It's Time to Refresh Your Data Center

Take the Modern Approach to Servers with GovConnection, Cisco®, and Intel®

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Situation Overview

In difficult economic times, many organizations have to cut back, limiting expenditures to necessities and putting new initiatives on hold. While that saves money in the short term, over time an aging infrastructure will prevent you from capitalizing on the exciting benefits and opportunities made possible by new technologies.

Intel® estimates[i] that one-third of the servers in use are more than four years old. At first, one might think that it is great to get this much service out of a capital investment, but the operational costs to run these outdated servers could pay for a complete technology refresh.

The latest infrastructure technology not only offers new delivery models that help your organization grow, an updated data center also lets you pursue:

- **Operational Excellence:** New hardware and software capabilities minimize operating expenses, maximize efficiency, and help ensure security and compliance.
- **Innovative Service Delivery:** Cloud computing provides new ways to deliver services on demand to your workforce. Take advantage of private, public, or hybrid cloud solutions to achieve the best total cost of ownership (TCO) for your applications.
- **New Opportunities:** The latest infrastructure and cloud computing also enable your organization to embrace new opportunities such as big data, Bring Your Own Device (BYOD) programs, and social and collaborative computing.

In the end it comes down to a single decision: Stick with the status quo or increase performance and reliability while reducing total costs.

In This White Paper

We'll take a close look at how Cisco® Unified Computing System (UCS®) with intelligent Intel® Xeon® processors is revolutionizing the way organizations store and access information. We'll also examine how improvements in processor technology have affected the data center, how Cisco outperforms the competition, and how you can avoid the pitfalls sometimes uncovered in an upgrade.

Cisco UCS servers unify computing, networking, management, virtualization, and storage access into a single integrated architecture. This unique architecture enables end-to-end server visibility, management, and control in both bare metal and virtual environments, and facilitates the move to cloud computing and IT-as-a-Service with Fabric-Based Infrastructure.

- **Consolidate Resources:** With Cisco UCS servers, you can dramatically reduce the number of devices your organization must purchase, deploy, and maintain. Cisco UCS servers simplify traditional architectures and optimize your virtualized environments end-to-end.
- **Accelerate Deployment:** The smart, programmable infrastructure of Cisco UCS servers simplifies and speeds enterprise-class application and service deployment. With unified model-based management, configuring hundreds of servers is as fast as configuring just one server—with the addition of lower total cost of ownership and improved continuity.
- **Simplify Management:** Cisco UCS offers simplified and open management with a large partner ecosystem. Cisco UCS Manager provides embedded management of all software and hardware components in Cisco UCS.

Old Technology, New Issues

It's recommended that you review and refresh your technology every two to four years. This allows you to evolve with and better serve in the world around you. An infrastructure refresh using Cisco Unified Computing System™ (UCS®) servers featuring Intel® Xeon® processors allows you to avoid the issues associated with an older infrastructure:

- **Higher costs**
- **Increased inefficiencies**
- **Complexity**
- **Continually evolving security gaps**

Cisco addresses these problems by delivering higher performance, reduced energy consumption, lower operating and maintenance costs, and advanced security to keep stored data safe. In addition, Cisco servers build flexibility and agility into their IT services so that you can capitalize on new opportunities that drive success.

World Leader, World Records

Thanks to their outstanding performance in advanced networking and management, Cisco now owns 31% of the Blade market in North America and 21% worldwide. Recently, Cisco introduced support for the Intel® Xeon® processor E5-2600 v2 product family for the Cisco UCS B200 M3, C240 M3, and C220 M3 servers. As a result, Cisco UCS captured seven new world records for industry benchmarks:

- **Oracle E-Business Suite Applications R12 Benchmark**
- **SPECjbb2013 Benchmark** (MultiJVM x86/x64 Java server performance)
- **SPECjbb2005** (Java business logic performance)
- **SPECint_base2006** (general CPU performance)
- **SPECfp_rate_base2006** (general CPU performance)
- **SPECompG_base2012**
- **VMware View Planner Benchmark** (desktop virtualization performance)

Why Cisco Means Performance

Although all vendors have access to the same Intel® Xeon® processors, only Cisco UCS unleashes their power to deliver high performance to applications through the power of unification. The unique, fabric-centric architecture of Cisco UCS, with exclusive Cisco SingleConnect Technology, maximizes Intel® innovations and as a result Cisco UCS with the Intel® Xeon® processor E5-2600 v2 family delivered up to 48% better performance over the prior generation of Intel® Xeon® processors.
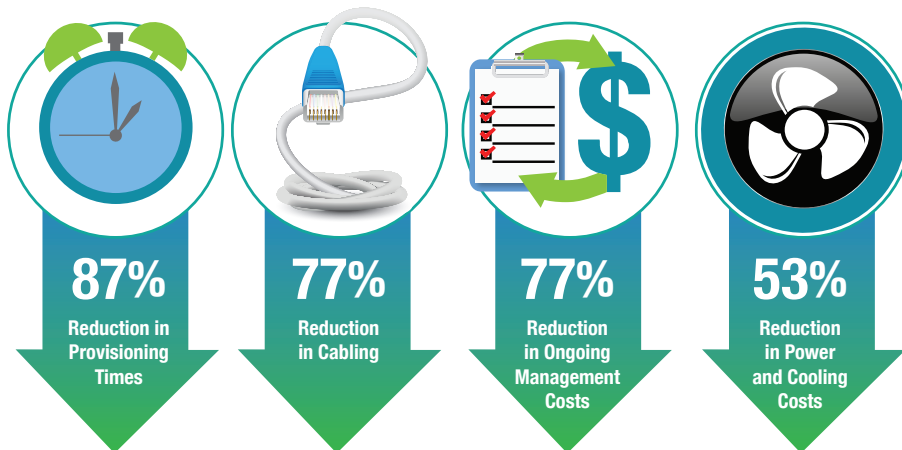
The Case for Savings

Using one scenario, an organization can replace 17 aging servers with just one new server with upgrades to Windows Server 2012 and Microsoft SQL Server 2012 data management software. This offers the same performance level as before, but offers the addition of a potential reduction in annual energy costs of up to 90%[3, 4, 5, 7] paying back the cost of the new server within 3 months.[3, 4, 5, 6]
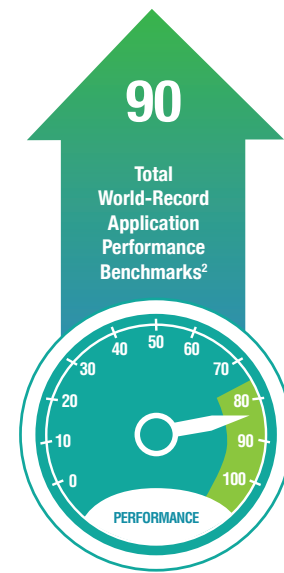
Make Organizational Intelligence Your Competitive Advantage

Cisco UCS Servers with Intel® Xeon® Processor E7 V2 Deliver:

- **2X Performance** for the Most Demanding Workloads
- **99.99% Uptime** for Mission-Critical Applications
- **3X RAM** for Memory-and Transaction-Intensive Workloads
- **Automation:** Be Up and Running in Minutes

87% Reduction in Provisioning Times

77% Reduction in Cabling

77% Reduction in Ongoing Management Costs

53% Reduction in Power and Cooling Costs

90 Total World-Record Application Performance Benchmarks[2]

PERFORMANCE

Superior Economics and Operations

Superior Performance

4 Steps to a Refresh

1 **Explore** — Identify your requirements.

Model — Find the solutions that meet your needs. **2**

3 **Plan** — Determine the technology you need.

Implement your upgraded infrastructure. **Execute** **4**
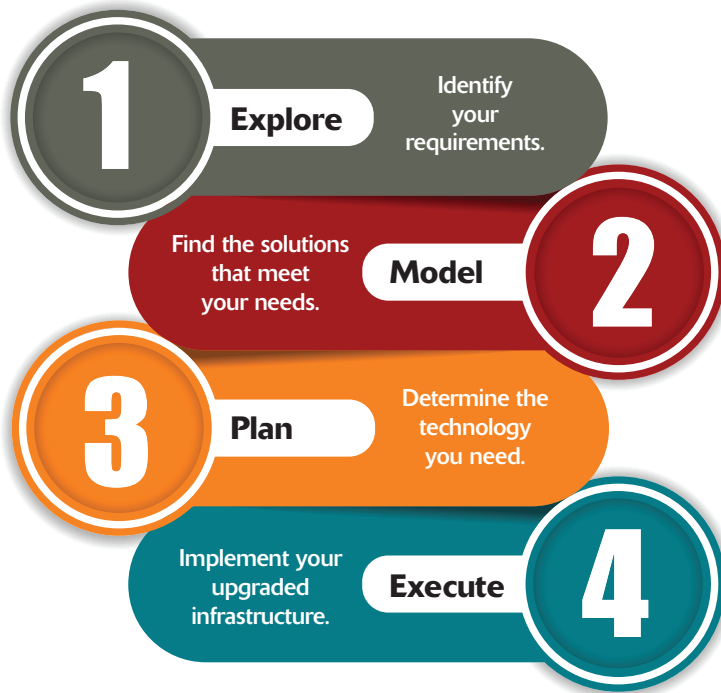
What is your current IT situation and what are your needs? What solutions are ready to meet your needs? These questions and more impact the magnitude and timing of any upgrade. While it's up to you how far you want to go in your quest for IT excellence, there are ways to make the search and transition to a modern data center painless.

When the time comes to consider changes to your IT infrastructure, follow the four steps above to achieve your refresh goals. These steps, along with clear communication between departments, will lead you down the road to a successful infrastructure upgrade.

What's Your Server Scenario?

With energy costs continuing to rise, now is the time to optimize your resources. GovConnection is ready to help. Our Server Assessment examines your existing IT environment and offers insights into your current inventory, system performance, and model consolidation ratios—yielding a viable plan for server virtualization. Our customized report details:

- How your servers are performing today
- How your servers stack up against industry norms
- Specific ways to save money and lower your total cost of ownership

How to Get Started

1. We schedule a Server Assessment discovery workshop led by a GovConnection services engineer.

2. We install the agent-less data collection tool, and it runs for 30 days.

3. The tool generates detailed reports.

4. GovConnection engineers provide recommendations and present a final report.

Call an Account Manager to schedule a Server Assessment today.

1.800.800.0019

www.govconnection.com/serverassessment

1. Intel Planning Guide, Modernizing the Midsize Business IT Infrastructure http://www.techrepublic.com/resource-library/whitepapers/planning-guide-modernizing-the-midsize-business-it-infrastructure/

2. Cisco Unified Computing System and Intel Xeon Processors: 90 World-Record Performance Results http://www.cisco.com/c/dam/en/us/products/collateral/switches/nexus-7000-series-switches/le_32801_pb_ucs_worldrecords.pdf

3. Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests such as SYSmark* and MobileMark* are measured using specific computer systems, components, software, operations, and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.

4. Results have been estimated based on internal Intel analysis and are provided for informational purposes only. Any difference in system hardware or software design or configuration may affect actual performance.

5. Intel estimates as of April 2013. Base configuration: Intel Xeon processor X5365 (4C, 3.0 GHz, 150 W), 2 sockets, 8 x 2 GB FB-DIMM 667 MHz ECC memory, SAS hard disk drive, running Windows Server 2003 R2 with Microsoft SQL Server 2005 database software. Upgrade configuration: Intel Xeon processor E5-2697 v2 (12C, 27 GHz, 130 W), 2 sockets, 16 x 8 GB DDR3-1600 REG ECC memory, Intel Solid-State Drive DC S3700 800 GB, running Windows Server 2012 operating system with Microsoft SQL Server 2012 database software.

6. ROI estimated using publicly available Intel Xeon Server Refresh Savings Estimator at intelsalestraining.com/Xeonestimator/demo.htm. For 3-month ROI: based on the investment cost of $13,440 (server and operating system acquisition cost) divided by the total annual savings for operating system support, database support, power, cooling, and server and network maintenance of $71,918 multiplied by 12 months.

7. Energy savings estimated using publicly available Intel Xeon Server Refresh Savings Estimator at intelsalestraining.com/Xeonestimator/demo.htm. For energy savings (power and cooling): $8,432. Utility rate= $0.10 per kilowatt-hour (kWh) utilized 24-7 (16 hours active, 8 hours idle), PUE 2.0 (Intel estimate). 2S Intel Xeon processor 5300 seriesbased servers: $8,432 per year; 2S Intel Xeon processor E5-2697 v2-based server: $354 per year (96 percent savings).

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