

Solution Showcase

Lenovo ThinkAgile HX with Nutanix for SAP HANA

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Abstract: As organizations increasingly seek digital transformation of their IT operations through data center modernization and data-driven initiatives, they can benefit from the combination of a high efficiency and cost-effective HCI platform that satisfies the performance and reliability requirements of SAP HANA. Enter the Lenovo ThinkAgile HX solution for SAP HANA powered by Nutanix Enterprise Cloud OS software.

Overview

To stay ahead in today's dynamic business environment, organizations must look to digitally transform by modernizing their infrastructures using hyperconverged infrastructure (HCI) technology. HCI systems help streamline operations by combining storage, servers, networking, and virtualization into a single virtualized entity. With the massive amount of corporate data generated every second, organizations must be able to quickly and easily analyze this data to derive business intelligence, vital to gaining new insights and business opportunities.

With growing numbers of IT organizations focused on becoming more data-driven, they are spending more on analytics and BI.¹ But what about organizations that have deployed HCI in their data centers and now want to run advanced analytics and large in-memory workloads using SAP HANA? Up until now, there hasn't been a certified HCI solution that works seamlessly with SAP HANA.

SAP HANA Meets HCI

SAP, a multinational software company known for its enterprise software that manages and provides intelligence for customer and business data, recently announced support to run SAP HANA on HCI. With organizations finally able to run SAP HANA advanced workloads in an HCI environment, they gain a two-fold benefit—a high-performing, in-memory database along with streamlined data center efficiencies and operations through HCI. This has paved the way for vendors in the HCI space to certify their software and hardware, and Nutanix, a well-known leader in the HCI space, announced that Nutanix AHV is now certified to support SAP HANA. As a strategic partner of Nutanix, Lenovo, a global technology provider of server, networking services, and solutions for SAP applications, has announced a four-socket platform optimized for SAP HANA - the Lenovo ThinkAgile HX Solution for SAP HANA.

ThinkAgile HX Solution for SAP HANA

One of the first of its kind HCI offering, the ThinkAgile HX Solution for SAP HANA is built on Lenovo's new, mission-critical four-socket ThinkAgile HX7820, which fits within the mission-critical category of the ThinkAgile HX Series—Lenovo's hyperconverged offerings of Nutanix Enterprise Cloud OS software preloaded on Lenovo's highly reliable and high performing platforms. Certified by SAP, the ThinkAgile HX Solution for SAP HANA comes preloaded with Nutanix software, and is integrated and validated in a Lenovo factory. Lenovo experts provide guidance to load SAP HANA software onsite. This enables organizations to hit the ground running, while ensuring high levels of availability and efficiency. And for organizations already leveraging HCI, extending the cost and infrastructure footprint reductions to SAP HANA is a welcome benefit.

¹ Source: ESG Research Report, [2018 IT Spending Intentions Survey](#), February 2018.

Through Lenovo-Nutanix co-innovation, the ThinkAgile HX Solution for SAP HANA helps optimize operations and reduce maintenance windows, with a recent ESG study showing organizations can achieve 85% faster application deployment times and 56% less application downtime and delays when leveraging the ThinkAgile HX.² Lenovo's SAP HANA deployment services, ThinkAgile Advantage Single Point of Support, and SAP HANA solution support from Lenovo SAP experts create a seamless, end-to-end customer experience. For example, by leveraging Lenovo's XClarity Integrator for Nutanix with tight integration to Nutanix resource management, organizations gain high levels of automation in HX node discovery, scalability, authentication, and monitoring. With ThinkAgile Network Orchestrator on Lenovo CNOS switches, that automation is extended to switch configurations in HX clusters.

Lenovo, Nutanix, and SAP

Lenovo's successful 30-year partnership with SAP is a testament to its deep relationship, based on innovation, joint technology adoption, and executive commitment. In fact, SAP runs its own HANA deployment on Lenovo platforms. The two collaborators have long focused on high-growth, mission-critical data center applications. With more than 10,000 SAP HANA units shipped, Lenovo is an SAP market leader. Next-generation SAP HANA was developed using the Lenovo ThinkSystem SR950. Lenovo was the first SAP OEM to demonstrate SAP HANA with Intel persistent memory, as well as the first to offer a software-defined memory scaling solution. Lenovo is one of the first server vendors to offer a new solution built solely for SAP HANA workloads and certified by SAP for HCI.

Long-time collaborator, Nutanix, has worked closely with Lenovo to assist organizations in building highly efficient, scalable, and available SAP environments. Lenovo and Nutanix are both SAP global technology partners, and Nutanix on the Lenovo ThinkAgile HX platform is certified for SAP Business Suite NetWeaver applications (NetWeaver is SAP's integrated technology platform). In addition, Nutanix and SAP have a collaborative technical support agreement to promote a seamless customer experience.

Together, this trio has helped drive digital transformation and data center convergence, optimizing technologies and offering innovative solutions to companies worldwide.

Deployment

Organizations can deploy SAP HANA with confidence, knowing Lenovo is a recognized market leader with deep SAP HANA expertise for lifecycle management (from planning and architectural design through deployment, support, and maintenance). The ThinkAgile HX solution for SAP HANA includes onsite installation of SAP HANA by Lenovo Professional Services teams with full SAP solution support by Lenovo experts. Additionally, architects in Lenovo's SAP Center of Competence are available to assist organizations in the planning of their SAP HANA deployments.

Reliability

Successfully running SAP HANA analytics workloads requires mission-critical performance and 24/7 availability, as well as easy scalability. Businesses that can accomplish this with minimized operating expenses and footprint can gain a long-term advantage over the competition.

Lenovo x86 servers are some of the most reliable in the industry, achieving five nines, or 99.999%, reliability among mainstream server hardware platforms.³ The Lenovo ThinkAgile HX solution for SAP HANA provides reliability, availability, and serviceability (RAS), essential features that help organizations run mission-critical SAP HANA workloads—maximizing uptime and speed, and incorporating Lenovo XClarity Administrator for alert management, built-in predictive failure analysis, Light Path diagnostics, advanced memory and error correction, and component redundancy.

Performance

Lenovo platforms have validated performance results from publicly available benchmarks, rating them as number one for accelerating a variety of workloads. As such, Lenovo currently holds 121 world records for a variety of performance

² Source: ESG Economic Value Validation, *Quantifying the Value of Simplified IT Infrastructure with Lenovo ThinkAgile HX Appliances*, January 2018.

³ Source: [ITIC 2017-2018 Global Server Hardware, Server OS Reliability Report](#), December 2017.

benchmarks, including high-performance computing, business intelligence, and decision support, to name a few. For SAP, Lenovo leads both BW⁴ and SD⁵ tier performance benchmarks. By leveraging a four-socket platform to satisfy SAP HANA on HCI, Lenovo is well positioned to not only meet, but exceed performance expectations for organizations the same way they already do for standard SAP.

Cost Savings

As a result of the simplicity and efficiency of the Nutanix Enterprise Cloud OS software, customers who choose ThinkAgile HX for their hyperconverged infrastructure can realize a 2.8x lower total cost of ownership.⁶ Lenovo-Nutanix co-innovations further reduce operational expenses by integrating Nutanix Prism to enable the automation of manual tasks.

SAP HANA Professional Services

With SAP HANA being one of the most popular applications deployed in the enterprise, Lenovo offers specific services for it. This includes deployment services to install SAP HANA systems at customer site, health check services to ensure SAP HANA systems remain up and optimally running, and managed services where Lenovo provides white glove service to handle all monitoring, maintenance, and management of SAP HANA systems, enabling organizations to focus on data and insights, as opposed to the supporting infrastructure.

- **SAP HANA Deployment Services** – Enterprise solutions services help organizations configure and validate the hardware and software stack and configure networking. They also provide basic skills transfer and post-install documentation for SAP HANA on Lenovo platforms. These services are included with the ThinkAgile HX Solution for SAP HANA appliance.
- **SAP HANA Managed Services** – The managed services offering provides constant remote monitoring of HANA hardware and software, as well as monitoring of the HANA software stack, ongoing health checks, scheduled upgrades, ownership and resolution of related problems, and maintenance of records.
- **SAP HANA Health Check Services** – This offering provides health check services for SAP HANA, which includes onsite assessment of HANA software stack, networking, solution configuration, and post-install documentation on System x hardware. This service also includes maintaining and updating firmware and software for the SAP HANA solution on System x hardware to SAP and Lenovo best-practices levels.

The Bigger Truth

As organizations prioritize IT agility and operational efficiency, HCI is becoming a go-to technology. As the technology matures and adoption grows, organizations are leveraging the infrastructure to support much more than tier-2 workloads—they are looking to make investments in solutions that help deliver data-driven insights. One such application is SAP HANA. With Lenovo's 30-year strategic partnership with SAP and the success of the ThinkAgile HX solution with Nutanix, the marriage of the three will serve as a key foundation to the future success of organizations prioritizing analytics and business intelligence as a value driver.

⁴ Source: <https://lenovopress.com/lp0795-sr950-sapbw-26b-benchmark-result-2017-11-08>

⁵ Source: <https://lenovopress.com/lp0896-sr950-8s-sapsd-benchmark-result-2018-05-25>

⁶ Source: ESG Economic Value Validation, *Quantifying the Value of Simplified IT Infrastructure with Lenovo ThinkAgile HX Appliances*, January 2018.

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