



Future-Proofing Digital Workspaces With NVIDIA vGPU

The workplace is experiencing a pandemic disruption that is changing the form and perspective of how we work. The adoption of digital technologies has helped organizations respond to the pandemic's unprecedented challenges and has made mobile workforces more prevalent. However, to build an enhanced digital workspace for the post-pandemic recovery and beyond, the emphasis needs to shift from defensive, short-term models to sustainable, resilient operating practices.

Digital transformation and workforce strategies top the corporate agenda and 53% of IT executives say their companies are increasing investment¹ with worldwide IT spending to grow 3% in 2022². Organizations with hybrid workforces need great scalability, user experience, and simplified manageability as employees move seamlessly between the office and home. Addressing the challenges of virtualization is more important than ever to meet the requirements of a remote workforce that will continue to contribute to business growth. NVIDIA virtual GPU technology brings GPU acceleration to end-user computing solutions that enable enterprises to expand accelerated workloads, whether on-premises or in the cloud, while allowing users to have the same user experience as a physical PC or workstation.

Increasingly, modern applications including office productivity tools, browsers, rich multimedia content, and even the Windows desktop environment, demand levels of graphics performance and user experience traditionally not supported by CPU-only desktop and application virtualization. NVIDIA virtual GPU solutions consist of NVIDIA RTX™ Virtual Data Center Workstation (vWS), NVIDIA Virtual PC (vPC), and Virtual Applications (vApps). These solutions address the deficiencies of VDI by bringing graphics and compute acceleration to the data center, enabling IT to extend the reach of virtualization to every user. From knowledge workers to designers and engineers, NVIDIA vGPU solutions deliver unparalleled NVIDIA graphics performance and a user experience that rivals physical PC's.

GPU-accelerated virtualization is the realization of a fully accelerated computing environment where NVIDIA GPU technology powers every desktop, workstation, and application across on-premises, hybrid, and multi-cloud. This technology future-proofs digital workspaces, making them accessible to an enterprise's entire workforce and capable of running any workload.

The Forefront of the Data Center Evolution

As data centers evolve, organizations are shifting away from on-premises solutions to infrastructure that includes on-premises, cloud, and as-a-service offerings.

By 2025, 40% of storage and compute will be consumed as-a-service³. With NVIDIA virtual GPU products, IT can future proof their infrastructure with the flexibility to deploy on-premise or cloud and easily scale without being confined to an on-premise data center.

- > Deploy on-premises or cloud with the same GPU-accelerated performance
- > Quickly provision GPU-accelerated virtual machines (VMs) as needed from leading cloud service providers
- > Accelerated software-defined infrastructure for present and future GPU architectures
- > Optimize resource utilization with tools like live migration

NVIDIA Virtual GPU Solutions

The NVIDIA virtual GPU solution comprises data center GPUs and software licensing components. Choose from three software editions: NVIDIA Virtual Applications (vApps), Virtual PC (vPC) for standard office workers, and NVIDIA RTX Virtual Workstation (vWS) for professional graphics users. The NVIDIA RTX vWS includes a certified RTX driver to ensure that users get the same features expected of a physical workstation, including anti-aliasing, realistic models, enhanced application performance, and application certification.

NVIDIA vGPU Portfolio

NVIDIA Virtual Applications	NVIDIA Virtual PC	NVIDIA RTX Virtual Workstation
Use with Citrix XenApp or other RDSH solutions like VMware Horizon Hosted Apps.	For virtual desktop delivering productivity applications, video conferencing tools, browser, and multimedia.	For professional graphics applications; includes an NVIDIA® RTX driver.

Raise the Bar on Productivity and User Experience for Remote Employees

With most US companies expecting their workforce to work from anywhere, organizations are turning to the hybrid workspace model to allow for a seamless transition between the office and home. NVIDIA virtual GPU products transform workflows to liberate your users and data from the confines of PCs, workstations, offices, and distance. Now your teams can seamlessly collaborate in real-time, irrespective of location, using any device they choose.




- > Meet the increasing graphics demands of the modern digital workplace and Windows

> Rapidly provision virtual workstations in a fraction of the time and cost of a physical workstation

> Access applications and data, anywhere and on any device, with a user experience that rivals physical PC
- > Eliminate constrained workflows that inhibit user productivity and limit business agility

> Enable geographically dispersed teams to collaborate in real time without borders or limits

Customer Examples

Company	Industry	Solution
	Healthcare	<p>The Paul Strickland Cancer Centre was looking for a solution to enable radiologists to work remotely. NVIDIA RTX Virtual Workstation enables collaborative and flexible working environments for radiologists with other medical experts while achieving real-time rendering of scans means no noticeable difference between remote and on-site working.</p> <p>“One of our biggest challenges in the center is space, which is limited in terms of health and safety regulations. The new system allows more staff to work off site, which means we have more space available for patients.”</p>
	Media & Entertainment	<p>Square Enix turned to NVIDIA vGPU solutions to create a location-agnostic development environment for game development.</p> <p>“High-definition graphics was a challenge for 100% reproduction in a virtualized environment. However, the team supporting the game development and the associated staff were able to work well in the NVIDIA vGPU-accelerated VDI environment, so we decided to deploy it to the production environment.”</p> <p>With NVIDIA RTX Virtual Workstation, Square Enix was able to deliver a flexible environment that enabled employees to do creative work, including development and design, from the home or office.</p>
	Media & Entertainment	<p>Topgolf needed a standardized infrastructure for each of its venue's operations, including HDTV displays in each of its guest bays and 3D game delivery. Topgolf implemented the NVIDIA virtual GPU for their 3D gaming solution.</p> <p>“The NVIDIA GPU acceleration coupled with NVIDIA virtual GPU technology enables the 3D visualization experience we've been able to achieve.”</p>
	Manufacturing	<p>Toyota Motor Corporation turned to NVIDIA RTX Virtual Workstation as they implemented CAD VDI, making it possible for many CAD engineers to use it in various locations. Toyota uses NVIDIA RTX vWS for various tasks, such as management, design, modeling, experiments/analysis, and production preparation.</p> <p>“We had a telecommuting system in place, but CAD work could not be done without coming into the office, so designers were unable to use it. With the introduction of RTX vWS, we are no longer restricted to coming into work and can schedule our day more freely.”</p>

¹CIOs, CTOs and technology leaders Latest findings from PwC's Pulse Survey, PwC, August 2022

²Gartner Forecasts Worldwide IT Spending to Grow 3% in 2022, Gartner, July 2022

³Gartner – How to Evolve Your Physical Data Center to a Modern Operating Model, Jason Donham & Jonathan Forest, 29 March 2022

Ready to Get Started?

To learn more about NVIDIA vGPU technology, visit
www.nvidia.com/virtualgpu

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