

Cloud High-Availability for Automotive Supplier

Industry

Manufacturing

Location

Germany

Key Challenges

Timely implementation of the Cloud First strategy with high availability for manufacturing systems

VMware Footprint

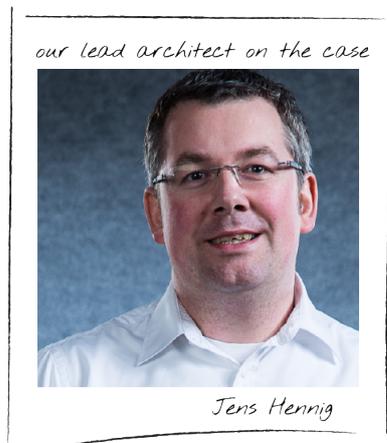
- VMware Cloud on AWS
- VMware SRM

Solution

Expansion of the on-prem data center into the cloud. High availability through stretched cluster and Site Recovery Manager for disaster recovery failover of critical VMs.

Our customer is an international automotive supplier with 1750 employees. They currently operate their own central data center and, to provide higher availability, a rented co-location for critical infrastructure workloads. The search was for a solution that reflects the company's management's new Cloud First strategy. In addition, the availability should be maintained and increased. The major challenge was on the one hand the requirement for the availability of the critical manufacturing systems and, on the other hand, the quick implementation without having to refactor the applications.

A stretched cluster configuration is usually used for such a high availability solution" says Jens Hennig, comdivision's lead architect at this customer, and describes the technology behind stretched clusters as follows: "Stretched clusters expand the vSAN cluster from a single location to two locations to ensure higher availability and cross-location load balancing" explains Hennig, "in a stretched cluster configuration, both locations are active locations. If one of the sites fails, vSAN uses the storage in the other site. vSphere HA will then restart any VM that needs to be restarted on the remaining active site".



The Challenge

Hennig explains that the customer wants to increase his already high requirements for the availability of critical systems in the future. "The use of a stretched vSAN not only increases availability, but is also high-performance and is future-proof, regardless of whether we want to host virtual machines or containers."

Now a corresponding solution had to be worked out, because running a stretched cluster configuration across two locations requires a lot of design effort, if you want to set everything up yourself.

The Solution

"...or you can use VMware Cloud on AWS" says Hennig with a wink. "VMware Cloud on AWS has the stretched cluster functionality already preconfigured and allows us to distribute stretched clusters over two availability zones and thus to obtain higher availability", says Hennig. The current workloads could easily be moved to the cloud.

Also, there are fewer costs for the witness host with VMware Cloud on AWS. In addition to the hosts ordered, a witness host with fewer functions will be added. This witness host is supposed to prevent problems like split brain in case of network partition.

"It is important to understand that this is a highly available service, but not a disaster recovery solution," adds Hennig, "the two availability zones are still in a single AWS region. So if a regional disaster takes place, this still does not secure the infrastructure. We therefore advised the customer to use VMware Site Recovery Manager (SRM) to reassign the critical machines to a different DR target. In this case initially back to on-premises, but with the gradual reduction of the on-prem environment worldwide, also to other VMware Cloud in AWS locations later on."

The Results

Due to the faster implementation without refactoring or other changes to the on-premises infrastructure, our customer was able to move to the cloud faster than planned and is evaluating the further elimination of physical data centers in two Asian data centers.