Siemens Benchmarks: Cisco Unified Computing System with the Intel Xeon Processor E7 Family for Siemens Soarian Clinicals

SIEMENS

Siemens Soarian Clinicals is powered to higher service levels and additional capacity by the Cisco Unified Computing System™ and the top-of-the-line Intel® Xeon® processor E7 family. This solution offers a converged infrastructure with support for workload spikes and growth for even the largest hospitals at a lower total cost of ownership (TCO) than previous solutions.

Siemens Healthcare, Cisco, and Intel have collaborated to evaluate the Cisco Unified Computing System with servers powered by the new Intel Xeon processor E7 family as a platform for Siemens Soarian Clinicals. The performance study reveals:

- A single Cisco Unified Computing System blade powered by four Intel Xeon E7-4870 processors, each with 10 cores, exceeds service-level performance objectives, running a workload that simulates the clinical and operational demands of approximately 2 medium-sized hospitals during peak hours.

- A 10 percent improvement in response time was achieved, with 20 percent fewer computing resources consumed compared to prior results achieved in the server test powered with the previous-generation Intel Xeon processor 7500 series, demonstrating a significant increase in headroom to support workload spikes and growth.

- The Cisco Unified Computing System combines servers powered by the Intel Xeon processor E7 family with a virtualization-optimized, converged infrastructure to power Soarian Clinicals, providing industry-leading performance with a simplified architecture for reduced TCO.

Siemens Soarian Clinicals

Soarian Clinicals is an enterprise-wide healthcare information system used throughout the continuum of care by healthcare providers and administrative personnel to document patient information and to electronically display, store, retrieve, transfer, exchange, report, and print patient information. Soarian Clinicals enables the healthcare enterprise to design, coordinate, and adapt processes using Soarian's healthcare process management tools, such as workflow and rules engines, and work lists. It supports the healthcare providers' operational and administrative initiatives with functions such as ordering, scheduling, clinical documentation, assessment, care planning, and reporting. It also includes tools to support a healthcare provider's use of standard practices and terminology.

Reliable High-performance Infrastructure

The Cisco Unified Computing System combines industry-standard server technology into a single cohesive system that delivers excellent performance and security with a reduced TCO. The system is designed with no single point of failure to help ensure predictable performance 24 hours a day, seven days a week. The system's unified, model-based management automates system

configuration, speeding up deployment and reducing errors caused by repetitive manual processes. The result is greater agility and application availability.

Cost-Effective Solution

In the past, it took multiple servers to amass the amount of computing power needed to run an entire hospital. The Intel Xeon processor E7 family delivers top-of-the-line capabilities, requiring many fewer servers. With the power of the Xeon processor E7 family, the Cisco Unified Computing Solution gives Soarian Clinicals the capacity to support future growth, spikes in workloads, and environment consolidation. With exceptional support for virtualization, the Cisco Unified Computing System can support the entire suite of Soarian Clinicals software on as few as two servers while also offering hardware redundancy, greatly reducing cost and complexity. The system's unified I/O infrastructure requires fewer than half the components of other blade and server platforms, greatly reducing the number of management points and simplifying both deployment and ongoing maintenance and management.

Although the testing here used a single server, a hospital would actually deploy the software suite across two or more Cisco servers for greater system availability. This test shows that a single Cisco UCS server using Intel Xeon processor E7 family technology can support an entire Soarian Clinicals

deployment with capacity to spare. This solution gives hospitals the additional computing and memory capacity necessary to provide excellent service through peak workloads, and hospitals can use the same infrastructure for testing and training as well as production, saving both time and money.

Virtualization Optimized

When applications are deployed in virtualized environments, the Cisco Unified Computing System provides a pool of resources that can be provisioned programmatically to support any workload in minutes. To continue to meet a hospital's growing needs, Cisco servers can scale to 40 cores, and the entire system can scale to 320 servers in a single converged system with one point of management for easy scalability and reduced TCO.

Greater Network Security and Visibility

In a business where patient confidentiality is mandated, the Cisco Unified Computing System brings increased security. The platform's unified fabric and fabric extender technology separates traffic to support data security equally for both physical and virtual environments. In virtual environments, hospital IT staff gain visibility and control over virtual servers so that servers can be managed like physical servers, eliminating many of the difficulties that can arise from virtualization. Additionally, hardware

support for AES-NI on the Intel Xeon processor E7 family provides data security without the traditional performance penalty, even for the most demanding applications.

Conclusion

For a hospital-ready platform, you can count on Cisco. The combination of the Cisco Unified Computing System and Intel Xeon processor E7 family servers provides a high-performance and reliable platform for running mission-critical applications such as Soarian Clinicals. This platform provides exceptional support for fast, secure transactions in both virtualized and physical environments, helping ensure patient data privacy. The excellent scalability and simplified architecture and management of this platform enable hospitals to deploy this powerful solution with a reduced TCO.

For More Information

For more information about the Cisco Unified Computing System, see:

· http://www.cisco.com/go/ucs

For more information about the Intel Xeon processor E7 family, see:

· http://www.intel.com/products/
server/processor/xeonE7/index.htm

For more information about Siemens Healthcare Soarian Clinicals, see:

· http://www.usa.siemens.com/
SoarianClinicals