

AZURE STACK HCI: VIRTUAL DESKTOP INFRASTRUCTURE

Technical Use Cases For Azure Stack HCI



Branch office
and edge



Virtual desktop
infrastructure



High-performance
Microsoft SQL Server



Trusted enterprise
virtualization



Scale-out
storage

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 VDI environment on Azure Stack HCI:

- [Solution Overview for VDI](#)

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

[Learn more](#)

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Deploying Virtual desktop infrastructure on Azure Stack HCI

PLEASE NOTE: GPU virtualization in Windows Server

GPU virtualization technologies enable GPU acceleration in a virtualized environment, typically within virtual machines. If your workload is virtualized with Hyper-V, then you'll need to employ graphics virtualization in order to provide GPU acceleration from the physical GPU to your virtualized apps or services. However, if your workload runs directly on physical Windows Server hosts, then you have no need for graphics virtualization; your apps and services already have access to the GPU capabilities and APIs natively supported in Windows Server.

The following graphics virtualization technologies are available to Hyper-V VMs in Windows Server:

[Discrete Device Assignment \(DDA\)](#)

[RemoteFX vGPU \(NOT SUPPORTED IN WINDOWS SERVER 2019!\)](#)

In addition to VM workloads, Windows Server also supports GPU acceleration of containerized workloads within Windows Containers. For more information, see [GPU Acceleration in Windows containers](#).

1. Supported Configurations

primeLine egino HCI Series 22242i-C622-NS1
primeLine egino HCI Series 22242i-C624-NN1
primeLine egino HCI Series 22242i-C624-NN2
primeLine egino HCI Series 22242i-C624-ON1
primeLine egino HCI Series 22242i-C624-ON2
primeLine egino HCI Series 22242i-C624-ON3
primeLine egino HCI Series 22242i-C624-XN2
primeLine egino HCI Series G2 22242i-C624-NA1
primeLine egino HCI Series G2 22242i-C624-NS1

2. Plan Hardware Deployment

We recommend to contact our Azure Stack HCI experts for individual configuration for this use case. primeLine also recommends using at least 4 nodes with All-Flash for Virtual Desktop scenarios. primeLine offers services for deployment, management and training on the product.

[Step by Step guide to deploy Azure Stack HCI](#)

1. Install Windows Server 2019 Datacenter (follow guidance above for network connectivity for Clustering)
2. Add Roles and Features

AZURE STACK HCI: VIRTUAL DESKTOP INFRASTRUCTURE

3. Setup Failover Clustering and enable a Cluster Witness
4. Setup Storage Spaces Direct

3. 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:
 - [Scale out an existing RDS collection with an RD Session Host farm](#)
 - [Add high availability to the RD Connection Broker infrastructure](#)
 - [Add high availability to the RD Web and RD Gateway web front](#)
 - [Deploy a two-node Storage Spaces Direct file system for UPD storage](#)

4. Deploy WAC and enable Cloud-based capabilities

[Install Windows Admin Center \(WAC\)](#)

From WAC, configure Azure Update Manager and add your VDI clients

From WAC, configure Azure Security Center and add your VDI clients

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 at your customer needs.