Datacenter Cloud Networking with Nuage Networks and Red Hat®

SOLUTION OVERVIEW

The Nuage Networks and Red Hat® SDN-based cloud solution makes your network more agile, flexible, and automated. With this solution, you can launch network services for cloud applications faster, reduce operational costs, and take full advantage of cloud technologies.

SOLUTION FOR

Telecommunications industry, particularly those focused on cloud-based service offerings.

OpenStack® is an open source infrastructure as a service (IaaS) initiative for creating and managing large groups of virtual private servers in a datacenter. Red Hat Enterprise Linux® OpenStack Platform is the production-ready solution for enterprise hybrid clouds.

76% of telecommunications financial executives consider the cost-reduction opportunities of the cloud to be strategically important to their business.

Source: *KPMG, 2013 Media and Telecommunications Industry Outlook Survey*, July 2013.
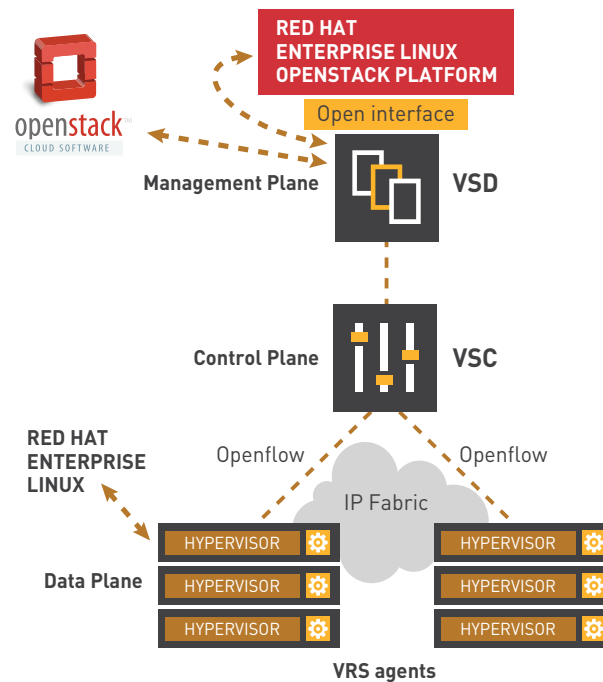
- Build agile datacenters, ready for the scale and flexibility that customers demand from cloud services
- Improve agility and responsiveness while reducing operating complexity and costs
- Smooth integration of LAN and WAN services, and extend the benefits of a hybrid cloud to all your customers' locations

Nuage Networks and Red Hat offer a workload-centric SDN-based cloud solution that virtualizes and simplifies your datacenter network, so you can maximize the value of your cloud infrastructure.

Cloud services promise rapid, cost-effective instantiation of workloads, to drive business agility and simplify operations. To deliver on this promise, however, datacenter networking must be as agile and flexible as the rest of the cloud market. Complex, static networking models require tedious, error-prone manual programming, which increases operational costs, reduces efficiency, and delays the availability of network services for cloud services. This restricts cloud operations and prevents you from taking full advantage of your infrastructure.

Moving to a virtualized, Software Defined Networking (SDN) model will provide your datacenter network with access to all the benefits of the cloud.

With enhanced network flexibility, automated network management, and scalability across multiple tenants and datacenters, Nuage Networks and Red Hat help you launch cloud services faster, dramatically reduce costs, and increase the efficiency of your cloud infrastructure. An open hybrid cloud based on Nuage Networks and Red Hat will allow you to compete effectively in the growing cloud market.

Solution features and benefits

Cloud services are a significant revenue opportunity for service providers, but if service instantiation is delayed, you risk losing market share to competitors. Based on a unique, workload-centric approach, the Nuage Networks and Red Hat SDN-based cloud solution abstracts application networking requirements from your physical network topology to streamline management operations and improve agility. Programmable business logic and a powerful policy engine let you define Level 2-4 network requirements once in simplified application terms and ensure compliance with resource policies across your infrastructure on a per-tenant and per-application basis.

Service-driven network instantiation reserves network resources as they are required and without manual intervention, allowing the demands of cloud services to be quickly met for thousands of users. This frees network administrators to focus on critical issues.

Seamless interoperability across multiple administrative domains and datacenters lets you place cloud workloads optimally across your infrastructure, improving server utilization and allowing cloud bursting and hybrid cloud services.

Nuage Networks Virtualized Services Platform (VSP)

Virtualized Services Directory (VSD)
- Programmable policy and analytics engine lets you define and enforce resource policies in a user-friendly manner

Virtualized Services Controller (VSC)
- Functions as a network control plane and enables federated and highly scalable networks

Virtual Routing and Switching (VRS)
- An enhanced Open vSwitch, makes up the network forwarding plane and applies the Layer 2-4 traffic policies defined in the VSD
- Tracks virtual machine creation, migration and deletion to dynamically adjust network connectivity

About Nuage Networks

Nuage Networks strikes at the heart of the cloud networking challenge: Choreographing datacenter and wide-area networks to maximize responsiveness, utilization and visibility. Nuage Networks delivers a highly programmable infrastructure that bridges the gap between the application-centric view and the equally important network-centric view, realizing the full power of SDN. The Nuage Networks solution combines groundbreaking SDN and virtualization techniques with unmatched networking expertise to deliver a massively scalable solution that consistently spans datacenters and remote locations. Our solution enables enterprise IT to respond instantly and securely to the demands of users and applications anywhere.

Discover more at **www.nuagenetworks.net** and follow us **@nuagenetworks**