INDUSTRY OVERVIEW

• The Financial Services (FS) industry is composed of several sectors – investment banking, trading, retail banking, and insurance.
• Like many industries, FS is seeing increased demand for GPU acceleration, driven by migration to Windows 10 and modern apps, including video and browsers.
• FS organizations tend to be risk adverse. Many are still on Windows XP, fearing business interruption and downtime during an upgrade.
• Business drivers of virtualization among FS include security and data management, BYOD, mobility, and cramped office space.
• Workforce productivity, satisfaction and engagement are very important in this highly competitive industry.
• Traders need mobility and often get moved around along with their systems to work closely with different groups like equity, commodities, or risk income. Traders also need to be constantly up and running, and have physically small desk areas.
• Multi-monitor support is desired as some may have as many as 15 applications open at a time. Highly paid FS professionals expect excellent user experience.
• FS is heavily regulated. Security continues to be a big focus with FS being the most-breached sector, experiencing 35% of all data breaches, with an average total cost of data breach of $10.1 million.\(^1\,\(^2\) Data needs to be safeguarded as information breach and insider trading have serious consequences.

THE SOLUTION

The Financial Services industry has two main use cases for virtualization:
1. General purpose VDI which is seen across all sectors and in various departments within these sectors like administrative, marketing, creative and other. These tend to be more of the knowledge worker use case and are impacted by increasing graphical requirements of Windows 10 and modern productivity applications.
2. Traders and Financial Analysts, who tend to already be virtualized with age old systems, and fear upgrading due to potential downtime or impact to performance.

VIRTUALIZATION WITH NVIDIA GRID AND TESLA GPUS

The NVIDIA GRID vPC/vApps is positioned for general purpose VDI across all sectors of the Financial Services industry

BENEFITS

- Support increasing graphical requirements of Windows 10 and modern productivity applications
- Support for up to two 4K or four HD monitors for increased productivity
- Deliver a cost-effective solution to scale VDI across your organization for as little as $2 per user per month\(^3\)
- Lower IT management costs
- Enforce security in the data center by reducing need for data at the end points
- Increase employee mobility
- Manage business continuity and disaster recovery centrally

VIRTUALIZATION WITH NVIDIA QUADRO vDWS AND TESLA GPUs

The NVIDIA Quadro Virtual Data Center Workstation is ideal for high frequency power traders, working on large datasets and complex models

BENEFITS

- Support for up to four 4K monitors and large frame buffer sizes - as large as 24 GB for increased productivity
- Deliver immersive, native-PC experience for the most demanding professional applications, improving productivity and morale
- Enforce security in the data center by reducing need for data at the end points
- Lower IT management costs
- Increase trader mobility
- Manage business continuity and disaster recovery centrally

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3 Assumes cost of subscription, NVIDIA GRID software, and hardware, with 3-year amortization of hardware of 2 Tesla M10 cards supporting 87 vApps users.
KEY FINANCIAL SERVICES USER GROUPS

|-----------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------|

USE CASES

<table>
<thead>
<tr>
<th>For running network heavy apps (Bloomberg, Reuters, Eikon) on multi-monitors, with security, redundancy &amp; continuity</th>
<th>For simultaneously running productivity apps and financial apps, and general purpose VDI with multi-monitor support on Windows 10.</th>
<th>For general purpose VDI, using custom finance apps and common office productivity apps</th>
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RECOMMEND

| Quadro vDWS on NVIDIA T4 for high end. P6 for blades [supports up to four 4K displays] | GRID vPC/vApps on NVIDIA M10 for rack servers or P6 for blades, T4 for high end [supports up to two 4K or four HD displays] | GRID vPC/vApps on NVIDIA M10 for rack servers or P6 for blades, T4 for high end [supports up to two 4K or four HD displays] |

NVIDIA VIRTUAL GPU SOLUTION

The NVIDIA virtual GPU solution brings graphics acceleration to the data center. It requires both hardware and software licensing components:

- NVIDIA VIRTUAL GPU SOFTWARE. Choose either GRID Virtual PC, GRID Virtual Apps, or Quadro Virtual Data Center Workstation, and the appropriate SUMs (Support, Update, Maintenance) option for your needs.
- NVIDIA DATA CENTER GPUs. Volta, Turing, and Pascal™ based GPU Accelerators in certified server platforms run the NVIDIA virtualization software. Choose from density optimized, performance optimized, or blade optimized solutions.

NEXT STEPS

KEY QUESTIONS TO ASK:

General-Purpose VDI:

- Did you know Windows 7 End of Support is January 2020?
- Did you know Windows 10 is the most graphically intensive OS to date and modern productivity apps require graphics acceleration to function properly?
- Do you need to cost-effectively scale VDI across your organization, while still ensuring security and regulatory compliance?

Traders and Financial Analysts:

- Do your traders need a virtualized environment with 4K multi-monitor support?
- Did you know you can increase productivity by giving every VM a PC-native experience for every app?
- Did you know you can improve density on your existing VDI environments with a GPU?

CUSTOMER WINS

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