

Cisco UCS Servers Claim Six New World Records on Industry-Standard Benchmarks with the Intel Xeon Processor E7 v2 Family



Performance Brief
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Highlights

Six World Records

- Cisco has captured six world records on industry benchmarks that demonstrate superior performance in virtualization and cloud computing and the capability to deliver CPU power to accelerate application performance.

History of World-Record Performance

- Since it was first released in March 2009, the Cisco Unified Computing System™ (Cisco UCS®) has demonstrated world-record performance 90 times.

Dramatic Performance Improvements

- Cisco's world-record-setting benchmark results demonstrate dramatic performance improvements over the prior-generation Intel® Xeon® processor E5 and E7 families.

Broad Range of Server Products

- Cisco offers 16 blade and rack servers to power a range of workload requirements, all in the industry's first unified system based on industry-standard, x86-architecture servers.

Powerful Servers for Mission-Critical Workloads

- Newly announced servers based on the Intel Xeon processor E7 v2 family include a full-width 2-socket blade server (Cisco UCS B260 M4 Blade Server) with up to 1.5 terabytes (TB) of main memory; a full-width double-height 4-socket blade server (Cisco UCS B460 M4 Blade Server) with up to 3 TB of main memory; and a powerful 4-socket rack server that can operate as a standalone system or as part of Cisco UCS, with up to 6 TB of main memory (Cisco UCS C460 M4 Rack Server).
- Each of Cisco's new servers has access to 160 Gbps of I/O bandwidth.

Cisco began transforming the server market almost five years ago. Ninety world performance records later, Cisco has rocketed to the number-two position among blade server vendors worldwide and counts 75 percent of Fortune 500 companies as its customers.



When Cisco developed the Cisco Unified Computing System™ (Cisco UCS®), the company was unfettered by the constraints that have limited other vendors. Despite the five years that competitors have had to catch up, Cisco UCS is still the only self-aware, self-integrating system with the capability to support both rack and blade servers in a single unified system. On the same day that the Intel® Xeon® processor E7 v2 family was announced, Cisco celebrated six new performance records on innovative new rack and blade servers (Table 1). With performance improved up to 122 percent since the last processor generation, customers can count on both innovation and performance from Cisco.

Table 1. Cisco Sets Six World Performance Records with the Intel Xeon Processor E7 v2 Family

Server	Processor	Benchmark	Score
Cisco UCS C460 M4 Rack Server	Intel Xeon processor E7-4890 v2 at 2.8 GHz	SPECint®_rate_base2006	<u>2320</u> Number-one 4-socket server
		SPECComp®G_base2012	SPECCompG_base2012= <u>17.9</u> Number-one 4-socket server
Cisco UCS B260 M4 Blade Server	Intel Xeon processor E7-4890 v2 at 2.8 GHz	VMware® VMmark® 2.5.1	<u>19.18@16 Tiles</u> Number-one 2-socket 2-node result
	Intel Xeon processor E7-2890 v2 at 2.8 GHz	SPECint_rate_base2006	<u>1170</u> Number-one 2-socket server
	Intel Xeon processor E7-4890 v2 at 2.8 GHz	SPECfp®_rate_base2006	<u>865</u> Number-one 2-socket server
SPECCompG_base2012		SPECCompG_base2012= <u>8.91</u> SPECCompG_peak2012=9.66 Number-one 2-socket server	

Application Performance with Better Infrastructure

Although all vendors have access to Intel processors, Cisco unleashes their power to deliver high performance to applications through the power of unification. Cisco UCS integrates industry-standard, x86-architecture blade and rack servers with networking and storage access into a unified system. Integrated, unified management makes the system self-aware and self-integrating, with automated server and network configuration that lets customers quickly and easily deploy new applications, repurpose existing servers, and scale applications with configurations that are compliant with your IT standards. Cisco UCS is integrated through Cisco® SingleConnect technology, which provides an exceptionally easy, intelligent, and efficient way to connect and manage computing in the data center. Cisco SingleConnect technology is an exclusive Cisco innovation that dramatically simplifies the way data centers connect rack and blade servers; physical servers and virtual machines; and LAN, SAN, and management networks.

Generations of Improvement

Cisco's results demonstrate the degree to which Cisco servers deliver the power of the new Intel Xeon processor E7 v2 family. Compared to Cisco's own previous-generation servers powered by the Intel Xeon

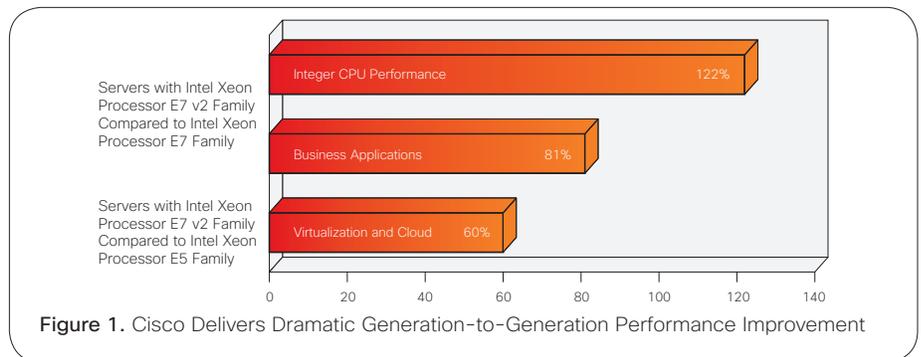


Figure 1. Cisco Delivers Dramatic Generation-to-Generation Performance Improvement

processor E5 and E7 families, Cisco's new servers demonstrate dramatic improvement in raw CPU performance, business application performance, and virtualization and cloud computing performance (Figure 1). These results allow customers to be confident that as processor technologies improve, Cisco will be there to deliver the performance they provide.

Performance That Matters

Businesses understand that almost every vendor can set a performance record now and then—but consistently reporting world-record performance with every new generation of processor is truly exceptional. Cisco's industry leadership and ability to set and reset world records on critical benchmarks are testimony to the fact that Cisco is not just selling servers—it is reinventing the server market.

For More Information

For more information about the Cisco Unified Computing System visit <http://www.cisco.com/go/ucs>.

SPEC, SPECfp, SPECint, SPECjbb, and SPECComp are registered trademarks of Standard Performance Evaluation Corporation. The benchmark results used to establish world-record status are based on those available at <http://www.spec.org> as of February 18, 2014.

VMware VMmark is a product of VMware, Inc. The benchmark results used to establish world-record status are based on those available at <http://www.vmmark.com> as of February 18, 2014.

The integer performance improvement of 122 percent compared the SPECint_rate_base2006 score of the Cisco UCS B260 M4 Blade Server with the [Cisco UCS C260 M2 Rack Server](#), a result that was available on April 5, 2011.

The business application performance improvement of 81 percent compared SPECjbb®2005 business operations per second of the [Cisco UCS C460 M4](#) (available February 18, 2014) with the [Cisco UCS B440 M2 Blade Server result](#) that was available September 30, 2011. Note that the SPECjbb2005 benchmark has been retired and SPEC is no longer reviewing or publishing results with that benchmark. Cisco is providing this result as a comparison to older hardware that may still be in use at some customer sites.

The virtualization and cloud computing performance improvement of 60 percent compared the Cisco UCS B260 M4 Blade Server result with the [Cisco UCS C240 M3 Rack Server result](#) that was available May 9, 2013.



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