NEOX NETWORKS
NEXT GENERATION NETWORK VISIBILITY

Feature Brief

Accelerating Visibility with Header Stripping

In the ever-evolving world of Network Visibility, efficiency and performance are paramount. As networks grow in complexity and scale, techniques like Header Stripping have emerged as innovative solutions to optimize network packet data transmission for monitoring and analysis. In the context of Network Traffic Brokering, where intermediaries facilitate data communication between the network and monitoring tools, Header Stripping plays a crucial role in enhancing throughput, reducing latency, and improving overall network monitoring efficiency for observability and security.

What is Header Stripping

Header Stripping is a Network Packet Brokering function or "service" that involves distributing or "stripping" certain packet header portion of network data packets, before forwarding the packets to their destinations. In traditional networking, each packet contains one or more headers that includes metadata such as source and destination addresses, sequence numbers, and error-checking details. While headers are essential for routing and ensuring data integrity, they can introduce significant overhead or hurdle, when the information to be analyzed resides in the inner header or the payload.
Header Stripping addresses this issue by removing the unnecessary header(s) and exposing the required portion of the packets. This allows the monitoring and security tools to process data more efficiently and quickly and saves the bandwidth and resourced.

Why Header Stripping Matters

At NEOX we understand that Header Stripping is more than just a technical detail — it's a game-changer for network performance and reliability. Here's why:

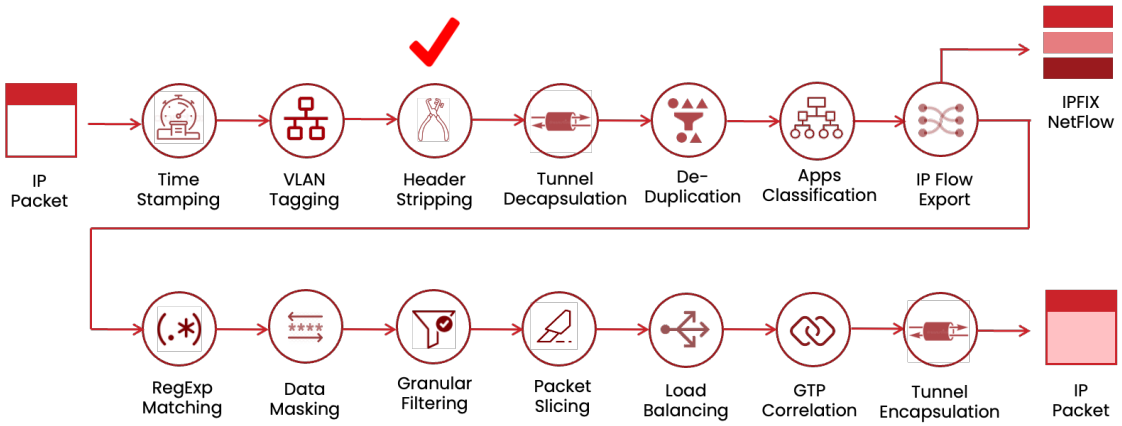
1. Reduced Overhead
   By removing unneeded header information, Header Stripping minimizes the overhead associated, allowing for more efficient use of bandwidth, as the bandwidth towards the tools is always oversubscribed and expensive. This prolongs investments.

2. Improved Throughput
   Pre-processing of Header Stripping by the NEOX Packet Brokers enables faster data transmission and processing by the tools, which are usually fewer and more expensive, offloading tools' CPU and memory resources, and improving their throughput. ,

3. Effective Load-Balancing
   NEOX Packet Brokers can provide Header Stripping to expose the right headers to load-balance the network traffic evenly across multiple paths or tools in a tool rail., preventing congestion, and ensuring optimal resource utilization.

4. Reduced Blindness
   Header Stripping enables monitoring tools to process traffic flows that would otherwise be unrecognized due to unreadable or unrecognized custom headers. It enables the interpretation of traffic collected from inter-switch and trunk links for monitoring.

5. Better Scalability
   Header Stripping supports scalable network visibility architectures, making it easier to handle increasing volumes of data and growing numbers of connected devices or links being monitored in a network.



Feature	PacketWolf	PacketLion	PacketTiger	PacketTigerVirtual
Header Stripping	✓	✓	✓	✓

How NEOX Delivers Header Stripping

At NEOX we've engineered our solutions such as PacketWolf, PacketLion, and PacketTiger, series packet brokers and processing appliances to address the challenges of modern networks. Unlike other vendors who require a license, the Header Stripping is a Free (no license needed) feature with NEOX Packet Brokers. It is by-default turned on and ready to use. Here's how we do it:

1. **Removing Standard Headers**
   Header Stripping removes packet headers and tags that can interfere with monitoring tools. Header Stripping efficiently processes packets for protocol-specific headers, such as VLAN, VXLAN, GRE, GTP, VNTAG, ERSPAN, and MPLS, and removes them before forwarding the packets to the performance or security monitoring tools. For tunneled network traffic, it removed both the header and the trailer and then forwards the packet.

2. **Removing Custom Headers**
   NEOX Packet Brokers provide a unique capability to strip headers in case of rarely used (such as MAC-in-MAC) and custom encapsulations. This is a powerful feature to provide total control over all kinds of traffic for a zero-trust security.

3. **Swapping Tags**
   In addition to stripping VLAN tags, Header Stripping on NEOX Packet Brokers can also be used to add or replace VLAN tags.

4. **Converting Timestamp Formats**
   Yet, another useful use of Header Stripping on NEOX Packet Brokers is to convert FM6000-based Timestamps to UTC-based Timestamps.

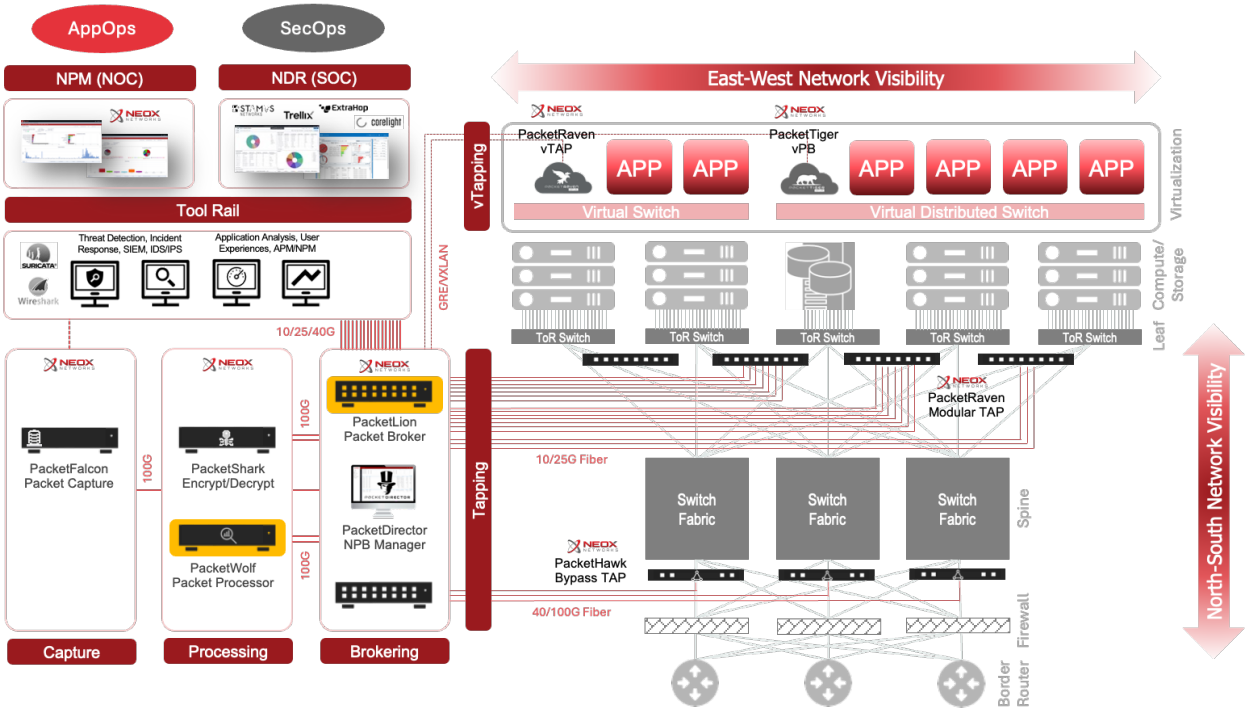
5. **Faster Processing**
   NEOX Packet Brokers can handle Header Stripping for 8 x VLANs and 8 x MPLS and strip all of those in one shot, saving tremendous processing resources and time – reducing mean-time-to-visibility.

Best Practices for Header Stripping with NEOX

To help you get the most out of your network, we recommend the following best practices to funnel, consolidate, and process all network traffic to be monitored through one of the two NEOX Packet Broker approaches:

- For better hardware performance, lower latency network, or for a future-proofed scalable visibility approach, deploy a **two-tier visibility architecture**. Use NEOX PacketLion Packet Broker for high-density TAP and tool aggregation, and use NEOX PacketWolf Packet Broker for faster Header Stripping and other packet services operations.

- For a lighter or software-driven approach, consolidate all network traffic to be monitored through a NEOX PacketTiger, and then from there to the tool rail. Same can be achieved in the cloud with PacketTigerVirtual before forwarding traffic to cloud-native monitoring or security tools.



The Future of Network Traffic Brokering Starts Here

As networks grow in complexity and speed, the importance of Header Stripping will only continue to rise. At NEOX we're committed to helping you stay ahead of the curve with innovative solutions that deliver precision, reliability, and performance

Ready to Transform Your Network?

Discover how NEOX can elevate your Network Traffic Brokering with advanced Header Stripping technology. Contact Us today or Request a Demo to learn more about our solutions and take the first step toward a smarter, faster, and more secure network.
NEOX – Precision. Performance. Perfected.

About NEOX Networks

NEOX Networks provides Next Generation Network Visibility for IT & OT Observability and Security. The result is strengthened cybersecurity, hybrid-cloud application observability, and business continuity, by integrating the network intelligence and real-time data-in-motion. Learn more at neoxnetworks.com