Solution Brief

Simplify on-premises VDI with Azure Virtual Desktop for Azure Stack HCI (currently in preview)

More than 70 percent of workers want more flexible, remote-work options.[1] Microsoft Azure Stack HCI and Azure Virtual Desktop can make these options available in a quickly deployable, on-premises solution.

With the integration of Azure Virtual Desktop—Microsoft's flexible cloud-based virtual desktop infrastructure (VDI)—and Azure Stack HCI, IT administrators can create a full Windows 10, Windows 11, or Windows Server desktop-virtualization environment that can be accessed on any device. This solution is a streamlined, efficient, and low-latency approach to enabling remote work by creating better IT and end-user experiences.

Remote work brings new challenges

The pace of change is accelerating everywhere, especially in the workplace. But two things are clear: flexible work is here to stay, and the talent landscape (workers with in-demand skills) has fundamentally shifted.[1] Soon, if not already, millions of employees will be working from home or at another remote site, rather than at a central office.

This new workplace shift is pushing IT administrators to set up VDI with remote connectivity, security, and management capabilities so that employees can remain productive and access necessary apps from wherever they are. Moving to the cloud offers many benefits to enterprises, including scalability, cost efficiencies, and near-limitless data capacity. However, many industries are required to keep their data on premises due to data-sovereignty needs and regulatory requirements.

What if there were a way to bring all the cloud benefits on premises by using familiar tools and applications based on Windows with a fully managed, cloud-hosted VDI management plane? The new Azure Stack HCI and Azure Virtual Desktop (Microsoft's VDI solution) can do just that to help companies overcome their remote work challenges in a powerful and efficient manner.

Lead the future of work with Azure Stack HCI

It's no wonder that VDI is the key workload that gave rise to the popularity of hyperconverged infrastructure (HCI). HCI offers the compute, storage, and network resources of multiple servers as a pooled, virtualized service that can be managed centrally.

Azure Stack HCI is a cloud-inspired HCI software stack from Microsoft that runs on on-premises servers (or in a co-location facility), and it is controlled and managed by the owner. Delivered as an Azure service, Azure Stack HCI supports VDI workloads with both great performance and the simple and affordable cost of $10/month per core on an on-premises server.[2]

Azure Stack HCI is ideal for enterprises that are just starting their journeys to the cloud, but that have key workloads that need to stay on premises. When IT administrators are ready to shift to a hybrid-cloud approach, they can extend on-premises infrastructure to Azure quickly and easily, with simplified access to cloud management and various Azure services. Azure Stack HCI builds in optional, vendor-native cloud integrations, including cloud-based backup, update management, security monitoring, and disaster recovery. This allows businesses to scale infrastructure with their needs while also controlling operating costs and simplifying maintenance.

Azure Virtual Desktop: Easing remote work for IT and end users alike

Azure Virtual Desktop is a flexible cloud-based VDI that can be used to deploy and scale Windows desktops and apps on Azure Stack HCI in minutes to enable secure, remote work. With Azure Virtual Desktop for Azure Stack HCI, IT administrators can create a full Windows 10, Windows 11, or Windows Server desktop-virtualization environment that can be used on any device. IT views all components on the same management plane, and it is simple to create and use Azure Virtual Desktop sessions on an Azure Stack HCI cluster.

With the support of Azure Virtual Desktop for Azure Stack HCI, Windows 10 and Windows 11 multisession capabilities are available in on-premises environments. IT staff can support multiple users on a single virtual machine (VM). That greatly reduces the number of VMs and the system-resource overhead costs while still providing the same resources to all end users.

Azure Virtual Desktop also simplifies management and user support. Because Azure Virtual Desktop is a managed service, organizations don't need to deploy a VDI themselves or have the burden of upgrading infrastructure. This is a game-changing advantage compared to other VDI solutions.

Secured desktops at the edge

Data is always protected in the datacenter under existing covenants with Azure Virtual Desktop for Azure Stack HCI. The desktops are virtual sessions, so after a user signs out, nothing is saved to the client device.

Working in an Azure Stack HCI environment also offers multilayered security features. Azure Stack HCI–certified hardware provides consistent secure boot, Unified Extensible Firmware Interface (UEFI), and Trusted Platform Module (TPM) settings right out of the box. Windows Defender Device Guard firmware protects against malware attacks by preventing unauthenticated, unsigned, and unauthorized programs and operating systems from loading onto a device. Windows Defender Credential Guard uses virtualization-based security to isolate information that must be protected, so only privileged system software can access it.

Enhanced performance

For employees, Azure Virtual Desktop provides a consistent and familiar personalized desktop that is optimized for Windows 10, Windows 11, and Microsoft 365. Companies can also streamline device management with "bring-your-own-device" policies, which allow workers to use their own preferred devices to access work desktops and applications over any internet connection.

Because all Azure Virtual Desktop sessions are hosted in the datacenter, employees also benefit from a better user experience through lower latency.

RDP Shortpath, a feature of Azure Virtual Desktop, helps improve performance by allowing client devices to broker sessions directly with the Azure Virtual Desktop session hosts. This direct connectivity reduces the dependency on the Azure Virtual Desktop gateways, improves the connection's reliability, and increases the bandwidth available for each user session.

Starting up Azure Virtual Desktop for Azure Stack HCI

- Deploy a VM on an Azure Stack HCI cluster.
- Configure the host pools in Azure Virtual Desktop and register the VM with the host pool.
- Create app groups, assign users, and publish resources.
- Publish full desktop or individual remote apps from a single host pool, create individual app groups for different sets of users, or assign users to multiple app groups to reduce the number of images.
- Once assigned, users can launch any Azure Virtual Desktop client to connect to their published Windows desktops and applications.
- End users can connect from any device through either a native application on their device or the Azure Virtual Desktop HTML5 web client.

Use cases

Azure Virtual Desktop for Azure Stack HCI is suitable for any remote desktop situation.

Hybrid employee workplaces

Remote and onsite workers alike can get work done on a familiar Windows desktop with Microsoft 365 apps, no matter where they are located.

Hospitals and doctors' offices

Clinicians can pull up patient records on client devices while in the examination room. For example, if a doctor wants to view an x-ray with the patient, all they need to do is sign in to a virtual desktop, pull up the patient's electronic health record (EHR), and then click the image in a file share stored in the datacenter. The image can be viewed immediately.

Retail businesses

Stores can set up point-of-sale (POS) systems to run virtual desktops with apps already installed. Salespeople can access payment and other apps from their POS stations directly, with low latency for speedy transactions.

Bring a secure and streamlined desktop experience to employees everywhere

The shift to increased remote work can be viewed as a net positive: less commuting and traffic, lower overhead costs, higher productivity, and happier employees. Organizations can also come out ahead in the workplace of the future with Azure Virtual Desktop for Azure Stack HCI. Learn more to see how you can get the most out of your existing infrastructure for remote work.

Learn more about **Azure Virtual Desktop** and **Azure Stack HCI**.

Try out Azure Virtual Desktop on an Azure Stack HCI cluster.

Microsoft Azure

[1] Microsoft. "The Next Great Disruption Is Hybrid Work–Are We Ready?" March 2021. http://ms-worklab.azureedge.net/files/reports/hybridWork/pdf/2021_Microsoft_WTI_Report_March.pdf.
[2] Azure Stack HCI pricing. https://azure.microsoft.com/en-us/pricing/details/azure-stack/hci.

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