

Accelerate and Simplify Your Virtualized Deployments

Solution Brief
February 2014



With the Cisco Virtualization Solution for EMC VSPEX with VMware vSphere 5.5 for Up to 1000 Virtual Machines

Virtualized environments don't have to be costly, complex, or time consuming. We make the journey easy with a presized, prevalidated, and supported solution.

Organizations everywhere are implementing virtualized and cloud computing environments. But planning, sizing, procuring, implementing, operating, and testing those environments can be costly and complex, lengthening time to value.

We created the Cisco® Virtualization Solution for EMC VSPEX with VMware vSphere 5.5 for Up to 1000 Virtual Machines to accelerate and simplify your journey to virtualization and cloud computing.

The solution includes the servers, storage, networking, and management you need to support 1000 virtual machines. It combines Cisco Unified Computing System™ (Cisco UCS®) servers with the versatile Intel® Xeon® processor E5-2600 v2 series, next-generation EMC VNX storage, VMware vSphere 5.5, and Microsoft Windows Server 2012 software. Our approach is better because:

- We tested, validated, and documented the solution through a Cisco Validated Design. Cisco Validated Designs reduce risk and

guesswork by giving your architects and administrators a guidebook for implementing the solution.

- We made deployment efficient by conducting extensive testing so that you can get your environment up and running quickly.
- We simplified the architecture and eliminated server management costs to reduce your capital and operating expenses.
- We worked with the EMC VSPEX program to match servers with storage for workloads of 300, 600, or 1000 virtual machines.
- We give you a choice of blade or rack servers so that you can use the form factor that suits you best.
- We offer a joint support program with EMC to cooperatively fix any problems you may encounter.
- Our engineers are testing and validating the next generation of

hardware and software to help you stay ahead while protecting your investment.

Reduce Costs

Less complexity means lower capital expenditures (CapEx). Cisco UCS is a unified system with a single point of management and connectivity. We simplified the solution by eliminating the multiple layers of complex and separate Ethernet and Fibre Channel switching typical of traditional environments.

Your operating expenses (OpEx) are less because management is embedded in the system, simplifying deployment and reducing the risk of configuration errors that can cause downtime. Integrated management means that you can deploy servers in minutes, rather than the days or weeks required in traditional environments.

Increase Availability

Our solution helps provide continuous application availability by increasing reliability and by giving you the tools you need to dynamically reconfigure your system if failures do occur.

We designed the solution with no single point of failure in the system's management and connectivity domain. Multiple engineering tests have helped ensure that any single component failure cannot bring the solution down.

However, servers—and even data centers—sometimes fail. These events cause you to move virtual machines,

Lower Solution TCO

Cisco: US\$2,998,133	
CapEx	OpEx
	HP: US\$4,896,752
CapEx	OpEx

Solution TCO

A mix of 80 rack and 80 blade servers has 42 percent less TCO when compared to a similar solution from HP—a savings of more than US\$12,000 per server (considering three-year TCO based on suggested retail prices as of August 8, 2013)

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reconfigure servers, and even bring up disaster-recovery sites. We increase availability with the following:

- Through close integration with VMware vSphere, virtual machine movement is orchestrated with all of the connectivity and security settings intact.
- Pools of servers can be allocated and reallocated to workloads on demand, making it easy to bring in additional resources to accommodate workload spikes or take the place of a failed server.
- You need fewer spares and licenses because server identity is configured on demand.
- Disaster recovery sites can be brought online quickly through global management supported by optional Cisco UCS Central Software.

Be Ready to Grow

Cisco UCS grows with you by providing management solutions that extend the scope of your solution.

Global Management Scope

As your virtualization requirements grow beyond a single solution, Cisco UCS Central Software extends the role- and policy-based management model of Cisco UCS Manager to deliver single, consistent, role- and policy-

based management that spans multiple systems within a data center, across multiple facilities, and across locations worldwide.

Infrastructure Automation

Cisco UCS Director provides comprehensive infrastructure automation. It manages Cisco UCS along with the additional networking, storage, and virtualization elements that are part of the solution. As you discover the ease of managing integrated infrastructure with Cisco UCS Director, you can use it to manage more of your IT operations.

Reduce Risk

We have made a significant investment so that you can adopt the solution with little risk. Cisco engineers have tested, validated, and documented the exact configuration in the Cisco Validated Design referenced at the end of this document. We have worked with the EMC VSPEX program to size the solution so that both capacity and performance needs are met.

Get Worry-Free Joint Support

More than 850 EMC and Cisco certified channel partners can sell EMC VSPEX solutions throughout the world. With Cisco and EMC offering a joint support

Lower Management Cost

Cisco: US\$0

IBM: US\$25,200

HP: US\$31,968

Three-Year Chassis Management Software Licensing Cost (US\$)

Management software costs for two IBM or HP chassis (based on pricing for HP OneView and IBM Flex System Manager available from HP and IBM websites as of January 15, 2014)

plan for EMC VSPEX solutions, you can be confident in choosing solutions from Cisco.

Benefit from Continuous Innovation

This document discusses just one of dozens of solutions described in Cisco Validated Designs. We are continuously innovating so that when new servers and software are available, we help you stay ahead.

For More Information

- Learn more about [Cisco solutions for VSPEX](#).
- Read the [Cisco Validated Design](#).



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