

HPE SUPERDOME FLEX ACHIEVES WORLD RECORD RESULTS AT 41.6 BILLION INITIAL RECORDS ON SAP BUSINESS WAREHOUSE (SAP BW), EDITION FOR SAP HANA® STANDARD APPLICATION BENCHMARK VERSION 3

Performance at scale in a single system: 16 processors, 12 TB DRAM, 12 TB HPE Persistent Memory



Key takeaways

Performance at scale

- **#1 overall and #1 16-processor performance on all 3 phases at 41.6 billion initial records.**
- **The ONLY single-system platform results with 24 TB of memory on the SAP BW, edition for SAP HANA standard application benchmark.**
- **Excellent performance with a combination of DRAM and HPE Persistent Memory.**
- **Outstanding performance in a single system managed by one operating environment.**
- **HPE Superdome Flex continues to prove its outstanding performance at scale as the ONLY platform with 16-processor single-system results on the SAP BW, edition for SAP HANA standard application benchmark: one at 20.8 billion initial records and one at 41.6 billion initial records.**



Configurations

HPE Superdome Flex at 41.6 billion initial records, Certification # [2020008](#); Intel® Xeon® Platinum 8280L 2.70 GHz processors: 16 processors / 448 cores / 896 threads, 12 TB memory and 12 TB of HPE Persistent Memory; SUSE Linux Enterprise Server 12, SAP HANA 2.0, SAP NetWeaver® 7.50.
 Scores: Data load 31,870 seconds; Query executions per hour 3,412; Runtime of complex query 262 seconds.

The as-of date is March 5, 2020. See [SAP benchmarks](#) for further details.

About the benchmark

The SAP BW, edition for SAP HANA benchmark is SAP's next-generation warehousing solution, optimized to fully leverage the SAP HANA in-memory platform.

EXECUTIVE SUMMARY

HPE Superdome Flex published a 16-processor result with 41.6 billion initial records on the SAP Business Warehouse (SAP BW), edition for SAP HANA® standard application benchmark Version 3. HPE Superdome Flex is the only platform with 16-processor single-system results on the benchmark: one at 20.8 billion initial records and now at 41.6 billion initial records. See a [list of results](#) from 41.6 billion initial records and lower, presented in descending order of initial records.

World record overall and 16P performance at 41.6 billion initial records!

#1 on Phase 1: Data load (seconds) (lower is better)	31,870
#1 on Phase 2: Query executions per hour (higher is better)	3,412
#1 on Phase 3: Runtime of complex query phase (seconds) (lower is better)	262

FIGURE 1 HPE Superdome Flex results at 41.6 billion initial records on the SAP BW, edition for SAP HANA standard application benchmark.

CUSTOMER VALUE WITH HPE

Up to 32P and 24 TB of memory for SAP HANA use cases

For SAP HANA use cases, HPE Superdome Flex offers the largest generally available certified scale-up configuration with 32P and 24 TB of memory for the most demanding mission-critical use cases. A choice of 4 to 32 processor scale-out nodes offers up to 288 TB of memory in a scale-out configuration.¹

HPE Superdome Flex

HPE Superdome Flex Server is a compute breakthrough to power critical applications, accelerate data analytics, and tackle AI and HPC workloads holistically. It delivers an unmatched combination of flexibility, performance, and reliability for critical environments of any size. This server can scale from 4 to 32 processors and 768 GB to 48 TB of shared memory as a single system with 4P chassis building blocks. The low-latency design speeds performance.

HPE Persistent Memory


[HPE Persistent Memory](#), available in 128, 256, and 512 GB capacities and featuring Intel® Optane™ DC Persistent Memory, provides additional memory capability in a scale-up environment. HPE Persistent Memory high-capacity memory transforms big data workloads and analytics possibilities.

Collaborative partnerships for innovation and customer success

Close cooperation between Hewlett Packard Enterprise, SAP, and Intel forms the groundwork for innovations that matter to customers because they accelerate success. Benchmark results are proof points for the technology achievements of this partnership.

¹ [SAP Certified and Supported SAP HANA® Hardware Directory](#)

Performance brief



HPE Superdome Flex results on SAP BW, edition for SAP HANA standard application benchmark at 41.6 billion initial records:

Record performance

- 16 processors**
- 24 TB of memory**
- Single system**



SAP

With dedicated people, a complete portfolio of SAP®-optimized services and solutions, committed co-innovation, and a proven business model, HPE and SAP deliver what customers need.

- For 30 years HPE and SAP have shared a collaborative partnership.
- HPE and SAP share 25,000 customers worldwide.



Intel® Xeon® Scalable Processors

HPE continues to innovate its server portfolio leveraging the latest Intel processor technology. The Intel Xeon Scalable processor family is designed for data center modernization to drive operational efficiencies.

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HPE Superdome Flex

HPE Superdome Flex single interconnect technology enables seamless single-system scaling from 4 to 32 processors in 4-processor increments per 42U rack. HPE Superdome Flex does not rely on switches or cluster technology, scaling up seamlessly with one hop, which means lower latency/faster performance than a design with multiple hops.

BOTTOM LINE

The Superdome Flex is the industry's most scalable infrastructure solution for mission-critical SAP HANA use cases, with certified configurations with up to 24 TB of memory in a single system. A four-processor modular building block design lets customers right size their SAP HANA systems and effortlessly scale-up to 32 processors, without re-platforming.

This benchmark is yet another proof point of the HPE Superdome Flex ability to deliver performance at scale, and uses the latest HPE Persistent Memory technology. These results are based on many decades of co-innovation from the partnership between HPE, Intel, and SAP.

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a50001204enw, March 2020