

# Speed Desktop Delivery to a Hybrid Workforce

## Virtual infrastructure for an increasingly distributed world

Although many organizations continue to move applications and services to the cloud, there are situations where staying on premises is the right answer. Whether running sensitive business applications or needing to ensure data sovereignty, some workloads are best left in the data center. As more global knowledge workers shift to hybrid work strategies,

modernizing systems and finding the right platform for a distributed workforce requires a balanced approach. With Cisco® and Microsoft solutions, you can deploy flexible, cost-effective hyperconverged infrastructure (HCI) for virtual desktops that makes it easy to deliver a secure, remote desktop experience from anywhere.

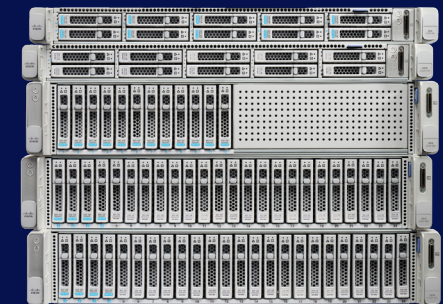
## A solution architecture that delivers access at any time, anywhere

You've likely already invested in the cloud but recognize the need to store certain data on premises. The combination of Microsoft Azure Stack HCI, Microsoft Azure Virtual Desktop, and Cisco UCS® C-Series servers makes it easy to deploy a hybrid cloud that supports enterprise applications and new, cloud-native applications that can be used within your data center and at remote and branch offices or locations.

You can keep your data local to support latency-sensitive workloads, data gravity, or regulatory compliance and data residency demands. The foundation is Microsoft Azure Stack HCI, a cloud-native hybrid solution based on a modern subscription model and an efficient hyperconverged infrastructure platform. Running on Cisco UCS servers located within your data center, Azure Stack HCI integrates

## Highlights

- Deploy flexible, cost-effective hyperconverged infrastructure for virtual desktops.
- Build a hybrid cloud with Microsoft Azure Stack HCI, Microsoft Azure Virtual Desktop, and Cisco UCS C-Series servers.
- Migrate certain data- and latency-sensitive VDI workloads to modern, on-premises data center resources.
- Standardize deployments across many clusters ranging in size from 1 to 16 nodes.
- Optimize user sessions with support for Microsoft Windows 11 multisession environments.



## Designed to support hybrid VDI requirements

### Virtual desktop infrastructure modernization:

Migrate existing VDI workloads to Azure using Azure Stack HCI and tap into the benefits of modern data center resources.

### Low-latency workloads:

Deliver on-premises VDI support for workloads that require local, high-performance compute resources and where cloud latency can impact performance.

### Data sovereignty:

Use cloud functionality that can meet the data sovereignty and data gravity requirements for public sector entities.

### Security and compliance:

Deploy a secure, high-performance cloud platform for financial institutions that meets compliance requirements.

### User and workload demand:

Scale systems one server node at a time to add system resources as your VDI or business needs grow. You can easily install identically configured servers, and the system rebalances resources to help ensure maximum performance.

computing, networking, and storage resources into a uniform hyperconverged environment that delivers the cloud features you've grown accustomed to with Azure.

Users access infrastructure resources through Microsoft Azure Virtual Desktop, a cloud VDI solution designed to meet the challenges of distributed workforces. The software can be deployed within the data center to provide remote users with a smooth and seamless user experience. Your users have access to their desktops and applications at any time, on any device, regardless of whether they're in the office or working remotely (Figure 1).

Within the solution, all software runs on Cisco UCS C-Series M7 servers (Figure 2). These powerful Tier-1 servers create a hyperconverged solution with all-NVMe storage to maximize performance. The servers are connected with Cisco switching to deliver performance, reliability, and security you can count on.

## Rapid deployment

One of the challenges of deploying computing and storage capabilities within the data center and out to the edge is being able to replicate installations at scale with a minimum of hands-on interaction. Microsoft Azure Stack HCI integrates with Cisco UCS to simplify deployment. Physical Cisco infrastructure

resources are managed with the Cisco Intersight® cloud operations platform. With role- and policy-based controls, you can standardize deployments across many clusters ranging in size from 1 to 16 nodes. Once deployed, you can manage your virtual environment with the Azure portal for consistency among clouds.

## Optimized user sessions

Unlike traditional Windows Server deployments that must run each user in a separate virtual machine, the Cisco and Microsoft solution supports Microsoft Windows 11 multisession environments. This means that multiple user sessions can run in a single virtual machine with a familiar Windows 11 experience.

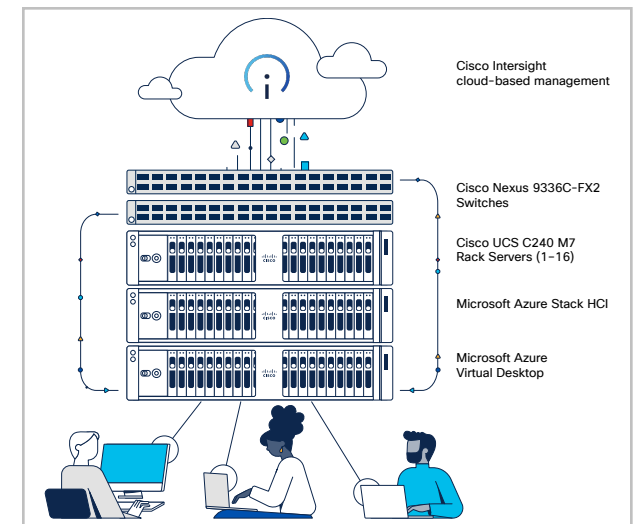


Figure 1. On-premises HCI that is easy to use and manage

## Reduced risk with Cisco Validated Designs and technical white papers

Cisco works with Microsoft to test, validate, and document joint solutions that you can get up and running quickly and with confidence. These Cisco Validated Designs reduce risk and guesswork by giving your architects and administrators [guidebooks](#) for implementing solutions.

Cisco has invested in VDI solutions for more than a decade. Many validated design and solution guides are available.

## Flexible configurations and pricing

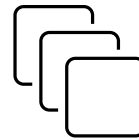
VDI applications range from call-center workers (task users) accessing a few applications, to professionals (knowledge workers) accessing many applications, to power users accessing graphics-intensive applications. Cisco UCS C-Series Rack Servers are flexible enough to create hyperconverged environments that can house a complete VDI solution within the Cisco UCS chassis.

In addition, you can fine-tune your server hardware. Azure Stack HCI operating system licensing is on a per-core basis, so you can size your infrastructure to match your VDI environments. Cisco Intersight gives you the option of specifying the number of cores to enable, so you can even purchase more cores than you need at first and have the headroom to enable more cores (and licenses) when and if they become necessary.



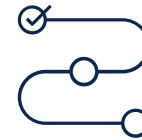
### Secure anywhere

- Run virtual desktops and applications securely
- Simplify broker, gateway, and server management



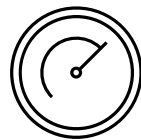
### Multisession session support

- Achieve high utilization and lower operation costs



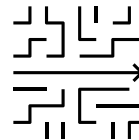
### Full control

- Satisfy data locality requirements
- Use on-premises storage and data residency



### Prime performance

- Optimize experiences and run graphic-intensive workloads with GPU support



### Manage and scale deployments

- Use a single management experience for cloud and on-premises infrastructure



### Optimize for cost

- Use existing eligible Windows licenses and multisession support

Figure 2. The Cisco and Microsoft solution delivers a wide range of business features and benefits

## Why Cisco and Microsoft?

There are many reasons why we believe our solution is the right fit for your data center:

- We are a Tier-1 server vendor with a solution that reduces complexity and accelerates performance.
- Cisco has had HCI solutions in the market for 5 years, and our C-Series servers provide an optimal platform to host HCI.
- Our range of Intel® and Nvidia GPUs are designed to meet the graphical needs of performance-sensitive VDI deployments.
- Cisco is the leader in data center networking, so you can use the technology standard you probably already have in your data center.
- Azure Arc and Cisco Intersight provide comprehensive system management from one screen.
- Our joint support model means that we can take the first call for any issue, log a support call with Microsoft, track progress, and report status to your staff.

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## Extending the benefits of cloud VDI to on-premises deployments

The combination of Azure Virtual Desktop and Azure Stack HCI running on Cisco servers brings the benefits of the cloud to your data center. With our solution, you can:

- **Secure anywhere:** You can run virtualized desktops and applications securely with Microsoft Entra ID, conditional access, and multifactor authentication (MFA). Our approach to simplified VDI deployment and intelligent management tools means there's no need to manage brokers, gateways, or underlying servers and storage.
- **Optimize:** With the capability to run Windows 10 and 11 in multisession mode, you can achieve high utilization rates and help lower operation costs.
- **Scale:** You can manage and scale your VDI deployments across both Azure and Azure Stack HCI with a single management pane, as well as the familiar Azure portal and administrative experience.
- **Accelerate:** Extensive GPU support means you can run graphic-intensive workloads and high-latency environments and deliver outstanding results.

### Outstanding support

Cisco CX Support has the ability to take the first call for system hardware and software. We can enter a support ticket for the Microsoft support organization and follow that ticket through the system to help ensure problem resolution.

Although our Azure Stack HCI CVDs offer a step-by-step guide to installing systems, we understand your teams may have a full IT agenda. Cisco CX can help by delivering a custom quote within 48 hours, performing the installation, and taking on other tasks for you.

### Get started

At Cisco, we position our solutions to err on the side of performance and easy manageability. If you need cloud VDI yet have data that must stay on premises, consider the Cisco and Microsoft solution. You'll gain full control to satisfy your data locality requirements and reap the benefits of secure, high-performance virtualized applications and desktops.

### Learn more

- [Microsoft and Cisco solutions](#)
- [Cisco UCS C-Series Rack Servers](#)
- [Azure Virtual Desktop](#) and [Azure Stack HCI](#)