

## **Revolutionizing Datacenter Networking**

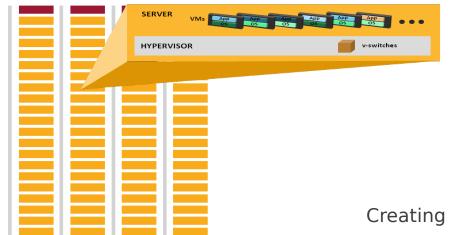
Sami Kinnunen Alcatel-Lucent

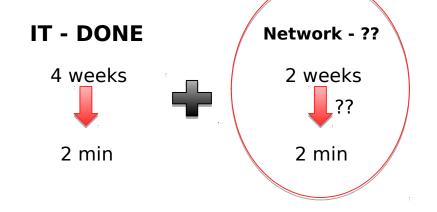
# Agenda

- Problem Statement
- Nuage Virtualized Services Platform Overview
  - Overview
  - Managing Physical Assets
- Conclusion

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## Server Virtualization: Is it enough?



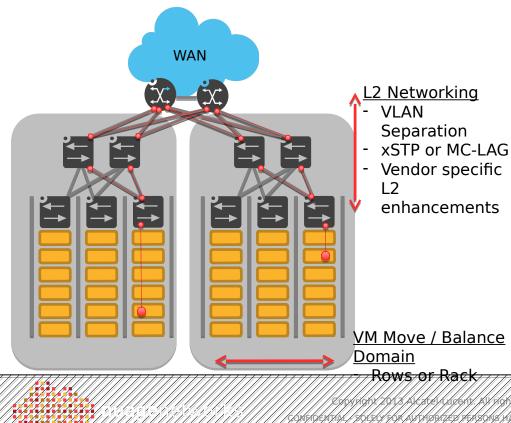


Creating new virtual machines takes little time, but The underlying network, as it stands, takes a lot of time...

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# **Traditional Datacenter Design**



Configuration

- vSwitch
- VLAN's in the network
- WAN Router
- Firewall

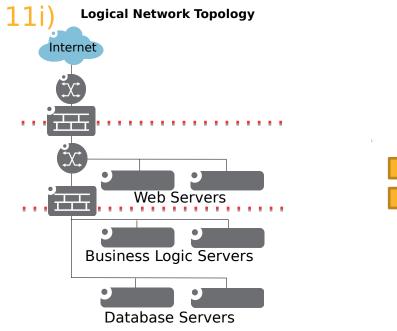
#### Results in:

- Asset isolation
- Complex compute migrations
- Cumbersome Configuration
- Vendor lock within the DC
- Constrained growth / moves within a POD

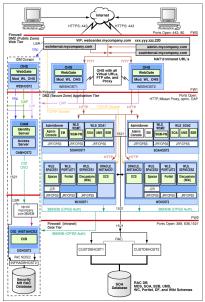
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## **Application Use Case**

## Three tier application deployment case (Oracle



#### **Application Topology**



Source: http://docs.oracle.com/cd/E12839\_01/core.1111/e12037/overview.htm

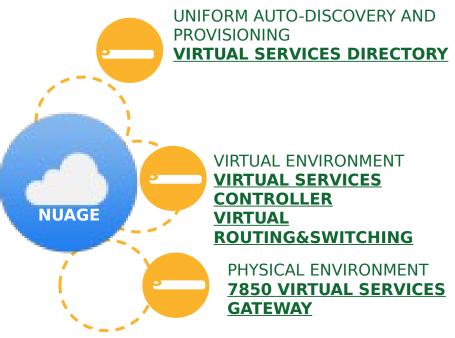
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# **Nuage Networks Solution**

Differentiated Cloud Proposition

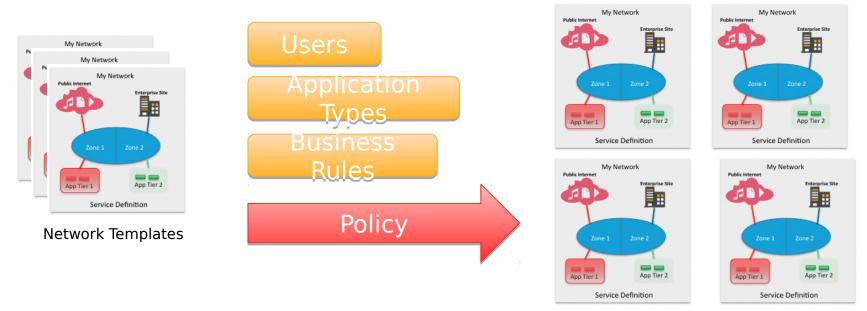
2 Simplified DC Networking

Integrates physical and virtualized DC Environment



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### Policy Based View Design once, use multiple times

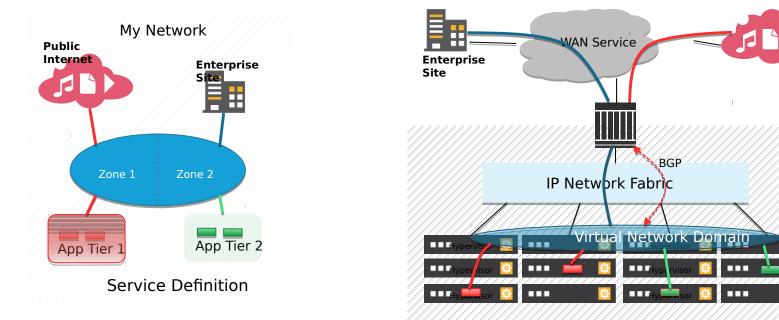


#### **Application Networks**

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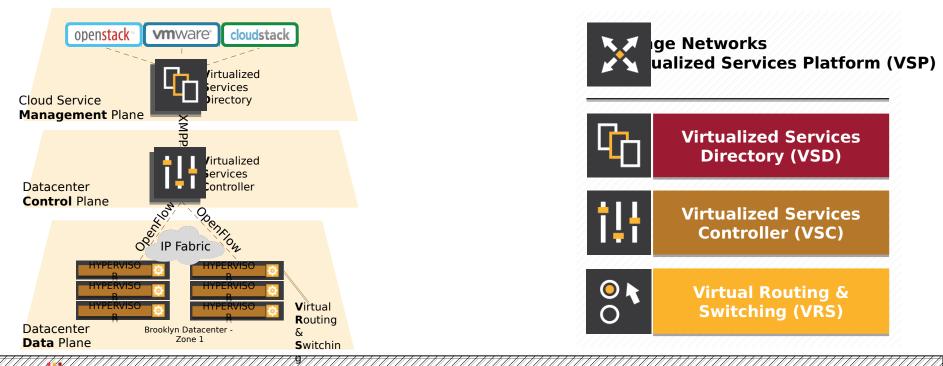
# **Distributed Virtual Routing & Switching**



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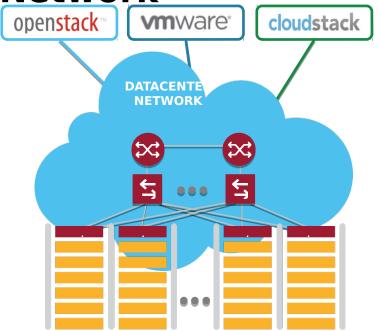
#### **Cloud Service Network Instantiation with Nuage**

## Reference view of datacenter and logical layers



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#### Nuage Networks Virtualizes any Datacenter Network



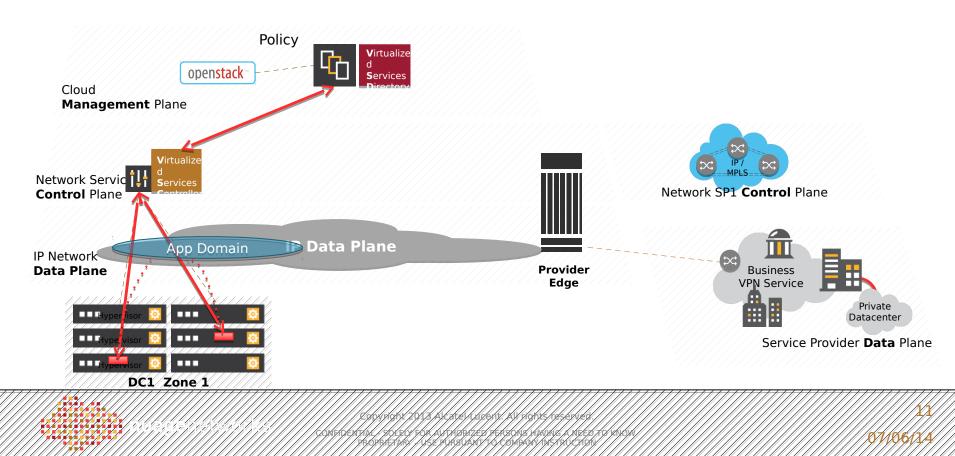
Compute Virtualization Environment of Choice

Datacenter Networking Hardware of Choice

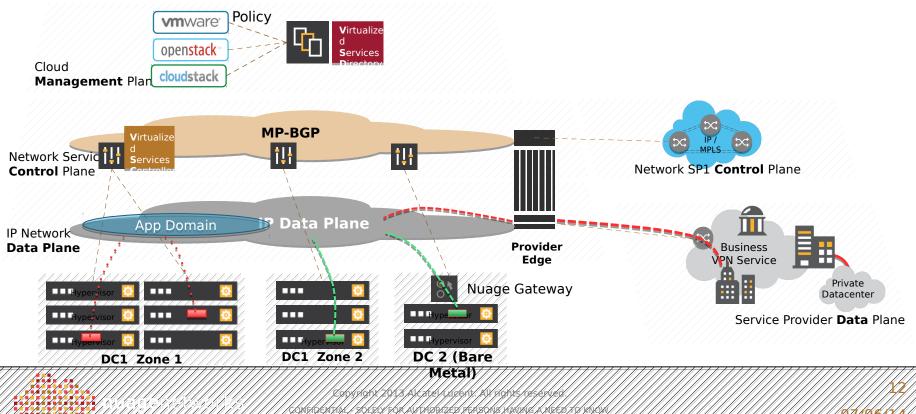
Server & Hypervisor Environment of Choice

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## **Nuage Networks VSP: Putting It All Together**

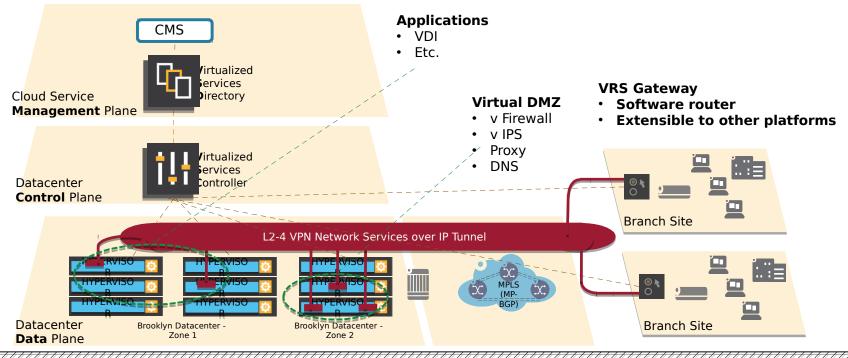


## **Nuage VSP: Putting It All Together**



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## **Extension of the Virtual Network to the Branch**



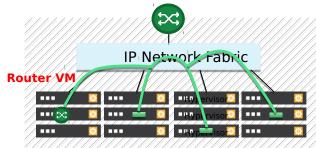
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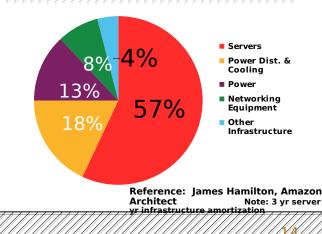
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# Nuage Networks VSP Business gain

#### Become As Efficient As Possible

- Automated Network Configuration
  - Reducing Network configuration management
  - Increasing service agility (= faster service activation)
- Improved Efficiency in the Datacenter Network of 40%
  - Due to its fully distributed L2-4 NV approach
- Enabling White label networking hardware
- Adds Value on Top of infrastructure
  - Enables Hybrid Cloud Service Models
  - Allows Advanced Multi Tier Enterprise Applications Virtualization
  - Allows advanced Monitoring/Analytics
- Enables a new type of VPNs: Software-Defined VPNs





#### Differentiators

#### Nuage Networks VSP

Within one datacenter (partial or full)

Manual

L2 with L3/L4 support

Proprietary

EMS-Based Provisioning (decoupled)

Hardware OR Software

Across multiple datacenters

Seamless, Automated

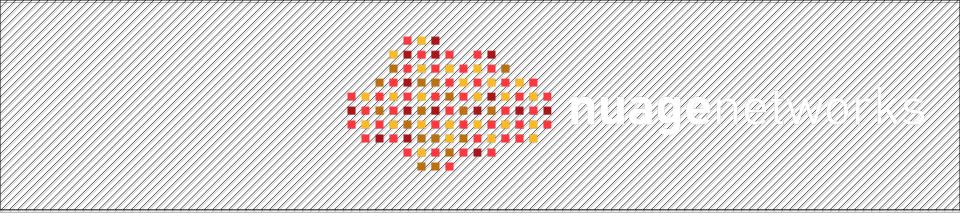
**Integrated L2-L4** 

**Open/Standards based (BGP)** 

Linked to the application, with w/ detailed analytics

Hardware AND Software, geared to physical and virtual environments

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## **Thank You**