Junos VPN Site Secure

Including Site-to-site and Group VPN

Product Overview

Junos VPN Site Secure uses a variety of standard encryption techniques to secure network communications between the customer premises and the network edge. This adds security to traffic over L3 VPNs, and it enhances end-user security.

Choose between Site-to-site VPN or Group VPN, depending upon your implementation.

- Choice of Site-to-site or Group VPN design
- Use of industry standard proven cryptography
- Any to any secure communication
- Simplify management of secure branch-to-branch communication
- Secure encryption for site-to-site, private IP or MPLS networks
- Encrypt all WAN traffic, meeting security compliance and internal governance
- Group VPN maintains full-mesh connectivity and routing paths, without the management and performance cost of a full mesh network.

Product Description

Juniper Networks® Junos® VPN Site Secure implements IPsec encryption using Advanced Encryption Standard (AES), Data Encryption Standard (DES), and triple Data Encryption Standard (3DES). With Junos VPN Site Secure, enterprises can provide IPsec encryption to enhance data security. Providers can offer IPsec encryption of access links from the customer premises device to the provider edge router, charging a premium for secure access to the network. The packets can then be securely forwarded or mapped into Layer 3 VPNs for transport across the provider network.

This application is particularly useful when offering a service to a customer whose access links are provisioned by a third-party provider. For the most concerned customers, providers can also offer IPsec encryption of unicast or multicast traffic over L3 VPNs for an added layer of security. IPsec may also be used to encrypt backhaul traffic by setting up encrypted tunnels across untrusted third-party wholesale networks.

Juniper Networks Group VPN is a different way to provide secure, any-to-any VPN connectivity between branch offices and anywhere within your network. Group VPN simplifies the management issue brought on by growing networks while improving performance for bandwidth heavy applications.

Architecture and Key Components

MX Series Portfolio

Juniper Networks MX Series 3D Universal Edge Routers are industry-leading Ethernet services routers 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. 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.

Site-to-site VPN

Junos VPN Site Secure utilizes an IPsec VPN tunnel consisting of tunnel setup and applied security. During tunnel setup, the peers establish security associations (SAs), which define the parameters for securing traffic between them. After the tunnel is established, Junos VPN Site Secure protects the traffic sent between the two tunnel endpoints by applying the security parameters defined by the SAs during tunnel setup. Junos VPN Site Secure protects user data via IPsec encryption, and tunnel mode is useful for protecting traffic between different networks when traffic must pass through an intermediate untrusted network.

Group VPN

Juniper Group VPN is a method of encrypting communication between branch offices or within the data center core that is an alternative to site-to-site VPN over an MPLS network. This approach defines groups of VPN participants (Group Members) where each peer has a single tunnel to a defined group. The VPN Group is defined and controlled by the Group Controller, which also plays the role of the Key Server (issuing encryption keys for the group). A Group Member is a member of a particular VPN group, and can communicate securely to others in their defined group.

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 VPN Site Secure offers a variety of encryption standards to ensure secure communications, especially for traffic in L3 VPNs that traverse third-party access links or transit wholesale networks.

Encryption algorithms (RFC 2405, RFC 2410):

- Advanced Encryption Standard (AES) (128, 192, and 256 bit)
- Triple Data Encryption Standard (3DES), DES, null

Authentication Hash Algorithms (RFC 2403, RFC 2404):

- Message Digest 5 (MD5); SHA-1 and SHA-2 (aka. SHA-256)
- Fully qualified domain name (FQDN)
- IPv6 for IPsec (RFC 2460)

Internet Key Exchange (IKE) modes:

- IKE v1, IKEv2 support
- Main/aggressive mode supported for IKE SA setup; quick mode supported for IPsec SA setup
- Digital certificates (X.509) VeriSign; entrust

IPSec VPN Designs

- Site-to-site VPN
- Group VPN

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.

What to Buy

Junos VPN Siite Secure adheres to the Juniper Software Advantage pricing model, thus please be advised of the following items that constitute an order:

- Select a software license based on the throughput required. The license is either subscription (fixed term) or perpetual (unlimited term).
- A subscription software license includes Juniper Care Software Advantage, entitling you to software updates and upgrades, 24x7 remote technical support, and online support.
- A perpetual software license excludes Juniper Care Software Advantage; the latter must be purchased.
- If your order includes a hardware product/platform, select a hardware license based on your networking, connectivity, and/or security requirements (e.g., interface options, I/O, services). You may need to purchase additional licenses in support of the base hardware license (e.g., power cables, network interface cards).
- If this is a virtual appliance/software product, you would not buy any hardware license from Juniper, but, instead, procure the hardware elsewhere. For information on supported hypervisor(s) and virtual machine (VM) requirements, please refer to the technical documentation for this product on our website (www. juniper.net) under the support section.

Juniper Networks products are sold directly as well as through Juniper partners and resellers. For more information on the Juniper Software Advantage business model, please visit www. juniper.net/us/en/products-services For information on how to buy, please visit: www.juniper.net/us/ en/how-to-buy.

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
JVPN-ES	Junos VPN Site Secure IPSEC for Site-to-site and/or Group VPN

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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