NVIDIA VIRTUAL GPU AND CITRIX
Powering Tomorrow's Remote Workspaces

The future of the workspace is transforming. Building an enhanced and flexible IT infrastructure is critical for supporting workforces to seamlessly transition between the office and home in the post-pandemic era. As workflows become more complex and the graphics requirements of mainstream applications across industries rise, IT departments are faced with the challenge of addressing the growing demands of an enterprise-wide, unified virtual workspace, while satisfying the need for greater workplace mobility, improved security, and lower TCO.

Desktop virtualization untethers users, enabling unprecedented mobility and productivity. Graphics Processing Units (GPUs) enhance the VDI experience by offloading tasks from the CPU to provide better performance and user experiences. Without a GPU, some accelerated graphics and compute workloads simply won't run in a virtualized environment or, at best, will run with a reduced feature set. GPUs also broaden the applicability of your VDI technology to support use cases that weren't previously viable and enable a cost-effective, scalable infrastructure that lets you expand virtualization to more users. Together, NVIDIA and Citrix are partnering to improve the technology and deliver an immersive graphical experience on any application, on any device. End users are empowered with tools to become more productive, and IT can cost-effectively scale virtualization to more users and more use cases.

CITRIX with NVIDIA Virtual GPU Solutions

> **NVIDIA Virtual GPU Technology**
  NVIDIA virtual GPU solutions extend the power of the NVIDIA data center GPUs to deliver a consistently great user experience with Citrix Virtual Apps and Desktops for everyone, from remote office workers to mobile professionals to designers and engineers that need to work from anywhere. NVIDIA virtual GPU software, installed in the hypervisor host or natively available within cloud platforms, divides one GPU into multiple vGPU instances that each have direct access to the native NVIDIA driver installed in the guest O/S. The graphics commands of each virtual machine are passed directly to the GPU, without translation by the hypervisor. This allows the GPU hardware to be allocated for each user to deliver the ultimate in shared virtualized graphics performance. With NVIDIA virtual GPUs, IT can deploy VMs across a wide range of users and graphics applications— from users using video conferencing tools and viewing PowerPoint slides to your most demanding engineers creating intensive 3D CAD design.

> **NVIDIA Virtual GPU Solutions for Citrix Virtual Apps and Desktops**
  The NVIDIA virtual GPU solution is comprised of NVIDIA data center GPUs and software licensing components. Choose from three software editions: NVIDIA Virtual Applications (vApps) and Virtual PC (vPC) for knowledge workers, and NVIDIA RTX Virtual Workstation (vWS) for professional graphics users. The NVIDIA 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.

In collaboration with Citrix

citrix™

Citrix Virtual Apps	Citrix Virtual Desktops	
NVIDIA Virtual Applications	NVIDIA Virtual PC	NVIDIA RTX Virtual Workstation
Designed for accelerated application streaming with Remote Desktop Sharing Host (RDSH)	For virtual desktop delivering standard PC applications, browser, and multimedia	For professional graphics applications; includes an NVIDIA RTX driver

Citrix + NVIDIA End User Computing Platform
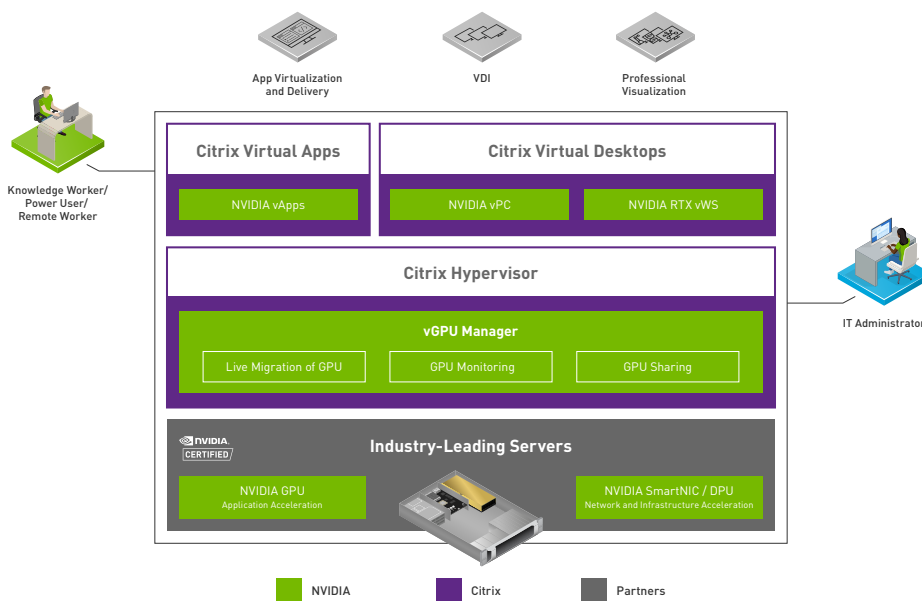
Future-Proof Your Digital Workspace

Modern applications including office productivity tools, browsers, web conferencing tools, and even the Windows desktop environment, are demanding increasing levels of graphics performance for a better user experience. NVIDIA virtual GPU products bring the graphics-accelerated experience to the virtualized data center, enabling IT to centralize applications and extend the reach of VDI to the entire workforce, providing virtual workspaces that offer improved security, efficiency, and simplified manageability.

Key Benefits of the NVIDIA Virtual GPU and Citrix Solutions

Immersive User Experience

> An accelerated virtual desktop experience optimized for Windows and office productivity applications with NVIDIA Virtual GPUs

> Proven benefits and performance of NVIDIA RTX technology, extended to virtual workstations with the NVIDIA RTX Virtual Workstation (vWS)

> Optimized application performance with NVIDIA virtual GPU products and Citrix HDX 3D Pro for complex 3D workloads, high-resolution monitors, multi-monitor configurations, and high frame rate applications

> Improved VDI user experience with NVIDIA vGPU products and Citrix Virtual Desktops support for H.264 and H.265

Full Digital Transformation Capability

> The ability to broaden the applicability of your VDI environment to support any user and any use case with NVIDIA Virtual GPUs

> NVIDIA vWS supports accelerated graphics and compute workflows (NVIDIA CUDA® and OpenCL) to streamline design and computer-aided engineering simulation

Greater Security for Mission-Critical Data

> The ability to secure even the largest, mission-critical datasets in the data center and access them remotely with professional apps running on Citrix Virtual Apps or Desktops powered by NVIDIA vWS

Single Platform, Lower Costs

> Citrix end-to-end platform and NVIDIA vGPU licenses for reduced OpEx, tailored to the EUC requirements and budget

> NVIDIA virtual GPU usage insights integrated into Citrix Monitor for the cloud and Citrix Director for on-premises to monitor and optimize every workload

Breadth of Partner Ecosystem

> A growing portfolio of industry's leading 3D application ISVs accelerated with NVIDIA RTX technology, powering your virtual environment through NVIDIA vWS

> NVIDIA virtual GPU solutions supporting a full range of Citrix Ready ecosystem partners for server, storage, and management—ensuring that customers' current and future investments are protected

OEM Systems Partners

Also available from Asus, Fujitsu, Hitachi, Huawei, Inspur, Nutanix, Sugon, Tyan, and Quanta. For a complete list of certified hardware, visit **www.nvidia.com/buygrid**.

Citrix and NVIDIA collaborate closely during product development to assure stability and reliability of the platform. As part of a joint Certification Program, NVIDIA virtual GPU solutions are thoroughly tested to ensure that customers get the performance they expect.

Learn More

For more information, visit **www.nvidia.com/virtualgpu** or

https://citrixready.citrix.com/partners/nv/nvidia/nvidia-grid.html