Cisco Solution for EMC VSPEX: Microsoft Private Cloud Fast Track 3.0 Small Implementation M100

Solution Brief
June 2013

In Collaboration with Microsoft and EMC

Highlights

Reduced Risk

- Uses a tested and certified Microsoft Fast Track architecture
- Available through the EMC VSPEX program that validates and tests solution interoperability
- Is highly available and reliable, helping ensure continuous application access

Rapid Deployment

- Using Cisco Unified Computing System™ (Cisco UCS®) and EMC VNXe storage, provides intelligent infrastructure that is ready out of the box

Reduced-Cost Approach

- Through simplified infrastructure, reduces both capital and operating expenses for lower total cost of ownership (TCO)

Uncompromised Performance

- Is based on a balanced approach to resources, including high-performance Intel® Xeon® processors, 20 Gbps of I/O per server, and EMC VNXe storage

Investment Protection

- Enables management of all components through built-in Microsoft Windows management consoles and Microsoft Windows PowerShell using staff knowledge and best practices

Cisco, Microsoft, and EMC deliver a Microsoft Private Cloud Fast Track 3.0 Small Implementation.

The Cisco® VSPEX Solution for Microsoft Private Cloud Fast Track 3.0 Small Implementation can be deployed in minutes to support a small (2 to 4 server) private cloud. The solution engages the EMC VSPEX program to accelerate movement to the private cloud with validated configurations that help ensure interoperability and accelerate deployment with reduced risk for small- and medium-sized businesses.

The solution integrates all the components necessary to quickly deploy a small infrastructure implementation. It consists of Cisco UCS® rack or blade servers, Microsoft Windows Server 2012 Hyper-V, and EMC VNXe3300 storage. All components are configured for high availability and reliability (Figure 1). The solution provides a highly scalable and reliable platform for a variety of virtualized workloads with up to 100 virtual machines. This solution enables small businesses and branch offices to take advantage of the power of cloud computing without the complexity entailed in designing and implementing custom solutions.

Solution Benefits

The solution helps organizations quickly deploy the tools they need to lower total cost of ownership (TCO), reduce complexity, and improve operational efficiency. A benefit available only from Cisco, every solution component integrates with Microsoft Windows PowerShell to automate infrastructure configuration, making administrators more productive and effective while lowering operating costs.

The Cisco Unified Computing System™ (Cisco UCS) combines computing, networking, virtualization, and storage-access resources into a single unified system. The system is self-aware and self-integrating, with

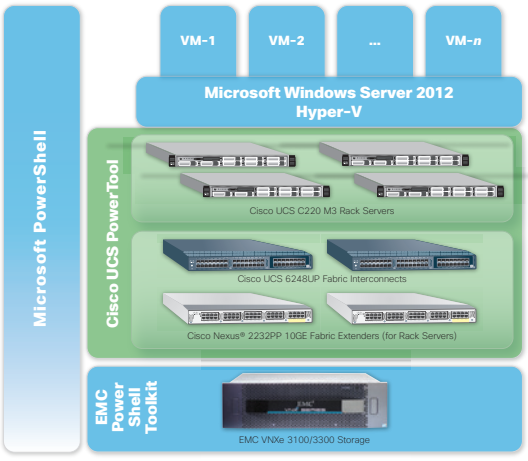

Figure 1. Deployment Can Be Automated Through Microsoft PowerShell Scripting (Rack Server Configuration Shown)

Table 1. Solution Components

Element	Rack Server Solution Components	Blade Server Solution Components
Computing	4 Cisco UCS C220 M3 Rack Servers, each with: • 2 Intel Xeon processors E5-2650 • 64 GB of memory (4 GB per virtual machine and management host; 256 GB needed to support 100 virtual machines) • Cisco UCS 1225 Virtual Interface Card (VIC)	1 Cisco UCS 5108 Blade Server Chassis 4 Cisco UCS B200 M3 Blade Servers, each with: • 2 Intel Xeon processors E5-2650 • 64 GB of memory (4 GB per virtual machine and management host; 256 GB needed to support 100 virtual machines) • Cisco UCS VIC 1240
Networking	10-Gbps unified fabric supported through: • 2 Cisco UCS 6248UP Fabric Interconnects • 2 Cisco Nexus® 2232PP 10GE Fabric Extenders	10-Gbps unified fabric supported through: • 2 Cisco UCS 6248UP Fabric Interconnects • 2 Cisco UCS 2208XP Fabric Extenders
Storage	EMC VNXe3300 storage including: • EMC VNXe3300 rack • 22 300-GB 15K SAS drives • 2 dual 10 Gigabit Ethernet I/O modules • EMC VNXe3300 Base OE V2.0 software plus software features	

model-based management simplifying and accelerating the deployment of applications and services. Server management is available through Cisco UCS Manager and Cisco PowerTool, which extends the powerful and flexible scripting environment made available through Microsoft Windows PowerShell.

Microsoft Windows Server 2012 with Hyper-V helps organizations consolidate their servers and reduce capital expenses by requiring less computing, networking, and storage infrastructure. It reduces operating expenses because there are fewer components to manage.

EMC VNXe is unified storage that delivers both SAN storage and network-attached storage (NAS) in a single platform optimized for virtualization. EMC VNXe storage makes the addition, management, and monitoring of storage straightforward. The EMC PowerShell Toolkit also integrates with Microsoft Windows PowerShell to automate configuration and administrative tasks.

Easy Ordering

Computing and networking components for the Cisco VSPEX Solution for Microsoft Private Cloud 3.0 Fast Track are available from Cisco and its partners (Table 1). Cisco solutions for EMC VSPEX make it easy to quickly deploy a powerful, secure private cloud environment in your enterprise without the expense or risk entailed in designing and building your own custom solution.

For More Information

For more information about Cisco UCS with EMC VNXe VSPEX Fast Track 3.0, please visit http://www.cisco.com/go/vspex.

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