

Cisco Unified Computing System and Intel Xeon Processors: 90 World-Record Performance Results



Performance Brief
February 2014

The Cisco Unified Computing System™ (Cisco UCS®) with versatile Intel® Xeon® processors continues its industry leadership, capturing a total of 90 world performance records with first-to-market results or results that exceed those set by other system vendors, including Dell, HP, and IBM, as of the date of disclosure (Table 1).



Table 1. World-Record Benchmarks Set by Cisco UCS

| World-Record VMware VMmark Benchmarks | | | | |
|---|------------------|------------------|-------------------------------------|---|
| Benchmark | Cisco UCS Server | Publication Date | Result and Disclosure | Record as of Publication Date |
| VMware® VMmark™ 2.x | C460 M2 | 9/20/2011 | 35.06 @35 tiles | Number-one result of any server |
| | C460 M2 | 10/4/2011 | 18.00 @18 tiles | Number-one 4-socket server, 2-node result |
| | C460 M2 | 4/5/2011 | 16.68 @18 tiles | Number-one result of any server |
| | C240 M3 | 5/9/2013 | 12.00 @10 tiles | Number-one 2-socket server, 2-node result |
| | B200 M3 | 9/11/2012 | 42.79 @36 tiles | Number-one result of any server |
| | B260 M4 | 2/12/2014 | 19.18 @16 tiles | Number-one 2-socket server, 2-node result |
| | B200 M3 | 9/18/2012 | 11.32 @10 tiles | Number-one 2-socket blade server |
| | B200 M2 | 3/23/2011 | 7.17 @7 tiles | Number-one 2-socket server |
| | B200 M2 | 12/28/2010 | 6.51 @6 tiles | Number-one overall VMmark 2.0 |
| VMware VMmark 1.x | C460 M1 | 9/7/2010 | 76.10 @51 tiles | Number-one server |
| | C460 M1 | 5/4/2010 | 73.82 @50 tiles | Number-one server |
| | B250 M2 | 4/6/2010 | 35.83 @26 tiles | Number-one 2-socket server |
| | B230 M1 | 10/19/2010 | 39.19 @27 tiles | Number-one 2-socket blade server |
| | B440 M1 | 7/27/2010 | 71.13 @48 tiles | Number-one blade server |
| | B200 M1 | 4/21/2009 | 24.14 @17 tiles | Number-one 2-socket server |
| | B200 M1 | 1/12/2010 | 25.06 @17 tiles | Number-one 2-socket server |
| World-Record VMware View Planner Benchmarks | | | | |
| Benchmark | Cisco UCS Server | Publication Date | Result and Disclosure | Record as of Publication Date |
| VMware® View Planner | B200 M3 | 9/10/2013 | VMware VDImark™ 149 | First and best official result by any company |

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90 World-Record Performance Results

| World-Record Java-Based SPEC® Benchmarks | | | | |
|---|------------------|------------------|--|---|
| Benchmark | Cisco UCS Server | Publication Date | Result and Disclosure | Record as of Publication Date |
| SPECjAppServer®2004 | C250 M2 | 3/16/2010 | 5,185.45 SPECjAppServer2004 JOPS@Standard | Number-one 1-node 2-socket server |
| | B230 M1 | 9/8/2010 | 11,283.80 SPECjAppServer2004 JOPS@Standard | Number-one 2-node server |
| SPECjEnterprise™2010 | B440 M2 | 9/30/2011 | 26,118.67 SPECjEnterprise EjOPS | Number-one x86-architecture server |
| | B440 M1 | 3/9/2011 | 17,301.86 SPECjEnterprise EjOPS | Number-one overall server |
| World-Record Java-Based SPEC Benchmarks (Continued) | | | | |
| Benchmark | Cisco UCS Server | Publication Date | Result and Disclosure | Record as of Publication Date |
| | C460 M1 | 3/30/2010 | 2,021,525 SPECjbb2005 bops, 1,263,45 SPECjbb2005 bops/JVM | Number-one x86/64 4-socket server |
| | C260 M2 | 4/5/2011 | 1,337,210 SPECjbb2005 bops, 668605 SPECjbb2005 bops/JVM | Number-one 2-socket server |
| | C220 M3 | 9/10/2013 | 2,152,354 SPECjbb2005 bops, 1,076,177 SPECjbb2005 bops/2 JVM | Number-one 2-socket server |
| | C220 M3 | 3/9/2012 | 1,584,567 SPECjbb2005 bops, 792,284 SPECjbb2005 bops/2 JVMs | Number-one 2-socket server |
| | B230 M2 | 9/30/2011 | 1,408,935 SPECjbb2005 bops, 704,468 SPECjbb2005 bops/JVM | Number-one 2-socket server |
| | B440 M2 | 9/30/2011 | 2,798,763 SPECjbb2005 bops, 699,691 SPECjbb2005 bops/JVM | Number-one 4-socket server |
| | B230 M2 | 6/15/2011 | 1,395,684 SPECjbb2005 bops, 697,842 SPECjbb2005 bops/JVM | Number-one 2-socket server |
| | B230 M1 | 9/25/2010 | 1,017,141 SPECjbb2005 bops, 127,143 SPECjbb2005 bops/JVM | Number-one x86/64 2-socket server |
| | B230 M1 | 9/7/2010 | 1,015,802 SPECjbb2005 bops, 126,975 SPECjbb2005 bops/JVM | Number-one x86/64 2-socket server |
| | B200 M1 | 3/16/2010 | 624,059 SPECjbb2005 bops, 156,015 SPECjbb2005 bops/JVM | Number-one x86/64 2-socket server |
| SPECjbb™2013 | C240 M3 | 2/5/14 | 63,079 max-jOPS 23,797 critical-jOPS | Number-one x86/64 2-socket server result for max-jOPS |
| | C220 M3 | 4/17/2013 | 41,954 max-jOPS 16,545 critical-jOPS | Top MultiJVM x86/x64 2-socket server |
| | B200 M3 | 9/10/2013 | 62,393 max-jOPS 23,505 critical-jOPS | Top MultiJVM x86/x64 2-socket server |

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90 World-Record Performance Results

| World-Record SPEC Computing Benchmarks | | | | |
|--|------------------|------------------|--|------------------------------------|
| Benchmark | Cisco UCS Server | Publication Date | Result and Disclosure | Record as of Publication Date |
| SPECint®_base2006 | C220 M3 | 9/10/2013 | 63.0 | Number-one 2-socket server |
| SPECint®_rate_base2006 | C460 M2 | 4/5/2011 | 1030 | Number-one x86/64 4-socket server |
| | C460 M1 | 3/30/2010 | 723 | Number-one x86/64 4-socket server |
| | C460 M4 | 2/18/2014 | 2320 | Number-one 4-socket server |
| | C220 M3 | 4/9/2013 | 681 | Number-one x86/64 2-socket server |
| | C220 M3 | 3/6/2012 | 671 | Number-one 2-socket server |
| | C260 M2 | 4/5/2011 | 526 | Number-one x86/64 2-socket server |
| | B260 M4 | 2/18/2014 | 1170 | Number-one 2-socket server |
| | B200 M2 | 3/15/2011 | 390 | Number-one x86/64 2-socket server |
| | B200 M2 | 3/16/2010 | 355 | Number-one x86/64 2-socket server |
| | B200 M1 | 4/21/2009 | 239 | Number-one x86/64 2-socket server |
| SPECfp®_rate_base2006 | C460 M1 | 5/25/2010 | 549 | Number-one x86/64 4-socket server |
| | C420 M3 | 7/30/2013 | 868 | Number-one x86/x64 4-socket server |
| | C220 M3 | 10/31/2013 | 682 | Number-one 2-socket server |
| | C220 M3 | 3/3/2012 | 496 | Number-one x86/64 2-socket server |
| | C260 M2 | 4/5/2011 | 365 | Number-one x86/64 2-socket server |
| | B260 M4 | 2/18/2014 | 865 | Number-one 2-socket server |
| | B200 M3 | 9/10/2013 | 681 | Number-one 2-socket server |
| | B200 M2 | 3/16/2010 | 248 | Number-one x86/64 2-socket server |
| | B200 M1 | 4/21/2009 | 194 | Number-one x86/64 2-socket server |
| SPECfp®_base2006 | C220 M3 | 3/6/2012 | 89.9 | Number-one 2-socket server |
| SPECComp®G_base2012 | C460 M4 | 2/18/2014 | 17.9 SPECCompG_base2012 | Number-one 4-socket server |
| | C240 M3 | 9/13/2013 | 6.79 SPECCompG_base2012 7.37 SPECCompG_peak2012 | Number-one 2-socket server |
| | B260 M4 | 2/18/2014 | 8.91 SPECCompG_base2012 9.66 SPECCompG_peak2012 | Number-one 2-socket server |

Cisco Unified Computing System and Intel Xeon Processors:
90 World-Record Performance Results

| World-Record SPEC Computing Benchmarks (Continued) | | | | |
|--|------------------|------------------|-------------------------|--------------------------------|
| Benchmark | Cisco UCS Server | Publication Date | Result and Disclosure | Record as of Publication Date |
| SPECCompL®base2001 | C460 M2 | 4/5/2011 | 727,635 | Number-one 4-socket server |
| | C460 M1 | 3/30/2010 | 607,818 | Number-one 4-socket server |
| | C220 M3 | 3/8/2012 | 527,122 | Number-one 2-socket server |
| | B230 M2 | 4/5/2011 | 378,522 | Number-one 2-socket server |
| | B200 M2 | 3/15/2011 | 282,771 | Number-one 2-socket server |
| | B200 M2 | 3/16/2010 | 278,603 | Number-one 2-socket server |
| SPECCompM®base2001 | C460 M1 | 3/30/2010 | 100,258 | Number-one 4-socket server |
| | C460 M2 | 4/5/2011 | 115,176 | Number-one 4-socket server |
| | C240 M3 | 3/6/2012 | 94,065 | Number-one 2-socket server |
| | B230 M2 | 4/5/2011 | 67,926 | Number-one x86 2-socket server |
| | B200 M2 | 3/15/2011 | 52,986 | Number-one 2-socket server |
| | B200 M2 | 3/16/2010 | 52,314 | Number-one 2-socket server |

| Transaction Processing Council Benchmarks | | | | |
|---|---------|------------------|---|--|
| Benchmark | Server | Publication Date | Result and Disclosure | Record as of Publication Date |
| TPC-C | C240 M3 | 9/27/12 | 1,609,186 tpmC US\$0.47 per tpmC | Number-one 2-socket server |
| | C250 M2 | 12/7/2011 | 1,053,100 tpmC US\$0.58 per tpmC | Number-one 2-socket server powered by Intel Xeon processors |
| TPC-H | C250 M2 | 2/14/2012 | 332,482 @100GB US\$0.15 per QphH@100GB | Number-one 2-socket server at 100-GB scale factor |
| | C250 M2 | 2/13/2012 | 331,658 @300GB US\$0.34 per QphH@300GB | Number-one 2-socket server at 300-GB scale factor |
| | C420 M3 | 10/31/2013 | 230,119 @3000GB US\$1.29 per QphH@3000GB | Number-one single-system x86 performance and price/performance at 3000-GB scale factor |
| | C460 M2 | 12/7/2011 | 134,117 QphH@1000GB US\$1.30 per QphH@1000GB | Number-one 4-socket server powered by Intel Xeon processors running Microsoft SQL Server |

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90 World-Record Performance Results

| World-Record Oracle Benchmarks | | | | |
|--------------------------------------|------------------|------------------|--|--|
| Benchmark | Cisco UCS Server | Publication Date | Result and Disclosure | Record as of Publication Date |
| Oracle E-Business Suite R12 (12.1.3) | B200 M3 | 9/10/2013 | 1,017,639 employees per hour | Number-one extra-large-model payroll batch result |
| | B200 M3 | 9/14/2012 | Payroll 839,865 employees per hour | Number-one extra-large-model payroll batch |
| | B200 M3 | 9/14/2012 | Order-to-Cash 232,739 lines per hour | Number-one large-model order-to-cash |
| Oracle E-Business Suite R12 (12.1.2) | B200 M3 | 9/14/2012 | Payroll 835,189 employees per hour | Number-one result |
| | B200 M3 | 3/6/2012 | Payroll 828,729 employees per hour | Number-one result |
| | B230 M2 | 12/9/2011 | Payroll 738,188 employees per hour | Number-one extra-large-model 2-socket server payroll batch |
| | B200 M3 | 9/14/2012 | Order-to-Cash 221,239 lines per hour | Number-one result |
| | B200 M3 | 3/6/2012 | Order-to-Cash 206,044 lines per hour | Number-one result |
| Oracle E-Business Suite 12.0.4 | B200 M2 | 2/23/2011 | Payroll 422,535 employees per hour | Number-one medium-model payroll batch |
| | B200 M2 | 8/21/2010 | Payroll 581,846 employees per hour | Number-one extra-large-model payroll batch |
| | B200 M2 | 8/21/2010 | Payroll 368,098 employees per hour | Number-one medium-model payroll batch |
| | B200 M2 | 8/21/2010 | Order-to-Cash 185,643 lines per hour | Number-one medium-model order-to-cash |

| Other World-Record Benchmarks | | | | |
|-------------------------------|---------|------------------|--|-------------------------------|
| Benchmark | Server | Publication Date | Result and Disclosure | Record as of Publication Date |
| LS-Dyna | C460 M1 | 3/30/2010 | 41,727 seconds car2car | Number-one 4-socket server |
| LINPACK | B200 M2 | 3/16/2010 | 146.8 GFlops | Number-one 2-socket server |

Architecture Propels Performance

The architectural advantage of Cisco UCS contributes to the system's world-record-setting performance and the timeliness with which Cisco delivers performance results. Cisco UCS is a single unified system that is configured through integrated, model-based management to simplify and accelerate the deployment of enterprise-class applications and services running in bare-metal, virtualized, and cloud-computing environments.

First Unified System

The first unified system available anywhere, Cisco UCS combines industry-standard, x86-architecture servers with networking and storage access into a single management domain that incorporates both blade and rack servers. The system is designed so that server, network, and storage access configuration can be programmed and automated through the system's embedded management features. Customers tuning system performance can reproduce their adjustments rapidly and accurately on additional servers with click-of-the-mouse simplicity.

Performance Breadth

With versatile Intel Xeon processors, Cisco UCS demonstrates performance breadth by setting records for raw CPU power, business- and mission-critical applications, database management systems, Java application servers, virtualization, cloud computing, and high-performance computing (HPC). Although all vendors have access to the same powerful Intel Xeon processors, only Cisco unleashes their power to accelerate application performance.

Performance for Applications

For customers, these results mean not only excellent application performance but also an automated configuration model that accelerates deployment, makes performance predictable, and increases IT productivity. The world records presented in Table 1 can help customers assess the way that Cisco UCS will perform for their mission-critical applications, while demonstrating the reasons that Cisco has emerged as a server-industry leader.

For More Information

For the most up-to-date information about Cisco UCS performance, please visit <http://www.cisco.com/go/ucsatwork>.

For more information about Cisco UCS, please visit <http://www.cisco.com/go/ucs>.

Disclosures

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