AZURE STACK HCI: VIRTUAL DESKTOP INFRASTRUCTURE

Leverage your Azure Stack HCI investment to deploy Virtual desktop infrastructure (VDI), deliver centralized, highly available, simplified, and secure management for your organization end-user computing. Enable scenarios like bring-your-own-device (BYOD), while providing customers consistent and reliable experience to business-critical applications without sacrificing security to your organization's infrastructure.

Below, you will find a how-to guide for building and deploying your VDI environment on Azure Stack HCI.

Overview of Virtual desktop infrastructure (VDI)

Virtual Desktop Infrastructure, or VDI, uses server hardware to run desktop operating systems and software programs on a virtual machine. For as long as operating system virtualization existed, VDI offered the flexibility of running traditional desktop workloads, on centralized servers. There is a wide range of advantages to leveraging VDI in a business setting, including keeping sensitive company applications and data in a secure datacenter, accommodating a bring-your-own-device policy without worrying about personal data getting mixed with corporate assets, reducing liability when corporate assets are lost - covering both data loss prevention, as well as exposure of sensitive data to potential corporate espionage and/or hackers. In addition, VDI has become the de-facto standard for supporting remote and branch workers, as well as providing contractor and partner access.

Azure Stack HCI offers the optimal platform for VDI. Leveraging a validated HCI solution, and Microsoft's mature Remote Desktop Services, customers achieve a highly available, and highly scalable architecture.

In addition, Azure Stack HCI VDI solutions provide unique cloud-based capabilities for protecting VDI workloads and clients:
- Centrally manage updates using Azure Update Management
- Unified security management and advanced threat protection for VDI clients

How to deploy VDI on Azure Stack HCI

1. Hardware and OS configuration for VDI

X13 2U 4-node GrandTwin SYS-211GT-HNC8R

Supermicro SYS-211GT-HNC8R

Scale
4 to 16 nodes

Single Node Data
- 8 to 64 cores Intel 5th Gen
- 256GB to 4TB memory
- 4.8TB to 92TB raw storage
- NVMe SATA SAS   NVMe
- 25GbE (Up to 100GbE)

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Supermicro X12 2U Mainstream:

Supermicro SYS-620P-TR

Scale
2 to 16 nodes

Single Node Data
- 16 to 80 cores Intel 3rd Gen
- 128GB to 1024GB memory
- 8TB to 160TB raw storage
- HDD
- 25GbE (Up to 100GbE)

Supermicro X13 Hyper 2U Hybrid:

Supermicro SYS-621H-TN12R – Hybrid

Scale
2 to 16 nodes

Single Node Data
- 15 to 120 cores Intel 4th Gen
- 128GB to 4TB memory
- 4TB to 160TB raw storage
- NVMe + HDD
- 25GbE (Up to 100GbE)

Supermicro X13 UP CloudDC 1U All-flash NVMe:

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Supermicro SYS-111C-NR – All Flash NVMe

Scale
1 to 16 nodes

Single Node Data
- 8 to 60 cores Intel 4th Gen
- 64GB to 2TB memory
- 3.75TB to 76.8TB raw storage
- NVMe
- 25GbE (Up to 100GbE)

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Supermicro X13 UP WIO 1U All-flash SATA SSD:

Supermicro SYS-511E-WR-HCI – All Flash SSD

Scale
1 to 4 nodes

Single Node Data
- 8 to 52 cores Intel 4th Gen
- 64GB to 1TB memory
- 4TB to 31TB raw storage
- SATA SSD
- 25GbE (Up to 100GbE)

Supermicro SYS-111E-WR-HCI – All Flash SSD

Scale
1 to 4 nodes

Single Node Data
- 8 to 52 cores Intel 4th Gen
- 64GB to 1TB memory
- 4TB to 76.8TB raw storage
- SATA SSD
- 25GbE (Up to 100GbE)

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Supermicro A+ H13 CloudDC 1U/2U All-flash NVMe:

Supermicro AS-1115CS-TNR – All Flash NVMe

Scale
1 to 4 nodes

Single Node Data
- 16 to 128 cores AMD 4th Gen
- 192GB to 3.072TB memory
- 3.84TB to 150TB raw storage
- NVMe
- 25GbE (Up to 100GbE)

Supermicro AS-1015CS-TNR – All Flash NVMe

Scale
1 to 4 nodes

Single Node Data
- 16 to 128 cores AMD 4th Gen
- 192GB to 3.072TB memory
- 3.84TB to 60TB raw storage
- NVMe
- 25GbE (Up to 100GbE)

Supermicro AS-2015CS-TNR – All Flash NVMe

Scale
1 to 4 nodes

Single Node Data
- 16 to 128 cores AMD 4th Gen
- 192GB to 1. 152TB memory
- 3.84TB to 180TB raw storage
- NVMe
- 25GbE (Up to 100GbE)

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Supermicro A+ H13 Hyper 1U and 2U All-flash NVMe:

Supermicro AS -2025HS-TNR-HCI – All Flash NVMe

Scale
1 to 4 nodes

Single Node Data
- 32 to 256 cores AMD 4th Gen
- 384GB to 3TB memory
- 7.68TB to 184.32TB raw storage
- NVMe
- Up to 100GbE

Supermicro AS -1125HS-TNR-HCI – All Flash NVMe

Scale
1 to 4 nodes

Single Node Data
- 32 to 256 cores AMD 4th Gen
- 384GB to 3TB memory
- 15.36TB to 61.44TB raw storage
- NVMe
- Up to 100GbE

Supermicro A+ H13 GrandTwin 2U4N All-flash NVMe:

Supermicro AS -2115GT-HNTR-HCI – All Flash NVMe

Scale
4 to 16 nodes (4-node in a system)

Single Node Data
- 16 to 84 cores AMD 4th Gen
- 192GB to 768TB DDR5 memory
- 15TB to 31TB raw storage
- NVMe
- Up to 100GbE

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Supermicro A+ H12 Ultra 1U All-flash:

Supermicro AS -1124US-TNRP–HCI – All Flash NVMe

Scale
2 to 16 nodes

Single Node Data
- 16 to 128 cores (AMD 3rd Gen)
- 128GB to 8TB memory
- 15.36TB to 92.16TB raw storage
- NVMe (Gen4)
- Up to 100GbE

Supermicro A+ H12 WIO 1U All-flash:

Supermicro AS -1114S-WN10RT–HCI – All Flash NVMe

Scale
2 to 16 nodes

Single Node Data
- 8 to 64 cores (AMD 3rd Gen)
- 128GB to 4TB memory
- 15.36TB to 76.8TB raw storage
- NVMe (Gen4)
- Up to 100GbE

Supermicro AS -1114S-WN10RT–HCI – All Flash SSD

Scale
2 to 16 nodes

Single Node Data
- 8 to 64 cores (AMD 3rd Gen)
- 128GB to 4TB memory
- 960GB to 76.8TB raw storage
- SATA SSD
- Up to 100GbE

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Supermicro X12 BigTwin 2U 4-Node All-flash:

Supermicro SYS-220BT-HNC8R–HCI – All Flash NVMe

Scale
4 to 16 nodes (1 to 4 systems)

Single Node Data
- 16 to 72 cores (intel 3rd Gen)
- 128GB to 4TB memory
- 15.36TB to 46.08TB raw storage
- NVMe (Gen4)
- Up to 100GbE

Supermicro X12 Ultra 1U All-flash:

Supermicro SYS-120U-TNR– HCI – All Flash NVMe + SSD

Scale
2 to 16 nodes

Single Node Data
- 16 to 80 cores (intel 3rd Gen)
- 128GB to 4TB memory
- 3.75TB to 75TB raw storage
- NVMe + SSD
- Up to 100GbE

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X11 Ultra

Supermicro SYS-2029U-TN24R4T- HCI

Scale
2 to 4 nodes

Single Node Data
- 8 to 56 cores (intel)
- 128GB to 6TB memory
- 4TB to 367TB raw storage
- NVMe
- Up to 100GbE

Supermicro SYS-6029U-E1CR4-HCI – ALL Flash

Scale
2 to 16 nodes

Single Node Data
- 8 to 56 cores (intel)
- 128GB to 6TB memory
- 12TB to 96TB raw storage
- NVMe + SSD
- Up to 100GbE

Supermicro SYS-6029U-E1CR4-HCI - Hybrid

Scale
2 to 16 nodes

Single Node Data
- 8 to 56 cores (intel)
- 128GB to 6TB memory
- 12TB to 96TB raw storage
- NVMe + SSD + HDD
- Up to 100GbE

Supermicro SYS-1029U-TN10RT-HCI

Scale
2 to 16 nodes

Single Node Data
- 8 to 56 cores (intel)
- 128GB to 6TB memory
- 4TB to 153TB raw storage
- NVMe
- Up to 100GbE

Supermicro SYS-1029U-TRT – HCI - Hybrid

Scale
2 to 4 nodes

Single Node Data
- 8 to 56 cores (intel)
- 128GB to 6TB memory
- 4TB to 60.8TB raw storage
- NVMe + SSD + HDD
- Up to 40GbE

Supermicro SYS-1029U-TRT – HCI – All Flash

Scale
2 to 4 nodes

Single Node Data
- 8 to 56 cores (intel)
- 128GB to 6TB memory
- 4TB to 60.8TB raw storage
- NVMe + SSD
- Up to 40GbE

2. Plan Hardware Deployment
    Please contact us for comprehensive deployment guidance.

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AZURE STACK HCI: VIRTUAL DESKTOP INFRASTRUCTURE

Step by Step guide to deploy Azure Stack HCI. Also install Windows Admin Center (WAC) for managing Azure Stack HCI.

From Windows Admin Center (WAC), set up **Azure Update Management** can quickly assess the status of available updates, schedule installation of required updates, and review deployment results to verify updates that apply successfully.

Update Management

Enable consistent control and compliance of this VM with Update Management.

This service is included with Azure virtual machines. You only pay for logs stored in Log Analytics. Learn more.

Enable

Settings

Location ❶
East US ⌄

Log analytics workspace ❶
Create default workspace... ⌄

Automation account ❶
Create default account... ⌄

- Additionally, you can set up additional ⚠ Azure hybrid services such as Backup, File Sync, Site Recovery, Point-to-Site VPN, Update Management, and Security Center in WAC.

3. Enable VDI support

Once your Azure Stack HCI deployment is complete and registered in Azure, follow the steps below to deploy Remote Desktop Services:

https://docs.microsoft.com/en-us/windows-server/remote/remote-desktop-services/rds-build-and-deploy

- Deploy the Remote Desktop Services infrastructure
- Create a session collection to hold the apps and resources you want to share
- License your RDS deployment
- Have your users install a Remote Desktop client so they can access the apps and resources.
- Enable high availability by adding additional Connection Brokers and Session Hosts:
    o Scale out an existing RDS collection with an RD Session Host farm
    o Add high availability to the RD Connection Broker infrastructure
    o Add high availability to the RD Web and RD Gateway web front
    o Deploy a two-node Storage Spaces Direct file system for UPD storage

Summary

With the completion of a VDI deployment using Azure Stack HCI, you now have a secure and resilient platform for running VDI end-user workloads, built to scale with your customer needs.

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