Cisco UCS B200 M3: Industry-Leading Performance for Oracle E-Business Suite

With the Versatile Intel Xeon Processor E5-2600 v2 Family

Performance Brief
September 2013

Highlights

Industry-Leading Results
- Cisco's latest Oracle E-Business Suite Applications R12 benchmark results demonstrate the leadership performance of the Cisco Unified Computing System™ (Cisco UCS™) with Intel® Xeon® E5-2600 v2 processors and EMC® VNX™ storage powering Oracle database and enterprise applications.

Proven Track Record
- Cisco has consistently set world records on Oracle E-Business Suite Applications benchmarks, proving the versatility of the enterprise multi-tier application performance that Cisco UCS can deliver.

Product Breadth and Depth
- The excellent benchmark results are based on an end-to-end solution using Cisco UCS with blade servers unified with Cisco® networking and storage access technology in combination with EMC storage. This solution demonstrates the breadth and depth of Cisco's high-performance data center solutions.

The Cisco Unified Computing System™ (Cisco UCS®) is the industry's first system to process more than 1 million employees per hour on the Oracle E-Business Suite Applications R12 benchmark.

The Cisco UCS B200 M3 Blade Server delivers the best performance of any 2-socket server on the Oracle E-Business Suite Applications R12 (12.1.3) 2-Tier Extra-Large Payroll (Batch) Benchmark. The Oracle E-Business Suite Standard Benchmark simulates global enterprise workloads with varying data model sizes to demonstrate performance and scalability across a range of scenarios. Results are certified by an independent auditor, and detailed benchmark reports are published on the Oracle website.

World-Record-Setting Oracle E-Business Suite Performance

Cisco UCS continues to lead the industry with top performance as measured by the Oracle E-Business Suite Standard Benchmark. The latest proof point, highlighted in Figure 1, shows the Cisco UCS B200 M3 powered by the Intel® Xeon® processor E5-2600 v2 product family outperforming the same server configured with previous-generation processors by 21 percent on the Extra-Large Payroll model.
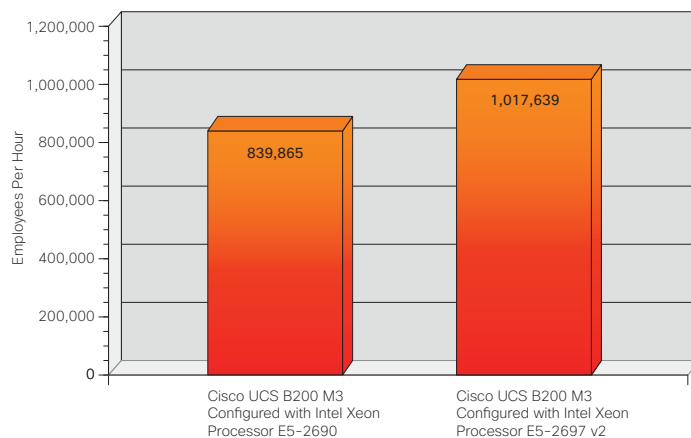

Figure 1. The Cisco UCS B200 M3 with the Intel Xeon Processor E5-2600 v2 Family Delivers a 21 Percent Performance Improvement Compared to Previous-Generation Intel Xeon Processors
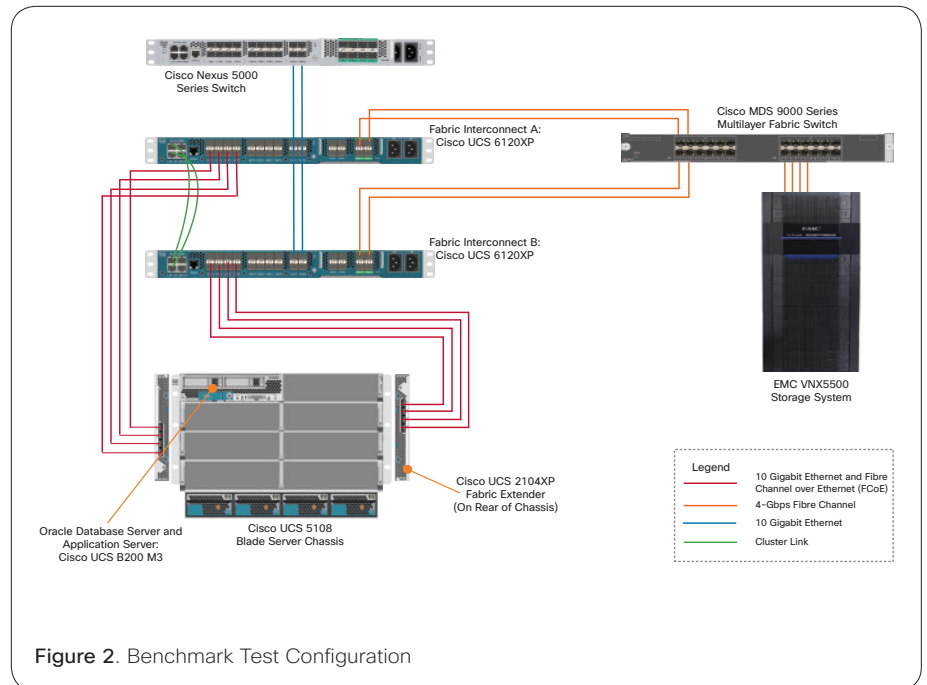
Exceptional Unified Platform

Cisco UCS, in combination with Oracle E-Business Suite Applications, is an outstanding solution that delivers best-in-class performance and reliability, availability, and serviceability (RAS) with exceptional data security for mission-critical applications. While other servers may incorporate the latest Intel processors, Cisco integrates them into a unified system built to deliver scalable performance to meet business needs. Unlike other products, Cisco UCS is a next-generation data center platform that unites computing, networking, storage access, and virtualization resources into a unified system designed specifically to reduce total cost of ownership (TCO) and increase business agility.

Benchmark Environment

Cisco ran the Oracle E-Business Suite (12.1.3) R12 Benchmark batch processes as standard concurrent processes (using the concurrent manager) from the SQL scripts provided with the benchmark.

The benchmark was run in a two-tier configuration with a single Cisco UCS B200 M3 Blade Server hosting both the database and the application server instances, all on a single Oracle Linux image. The Cisco UCS B200 M3 Blade Server had two Intel Xeon processors E5-2697 v2 (12 cores each for 24 total cores) running at 2.70 GHz with Intel Hyper-Threading enabled. For this test, 128 GB of memory was configured. As shown in Figure 2, Cisco UCS unifies all networking and storage access across

Figure 2. Benchmark Test Configuration

a high-bandwidth, low-latency 10 Gigabit Ethernet fabric using integrated Cisco® fabric extender and Cisco fabric interconnect technologies.

Cisco UCS B200 M3 Blade Server

The Cisco UCS B200 M3 is a blade server without compromise. Powered by the Intel Xeon processor E5-2600 v2 product family, the half-width blade server offers 24 DIMM slots (up to 768 GB total capacity when equipped with 32 GB DIMMs) to support large virtual machine footprints. It is the first blade server anywhere to provide built-in programmable I/O connectivity, delivering the utmost in I/O bandwidth and flexibility.

The Intel Xeon processor E5-2600 v2 product family is at the center of an agile, efficient data center that meets a diverse set of needs, including the needs of Oracle workloads. Using Intel's industry-leading 22-nanometer (nm) 3-D Tri-Gate transistor technology, these versatile processors deliver significantly greater performance and power efficiency than the previous generation of Intel Xeon processors. The processor family offers more cores with more threads, more processor cache space, faster main memory, and lower power consumption by intelligently matching core, memory, cache, and I/O power to system demand.

EMC VNX Storage

The EMC® VNX™ 5500 storage system, with 75 600-GB SAS drives, was used to support the system test environment. Designed for high performance and consolidation, EMC VNX storage systems address the requirements of Oracle enterprise applications. With EMC VNX storage, Oracle application environments can be configured with discrete SANs with network-attached storage (NAS) or Fibre Channel over Ethernet (FCoE). The unified fabric supported by Cisco UCS allows FCoE traffic to reach speeds of 10 Gbps while providing an end-to-end data center connectivity strategy based on 10 Gigabit Ethernet.

Performance and Scalability for Demanding Applications

With demand for faster processing continuing at an accelerated pace, data center infrastructure must deliver excellent performance and scalability. Cisco's multi-tier application server solution delivers world-class performance among x86-architecture servers while surpassing the same solution configured with previous-generation processors.

By deploying Oracle E-Business Suite on Cisco UCS servers configured with the Intel Xeon processor E5-2600 v2 product family, IT departments can process more workloads and accelerate response times. Many employees can be processed per hour—up to an industry-leading 1,017,639 in the benchmark configuration—with little hardware. IT departments can choose from a broad range of Cisco UCS blade and rack server models to scale deployments further by using larger servers or adding servers to create scale-out deployments with a small footprint. These innovations plus a dramatic reduction in the number of physical components needed demonstrate Cisco's commitment to delivery of systems that provide value to Oracle deployments.

For More Information

- Cisco Unified Computing System: http://www.cisco.com/go/ucs

- Cisco UCS and Oracle software: http://www.cisco.com/go/oracle

- Cisco UCS and EMC storage: http://www.cisco.com/go/emc

- EMC VNX storage systems: http://www.emc.com/storage/vnx/vnx-family.htm

Benchmark Disclosures

The performance comparisons described in this document are derived from detailed benchmark reports published by Oracle at http://www.oracle.com/us/solutions/benchmark/apps-benchmark/results-166922.html as of September 10, 2013.

The new Cisco UCS B200 M3 server cited in this document was configured with two 2.70-GHz Intel Xeon processors E5-2697 v2 (24 cores total) and 128 GB of memory; was running Oracle Linux 5.7 (64-bit), Oracle E-Business Suite R12 (12.1.3), and Oracle 11g Database (11.2.0.1.0; 64-bit); and was connected to the EMC VNX 5500 storage system, configured using Oracle Automatic Storage Management (ASM).

The Cisco UCS B200 M3 server used for comparison was configured with two 2.90-GHz Intel Xeon processors E5-2690 (16 cores total) and 128 GB of memory; was running Oracle Linux 5.5 (64-bit), Oracle E-Business Suite R12 (12.1.2), and Oracle 11g Database (11.2.0.1.0; 64-bit); and was connected to the EMC VNX 5500 storage system, configured using Oracle Automatic Storage Management (ASM).

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