



How SDN Fundamentally Changes Networking

The SDN Journey

Poll #1 What is your background?

- Technical
- Business
- Marketing
- Engineering
- Other





HP's Vision for the future of networking

A new Networking paradigm for the 21st Century



Focus less on managing **infrastructure...**



...and more on **quality of business experience**





HP Networking is leading the SDN market transition

We

SDN is the most important innovation in networking since Ethernet

Because....

SDN aligns the network with business objectives

Flexibility in network usage

Rapid application deployment

Lower operating complexity, expense



What is Software-defined Networking?

Definition from the Open Network Foundation

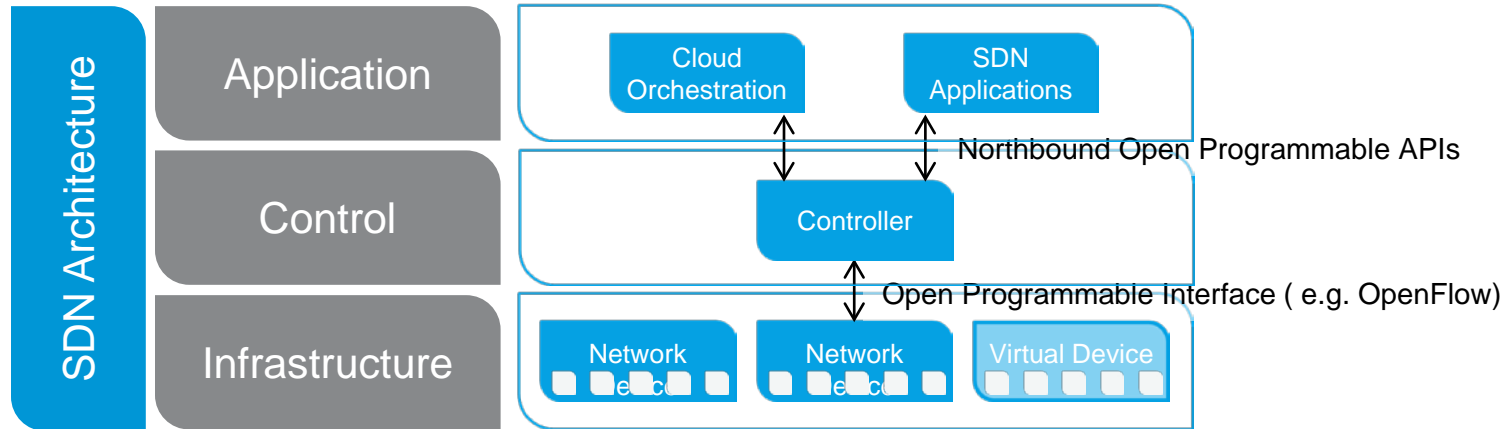
... In the SDN architecture, the control and data planes are decoupled, network intelligence and state are logically centralized and the underlying network infrastructure is abstracted from the applications ...

Source: opennetworking.org

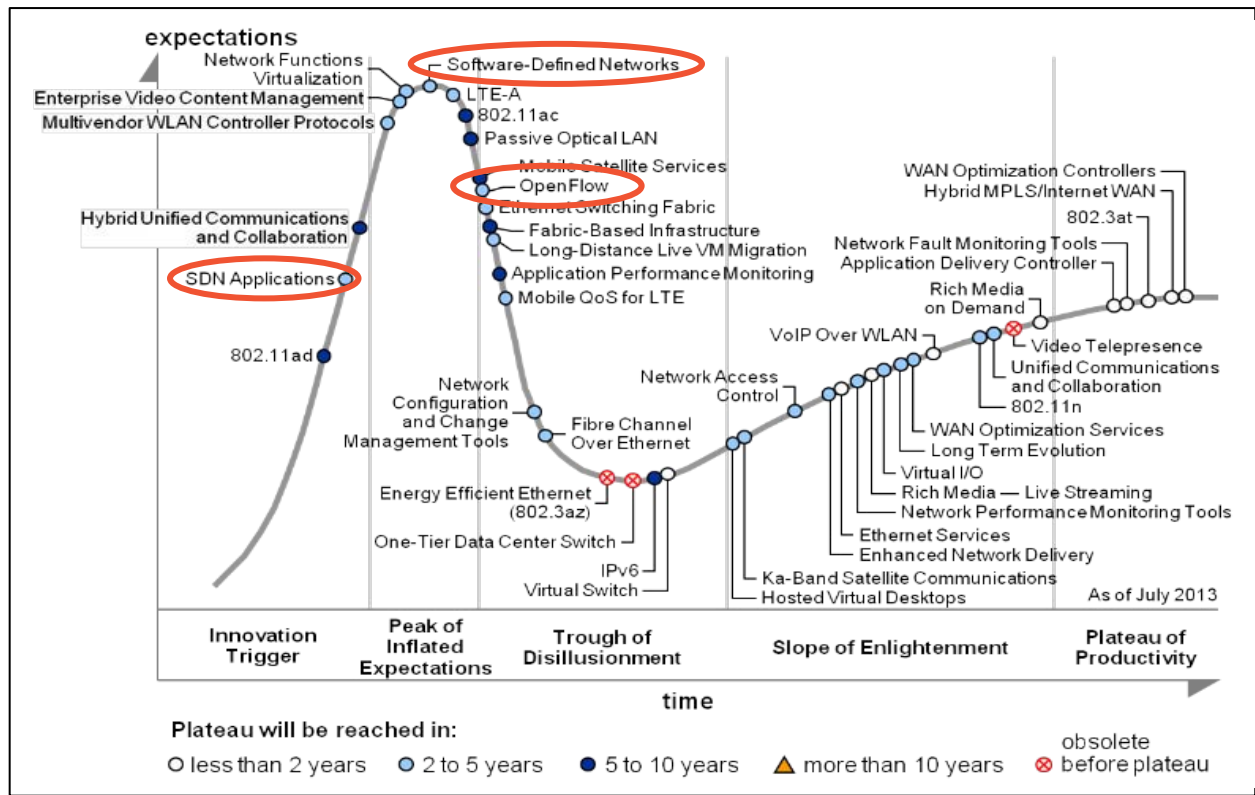


Software-defined network products

Aligning to the SDN architecture definition



Gartner Hype Cycle



10 Year Cycle

2008

2011

2013



Inhibitors to SDN innovation

Nonexistent

No marketplace
to sell & support
SDN applications

SDN market will reach **\$3.7 billion** by 2016. Nearly **\$670 million** will come from SDN applications.

IDC #240557, Technology Assessment: The Impact of SDN on Datacenter and Enterprise Network Architectures, April 2013

Closed

Limited ability to
develop network
applications

SDN applications will deliver substantial benefit to users only if there is an **open ecosystem**.

Hype Cycle for Networking and Communications, 2013
Gartner, 26 July 2013 ID:G00251108

Complex

Legacy network
human
middleware

The adoption of SDN has the potential to eliminate the **human middleware** problem that has plagued network operations for the past two decades.

Hype Cycle for Virtualization, 2013
Gartner, 31 July 2013 ID: G00250781

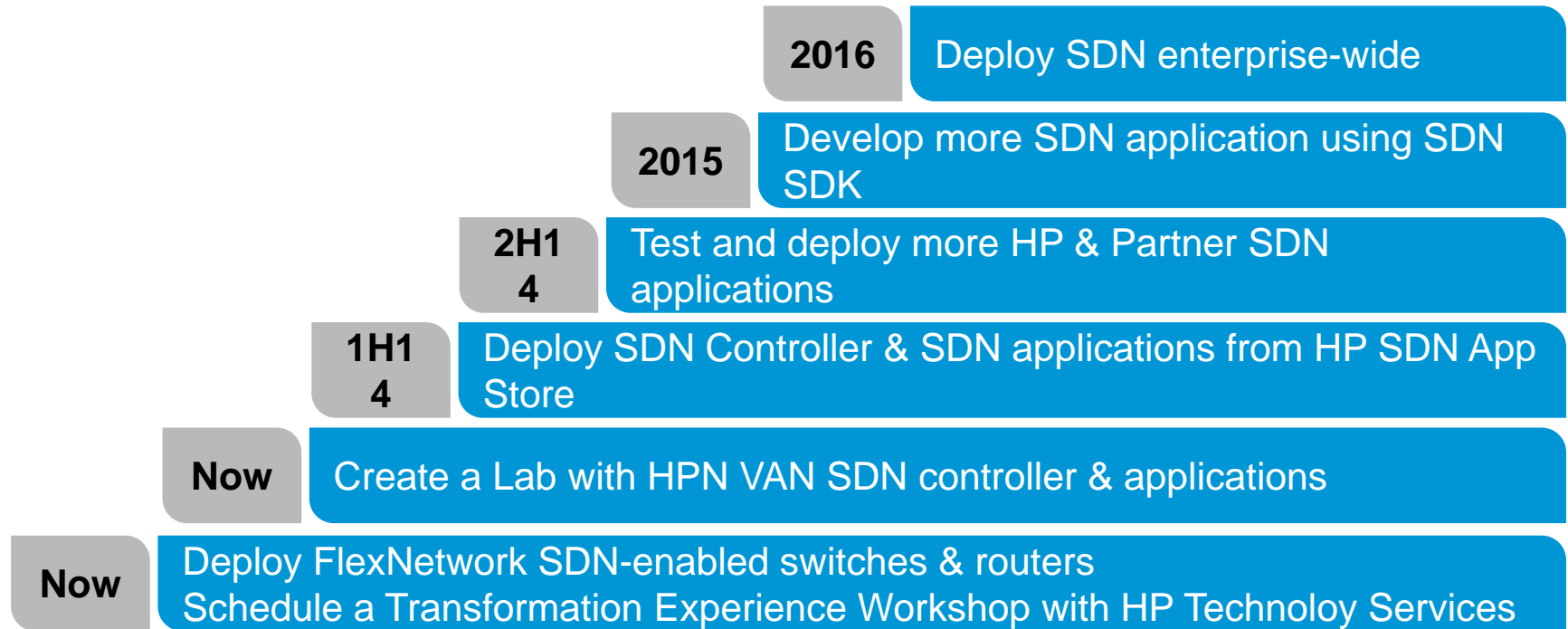


Poll: Where are you with your SDN journey?

- Beginning/Learning
- Evaluating
- Proof of Concept
- Deployed

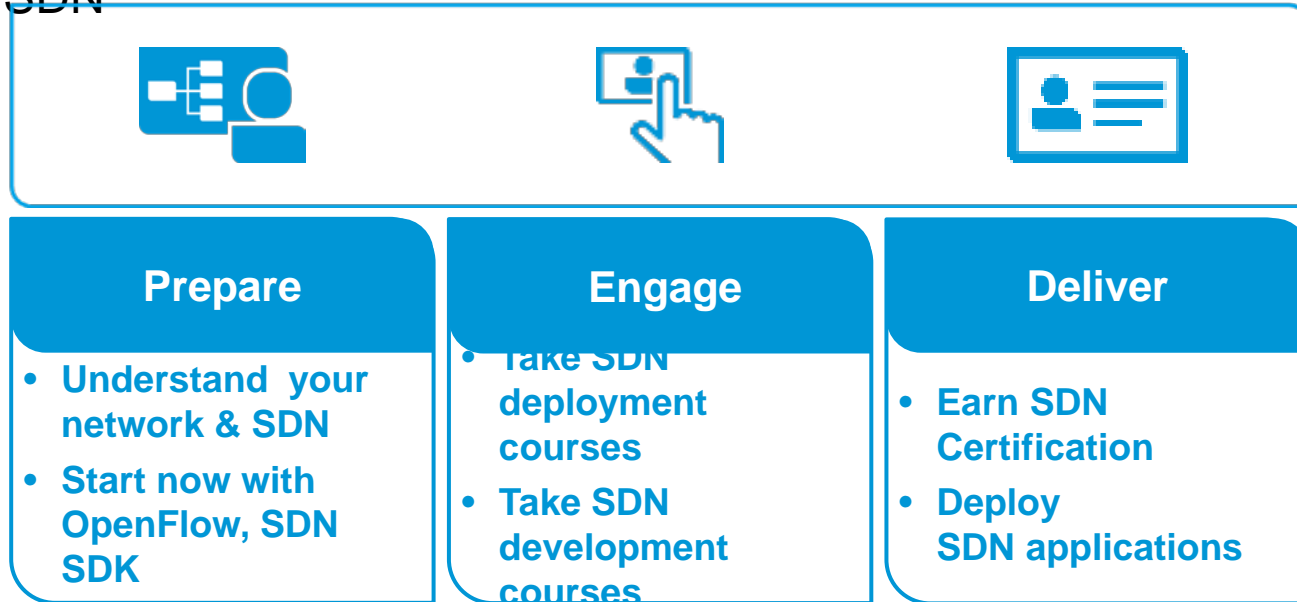


Customers can start their SDN journey now



New SDN Learning Journey and SDN Certification

Helping IT professionals & developers understand the best ways to adopt & implement SDN



Software defined networks

Raises many questions....



How will you manage them?

What do you manage?

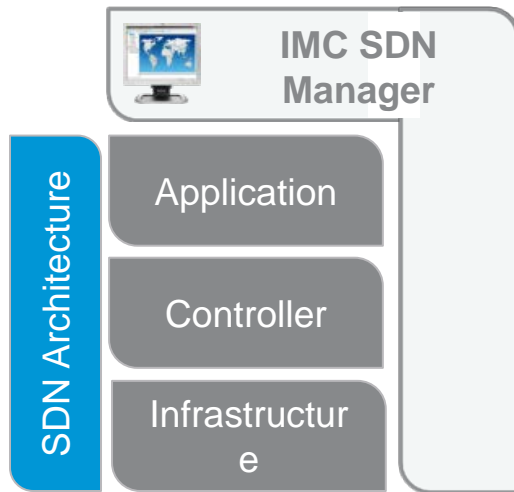
Infrastructure, controller or apps

Do you use separate management tools?

Have you given this any thought?

IMC VAN SDN Manager

Industry's first comprehensive SDN management tool



SDN

- Completes the SDN architecture with management
- Configuration, monitoring & policy management for all SDN layers

Hybrid

- Unifies SDN and non-SDN islands in the network
- Single Point-of-View for OpenFlow SDN and non SDN fabric
- One tool to manage the

10X acceleration of SDN deployments

50% less management complexity



It's Ultimately About Solutions, not Protocols



Poll What is the top benefit you see for SDN?

- Automation & Orchestration
- Network Agility
- Lower TCO
- Don't know
- Other



Igniting the 'intelligent network'

HP Virtual Application Networks (VAN) Leads the Business Revolution

- Simplify deployment and operation - minimize 'human glue'
- Network dynamically adapts to balance end user experience and network resources
- Dynamically enforce security/policy at network edge

Network Intelligence Applications



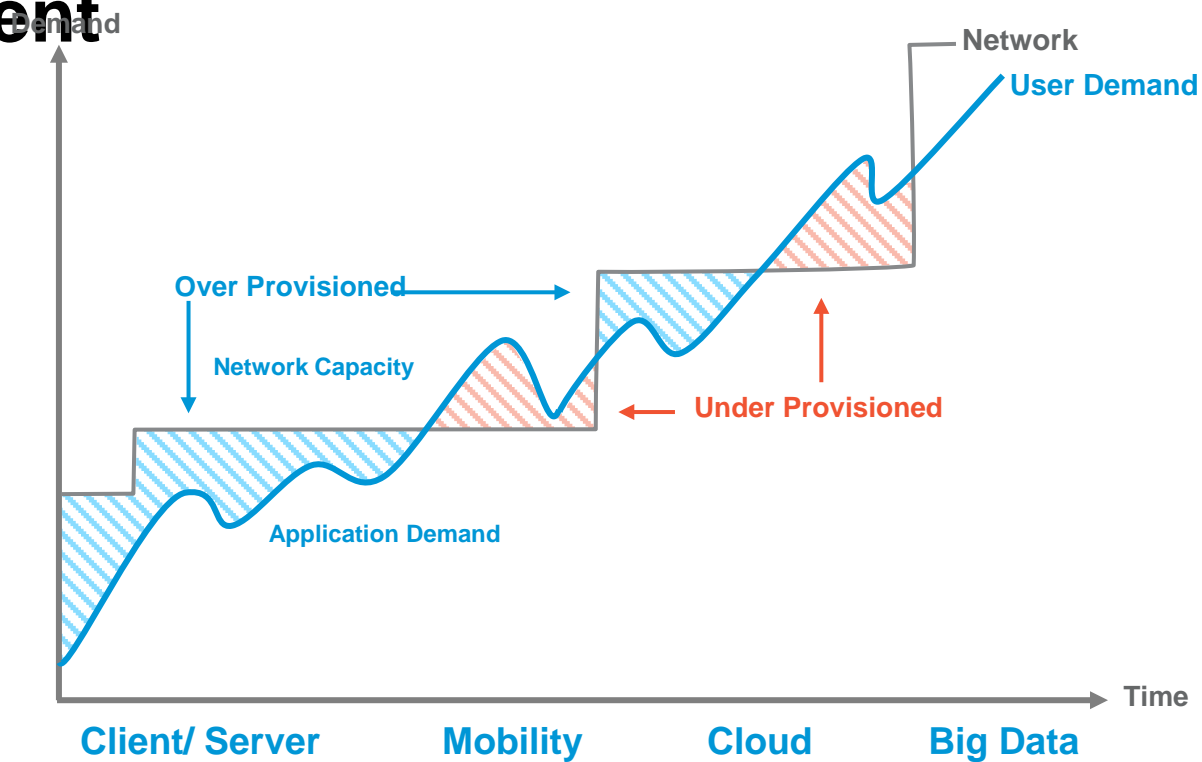
- Enables customers to monetize their network
- Vertical value-added capabilities tuned to customer's business need
- Framework to enable organic, ecosystem partner and customer app development

Business Intelligence Applications

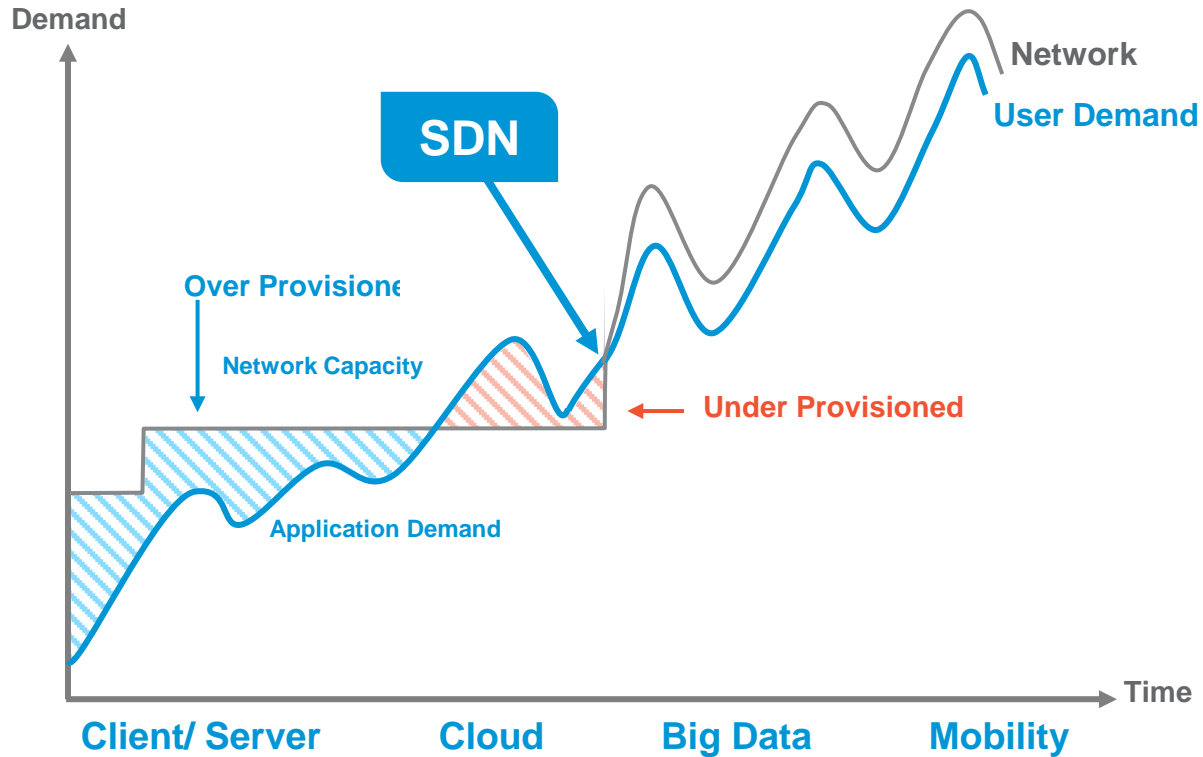




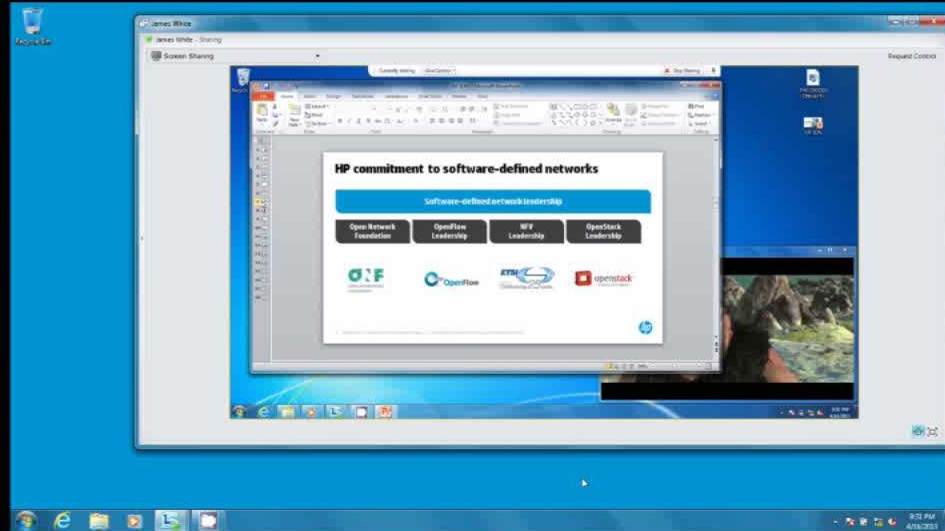
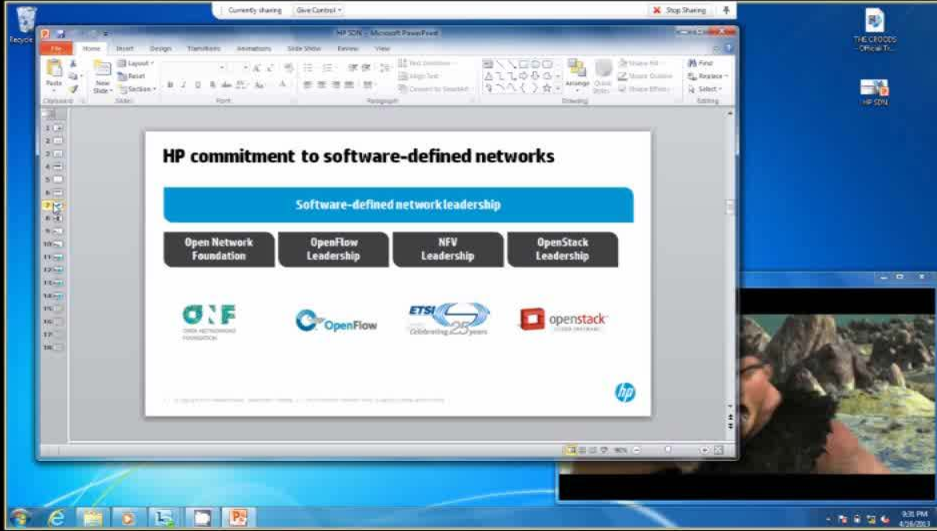
Stranded capital due to lack of network alignment



Network aligned to business apps



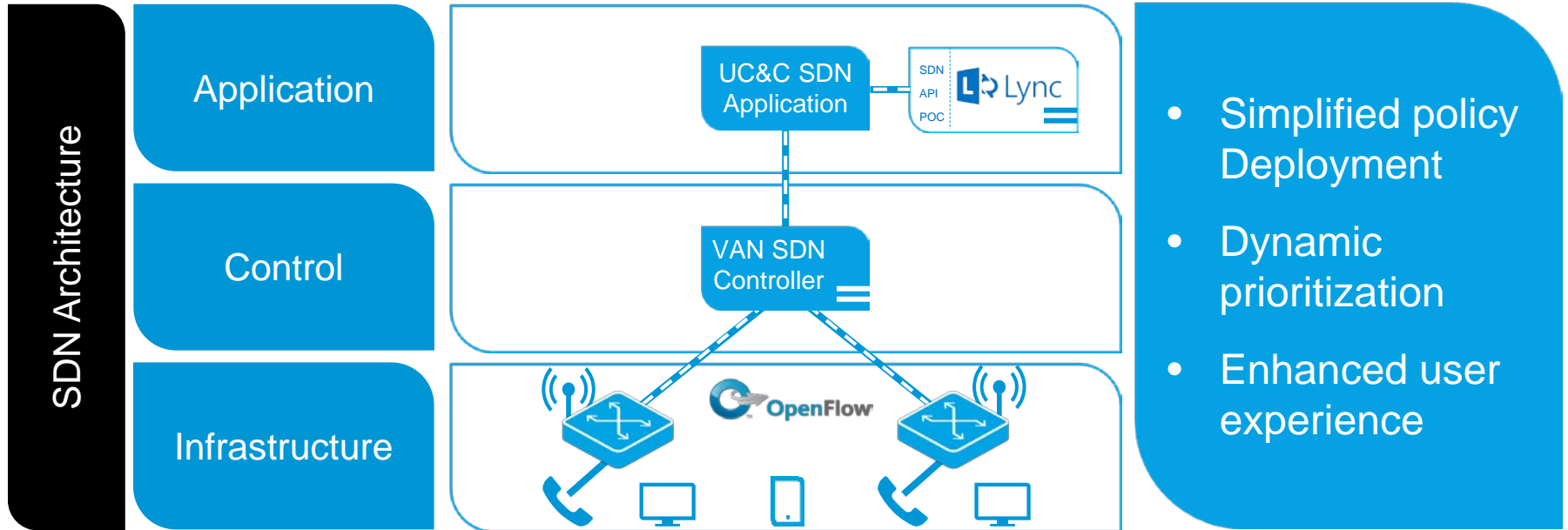
HP UC&C SDN Application for Lync Demo



Typical User Experience
Experience with
HP UC&C SDN Application

Network Optimizer SDN application for Lync Microsoft

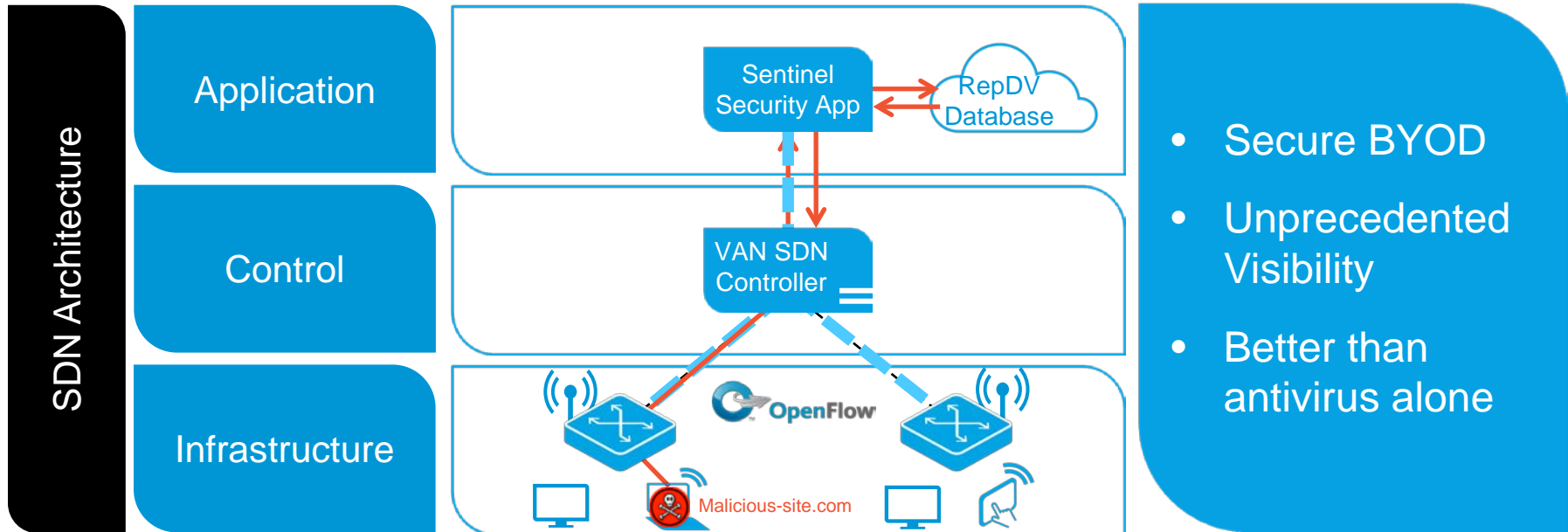
Automating policy for campus enterprise business applications





Network Protector security application

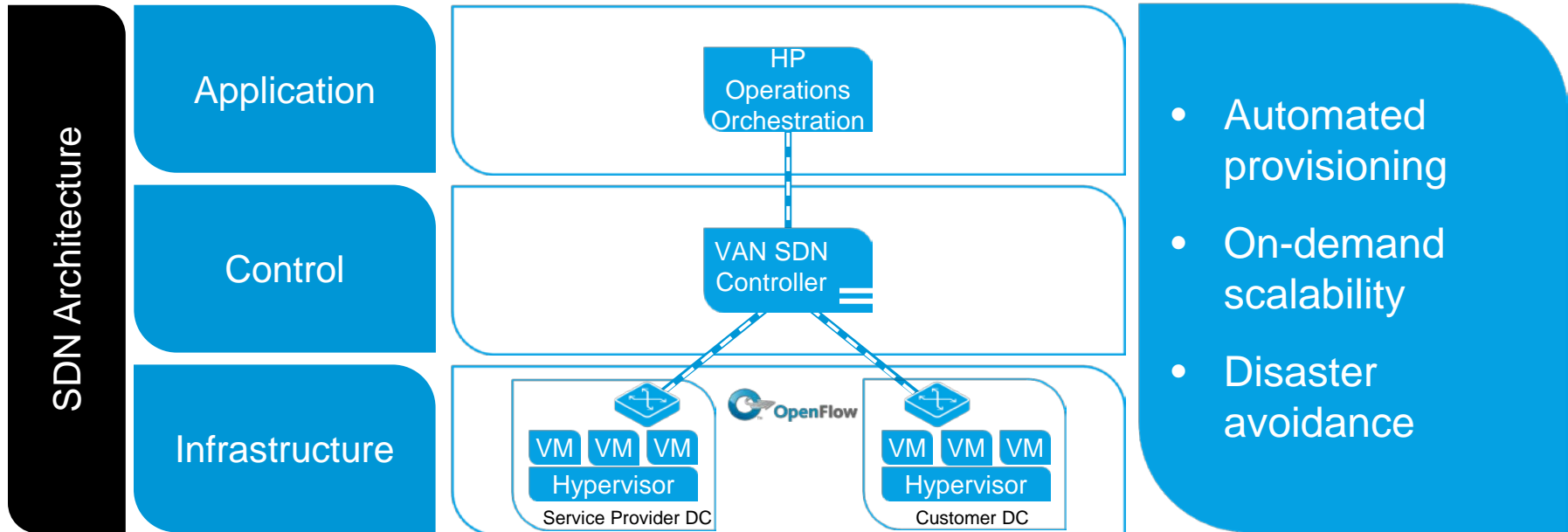
Enabling real-time threat detection across enterprise campus networks



Dynamic WAN bandwidth provisionin



Delivering new revenue opportunities for service provider cloud data centers



What is network virtualization & overlay?

Definitions

“**Network virtualization** is the process of combining hardware and software network resources and functionality into a single virtual network.

Source: <http://www.gartner.com/it-glossary/network-virtualization>

Overlay is the virtual network infrastructure

Underlay is the physical network infrastructure

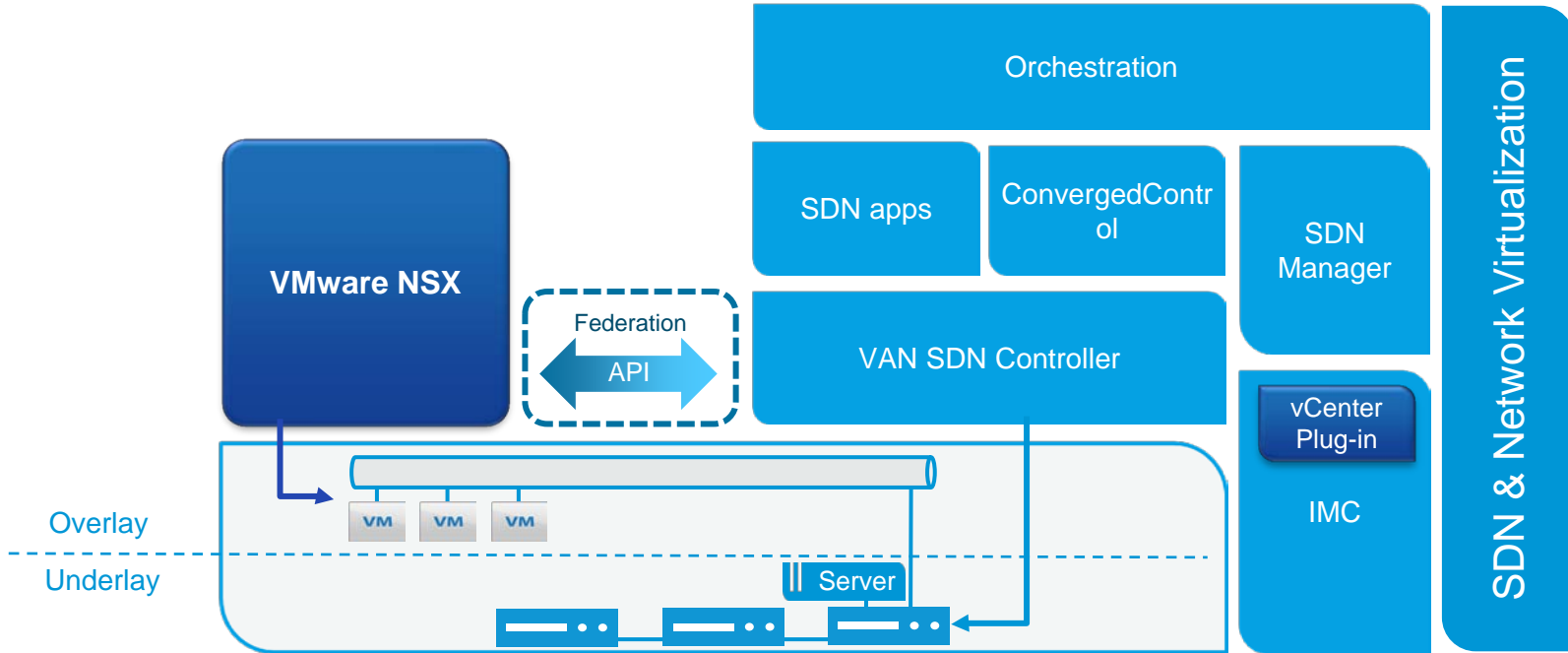
“While some vendors equate SDN with network virtualization, **network virtualization is simply one of the applications supported by SDN.**”

Source: Ending the confusion about Software-Defined Networking: A taxonomy



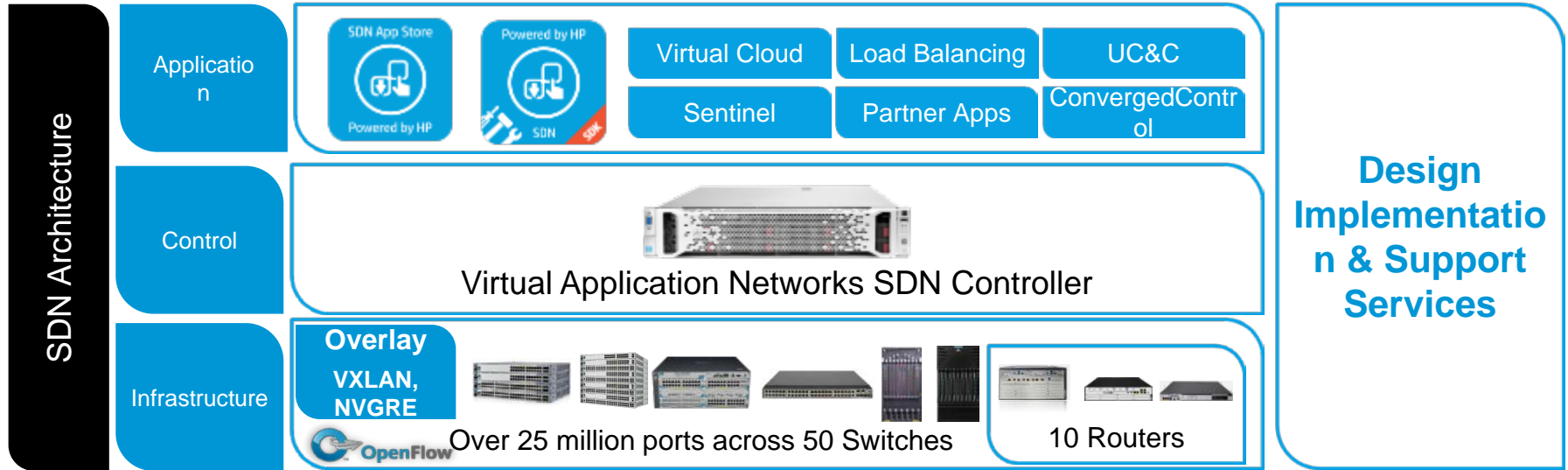
HP-VMware Network Solution

Open, interoperable solution unifying physical and virtual



Open SDN portfolio, SDK, App Store enable Ecosystem

Open SDN network aligned to business application delivers agility



Microsoft

vmware



SAP

CITRIX

ShoreTel
Brilliantly simple™



riverbed
Think fast.

BLUE COAT



**Make it Simple
Make it Matter
Make History**

Thank you

