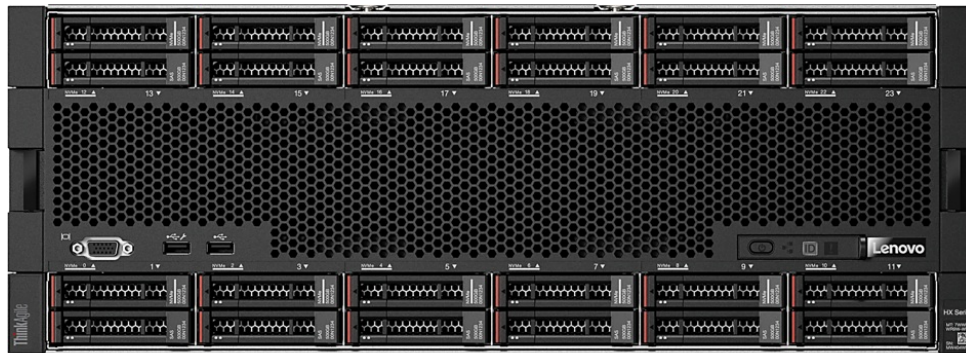


ThinkAgile HX7821 Certified Node Sets World Record with New SAP BWoH Benchmark Result

Performance Benchmark Result

Lenovo ThinkAgile HX7821 Certified Node using Intel Xeon Platinum 8280L processors delivers world record performance for all three KPIs for SAP BW edition for SAP HANA Standard Application Benchmark Version 3 with 24.7 billion initial records in a scale-out configuration (1).



Enterprises running large systems on SAP HANA can benefit from fully scalable and optimized infrastructure in the data center. SAP BW, edition for SAP HANA benchmark on ThinkAgile HX7821 Certified Node demonstrates that they can provide the headroom for fast growth in data volumes used by systems running on SAP HANA. Data growth can easily be accommodated with additional capacity and scalable performance when required with fast to setup and easy to manage SAP-certified ThinkAgile HX7821 infrastructure.

The ThinkAgile HX7821 Certified Node for SAP® BW edition for SAP HANA Standard Application Benchmark Version 3 comprised of three nodes (1 Master node, 2 slave nodes) each configured as follows:

- Lenovo ThinkAgile HX7821 configured with four Intel Xeon Platinum 8280L Processors, 2.70 GHz, 64 KB L1 cache and 1024 KB L2 cache per core, 38.5 MB L3 cache per processor, 112 total cores / 224 total threads, 6,144 GB DRAM
- Nutanix AHV 20170830
- SUSE Linux Enterprise Server 12 SP4
- SAP HANA 2.0
- SAP NetWeaver 50
- One VM per node with 168 vCPUs and 4.5 TB DRAM

The benchmark consists of three phases and the ThinkAgile HX7821 certified node achieved the following performance results (1):

- **Phase 1: Data load phase = 16,946** (Runtime of last Data Set in seconds)
- **Phase 2: Query throughput phase = 2,514** (Query Executions per Hour)
- **Phase 3: Query runtime phase = 181** (Total Runtime of complex query phase in seconds)

This world record for all three KPI results show that the Lenovo ThinkAgile HX7821 Certified Node offers a significant performance advantage compared to other vendors.

Results referenced are current as of July 13, 2020. For the latest SAP BW edition for SAP HANA Standard Application Benchmark Version 3 results, visit: <https://www.sap.com/dmc/exp/2018-benchmark-directory/#/bwh>.

(1) This benchmark fully complies with the SAP Benchmark Council regulations and has been audited and certified by SAP SE ([certification number 2020026](#)). Details can be obtained from Lenovo and SAP. The benchmark was performed at the Lenovo Data Center Performance Lab in Walldorf, Germany, by Lenovo engineers. Configuration: 3 ThinkAgile HX7821 Certified Nodes each configured with 4 processor / 224 cores / 448 threads, Intel Xeon Platinum 8280L processors, 2.70 GHz, 64 KB L1 cache and 1024 KB L2 cache per core, 38.5 MB L3 cache per processor, 6,144 GB DRAM.

About the ThinkAgile HX7821 Certified Node

Lenovo ThinkAgile HX Certified Nodes are designed for deploying industry-leading hyperconvergence software from Nutanix on Lenovo enterprise platforms that feature the second generation of the Intel Xeon Processor Scalable Family (Xeon SP Gen 2).

The ThinkAgile HX Certified Nodes deliver fully validated and integrated Lenovo hardware and firmware, certified and preloaded with Nutanix software. Nutanix brings the benefits of web-scale technologies to enterprise applications through enterprise storage, data protection, infrastructure resilience, management and analytics, and security.

The ThinkAgile HX7821 is a 4U rack-mount certified node that supports four processors, up to 6 TB of TruDDR4 memory with up to 2933 MHz memory speeds, 16x SAS/SATA and 8x AnyBay SFF hot-swap drive bays with an extensive choice of NVMe PCIe, SAS, and SATA SSDs and SAS HDDs, and flexible network connectivity options with 1/10 GbE RJ-45, 10 GbE SFP+, 10/25 GbE SFP28, and 25/40 GbE QSFP+ ports.

Several common uses for the ThinkAgile HX7821 Certified Node that is optimized for high-performance workloads include SAP HANA, e-mail and collaboration, and workload-balancing clusters.

About the SAP BW edition for SAP HANA Benchmark

The SAP BW, edition for SAP HANA Standard Application Benchmark, Version 3, is the latest addition to the list of benchmarks for SAP Business Warehouse. It utilizes the capabilities of SAP HANA to process the benchmark workload. Allowed data volumes are a multiple of 1.3 billion initial records and can be run in single-node and multi-node setups. This benchmark was released in July 2018.

The benchmark scenario represents typical mid-size customer scenario and volumes for SAP BW running on SAP HANA. The benchmark simulates a variety of users with different analytical requirements and measures the key performance indicator (KPI) relevant to each of the three benchmark phases.

The three benchmark phases are as follows:

1. Data load phase, testing data latency and load performance
2. Query throughput phase, testing query throughput with moderate complex queries
3. Query runtime phase, testing the performance of running very complex queries

For more information about the benchmark, go to <https://www.sap.com/about/benchmark.html>.

Learn more

To learn more about business warehouse and data analytics solutions for SAP applications running on Lenovo Servers visit, <https://www.lenovo.com/us/en/data-center/solutions/sap/> or contact your Lenovo Customer Representative.

To learn more about the Lenovo ThinkAgile HX7821 Certified Node, see the following web pages:

- ThinkAgile HX Solution for SAP HANA Datasheet:
<https://lenovopress.com/datasheet/ds0068-thinkagile-hx-series-for-sap-hana>
- ThinkAgile HX7821 Product Guide:
<https://lenovopress.com/lp1134-lenovo-thinkagile-hx7821-certified-node-gen2>

Related product families

Product families related to this document are the following:

- [SAP Alliance](#)
- [SAP BW Benchmark Results](#)
- [ThinkAgile HX Series for Nutanix](#)

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