source to the observing port without affecting the original packet forwarding.

Types of Mirroring

- Local Mirroring:** The observing port is directly connected to the monitoring device on the same switch.
- Remote Mirroring:** The observing port sends mirrored traffic through Layer 2 or Layer 3 networks to a remote monitoring device. Technologies like RSPAN (Remote Switched Port Analyzer) and ERSPAN (Encapsulated RSPAN) are used for this purpose.
- VLAN Mirroring:** Copies all traffic within a specific VLAN to the monitoring port.
- MAC Address Mirroring:** Copies traffic associated with a specific MAC address.

Use Cases

- Troubleshooting:** Identify network bottlenecks, packet loss, or misconfigurations.
- Security Monitoring:** Detect suspicious activity or attacks by analyzing traffic patterns.
- Compliance Auditing:** Capture traffic for regulatory or internal audits.
- Performance Analysis:** Monitor band...

Article Content

Understanding the Core Switch: Key Differences and Uses

Explore the core switch's role as the backbone of your network. Discover key differences, uses, and insights into layer 3 core switch technology.

ExtremeXOS® User Guide

Mirroring is a function on existing Extreme Networks switches that allows copies of packets to be replicated to additional ports without affecting the normal switching functionality.

serenalindquist99/server-core-switch-lab

This lab simulates a real-world enterprise network upgrade involving the replacement and configuration of core switches, port migration, ACL deployment, and rollback planning.

VOSS User Guide

Port Mirroring Overview Port mirroring causes the switch to make a copy of a traffic flow and send the copy to a device for analysis. Use port mirroring in diagnostic sniffing—use the mirror to view the

how to configure SPAN port scenario

If yes then we can configure RSPAN on Cisco switches and extend the vlan till ESXi virtual switch and from there we can forward mirroring traffic to ESXi host1.

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

Ethernet switch port mirroring is more than traffic duplication—it is a core tool for network management and security monitoring. Selecting the appropriate network switch port mirroring type

Configuring Port Mirroring

You can analyze the mirrored packets and troubleshoot faults. switch supports one-to-one and many-to-one mirroring. Many-to-one mirroring supports multiple mirroring sources but only one destination

Interface and Hardware Component Configuration

Learn to configure traffic mirroring with SPAN, ACLs, rate limits, and file mirroring, in one comprehensive guide.

AXARPS: Scalable ARP Snooping Using Policy-Based Mirroring of

AXARPS employs a policy-based mirroring of a core switch that mirror traffic that matches a specified filter. AXARPS is, therefore, passive snooping, and incur almost no load on a

Configuring local mirroring

The following commands configure mirroring for a local session in which the mirroring source and destination are on the same switch. The mirror command identifies the destination in a mirroring

Port mirroring in L2 and L3 switches

L3 switch is core switch and existing Firewall LAN interface connected with this switch port no.2 L2 switch is connected to existing Firewall DMZ port.

Understanding Core Switch: What It Is and How to Choose the Right

A core switch is not merely a type of switch but rather denotes the switch that operates at the core layer (the network's backbone). Positioned at the top of the three-layer network architecture,

Port Mirroring on Switches – The Cybersecurity Man

Modern switches have a lot of cool, useful features that make these devices simple to manage, but perhaps, more difficult to configure. In my last

VMware Cloud Foundation (VCF) Blog – Home Page

VMware Cloud Foundation (VCF) - The simplest path to hybrid cloud that delivers consistent, secure and agile cloud infrastructure. Read more.

Switch Port Mirroring: A Comprehensive Guide to

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

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.

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

Both physical interfaces and Eth-Trunks can be configured as mirrored ports. If an Eth-Trunk is configured as a mirrored port, its member ports cannot be configured as observing ports.

Core Switches: The Pillar of Network Infrastructure

Get a closer look at core switches: the nerve centers of network infrastructure that enhance performance and facilitate growth.

Use RSPAN to mirror traffic from remote switches

Remote Switched Port Analyzer (RSPAN) allows you to mirror traffic from remote switches for analysis on a local destination port.

What is a Core Switch | Functions and Difference over Normal Switch

What is a core switch and how it works? This article builds the basics of this kind of switch for the ones who don't know anything about it. What is a Core Switch? It is a powerful

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

SPAN Session or Port Mirroring

About SPAN Sessions The Switched Port Analyzer (SPAN) or Port Mirroring feature helps you analyze network traffic passing through interfaces or VLANs by using SPAN sessions. The SPAN sessions

Core Switch Explained: Key Functions and Benefits

Discover what a Core Switch is, its pivotal role in network architecture, and how it boosts performance and reliability in your data infrastructure.

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.

Contact Us

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