

Improve ROI and Accelerate Migration to Microsoft SQL Server 2014

SmartStack for Microsoft SQL Server 2014 with VMware



THIS SMARTSTACK SOLUTION DELIVERS IT AND BUSINESS ADVANTAGE THAT CAN HELP YOU:

- Speed deployment and optimize performance with prevalidated solutions
- Greatly reduce risk
- Scale computing and storage performance and capacity transparently and independently to meet business needs
- Simplify with standardized infrastructure and unified management
- Improve productivity and return on investment (ROI)
- Reduce total cost of ownership (TCO)

Microsoft SQL Server 2005 will reach its end of life on April 12, 2016. SmartStack is an excellent platform to use to help you migrate to Microsoft SQL Server 2014.

Microsoft will stop supporting SQL Server 2005 next year. At that time, Microsoft will no longer provide automatic fixes, updates, or online technical assistance. Without Microsoft support, customers will no longer receive security updates that protect their systems from harmful viruses, spyware, and other malicious software. This change will significantly affect those Microsoft customers who widely deploy SQL Server 2005 in their data centers. They will need to migrate to a new platform or face the risk of operating without support. Microsoft announced the end of service for SQL Server 2005 several years ago, but budget and IT-related issues caused migration delays. Now, time is running out.

This change will affect businesses differently. Some will investigate Microsoft Cloud (Azure) or Cisco's cloud offerings, but more will have on-premises business-critical applications that depend on SQL Server in a hybrid cloud environment. And some industries, such as healthcare, government, finance, and local government, have legal requirements that prohibit data to be housed in a public cloud.

Budgets for IT resources are flat, and in many enterprises decreasing, to maintain profit margins. This constraint in combination with an aging IT hardware infrastructure and the pressure to support new and competitive mission-critical business applications is forcing the rapid adoption of converged or integrated infrastructure solutions. In addition, many organizations with SQL Server 2005 still have physical socket-based license pricing. With SQL Server 2012 and later, licenses are priced per processor core.



SmartStack[™]



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SmartStack Integrated Infrastructure from Cisco and Nimble Storage

The challenge for organizations like yours will be to migrate current SQL Server workloads to a new infrastructure, and possibly a new operating system version, together with the application software. This migration can help you dramatically improve your SQL Server database application consolidation and increase performance, helping reduce your total cost of ownership (TCO) and increase your business responsiveness.

To help you meet this challenge, Cisco and Nimble Storage, leaders in integrated infrastructure, offer SmartStack for Microsoft SQL Server 2014 with VMware (Figure 1).

Improved Operational Efficiency

SmartStack for Microsoft SQL Server 2014 with VMware provides a prevalidated end-to-end tested reference architecture. The entire infrastructure, including computing, networking, and storage resources, are tested using a VMware vSphere 6.0 virtualization environment. The computing and networking resources are provided by Cisco UCS® Mini, which has been designed from the foundation to increase the performance of hypervisors. The data resides on Nimble Storage Adaptive Flash storage. The two combined deliver speed, scale, and simplicity.

Cisco went beyond manual integration of components and chose a model in which policies guide configuration—a model that scales and allows routine tasks to be completely automated. This philosophy allows Cisco Unified Computing System™ (Cisco UCS) to deliver rapid scalability and deployment that increases IT productivity and business agility.

Improved Productivity and ROI

SmartStack is incredibly easy to deploy on day zero with SmartStack SmartSetup. SmartSetup will configure the complete Cisco UCS and Nimble environment with a simple, intuitive process. You can configure all policies and profiles to quickly and easily get your SmartStack solution up and running.

Nimble's Adaptive Flash platform is an excellent consolidation platform for a diversified set of workloads, including SQL Server applications. Nimble Storage InfoSight is an innovative analytics and storage management engine that is designed to keep Nimble arrays running in peak condition. InfoSight also provides intelligent performance modeling at the virtual machine level, actionable capacity forecasting for future needs, and comprehensive dashboard views.

Cisco UCS can help your organization go beyond simple efficiency: it can help

“The combination of Nimble and Cisco partnering together and coming up with a tightly integrated converged infrastructure platform has placed our company on a safe path for many years going forward. With Nimble, we’ve slashed our recovery point objectives (RPOs)—we snapshot and replicate every 15 minutes for our file servers, once per day for our print servers, Microsoft Exchange every four hours, and our Microsoft SQL and Oracle databases every hour.”

— Tom Uva, CIO, Wynit

you become more effective through technologies that generate simplicity rather than complexity. With this flexible, agile, high-performance, self-integrating platform, your organization can reduce staff costs, increase uptime through automation, and achieve a rapid return on investment (ROI). In addition, Cisco UCS Manager has an XML API that connects to

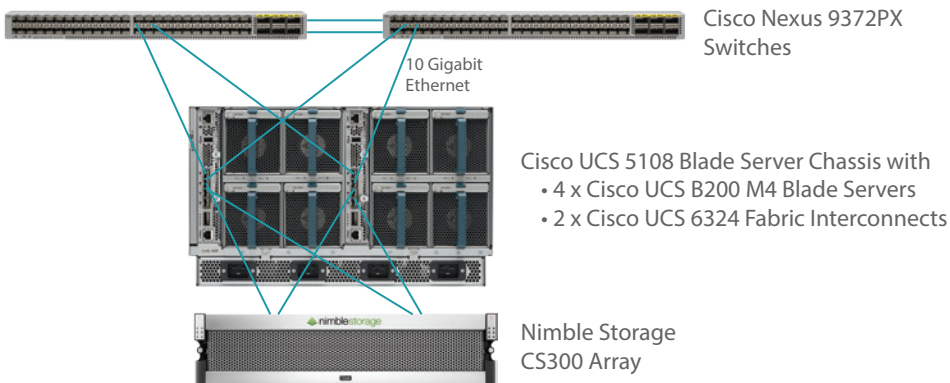


Figure 1. SmartStack Reference Architecture for Microsoft SQL Server 2014 with VMware

EASY AND AUTOMATED MANAGEMENT ACCELERATES ROI

- 86 percent employee time savings for deployment.
- 68 percent employee time savings for management.
- 96 percent employee time savings on down servers.
- Approximately 10-month payback period on customer investment.

— IDC study for Cisco, 2015

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a set of Microsoft PowerShell tools, called Cisco UCS PowerTools, and to Microsoft System Center to maintain consistent management across your environment if you choose Microsoft System Center VMM 2012 R2 with VMWare.

Reduced Risk

SmartStack integrated infrastructure has been tested and validated across the entire system, with proven linear scalability with SQL Server 2014. This reference architecture was tested in three configurations—for small, medium-sized, and large SQL Server virtualized workloads—so that you can choose the solution that best fits your environment today.

This approach allows you to reduce costs and risk by starting where your needs are now. You can start small and scale to fit as your SQL Server

workload grows. The SmartStack computing and storage resources can be incrementally and independently scaled for both performance and capacity in a nondisruptive way during production runtime. You never need to overprovision or overspend at the start of your project and incur the capital expenditures (CapEx) of purchasing more server and storage capacity than you need. By replacing your traditional infrastructure with SmartStack infrastructure, you also save operating expenses (OpEx) from dramatic reductions in space, power, and cooling requirements. And you gain additional OpEx savings because you don't have to deploy and support greater capacity until you need it. As your business needs change, SmartStack can easily scale beyond the capacity of traditional blade chassis and storage arrays and can contain multiple blade chassis, storage systems, and rack servers. There is no need to overprovision from the start.

Migration Services

Cisco and Nimble Storage are here to help you migrate your current environment to SmartStack for Microsoft SQL Server 2014. We provide the following services to smooth your transition to newer, faster, and more-efficient hardware and software platforms:

- Operating system migration to Microsoft Windows Server 2012 R2
- Migration to Microsoft SQL Server 2014
- IT assessment and migration planning
- Performance tuning

Transparent Support

SmartStack provides a single point of support, with a single number to call, with Cisco® Solution Support for Critical Infrastructure and Nimble Storage SmartStack Integration Support. These services are backed by TSANet, a global alliance framework that enables fast-track technical support cooperation between partners, including Microsoft.

Ease Your Migration to Microsoft SQL Server 2014

Your IT organization must deliver more services with speed and agility while managing exponential data growth and operating within constrained budgets. Let Cisco and Nimble Storage help you quickly migrate to Microsoft SQL Server 2014 running on SmartStack: a fast, scalable, and simplified integrated infrastructure.

For More Information

For more information about the SmartStack solution, visit:

- <http://www.cisco.com/go/smartstack>
- <http://www.nimblestorage.com/solutions/smartstack/>

You can also contact your Cisco or Nimble Storage sales representative or authorized reseller.

"I can now do everything we were doing with 42 RU of Compellent with only 6 RU of Nimble Storage. As a result, we were able to reduce our costs for space, power, and cooling by a factor of 7 to 1."

— Amado Garcia, senior systems administrator, Community Health Plan of Washington



SmartStack™



Nimble Storage, Inc.
211 River Oaks Parkway
San Jose, CA 95134
www.nimblestorage.com

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134
www.cisco.com/go/smartstack