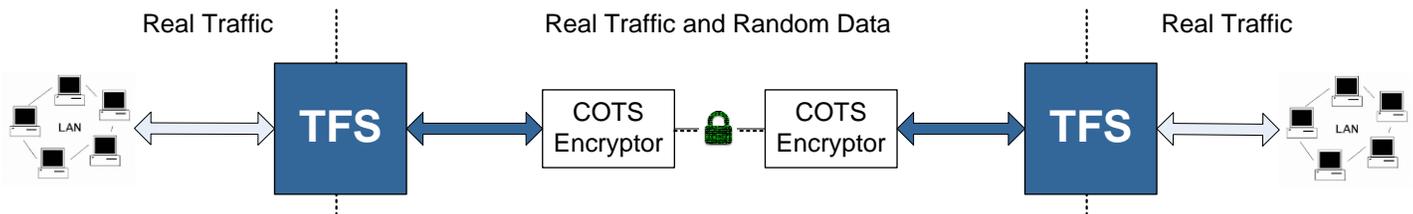


# TRAFFIC FLOW SECURITY DEVICE FOR LAYER 2 NETWORKS



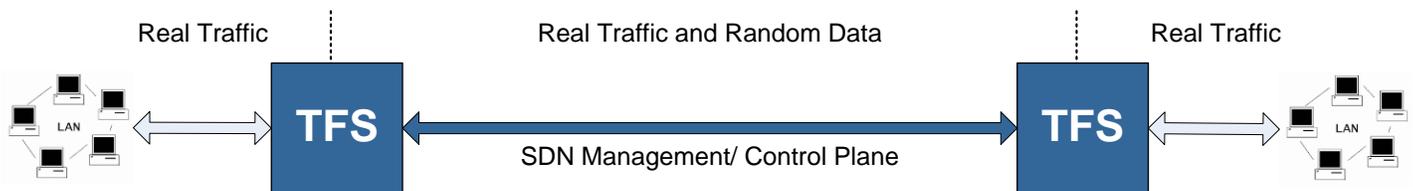
- Stand-alone Traffic Flow Security (TFS) device for Ethernet Networks
- Can be used in conjunction with a Commercial-Off-The-Shelf (COTS) encryptor to resolve a TFS gap
- Provides TFS for a Software Defined Network's unencrypted control plane
- Programmable data rates up to 10Gbps (Higher data rates - 3Q15)
- Encapsulation Methods include Fixed Sized payloads and Single User Frame (i.e., Variable)
- Available with multiple physical interfaces (e.g., fiber, copper, SFP)
- Simultaneous separation of transmit and receive data flows improves efficiency and reduces latency
- Promiscuous Mode simplifies configuration by passing all traffic to the central processor unit
- Designed in accordance with NSA Ethernet Security Standard (ESS) V1.0 Appendix B



The Traffic Flow Security (TFS) device masks the transmission of information in order to prevent interception and/or analysis of traffic patterns and characteristics. TFS is of particular importance in military applications where the activity pattern can indicate the possibility of an action being planned or executed. By intercepting and analyzing the flow of information, even encrypted information, an enemy would be able to determine the status of an operation.

In order to reduce latency and increase control, network architects have started to rely on Layer 2 encryption and Software Defined Networking (SDN). However, because they are designed for bandwidth efficient networks, TFS is not a typical feature of COTS Ethernet encryptors. Additionally, SDN is designed to separate the data plane from the management/ control plane. Since the management/ control plane is routed over a separate path than the data plane it cannot be assumed that it passes through an encryption device and is protected by TFS. Therefore, a need was identified for a standalone Layer 2 TFS device that would allow network architects to utilize low-cost COTS encryption and next generation SDN while remaining compliant with Department of Defense security requirements.

TELEGRID's standalone Layer 2 TFS Device produces a constant data stream at a programmable data rate regardless of the data rate of the input Local Area Network (LAN) connection. It can be used in conjunction with an encryptor or by itself to mask data transmission flow. The device's settings are user configurable (data rate, encapsulation method, etc.) and the unit requires little to no setup.



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