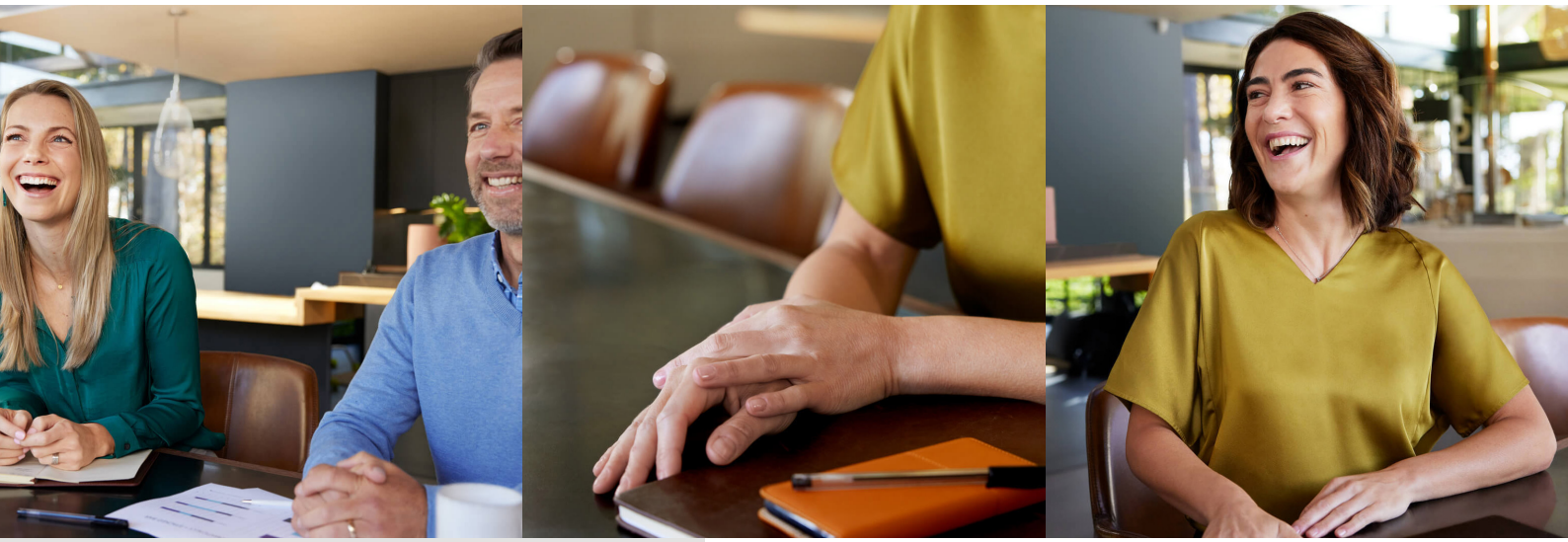
Microsoft Azure Stack HCI on the HPE Alletra Storage Server 4110

The latest high-performance hybrid cloud infrastructure for data-centric Microsoft Windows applications



Azure Stack HCI on HPE Alletra Storage Server 4110 — benefits

Provides a high-performance all-flash NVMe platform for Windows software-defined HCI:

- Delivers greater performance with high-throughput PCIe 5.0 architecture
- Inhabits a space-efficient ultra-data dense 1U footprint
- Provides future-proofing with Enterprise and Datacenter Standard Form Factor (EDSFF) storage — the newest SSD form factor for next-gen devices
- Leverages the validated design to provide deployment and licensing flexibility
- Offers deployment guidance through technical white papers, published documentation, and training
- Expands the line of official Azure Stack HCI solutions from Hewlett Packard Enterprise

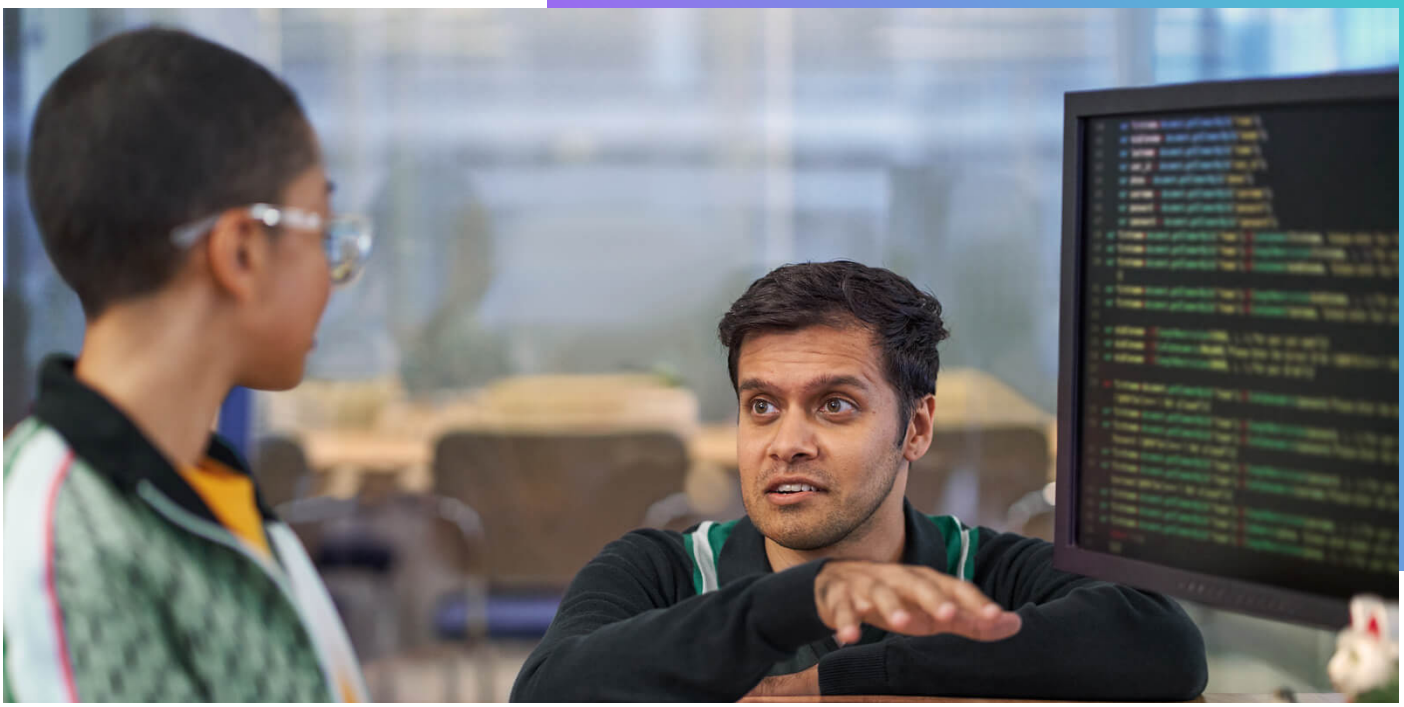
Achieve new levels of performance for your Microsoft software-defined hybrid cloud infrastructure

Organizations continue to simplify their IT infrastructures with the aim of reducing cost and complexity and minimizing the need for specialized expertise. They do so by configuring ever-more-converged solution stacks as well as by moving workloads completely to the cloud. While this shift is taking place, the day-to-day challenges for IT teams remain constant: keeping important applications running, protecting corporate data, meeting growing data capacity requirements, and doing it all within budget.

A compelling but elusive approach to modern IT has been hybrid cloud computing, which promised the best of both worlds: providing access to the vast resources of the cloud while helping businesses maintain the control and familiarity of on-premises computing. Hybrid seemed to offer the benefit of a more modern infrastructure along with the ability to adopt the latest technologies such as generative AI. Until recently, however, a lack of comprehensive hybrid products has made this goal hard to achieve.

Now, companies are discovering that hybrid cloud computing is possible today, with Azure Stack HCI solutions.

HPE GreenLake



Run production workloads on-premises and manage them in the cloud

Azure Stack HCI is the hybrid cloud infrastructure service from Microsoft that unifies resource management with a flexible cloud-connected architecture. Now in its third generation, this established infrastructure environment enables you to run your important Microsoft workloads on-premises while managing them through the Azure portal. And by working as a service, rather than just an operating system, it stays up to date with the latest security, performance, and functionality through an Azure Arc-enabled connection to the Azure cloud.

Azure Stack HCI is also hyperconverged infrastructure. It is software-enabled, and each hardware configuration must pass stringent testing before being listed in the Microsoft catalog. Also, despite being the most cloud-connected HCI offering, it simplifies IT management by incorporating familiar tools. It is managed through Windows Admin Center (WAC) — the same built-in deployment GUI that is used to manage Microsoft Hyper-V and Windows Server. And you can automate Windows tasks as you always have, by using the popular cross-platform Windows PowerShell framework.

Azure Stack HCI meets the next-gen storage server

Azure Stack HCI on the HPE Alletra Storage Server 4110 is the solution designed for the most demanding, data-intensive Microsoft workloads. It amplifies the benefits of modern hybrid cloud computing with a next-gen storage server platform that has market-leading performance and capacity. This all-flash NVMe device provides the solution of choice for demanding, data-intensive workloads such as Microsoft SQL Server and other enterprise databases, analytics, computer-aided engineering (CAE), video repositories, and secondary storage.

This new offering joins an existing line of officially validated solutions. Azure Stack HCI on the HPE Apollo Gen10 Plus Server system delivered more performance than the previous generation, with — at the time — the latest Intel® Xeon® Scalable processors, select GPU support, more memory, and a PCIe Gen4 architecture. Now, with the introduction of the new high-performance solution based on the HPE Alletra Storage Server 4110, the HPE Apollo 4200 Gen10 Plus system is the clear choice for capacity and flexibility. Its 2U system accommodates far more than the 400 TB per node limit of the Azure HCI software, and it offers more validated configurations, supporting all-flash SATA SSDs, all-flash SAS SSDs, hybrid NVMe/SAS HDD, and hybrid NVMe/SATA HDD options.

The future of data-intensive hybrid cloud computing has arrived

The HPE Alletra Storage Server 4110 is next-gen hardware from Hewlett Packard Enterprise, powering the most performance-demanding data storage-centric workloads in just 1U. It is unique in its class because it is a 1U all-NVMe storage density-optimized server validated to hold 20 EDSFF all-NVMe flash drives. And perhaps more importantly, it is future-proofed with EDSFF SSDs that deliver up to 315 GB/s of PCIe 5.0 bandwidth. EDSFF represents a brand-new form factor that resembles NAND flash memory but is used for data storage, with the ability to deliver performance surpassing what was possible in earlier SSD (and certainly HDD) storage media.

The HPE Alletra Storage Server 4110 ships with the very latest 4th Generation Intel Xeon Scalable processors and select GPU support. It provides leading performance with all-flash NVMe, delivering low latency along with high throughput and IOPS for data-centric workloads. It achieves higher performance than Gen10 and Gen10 Plus solutions. Despite its 1U footprint and performance orientation, it stores as much data as you might need — its capacity of up to 307 TB all-NVMe approaches the current Azure Stack HCI capacity per node limit. The solution is ideal for SQL Server, analytics, digital and video repositories, and Big Data workloads.

Azure Stack HCI on HPE Storage is more than just hardware

The HPE Alletra Storage Server 4110 is at the core of this Microsoft software-defined HCI solution, but there is much more to the solution. HPE solution engineering teams perform extensive testing on all solution designs and publish technical white papers to provide guidance on implementation, administration, and performance optimization. Hewlett Packard Enterprise also trains authorized reseller partners to help ensure fast, successful deployments and fast time to solution for customers.

WAC has become the new standard interface for Windows system management. Hewlett Packard Enterprise has developed extensions for WAC that make it easier to manage HPE Alletra Storage and HPE Apollo systems within Windows Server environments as well as specifically within Azure Stack HCI clusters.

Hewlett Packard Enterprise brings the cloud to data storage with HPE GreenLake for Data Storage

HPE Storage products and services accelerate data-first modernization by radically simplifying data management with the industry's most comprehensive solutions for storing, managing, and protecting data across hybrid cloud. HPE GreenLake for Data Storage provides the means to simplify data management through intuitive cloud operations for your workloads, from edge to cloud. Hewlett Packard Enterprise leads the market in data storage innovation with cutting-edge storage-as-a-service models and new modular storage solutions that are configurable for block or file stores.

Get started

The Azure Stack HCI on HPE Alletra Storage Server 4110 solution provides hundreds of terabytes of data capacity in a compact 1U design. Officially validated solutions are listed in the Azure Stack HCI catalog.[1] The HPE Alletra Storage Server platform is a performance-oriented all NVMe storage server with both low latency and high throughput and IOPS for data storage-centric workloads. It joins the Azure Stack HCI on HPE Apollo 4200 solution, which offers a more affordable capacity and expanded storage media option. The Azure Stack HCI solution delivers cloud-connected infrastructure with a single dashboard to manage Windows resources, whether on-premises or in the cloud. The HPE solution ships with published technical guidance documents, including white papers and related resources that include free WAC extensions. The Azure Stack HCI on HPE Alletra Storage Server 4110 solution is available for purchase today.

[1] Azure Stack HCI catalog is online at azurestackhcisolutions.azure.microsoft.com/#/catalog.

Learn more at

HPE.com/storage/Microsoft

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