citrix

Expanding the limits of virtual engineering with CEVT

Citrix Cloud enables remote engineering

Engineers and designers run high-performance 3D CAD and calculations from any location with Citrix Cloud

People can be their most creative when they have control over their working environment. But many engineers and designers using the most resource-intensive applications have found themselves tied to expensive and bulky workstation hardware. Opportunities to manage the way they work have been constrained and when extreme events, like the COVID-19 lockdown, prevent access to offices, they have been unable to work at all.

CEVT (China Euro Vehicle Technology, part of the Zheijang Geely Holding Group which owns well-known auto brands like Volvo Cars and Lotus) is an innovation center located in the heart of Sweden's automotive cluster. CEVT works on hybrid and electrification technology, autonomous driven vehicles and other revolutionary engineering projects, many within the software development area. Its goals include "pushing the boundaries of virtual engineering".

"Our aim is to provide staff with the IT toolkit they need to the best they can be," explains IT Manager and CEVT's Citrix Product Owner, Mattias Brandt. "We want to enable employees to set their own work-life balance, to work where they want, when they want, on any device."

Brandt worked with Platinum Citrix Solution Advisor, WiseArc Advisors, to develop a solution that could deliver engineering applications to any device, anywhere, freeing staff from their workstations. They chose Citrix Virtual Apps and Desktops and Citrix Cloud services.

"We've centralized all users on a single Citrix platform and can deliver apps to any user device: Mac, Linux, Windows, or Android," Brandt explains. "Citrix HDX 3D Pro means we can deliver the most resource-heavy 3D CAD applications to our demanding user-base of engineers and designers. Having all the computing power in the back end, rather than on individual workstations means that engineers can continue working while heavy calculations are running in the background. It also means they can submit jobs overnight, from home, and pick up the results in the morning. We utilize the environment 24/7."



Industry

Manufacturing

Location Sweden

Citrix products

- Citrix Cloud service
- Citrix Virtual Apps and Desktops

Key Benefits

- Citrix Cloud supports CEVT's hybrid cloud environment and provides a secure, "evergreen" platform for app delivery
- Citrix Virtual Apps and Desktops delivers resource-hungry computation and 3D graphics apps to any device for 1,300 designers and engineers

The new platform was quickly adopted by staff in all roles.

"My manager, Vice President EUS Security Operations, Patrik Fredlund, is one of our greatest ambassadors," Brandt says. "He works completely from his smartphone, using it as a full endpoint through Citrix Workspace."

Making virtual engineering a virtual reality

"Choosing Citrix was an easy decision," Brandt continues. "HDX 3D Pro delivered from day one."

Within a year, CEVT had 1,300 engineers and designers using its Citrix solution.

Brandt and his colleagues haven't stopped at traditional 3D CAD applications. CEVT uses Unreal Engine to render design images more quickly and to make decisions earlier in the design process. Now, as Brandt explains, "Employees can sit on the train, on their phones, access Unreal Engine through Citrix and start a rendering process. Then they pick up the job when they reach the office."

Today's designers are moving from clay models to virtual reality. Brandt and his team are constantly seeking new opportunities to improve the working experience for CEVT staff.

"In the innovation center, we had a large, empty, white room with a big workstation computer in the corner and a single virtual reality headset. Whenever the workstation was in use, the room quickly got loud and hot – not ideal for exploring a new VR design," says Brandt.

"We replaced the hardware with an IGEL thin client, connected the headset and streamed the VR over Citrix. The hardware was smaller, cheaper, quieter and cooler," he continues. "And, more importantly, it's mobile. With the thin client, you can pick it up and take it anywhere."

Extending business continuity in minutes

CEVT staff no longer need to carry heavy, engineering-grade laptops back and forth to work. Even when health or circumstance force lifestyle changes, employees can continue their jobs. When a coworker suffered a life-changing illness, with the benefit of the Citrix solution, he was able to build a work-life workstyle that accommodated his condition and enabled him to continue the job he loved.

When the Covid-19 pandemic meant that 700 workers in another country (and another part of the Geely group) couldn't continue their work, the initial consideration had been how to ship high-powered laptops to individual homes – an expensive, time-consuming and imperfect solution. Instead, Brandt suggested Citrix.

"I used Citrix Provisioning Services to quickly give the subsidiary's workers access to the critical applications. We had it done in just four minutes, with no downtime for the affected engineers," he explains. Now staff in the affected country can continue their work on home PCs or other devices without compromising either security or the performance of resource-hungry applications like 3D CAD. "The biggest benefit of using Citrix is the flexibility it gives. We can provide users with whatever they need to be creative. We can look beyond limitations. With Citrix, it's fun to see beyond current possibilities."

Mattias Brandt Citrix Product Owner CEVT

"With Citrix, we can look beyond current possibilities."

In the demanding environment of CEVT's Swedish innovation center, Brandt relishes finding new ways for Citrix to support the business's skilled engineers and designers.

"Of course, security is very important for us. We need to ensure CEVT's intellectual property is protected and, using Citrix, we have no problems. Data is held securely in our datacenters and nothing is stored on the endpoint device," he says.

"However, the biggest benefit of using Citrix is the flexibility it gives. We can provide users with whatever they need to be creative. We can look beyond limitations. With Citrix, it's fun to see beyond current possibilities."

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