Spectrometer collects network traffic



Overview

Learn what network traffic monitoring is, how it works, and why it''s essential for detecting data exfiltration, lateral movement, and insider threats.

Key Takeaways

A network-enabled spectrometer, like the SR58, can transmit and collect spectral data over a network but does not inherently capture general network traffic like a network monitoring tool.

Network-

Enabled Spectrometers

Modern spectrometers, such as the SR58, are equipped with Ethernet, USB, and serial interfaces that allow them to communicate over a network for remote operation, multi-unit synchronization, and centralized data collection. These devices can be integrated into a network switch to manage up to 100 units simultaneously, enabling distributed monitoring and real-time spectral data acquisition across production lines or laboratory setups. The spectrometer transmits its own measurement data over the network, which can be logged, visualized, or analyzed remotely.

Difference from Network Traffic MonitoringWhile spectrometers use network protocols to send data, they do not capture or analyze general network traffic such as IP packets, TCP/UDP flows, or DNS queries. Network traffic analysis (NTA) tools, by contrast, are designed to monitor, inspect, and interpret network data to understand traffic patterns, detect anomalies, and ensure network performance and security.

NT

© 2026 CGWEB NETWORK INFRASTRUCTURE - All rights reserved

A tools collect flow records or perform packet inspection, providing visibility into bandwidth usage, latency, and potential security threats.

Integration Possibilities

A spectrometer's network data can be monitored using standard network tools if desired. For example, administrators can track Ethernet traffic from the spectrometer to ensure proper data transmission, detect bottlenecks, or integrate the device into a larger IoT or laboratory automation system. However, this monitoring is limited to the spectrometer's own data streams and does not extend to general network traffic unless combined with dedicated network monitoring solutions.

Summary

In essence, a spectrometer like the SR58 collects and transmits its own measurement data over a network, enabling remote control and multi-unit coordination. It does not function as a network traffic analyzer. To monitor broader network activity, separate network monitoring or traffic analysis tools are required, which can complement the spectrometer's network integration for operational oversight.

Article Content

Network Traffic Monitoring: What It Is and How It Works

Learn what network traffic monitoring is, how it works, and why it''s essential for detecting data exfiltration, lateral movement, and insider threats.

Network Telemetry in 2025: How It Works, Protocols and Use Cases

Network telemetry is the process of collecting, measuring, and analyzing data from network devices and traffic to gain insights into network performance, health, and security.

How to Look at Network Traffic: Essential Tools and Methods for Real ...

Learn essential tools and methods for real-time network traffic monitoring to optimize performance, detect security threats, and prevent costly outages.

Understanding Network Traffic Monitoring

Collect flow information to track how traffic is moving across the network, which applications are in use, and where congestion is occurring. Use flow analytics to monitor application,

Clustering Network Traffic Using Semi-Supervised Learning

© 2026 CGWEB NETWORK INFRASTRUCTURE - All rights reserved

This paper presents a method for clustering malicious network traffic in a semi-supervised manner. Our motivation comes from observing that certain connections made with honeypots match

Top 9 Network Traffic Analysis Software in 2026

We evaluated 20 network traffic analysis solutions across production environments, testing the performance of NetFlow, sFlow, and IPFIX protocols, as well as real-time monitoring

A Real Network Environment Dataset for Traffic Analysis

The scheme involves the collection of a large real Internet traffic dataset including encrypted and non-encrypted traffic through sensors deployed on real-world network access equipment.

Network Monitoring and Packet Capture Techniques

The tool captures packets from the network interface of the computer, allowing you to analyze the captured traffic. This method is convenient for capturing traffic in small networks or for

8 Best Network Analyzer Tools for 2025 (Paid & Free)

Deep inspection of network traffic enables admins to inspect individual data packets as they move through a network. This feature offers more than basic traffic pattern monitoring.

7 Best Best Network Traffic Analyzer Tools for 2026

It collects network traffic and bandwidth usage data from different devices using network flow protocols like jFlow, sFlow, IPFIX, and NetFlow.

11 Best Network Traffic Analyzers For Windows, Mac & Linux

Select the Best Network Traffic Analyzer based on this review of popular Network Analysis tools to analyze traffic at your home or business.

How to Monitor Network Devices: From Routers to Switches

Unlock the secrets to network device monitoring! From routers to switches, discover insights to monitor core network devices with tools, tips & techniques.

Network Traffic Monitoring and Analysis | Springer Nature Link

This chapter covers the foundations of Network Traffic Monitoring and Analysis (NTMA) by providing a thorough review of its fundamental ideas while highlighting the crucial part it plays in

What Is Network Traffic Monitoring?—IT Glossary | SolarWinds

© 2026 CGWEB NETWORK INFRASTRUCTURE - All rights reserved

Network traffic monitoring is the process of observing and analyzing the data that flows through a network. This involves tracking the movement of packets, identifying the types of traffic, and

Network Monitoring and Packet Capture Techniques

Techniques for Packet Capturing Port mirroring (SPAN): This technique involves configuring a switch to copy network traffic from one or more

What is Network Traffic Analysis (NTA)? Benefits

Network Traffic Analysis (NTA) is a method of monitoring network availability and activity to identify anomalies, including security and operational issues.

What Is Network Monitoring? Ensuring Uptime, Security ...

What network monitoring can do Network monitoring helps IT teams identify anomalous behavior and optimize network efficiency in real-time. From a business perspective, network

How to Monitor Network Traffic: Effective Tools + Alternatives

Do you want to make sure that your network is running smoothly and without issues? Monitoring your network traffic is something you want to keep in mind whether you are in charge of a

Contact Us

Continue your research online:

Website: https://cgweb.co.za
Technical inquiry: https://cgweb.co.za/project-enquiry.html

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

© 2026 CGWEB NETWORK INFRASTRUCTURE - All rights reserved