

QCT 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](#)

Deploying Virtual desktop infrastructure on Azure Stack HCI

1. Workload definition

Taking RDS as reference, VDI workloads can be classified as 4 types, which are Light, Medium, Heavy, and Power.

The typical applications or jobs that run on each worker workload are shown as follows,

Workload type	Example users	Example apps
Light	Users doing basic data entry tasks	Database entry applications, command-line interfaces
Medium	Consultants and market researchers	Database entry applications, command-line interfaces, Microsoft Word, static web pages
Heavy	Software engineers, content creators	Database entry applications, command-line interfaces, Microsoft Word, static web pages, Microsoft Outlook, Microsoft PowerPoint, dynamic web pages
Power	Graphic designers, 3D model makers, machine learning researchers	Database entry applications, command-line interfaces, Microsoft Word, static web pages, Microsoft Outlook, Microsoft PowerPoint, dynamic web pages, Adobe Photoshop, Adobe Illustrator, computer-aided design (CAD), computer-aided manufacturing (CAM)

2. Supported Configurations



QCT QuantaGrid D52BQ-2U Balanced

Scale:

- 2 to 4 nodes

Single Node Data:

- CPU: 20-56 cores (Intel)
- RAM: 256GB to 768GB
- Raw storage: 32TB to 80TB
- Storage type: SSD + HDD
- Network speed: Up to 25Gb

[Learn more >](#)

QCT QuantaGrid D52BM-2U

Scale:

- 2 to 4 nodes

Single Node Data:

- CPU: 20-40 cores (Intel)
- RAM: 192GB to 768GB
- Raw storage: 40TB to 160TB
- Storage type: DCPMM+HDD
- Network speed: Up to 25Gb

[Learn more](#)

QCT QuantaGrid D52T-1ULH

Scale:

- 2 to 4 nodes

Single Node Data:

- CPU: 20-56 cores (Intel)
- RAM: 256GB to 384GB
- Raw storage: 32TB to 120TB
- Storage type: SSD+HDD
- Network speed: Up to 25GB

[Learn more >](#)

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[QuantaGrid D52BQ-2U](#): Optimized for Light, Medium workloads

[QuantaGrid D52BM-2U](#): Optimized for Medium, Heavy and Power workloads

[QuantaGrid D52T-1ULH](#): Optimized for larger number of VM of VDI for Light and Medium workloads

3. Plan Hardware Deployment

For detailed guidance on how to deploy QCT's Azure Stack HCI products, please refer to <https://go.qct.io/wp-content/uploads/2020/03/QCT-Azure-Stack-HCI-White-Paper-for-VDI.pdf>

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

4. 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](#)

5. 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

[QCT's Management Suite \(WAC extension\)](#)

QCT also offers management tool extension that helps manage QCT's Azure Stack HCI products, called QCT's WAC (Windows Admin Center) extension. It enhances user experiences on Azure Stack HCI with features like, (1)Server Health Status Overview with easy-to-interpret graphs (2)Intuitive UI with vivid disk mapping and LED signal (3)Lifecycle management with driver supervision and one-click firmware update (4)Advanced management with S.M.A.R.T prediction. Make the management experience of Intel Select Solutions on Azure Stack HCI delightful

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.