

Wysetek enhances data synchronisation, increases productivity for engineering company



Citrix VDI and NVidia virtual GPU was successfully deployed by Wysetek team for global leader in plant engineering.

A multinational group with a highly technological DNA is an International leader in the field of plant engineering.

The company specialises mainly in the hydrocarbon sector (Petrochemical, fertilizers, oil and gas refining) with its large contribution to the transformation of natural resources into innovative products. The engineering conglomerate further intends to gradually prepare itself for the growing renewable energy and green chemistry paradigm.

Main Challenges

One of the biggest IT challenges faced by the customer was the lack of data synchronization. The company's mechanical design engineers faced daily productivity setbacks when working on shared 3D files in applications SP3D (Smart Plant 3d Design Software). To update files, engineers downloaded them from the server and uploaded them on completion. This process meant that engineers were never sure whether they were working on the latest revised files.

It was common for engineers to update files and then forget to export a new viewable version or inform colleagues about changes. When a project was ready for production, engineers exported the 3D files and transferred them to mechanics for viewing in eDrawings. "This process introduced the challenges with large data transfers and possibly leading to errors. Lacking a single source of truth, engineers and mechanics spent valuable time checking and rechecking plans before project completion," said Zahir Bhatkar, Presales Engineer, Wysetek Systems Technologists.

Another challenge was finding an effective strategy for rapidly rolling out and managing IT for users around the world. Running a global business, a big part of company's success rested upon the employees' ability to share large files, collaborate in real time, and communicate via video conferencing. The IT team of the customer needed to stay lean and cost-effective even as it kept up with the rapid growth of users' IT maintenance and software

Solution by Wysetek

The customer was seeking an effective IT solution to ward off the challenges faced by their team and customers. The IT team started exploring VDI with GPU Virtualization and Wysetek Systems Technologists with history of implementation of GPU Based Solution was identified as qualified partner for the project.

There was a successful Proof of concept and thorough evaluation along with teams of Wysetek and the customer.

First, the Wysetek team deployed a production environment on 4 servers with 40 concurrent NVIDIA virtual GPU (vGPU) users. When testing was complete, the IT team of the customer decided to allocate resources according to three profiles: engineer, viewer/mechanic, and office worker. To meet the resource requirements of engineers and mechanics, the IT team compared the performance of the NVIDIA GRID K2 and Tesla M60 cards. They discovered that they could get faster results and double the density per server using Tesla M60 GPU.

Citrix XenDesktop, HDX 3D Pro is a set of graphics acceleration technologies designed to optimize the virtualization of rich graphics apps. HDX 3D Pro graphic acceleration technologies includes Computer-aided design, manufacturing, and engineering (CAD/CAM/CAE) applications, Geographical information system (GIS) software, Picture Archiving Communication System (PACS) workstations for medical imaging, Web-based apps with hi-res imagery and/or video, Latest OpenGL, DirectX, CUDA and CL versions supported, Latest platforms supported with AMD,

Key Benefits

The customer is rapidly expanding its plant engineering business around the world. Citrix VDI powered by NVIDIA ensures the IT team can provide new virtual desktops to locations almost instantly wherein setting a new location only takes a few hours.

Deploying Citrix and NVidia the company has managed to almost double its engineering and mechanics productivity without the need for additional IT support. It has almost no IT equipment at locations, leading to almost no maintenance.

Citrix and NVIDIA enables engineers to work with more efficiency by providing unmatched 3D rendering speed and capacity. Moreover, engineers can work collaboratively on 3D graphics. Mechanics can view updated files in eDrawings at any of the customer's facilities without data synchronization issues. The user experience significantly improved—rotating models in SP3D and browsing projects became much faster.

With CPU offloading, engineers have a high-quality, fluid experience with video conferencing which was important as engineers one site use Skype for Business and do screen sharing with engineers in Customer Site.

Prime Benefits of Citrix VDI and NVidia GPU Solution to Customer

- Citrix VDI powered by NVIDIA ensures IT team can provide new virtual desktops to new locations almost instantly across the globe.
- Managed to almost double its engineering and mechanics productivity without the need for additional IT support.
- Engineers work more efficiently by providing unmatched 3D rendering speed and capacity incl. work collaboratively.
- High-performance virtualization also dramatically speeds up the production process. Major improvements in user density on servers, as well as decreased latency.
- Improvement in productivity extends to office staff using Microsoft Office as well as Skype for Business VoIP calls, video conferencing, and instant messaging.
- NVIDIA virtual GPU technology ensures no matter what application they're working on or where they're located, staff can experience great performance.

Running a global business, a big part of company's success rested upon the employees' ability to share large files, collaborate in real time, and communicate via video conferencing. IT team of customer needed to stay lean and cost-effective even as it kept up with rapid growth of users' IT maintenance and software requirements.

Zahir Bhatkar, Presales Engineer, Wysetek Systems Technologists