CORNERSTONE BRINGS HOME LOANS TO THE NATION

EMPOWERING COLLABORATION WITH NVIDIA GRID, NUTANIX, AND CITRIX.

NVIDIA

Increasing user adoption with low-latency, high-performance virtualization.

ABOUT CORNERSTONE

Established in 1988, Cornerstone is a leading home lending company with more than 100 branches and 1,000 loan officers, processors, and underwriters across the country working in storefronts and from home. With a broad reach and expertise, Cornerstone has earned a "Top Workplaces" award for each of the past seven consecutive years.

CHALLENGE

Providing home loans for families across the nation takes the collaboration of lending experts coming together to deliver the best opportunities for their customers. Cornerstone turned to virtualization to enable collaboration between its 100 branches, centralization of their data, and to streamline desktop deployment to over 1,000 employees—with about one-half working remotely or in the field. Also, recent acquisitions resulted in 125 new users coming on board and virtualization was identified as an excellent way to get them quickly up and running with Cornerstone's proprietary lending solution and other applications.

While their initial virtualization solution worked well enough, it experienced performance challenges. "We built out a XenDesktop 5.6 environment on HP c7000 Blades and 3PAR storage," said Marc Grant, Director of Infrastructure at Cornerstone. "That effort chugged along for about two-and-a-half years, but acceptance from our existing users was slow going. The new employees had no previous comparison, so they were fine with it, but existing ones who'd had fat clients at their desktops— especially if they were at corporate where the data center lies—that was more of a struggle."

"The branches saw some trade-offs and degradation of user experience too," he continued. "Their applications were running faster, but they were losing some of the speed they'd had in streaming videos and music; just things that were part of their day-to-day work."

With poor performance and user experience, Grant knew his team had a decision to make; continue dragging users kicking and screaming down the current path or identify a solution that would work better for them.

> "Graphics-accelerated virtualization keeps teaching me to be agile, to be flexible, and to keep learning. I have been doing this for a while now, since 1993, and have been through the trends of mainframes, outsourcing, offshoring, and more. To me, virtualization is here to stay."
>
> -Marc Grant, Director of Infrastructure, Cornerstone

"We realized we were seeing a lot more streaming media, as employees increasingly produced videos from their desktop for marketing campaigns. We also considered the fact that we were going to start pushing towards Windows 10 and Office 2016, given its increased graphics capabilities."

As Grant and his team looked at Nutanix to provide refreshed hardware—either a stand-alone environment or commoditized environment for virtual desktops—they also started looking at NVIDIA GRID™ as a method for deploying a better end-user experience to their loan officers, executives, and marketing staff that perform graphics-intensive tasks on a regular basis.

SOLUTION

With Nutanix Enterprise Cloud Platform, Citrix XenDesktop, NVIDIA GRID software, and NVIDIA® Tesla® M10 and M60 GPUs, Cornerstone was able to overcome the hurdles of delivering a modern, digital workplace with workstation-like experience on any desktop or mobile device for all of their users.

> "We are now basically 95% virtualized, out of the 2,500 total devices including almost all of our servers and desktops. Most people don't know it is virtualization but they know they have access to the applications they need anywhere."

"We're not the type of business that one would immediately associate with needing vGPUs (virtualized GPUs). But one of the sessions I attended at Citrix Synergy last year was 'vGPU for Everybody,' and it lined up exactly with what I'm seeing—that even your core desktop applications are becoming more graphics-intensive and requiring more and more CPUs. NVIDIA GRID offers a great way to offload CPU while providing a better graphics experience, and the offload of that CPU enables the non-vGPU capable applications to have more resources for standard applications so that contention is alleviated."

With NVIDIA GRID, leveraging modern applications that need graphics-acceleration to work properly became a breeze. For example, without graphics-acceleration, functionality in common business applications like being able to scroll through a PDF lagged significantly. With NVIDIA GRID, users can speed through 300-page PDFs in minutes with no issues.

Grant and his team began to examine more deeply which applications required graphics-acceleration. Social media, in particular, a big focus for Cornerstone marketing, relied on graphics-acceleration to deliver a low latency, high-quality user experience.

Said Grant, "We don't do a lot of TV or radio marketing; we drive them to our social media sites. When we send out mass mailings, we point them to videos created by our marketing team. Much of the time, these videos aren't crafted in the corporate office. Marketing teams across branches use software like Salesforce and LiveMessage. At the same time they use lending applications like Mortgage Coach to regularly record, review edits, and upload videos from their VDI, thin client, or phone. If any of this process is hindered by poor performance on the VDI, it makes it difficult to effectively execute marketing campaigns."

But the proof is in the user satisfaction and adoption. Grant explains, "We are now basically 95% virtualized, out of the 2,500 devices total including almost all of our servers and desktops. Most people don't know it is virtualization, but they know they have access to the applications they need anywhere."

For Grant, NVIDIA GRID, Nutanix, and Citrix provide the next level of digital workplace. "Graphics-accelerated virtualization keeps teaching me to be agile, to be flexible, and to keep learning. I have been doing this for a while now, since 1993, and have been through the trends of mainframes, outsourcing, offshoring, and more. To me, virtualization is here to stay."

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