Junos Address Aware

Product Overview

Junos Address Aware is an addressing and tunneling software portfolio for the Juniper Networks MX Series 3D Universal Edge Routers that helps network operators conserve and extend their IPv4 address pool, ensure IPv4/IPv6 coexistence and pragmatically transition to IPv6 in a cost effective and low risk manner, for the MX 3D Series of Universal Edge Routers.

Product Description

In early 2011, the Internet Assigned Numbers Authority (IANA) allocated the last of its inventory of large block IPv4 addresses. As a result, service providers, large enterprises and universities, cloud providers, federal agencies, and others are finding it increasingly difficult to acquire large IPv4 address blocks.

Juniper Networks® Junos® Address Aware provides a comprehensive set of technologies that mitigate IPv4 address depletion while ensuring IPv4/IPv6 coexistence. These technologies include IPv4/IPv6 dual stack, and NAT44, among others, and they enable a pragmatic, business-driven transition to IPv6.

Junos Address Aware is available as licensed software for new and existing Juniper Networks MX Series 3D Universal Edge Routers, which reduces implementation risks and ensures investment protection. With extensive IP expertise, leadership on key Internet Engineering Task Force (IETF) working groups, and a broad portfolio of solutions, Juniper is uniquely qualified to help you meet your most challenging technical and business requirements.

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.

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.

Your ideas. Connected.™

Features and Benefits

- Offers low risk adoption via licensed software upgrade

- Enables customers to flexibly evaluate, select, and deploy network addressing solutions on new or previously installed MX Series devices

- Provides mature, field-proven solutions for mobile, cable, wireline, and enterprise networks

- Uses extensive application-level gateway (ALG) for nondisruptive support of popular applications that are incompatible with Network Address Translation (NAT)

- Includes user configurable session and session-rate per subscriber, as well as flows per profile limits

- Offers flexible port allocation algorithms that include port block, secure port block, round-robin across pools, random, sequential, and combinations

- Includes support for all BEHAVE RFCs: RFC 4787, RFC 5382, RFC 5508, RFC 6889, Hairpinning, EIM and EIF, EIF prefix list support, address pooling paired, preserve range and parity, TCP simultaneous open, and configurable timeouts per application

Specifications and Approvals

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

- Protocols that mitigate IPv4 address depletion and ensure IPv4 and IPv6 coexistence and smooth transition to IPv6 include:

  - Draft-ietf-behave-lsn-requirements (common requirements for carrier-grade NAT devices)

  - RFC 2663 (NAT44 and NAPT44)

  - RFC 4787 (UDP Behave), RFC 5382 (TCP Behave), RFC 5508 (ICMP Behave)

  - RFC 6146 (Stateful NAT64)

  - Draft-wing-softwire-port-control-protocol—Pinhole Control Protocol (PCP)

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
JAA-NAT	Junos Address Aware CGNAT

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.

JUNIPER
NETWORKS

1000455-001-EN Mar 2015