

Cisco UCS B230 M2 Blade Server: Establishing a Tradition of Record-Setting Oracle E-Business Suite Performance



Performance Brief
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Highlights

World-Record-Setting Results

- Cisco's latest Oracle E-Business Suite Applications R12 benchmark results demonstrate the superior performance of the Cisco Unified Computing System[™] (Cisco UCS[™]) with Intel[®] Xeon[®] 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 enterprise multi-tier application performance that Cisco UCS can deliver.

Superb Performance for Cost-Effective RISC Migration

- The benchmark results demonstrate how well Cisco's solution based on open standard, x86-architecture processors can outperform proprietary RISC processor-based systems and save up to 50 percent on Oracle Database license costs.

Product Breadth and Depth

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

Cisco establishes a tradition of enterprise application performance by demonstrating once again that Cisco Unified Computing System powers software such as Oracle E-Business Suite better than any other server vendor.

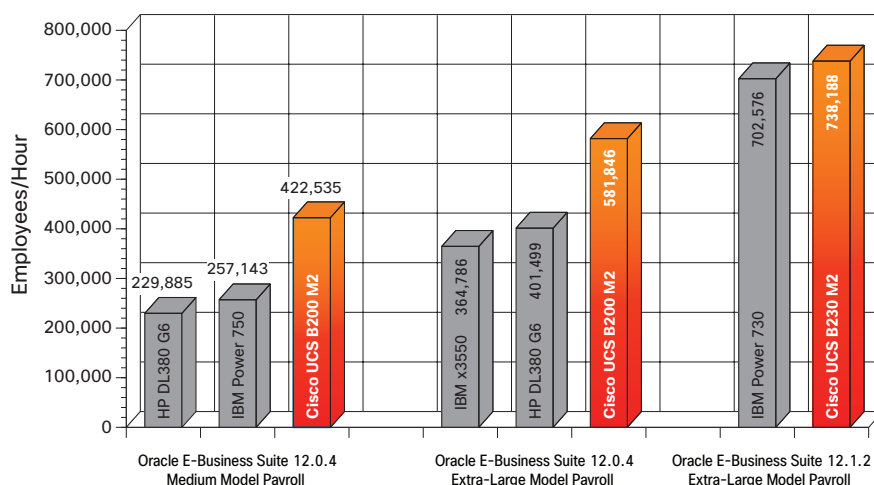
The Cisco UCS[™] B230 M2 Blade Server delivers the best performance of any two-socket server on the Oracle E-Business Suite Applications R12 (12.1.2) 2-Tier Large/Extra-Large Payroll (Batch) Benchmark. This result is the first to use Oracle Automatic Storage Management (ASM) and EMC VNX5300[™] storage configured with RAID 5. This configuration closely resembles the configurations of real-world Oracle E-Business Suite deployments.

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 Unified Computing System[™] (Cisco UCS) powered by Intel[®] Xeon[®] processors 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 cost-effective Cisco UCS B230 M2 outperforming the IBM Power 730 by 5 percent.

Figure 1. A History of Cisco UCS Performance Leadership



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Industry-Leading Platform

The Cisco UCS platform, 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 compute, network, storage access, and virtualization resources into a cohesive system designed specifically to reduce total cost of ownership (TCO) and increase business agility.

Benchmark Environment

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

Physical Configuration

The benchmark was run in a 2-Tier configuration with a single Cisco UCS B230 M2 Blade Server hosting both the database and the applications server instances, all on a single Oracle Linux image.

The Cisco UCS B230 M2 Blade Server had two Intel Xeon E7-2870 processors (10 cores each for 20 total cores) running at 2.40 GHz with Intel Hyper-Threading enabled. For this test,

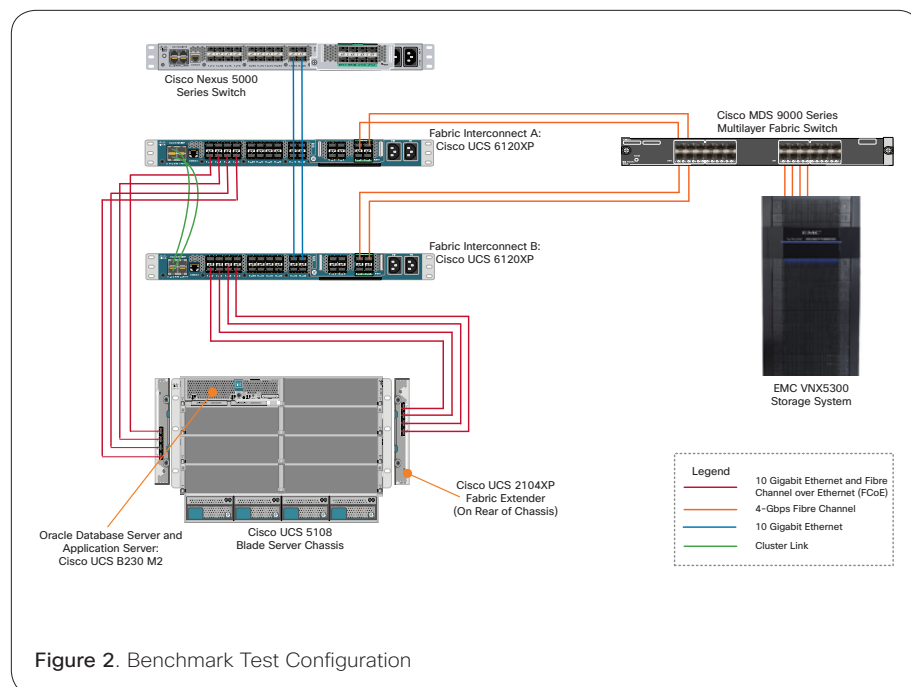


Figure 2. Benchmark Test Configuration

256 GB of memory was configured. As shown in Figure 2, 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.

EMC VNX Storage

The EMC VNX5300 storage system, with 75 x 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, offering:

- Unified support for block and file use protocols

- Simple and intuitive management interface
- Design for five-nines reliability
- Fully automated storage tiering
- Built-in features that support replication and disaster protection

With EMC VNX storage, Oracle application environments can be configured with discrete storage area networks with networked attached storage (NAS), or Fibre Channel over Ethernet (FCoE). The unified fabric supported by the 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.

High Performance with Lower Licensing Costs

Cisco's multi-tier application server solution delivers world-class performance among x86-architecture servers while surpassing IBM's RISC processor-based solution by 5 percent. With Cisco UCS the Oracle Database software licensing costs may be reduced by up to 50 percent compared to IBM RISC platforms. These results demonstrate not just superior performance, but also illustrate how customers can power their enterprise applications with a cost-effective, high-performance system built on industry standards: the Cisco Unified Computing System and EMC VNX storage.

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>. The systems cited in this document were configured as follows:

- **Cisco UCS B200 M2 server** was configured with two 3.33-GHz Intel Xeon X5680 processors (12 cores total) and 48 GB of memory; was running Red Hat Enterprise Linux 5 (64-bit), Oracle E-Business Suite R12 RUP 4 (12.0.4), and Oracle 10g Database (10.2.0.3); and was connected to a single EMC CLARiiON CX4 Model 240 storage system.
- **HP ProLiant DL380 G6 server** was configured with two 2.93-GHz Intel Xeon X5570 processors (8 cores total) and 48 GB of memory; was running Enterprise Linux 5 (64-bit), Oracle E-Business Suite R12 RUP 4 (12.0.4), and Oracle 10g Database (10.2.0.3); and was connected to a single HP StorageWorks EVA6400 storage system.
- **IBM System x3550 server** was configured with two 2.93-GHz Intel Xeon X5570 processors (8 cores total) and 64 GB of memory; was running Enterprise Linux 5 (64-bit), Oracle E-Business Suite R12 RUP 4 (12.0.4), and Oracle 10g Database (10.2.0.3); and was connected to a single IBM Storage System DS4700.
- **IBM Power 750 server** was configured with one 3.3-GHz IBM Power7 processor (6 cores total) and 64 GB of memory; was running IBM AIX 6.1 TL04, Oracle E-Business Suite R12 RUP 4 (12.0.4), and Oracle 10g Database (10.2.0.3); and was connected to a single IBM Storage System DS5100.
- **Cisco UCS B230 M2 server** was configured with two 2.40-GHz Intel Xeon E7 2870 processors (20 cores total) and 256 GB of memory; was running Oracle Linux 5 Update 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 EMC VNX5300 storage system, configured using Oracle Automatic Storage Management (ASM) with 1024-GB RAID 5 storage for data.
- **IBM Power 730 Express Server** 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 6100-04-09-1112, Oracle E-Business Suite R12 (12.1.2) and Oracle 11g Database (11.2.0.1.0; 64-bit); and was connected to IBM Storwize V7000 storage array.



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