Cisco UCS C240 M3 Rack Server: Fastest Two-Socket Database Server

Performance Brief
September 2012

Highlights

Better Performance at Lower Cost

- The 2-socket Cisco UCS® C240 M3 Rack Server achieved 1,609,186 transactions per minute in the TPC-C benchmark (tpmC), with a price-to-performance ratio of US$0.47 per tpmC ($/tpmC).
- Cisco's results are **34 percent faster and the cost is 32 percent less** than for IBM DB2 running on a 2-processor IBM POWER7 system (see disclosures).
- The results are **7 percent faster and the cost is 11 percent less** than for a 2-socket IBM Flex System x240 running IBM DB2 (see disclosures).

Dramatic Performance Improvement

- Cisco's results represent a **53 percent improvement** compared to Cisco's last generation of servers.

Industry-Standard Benchmark Leadership

- Cisco has established a tradition of performance leadership on essential enterprise benchmarks, including TPC-C and TPC-H.

Continuing industry leadership for database performance, Cisco delivers breakthrough 2-socket server performance at lower cost.

Industry-Leading Performance for Online Transaction Processing

Online transaction processing (OLTP) is critical to enterprise IT departments, requiring both capable systems and high-performance database management software. Cisco's world-record Transaction Processing Performance Council (TPC) result of 1,609,186 transactions per minute in the TPC-C benchmark (tpmC), with a price-to-performance ratio of US$0.47 per tpmC ($/tpmC), demonstrates how Cisco Unified Computing System™ (Cisco UCS®) servers, in combination with Oracle Database, deliver world-record performance for 2-socket servers at lower cost than the competition.

- **Faster and cheaper than IBM.** The Cisco UCS C240 M3 Rack Server powered by two Intel® Xeon® processors E5-2690 outperforms an IBM Flex System x240 with the same processor and memory capacity by 7 percent at 11 percent less cost per transaction (Figure 1).
- **No better time for RISC migration.** The Cisco UCS C240 M3 delivered 34 percent more performance at 32 percent less cost per transaction than IBM DB2 on a 2-processor IBM POWER7 system, demonstrating the value of upgrading from RISC processor-based servers to current Cisco® offerings powered by Intel Xeon processors.
- **No better time to upgrade.** For Cisco customers considering upgrading from

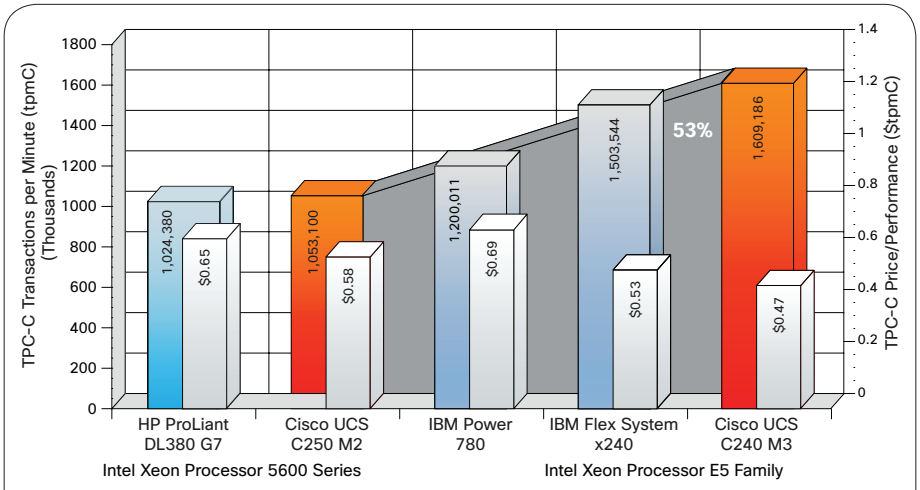

Figure 1. Cisco Establishes a Tradition of TPC-C Performance

Cisco's last generation of servers, The current offering outperforms the Cisco UCS C250 M2 Extended Memory Rack Server by 53 percent.

- **A tradition of Oracle Database performance.** Cisco's breakthrough performance result establishes a tradition of outperforming the competition at less cost. Even Cisco's last-generation server (Cisco UCS C250 M2 Extended Memory Rack Server) beat HP's fastest 2-socket result by 3 percent at 11 percent lower cost despite having the same processor and memory capacity.

TPC-C Benchmark

The flagship server benchmark that measures online transaction processing performance, TPC-C simulates a complete computing environment in which a population of users runs transactions against a database. TPC-C is not limited to the activity of any particular business segment, but rather represents any industry that must manage, sell, or distribute a product or service. The primary metrics are the transactions per minute (expressed as tpmC) and the associated price per transaction in U.S. dollars (expressed as $/tpmC).

Cisco UCS C240 M3 Rack Server

The Cisco UCS C240 M3 Rack Server is a high-performance, memory-intensive, two-rack-unit (2RU) rack-mount server that supports up to two Intel Xeon E5 series processors, up to 768 GB of memory, and up to 12 large-form-factor (LFF) or 24 small-form-factor (SFF) internal disk drives with a variety of RAID options.

Benchmark Configuration

The tested configuration consisted of a Cisco UCS 240 M3 equipped with two Intel Xeon processors E5-2690 at 2.9 GHz with 768 GB of main memory. The server ran Oracle Database 11g Standard Edition One and Oracle Linux with Unbreakable Enterprise Kernel Release 2. The client tier consisted of two Cisco UCS C200 M2 servers. The storage system consisted of two Violin 6000 series arrays. Violin memory arrays provide a scalable high-performance infrastructure for large-data-set applications, providing industry-leading space and power efficiency.

Conclusion

With the newest world-record-setting TPC-C benchmark result, Cisco establishes a tradition of delivering more performance at less cost than the competition and of delivering significant performance gains with each successive generation of its own products. For organizations assessing infrastructure for enterprise applications, these results demonstrate Cisco's commitment to running Oracle software best.

For More Information

- For more information about Cisco UCS servers, please visit http://www/cisco.com/go/ucs.
- For more information about Violin storage systems, please visit http://www.violin-memory.com/.

Disclosures

The Transaction Processing Performance Council (TPC) is a nonprofit corporation founded to define transaction processing and database benchmarks and to disseminate objective and verifiable performance data to the industry. TPC-C, tpmC, and $/tpmC are trademarks of the Transaction Processing Performance Council (TPC). The performance results described in this document are derived from detailed benchmark results available as of September 27, 2012, at http://www.tpc.org/tpcc/default.asp. The TPC-C results cited in this document are as follows:

- Cisco UCS C240 M3 Rack Server, 1,609,186.39 tpmC at US$0.47/tpmC; available September 27, 2012
- IBM POWER 780 Server Model 9179-MHB, 1,200,011.00 tpmC at US$0.69/tpmC; available October 13, 2010
- IBM Flex System x240, 1,503,544 tpmC at US$0.53/tpmC; available August 16, 2012
- Cisco UCS C250 M2 1,053,100 tpmC at US$0.58/tpmC; available December 7, 2011
- HP ProLiant DL380 G7, 1,024,380 tpmC at US$0.65/tpmC; available June 20, 2011

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LE-36702-00 09/12