

Packet capture of industrial mirror switches



Overview

The most reliable and non-intrusive way to capture IEC 60870-5-104 traffic on a live SCADA network is to use a managed Ethernet switch with port mirroring (also called SPAN — Switched Port Analyzer). The software displays the individual data packets in detail, enabling analysis of the individual data packets and communication between different nodes. The documentation explains the basics and the. Learn how to configure Switched Port Analyzer (SPAN) port mirroring on Cisco, Arista, and Linux systems using tc to copy traffic from monitored ports to a capture device running Wireshark or tcpdump. Its core principles can be broken down into three key steps: Traffic Capture: The switch replicates bidirectional traffic (inbound/outbound) from the source port in real time. Wireshark is the go-to tool for analyzing communication protocols — and it fully supports IEC 60870-5-104 (commonly known as IEC 104). Whether you're diagnosing network issues, validating SCADA data, or learning how IEC 104 works, Wireshark provides an unmatched level of visibility into the. Port Mirroring duplicates Ethernet packets from a selected source port to a designated destination port without disrupting other traffic on the network. In practical scenarios where it is not possible to.

Article Content

Mar 22, 2026

Port Mirroring for Network Monitoring Explained

Using software, we can easily configure or change what data is to be monitored. Managed locally or remotely, we set up our mirrored ports to forward a

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Switch Port Mirroring Explained: What is Mirror Port in

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

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Wireshark and Port Mirroring Guide

This guide will cover both setting up a mirrored switch and Wireshark, as well as a quick overview of the information that Wireshark provides us.

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What is Packet Mirroring? Types & Best Practices

Packet mirroring is a networking technique that involves duplicating and redirecting network traffic to a monitoring or analysis tool for inspection.

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CaptureSetup/Ethernet

CaptureSetup/Ethernet Ethernet capture setup This page will explain points to think about when capturing packets from Ethernet networks. If you are only trying to capture network traffic between

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Packet Captures and Port Mirroring on the MS Switch

Enable port mirroring on your switch The most effective way to capture traffic passed on a given switchport is to mirror that port to another available port, so all traffic passed by the source port will

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

You can capture packets without buying any special equipment because your switch can forward copies of passing traffic. This process is called

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Configure Port Mirror on FortiSwitch for Packet Capture

In this tutorial, I walk you through the process of configuring a port mirror on a Fortiswitch managed by FortiGate, specifically to capture traffic from a phone connected to port 2 and view it on ...

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Packet Captures and Port Mirroring on the MS Switch

A workstation connected to Cisco Meraki switches can capture these packets through port mirroring. This article will cover how to capture traffic passed by an MS switch, using the following steps:

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Mirroring a port for packet capture

Use the following commands to set up a monitor session, so that you can capture packets crossing a physical switch interface. The idea is to reconfigure the switch so that a copy of

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Packet Capture with HUB/Switch

There are difference in HUB and a normal network switch. We cannot use a normal switch to do this function unless do some other setting. 1, In a Cisco switch, we can use command to change the

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Network capture with Wireshark and Port Mirroring using the example

Wireshark is a free and open-source software for capturing and analyzing Ethernet data traffic. The software displays the individual data packets in detail, enabling analysis of the individual

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Full Duplex Capture in Industrial Networks

At least for the lower levels of the Industry 4.0 infrastructure (control and device level) security solution vendors tend to use the mirror/span ports offered by the network switches to integrate their solutions

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How To Use Wireshark To Capture Network Packets On

To effectively capture packets on a switched network, you need to employ special techniques to access the traffic flowing between devices. These techniques allow

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How to Use Port Mirroring to Capture Packets in the

Port Mirroring duplicates Ethernet packets from a selected source port to a designated destination port without disrupting other traffic on the

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Port Mirroring Explained: Basis, Configuration & FAQs

Port mirroring, also known as SPAN (Switched Port Analyzer) in Cisco terminology, is used on a network switch or a router to send a copy of

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How to Use Port Mirroring to Capture Packets in the

Since the EAP directly forwards the DHCP packets to the router, the monitoring PC cannot capture packets by default. Therefore, we need to enable

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Inline vs. SPAN / Mirror Packet Capture

Under peak loads, the switch/router may drop packets intended for the SPAN/mirror port should the traffic volume overwhelm the switch/router's buffer. Choosing Which Mode to Use In situations where

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HP Switch remote packet capture using WireShark : r/networking

So yesterday, I discovered that HP can mirror a port to a remote switch, and then that remote switch would span that data to the specified port. However, it looks like you can just specify the IP address

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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

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Network capture with Wireshark and Port Mirroring using the example

The software displays the individual data packets in detail, enabling analysis of the individual data packets and communication between different nodes. The documentation explains the

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Practical cases to use Port Mirroring

Hello, everyone: I have read about Port Mirroring and I think I get the idea and I also know how to implement it. Now, I would like to know practical and concrete scenarios where I could use it,

Oct 12, 2025

Network Management Configuration Guide, Cisco IOS XE Fuji 16.9.x ...

Prerequisites for Configuring Wireshark Prerequisites for Configuring Embedded Packet Capture Prerequisites for Configuring Wireshark Wireshark is supported only on switches running

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Wireshark IEC 60870-5-104 Decoding — Analyze

The most reliable and non-intrusive way to capture IEC 60870-5-104 traffic on a live SCADA network is to use a managed Ethernet switch with port

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Configuring FortiSwitch port mirroring | FortiSwitch 7.6.3

In RSPAN mode, traffic is encapsulated in VLAN 4092 and sent toward the FortiGate device, where it can be captured using packet capture. The FortiSwitch unit

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How to Set Up Port Mirroring (SPAN) on a Switch for Packet Capture

Learn how to configure Switched Port Analyzer (SPAN) port mirroring on Cisco, Arista, and Linux systems using tc to copy traffic from monitored ports to a capture device running

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Port Mirroring Function of Industrial Switches

Traffic Capture: The switch replicates bidirectional traffic (inbound/outbound) from the source port in real time using ASIC chips or FPGA hardware, ensuring no packet loss.

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Port Mirroring – A Definition & How It Works (Tutorial)

Port Mirroring is a Great Feature that some Routers and Switches have Built-in to Mirror packets/Traffic to another Port in Order to Capture, Analyze

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The Ultimate Guide to Port Mirroring: Everything you

Learn everything you need to know about port mirroring, including how it works, use cases, and best practices for optimizing your network

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PORT MIRRORING OVERVIEW

Network traffic from IP Phone goes through network switch with port mirroring. The switch sends to the Recorder a copy of every network packet, sent or received by IP Phone. By using intelligent packet

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