

VM-Series and Nutanix Flow Virtual Networking

Securing Nutanix AHV Workloads with Flow Virtual Networking and VM-Series Firewalls

Benefits of the Integration

- Leverage current security tool sets and investments to secure your networks, data, and applications.
- Remove complexity and the need for additional resources to accelerate security operations and provide actionable insights.
- Extend and create multitenant networks that simplify and ensure segmentation of workloads across clouds.

The Challenge

A virtual private cloud (VPC) is an isolated, logical unit of a provider network where a customer (tenant) has complete network control, from defining IP address ranges to the creation of subnets, gateways, and the configuration of routing tables. In the past, when a private cloud network had to be connected to a public cloud network, multiple challenges necessitated hard-to-manage workarounds or multiple products to create a hybrid cloud solution. Furthermore, the ability to secure and apply policies across clouds was difficult and clunky.

The Solution

Providing a cloud network solution with multitenant VPC capabilities, customers can have total control of where and how applications and data communicate, even across clouds. This holistic “defense-in-depth” approach removes the complexity of multiple competing products and aligns cloud strategies. Defined by software and backed by a policy engine that delivers just-in-time routing decisions, organizations can refocus critical network and security resources without increasing security risks to more strategic business initiatives.

Nutanix Flow Virtual Networking

Nutanix Flow Virtual Networking for AHV virtualization brings together the VPC with other advanced virtual networking constructs to bridge traditional and cloud-native network models. This use of a software-defined approach simplifies the infrastructure and removes the need for costly hardware segmentation solutions or more complex and static physical network architectures. Finally, it forms the first layer of defense by helping ring-fence a group of workloads within the VPC.

Palo Alto Networks VM-Series Virtual Firewalls

The Palo Alto Networks VM-Series Virtual Next-Generation Firewall consistently protects public and private clouds, virtualized data centers, and branch environments by delivering inline network security and threat prevention.

Palo Alto Networks and Nutanix Flow Virtual Networking

Nutanix provides a hybrid cloud network solution with multitenant VPC capabilities on a Nutanix AHV cluster with Flow Virtual Networking and policy-based routing with the Palo Alto Networks VM-Series virtual firewall deployed as a high availability (HA) pair. Multiple network benefits and best practices extend from this combined solution, while also delivering best-in-class network security that utilizes multiple layers of defense and segmentation.

Palo Alto Networks VM-Series virtual firewall is deployed inside a Nutanix Flow Virtual Networking VPC on Nutanix AHV and managed by a Palo Alto Networks Panorama® appliance deployed virtually outside the VPC network, as a best practice.

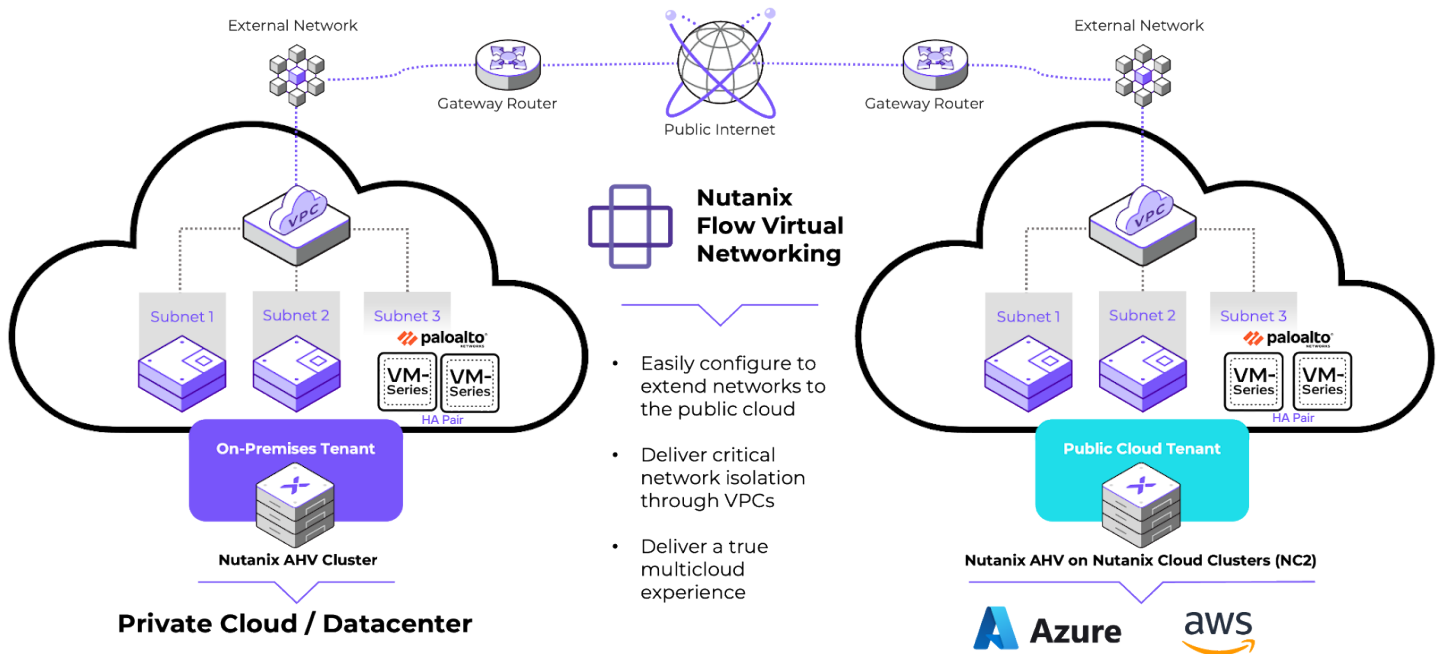


Figure 1: Palo Alto Networks and Nutanix integration

Use Case: Securing Nutanix Workloads with Policy-Based Routing

Challenge

Customer workloads deployed in Nutanix AHV overlay networks need additional security over and above native AHV security to protect their application and data. Base-level security features that look at the IP and port are not sufficient to protect workloads and data from threats at the application layer. Hence, advanced security features such as those available from a next-generation firewall become a requirement.

Solution

Palo Alto Networks and Nutanix provide a comprehensive solution for the security and networking of workloads deployed on the Nutanix Cloud Platform. Using Nutanix Flow Virtual Networking VPCs, traffic to and from VPC instances is sent to the data interface of the Palo Alto Networks VM-Series virtual firewall deployed within a tenant's Nutanix VPC in HA active/passive mode for delivery of advanced security functions.

VPCs further enable control of other tenant network functions and services like IP address ranges, subnets, routing, and gateways, which can then extend to public clouds like Amazon Web Services (AWS) and Azure, creating a hybrid cloud. This model also provides reach within VPC environments to networks beyond the scope of Nutanix VPCs.

Palo Alto Networks and Nutanix Integrations

Product integrations between Palo Alto Networks and Nutanix include:

- [VM-Series Compatibility Matrix](#)
- [Panorama Compatibility Matrix](#)
- [Panorama Plugin for Nutanix \(Dynamic Address Groups\)](#)
- [Palo Alto Networks Calm Blueprint and Nutanix FLOW](#)

About Nutanix

Nutanix is a global leader in cloud software, offering organizations a single platform for running applications and managing data, anywhere. With Nutanix, companies can reduce complexity and simplify operations, freeing them to focus on their business outcomes. Learn more at www.nutanix.com.

About Palo Alto Networks

Palo Alto Networks is the global cybersecurity leader, committed to making each day safer than the one before with industry-leading, AI-powered solutions in network security, cloud security, and security operations. For more information, visit www.paloaltonetworks.com.



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