

Cisco UCS C460 Rack Server: Best 4-Socket Server SPECjbb2015 MultiJVM Performance



Versatile Performance with the Intel Xeon Processor E7-8800 v3 Family

Performance Brief
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Highlights

Best 4-Socket SPECjbb2015 MultiJVM Performance

- These two benchmark results capture the best 4-socket server SPECjbb®2015 MultiJVM benchmark results for max-jOPS and critical-jOPS.
- Your real-world workloads may require maximum interactive responsiveness or maximum throughput, and these results demonstrate how you can tune your Cisco UCS® C460 M4 Rack Server to achieve world-record-setting performance by either measure.

Commitment to Performance

- Cisco demonstrates its commitment to delivering superior business application performance by delivering performance that surpasses other vendors—giving you confidence in the choice of Cisco® servers for your business applications.

Optimized Resource Use

- The Cisco Unified Computing System™ (Cisco UCS) dramatically reduces the number of physical components needed to support demanding Java application workloads, enabling IT departments to make effective use of limited space, power, and cooling resources.

Capability to Do More with Less

- Cisco UCS enables IT organizations to simplify their enterprise application landscape and increase capacity with a smaller footprint.

Whether you need maximum responsiveness or throughput, the Cisco UCS® C460 M4 Server gives you the best 4-socket server performance on the SPECjbb®2015 MultiJVM benchmark.



Cisco has a long track record of delivering the best performance possible from generation after generation of Intel® Xeon® processor technologies. Although other vendors have access to the same processors, customers count on Cisco to deliver industry-leading performance, and today's results continue to support that trend.

The SPECjbb2015 benchmark allows vendors to demonstrate Java-based business software performance so you can evaluate the way that your software will run in real-world environments. The SPECjbb2015 benchmark provides two measures of performance: the max-jOPS metric provides a measure of overall transactional throughput, and the critical-jOPS metric provides a measure of interactive responsiveness. In two different benchmark reports, Cisco demonstrates that the Cisco UCS C460 M4 Rack Server with Intel Xeon processor E7-8800 v3 family CPUs has the flexibility to be tuned for world-record-setting performance on either the throughput or responsiveness metric (Table 1). When tuned for max-jOPS, the Cisco UCS C460 M4 delivers a score of 171,642, more than 18 percent higher than HP's best score for the 4-socket HP ProLiant DL580 Gen9 server. When tuned for critical-jOPS, the Cisco UCS C460 M4 delivers a score of 99,646, or almost 96 percent higher than HP's best posted result.

Table 1 SPECjbb2015 Results for the Cisco UCS C460 M4 Rack Server

Server	SPECjbb2015 MultiJVM max-jOPS	SPECjbb2015 MultiJVM critical-jOPS	Disclosure Date and Disclosure Link
Cisco UCS C460 M4 with 4 Intel Xeon processor E7-8890 v3 CPUs at 2.5 GHz	171,642, best 4-socket MultiJVM max-jOPS performance	53,348	October 22, 2015
	157,832	99,646, best 4-socket MultiJVM critical-jOPS performance	October 27, 2015

SPECjbb2015 Benchmark

The SPECjbb2015 benchmark aligns with the changes that you experience in your own IT organization—thus giving a more accurate capacity measurement than previous versions of the benchmark. SPECjbb2015 adds physical and virtual performance measurements, reflecting the move toward virtualization and cloud computing. Further reflecting real-world use, the benchmark allows multiple run configurations that include the capability to modify multiple elements of the system stack, including the hardware, operating system, Java virtual machine (JVM), and application layers.

Benchmark Configuration

The benchmark configuration included the benchmark controller, back-end, and transaction injector components, each running in its own JVM. The JVM instances ran on a Cisco UCS C460 M4 Rack Server running a single instance of SUSE Linux Enterprise Server (SLES) 12 and 64-bit Oracle Java HotSpot Server Virtual Machine (VM) 1.8.0_60.

Cisco UCS C460 M4 Rack Server

The Cisco UCS C460 M4 delivers the balanced I/O, memory, and computing capacity needed for large-scale analytical and business intelligence applications. The system is a 4-rack-unit (4RU), 4-socket rack server that

supports, up to 6 terabytes (TB) of memory and up to 12 small form-factor (SFF) hot-pluggable SAS, SATA, or SSD drives. With 10 full-height Generation 3 PCI Express (Gen3 PCIe) slots, the server supports massive I/O capacity.

For the benchmark, the server was equipped with four 2.5-GHz Intel Xeon processor E7-8890 v3 CPUs. The world-record max-jOPS result was achieved with a 1-TB memory configuration, and the critical-jOPS record was achieved with a 2-TB memory configuration. The server accessed the network through a built-in dual Gigabit Ethernet network interface and a dual 10 Gigabit Ethernet network interface card (NIC).

Powered by the Intel Xeon Processor E7-8800 v3 Family

Cisco UCS C460 M4 can be configured with the Intel Xeon processors that best match your workload requirements. It supports the Intel Xeon processor E7-2800, E7-4800, and E7-8800 v2 and Intel Xeon processor E7-4800 and E7-8800 v3 families. The new Intel Xeon E7-4800 and E7-8800 v3 families provide exceptional performance and scalability for large-data-set workloads, including the memory-demanding SPECjbb2015 benchmark, large databases, and big data workloads. With massive processing resources, large memory capacity,

and sophisticated reliability features, the family also provides world-class support for enterprise applications.

Deliver Business Advantage

These performance results prove that you can tune your Java application platform to achieve the best throughput or interactive responsiveness.

Cisco tunes its chip sets and servers to achieve maximum performance for specific workloads. Cisco UCS delivers the scalability needed for large Java application deployments. The dramatic reduction in the number of physical components results in a system that makes effective use of limited space, power, and cooling resources by deploying less infrastructure to perform the same, or even more, work.

For More Information

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

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