

Car Manufacturer Relies on VMware Horizon for their CAD/CAE VDI

(This case study is divided into two parts: this part describes the design of the actual VDI infrastructure using VMware Horizon and the design of the monitoring and reporting solution using vRealize Operations Manager. The introduction is the same in both parts)

German car manufacturer relies heavily on Computer Aided Design (CAD) and Engineering (CAE) to give them a competitive edge, design and save money on better parts and even save fuel. Until now, the engineers were using traditional high-end workstations for their CAD software. Those workstations are costly to be kept up to date. "Security is a concern when subcontractors need access to these systems" said the program manager, "data can be stolen and access is never water-tight in case a contract is terminated."

Industry

Manufacturing

Location

Germany

Key Challenges

- Provide different virtual desktop configurations for every department
- Enable secure access using two-factor authentication from two different providers

So, this company was looking for a solution to virtualise these desktops, to give engineers access to the right desktop session at the right moment without wasting time and resources and not worry about keeping locally installed software packages up to date.

"We decided that we want to move away from CAPEX intensive hardware and rather rent the environment in a pay-as-you-go model", explained the program manager. comdivision provided a best in class Desktop-as-a-Service solution with GPU support and a system architecture that provided security, availability, resource monitoring and sizing as well as reporting.

our lead architect on the case



Fabian Lenz

The VDI Challenge

Fabian Lenz, comdivision's lead architect for the VDI infrastructure on the case, knew that they would face a few hurdles during this project: "From a VDI

perspective, we had to account for several types of desktop configurations, depending on the department that was using the resources” said Lenz, “but more importantly, we had to plan for a list of engineering tools that are very resource intensive, especially when it came to GPU usage.”

The customer wanted to be able to monitor the utilization and have reporting capabilities per department. “We needed to optimize sizing and availability” said the program manager, “and we envisioned that we could proactively anticipate diminishing resources”.

The VDI Solution

Lenz and his team delivered a best-in-class solution: VMware Horizon for Desktop virtualization with a Nvidia plugin for GPU to support the extensive 3D rendering and CAD workloads. These IaaS workloads – Windows and Linux desktops – are running on two vSphere Clusters in an off-premises datacenter.

The Results

“The customer was super happy with the design!” Lenz exclaimed, and described the environment: “we set up four different types of virtual desktops, depending on the GPU config, where the departments can choose or run a mix of the four” he said, and continued to explain the security environment “we rolled out three types of access: and internal load balancer that connects to two Horizon brokers to assign desktop sessions and two external connections where two-factor authentication was implemented, either using RSA or Yubikey. The latter two connect to another load balancer that dispatches the sessions.”

“comdivision did a great job” the program manager said “and best of all, Fabian and Alain’s team finished in time and budget, we are looking forward to implementing all of the features the system promises”.

Business Benefits

- VDI-as-a-Service to reduce CAPEX
- Supported high secure infrastructure on demand.

VMware Footprint

- VMware Horizon
- VMware vSAN
- VMware vRealize Operations