Accelerate your Business with ThinkAgile HX AI-Ready Solutions

Solution Brief

Overview

The demand and growth of AI applications and workloads across the world have been remarkable. Within the realm of AI, generative AI takes center stage, designed to generate fresh data, multimedia, images, code, and various other content without the need for explicit human intervention.

These techniques harness deep learning algorithms, learning from extensive datasets to recognize patterns and produce new content reminiscent of the original data.

This becomes crucial as organizations endeavor to harness the extensive data they accumulate each day, making AI applications an imperative component for the construction of a proficient data-driven enterprise.

In addition to numerous other applications, use cases include:

- Video and multimedia content generation
- Customer service chatbots
- Translation services
- Software programming and testing
- Computer vision and verification systems
- Optimization of medical device designs

Lenovo ThinkAgile HX Series

Lenovo and Nutanix have nurtured a strong partnership since 2015, resulting in 9 generations of ThinkAgile HX solutions. Lenovo is first to market by consistently introducing most of the latest CPU generations from Intel® and AMD®, offering 18 GPU-enabled ThinkAgile HX models.

Lenovo's ThinkAgile HX Series appliances represent a top tier hyperconverged system, featuring Nutanix's cutting-edge software pre-installed on Lenovo server platforms. The HX Series seamlessly combines computing, virtualization, and storage into a robust, software defined solution, capable of handling diverse workloads, whether at scale or in the cloud.

Tailored for all virtual or container applications, these appliances offer exceptional reliability, robust security, scalable performance, simplified management, and rapid time-to-value.

Simultaneously, they drive down total cost of ownership (TCO), freeing up your IT team to focus on innovation and delivering business value.

Lenovo advancing towards AI-driven future

Lenovo and Nutanix work together to build innovative solutions for AI use cases with efforts to create more solutions to operate advanced scenarios. The ThinkAgile HX solutions powered by NVIDIA GPUs are validated to accelerate the time to value and meet customer requirements across all business verticals.

- 18 NVIDIA GPU supported ThinkAgile HX models
- Accelerates AI inferencing
- Trusted security by design

Redefining Hyperconverged environments with AI

In hyperconverged environments the integration of AI marks a significant leap in enterprise computing capabilities. From content generation and natural language interaction to content style imitation and even predictive analytics, enterprises can leverage artificial intelligence for a wide range of applications.

Inferencing in AI is the process of making predictions and decisions and generating output based on a trained model, applied to large data sets including new ones. For example, if models are trained to identify plants in images, AI inferencing will help in automatically identifying plants in new images that's it's never seen before.

AI Inferencing on ThinkAgile HX integrates advanced AI into core business processes.

Unlocking the power of AI with NVIDIA AI Enterprise

NVIDIA AI Enterprise is a high-performance, secure, cloud-native AI software platform built with enterprise-grade security, stability, manageability, and support for creating and deploying AI models. It addresses the complexities of organizations trying to build and maintain a complex AI software stack that builds on over 4,500 unique software packages: 64 NVIDIA CUDA® libraries and more than 4,471 third-party and open-source software (OSS) packages. The platform maintains API stability and the 9,000+ dependencies between these unique software packages.

NVIDIA AI Enterprise, as a full AI software stack, accelerates AI pipelines and streamlines development and deployment of production AI covering a wide range of use cases.

Solution Overview

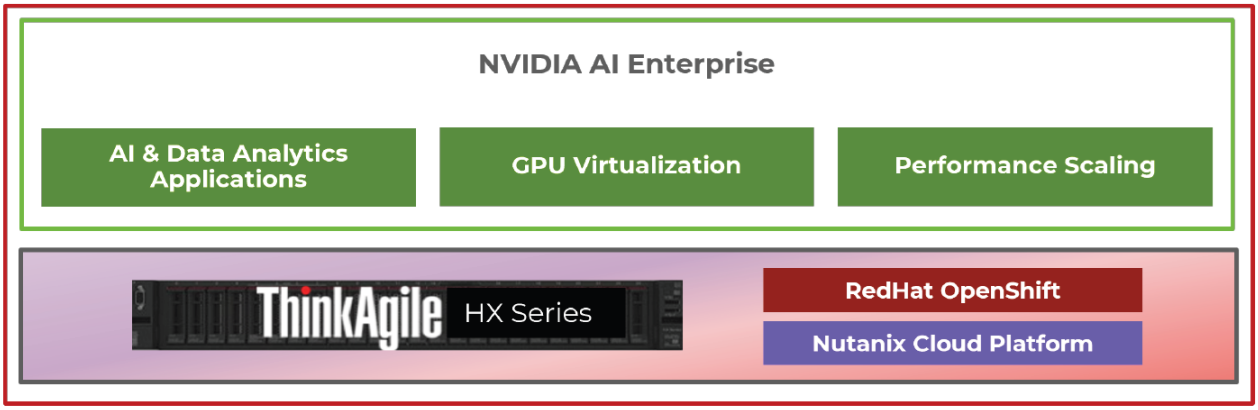

Figure 1. ThinkAgile HX AI-Ready Solution Architecture

With Lenovo ThinkAgile HX and NVIDIA AI Enterprise as the core components, organizations can unlock superior, swift predictions and results that speed up decision-making. This engineered solution tackles inferencing hurdles including latency, resource constraints, responsiveness and adaptability and facilitating the conversion of enterprise data into intelligent and smarter insights.

Combined with Lenovo's cutting-edge technologies, extensive professional services, and an extensive partner network, your enterprise can drive AI inferencing across your organization on a grand scale.

Lenovo ThinkAgile HX

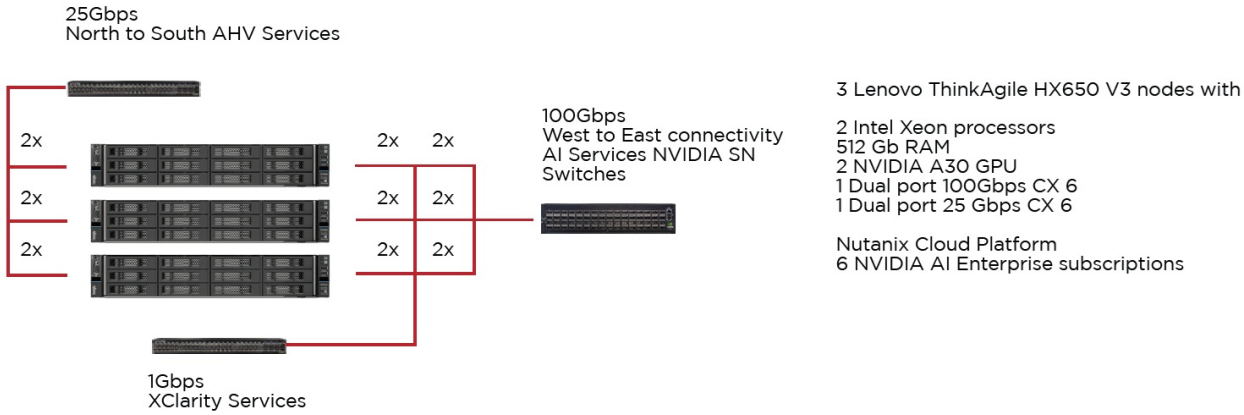

Figure 2. ThinkAgile HX AI-Ready Solution Configuration

ThinkAgile HX brings together the following elements necessary to deploy AI workloads on the enterprise Data Center

Tested and Validated ThinkAgile HX solution - Broad choice of GPU enabled ThinkAgile HX models for the full stack software defined AI solution for initiatives from edge to core.

Nutanix Unified Storage for consolidated data services - LLMs run using internal data accessed from Nutanix Files and Object Storage while maintaining full control over the data.

Nutanix Cloud Platform on GPU-enabled platform - NCP forms the base of the software stack that unifies hybrid cloud infrastructure and enables unified multi-cloud management.

NVIDIA AI Enterprise and NVIDIA High Speed Ethernet interconnects - Subscription to NVIDIA AI Enterprise Essentials with access to NVIDIA GPU Cloud and NVIDIA Connect X-6 and NVIDIA SN Switches.

Why Lenovo, NVIDIA and Nutanix

Focused on a bold vision to deliver smarter technology for all, Lenovo is developing world-changing technologies that create a more inclusive, trustworthy, and sustainable digital society. By designing, engineering and building the world's most complete portfolio of smart devices and infrastructure, we are also leading an Intelligent Transformation to create better experiences and opportunities for millions of customers around the world.

NVIDIA pioneered accelerated computing to tackle challenges no one else can solve. Our work in AI and the metaverse is profoundly impacting society and transforming the world's largest industries—from gaming to robotics, self-driving cars to life-saving healthcare, climate change to virtual worlds where we can all connect and create.

Nutanix offers a single platform to run all your apps and data across multiple clouds while simplifying operations and reducing complexity. Trusted by companies worldwide, Nutanix powers hybrid multi-cloud environments efficiently and cost effectively. This enables companies to focus on successful business outcomes and new innovations.

Related product families

Product families related to this document are the following:

- Artificial Intelligence
- ThinkAgile HX Series for Nutanix

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