What’s New in vSphere?

Michael Adams, VMware
madams@vmware.com
Disclaimer

• This presentation may contain product features that are currently under development.
• This overview of new technology represents no commitment from VMware to deliver these features in any generally available product.
• Features are subject to change, and must not be included in contracts, purchase orders, or sales agreements of any kind.
• Technical feasibility and market demand will affect final delivery.
• Pricing and packaging for any new technologies or features discussed or presented have not been determined.
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<th>Agenda Item</th>
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<td>State of the Union</td>
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VMware Delivers:
The Foundation for the Software-Defined Enterprise

### End User Computing

<table>
<thead>
<tr>
<th>End User Computing</th>
<th>Desktop</th>
<th>Mobile</th>
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<tbody>
<tr>
<td>Virtual Workspace</td>
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### Applications

<table>
<thead>
<tr>
<th>Applications</th>
<th>Traditional</th>
<th>Modern</th>
<th>SaaS</th>
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<tbody>
<tr>
<td></td>
<td>[Images]</td>
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### Software-Defined Data Center

#### Policy-based Management & Automation

<table>
<thead>
<tr>
<th>Software-Defined Data Center</th>
<th>Cloud Automation</th>
<th>Cloud Operations</th>
<th>Cloud Business</th>
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#### Virtualized Infrastructure Abstract & Pool

<table>
<thead>
<tr>
<th>Virtualized Infrastructure Abstract &amp; Pool</th>
<th>Compute Abstraction = Server Virtualization</th>
<th>Network Abstraction = Virtual Networking</th>
<th>Storage Abstraction = Software-Defined Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Hardware</strong></td>
<td>Compute</td>
<td>Network</td>
<td>Storage</td>
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<tr>
<td>Compute</td>
<td>Network</td>
<td>Storage</td>
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### CONFIDENTIAL
What Are We Trying to Do Now? vSphere Can Bridge the Gap

- Legacy Apps
- On-Prem
- Traditional HW

- Next Gen Apps
- Hybrid
- White Box
vSphere 5.5: What’s New in 2013

New Features

- App HA
- Flash Read Cache
- Replication
- Backup and Recovery
- Big Data Extensions

New Customer Benefits

- High availability now tied to specific applications
- Accelerates performance for mission critical applications by up to 2x
- Ability to run Big Data applications on vSphere
vSphere Go to Market

vCloud Suite
SDDC Components for a vSphere-Based Private Cloud

vSphere with Operations Management
Virtualization with Insight into Capacity and Health

vSphere A La Carte
Just vSphere
State of the Union
### vSphere Updates – Announcing at VMworld 2014*

<table>
<thead>
<tr>
<th>vSphere 5.5 Update 2*</th>
<th>vSphere for ROBO*</th>
</tr>
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<tbody>
<tr>
<td>• Support for the new vCloud Suite 5.8</td>
<td></td>
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<tr>
<td>• Additional updates and patches</td>
<td></td>
</tr>
<tr>
<td>• Support for new hardware</td>
<td></td>
</tr>
<tr>
<td>• New vSphere offering tailored for remote and branch office virtualization</td>
<td></td>
</tr>
<tr>
<td>• Available in early September</td>
<td></td>
</tr>
<tr>
<td>• Per VM licensing</td>
<td></td>
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<table>
<thead>
<tr>
<th>vSphere Beta</th>
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<tbody>
<tr>
<td>• “Open” program now allows sign-up directly by the end user</td>
</tr>
<tr>
<td>• High response rate</td>
</tr>
<tr>
<td>• Available since June 30</td>
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</table>
vSphere – Accelerating Market Leadership in Compute Virtualization

**vSphere 5.5**
- Performance and Scale
- Latency Controls
- App HA
- Flash Read Cache
- Big Data Extensions

**vSphere 5.5 U2**

**vSphere Beta**

**vSphere Tech Previews**

- **Scale-up & Scale-out**
  - Performance and Scale
  - In-Memory Database
  - Container support
  - NVIDIA Grid For VDI

- **Break-through Availability***
  - vMotion Enhancements
  - Multi-Processor Fault Tolerance
  - Virtual Volumes

- **Automation***
  - Virtual Data Center
  - Policy Based Management
  - Content Library
  - Enhanced Link Mode

*Showcased in Solutions Exchange

**Past**

**Present**

**Future**

vmworld 2014
## vSphere 5.5 U2

<table>
<thead>
<tr>
<th>Q1 2014</th>
<th>Q2 2014</th>
<th>Q3 2014</th>
<th>Q4 2014</th>
<th>Q1 2015</th>
<th>Q2 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>vSphere 5.5 U1</td>
<td>vCD 5.5 U1</td>
<td>vSphere 5.5 U2</td>
<td>vSphere 5.5 U2</td>
<td>vSphere 5.5 U2</td>
<td>vSphere 5.5 U2</td>
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</tbody>
</table>

- **vSphere 5.5 U1**
  - Q3’2014 vCloud Suite
  - 6TB host support
  - Haswell EP legacy
  - VC: Win 2012 R2, Oracle 12c, SQL 2012 SP1
  - New GOSEs
  - Storage vMotion interop w. CBT

- **vCD 5.5 U1**
  - Oracle 12c
  - New GOSEs
VMware vSphere Beta

• Help shape the future of vSphere
• Gain visibility into features and technology that may be in upcoming versions of vSphere
• No nominations required. Open to everyone!
• [Link](http://www.vmware.com/go/vspherebetaq2)
Percent of Workloads Running Remotely

- On average, 24% of workloads are running at remote or branch offices

### by Region
- **North America (NA)**: 22%
- **Western Europe**: 26%
- **Developed APAC**: 24%
- **BRIC**: 29%

### by Company Size
- **SMB**: 22%
- **COMM**: 23%
- **ENT**: 28%

Status of Virtualization – VMware Study 2013
Typical Problems and Their Implications in Managing Remote Offices and Branch Offices

Lack of local IT staff, coupled with distributed nature of locations
- Scale is of a different nature, small number of servers across a large number of locations
- Speed of provisioning and management of multiple sites centrally or remotely becomes important
- Ensuring consistent, compliant and secure configurations and maintaining these configurations becomes critical for operational ease

Network connectivity, a single point of failure
- Survivability and availability of workloads that serve local needs is vital

Limited IT budgets
- Investing in specialized business continuity and compliance solutions/hardware becomes cost-prohibitive
Why Should I Virtualize My Server Workloads in Remote Office and Branch Office Sites?

- HARDWARE ABSTRACTION
- AGILITY
- STANDARDIZATION
- INFRASTRUCTURE LEVEL AVAILABILITY
- COMPLIANCE
## Introduction of New vSphere Remote Office Branch Office Editions

<table>
<thead>
<tr>
<th>Name</th>
<th>vSphere Remote Office Branch Office Standard</th>
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<tbody>
<tr>
<td><strong>Licensing</strong></td>
<td>• Pack of 25 VMs</td>
</tr>
</tbody>
</table>
| **Packaging**               | Features include:  
  • vSphere Hypervisor  
  • vSphere HA  
  • vMotion  
  • vSphere Data protection  
  • vSphere replication  
  • vShield Endpoint  
  • Fault Tolerance  
  • Storage vMotion                                                                                   |
| **Usage**                   | • Maximum of 1 pack of either offering (NOT BOTH) per site (25 VM per site)  
• Customers can flexibly distribute pack VMs across sites                                              |

Customers can use existing vCenter Server Standard for central management by upgrading to Q3’2014 GA version or purchase vCenter Server separately

Note: All reference pricing above is suggested MSRP for the US, in USD
Pivotal CF
Platform as a Service (PaaS): Pivotal CF
Platform as a Service Running on VMware vSphere

Overview

• On-premise packaged software edition of Cloud Foundry
• Enables enterprises to install and manage a PaaS offering on vSphere infrastructure

Benefits

• Developers can now focus on application development and not infrastructure requirements
• Self-service
• Delivering and updating of applications at scale and the pace of business
Big Data
vSphere Big Data Extensions
Running Hadoop with ease and efficiency on VMware vSphere

Overview
- vSphere extends support for Big Data workloads, including all major Hadoop distributions
- vCenter plugin with easy to use UI

Benefits
- Simple to deploy, manage, and operate Hadoop on vSphere
- Maximize resource utilization by running multi-tenant, elastic Hadoop
- Architect a scalable and flexible Big Data Platform
## What’s New In vCloud Suite 5.8

### Improved business continuity and disaster recovery
- Self-service, policy-based provisioning of DR tiers
- Hyper-Converged storage for DR
- Increased scalability of protection and recovery capabilities

### Enhanced next-generation applications
- Big Data Extensions support Hadoop 2 distributions with YARN cluster resource management

### New proactive support
- Support Assistant, a free vCenter plug-in, identifies issues before problems occur

### Improved interoperability with NSX
- Customizable provisioning of NSX firewall and routing services
Technology Previews
Compute = VMware vSphere (ESX and vCenter Server)

Best Virtualization Platform

VMware vSphere is the most used virtualization platform

Run Today’s and Tomorrow’s Apps

Today’s Data Center
- Traditional Applications

Software-Defined Data Center
- Next-Gen Cloud Applications

Virtualize all x86 workloads

Operational Efficiency at Scale

Fewer manual steps, more automation
vMotion Across vCenter Servers
Moving VM across vCenter Management Boundaries

Overview
- vMotion across VMware® vCenter™ Server management boundaries
- Easily move VMs across vSwitches, folders and data centers
- Builds upon vMotion without shared storage

Benefits
- Simplifies vCenter Migration and consolidation
- Aligns vMotion capabilities with larger data center environments
Long-Distance vMotion
The Next Generation in vMotion Innovation

Overview
- Targeting cross-continental US distances –up to 100 ms RTTs
- Maintain standard vMotion guarantees
- Leader in VM flexibility

Benefits
- Permanent migrations between data centers
- Disaster avoidance (DA)
- SRM/DA testing
- Multi-site load balancing
- Follow the sun
Fault Tolerance for Multi-Processor VMs
Symmetric Multi-Processor Fault Tolerance – Multi- vCPU Support

Overview
- FT support for up to 4 vCPUs
- Protection for high performance, multi-vCPU VMs
- New, more scalable technology: fast check-pointing to keep primary and secondary in sync

Benefits
- Protect mission-critical, high-performance applications regardless of OS
- Continuous availability: zero downtime, zero data loss for infrastructure failures
- Fully automated response
Host and VM Scale

Ensuring ESXi Scales to Meet Data Center Needs, from Enterprises to Hosting Providers

**Overview**

<table>
<thead>
<tr>
<th></th>
<th>vSphere 5.1</th>
<th>vSphere 5.5</th>
<th>Future</th>
</tr>
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<tbody>
<tr>
<td>pCPU</td>
<td>160</td>
<td>320</td>
<td>320+</td>
</tr>
<tr>
<td>Host Mem</td>
<td>2TB</td>
<td>4TB</td>
<td>4+ TB</td>
</tr>
<tr>
<td>vCPUs</td>
<td>2048</td>
<td>4096</td>
<td>4096+</td>
</tr>
<tr>
<td>Nodes/Cluster</td>
<td>32</td>
<td>32</td>
<td>32+</td>
</tr>
<tr>
<td>VMDK</td>
<td>2TB</td>
<td>62TB</td>
<td>62TB+</td>
</tr>
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**Benefits**

- Ensure the investment in ESXi scales with the needs of the data center
- Monster VMs to meet the needs of large in memory databases
- More VMs per cluster simplifies management
App HA and Component Protection

Detect and Recover from OS or Application Failure, Recover from APD / PDL

Available Now:
• Detect and recover from app or OS failure

Roadmap:
• Extensibility with app-aware APIs
• Better protection for storage connectivity issues

Overview

Benefits
• Simpler management through health visibility into vCenter
• Tier 1 application protection at scale
• Lower TCO than traditional app-specific solutions
• Smarter detection, remediation of all-paths-down & permanent device loss situation
Predictable Performance for Latency-Sensitive Apps

Overview
- vSphere supports latency sensitive and high throughput applications such as Telco network services and financial services trading applications
- vCPU affinity settings for low latency applications at VM level
- vMotion in-guest notification prevents interruption to latency sensitive applications

Benefits
- Significant performance and jitter improvement for I/O bound applications
- Live migration support of latency sensitive applications
Content Library

Store and Sync VMs, OVF$s, and ISO$s

Overview

• Content Library provides storage and versioning of files including VM templates, ISO$s, and OVF$s.
• Includes powerful publish and subscribe features to replicate content
• Backed by vSphere Datastores or NFS

Benefits

• Simplifies management of templates
• Enables synchronization between local and remote vCenter Servers
• Also enables sync between vC and vCD
Virtual Data Center
Aggregate Resources and Simplify the VM Provisioning Experience

Overview
- Virtual Data Center aggregates compute clusters, storage clusters, networks, and policies
- Creates a unified resource pool for VM creation

Benefits
- Automate VM provisioning based on capacity and capability
- Intelligently place VM’s based on policy
- Monitor VM policy adherence with automated remediation
Policy-Based Management
Policy-Based Management of the Virtual Data Center

Overview
- Intelligent placement of VMs based on Tags
- Policy compliance checking with manual remediation
- Anti-affinity policies can be created and deployed at VM provisioning time

Benefits
- Automate initial VM placement without writing complex policies
- Ongoing operational efficiencies via policy-based remediation throughout VM lifecycle
VCD Transition
VMware’s Plan to Reduce Complexity and Simplify the Cloud

vCloud Automation Center (vCAC)

Well governed Self-Service Delivery

Cloud Automation provides personalized, self-service delivery of application, infrastructure, and desktop services by fully automating the end-to-end service lifecycle across heterogeneous and hybrid clouds.

vCloud Director (vCD)

Cloud Administration

VMware’s Cloud Infrastructure Platform produces an entire virtual datacenter (VDC) that harnesses the software-defined infrastructure to deliver the most agile, cost-efficient cloud.

The information on the roadmap is intended to outline our general product direction and it should not be relied on in making a purchasing decision. It is for information purposes only and may not be incorporated into any contract.
EOA Reminders
Keep These in Mind

• Recent
  – vSphere 4.x and Lab Manager EOS
  – Heartbeat EOA (June 2, 2014) and EOS Announced
  – SLES for VMware EOA and EOS Announced

• VMworld
  – Essentials/Essentials Plus ROBO SKUs EOA
    (new ROBO SKUs)
Q and A
Thank You
Fill out a survey

Every completed survey is entered into a drawing for a $25 VMware company store gift certificate
What’s New in vSphere?

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