

Cisco UCS B200 M4: Fastest Server Anywhere Running Oracle E-Business Suite



With the Versatile Intel Xeon Processor E5-2600 v3 Family

Performance Brief
September 2014

Highlights

Cisco UCS Is Number 1

- The Cisco UCS® B200 M4 Blade Server with the Intel® Xeon® processor E5-2600 v3 product family and EMC® VNX™ storage is the number-one server with top results on the Oracle E-Business Suite Applications R12 benchmark. The Cisco UCS B200 M4 performed over a million employees per hour on the Payroll Extra-Large Model Benchmark outperforming the IBM Power System S824.

Proven Track Record

- Cisco has consistently set world records on Oracle E-Business Suite Applications benchmarks, proving Cisco UCS can deliver the performance versatility that your multitier enterprise applications need.

Product Breadth and Depth

- The excellent benchmark results are based on an end-to-end solution using Cisco Unified Computing System™ (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.

Cisco continues a tradition of enterprise application performance leadership with two new world records on Oracle E-Business Suite benchmarks, demonstrating that Cisco Unified Computing System™ (Cisco UCS®) powers business-critical software better than any other server vendor.



The Cisco UCS B200 M4 Blade Server delivers the best performance of any server on the Oracle E-Business Suite Applications R12 (12.1.3) Payroll and Order-to-Cash Benchmarks. 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, highlighted in Figure 1, shows the Cisco UCS B200 M4 Blade Server with the Intel® Xeon® processor E5-2697 v3 outperforming all competitive solutions.

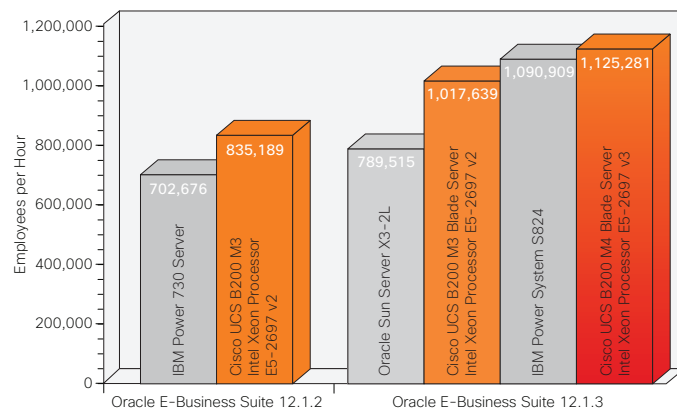


Figure 1. Cisco Continues a Tradition of Record-Setting Performance on Oracle E-Business Suite Payroll Extra-Large Model Benchmarks

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The Cisco UCS B200 M4 delivered world-record results on the Payroll Extra-Large Model Benchmark, exceeding one million employees per hour with a score of 1,125,281 and outperforming the IBM Power System S824, setting the standard for performance on this benchmark. This result is an 11 percent improvement over the previous-generation Intel Xeon processor running on the same Cisco UCS server and a 3 percent improvement over the IBM Power System S824 (Figure 1).

The Cisco server continues a Cisco tradition by setting a world record on the Order-to-Cash workload, outperforming the same server configured with previous-generation processors by 5 percent on the Order-to-Cash Large Model Benchmark, processing more than 11,000 more order lines per hour (Figure 2).

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. Although other servers may incorporate the latest Intel processors, Cisco integrates them into a unified system built to deliver scalable performance to meet business needs.

Benchmark Environment

We ran the Oracle E-Business Suite R12 Benchmark batch processes

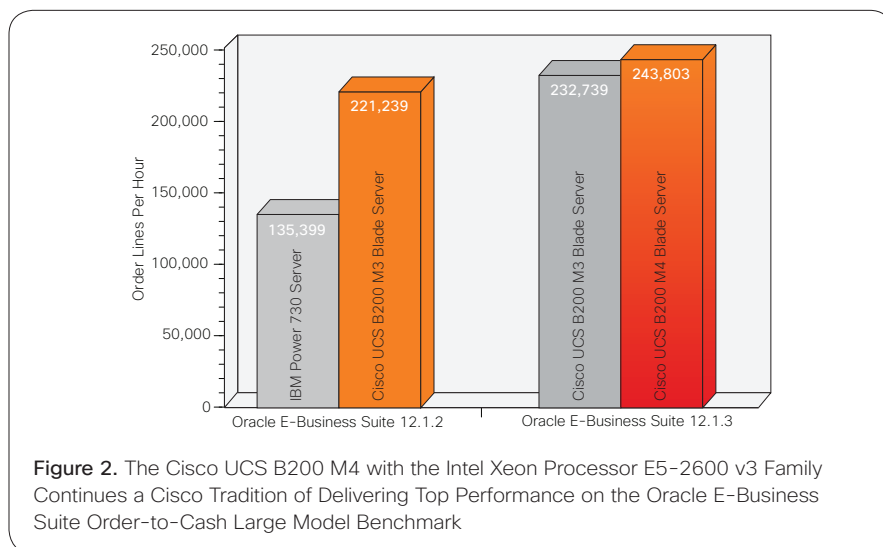


Figure 2. The Cisco UCS B200 M4 with the Intel Xeon Processor E5-2600 v3 Family Continues a Cisco Tradition of Delivering Top Performance on the Oracle E-Business Suite Order-to-Cash Large Model Benchmark

using the concurrent manager from the standardized scripts provided with the benchmark. The benchmark was run in a two-tier configuration with a single Cisco UCS B200 M4 Blade Server hosting both the database and the application server instances, all on a single Oracle Linux image.

We ran the batch processes as standard concurrent processes (using the concurrent manager) from the SQL scripts provided with the benchmark.

Hardware Configuration

The Cisco UCS B200 M4 Blade Server was configured with two Intel Xeon processors E5-2697 v3 (14 cores each for 28 total cores) running at 2.6 GHz with Intel Hyper-Threading Technology enabled. For this test, 128 GB of memory was configured using 16-GB DIMMs. As shown

in Figure 3, Cisco UCS unifies all networking and storage access across a high-bandwidth, low-latency 10 Gigabit Ethernet fabric using integrated Cisco® fabric extender and Cisco fabric interconnect technologies.

Cisco UCS B200 M4 Blade Server

The Cisco UCS B200 M4 is a blade server without compromise. Powered by the Intel Xeon processor E5-2600 v3 product family, the half-width blade server offers 24 DIMM slots (up to 1.5 terabytes [TB] of total capacity when equipped with 64-GB LRDIMMs) to support large virtual machine footprints. It is the first blade server to provide built-in programmable I/O connectivity, delivering the utmost in I/O bandwidth and flexibility.

The Intel Xeon processor E5-2600 v3 product family offers outstanding versatility for business applications,

including Oracle workloads. These flexible processors deliver greater performance and power efficiency than the previous generation of Intel Xeon processors. These new processors allow you to be more responsive to business needs with their enhanced support for virtualization, automation, and orchestration. These capabilities help optimize infrastructure efficiency and lower total cost of ownership (TCO).

EMC VNX Storage

The EMC® VNX™ 5400 storage system, configured with 70 536-GB SAS drives and 20 183-GB SSD 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 to grow at an accelerated pace, data center infrastructure must deliver excellent performance and scalability. Cisco's multitier application server solution delivers world-class performance among x86-architecture

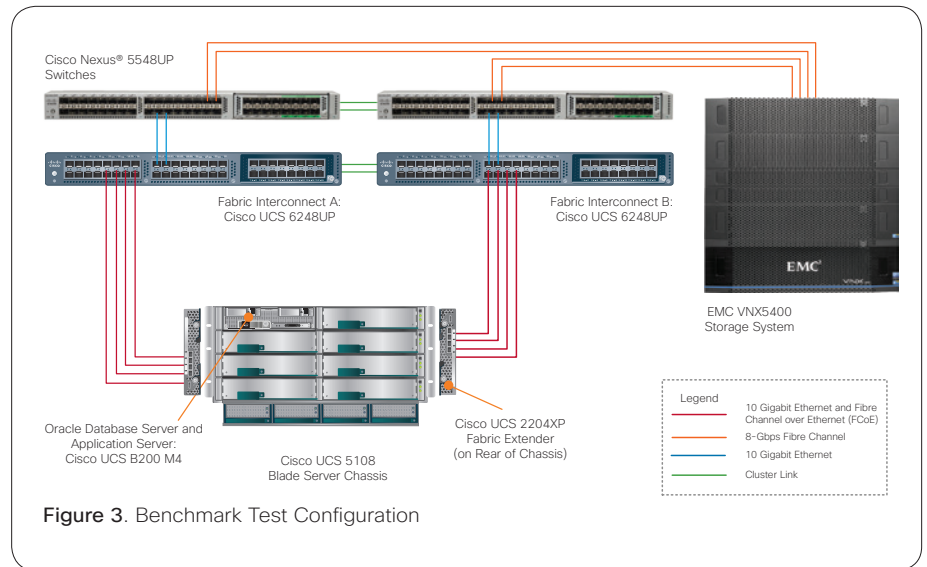


Figure 3. Benchmark Test Configuration

servers, 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 v3 product family, IT departments can confidently process more workloads and shorten response times. These innovations demonstrate Cisco's commitment to delivery of systems that provide value to Oracle deployments.

For More Information

- Cisco UCS B200 M4 Oracle E-Business Suite results details: <http://www.oracle.com/us/solutions/benchmark/apps-benchmark/results-166922.html>.
- 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 8, 2014.

The new **Cisco UCS B200 M4** server cited in this document was configured with two 2.60-GHz Intel Xeon processors E5-2697 v3 (28 cores total) and 128 GB of memory; was

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running Oracle Linux 5.7 (64-bit), Oracle E-Business Suite R12 (12.1.3), and Oracle 11g Database (11.2.0.3.0; 64-bit); and was connected to the EMC VNX 5400 storage system, configured using Oracle Automatic Storage Management (ASM).

The **Cisco UCS B200 M3** server used for comparison 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 (11.2.0.3.0; 64-bit); and was connected to an EMC VNX 5500 storage system, configured using Oracle ASM.

The **Oracle Sun X3-2L 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 5.7 (64-bit), Oracle E-Business Suite R12 (12.1.2), and Oracle 11g Database (11.2.0.3.0; 64-bit); and used eight 100-GB SSD for data and one 200-GB SSDs for logs.

The **IBM Power 730 Express Server** used for this comparison was configured with two 3.72-GHz IBM POWER7 processors (12 cores total) and 48 GB of memory; was running IBM AIX 6.1 TL04 (64-bit), Oracle E-Business Suite R12 (12.1.2), and Oracle 11g Database

(11.2.0.1; 64-bit); and was connected to an IBM Storwize V7000 storage array.

The **IBM Power Server S824** used for comparison was configured with two 3.525-GHz IBM Power8 processors (24 cores total with only 12 cores active) and 64 GB of memory; was running IBM AIX 7.1 7100-01-03-1207 (64-bit), Oracle E-Business Suite R12 (12.1.3), and Oracle 11g Database (11.2.0.3; 64-bit); and used a single IBM Storwize V7000 disk array for storage.



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