

# Power Your Desktops and Workstations with Cisco, NVIDIA, and VMware



Cisco® hyperconverged solutions with VMware Horizon 7 and NVIDIA virtual GPUs deliver a rich user experience on any device.

To be successful, your highly mobile workforce, customers, and supply chain must have anytime, anywhere access to business tools. Your IT staff must find ways to support these users and mobile devices while also maintaining corporate and personal data compliance. Adding urgency to the situation is the impending end of support for Microsoft Windows 7. Migration to Windows 10 is in your future. It's time to take a serious look at shifting from a desktop- and workstation-based user environment to a flexible one based on desktop virtualization.

With Cisco hyperconverged solutions with NVIDIA vGPUs for virtual desktop infrastructure, you can deliver a rich experience to users anywhere and on any device. This centralized approach increases both your IT staff and user productivity with an excellent user experience while simplifying desktop maintenance and management.

## Benefits



- Deliver an uncompromising user experience that scales easily.
- Improve productivity for an expanded user base, including task workers, knowledge workers, and graphics power users, whether they access limited applications or demand graphics-intensive 2D and 3D visualization.
- Have confidence in solutions based on the industry's fastest-growing server solutions and the leading platform for desktop virtualization—VMware Horizon.
- Use proven NVIDIA virtual GPUs (vGPUs) to bring graphics acceleration to every workload—from virtual client computing to the most workloads like AI, data science, and high-performance computing (HPC).
- Choose Cisco HyperFlex™ systems or Cisco UCS® vSAN Ready Node platforms as the foundation for your solution.
- Expand your deployments to match business demands with an exceptional price-to-performance ratio.

## NVIDIA vGPUs for every user

NVIDIA GPUs can be allocated to different classes of users depending on their needs. NVIDIA virtual GPU technology enables the sharing of a single GPU among multiple users, or multiple GPUs can be allocated to a single virtual machine to power the most demanding workloads.

- Designers and engineers working with increasingly complex models can work more efficiently, collaborate across geographies, and bring their creations to market more quickly with NVIDIA Quadro Virtual Data Center Workstation (Quadro vDWS).
- Knowledge workers who use graphics-intensive applications and often multitask across dual monitors can leverage NVIDIA GRID to scale VDI deployments with a consistently appealing user experience.
- NVIDIA vComputeServer provides the ability to virtualize GPUs and accelerate compute-intensive server workloads, including AI, deep learning, and HPC. With this, automotive manufacturers can use the latest in simulation and compute technologies to create the most fuel efficient and stylish designs, and researchers can analyze the function of genes to develop medical treatments more quickly.

## All users need more graphics

Microsoft has increased the graphic processing requirements of its user interface and associated applications, such as web browsers and back office applications, by as much as 98 percent. Your IT staff must be able to deliver a rich user experience for every type of application and user. Rather than upgrade every laptop, desktop, or graphics workstation, you can add powerful graphics in virtual desktop environments. These resources can be shared or dedicated to users as needed, helping you increase return on investment.

## Satisfy user needs

When you deploy Cisco hyperconverged solutions for desktop virtualization, your workers can access their traditional Microsoft Windows 10 desktops and applications as well as graphics-intensive applications with the same level of responsiveness that they've come to expect when working on a traditional desktop or workstation system. With these solutions, one or more NVIDIA GPUs are installed in either Cisco HyperFlex systems, or Cisco UCS vSAN Ready Nodes offload the CPU and perform all the graphics processing. VMware Horizon delivers the virtual desktops and applications on any device your users choose. When you need to scale your solution, simply add more nodes to your cluster.

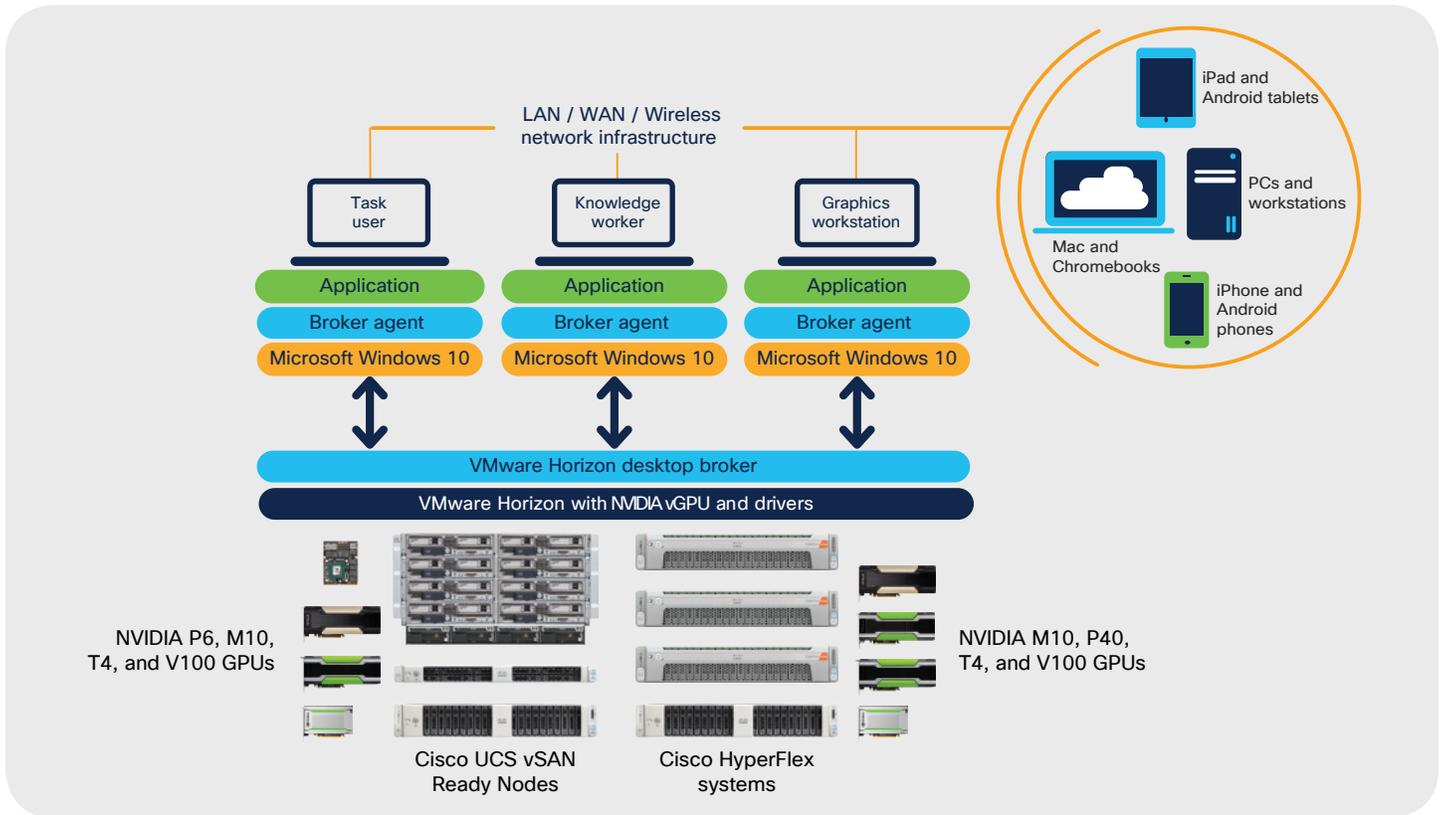
## Ease administration demands

Your IT administrators benefit from the easy management, business continuity, and added security that virtual desktops bring to your data center. Indeed, your HyperFlex Nodes or Cisco UCS vSAN ReadyNodes with NVIDIA vGPUs can be managed by Cisco Intersight™ software as a service and by VMware vCenter, significantly reducing total cost of ownership (TCO). Furthermore, the capability to virtualize even your most demanding user workloads gives you consistency of deployment, security, and data management within a centralized environment.

This flexibility is especially useful when outsourcing product development or engineering to third parties who have the expertise necessary to complete a project, but who may be located in a different geographic area. In a healthcare setting, clinicians can access MRI and CT scans at patient bedsides, at home, or on the go while using the device of their choice, optimizing work flow, and improving patient outcomes.

## VMware Horizon

VMware Horizon delivers virtual applications and desktops that can be accessed easily across devices and locations. Using a single platform based on the industry's leading hypervisor VMware Horizon enables cost-effective delivery of desktops and applications that only virtualization can provide. With



**Figure 1.** Cisco hyperconverged infrastructure solutions with NVIDIA vGPUs and VMware Horizon for virtual applications, desktops, and workstations.

certification for a growing list of independent software vendors (ISVs), VMware Horizon enables organizations across the world to easily support application and desktop management at scale.

## Cisco solutions

We give you choice. We can deliver both Cisco HyperFlex systems and Cisco UCS vSAN Ready Nodes as the foundation for your desktop virtualization platform. These solutions provide an open, end-to-end, service- and application-optimized infrastructure for next-generation virtual workspaces. Jointly delivered with Cisco, NVIDIA, and VMware these solutions can help your organization:

- **Simplify:** Accelerate time to productivity by simplifying

data center infrastructure and deployment processes.

- **Secure:** Improve protection of data center infrastructure and assets with consistent security settings that travel with the virtual desktop.
- **Scale:** Support more desktops per server with predictable performance.
- **Save:** Achieve accelerated return on investment, improved deployment speed, significantly reduced operating costs, and greater investment protection.

### Management simplicity

With all components managed as a single system (Figure 1), integration with VMware vCenter simplifies the deployment and ongoing management of the entire virtual desktop infrastructure

to reduce operating costs and call-center incidents.

Cisco Intersight is a lifecycle management platform for your HyperFlex or rack-server-based Cisco UCS vSAN Ready Nodes, regardless of where they reside. Intersight delivers a new level of cloud-powered intelligence that is tightly integrated with the Cisco Connected Technical Assistance Center (TAC) for rapid remediation and problem resolution supported with automated upload of error logs for rapid root-cause analysis.

Cisco UCS Manager provides role- and policy-driven management that speeds and simplifies blade server-based vSAN Ready Node deployment, making it as easy to deploy 100 nodes as it is to deploy a single one.



## For more information

- [VDI solutions from Cisco and NVIDIA](#)
- [Cisco hyperconverged solutions](#)
- [NVIDIA virtual GPUs](#)
- [VMware Horizon Desktop and Applications](#)
- [VMware vSAN ReadyNodes](#)
- [Cisco UCS](#)
- [Cisco Validated Designs for VDI environments](#)

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## Be the rock star

You can use industry-leading VMware Horizon together with high-performance Cisco hyperconverged solutions and NVIDIA virtual GPU technology to offer a better experience for graphics-demanding users, including highly responsive multimedia and professional applications, anywhere, anytime, and on any device.

You can manage more desktops consistently and securely while providing increased flexibility. Cisco hyperconverged solutions with NVIDIA virtual GPU software and VMware Horizon gives you choice in deploying graphics-enabled virtual desktops and workstations to meet the increased application and desktop graphics requirements and serve graphics-intensive application needs.

Our solutions simplify virtual desktop management and reduce the time needed for desktop patching, provisioning, and updates. End users benefit from an experience that is consistent across devices and locations, delivered across a quality-of-service (QoS)-enabled infrastructure that is virtual machine-, desktop-, and workstation-aware.

### Start your journey

Cisco hyperconverged solutions with VMware Horizon and NVIDIA vGPUs deliver scalable solutions for customers of all sizes, across a wide range of industries requiring high-quality desktop virtualization with graphics acceleration. Users are no longer tethered to physical desktops but can gain the mobility and flexibility they need to be productive while accessing their virtual desktop environments and mission-critical and graphics-intensive applications anywhere, on any device.

Visit [this website](#) to start this transformational journey.