Microsoft Azure Stack HCI Solutions on Lenovo ThinkSystem SR250 V2

Solution Brief

Accelerate your Business

Deploying hyperconverged infrastructure (HCI) has become the de-facto standard for organizations looking to modernize their aging infrastructure. Large storage deployments are increasingly being replaced by HCI-based solutions for most general-purpose workloads. HCI has proven to deliver better efficiency and price performance in the datacenter. Additionally, customers have been choosing a hybrid approach, migrating certain workloads to the cloud, while keeping other workloads on-premises.

Azure Stack HCI is Microsoft's hybrid cloud solution for customers that wish to run workloads on-premises and extend easily to Azure for hybrid capabilities such as back-up, site recovery, storage, cloud-based monitoring and more. Microsoft Azure Stack HCI with Azure Arc on Lenovo servers is the perfect hybrid cloud solution to help our joint customers on their modernization journey.

Azure Stack HCI is a new HCI host operating system from Microsoft, delivered as an Azure service, providing the latest and up-to-date security, performance, and features. Azure Stack HCI builds on the foundation of the Microsoft Windows Server Software Defined program and provides a certification path for Storage Spaces Direct solutions.

Lenovo has designed, tested, and validated ThinkSystem SR250 V2 Azure Stack HCI validated nodes to provide quick and easy solutions for small-to-medium businesses. The result is that you can quickly deploy a robust, high-performance hybrid cloud solution and rapidly solve your IT challenges.

Figure 1. Lenovo ThinkSystem SR250 V2

Reliability: Powered by Lenovo Servers

The Lenovo ThinkSystem SR250 V2 is a high-value single-socket 1U rack server for growing businesses that need optimized performance and flexibility for future growth, along with enterprise-class reliability, management, and security. The server supports one Intel Xeon E-2300 Series processor (formerly codenamed "Rocket Lake") or Intel Pentium ("Comet Lake Refresh") and up to 128 GB of 3200 MHz TruDDR4 ECC memory.

The ThinkSystem SR250 V2 is an entry-level server with enterprise-grade management features and support for hot-swap power supplies and drives. It offers full support of Lenovo XClarity Administrator for comprehensive systems management and includes the next generation UEFI-based Lenovo XClarity Provisioning Manager for system setup and diagnosis, and the Lenovo XClarity Controller management processor for ongoing systems management and alerting. These tools make the SR250 V2 easy to deploy, integrate, service, and manage.

Lenovo ThinkSystem servers are high performance systems, with nearly 300 world record benchmarks (as of October 1, 2022), and have been ranked #1 in reliability among x86 servers for the past eight years (ITIC).

Excellent Value

Lenovo Azure Stack HCI offerings use the Microsoft Azure Stack HCI operating system on the host nodes, and optionally include Windows Server 2022 Datacenter in case you require unlimited guest OS virtual machine licenses. The Azure Stack HCI OS license provides the following benefits:

- **Storage Spaces Direct**: State of the art software-defined storage from Microsoft with multiple high-performance resiliency options, deduplication, compression and more.
- **Windows Admin Center (WAC)**: A web-based management portal software is recommended for managing an Azure Stack HCI cluster. Deployment and update features in WAC make deployment extremely simple and easy to perform. Additionally, Lenovo's XClarity plugin allows you to deploy their hardware as well as software from the same interface, enabling single pane of management. Cluster-aware updating features makes it easy to streamline software and firmware updates in a single maintenance window.
- **Hyper-V**: Hypervisor is included in the license
- **Software-Defined Networking**: Features such as virtual network encryption, firewall auditing, and virtual network peering allow you to get the benefits of a more secure software defined network with Azure Stack HCI.
- **Azure Stack HCI** is hybrid by design, and you can benefit from native integration with Azure ARC and Azure Monitor and connect to Azure for a variety of Azure hybrid services seamlessly. Fleet management for hosts and VMs allows you to monitor and manage clusters at scale.

Microsoft Azure Stack HCI offering on Lenovo ThinkSystem SR250 V2

Specifications

Key Features

The ThinkSystem SR250 V2 is a high-value single-socket 1U rack server for growing businesses that need optimized performance and flexibility for future growth.

Scalability and performance

The SR250 V2 offers the following features to boost performance, improve scalability, and reduce costs:

- Improved single-socket processor performance:
    - Intel Xeon E-2300 Series processors ("Rocket Lake-E") up to 8 cores and core speeds up to 3.7 GHz
    - Intel Pentium G6405, G6505 and G6605 processors ("Comet Lake Refresh") with 2 cores and core speeds up to 4.3 GHz
- Up to four 3200 MHz DDR4 ECC UDIMMs provide speed and capacity of up to 128 GB
- Offers flexible and scalable internal storage in a 1U rack form factor with up to 10x 2.5-inch drives for performance-optimized configurations or up to 4x 3.5-inch drives for capacity-optimized configurations.
- Up to three PCIe slots for I/O expansion, one of which has the new PCIe Gen4 interface to maximize I/O performance.
- The use of solid-state drives (SSDs) instead of, or along with, traditional hard disk drives (HDDs) can significantly improve I/O performance. An SSD can support up to 100 times more I/O operations per second (IOPS) than a typical HDD
- New high-speed RAID controllers from Lenovo and Broadcom provide 12 Gb SAS connectivity to the drive backplanes
- Supports two M.2 drives for OS boot support with RAID redundancy
- The server has two integrated Gigabit Ethernet ports
- Support for a NVIDIA GPU for enhanced workload performance

As Much Help As You Need

Lenovo and Lenovo partners have a comprehensive portfolio of professional services that support the full life cycle of your infrastructure. At every stage—from planning to deploying, supporting, optimizing, and end of life—extra help is available to accelerate meeting your business objectives.

Lenovo and Microsoft

With co-located engineering organizations and a history of technical collaboration, Microsoft and Lenovo consistently deliver innovative joint solutions for the data center and for edge scenarios. Lenovo's leadership in reliability, customer satisfaction, and performance, combined with Microsoft's leadership in software and cloud services, continues to deliver innovative data center and edge solutions and lower TCO for our joint customers.

For More Information

To learn more about ThinkSystem SR250 V2 server, contact your Lenovo representative or Business Partner, or visit https://lenovopress.lenovo.com/lp1549-thinksystem-sr250-v2

Microsoft Azure Stack HCI catalog:
https://azurestackhcisolutions.azure.microsoft.com/#/catalog?Manufacturer=Lenovo

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Related product families

Product families related to this document are the following:

- Microsoft Alliance
- ThinkSystem SR250 V2 Server

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