

In Collaboration with EMC



Cisco, VMware, and EMC deliver a radically simplified virtualization solution.

Highlights

Reduced Risk

- Based on a tested and certified Cisco® Validated Design
- Engages the EMC VSPEX program to validate configurations and help ensure interoperability
- Is highly available and reliable, helping ensure continuous application access

Rapid Deployment

- Using Cisco Nexus® switching, Cisco Unified Computing System™ (Cisco UCS®) servers, EMC VNXe storage, and VMware vSphere software, the solution 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 consoles and using staff knowledge and best practices

The Cisco® VSPEX Server Virtualization Solution for Small and Medium-Size Businesses can be deployed in minutes to support a range of business initiatives. The solution engages the EMC VSPEX program to accelerate movement to server virtualization with validated configurations that help ensure interoperability, decrease complexity, accelerate deployment, and increase efficiency with reduced risk for small- and medium-size businesses.

The solution integrates all the components necessary to quickly deploy a range of solution sizes to meet the needs of businesses. It consists of Cisco UCS® C220 M3 Rack Servers, VMware vSphere 5.0, and EMC VNXe storage. The solution provides a highly scalable and reliable platform (Figure 1) for a variety of virtualized workloads. This solution enables small and medium-size businesses to take advantage of the power of server consolidation without the complexity entailed in designing and implementing custom solutions.

Solution Benefits

This solution helps organizations quickly deploy the tools they need to lower total cost of ownership (TCO), reduce complexity, and improve operation efficiency.

[Cisco Nexus® switching](#) provides high-bandwidth, low-latency, line-rate 10-Gbps unified fabric connectivity between servers in the virtualization cluster. The Cisco

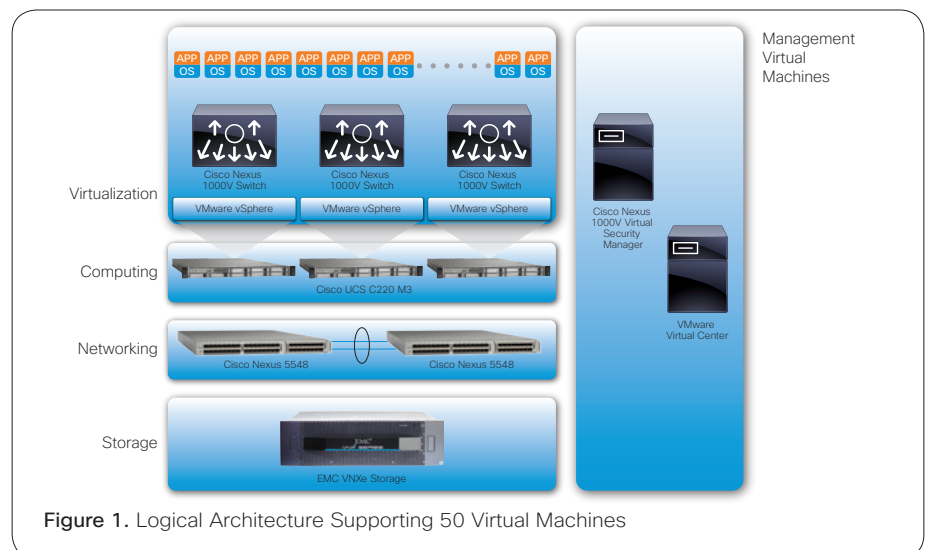


Figure 1. Logical Architecture Supporting 50 Virtual Machines

Table 1. Each Solution Can Be Ordered with a Single Part Number

Element	50 Virtual Machines	100 Virtual Machines	125 Virtual Machines
Virtualization	VMware vSphere 5.0	VMware vSphere 5.0	VMware vSphere 5.0
Computing	3 Cisco UCS C220 M3 Rack Servers, each with: <ul style="list-style-type: none"> • 2 Intel Xeon processors E5-2650 (2 sockets and 16 cores) • 64 GB of memory (2 GB per virtual machine) • Redundant power supplies 	4 Cisco UCS C220 M3 Rack Servers, each with: <ul style="list-style-type: none"> • 2 Intel Xeon processors E5-2650 (2 sockets and 16 cores) • 64 GB of memory (2 GB per virtual machine) • Redundant power supplies • Cisco UCS P81E Virtual Interface Card (VIC) 	5 Cisco UCS C220 M3 Rack Servers, each with: <ul style="list-style-type: none"> • 2 Intel Xeon processors E5-2650 (2 sockets and 16 cores) • 64 GB of memory (2 GB per virtual machine) • Redundant power supplies • Cisco UCS P81E VIC
Networking	1-Gbps fabric supported through <ul style="list-style-type: none"> • 2 Cisco Nexus 3048 Switches • 1 Cisco Nexus 1000V Switch 	10-Gbps unified fabric supported through: <ul style="list-style-type: none"> • 2 Cisco UCS 5548UP Switches • 1 Cisco Nexus 1000V Switch • Low-latency Twinax cabling 	10-Gbps unified fabric supported through: <ul style="list-style-type: none"> • 2 Cisco UCS 5548UP Switches • 1 Cisco Nexus 1000V Switch • Low-latency Twinax cabling
Storage	EMC VNXe3150 storage <ul style="list-style-type: none"> • 30 x 600-GB 15K SAS drives • 2 dual Gigabit Ethernet I/O modules 	EMC VNXe3300 storage with: <ul style="list-style-type: none"> • 63 x 600-GB 15K SAS drives • 2 dual 10 Gigabit Ethernet I/O modules 	EMC VNXe5300 storage with: <ul style="list-style-type: none"> • 60 x 600-GB 15K SAS drives • 15 x 300-GB 15K SAS drives • 2 dual 10 Gigabit Ethernet I/O modules

UCS C220 M3 delivers outstanding levels of density and performance in a compact package using the Intel® Xeon® processor E5 family, up to 256 GB of RAM, eight disk drives or solid-state drives (SSDs), and two integrated Gigabit Ethernet interfaces.

[VMware vSphere 5.0](#) 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 is designed for five-nines availability using redundant components throughout the array.

Easy Ordering

Cisco VSPEX Server Virtualization for Small and Medium-Size Businesses is available through the Cisco Smart Play program (Table 1). With all hardware components available by ordering only a single part number, the program makes it easy to quickly deploy a powerful, secure virtualized 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 the Cisco VSPEX Server Virtualization Solution for Small and Medium-Size Businesses, please visit <http://www.cisco.com/go/vspex>.

For more information about Cisco Validated Designs for Cisco VSPEX Server Virtualization for Small and Medium-Size Businesses, please visit http://www.cisco.com/en/US/docs/unified_computing/ucs/UCS_CVDs/cscosol_vspex_v50v100v125.pdf.

For more information about the Cisco Smart Play program, please visit: <http://www.cisco.com/go/smartplay>.



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