DYNANIC

Experience Unmatched Network Efficiency
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Use-case: *Monitoring acceleration*

Problem statement

Monitoring of what is happening is a must for any network infrastructure. Due to the significant increase of security incidents, **it is required to collect not only basic Netflow/IPFIX statistics but also to perform detailed analysis of traffic and to detect security threats.** However, this requires a lot of computing power. For fast network links, achieving the required throughput is impossible, significant packet losses occur, and many CPU cores are burned.

Solution description

DYNANIC allows ultra fast traffic processing to achieve the required throughput and prevent wasting of CPU cores. The Connection Tracking Table counts statistics from all network traffic. DYNANIC also **allows in-depth analysis of any flow with feature extraction that enables AI tools to detect undesirable behavior.** Moreover, due to the flexible filters, a selected portion of network traffic can be directly routed to IDS or stored for future analysis.

Main features

- Wire-speed hardware filters and packet capture to host even for 400 GbE
- Connection Tracking Table can apply user-defined actions on packets at the level of flows (count statistics/hashes, extract features for AI, truncate, drop, etc.)
- Hardware filters can redirect packets to one or more security and monitoring applications (IDS Suricata, Wireshark, etc.)

BRNO LOGIC

BrnoLogic offers custom design and development services for FPGA-based projects. For more than 20 years the company team members are specializing in the acceleration of algorithms required for high-speed network packet processing (e.g. packet parsing, packet/headers fields extraction, hash based pattern matching, filtering, traffic flow management, etc.). Unique portfolio of IPs for link speeds of up to 400 Gbps was also utilized to bring FPGA technology closer to any customer, where network efficiency matters. That's how **DYNANIC** solution was created.