VDI Graphics Acceleration with Nutanix

Graphics acceleration is embedded into billions of consumer and business devices, including workstations, smartphones and notebooks. It provides a rich, high-fidelity user experience for a wide range of applications. Virtual desktop infrastructure (VDI), however, has not benefited from this advanced acceleration technology. Users of geospatial applications, 3D rendering software and other applications that incorporate heavy graphics, have been denied the flexibility of VDI.

Nutanix Virtual Computing Platform integrates NVIDIA graphics processor units (GPUs) to deliver the graphics-intensive applications increasingly used by the full spectrum of users, from demanding 'knowledge' workers to the emerging class of data scientists. With Nutanix, virtual desktop users can now run the full range of applications with workstation-level performance, and without impacting the performance for all other VDI users in the environment.
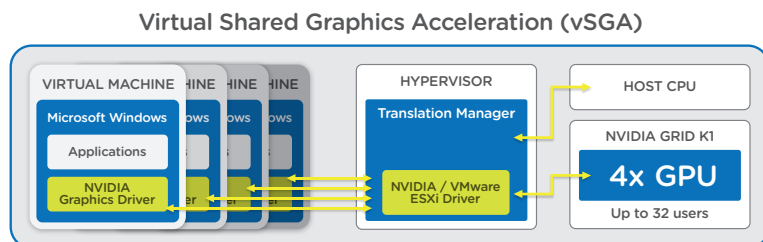
100% software-defined platform integrating industry-leading graphics acceleration

The Nutanix Virtual Computing Platform incorporates both NVIDIA GRID technology and the Teradici PCoIP accelerator. NVIDIA GRID™ offloads graphics processing from the system CPU, allowing the data center manager to deliver a graphics-rich experience to more users throughout the organization. No longer are desktops supporting heavy graphics confined to physical infrastructure, forgoing the flexibility and security benefits that accrue from virtualization.

Leveraging VMware's SVGA driver technology along with NVIDIA GRID™ K1 and K2 solutions, Nutanix supports multiple rendering models, including Soft 3D, vSGA and vDGA. The PCoIP accelerator from Teradici compresses, encrypts and rapidly transports image pixels to PCoIP end-user devices. The technology unburdens the virtual desktop host from performing these expensive tasks and consuming resources that otherwise could be leveraged to support additional users. The combination of these technologies enables enterprise-wide mobility initiatives – untethering workers from physical desktops and allowing applications and desktops to be accessed from anywhere, using any device.

Virtual Shared Graphics Acceleration (vSGA) enables High Availability, vMotion and Distributed Resource Scheduling

The Nutanix Virtual Computing Platform allows enterprise IT organizations to dramatically improve user productivity running VMware Horizon View 5.2 or XenDesktop. vSGA support enables multiple users to share graphics acceleration hardware in a single VDI environment. Virtual desktops now have high-performance access to thousands of applications that run DirectX 9 or OpenGL 2.1.

NX-7110

Key Benefits

- Accelerates graphics-intensive desktops

- Supports Soft 3D, vSGA and vDGA rendering models

- Highly responsive windows and rich multimedia experiences

- Flexible configurations of GRID K1/K2 and PCoIP hardware

- Eliminates complexity and reduces deployment time for VDI

Virtual Shared Graphics Acceleration (vSGA)

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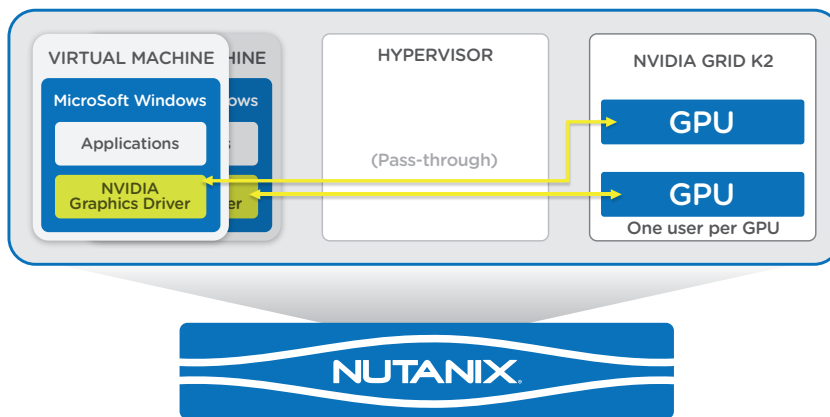
NUTANIX.
www.nutanix.com

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Support the most graphically-intense users with Virtual Dedicated Graphics Acceleration (vDGA)

Create a virtual workstation with all the benefits of a local dedicated processor. By directly connecting a GPU to the hypervisor in pass-through mode, IT professionals can now allocate a full GPU and graphics memory to a single virtual machine. This gives individual knowledge workers, power users and designers the ability to perform at their best without interruption. Users can take advantage of the full suite of available applications running the latest in OpenGL 4.3 and Microsoft DirectX9,10 and 11.

Dedicated GPU Pass-through (vDGA)

VIRTUAL MACHINE

MicroSoft Windows

Applications

NVIDIA
Graphics Driver

HYPERVISOR

(Pass-through)

NVIDIA GRID K2

GPU

GPU

One user per GPU

NUTANIX.

Seamlessly integrate platforms for simple management and unlimited scale

Nutanix Virtual Computing Platform with integrated GPU acceleration can be seamlessly added to any Nutanix cluster – providing a single compute and storage infrastructure for delivery of virtual desktops and applications in addition to server virtualization, big data, and disaster recovery. VDI deployments can scale out one node at a time to deliver linear and predictable growth. Additionally, all virtual desktops are managed via a single management framework eliminating individual silos of infrastructure.

About Nutanix

Nutanix provides datacenter infrastructure solutions that are hyper-efficient, massively scalable and elegantly simple. The award-winning Nutanix Virtual Computing Platform has disrupted the market by seamlessly and natively converging compute and storage in a single appliance. Headquartered in San Jose, Calif. with offices and authorized solution providers throughout the world, Nutanix is privately held and backed by top-tier VC firms. For more information, visit www.nutanix.com.