

# 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. Thomas-Krenn.AG Azure Stack HCI Systems
  - [Azure Stack HCI Rack-Series Variants](#)
  - [Azure Stack HCI Micro-Cluster Variants](#)
2. Plan your Azure Stack HCI environment with [Azure Stack HCI Solutions from Thomas-Krenn.AG](#)
  - Maximum flexibility and scalability
  - 1x AMD 3<sup>rd</sup> Generation EPYC CPU each Node
  - Up to 2 TB RAM each Node
  - Up to 2x 200 GbE RDMA-Network each Node
  - Individual calculated Storage-Capacity available <sup>(1)</sup>
    - NVMe-Storage

(1) [Nested two-way Mirror](#) is highly recommended for 2-Node-Azure-Stack-HCI-Clusters

Please consider backup and restore times for large-capacity configurations. Most data protection solutions are not able to ingest and restore at speeds businesses expect.

3. Network and Switch Connectivity
  - [RoCE/RDMA](#) technology for Storage Spaces Direct Traffic.  
With RoCE there is additional DCB and PFC configuration required. Network devices have to support this capabilities.
  - Available as switch-connected or direct-attached solution <sup>(2)</sup>
    - One single/standalone switch

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- Two redundant/stacked switches
- Direct-attached for RDMA (storage & cluster) traffic

(2) Thomas-Krenn.AG recommends a switched configuration. The switch helps the cluster determine whether loss of node connectivity is due to node or network failure, ensuring more predictable failover behavior.

**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  East US

Log analytics workspace  Create default workspace...

Automation account  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.

## 1. 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:
  - [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](#)

## 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.