USE CASE

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Hardware Data Diodes: The Missing Piece in Your Critical Infrastructure Compliance Strategy

Challenge

Critical infrastructure remains one of the most targeted sectors for cyberattacks globally. To protect against attacks that could impact production, cause system failures or disruptions, local municipalities are increasingly obligated to demonstrate that monitoring and security connections cannot become a pathway for inbound threats.

Whether the driver is NERC CIP requirements, CJIS mandates for government agencies, or a state-specific OT security regulations, the requirement is the same: ensuring visibility into critical networks without introducing additional risk.

A regional government agency recently faced this exact challenge. Their existing industrial switches provided the network visibility needed to support monitoring and security tools. Unfortunately, like most switches, they were designed for bidirectional communication. As a result, they could not physically guarantee that monitoring connections would remain a one-way path, creating a compliance gap within their security framework.

The TAP to Tool™ Solution

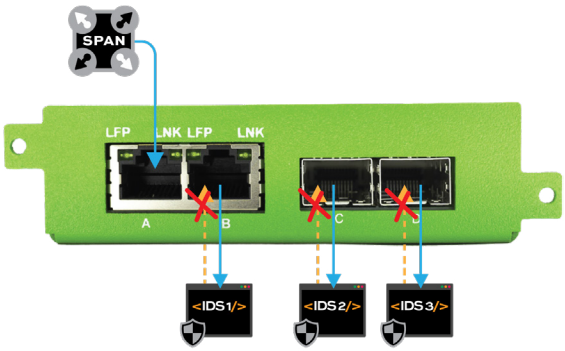
To meet new compliance requirements, the agency needed a simple way to ensure traffic flowing from their network to monitoring and security tools could not be used as a pathway for inbound threats.

Garland Technology has several simple, hardware-based solutions that can be installed into existing OT environments. Hardware Data Diodes and Network TAPs provide unidirectional traffic flow, a fit for any compliance framework that requires one-way data flow.

In this use case, the customer chose to utilize the mirroring capability of their existing industrial switches to feed multiple tools for continuous monitoring and detection. A Hardware data diode connected to each switch's SPAN port provides the physical, unidirectional path for traffic flowing from one location to another, without the possibly of flowing in the reverse direction. A simple, plug-and-play solution with no management required.

Benefits

- Physical data diode removes risk of software misconfiguration
- Eliminates risk of inbound cyber attacks from that point in the network
- Reduces complexity of deployment
- Cost effective solution to meeting unidirectional data flow requirements
- US manufactured, controlled and secure supply chain



Have Questions?

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