NVIDIA AND NUTANIX
DRIVING DIGITAL TRANSFORMATION WITH GPU VIRTUALIZATION AND ENTERPRISE CLOUD.

Given the speed at which the modern workplace is changing, IT organizations are increasingly challenged to keep pace with the new digital workplace applications and operating systems that demand more computing resources than their precursors. From productivity applications to professional graphics applications, users now demand the best user experience in virtual environments that they enjoyed on physical endpoints.

A recent study exploring client computing configurations revealed that the number of applications requiring graphics acceleration within a physical endpoint has doubled in the last five years.[1] According to a Gartner survey, 85% of enterprises will have started Windows 10 deployments by the end of 2017.[2] Windows 10 requires up to 32% more computer graphics than Windows 7, and the common business productivity applications such as Chrome, Skype, and Office that get upgraded along with it also require more GPU resources.[3] To meet these requirements and the proliferation of Windows 10, virtual desktop infrastructure (VDI) needs graphics acceleration to match the performance and user experience of a physical platform.

But as organizations attempt to undergo this digital transformation, to deliver the best possible user experience, they must also modernize legacy infrastructure, tools, and processes to keep pace with business demands. The challenge is that legacy IT infrastructure—comprised of separate silos of compute, storage, networking and virtualization resources—creates IT complexity, increases costs, reduces business speed, and elevates risk.

[1] Data from Lakeside Software's SysTrack Community, 2017

[2] Gartner. April 25, 2017. "Gartner Survey Shows 85 Percent of Enterprises Will Have Started Windows 10 Deployments by End of 2017." [Press release]. Retrieved from http://www.gartner. com/newsroom/id/3690917

[3] Lakeside Software, Inc. "Elevating User Experience Through GPU Acceleration: A Windows 10 versus Windows 7 Analysis." Lakeside Software White Paper. 2017

In collaboration with Nutanix

NVIDIA Virtual GPU Solutions

Modernized apps today require sufficient resources to deliver immersive environments for users and the experience is expected to be no different, moving from physical to virtual and back. A virtualized GPU in the VDI host enables graphics rendering allowing IT to reclaim lost CPU cycles and thereby improving host density, while uplifting performance and creating the same immersive user experience in a virtualized setting. This is where NVIDIA virtual GPU technology comes into play.

NVIDIA virtual GPU technology is the industry's leading graphics virtualization platform, built on an enterprise-grade platform that includes NVIDIA® Tesla® GPU's, NVIDIA GRID™ vPC and vApps software, and the NVIDIA Quadro® Virtual Data Center Workstation (Quadro vDWS) software that extends the power of NVIDIA GPU technology to virtual desktops and applications. It lets IT tap into a powerful graphics-accelerated data center solution that helps centralize apps and data and deliver high-performing digital workspaces that offer improved security, productivity, and cost-efficiency. As virtual desktops become mainstream across industries in the modern, digital workplace, NVIDIA works with Nutanix Enterprise Cloud to enable high performance for every type of VDI user, from task and knowledge workers to power users and data scientists.

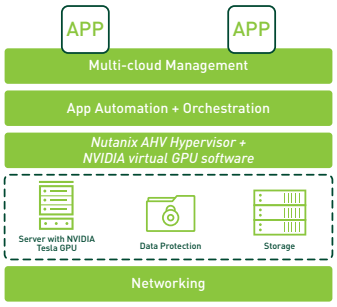
Nutanix Enterprise Cloud: Invisible Infrastructure That Just Works

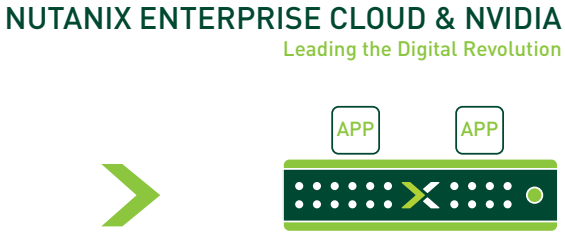
Nutanix makes data center infrastructure invisible by delivering an Enterprise Cloud that enables IT to focus on the applications and services that power their business. The Nutanix Enterprise Cloud natively converges silos of compute, storage, networking and virtualization in a hyperconverged platform to run any workload, at any scale. The Nutanix distributed architecture provides a scale-out cluster design that allows linear scalability simply by adding nodes when needed thereby delivering an immensely scalable, resilient, and high-performance architecture.

Nutanix supports all leading hypervisors but also comes pre-packaged with its own license-free hypervisor, AHV, thus mitigating the limitations of traditional virtual environments including limited mobility, and high licensing costs. It also offers high-performance all-flash storage. Placing flash storage in each hyperconverged node, and leveraging it for more than just a caching layer maximizes performance, which is desirable for most graphics intensive application virtualization.

NVIDIA and Nutanix: A Joint Solution from the Industry Leaders

Together, NVIDIA and Nutanix are simplifying and accelerating VDI deployments with a certified, joint solution. Nutanix's Hyperconverged Infrastructure (HCI) Solution enhances the benefits that NVIDIA virtual GPUs can deliver to an enterprise. Some of these benefits include:





Lower Total Cost of Ownership: Nutanix's hyperconverged architecture allows enterprises to deploy the appropriate amount of server, storage, and networking resources that will meet the enterprise's requirements today thereby eliminating risk and mitigating over-provisioning. And with NVIDIA's virtual GPU management and monitoring capabilities, you can create, deploy, and support at large scale with end-to-end insights of your GPU-enabled environment, further lowering your TCO.

High Performance and Better User Experience: NVIDIA GRID vPC and vApps enables VDI to support the performance and user experience demands of today's modern apps used by most knowledge workers such as Microsoft Office, Skype, and YouTube. The power of the NVIDIA Quadro vDWS, enables your VDI environment to also support professional technical and creative applications. The software-defined architecture of the Nutanix platform automatically distributes all data and processes leveraged by all supported applications across the entire Nutanix cluster, thus enabling predictable performance. Deploying NVIDIA and Nutanix together enhances the performance exponentially. End-users report exceptional video and responsiveness of applications.

Ease of Scale: The scale-out architecture of the Nutanix VDI solution allows organizations to grow their infrastructure without necessarily incurring large upfront capital costs. For knowledge workers of the modern digital workplace, improving scalability as well as the user experience is a requirement. And with the NVIDIA GRID vPC, you can further improve scalability since the tasks that were once done by the CPU are offloaded to the GPU, allowing you to lower CPU utilization and ultimately increase density by up to 30%.[4]

Enabling greater mobility, productivity, and security for professional workstation users: Virtualized professional workstations powered by the NVIDIA Quadro vDWS deliver secure productivity and performance, on any device. Engineers, architects, and designers are liberated to work from anywhere, collaborate with distributed teams and share large data sets that are managed and secured from the data center.

The joint solution delivers a consistent, high-quality user experience and excellent performance. It enables predictable, linear, non-disruptive scaling while supporting a digital enterprise's mobility, BYOD, and cloud initiatives. The Nutanix and NVIDIA solution addresses the increased resource consumption of Windows 10 and the digital workplace as well as the needs of the most demanding professional workstation users, while also simplifying management, improving security, and lowering TCO.

[4] Lakeside Software, Inc. "Elevating User Experience Through GPU Acceleration: A Windows 10 versus Windows 7 Analysis." Lakeside Software White Paper. 2017

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