



JUNIPER CONNECTED SECURITY DELIVERS COMPREHENSIVE PROTECTION FOR NUTANIX ENTERPRISE CLOUD

Microsegmentation with end-to-end security for the multicloud

Challenge

Perimeter security solutions that block threats contained in north-south traffic entering or leaving the data center cannot defend against threats introduced by compromised virtual machines that infect east-west traffic flowing within the enterprise multicloud between applications and services.

Solution

Juniper's connected security solutions, working with the Nutanix Flow software-defined network offering and Acropolis hypervisor (AHV), enable microsegmentation to secure applications and defend against lateral threat propagation in the enterprise multicloud.

Benefits

- Protect the business by delivering advanced security services, including user and application firewall, advanced threat prevention, and IPS
- Protect virtual workloads through effective microsegmentation
- Provide granular visibility and analytics
- Enable consistent policy enforcement across cloud deployments with single-pane-of-glass management

Hyperconverged infrastructure (HCI) technology combines compute virtualization, storage, and networking resources into a single, easily deployable solution. Due to its simplicity and ease of management, HCI is widely deployed in multicloud environments with agile data centers. The highly dynamic applications that run in these environments need a security solution that can deliver comprehensive protection without compromising scale or agility.

The Challenge

Manual, rigid, and static connectivity and security implementations might work in traditional network environments. In the multicloud era, however, where application requirements are highly dynamic, network security must be an agile and scalable partner to compute and storage.

Enterprise multiclouds typically employ perimeter security solutions to block threats contained in north-south traffic entering or leaving the HCI. Effective as they are, these solutions cannot defend against threats introduced by compromised virtual machines (VMs) that infect east-west traffic flowing within the data center itself, between applications and services. If these threats are not identified and addressed in a timely manner, it could compromise mission-critical applications and lead to the loss of sensitive data, causing irreparable harm to an organization's revenue and reputation.

Juniper Networks Connected Security for Nutanix Enterprise Cloud Deployments

Juniper's security solutions work with Nutanix Enterprise Cloud to provide advanced security, consistent management, automated threat remediation, and effective microsegmentation—delivering a secure and automated solution for defending today's multicloud environments.

The Juniper Networks and Nutanix joint solution includes the following key components:

- **Juniper Networks® vSRX Virtual Firewall:** The vSRX offers the same full-featured advanced security as the physical Juniper Networks SRX Series Services Gateways, but in a virtualized form factor. Handling speeds up to 100 Gbps, making it the industry's fastest virtual firewall, the vSRX delivers:

- Core next-generation firewall (NGFW) functionality, which offers user- and application-based firewalling along with intrusion prevention system (IPS) functionality to detect and block network intrusions. By delivering the highest firewall performance per core, the vSRX offers the industry's lowest TCO.
- User-based firewalls that analyze, log, and enforce access control based on user roles and groups.
- Application control and visibility with integrated Juniper Networks AppSecure 2.0, which provides application-level analysis, prioritization, and blocking to safely enable applications.
- **Junos Space® Security Director with Policy Enforcer:**
Juniper Networks Junos Space Security Director allows network operators to manage a distributed network of virtual and physical firewalls from a single location. Serving as the management interface for the vSRX Virtual Firewall, Security Director manages the firewall policies on all vSRX instances, providing consistent policy management across environments. It includes a customizable dashboard with detailed drill downs, threat maps, and event logs, providing unprecedented visibility into network security. Remote mobile monitoring is also possible via a mobile app for Google's Android and Apple's iOS systems.

Policy Enforcer, a component of Security Director, is a central policy orchestration module that extends Security Director's capabilities by consolidating threat intelligence from multiple sources and enforcing controls at the network level in addition to perimeter firewalls.
- **Nutanix AHV:** Nutanix AHV is an enterprise-class virtualization solution included with the Acropolis Enterprise Cloud OS, with no additional software components to license, install, or manage. Starting with proven open-source virtualization technology, AHV combines an enhanced data path for optimal performance, security hardening, flow network virtualization, and complete management features to deliver a leaner yet more powerful virtualization stack with no software bloat, no costly shelfware, and lower virtualization costs.
- **Nutanix Prism:** Nutanix Prism is an end-to-end management solution for virtualized data center environments that streamlines and automates common workflows, eliminating the need for multiple management solutions across data center operations. Powered by advanced machine learning technology, Prism analyzes system data to generate actionable insights for optimizing virtualization and infrastructure management.

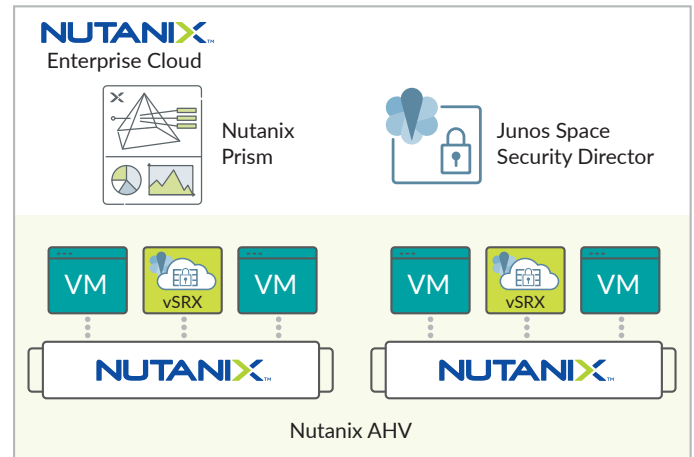


Figure 1: Nutanix AHV deployed with vSRX Virtual Firewall and Junos Space Security Director

Microsegmentation facilitates granular segmentation and control by applying security policies at the virtualized host level. From a security perspective, the more granular level at which a threat can be blocked, the more effective the defense will be in containing the threat's propagation. Administrators must augment their perimeter security solutions with microsegmentation and automated threat remediation, providing the visibility and control required to protect lateral data center traffic from common breaches.

Junos Space Security Director manages vSRX virtual firewalls deployed on each node of a Nutanix AHV cluster, and it acts as unified security policy manager to apply consistent policies across all vSRXs in Nutanix-based private and public clouds (AWS/Azure).

Traffic between VMs and applications is redirected through the vSRX, allowing NGFW security services with advanced threat prevention to be provisioned. Security policies enforced on traffic inside the enterprise cloud augment the Nutanix HCI with microsegmentation, blocking sophisticated threats that propagate laterally while identifying and controlling application and user access. This enables security administrators to isolate and segment mission-critical applications and data using zero-trust security principles.

Features and Benefits

The following table outlines the primary features and benefits of the joint Juniper-Nutanix solution.

Table 1. Features and Benefits

Features	Benefits
Advanced security	Protects the business by providing NGFW security services, including user firewall, application firewall, advanced threat prevention, and IPS
Microsegmentation	Instantaneously blocks lateral threats from propagating in the east-west direction
Intent-based	Creates consistent, pervasive security policies using application metadata
Visibility	Provides visibility into application, user, IP behavior, and activity
Automation	Offers rich APIs and automation libraries from Nutanix and Juniper Networks to enable agile DevOps workflows; a deeper integration between the partners will soon deliver improved security response through unified automation of security and networking workflows
Operational simplicity	Streamlines policy deployment with single-pane management and simple, intuitive controls across the multicloud

Summary—Juniper and Nutanix Secure Enterprise Multicloud Environments

The joint Juniper Networks-Nutanix hyperconverged solution helps enterprises secure their multicloud environments with advanced security, consistent management, automated threat remediation, automation, and effective microsegmentation. Enterprises can now easily deploy a secure and automated multicloud without the overhead of operational and management complexity. Juniper's vSRX is certified for the Nutanix AHV and is available now.

Next Steps

For more information about Juniper Networks, please visit www.juniper.net. For more information about Nutanix, please visit www.nutanix.com.

About Nutanix

Nutanix makes infrastructure invisible, elevating IT to focus on the applications and services that power their business. The Nutanix enterprise cloud platform leverages web-scale engineering and consumer-grade design to natively converge compute, virtualization, and storage into a resilient, software-defined solution with rich machine intelligence. The result is predictable performance, cloud-like infrastructure consumption, robust security, and seamless application mobility for a broad range of enterprise applications.

About Juniper Networks

Juniper Networks brings simplicity to networking with products, solutions and services that connect the world. Through engineering innovation, we remove the constraints and complexities of networking in the cloud era to solve the toughest challenges our customers and partners face daily. At Juniper Networks, we believe that the network is a resource for sharing knowledge and human advancement that changes the world. We are committed to imagining groundbreaking ways to deliver automated, scalable and secure networks to move at the speed of business.

Corporate and Sales Headquarters

Juniper Networks, Inc.
1133 Innovation Way
Sunnyvale, CA 94089 USA
Phone: 888.JUNIPER (888.586.4737)
or +1.408.745.2000
Fax: +1.408.745.2100
www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.
Boeing Avenue 240
1119 PZ Schiphol-Rijk
Amsterdam, The Netherlands
Phone: +31.0.207.125.700
Fax: +31.0.207.125.701

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