Hewlett Packard Enterprise

Performance brief

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HPE PROLIANT AMD EPYC™ GEN10 PLUS 1P AND 2P SERVERS ACHIEVE FIVE WORLD RECORDS ON JAVA WORKLOAD

Plan for success with World's Most Secure Servers[1] and SPECjbb® 2015 benchmark results

Key takeaways
HPE ProLiant DL345 Gen10 Plus

- **#1 1P on 3 SPECjbb2015 metrics**
  - **MultiJVM max-jOPS**
  - **MultiJVM critical-jOPS**
  - **Distributed max-jOPS**

HPE ProLiant DL385 Gen10 Plus v2

- **#1 2P on 2 SPECjbb2015 metrics:**
  - **MultiJVM max-jOPS**
  - **Distributed max-jOPS**

HPE ProLiant DL345 Gen10 Plus and DL385 Gen10 Plus achieved 16.8% and 17.1% gains respectively compared to closest 1P and 2P competitors

Performance Score Card

HPE ProLiant DL345 Gen10 Plus
2U/1P ~ AMD EPYC 7763
MultiJVM: **210,387** / 71,928 max- / critical-jOPS
MultiJVM: 177,561 / **153,918** max- / critical-jOPS
Distributed: **205,814** / 74,833 max- / critical-jOPS

HPE ProLiant DL385 Gen10 Plus v2
2U/2P ~ AMD EPYC 7763
MultiJVM: **407,053** / 155,985 max- / critical-jOPS
Distributed: **407,053** / 74,833 max- / critical-jOPS

World record scores are in bold type. The max-jOPS metric is a measure of pure throughput and the critical-jOPS metric is a measure of critical throughput.

Lenovo ThinkSystem SR655 1P results with AMD EPYC 7H12:
153,918 / 131,730 MultiJVM max- / critical-jOPS

Lenovo ThinkSystem SR665 2P results with AMD EPYC 7H12:
347,351/ 124,094 Distributed max- / critical jOPS

EXECUTIVE SUMMARY

To meet today's challenges, customers need to be assured of server workload capabilities even more than before. HPE ProLiant Gen10 Plus servers with AMD EPYC processors offer a range of form factors optimized for a variety of workloads. The ability to project a server's Java workload performance is a key requirement of success for many solution scenarios.

Two new HPE ProLiant servers powered by 3rd Gen AMD EPYC™ processors have achieved five world records for pure and critical throughput on the SPECjbb2015 server-side Java benchmark. The two-processor (2P) HPE ProLiant DL345 Gen10 Plus server achieved three one-processor (1P) records: #1 1P MultiJVM max-JOPS, #1 MultiJVM critical-jOPS, and #1 1P Distributed max-jOPS. The HPE ProLiant DL385 Gen10 Plus v2 server achieved two two-processor (2P) records: #1 2P MultiJVM max-jOPS and #1 2P Distributed max-jOPS.

These results defeated the closest 1P competitor by up to 16.8 percent on the MultiJVM critical-jOPS critical throughput metric and the closest 2P competitor by up to 17.1 percent on the Distributed max-jOPS pure throughput metric.

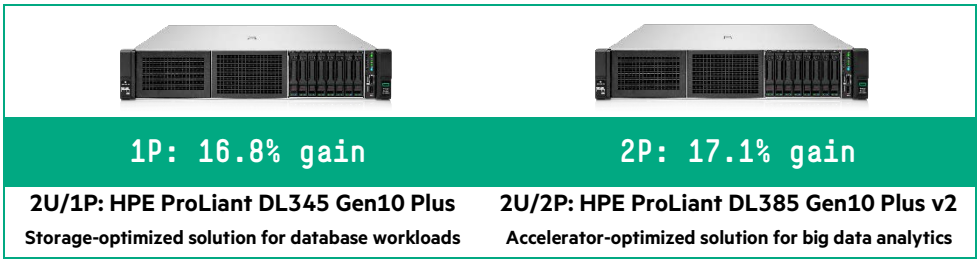

FIGURE 1. HPE ProLiant DL345 Gen10 Plus and HPE ProLiant DL385 Gen10 Plus v2 gains versus closest competitors

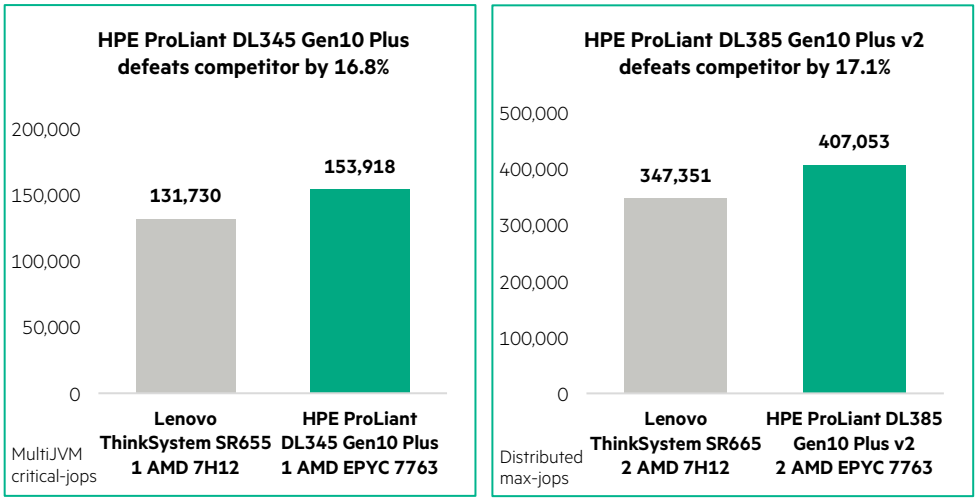

FIGURE 2. HPE AMD EPYC and competitor results comparison for 1P and 2P on the SPECjbb2015 benchmark

[1] Based on external firm conducting cyber security penetration testing of a range of server products from a range of manufacturers, May 2017

CUSTOMER VALUE WITH HPE AND AMD EPYC

HPE has doubled its number rack servers supporting AMD EPYC™ processors, providing solutions for a wide range of customer deployment needs.

HPE ProLiant Gen10 servers are the World's Most Secure servers, with HPE silicon root of trust powered by HPE iLO. HPE is the only server vendor to have received the Marsh Cyber Catalyst[SM] designation.[2] The AMD EPYC™ processor provides several security-related features, including AMD secure processor, secure memory encryption (SME), and secure encrypted virtualization (SEV). These features are used to help enable key security functionality and technology categories, including Secure Root-of-Trust, Secure Run, and Secure Move

ABOUT THE BENCHMARK

The SPECjbb2015 benchmark shows a server's pure throughput (max-jOPS) as well as critical throughput (critical-jOPS) under service-level agreements (SLAs) specifying response times from 10 ms to 500 ms. It exercises CPUs, caches, memory hierarchy, and the sclability of shared memory processsors (SMPs) as well as implementations of the Java Virtual Machine (JVM) and aspects of the operating system. The benchmark models a worldwide supermarket company handling point-of-sale requests, online purchases, and data-mining operations. Source: spec.org

BOTTOM LINE

With these results, customers can choose AMD-powered rack servers from HPE with confidence, for deployments that require Java. HPE provides technology leadership and workload performance proof points to fast-forward customer success.

LEARN MORE AT

AMD EPYC Processor World Records

HPE and AMD EPYC

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[2] Silicon Root of Trust – Cyber Catalyst Designation

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