

DevOps Reference Architecture with Canonical

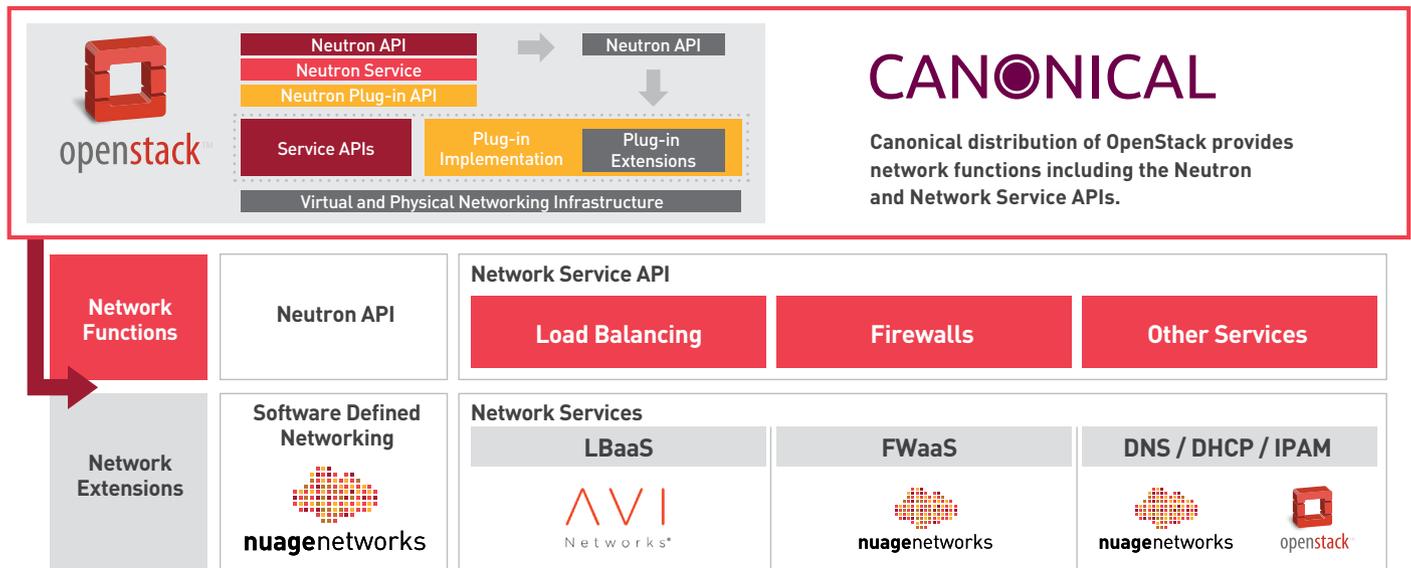
[Nuage Networks Ecosystem Program](#)

is a complete ecosystem of networking partners, system integrators, open source community projects, and developers. Leveraging Software Defined Networking from Nuage Networks, the program provides complete solutions for public and private clouds and validates components for custom efforts.

The Ecosystem Program provides reference architectures based on existing, proven and operational models that have been deployed at customer sites. This DevOps reference architecture leverages [Nuage Networks Virtualized Services Platform \(VSP\)](#), an industry-leading SDN solution, and includes:

- Canonical Ubuntu OpenStack® distribution for network functions and APIs
- Avi Networks Cloud Application Delivery Platform (CADP) for Load Balancing as a Service (LBaaS)
- Nuage Networks VSP for Firewall as a Service (FWaaS)
- Nuage Networks VSP and OpenStack for DNS, DHCP, and IP Address Management (IPAM)

Canonical networking is managed by Nuage Networks VSP with service insertion from leading vendors



Ecosystem Partners

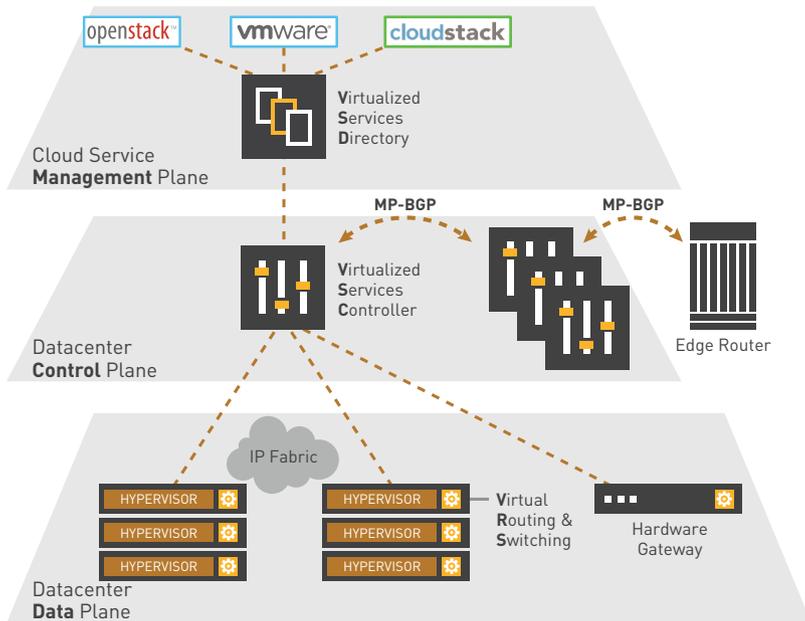
Ubuntu OpenStack is arguably the world's most popular operating system for OpenStack. The Canonical Distribution of Ubuntu OpenStack includes a web-based wizard, also known as Ubuntu Autopilot, to guide administrators through the configuration process, enabling the deployment of working cloud in minutes while recommending the best utilization of resources. Additionally, Ubuntu OpenStack offers a portfolio of tools to help build, manage and scale clouds, a thriving ecosystem of partners and a complete range of commercial support and management packages.

Avi Networks Cloud Application Delivery Platform (CADP) is a software-based application delivery solution with integrated analytics for on-premise and cloud-based applications.

- CADP with Hydra™ Architecture: At the heart of the Avi Networks CADP is a revolutionary analytics-driven distributed services architecture called HYDRA™ (Hyperscale Distributed Resources Architecture). Based on SDN principles, HYDRA separates the data plane from the control plane — an industry first for Application Delivery Controllers (ADC) and load-balancers.
- Closed-Loop Application Delivery™: The HYDRA architecture components — Inline Analytics™ and Distributed Microservices™ modules— are tightly interwoven, resulting in the industry's first closed-loop application delivery solution. Distributed Microservices continuously and automatically adjust the performance, placement, and capacity of application delivery services based on end-user and application insights derived by the Inline Analytics™ module.



Nuage Networks Virtualized Services Platform

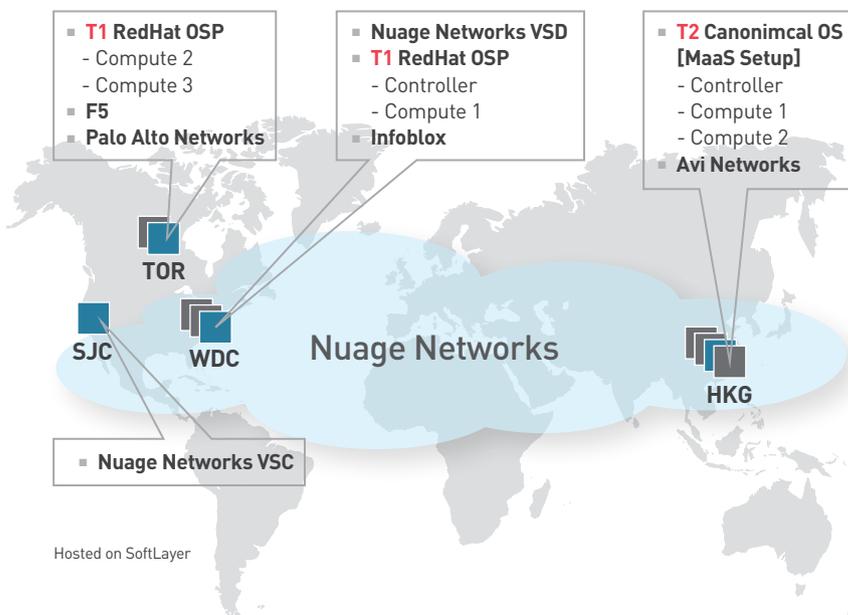


- 
Nuage Networks Virtualized Services Platform (VSP)
- 
Virtualized Services Directory (VSD)
 - Network Policy Engine — abstracts complexity
 - Service templates and analytics
- 
Virtualized Services Controller (VSC)
 - SDN Controller, programs the network
 - Rich routing feature set based on Alcatel-Lucent SR-OS
- 
Virtualized Routing & Switching (VRS)
 - Distributed switch/router — L2-4 rules
 - Integration of bare-metal assets

Nuage Networks VSP lays the foundation for an open and dynamically controlled datacenter network. The enhanced datacenter network accelerates application programmability, facilitates unconstrained mobility, and maximizes compute efficiency for cloud service providers, web-scale operators and leading tech enterprises across the globe. Nuage Networks VSP eliminates the constraints that have limited the responsiveness and efficiency of the datacenter network. The solution:

- Makes datacenter networks as dynamic and consumable as compute infrastructure
- Eliminates cumbersome configuration-driven processes for datacenter networking
- Simplifies the definition of network service requirements and policies
- Scales to meet the demands of thousands of tenants with unique application requirements, distinct security policies, and committed service levels

Federated DevOps Environment



Ecosystem Program DevOps Environment

For the program's DevOps environment, Nuage Networks leveraged SoftLayer®, an IBM® company, to host the physical server infrastructure in four distinct geographical regions: San Jose, CA; Washington, DC; Toronto, Canada; and Hong Kong.

Leveraging Nuage Networks VSP, Nuage Networks overlaid a logically contiguous LAN over the dispersed infrastructure to create a single network for the OpenStack deployment and related services. By federating four separate datacenters into one logical topology, Nuage Networks created a more reliable, resilient and geographically dispersed infrastructure while reducing operational complexity.

For more information on the Nuage Networks Ecosystem Program, visit www.nuagenetworks.net/partners.