



ARCGIS PRO VIRTUALIZATION

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RYAN DANZEY

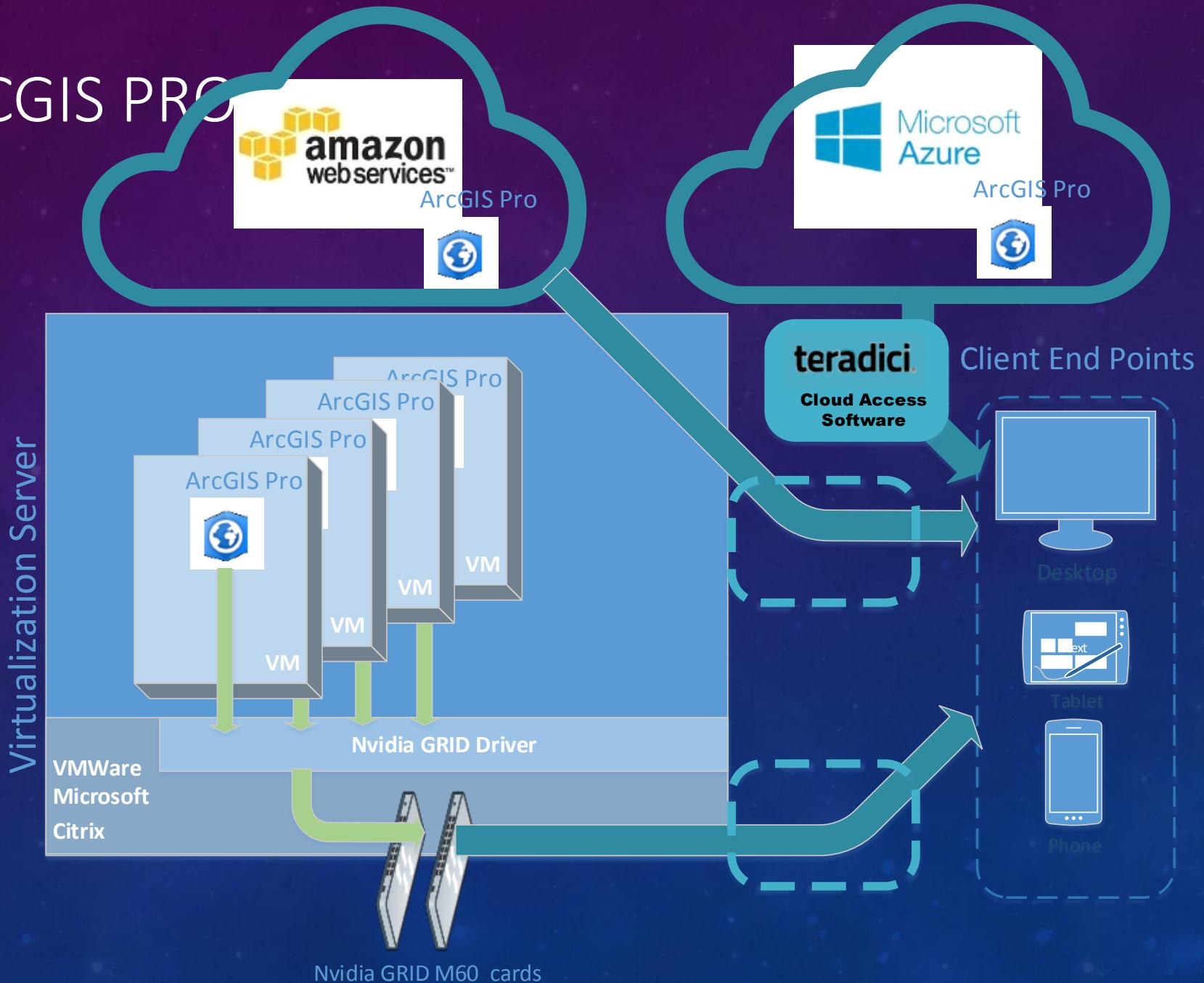
PERFORMANCE ENGINEERING, ESRI-REDLANDS

VIRTUALIZATION

- On-Premises
 - Citrix XenDesktop
 - VMWare View
 - Citrix XenApp
- Cloud
 - AWS GPU Workspace
 - Azure NV-Series
 - Fra.me

VIRTUALIZING ARCGIS PRO

- Required Technologies
 - Servers + GPU
 - Hypervisor
 - Remote Display Protocol



ARCGIS PRO ARCHITECTURAL CONSIDERATIONS

Pro

2nd largest repository of spatial capability on this planet

64 Bit

Multi-threaded

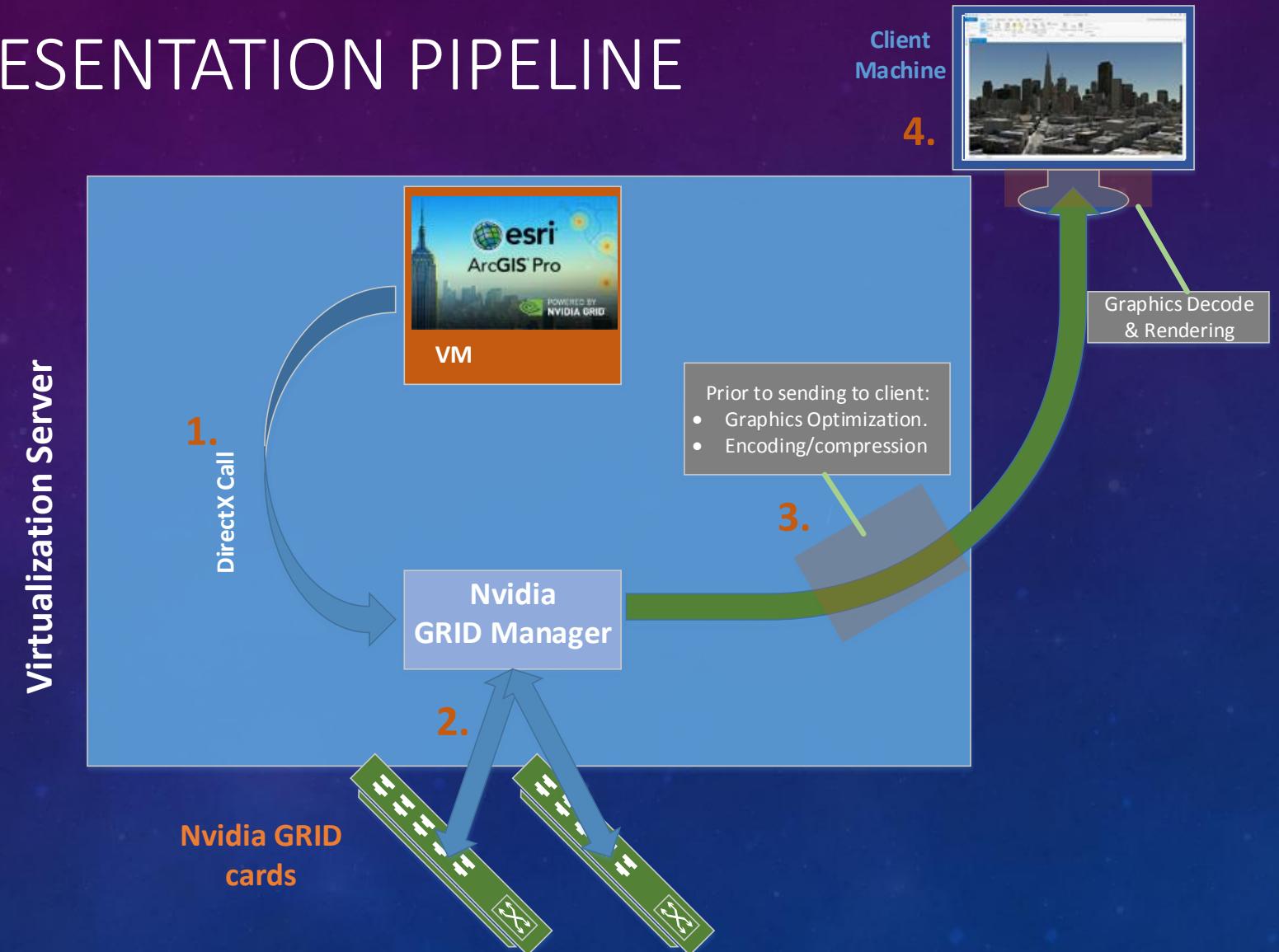
DirectX / OpenGL

ArcMap

- Largest repository of spatial capability on this planet
- 32 Bit
- Single-threaded
- Windows GDI+

VIRTUALIZATION PRESENTATION PIPELINE ON-PREMISE

- On-Premise Server resources
 - Local virtualization servers
 - VMWare Horizon View
 - Citrix XenDesktop
- Requires
 - Shared GPUs
 - Nvidia GRID Manager
 - Ex.VMWare, Citrix



CHALLENGES WITH XENAPP

Unable to share GPU

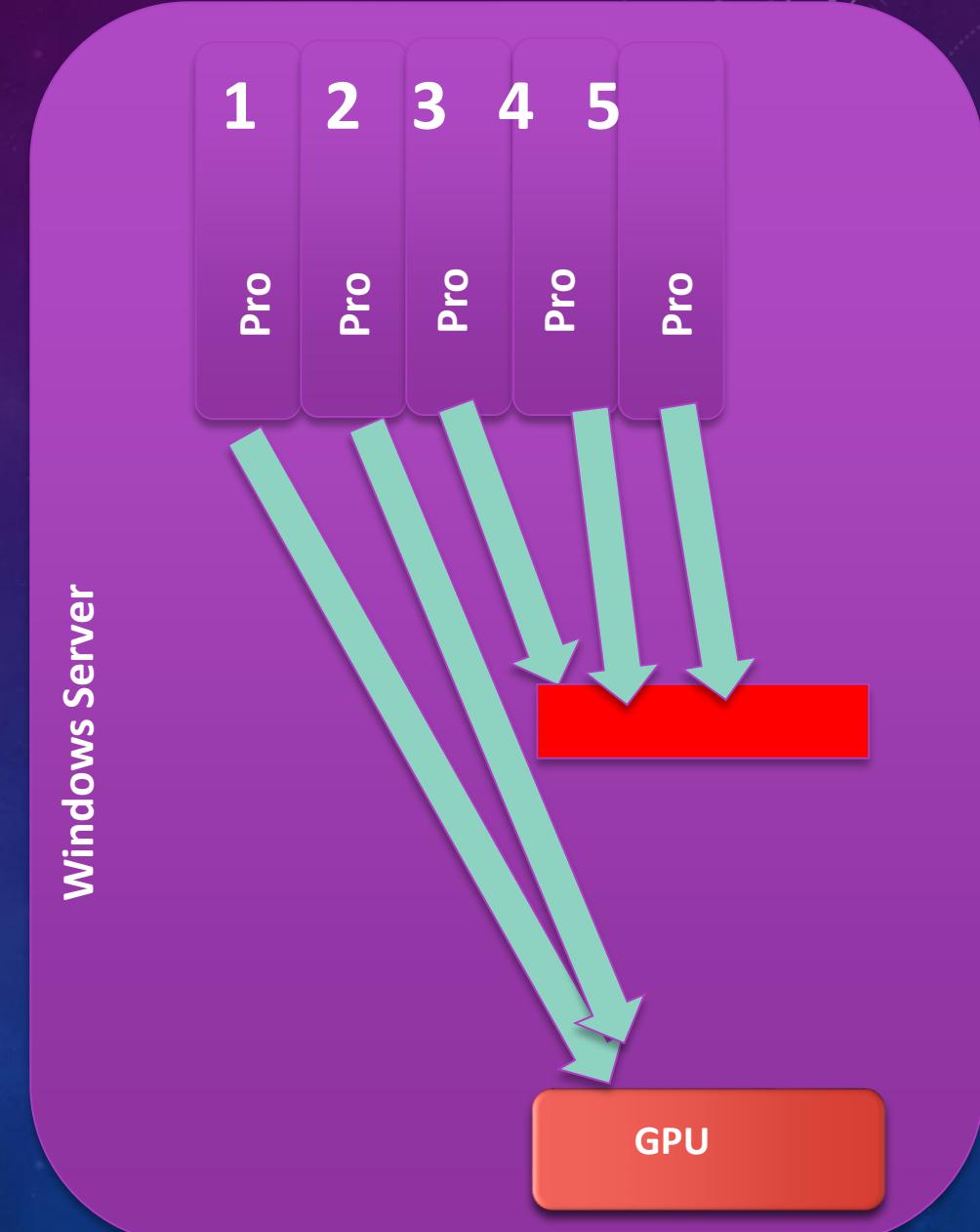
ArcGIS Pro will not work with Citrix XenApp
Limitation of Windows Server

XenApp Sessions 1~3 get necessary FrameBuffer

XenApp Sessions 4+ queued on GPUs

Terrible UX

XenApp is within Windows Server



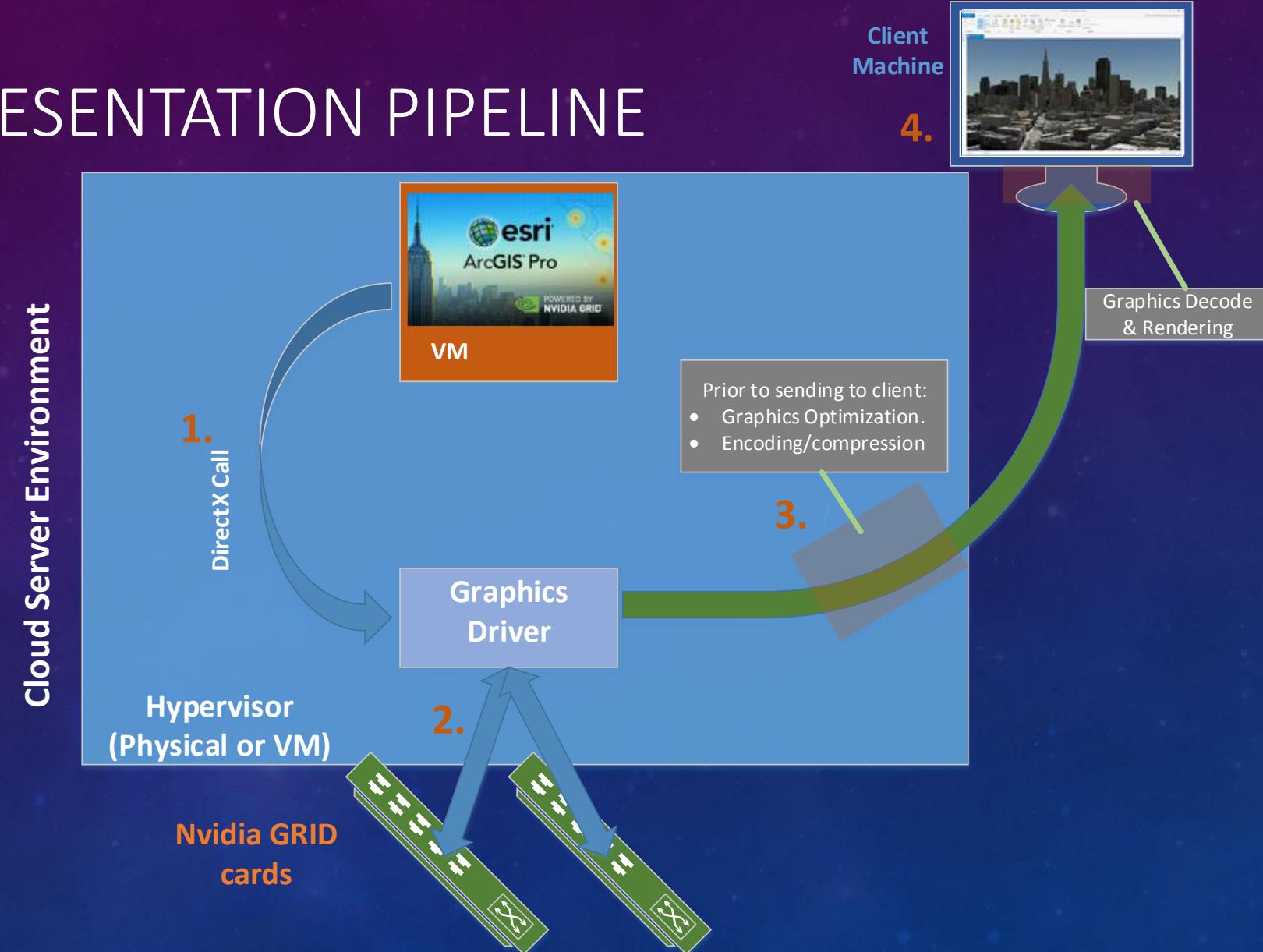
CLOUD VIRTUALIZATION

- Azure
 - NV-Series 6
- AWS
 - GPU Workspace

VIRTUALIZATION PRESENTATION PIPELINE

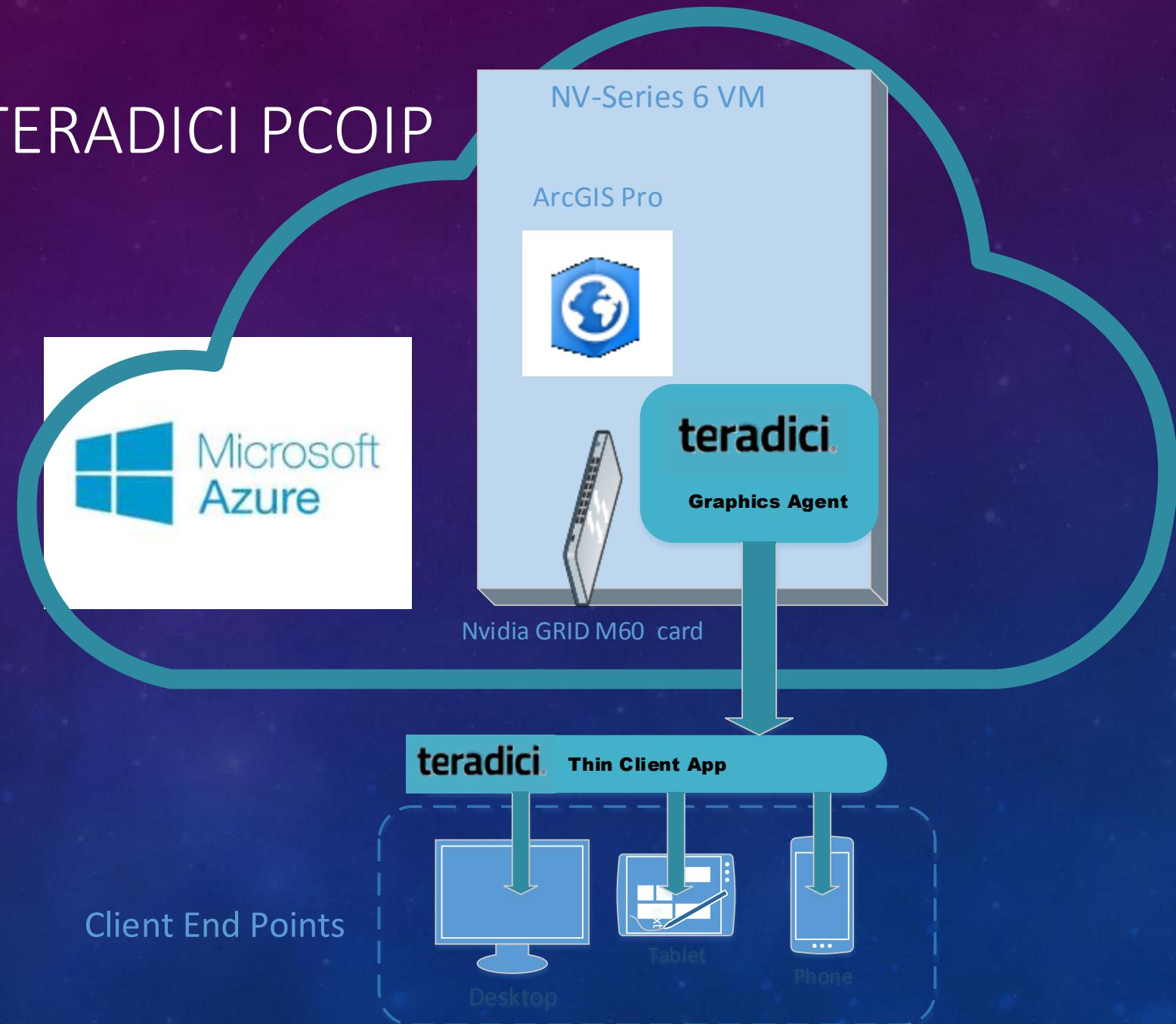
CLOUD - BASED

- Datacenter resources
- Multiple geographic regions
- Requires
 - Shared GPUs
 - Ex. VMWare, Citrix
 - Dedicated GPUs
 - Pass-through (Nvidia Grid Mgr)
 - DDA (MS WinServer 2016)



AZURE NV-SERIES + TERADICI PCOIP

- Azure NV-Series
 - Virtualization infrastructure
 - GPU
- Teradici PCoIP
 - Remote Display Protocol



ARCGIS DESKTOP VIRTUALIZATION APPLIANCE

- Dell R730 Precision Rack Server
- 3.75 TB SSD storage
- 275 GB RAM
- 2x Nvidia GRID M60 cards



- VM configuration
 - 6 virtual CPUs
 - 8GB RAM
 - 1GB Frame Buffer*

- VM/Server Density
 - Using the 2Q
 - 24 VMs per Dell R730

ArcGIS Pro Virtualization

ArcGIS Pro as a hosted application running on the following virtualized environments

Virtual Desktop Infrastructure (VDI)**

- Citrix XenDesktop 7.5
- Citrix XenDesktop 7.6
- Windows Server 2012 R2 Hyper-V
- VMWare vSphere 6.0 Horizon View

**Citrix VDI certified with NVIDIA GRID driver 346.68/348.27

**Microsoft VDI certified with NVIDIA GRID driver 346.68/348.27

**VMWare VDI certified with NVIDIA GRID driver 346.68/348.27

Citrix XenApp*

Version	Hosted OS	Minimum OS version
Citrix XenApp 6.5	Windows Server 2008 R2	SP1
Citrix XenApp 7.6	Windows Server 2008 R2 Windows Server 2012 R2	SP1 Update: April 2014

*A GPU compatible with your virtualization platform is recommended.

System Requirements

Community

The screenshot shows a blog post on the Esri ArcGIS blog. The title is "ArcGIS Desktop Virtualization Appliance is available!" by John Meza on December 1, 2015. The post discusses the availability of the ArcGIS Desktop Virtualization Appliance and mentions that many companies are starting to virtualize ArcGIS Pro. It includes social sharing buttons for Facebook, Twitter, and LinkedIn, and a sidebar with links for "Sign In", "Subscribe to the RSS Feed", and "Comments RSS".



ArcGIS Desktop Virtual Appliance ADVA



Pro virtualizes for any organization

THANKS FOR ATTENDING

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