UPMC boosts virtualized application deployment speed with SDN

UPMC LIFE CHANGING MEDICINE

UPMC is a world-renowned health-care provider based in Pittsburgh, Pennsylvania and the largest non-governmental employer in the state with over 62,000 employees.

Business benefits

- Dramatically faster application deployment times inside the enterprise

- Ability to leverage existing investments in third-party virtualization and networking infrastructure

- Increased operational simplicity and agility for both physical and virtual workloads

- Ability to span to separate data centers over an MPLS network to provide a contiguous networking infrastructure

Challenge

University of Pittsburgh Medical Center (**UPMC**) is a world-renowned healthcare provider, generating $11 billion annually with more than 62,000 employees. The enterprise has more than 450 sites, including 21 hospitals. The entire operation is supported out of two data centers tied together over an MPLS core network.

Prior to server virtualization, **UPMC**'s network topology was quite stable. Applications took several weeks to deploy and lasted 3-4 years before any further change was needed.

Approximately 90% of **UPMC**'s applications are virtualized. Once virtualization was underway with operational workloads, it became clear that the network, designed for a non-virtualized world, had become a problem.

"Virtualization has changed everything. Application deployment is slowed by the network," said Bill Hanna, Vice President of Technical Services at **UPMC**. Given **UPMC**'s geographical scope and the excellence with which it must care for its customers, it became critical to resolve the problem.

Solution

To resolve the networking bottleneck imposed by application virtualization, **UPMC** turned to Nuage Network's Virtualized Services Platform (VSP) solution. VSP is a software defined networking (SDN) solution that is hypervisor-agnostic and is capable of working with any existing hardware.

UPMC elected to deploy an SDN solution with Nuage Networks because the solution worked well with the VMware-based server virtualization solution and the existing Cisco Nexus switches and Juniper firewalls in its data centers. Moreover, because the distributed virtual switches are based on the tested and proven Nokia Service Router Operating System (SR OS) codebase, stability and reliability of the virtual network are a given.

The results are more operational simplicity, better control over both physical and virtual workloads, better quality of service for key applications by being able to state the required bandwidth and priority for east-west traffic of any application, and a reduction in human errors by virtue of an intuitive and robust GUI instead of an error-prone command line interface found in legacy networking gear. Applications' time to market has improved, as has the quality of healthcare provisioning at **UPMC**.

"When people ask me if I am comfortable with Nuage Networks, I say that I am very comfortable. This view is based on how well my core systems are running.

We conducted a number of SDN tests. The system is highly automated. Network configuration parameters no longer get in the way."

Bill Hanna, Vice President of Technical Services, University of Pittsburgh Medical Center

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