

Virtualizing Microsoft Exchange 2010 with Confidence

EMC, Cisco, and Microsoft: testing and validating advanced, virtualized solutions for Microsoft Exchange 2010

The Big Picture

EMC, Cisco, and Microsoft joint testing assures:

- Rigorous architecture testing for reduced risk and accelerated deployment of your virtualized environment
- Confidently virtualize to lower costs and provide the business agile IT services
- Start small and expand into bigger mailbox sizes as required with virtual provisioning
- Centralized infrastructure operations—including storage, backup, replication, and archiving—for massive efficiency gains.

Moving ahead with your virtualized environment

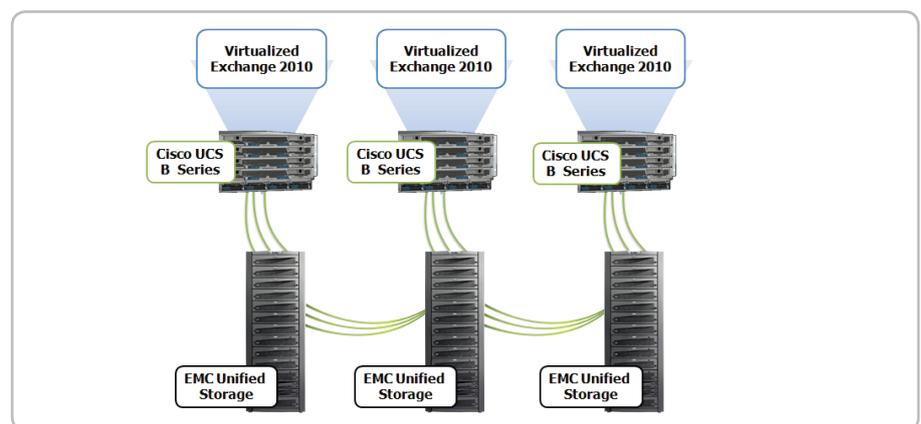
More and more IT organizations are realizing the benefits of virtualization. They're reducing costs and providing more agile IT services to the business. But with business-critical applications like Microsoft[®] Exchange[®], it makes sense to go slowly. No one wants to tread in untested waters. You want to know not only that it will work but also how it will work. Before making your next investment, you need a proven architecture with tested best practices.

Reducing risk and accelerating deployment through joint testing

In April of 2009, Cisco and EMC participated in the Microsoft Exchange 2010 Tested Solutions Program to provide the assurance you need to confidently virtualize your Microsoft Exchange environment. Cisco and EMC[®] engineers, working together with Microsoft engineers from the Exchange Product Team, successfully validated advanced, virtualized solutions for Exchange 2010.

Tested components and architecture

In labs on Microsoft's Redmond, Washington campus, engineers rigorously tested Microsoft Exchange 2010—with Microsoft Hyper-V[™] R2 running on the Cisco Unified Computing System (UCS) and the EMC Celerra[®] NS-480 unified storage system—to prove how the solution would perform. The goal was to identify solution strengths as well as any limitations.



Components tested in Microsoft EEC Labs

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|-------------------------------------|--|
| Microsoft Exchange Server 2010: | Messaging application providing mail services for 27,000 mailboxes |
| Microsoft Hyper-V: | Providing the hypervisor to create 24 standalone virtual machines for this configuration |
| Cisco UCS B200 Blade Servers: | Server platform leveraging Hyper-V for hosting Exchange virtual machines |
| EMC Celerra NS-480 unified storage: | Intelligent disk storage for Exchange components including mailbox servers |



Joint testing reduces deployment risk

The testing performed by Microsoft, Cisco, and EMC definitively demonstrated a very low-risk solution. By leveraging these best practices and lessons learned, you can significantly reduce the chance that components won't operate as planned, or that they have the wrong driver levels, or that the network or storage wasn't set up correctly.

When testing, not only did the test team build the environment, the engineers also pushed it to its limits by stressing out the configuration with I/O workload generators. They also ran a series of failover scenarios to see how the environment would perform. After ironing out many of these complex integration points, the three companies were well satisfied with test results and published their joint findings.

Virtualization solution benefits—validated through the Microsoft Exchange 2010 Tested Solutions Program

	Before Virtualization	After Virtualization
Servers	Deployed in a physical fashion, customers find themselves in a cycle of: <ol style="list-style-type: none">1. Increasing workloads/data2. Adding servers to satisfy growth3. Adding people to manage complex solutions	Cisco UCS, deployed with Microsoft Windows® Server 2008 R2 with Hyper-V enables faster provisioning and centralized management—which leads to increased efficiency and lower operational costs.
Network	Each server has its own independent network—so setup, configuration, and maintenance can become challenging.	The Cisco UCS architecture balances simplicity, performance, and density, enabling you to centralize management and gain access to a shared 10GbE backplane. This provides improved management and higher performance for reseeding, failovers, and failbacks.
Storage	Over-provisioned, direct-attached configurations that must be maintained separately. Storage allocation, backup, replication, and archiving are all configured independently.	Because virtual provisioning is built-in to the EMC Celerra NS-480 unified storage system, you can start small and expand into larger mailbox sizes as needed and pay as you grow. And with storage area networks (SANs) you can pool your storage—and centralize all infrastructure operations (storage, backup, replication, and archiving) for massive efficiency gains.

The result: You can virtualize Microsoft Exchange 2010 with confidence

The synergies created by the Microsoft, Cisco, and EMC joint testing provide the assurance you need to move forward with virtualization in your environment—and to feel confident about reducing risk and accelerating deployment with a rigorously tested architecture.



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Take the next step

For more information on how EMC, Cisco, and Microsoft joint testing reduces risk and speeds deployment of your virtual environment, contact your local EMC representative or visit us online at www.EMC.com/exchange.