Utilities in Transition – Migration to the Cloud

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Agenda

- AdvizeX Introduction
- Cloud Drivers
- Cloud Defined
- The Software Defined Data Center
  - Network Virtualization
  - Network Security
  - Hyperconvergence
- Benefits of the Cloud
- Deciding Factors Moving to the Cloud

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We are local.
We are global.

- Over 39 years in business with a 5-year CAGR of ~20% revenue growth
- Thousands of customers from across all industries
- Over 2,500 software and hardware engineers
- A Global 200 Best Company
- Over 1,000 IT hardware and software certifications
- A 98% customer retention rate in 2014

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AdvizeX and Rolta. Two Leaders, One Vision.

Infrastructure

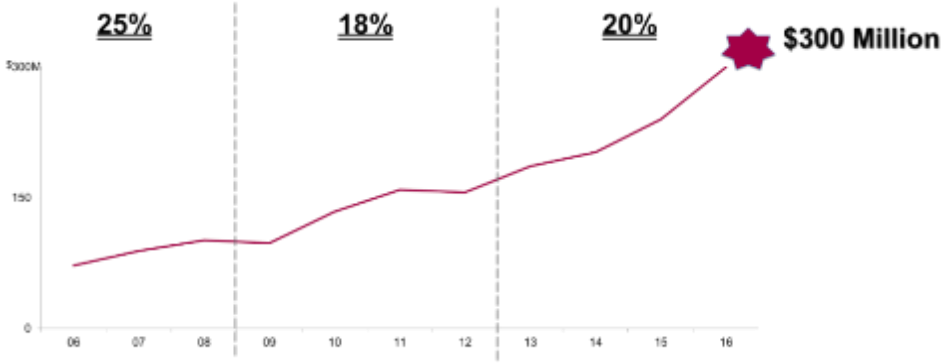
Plan, Build, Manage

- Infrastructure
- Cloud and Virtualization
- Mobility and Security

Applications

Plan, Build, Manage

- Applications
- Data
- Managed Services



2014 Highlights

Actual Growth	**24%**
New Customers	**206**
New Employees	**72**

A Passion for Technology
A Commitment to Excellence

- A top partner to VMware, EMC, HP, Oracle, and SAP
- A recognized industry leader

vmware®
PARTNER NETWORK AWARD
2014 GLOBAL WINNER

Microsoft Partner Award
Top 250 Partners

ORACLE
PARTNER NETWORK
TITAN AWARD WINNER

2013 redhat.
Rising Star Award

SAP Pinnacle Awards 2014 Winner

EMC²
AMERICAS PARTNER AWARD WINNER
2013

CRN TECH ELITE 250 2014

Cloud Drivers

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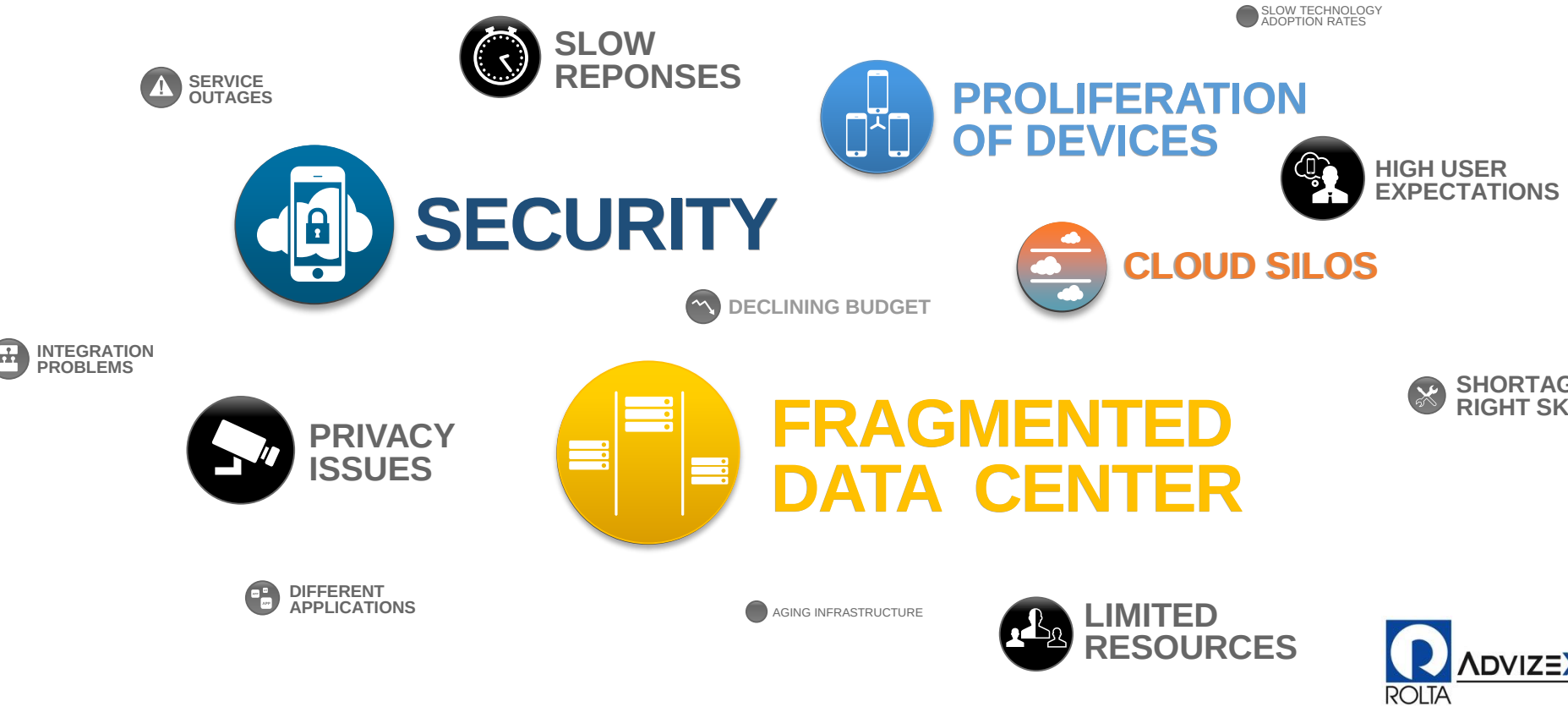
It’s a liquid world


It’s a digital world
Every industry is being transformed

The Driving Forces Behind the Liquid World

Harnessing Mobile and Cloud Is Challenging



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Cloud Defined

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What is the “Cloud”

The “Cloud” is a group of concepts around the idea that information is fluid.

- Mobile devices change the way information is accessed
- Data can now easily be multi-homed
- IT Groups supply resources, not services
- Software Management > Hardware Management

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The Software Defined Data Center

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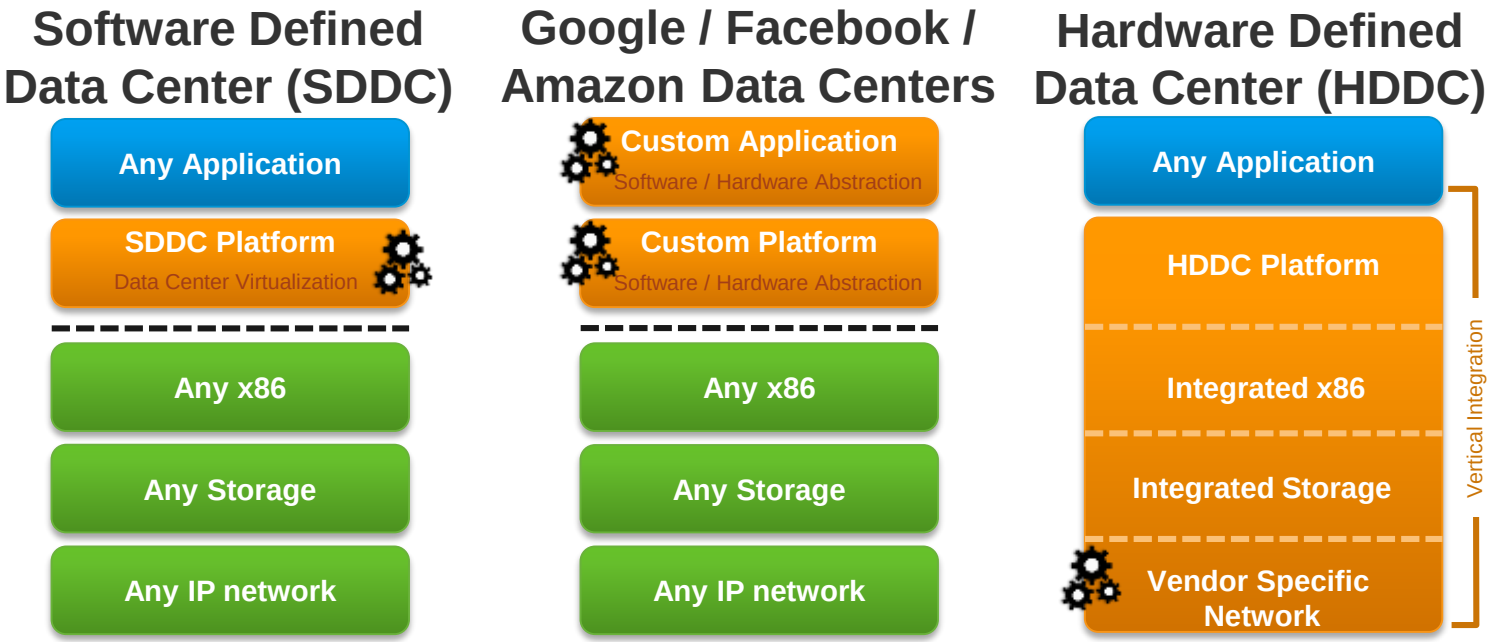
The Holy Grail Model

Let Business Needs Define Your Datacenter



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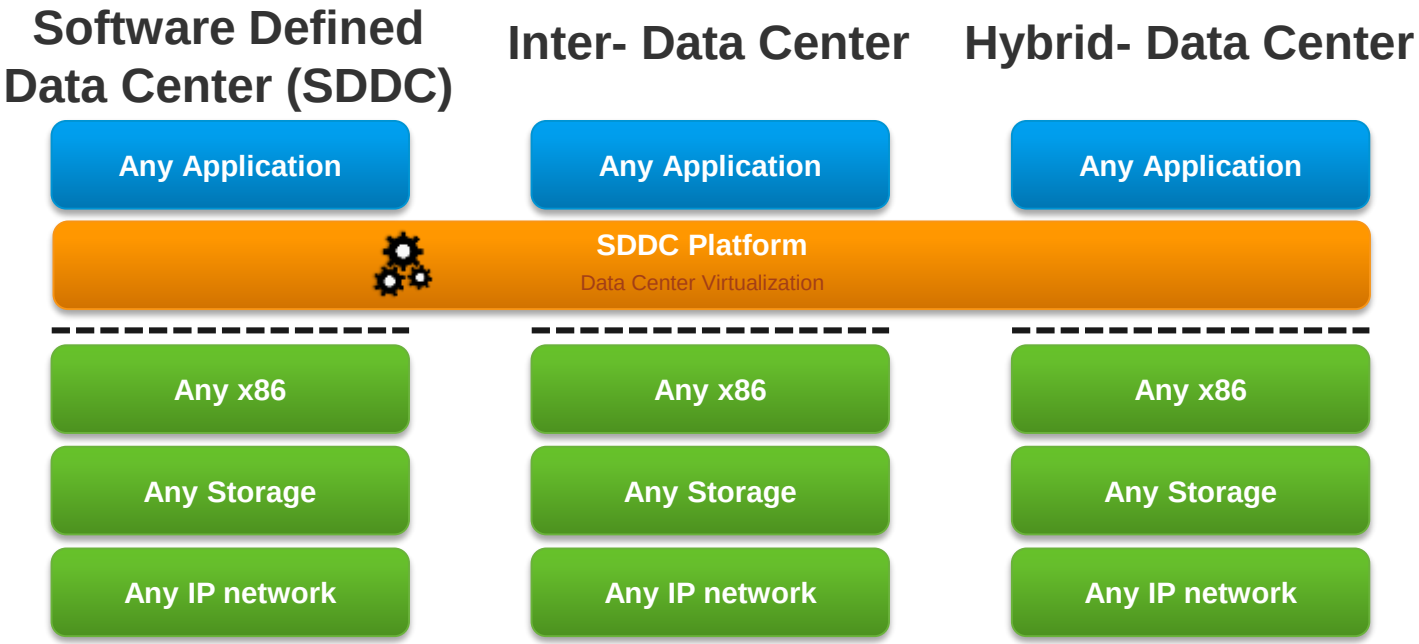
SDDC Within, Between and Across Data Centers



Any Device

Business Mobility: Applications | Devices | Content

Any Application

Traditional Applications

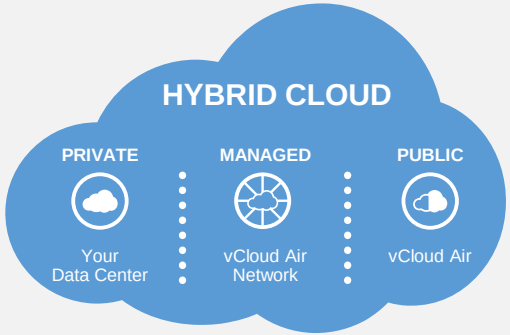
APP APP APP

APP APP APP

Modern, Cloud Applications

One Cloud

Cloud Management



Software-Defined Data Center

Virtualized Compute, Network, Storage

Build-Your-Own

Converged Infrastructure

Hyper-Converged Infrastructure

Network Virtualization

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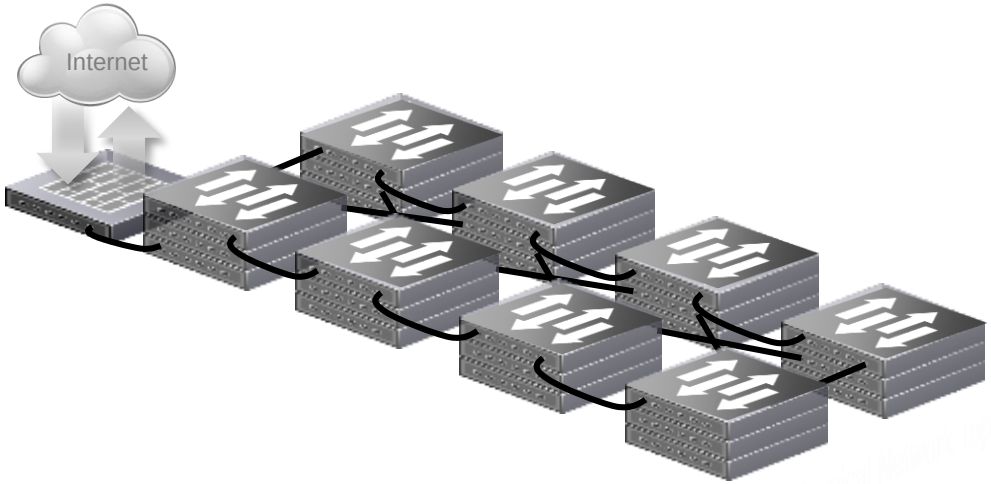
Network Capacity



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Compute Capacity

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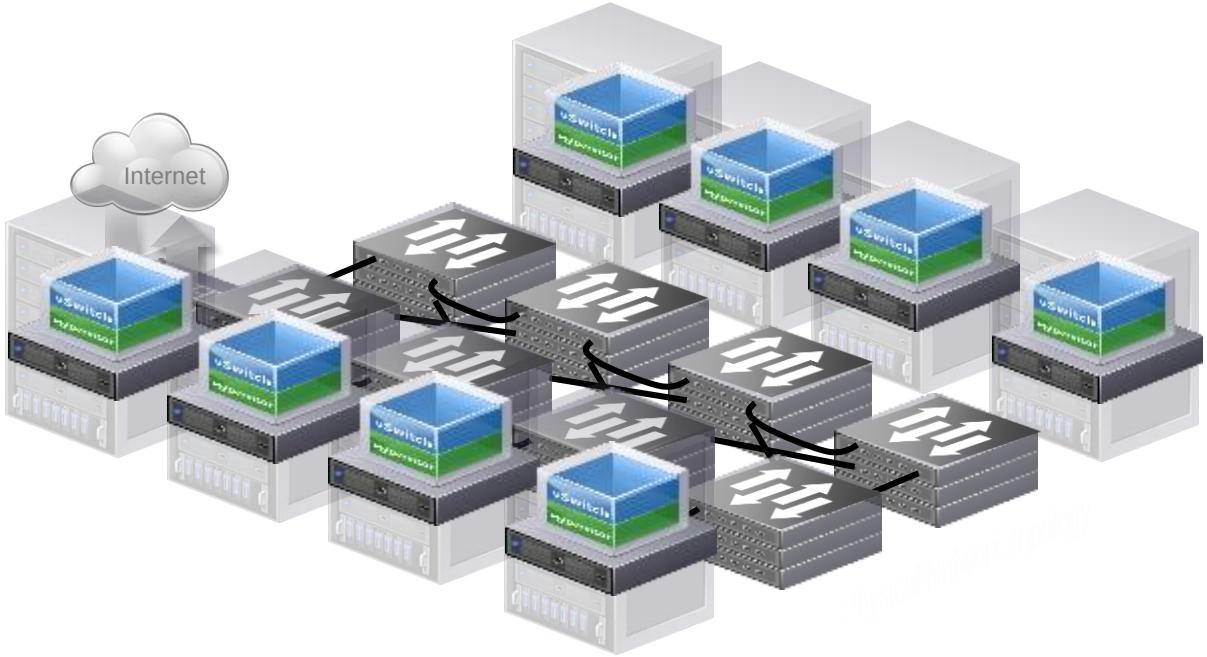
Data Center Virtualization Layer



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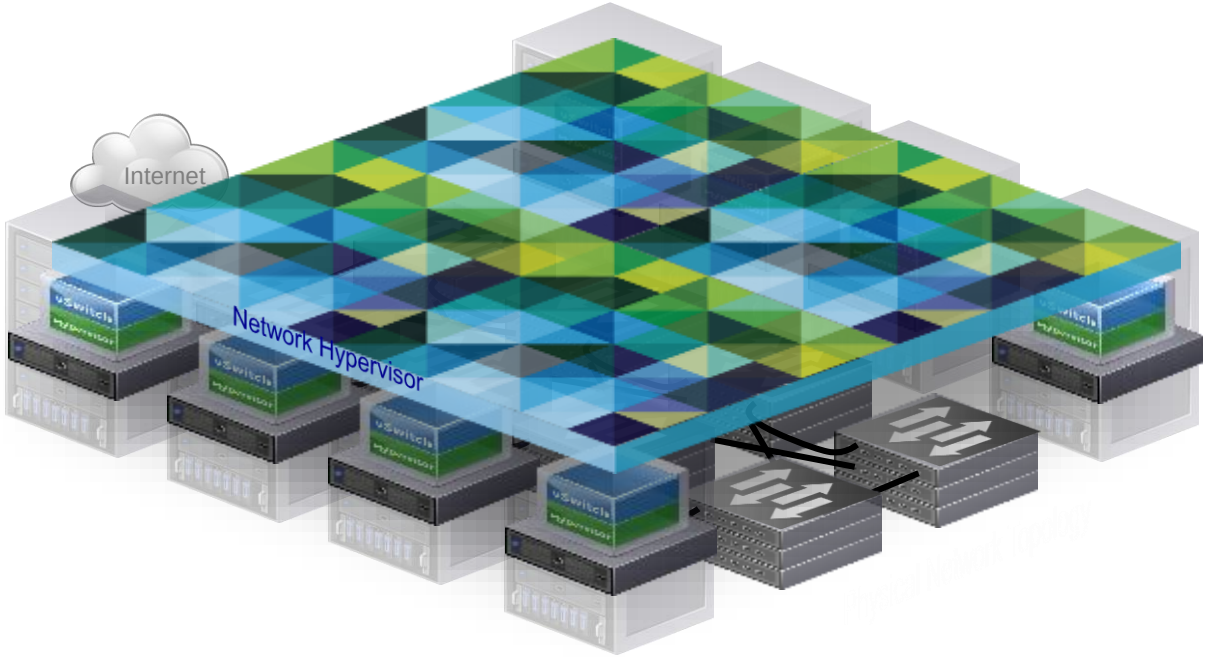
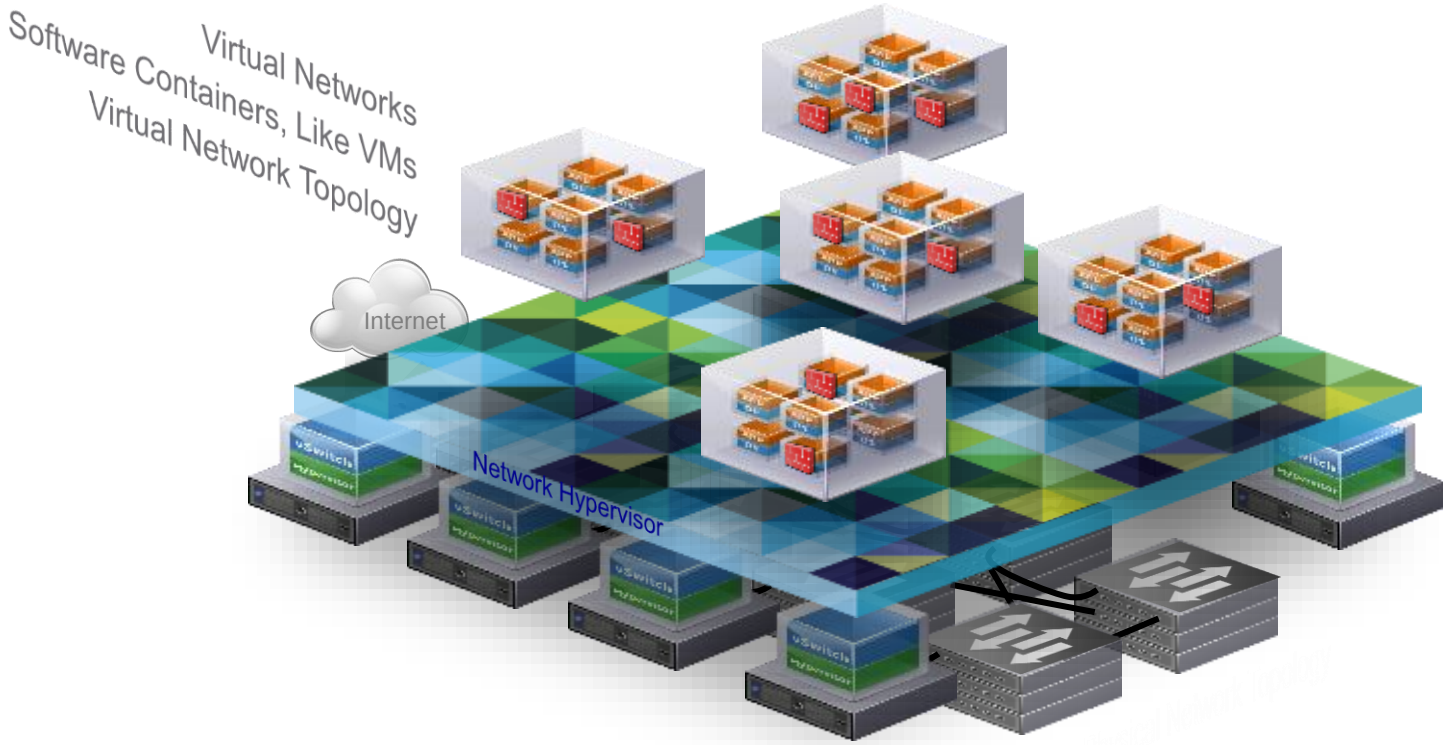
A “Network Hypervisor”



The Operational Model of a VM for the Networking



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Network Security

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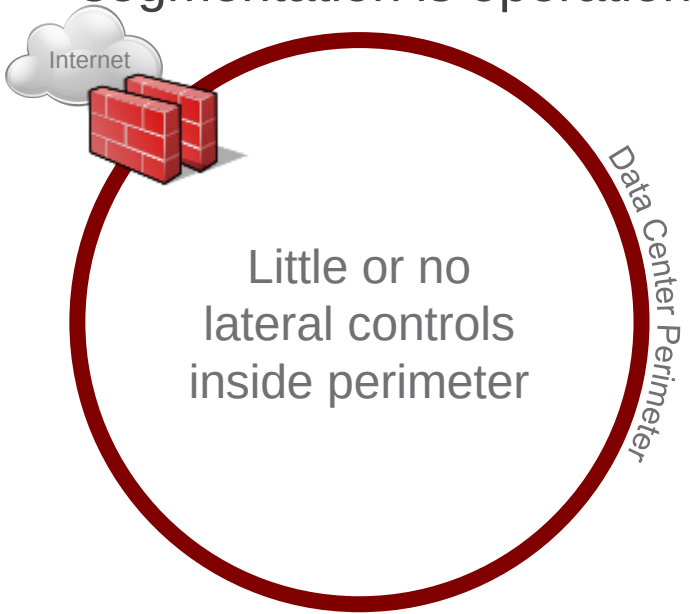
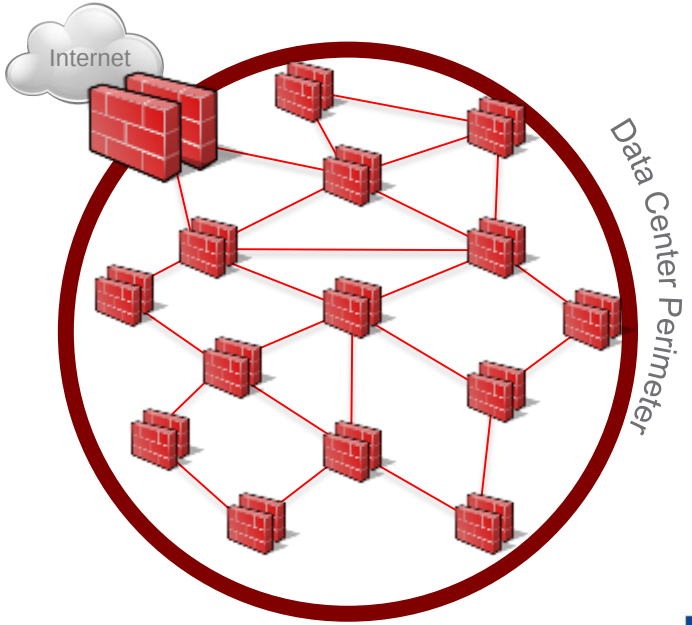
Problem: Network Security

- Perimeter-centric network security has proven insufficient, and micro-segmentation is operationally infeasible



Insufficient



Operationally
Infeasible

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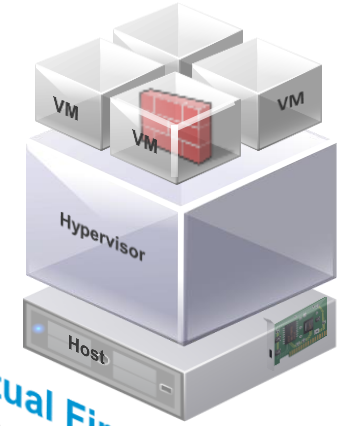
There is a BIG difference…

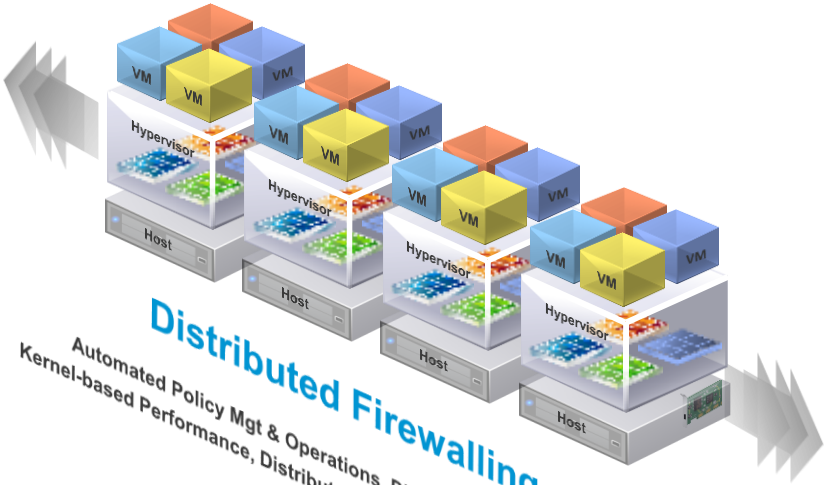
Physical Firewalls

Traditional Firewall Rule Mgt & Operations
Physical Firewalls (2 – 100 Gbps)



Virtual Firewalls

Traditional Firewall Rule Mgt & Operations
Virtual Firewalls (1 – 3 Gbps)



Distributed Firewalling

Automated Policy Mgt & Operations, Distributed Enforcement
Kernel-based Performance, Distributed Scale-out Capacity (20 Gbps/host)

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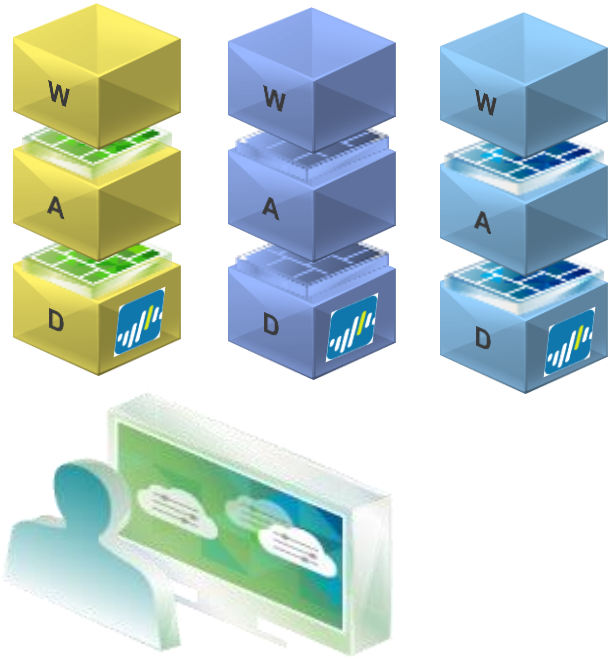
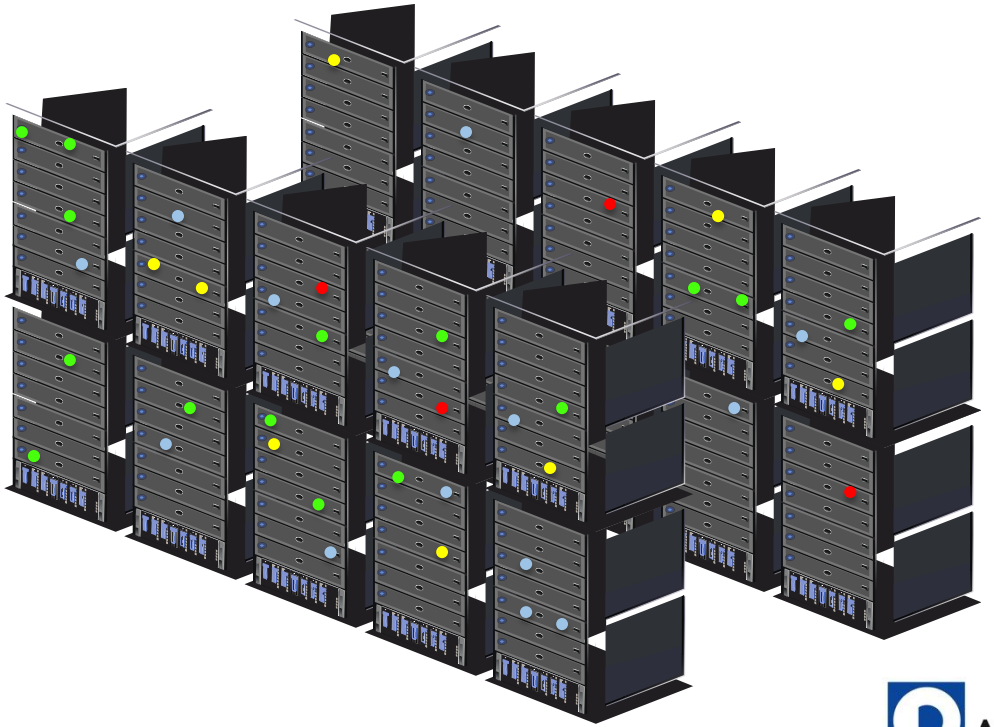
Automated Security in a SDDC

Data Center Micro-Segmentation





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Hyperconvergence

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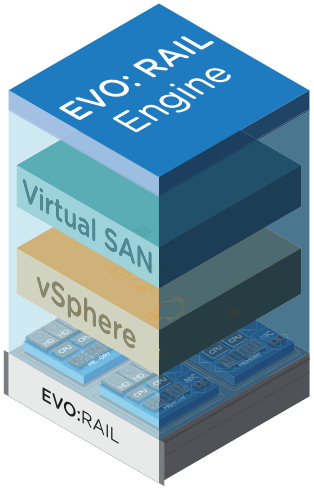
Hyperconvergence

Storage, Compute, and Networking resources converged into a single node. Software controls the separate functions.

- Based on Commodity Hardware
- Storage, Compute and Networking grow in tandem
- Flexible Growth Model, Grow to Meet Demand



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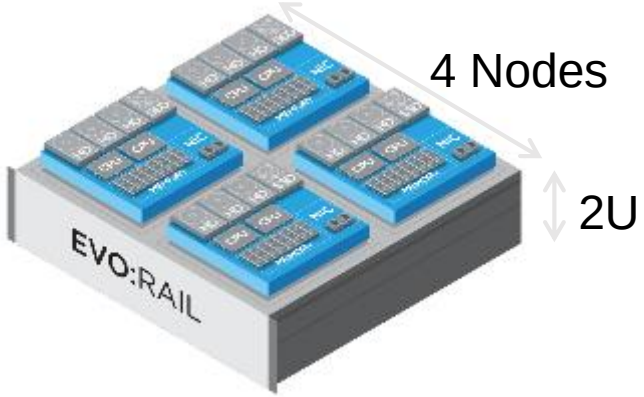
High Level Hardware Specifications



- Hardware Specifications Per Node X 4

Processor	• Dual Intel E5 processors (12 cores, 2.1Ghz)
Memory	• 192 GB RAM
Storage	• 400 GB Intel SSD • 3 x 1.2TB raw capacity
Network	• 2 x 10 Gigabit Ethernet NIC port • 1 Management port

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Benefits of the Cloud

The key here is **Flexibility**

- Infrastructure spend decreases
  - Pay as you grow model
- Reliability, Accessibility much higher
  - Disaster Recovery, can be located anywhere
- Economies of Scale, Achieve more with less
  - Become an architect, create vision for the Organization

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Should I Move to the Cloud?

Deciding Factors

- Applications and Workflow
  - How do your applications interact?
- Security Regulations
  - NERC-CIP
  - Industry and Agency Regulations
- Speed to Market
  - PaaS or Containers
- Hardware Refresh Cycle
  - Are you at the end of hardware life?
- Staffing
  - How large is your staff?
  - What skills do they have?

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Thank You