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HP Advances Software-Defined Networks with Integrated Infrastructure, Controller and Application Solutions [1]

New offerings increase agility through ?single control plane? to abstract, program and automate the entire network

PALO ALTO, Calif., Oct. 2, 2012

<http://www.hp.com/hpinfo/newsroom/press/2012/121002a.html> [3]

HP today announced the industry?s first open-standards-based software-defined network (SDN) technologies to span infrastructure, control software and application layers with a ?single control plane? that enables enterprises and cloud providers to simplify and maximize agility across data center, campus and branch networks.⁽¹⁾

?To solve the challenges created by legacy networks, organizations need the ability to automate the network from end to end by leveraging SDN to abstract the control plane from the physical infrastructure,? said Joe Skorupa, vice president and distinguished analyst, Gartner. ?For maximum performance, utilization and simplicity, customers must ensure that there is a suite of SDN technologies across the entire network?from the hardware infrastructure to the control plane to the applications, and also from the data center to the desktop?in order to move beyond today?s complexities and improve business agility across the enterprise.?

As companies move to cloud and other computing environments, manual configuration of networks through command-line interface (CLI) coding has proven to be error prone, as well as time and resource intensive. SDN overlay-point products offer a centralized control plane, but fall short by not enabling automated configuration of network infrastructure or providing SDN applications to roll out new services for campus and branch networks. This incomplete approach creates complexity and unnecessary manual coding requirements.

The new HP technologies announced today cover all layers by including an SDN controller, and SDN applications, services and solutions that further strengthen HP's Virtual Application Networks [4] strategy. As a result, clients can achieve the full potential of SDN technologies through the abstraction, programming and automation of their network to improve scalability and agility, while simplifying the deployment of applications and services.

?In the cloud era, clients need a single point of control for the entire network, which enables them to deploy any application or service directly to the user within minutes,? said Bethany Mayer, senior vice president and general manager, Networking, HP. ?Only HP provides clients with a complete software-defined network solution that automates manual configuration tasks across hardware, software and applications and from data center to desktop through a single control plane.?

Industry's first complete SDN solution to increase network agility

HP is the first to offer SDN technologies for all three critical layers?infrastructure, control software and application?to simplify networks and improve agility across the enterprise. These layers create a complete, open SDN hardware and software solution that provides a single point of control for the entire network.

The infrastructure layer delivers open programmable access through OpenFlow, a networking protocol that automates hardware configurations.

- New SDN functionality in the infrastructure layer enables clients to simplify network configuration. HP today announced nine additional switch models providing OpenFlow-enabled [5] support for HP FlexNetwork architecture [6], offering clients a flexible and programmable standards-based interface. The addition of the new HP 3800 [7] switch series to the 16 existing models in the product portfolio reaffirms HP as the only major networking vendor with more than 15 million installed OpenFlow-enabled ports.(1)

The control-software layer creates a centralized view of the network.

- Within the control layer, the new HP Virtual Application Networks SDN Controller [8] abstracts the physical hardware from the logical deployment, providing a centralized view and automating network configuration of all devices in the infrastructure. By eliminating thousands of manual CLI entries, the controller enables network administrators to easily and flexibly program and scale their network environment for single-touch automated applications. It also provides application program interfaces (APIs) to third-party developers to integrate custom enterprise applications.

?We recognized the need to scale our perimeter firewall capacity to cope with the increase of internet traffic,? said Jean-Michel Jouanigot, communication systems group leader, IT Department, CERN. ?In the framework of the CERN openlab R&D collaboration, we are developing with HP's software defined network technologies a load-balancing application for

the Virtual Application Networks SDN controller to distribute network traffic across multiple devices including firewalls and servers, increasing simplicity while reducing cost and bandwidth bottlenecks.?

The application layer delivers open programmable interfaces to automate applications across the network.

- New HP Virtual Cloud Networks software enables cloud providers to deliver automated and scalable public cloud services to enterprises. Using this software, enterprises can create an isolated virtual cloud network environment through a self-service public cloud infrastructure, providing them complete control for introducing new services and applications to their users.
- Also at the application layer, the new HP Sentinel Security software application automates network access control and intrusion prevention security for enterprise campus networks with existing OpenFlow-enabled switch hardware through HP's controller. As a result, clients can eliminate the complexity and expense of dedicated networking hardware appliances, while achieving scalable security needed for bring-your-own-device (BYOD) initiatives.

?With the growing demand for digital creation and distribution of our content, we recognized the need to enable scalable security across HBO's entire network infrastructure without investing in additional equipment,? said Walter Kerner, vice president, Network Services and IT Security, HBO. ?To do so, we began working closely with HP on their breakthrough software-defined network-based Sentinel Security application, which delivers security across our existing hardware infrastructure and gives us a better view of security inside the network instead of just at the edge, while improving business agility with simple network automation.?

Industry's first SDN services portfolio focused on people, process and technology

New offerings from HP Technology Services [9] guide clients through SDN roadmap development, architecture creation, governance preparedness and proof of concept. These include services to design, deliver and implement on the promise of HP Virtual Application Networks. New SDN services include:

- HP Transformation Experience Workshop provides insight into SDN transformation benefits and IT implications from the perspective of people, process and technology.
- HP Network Provisioning Baseline Assessment Service assesses the current network resource provisioning time required to deploy applications.
- HP SDN Proof of Concept Service assesses and reports provisioning time improvements achieved with HP Intelligent Management Center [10] (IMC) and HP Virtual Application Networks technologies.

HP at Interop New York 2012

HP is demonstrating new software solutions for HP Virtual Application Networks, as well as products in the FlexNetwork architecture and services, at Interop New York 2012 October 1-5, at the Javits Center in booth 407.

Bethany Mayer, senior vice president and general manager, Networking, HP, will deliver a keynote address at 9 a.m. ET, on Thursday, Oct. 4, at the Javits Center, Special Events Hall, First floor. The live webcast will be available at <http://interop.com/live> ^[11].

Pricing and availability

- HP Virtual Application Networks SDN Controller is expected to be available worldwide by the second half of 2013.
- HP Virtual Cloud Networks Application is expected to be available worldwide by the second half of 2013.
- HP Sentinel Security Application is currently available as an early access program to select customers.
- OpenFlow support is currently available on HP Networking switches as a software upgrade.
- HP SDN services will be available worldwide early 2013. Pricing varies according to location and implementation.

HP's premier Europe, Middle East and Africa client event, [HP Discover](#) ^[12], takes place Dec. 4-6 in Frankfurt, Germany.

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(1) Based on HP internal comparative analysis of publicly available data from major competitors.

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Editorial contacts:

Samantha Singh, HP: samantha.singh@hp.com [19]

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