Virtualization Simplifies Provisioning of VMs, But Steps Needed to Deploy in a Production Environment Cause These Challenges

Past

$10,000
10 weeks

Present

$1,800
5 days, 2 minutes

$13,800
25 days, 2 minutes

Enterprise storage
VLAN networks
Firewall, load-balancer
IDS, security, monitoring
Availability
Software-defined Datacenter:
All infrastructure is virtualized and delivered as a service, and the control of this datacenter is entirely driven by software.
Software-Defined Datacenters Simplifies Process to Define an Application and All the Resources It Needs

Future

Virtual Datacenter

5 days, 2 minutes

2 minutes
This Eliminates Operational Inefficiency

**From Servers To Services**

<table>
<thead>
<tr>
<th>Weeks</th>
<th>Days/Hours</th>
<th>Minutes/Seconds</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>46 2012</td>
<td>46 Future</td>
</tr>
</tbody>
</table>

* Recent healthcare customer
VMware vCloud Suite Delivers The Software-defined Datacenter

- **Based On Virtualization**
  - Delivered by VMware vSphere
- **Recasting all datacenter services as software**
  - Compute, storage, network
  - Security, Availability
  - Automation and Management

vCloud Suite: Complete offering delivering the Software-defined Datacenter
What is the vCloud Suite?

Components of a Complete, Integrated Cloud Infrastructure

- Standard services catalog
- High-frequency Task Automation
- Testable Disaster Recovery
- Monitoring, Planning, Out-of-box Compliance
- Software-defined network and security
- Intelligent Infrastructure
- Software-defined compute

vCloud Suite

- vCloud Automation Center
- vFabric Application Director
- vCenter Site Recovery Manager
- vCenter Operations Management Suite
- vCloud Networking and Security
- vCloud Director
- vCloud Connector
- vSphere Enterprise+
ACCELERATING THE JOURNEY TO YOUR CLOUD COMPUTING

With CISCO, VMware and EMC

K. Aggelakopoulos - Sr. Systems Engineer / EMC
VCE VBLOCK SYSTEMS

A fully integrated and fully virtualized cloud infrastructure system
VCE MODEL – THE BEST OF THE BEST

**CISCO**
- Undisputed leader in networking
- Leading innovator in blade technology

**EMC²**
- Undisputed leader in storage
- Leading innovator in information management & security

**Intel**
- Undisputed leader in platforms
- Leading innovator in core architecture

**VMware**
- Undisputed leader in virtualization
- Leading innovator in cloud application enablement

**Converged Infrastructure & Cloud Deployment**
A NEW WAY TO DELIVER IT

**Vblock™ Infrastructure Platforms**

Management and Orchestration:
- Unified Infrastructure Manager (UIM) framework

Virtualization: VMware

Compute: Cisco UCS

Network: Cisco Nexus and MDS switching

Storage: EMC Unified or EMC Symmetrix VMAX

**Solutions and Services**

Accelerate time to value of business applications

Seamless Support
VCE PRODUCT STANDARDIZATION

- Virtualization, server, storage, networking, and security
- Pre-engineered, pre-tested and validated
- Physical and logical integration
- Simplified management
- Solutions validation
- Roadmap planning, interoperability testing, change management, and upgrades
- VCE™ Support

Converged Infrastructure and Cloud Computing
VBLOCK SYSTEMS PRODUCT PORTFOLIO

VBLOCK SYSTEM 100  NEW

VBLOCK SYSTEM 200  NEW

VBLOCK SYSTEM 300  NEW Modular Design

VBLOCK SYSTEM 700

Vblock Systems Management Software  NEW

Applications and Solutions Validation
A “right-sized” system to meet capacity, workload, and space requirements

- Brings the power and benefits of the Vblock Systems family into a smaller form factor solution
- Delivers core IT services for distributed and mid-sized datacenters
# VBLOCK SYSTEM COMPONENTS

<table>
<thead>
<tr>
<th>VBLOCK SYSTEM 100</th>
<th>VBLOCK SYSTEM 200</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMPUTE</strong></td>
<td><strong>COMPUTE</strong></td>
</tr>
<tr>
<td>BX – 3-4 UCS C220 M3</td>
<td>3 – 12 UCS C220 M3</td>
</tr>
<tr>
<td>DX – 3-8 UCS C220 M3</td>
<td><strong>VIRTUALIZATION</strong></td>
</tr>
<tr>
<td>(BX 2 Configs, DX 6 Configs)</td>
<td>VMware vSphere 5.x Enterprise Plus Nexus 1000v Essentials</td>
</tr>
<tr>
<td><strong>NETWORK</strong></td>
<td><strong>VMWARE STORAGE</strong></td>
</tr>
<tr>
<td>Cisco Catalyst 3750-X Ethernet (iSCSI &amp; NFS)</td>
<td>EMC VNXe (3150/3300)</td>
</tr>
<tr>
<td><strong>VIRTUALIZATION</strong></td>
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</tr>
<tr>
<td>VMware vSphere 5.x Enterprise Plus Nexus 1000v Essentials</td>
<td>VMware vSphere 5.x Enterprise Plus Nexus 1000v Advanced, Essentials</td>
</tr>
<tr>
<td><strong>SOFTWARE</strong></td>
<td><strong>SOFTWARE</strong></td>
</tr>
<tr>
<td>VCE Vision™ Intelligent Operations Software</td>
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</tr>
</tbody>
</table>

**Cisco Nexus 5548 – Ethernet (iSCSI & NFS), FC (10Gb)**

**EMC VNX 5300**

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VBLOCK SYSTEM 100: RIGHT-SIZED...

... Compute resources, with up to 8 servers per Vblock System 100

... IOPS of 720 to 6K that is well optimized for intensive I/O workloads

... Drives for recovering more usable storage of up to 16TB

... For VDI use cases that support 50 to 200 users

... For messaging use cases to support up to 10K mailboxes

... For collaborative work spaces to support up to 400 SharePoint users
VBLOCK SYSTEM 200: RIGHT-SIZED…

… Compute resources with choice of CPUs, processor types

… IOPS of up to 10K that is well optimized for intensive I/O workloads

… Drives for recovering more usable storage of up to 100TB

… For VDI use cases that support up to 450 users

… For messaging use cases to support up to 30K Exchange mailboxes

… For collaborative work spaces support of up to 4K SharePoint users
Logical Advanced Management Pod (LAMP)

Advanced Management Pod (AMP) to host all of software used to manage the system

VM-based logical AMP to provide the most cost-effective and efficient solution

- Cisco Integrated Management Console (CIMC) for UCS C220 M3
- Cisco IOS CLI for Catalyst 3750
- EMC Unisphere for EMC VNX storage
- VMware vSphere for EXSi
CUSTOMER VALUE

Vblock System 100

- Pre-defined **fixed** configurations
- Approximately 30 days from order to deployment
- “Right-sized” to meet capacity, workload, and space requirements

Vblock System 200

- Pre-defined **variable** configurations
- Approximately 45 days from order to deployment
- Core mixed-workload IT infrastructure for mid-sized datacenters
WHY VBLOCK SYSTEMS

Pre-Engineered, Pre-Validated, Pre-tested

- Highest Efficiency
- Highest Agility
- Rapid Time to Value
- Low Risk
- Highest Reliability
- Lowest TCO