

vmworld 2013

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# DEEPLY

CONVENTION

## Forward-Looking Statements

This presentation contains forward-looking statements including, among other things, statements regarding the total addressable market for VMware products and services; expectations regarding the volume of server workloads and the role of network virtualization; VMware's strategy and vision for growth in compute, networking, storage, management and software-defined data center products and services; expected features and availability of VMware NSX, Virtual SAN, and VVols products and their potential benefits to customers and partners; pricing and expectations of customer interest and demand; and trends in cloud management. These forward-looking statements are subject to the safe harbor provisions created by the Private Securities Litigation Reform Act of 1995. Actual results could differ materially from those projected in the forward-looking statements as a result of certain risk factors, including but not limited to: (i) adverse changes in general economic or market conditions; (ii) delays or reductions in consumer or information technology spending; (iii) competitive factors, including but not limited to pricing pressures, industry consolidation, entry of new competitors into the virtualization and cloud computing markets, and new product and marketing initiatives by our competitors; (iv) our customers' ability to develop, and to transition to, new products and computing strategies such as cloud computing, network virtualization and the software defined data center; (v) the uncertainty of customer acceptance of emerging technology; (vi) rapid technological and market changes in virtualization software and platforms for cloud and end user computing and networking; (vii) our ability to attract and retain highly qualified employees; and (viii) geopolitical events and stability. These forward-looking statements are based on current expectations and are subject to uncertainties and changes in condition, significance, value and effect as well as other risks detailed in documents filed with the Securities and Exchange Commission, including our most recent reports on Form 10-K and Form 10-Q and current reports on Form 8-K that we may file from time to time, which could cause actual results to vary from expectations. VMware assumes no obligation to, and does not currently intend to, update any such forward-looking statements after the date of this release.

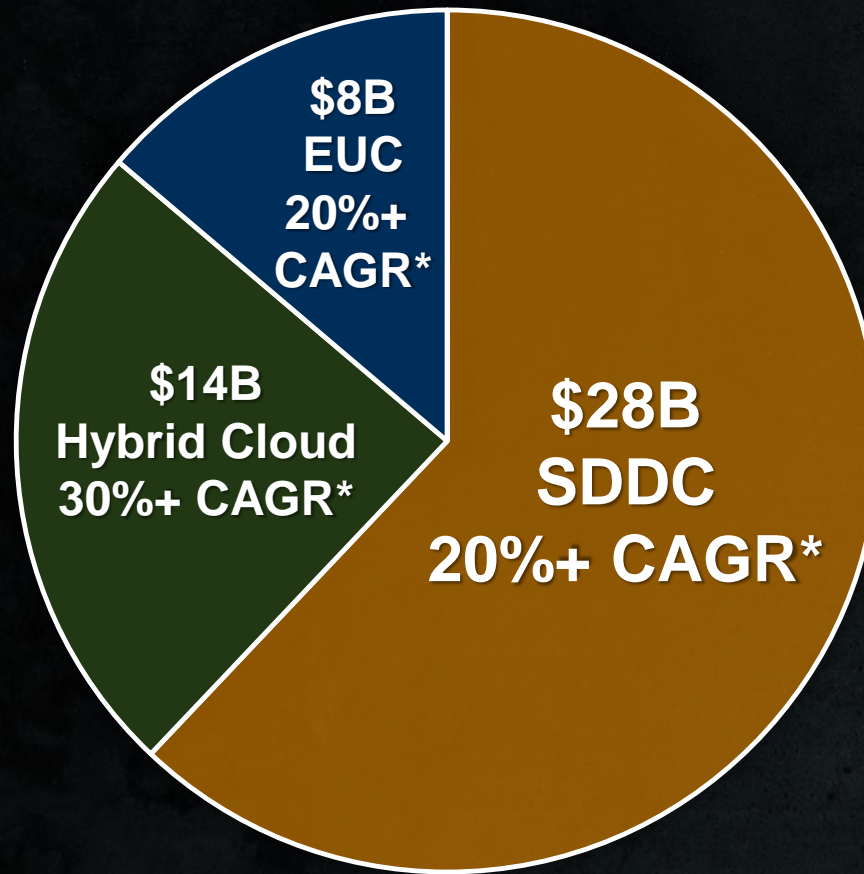
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**Financial Analyst Day**

# **VMware Software-Defined Data Center Products**

**Raghu Raghuram**  
**Executive Vice President of**  
**Cloud Infrastructure and Management**  
**VMware**

# \$50B+ Total Addressable Market Opportunity 2016



Source: Analyst Data and VMware Internal Analysis, 1Q2013, \* CAGR from 2012-2016

# Major Trends

1

**Customers recognize the SDDC as the new architecture for future data centers**

---

2

**Positioning customers for success in the mobile-cloud era**

- Compute
- Networking
- Storage
- Management

# Mobile-Cloud Era Demands Continued Innovation



## New Challenges for IT...

- Velocity—Continuous application development and deployment
- Explosion of data volume
- Inefficient infrastructure silos
- IT Losing Control—Use of external infrastructure resources



## ...Require New Data Center Capabilities

1. Apps and services in production on-demand
2. Automated, dynamic resource assignment with ecosystem integration
3. HW-agnostic and elastic scalability
4. Hybrid infrastructure with IT control

# Positioning IT Organizations for Success in the Mobile-Cloud Era

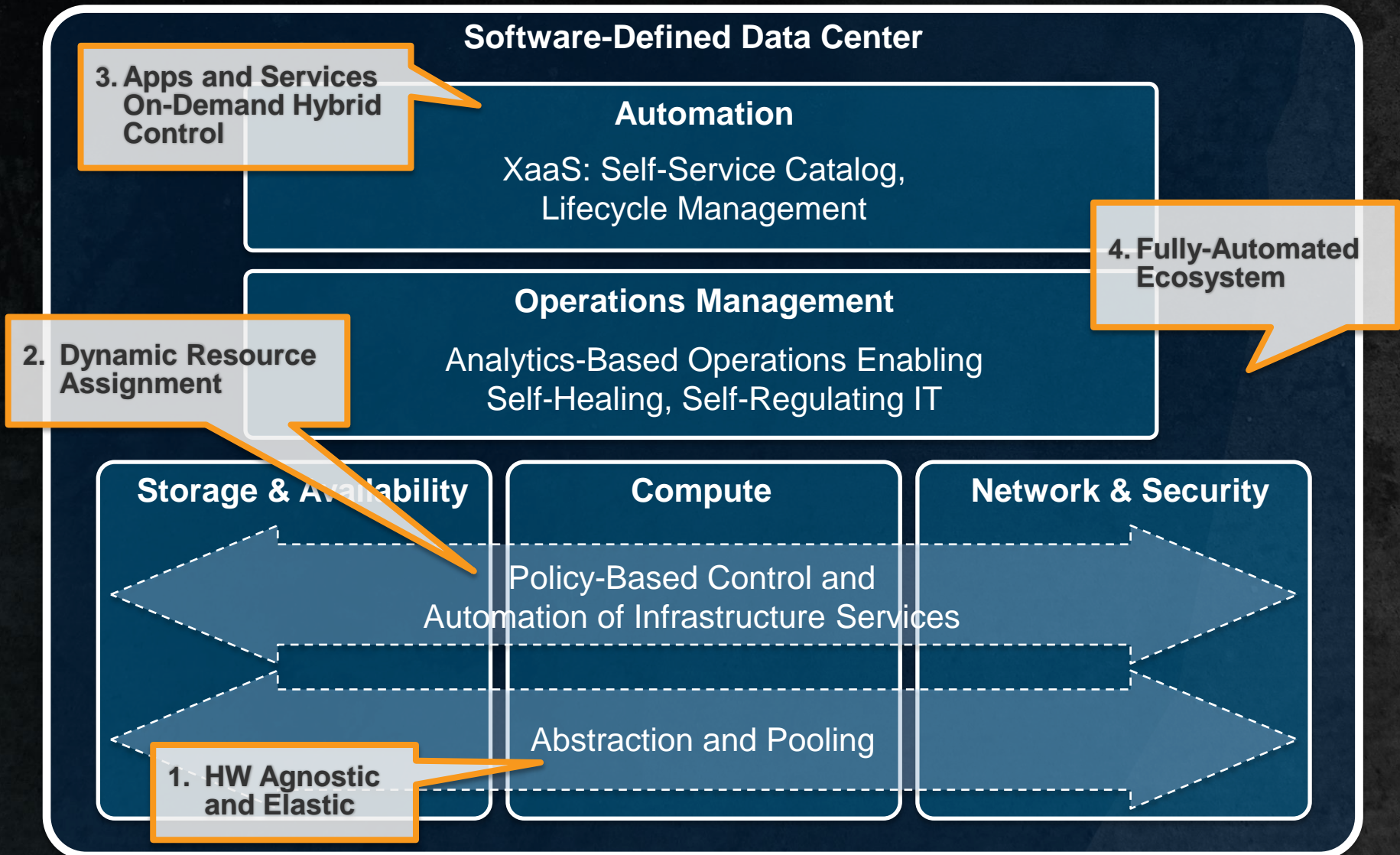


## Software-Defined Data Center

All infrastructure is virtualized and delivered as a service, and the control of this data center is entirely automated by software

# SDDC:

## Positioning Enterprise IT for the Mobile-Cloud Era





# SDDC Product Updates in H2 2013

## Software-Defined Data Center

### Automation

XaaS: Self-Service Catalog,  
Lifecycle Management

vCAC

### Operations Management

Analytics-Based Operations Enabling  
Self-Healing, Self-Regulating IT

vC Ops

Log  
Insight

### Storage & Availability

Virtual  
SAN  
(PUBLIC  
BETA)

Virsto

### Compute

Policy-Based Control and  
Automation of Infrastructure Services

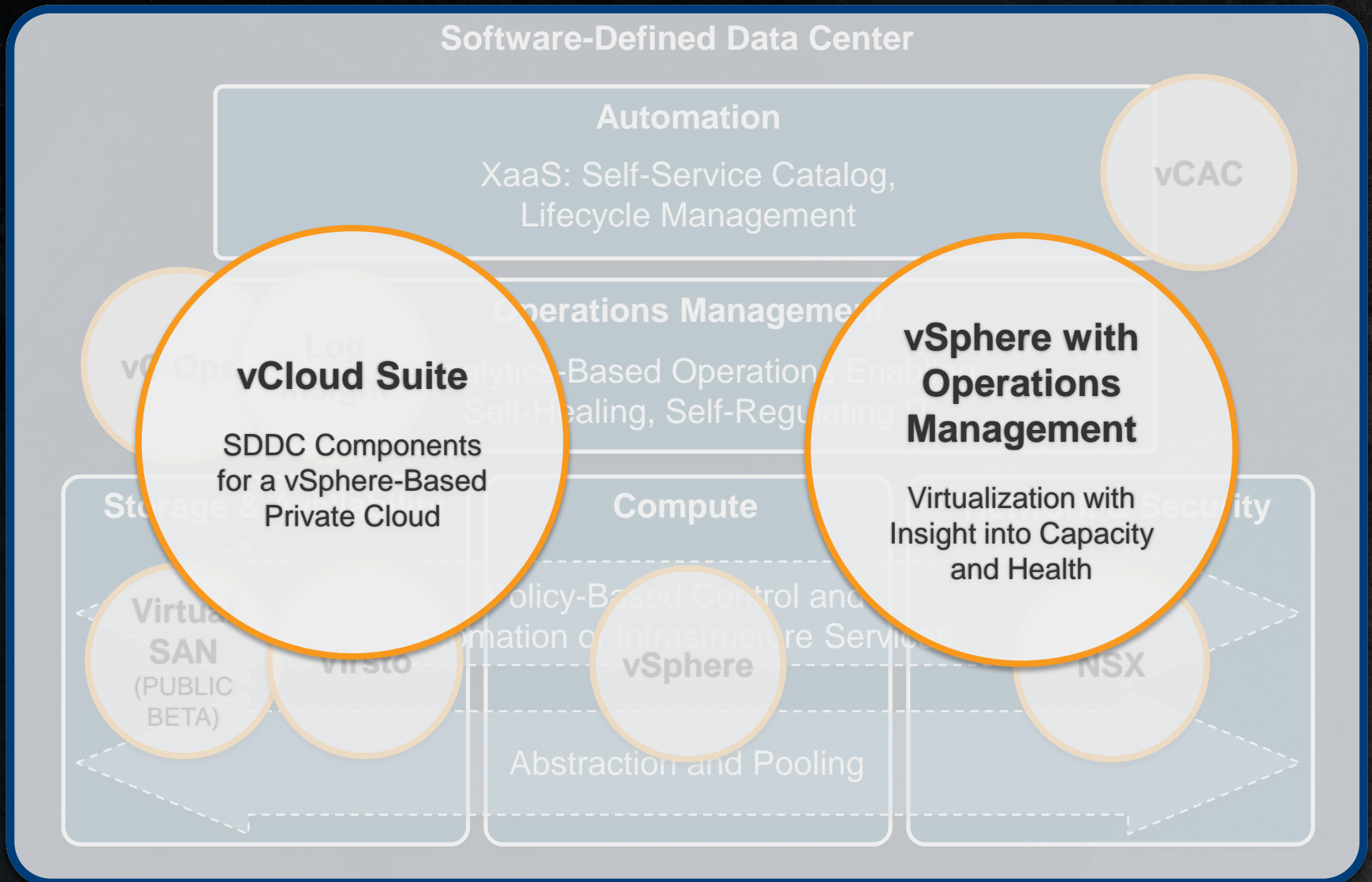
vSphere

Abstraction and Pooling

### Network & Security

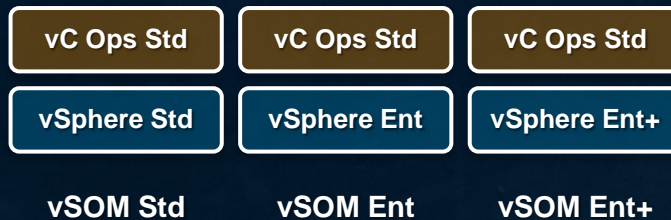
NSX

# SDDC Product Updates in H2 2013



# 2013 vSOM and vCloud Suite Offerings

## vSphere with Operations Management per CPU

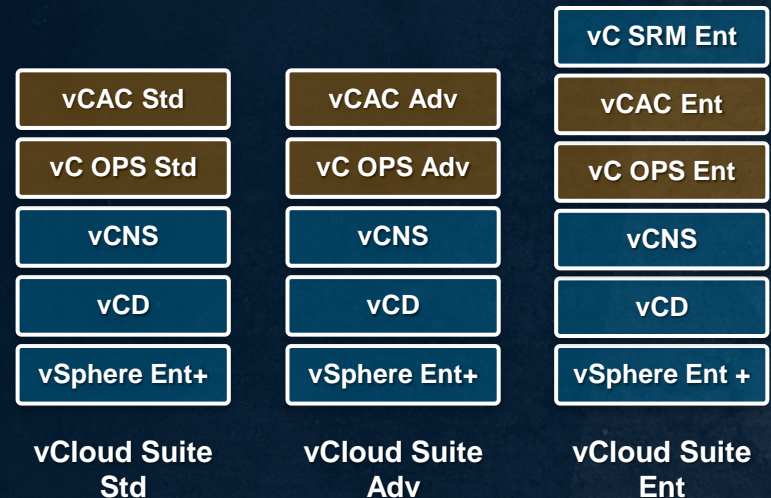


**Virtualization:** Insight on Capacity and Health

- Enterprise (Emerging)
- Commercial and SMB

Transactional / Low Touch

## vCloud Suite per CPU



**Private Cloud:** Pooled, Automated Self-Service

- Enterprise and Commercial
- Premier SMB

ELA / High Touch Transactional

**Capability**

**Customers**

**Type of sale**

# Many Customers Are Already Adopting Key Components of SDDC Technology

## Automation



## Operations Management



## Storage & Availability



## Compute

100% of  
**FORTUNE  
500**  
... and several  
hundred thousand  
customers

## Network & Security



## Options for Customers in Adopting SDDC Technology

- Stepwise by technology area
- Full SDDC

# vCloud Suite and vSphere

With Operations Management Customer Examples

## vCloud Suite Customers



**10,000**  
Engineering Work-  
Weeks Saved

**200,000**  
VMs Deployed

**3,000**  
Users  
Supported



**\$47M**  
CapEx/OpEx  
Savings

**#1**  
Industry Leader  
with Lowest Overall TCO

**70**  
New Stores Powered  
in China

## vSphere Operations Management Customers



**\$100K+**  
Hardware  
Savings

**300**  
VMs Deployed

**3**  
Data Center  
Locations



**2**  
Data Centers Now  
Virtualized and Monitored

**30**  
Servers Running

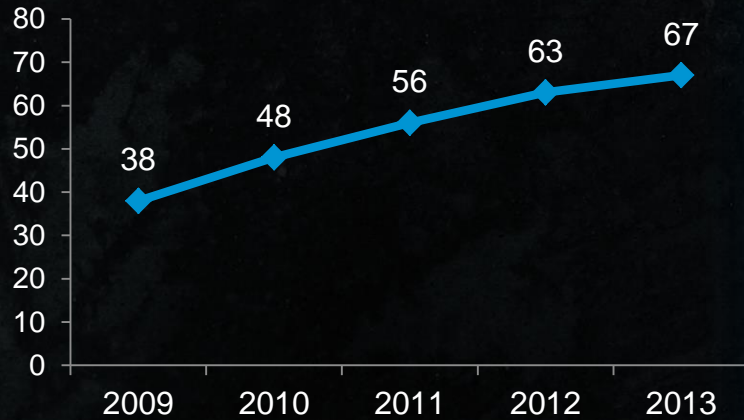
Hyper-V  
Displacement  
Example

**Positioning customers for success  
in the mobile-cloud era**  
**COMPUTE**

# vSphere Platform Growth Continues to Be Strong

Virtualization Increasingly the Standard for Deploying Workloads...

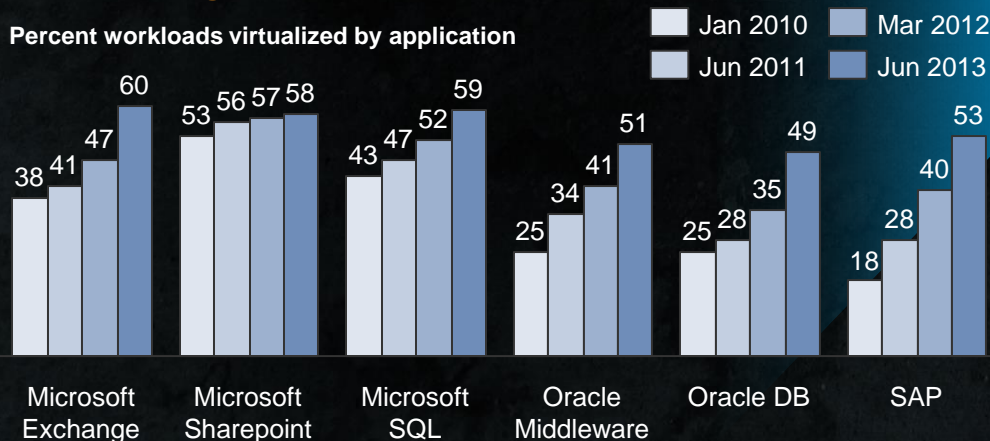
Percent workloads virtualized



**VMW Today:**  
~40M VMs  
500K  
Customers

...Including Business Critical Applications

Percent workloads virtualized by application



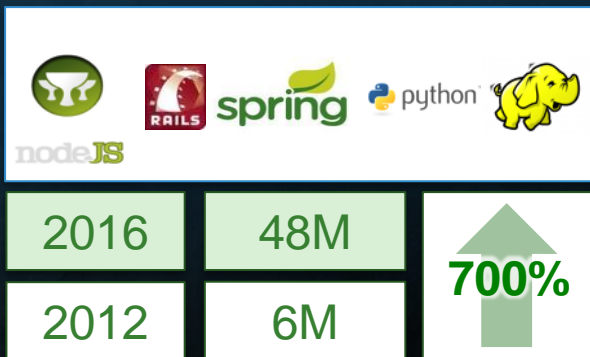
**Broad Installed Base  
Positions VMware to  
Deliver Additional Value  
with SDDC Offerings**

Sources for % Virtualized chart: VMware and Industry Analyst data, all x86 server workloads

Source for BCA chart: VMware market survey, % workloads virtualized

# vSphere 5.5: Designed to Capture Next-Gen Apps and All x86 Workloads

Optimized for Next Gen Cloud Applications Growth



vSphere Big Data Extensions – Optimize Hadoop Workloads and Extend Project Serengeti



Pivotal CF on VMware vSphere – Build PaaS On-Premise



OpenStack – Deliver Architecture Choice



High-Performance Computing - Virtual Beats Physical  
2700+ Core HPC for Air and Missile Defense



Latest Chip Set Support – Next Generation Intel® Xeon® Processor E5 v2  
Intel® Atom™ Processor C2000

Note: Server workloads

Source(s): VMware estimates based on Industry analyst data and internal analysis



# vSphere 5.5: Optimizing Performance for Business-Critical Apps (BCA)

Increasing business critical apps virtualized



## vSphere 5.5 New Features



### Enhanced Application Performance

- Increased Performance/Scale
- vSphere Flash Read Cache
- Low Latency Sensitivity



### Application-Aware Availability

- vSphere App HA

## Low Latency Sensitivity - Beta Customer Feedback

*“WOW! I can't thank you and everyone else who worked on the low-latency improvements enough...”*

*...It's going to be a wild ride with vSphere 5.5 - you guys have hit this one out the park and past the county lines as far as I'm concerned.”*

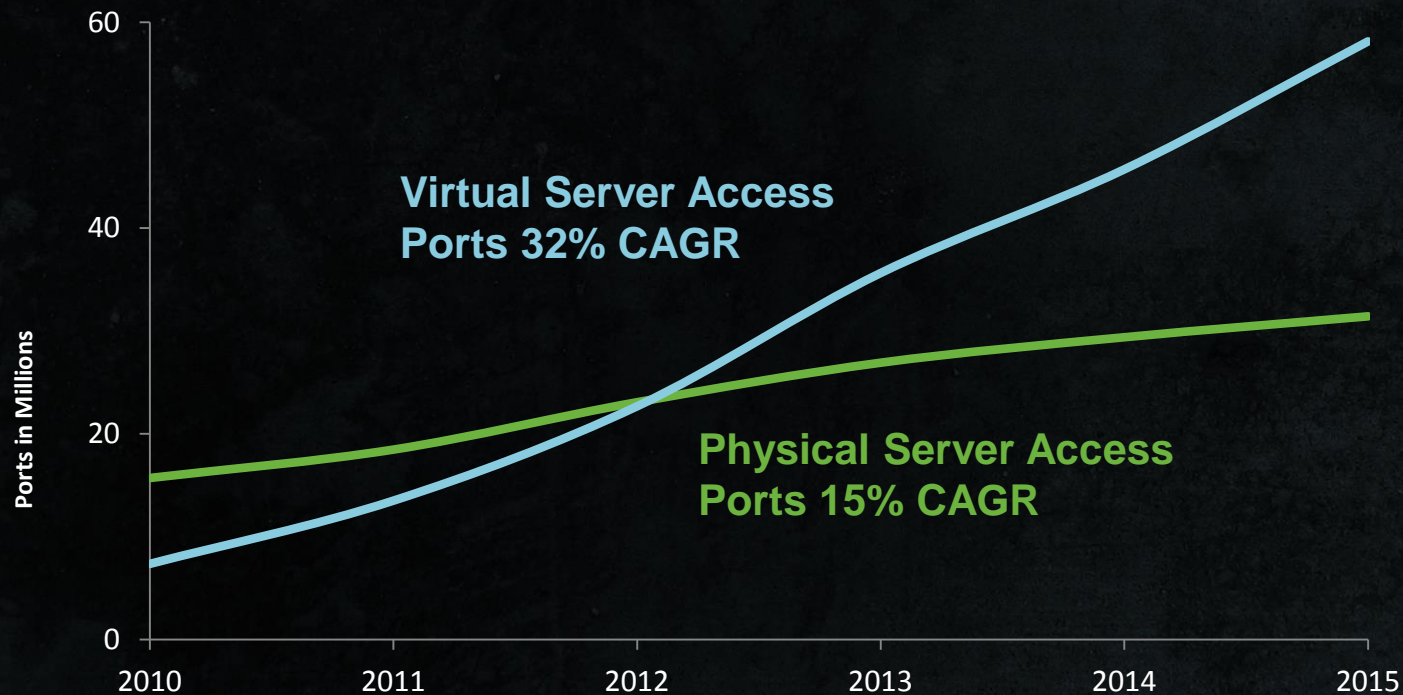
Sys Admin, Global International Investment Bank  
HQ'd in New York

Note: Server workloads

Source(s): VMware estimates based on Industry analyst data and internal analysis

**Positioning customers for success  
in the mobile-cloud era**  
**NETWORKING**

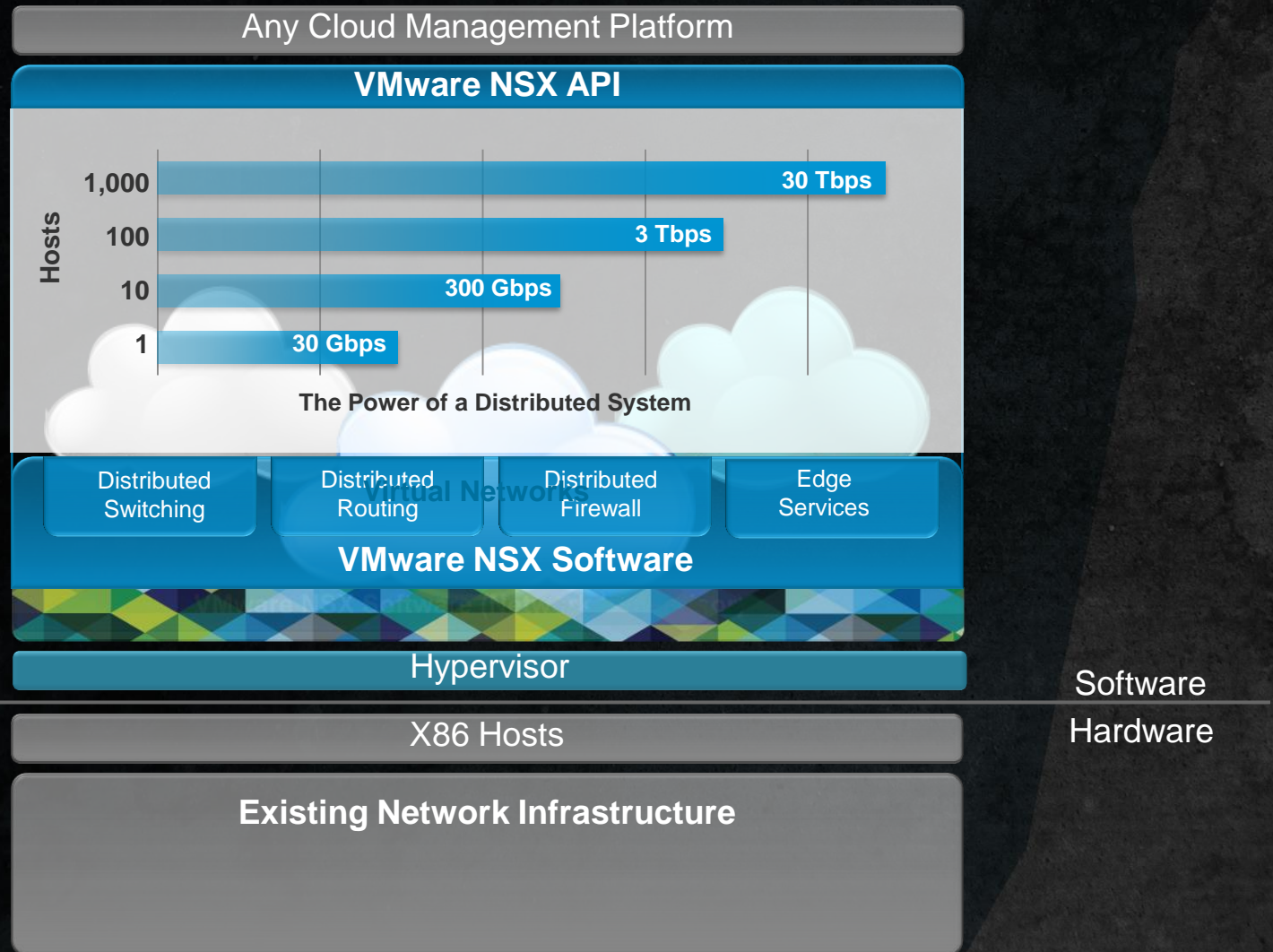
# The Network is Becoming Virtual



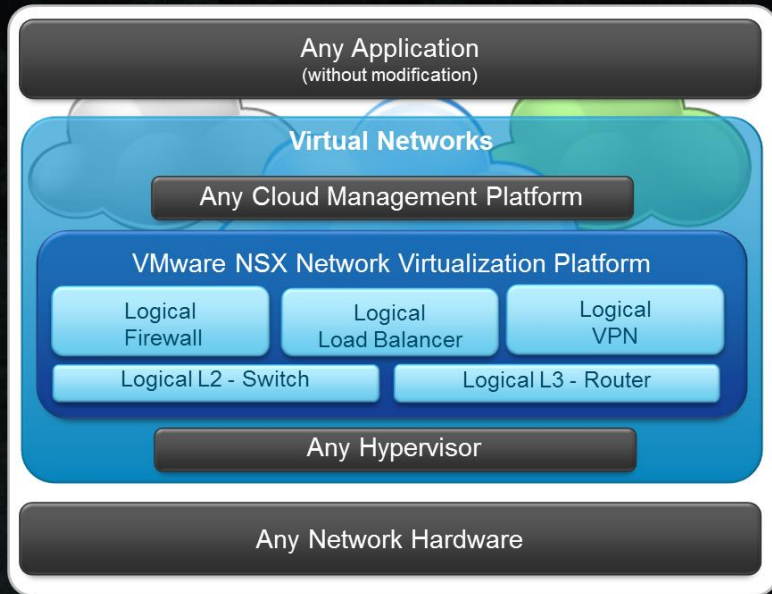
CREHAN RESEARCH Inc., March 2013

- Half of all Server Access Ports are already virtual...  
...and are on track to be ~67% in 2 years
- 40% of virtualization admins also manage virtual switching

# The Role of Network Virtualization



# Partner Extensibility for NSX



**Positioning customers for success  
in the mobile-cloud era**  
**STORAGE**

# Software-Defined Storage Brings the Operational Model of Compute to Storage



Software-Defined  
Data Center

Software-Defined Storage

Policy-Driven Control Plane

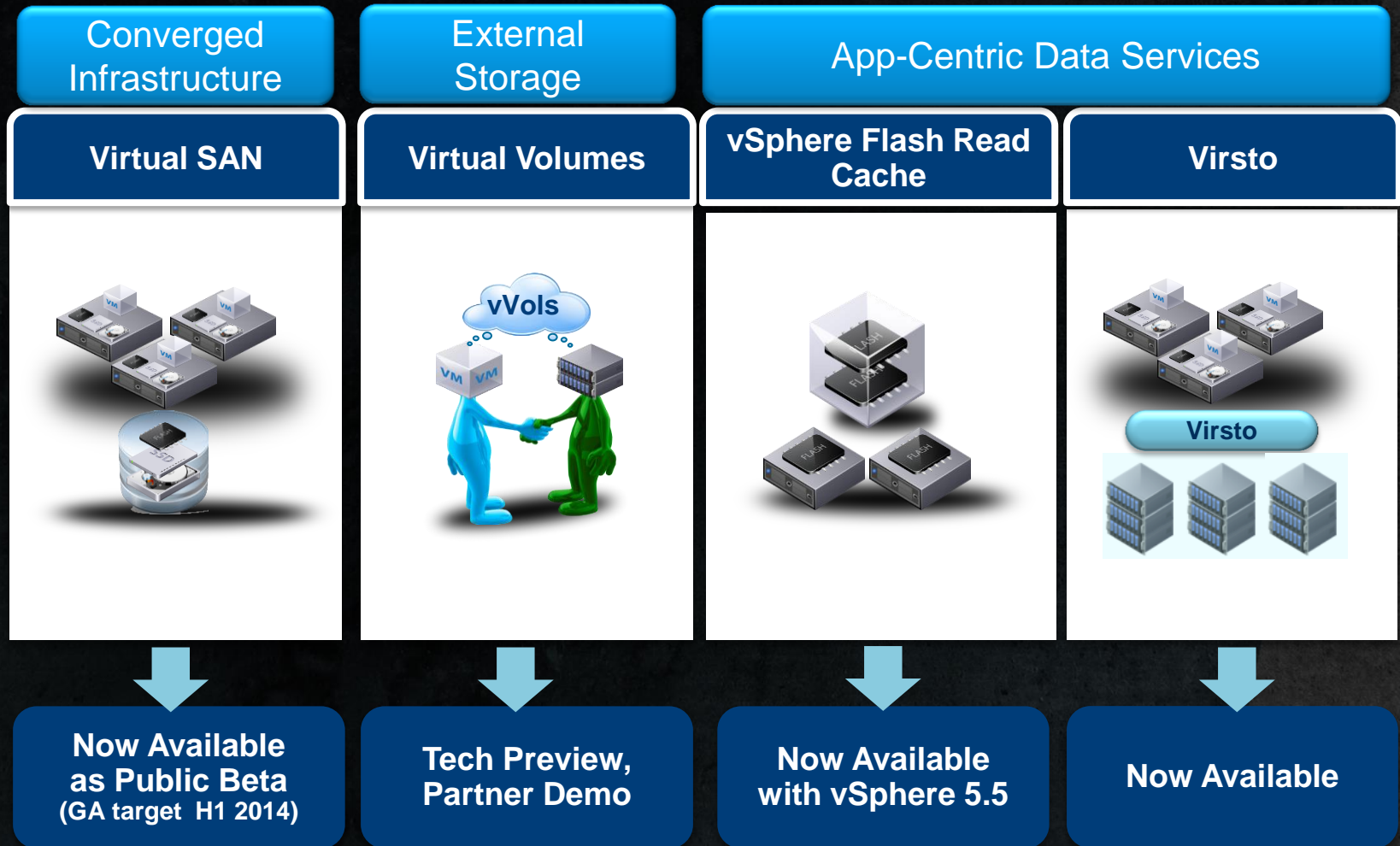
App-Centric Data Services

Virtualized Data Plane

Software-Defined Storage

Heterogeneous storage resources are abstracted into logical pools, consumed and managed through app-centric policy-based automation

# VMware Software-Defined Storage – Product Announcements





# VMware Virtual SAN – Initial Use Cases

## Virtual Desktop (VDI)



- Handle peak performance such as boot, login, read/write storms
- Seamless granular scaling from POC to deployment without huge upfront investments
- Support high VDI density

## Tier 2 / Tier 3 Test and Dev



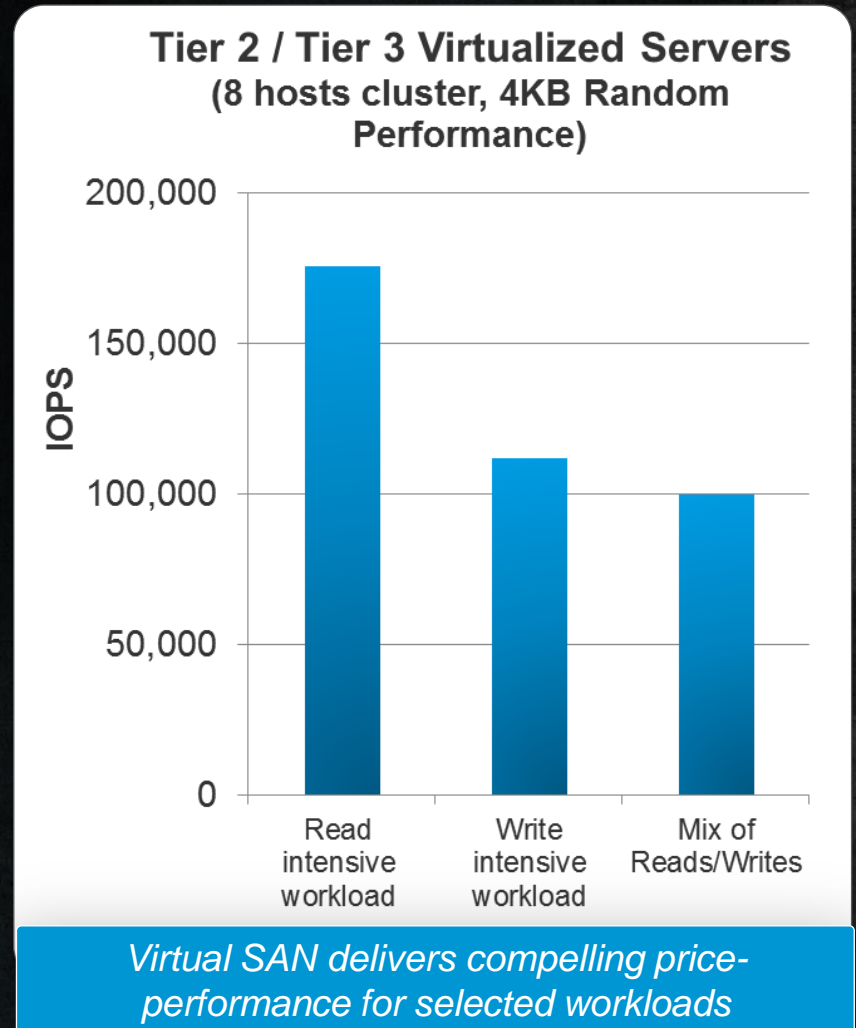
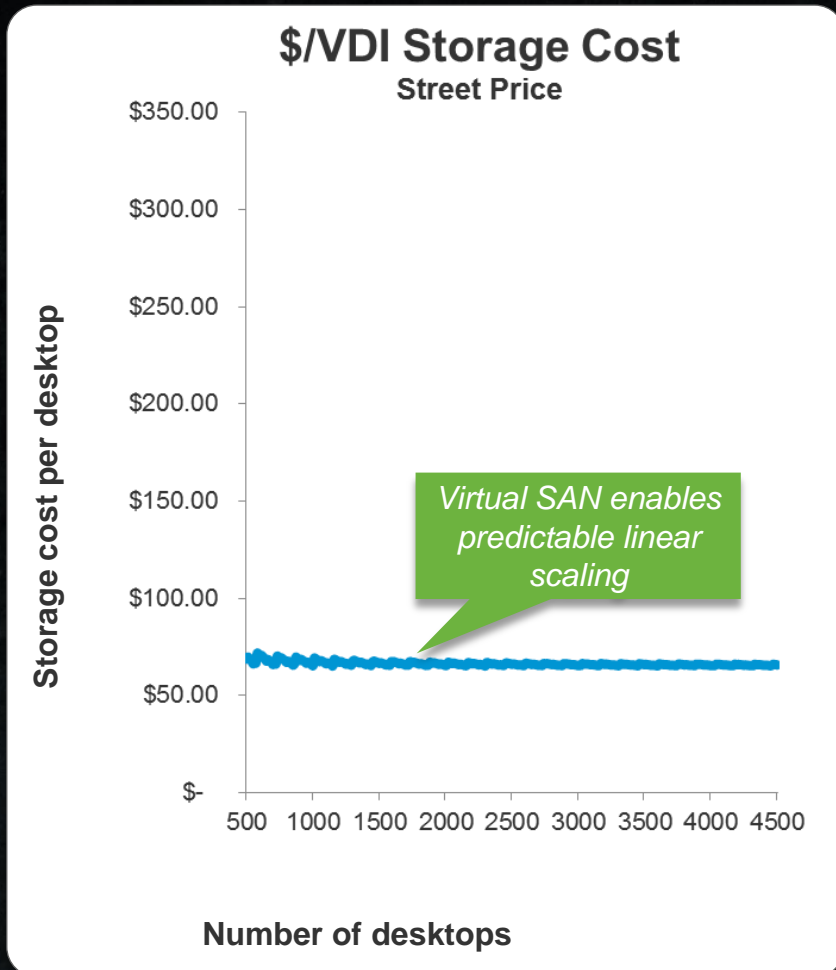
- Rapid storage provisioning and complete automation
- Ideal price/performance
- Minimizes data center footprint

## DR Target



- Integrated with vSphere Replication and VMware SRM
- Reduces cost of storage
- Minimizes data center footprint

# Compelling Price/Performance with Predictable Scaling



- Estimated based on 2013 street pricing, Capex (includes storage hardware + software license costs)
- Additional savings come from reduced Opex through automation
- Virtual SAN configuration: 10TB hosts, 9 VMs per core, with 40GB per VM, 2 copies for availability and 10% SSD for performance

**Positioning customers for success  
in the mobile-cloud era  
MANAGEMENT**

# Cloud Management – Opportunities



## Cloud Management Space Is Ripe for Continued Disruption

- Technology and market changes creating opportunity for new leaders
- Organizations are deploying new Cloud management solutions that are purpose-built to manage environments that are dynamic, heterogeneous, and scale-out capable



## VMware Management Leading the Disruption

- Big shift in software spend from traditional IT management to cloud management vendors
- VMware is one of the fastest growing management vendors
  - IDC: #1 market share in Cloud Systems Management in 2012
  - Gartner: Top 2 fastest growing ITOM vendors in 2012

# Technology Shifts Driving the Disruption

- Client-Server Era → Mobile-Cloud Era
- Cloud scale
- Shifting category boundaries

## Legacy Management

- Regulate and coordinate manual processes
- Manual health models on structured data
- Many point products, installed on-premise

## Cloud Management

- Policy-based automation and control
- Analytics approach on unstructured data
- Broad solution suites

# Cloud Management Mission

**VMware Simplifies and Automates IT Management  
and Empowers IT to Govern Services  
Across Heterogeneous Platforms and Hybrid Clouds**

## Cloud Automation

Automate the delivery of infrastructure, applications and desktops as a service across multiple clouds and platforms.

### Target Market:

Enterprise customers on-boarding to cloud via automation, IaaS/PaaS

## Cloud Operations

Ensure the health, risk, efficiency and compliance of your infrastructure and applications.

### Target Market:

Customers (>50 VM) looking for operations management in dynamic, virtual and cloud environment

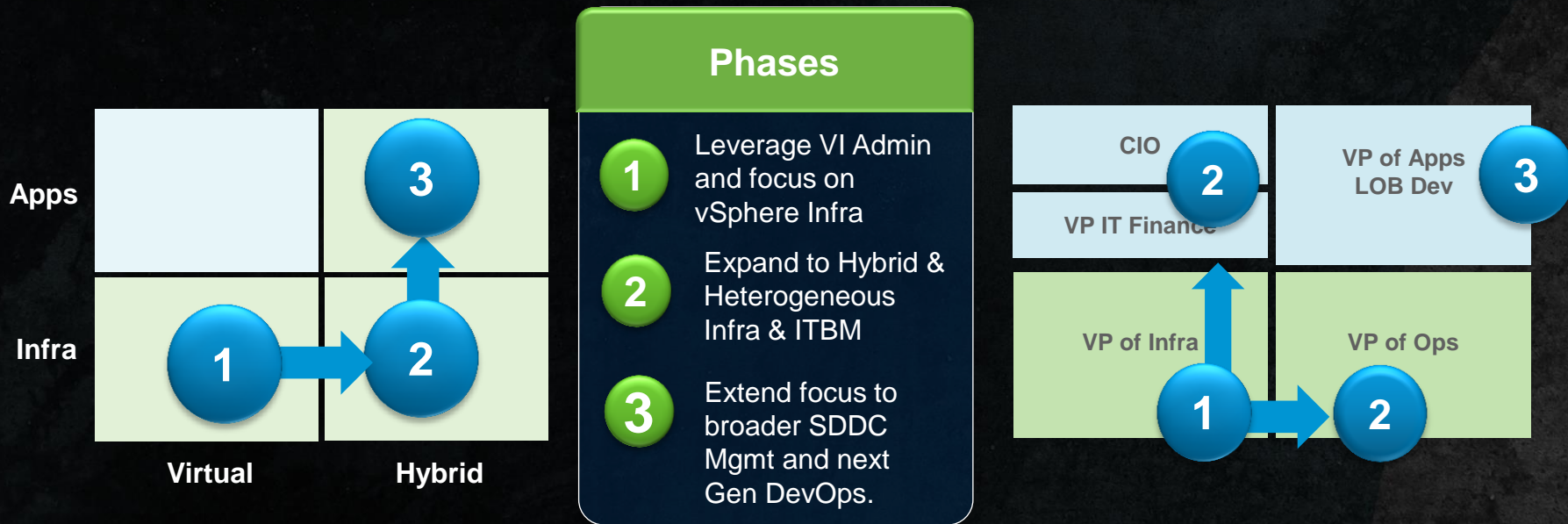
## Cloud Business

Govern and manage cloud services as a critical element of running IT like a business.

### Target Market:

- Fortune 2000 customers
- IT spend > \$75M

# Cloud Management: Evolution and Strategy



2010	2011	2012	2013	2014	2015+
<p><b>1</b></p> <ul style="list-style-type: none"> <li>• Launched Mgmt Business</li> <li>• Acquire Ionix and Integrien</li> </ul>	<p><b>2</b></p> <ul style="list-style-type: none"> <li>• Acquired Digital Fuel – ITBM Market entry</li> <li>• Acquired DynamicOps – Expanded Heterogeneous and Hybrid Management focus</li> <li>• Acquired Pattern Insights - Extended Analytics from Machine to Log</li> </ul>		<p><b>3</b></p> <ul style="list-style-type: none"> <li>• Investment to accelerate growth</li> <li>• Expand Portfolio to new management domains</li> </ul>		

# Cloud Management: Investment Areas

## Cloud Automation

- Multi-platform, multi-vendor provisioning
- Personalized, self-service delivery
- Lifecycle management of service including resource reclamation
- Extensible design

## Cloud Operations

- Visibility – application to infrastructure
- Preventive and automated operations
- Operations for large scale cloud environments
- Analytics for unstructured data

## Cloud Business

- Cost Visibility
- Efficiency – compare costs, benchmark
- Optimize sourcing
- Prescriptive guidance



# Delivering Customer Value

## Cloud Automation

### vCloud Automation Center

- Self-service access
- Policy-based compliance
- Automated service provisioning



- Reduced provisioning from days to minutes
- Solution extended throughout NewsCorp

## Cloud Operations

### vCenter Operations Management

- Analytics-based
- X-cloud performance and compliance



- Managing over 10K VMs
- Reduced daily alerts 10x
- Found 92% VMs over-prov., reclaimed 1000 VMs

## Cloud Business

### VMware ITBM

- Show-/chargeback
- Fact-based Biz/IT planning
- "Broker of IT Services"



- 6% reduction in unit costs through Unit Cost Analysis
- \$20M in annual cost savings

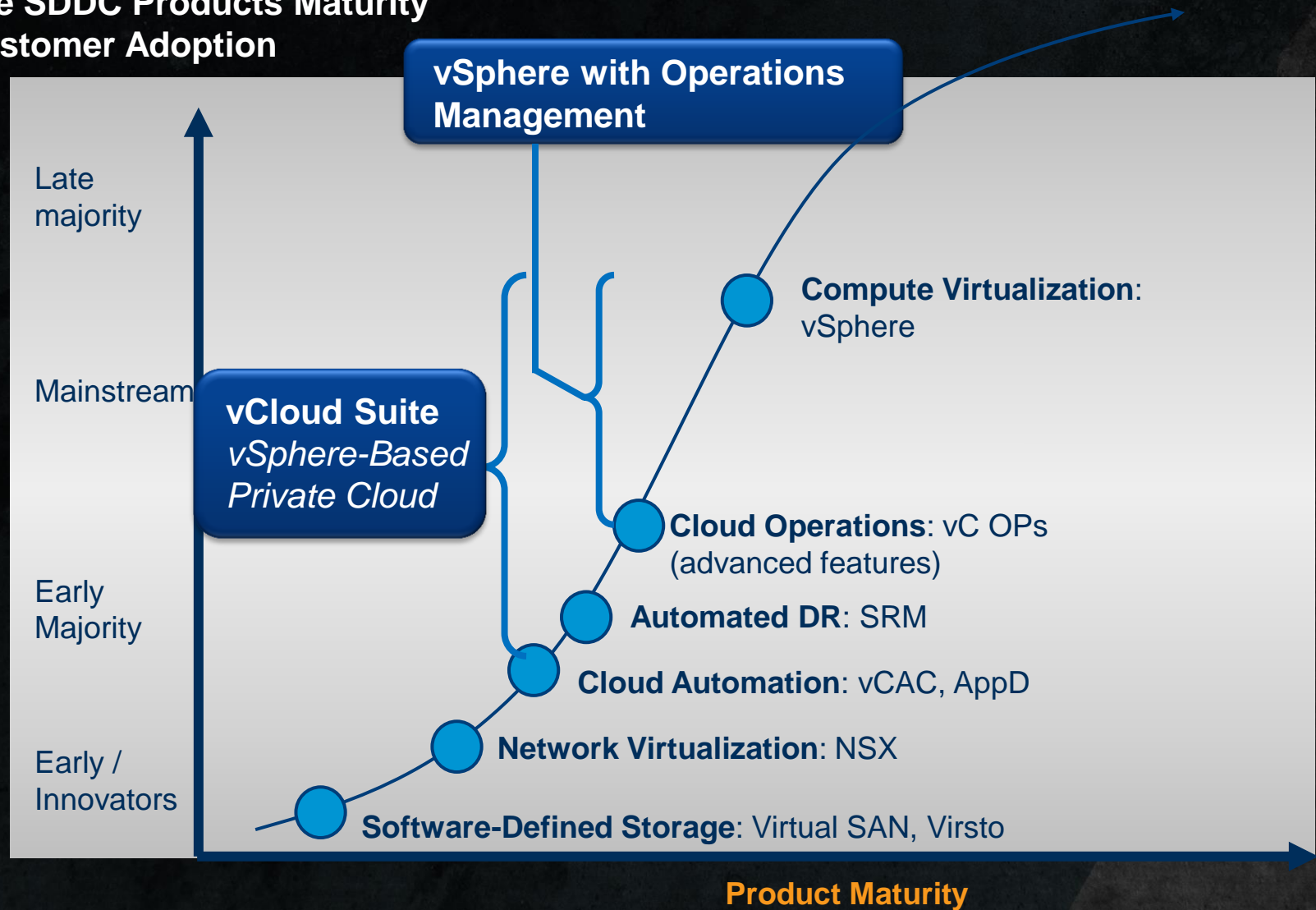
## Value Prop

## Proof Points

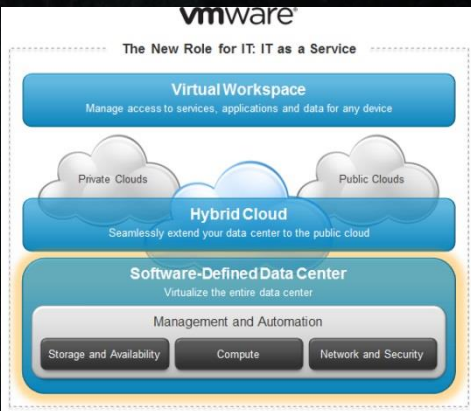
# **Positioning customers for success in the mobile-cloud era**

# Building Towards the SDDC for Customer Value

## VMware SDDC Products Maturity and Customer Adoption



# Track Record of Innovation Positions VMware to Realize the Software-Defined Data Center



## Management and Automation

- Cloud Management Disrupting Traditional Enterprise Management

## Compute

- Optimizing vSphere for business critical and next generation apps

## Network and Security

- Start of transformational journey

## Storage and Availability

- Big opportunity to drive simplicity, automation, and efficiency

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