Car Manufacturer Monitors their CAD/CAE VDI with VMware vRealize Operations

(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 will be laid out in a separate document. 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

- Changing needs and budget
- Off-premises hosting and support

Business Benefits

- Resource monitoring and sizing.
- Reporting on utilization and availability per department.

VMware Footprint

- VMware Horizon
- VMware vRealize Operations

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.

The Reporting Challenge

Alain Geenrits, comdivision's lead architect for the vRealize Operations integration, explained the importance of the customer's request to be able to

monitor the utilization and have reporting capabilities per department. "The customer needed to optimize sizing and availability" Geenrits said, "and they envisioned that they could proactively anticipate diminishing resources".

The Reporting Solution

Geenrits explained the solution: "with the Horizon and Nvidia plugins that we implemented in the vROps for Horizon solution, we are able to alert VDI admins to performance bottlenecks in the Horizon infrastructure and provide real-time and historical metrics on web-based dashboards for performance analytics" said Geenrits, and continued: "the admins can run what-if scenarios, where they add or remove VMs. Another feature they can use are built-in actions for issue remediation. Those are helpful to trigger for example automatic adding or removing of CPU or Memory to a VM, if certain thresholds are breached".

Geenrits and his team also developed a bunch of high-level dashboards to facilitate time-saving trouble shooting, when the customer calls the helpdesk. "It is especially important to the support team to know where the root cause of the issue is likely to be located" said Geenrits, "a quick glance at the health dashboard determines if a performance issue is caused for example by the server infrastructure or maybe the internet connection is to blame".

The Results

"We are very happy with the way Alain planned the different views and prepared the reports" said the program manager, "this way we can follow the overall health and utilization of the system and see how many desktop sessions each department has in use".

In the future, the customer can also use the detection function in vRealize Operations to alert optimization opportunities like inactive VMs or large snapshots, or test the network accessibility of loadbalancers.

"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".