Network Visibility with Junos Traffic Vision

Product Overview

Junos Traffic Vision provide the capability for flow monitoring. Juniper Networks MX Series 3D Universal Edge Routers with Multiservices Modular Port Concentrator (MS-MPC) and Multiservices Modular Interface Cards (MS-MICs) are able to receive sampled packets from the forwarding engine and generate summarized flow records. Such flow records are exported in RFC-compliant standard packet formats.

Product Description

Flow monitoring is a vital aspect of network management. It provides the operator information about traffic in the network and aids in tasks such as billing, traffic engineering, capacity planning, and traffic analysis for peering policy decisions.

Juniper Networks® Junos® Traffic Vision summary records give service providers the ability to collect data on packet flows, aggregate the data, and export the data to an external device. This enables usage-based accounting, traffic profiling, traffic engineering, attack/ intrusion detection, and service-level agreement (SLA) monitoring. The flow format is industry standards-based and can be exported to many third-party offline applications.

Junos Traffic Vision provides:

- Flexible deployment models and licensing options
- Flow monitoring that is transparent to the network and imposes no changes to end stations
- Flexible implementation at the individual interface, sub-interface, or virtual router level
- No impact to flow performance, no changes to networked traffic or packets

Architecture and Key Components

The MX Series 3D Universal Edge Routers Portfolio

The MX Series portfolio of Ethernet services routers is the industry leader for carrier Ethernet capacity, density and performance. Optimized for emerging Ethernet network architectures and services, the MX Series is purpose-built for the most demanding carrier and enterprise applications, and it leverages Juniper Networks Junos operating system to enable carriers and enterprises to seamlessly and cost-effectively deploy Ethernet and accelerate their next-generation network deployments. By combining a best-in-class hardware platform with the reliability and service flexibility of Junos OS, the MX Series delivers a combination of features and capabilities previously unattainable in carrier Ethernet deployments.

Multiservices Cards (MS-MPC, MS-MIC)

MS-MPCs and MS-MICs are next-generation, advanced service modules for Juniper Networks® MX Series 3D Universal Edge Routers. They deliver the performance, services, and scalability that are critical to today's advanced Ethernet services edge and broadband edge networks. MS-MPCs are full slot modules that supply hardware acceleration for an array of packet processing-intensive services for the MX2020, MX2010, MX960, MX480, and MX240 3D Universal Edge Routers. The MS-MIC is based on Juniper's MIC card hardware form and can be inserted in the MX5, MX10, MX40, and MX80 3D Universal Edge Routers, as well as the MPC1, MPC2, and MPC3 cards.

Your ideas. Connected.™

These cards offer flexible support for stateful firewall, Network Address Translation (NAT), IPsec, anomaly detection, flow monitoring and accounting, and tunnel services. This wide array of services enables service providers and enterprises to secure their network infrastructure; collect rich statistics for billing, capacity planning, and security purposes; and create new services, all with a single module.

Features and Benefits

Junos Traffic Vision is the sampling service that is available on MX Series routers, and it keeps track of the packets treated by the router on any particular interface. The details of the traffic flow (also known as flow records) such as the source address, the destination address, packets and byte counts, etc. are aggregated and reported using the flow record. Junos Traffic Vision reporting and the sampling service does not hinder the traffic forwarded and processed by the MX Series router. Prior to reporting, the router will replicate/sample the incoming traffic, eliminating any network delay due to jitter introduced on the original flows. Sampling requires the use of a firewall filter with a sample of the action to be applied to the relevant interface/Packet Forwarding Engine (PFE)/ chassis whose traffic the operator wishes to report on.

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- Junos Traffic Vision records can be created in all Juniper router platforms while they operate in active mode, forwarding production traffic. As flow analysis is packet processing-intensive, specialized service cards such as the MS-MPC and MS-MIC are used to add capacity in the number of flows and bandwidth which may be analyzed. Flow analysis in both active and passive configuration can take place alongside the lawful intercept filtering and port mirroring—without any impact on performance.

Specifications and Approvals

For a complete list of supported software features, please consult the Junos OS software documentation at www.juniper.net/techpubs/software/.

Junos Traffic Vision monitors network usage in support of troubleshooting, traffic analysis, and related operational tasks.

Support for cflowd cflowd v9, and cflowd v10 is included.

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit www.juniper.net/us/en/products-services.

Ordering Information

Model Number	Description
MS-MIC 16G	MS-MIC with 16 GB of memory, occupies single MIC slot on MX5, MX10, MX40, and MX80 3D Universal Edge Routers, as well as on the MPC1, MPC2, and MPC3 cards for the MX2020, MX2010, MX960, MX480, and MX240 3D Universal Edge Router.
MS-MPC	MS-MPC with 128 GB of memory (32 GB per NPU) occupies a single slot in MX2020, MX2010, MX960, MX480, and MX240 3D Universal Edge Routers
JTV-FLOW	Junos Traffic Vision J-FLOW

About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at www.juniper.net.

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