



INDUSTRY

Manufacturing

LOCATION

India

KEY CHALLENGES

Improve the reliability, availability and performance of business-supporting applications

SOLUTION

Deployed a virtualized infrastructure based on VMware vSphere to support key applications and operate across a second datacenter on the organization's premises to provide redundant processing and storage capabilities

BUSINESS BENEFITS

- Established a robust, scalable and highly available virtual infrastructure to support business-critical applications
- Reduced incidence of unplanned system downtime to zero
- Improved disaster recovery capabilities by establishing a second datacenter



Volkswagen. Das Auto.

Volkswagen India Gives its Core Manufacturing Systems a Smooth Ride

Leading passenger car manufacturer turns to VMware vSphere to run a business-supporting application required to build a car every two minutes. Implementing a virtualized infrastructure delivered the reliability and performance needed to ensure the application met the company's business needs.

Part of the global Volkswagen AG group, Volkswagen India Private Ltd manufactures passenger cars. Headquartered in Pune in the state of Maharashtra in western India, Volkswagen India employs approximately 3,500 people and operates a production plant with capacity to build up to 150,000 vehicles each year.

The Challenge

In 2010, Volkswagen India had to improve the reliability and availability of some of its business-critical applications. These applications play key roles in manufacturing some of the world's most popular, dynamic and easily recognized passenger cars.

"We needed to make sure that we could continue to deliver these vehicles to meet the demand from the market," said Rajat Kapoor, Assistant Manager – Information Technology & Process, Volkswagen India Private Ltd.

By upgrading its IT architecture, Volkswagen India could also further protect its core business systems in the event of a disaster and obtain even greater value from its datacenter hardware.

The Solution

Facing these challenges, the Volkswagen India IT team decided virtualization would provide the availability and flexibility necessary for the firm's business-supporting applications.

After examining a range of alternatives, Volkswagen India opted to deploy VMware vSphere®.

Kapoor said many other Volkswagen manufacturing plants around the world had already adopted VMware, and he was confident the vendor's technologies would meet the car manufacturer's requirements.

By deploying VMware vSphere, Volkswagen India could take advantage of products such as VMware vSphere vMotion, which allowed it to eliminate application downtime during server maintenance, and VMware vSphere High Availability, which provided protection against server or operating system failure.

In addition, the organization could provision new virtual machines as needed to meet business requirements, rather than waiting weeks or months to acquire a new physical machine.

By consolidating its physical server fleet to a small number of hosts running a large number of virtual machines, it could improve its server utilization and

“With the implementation of a virtualized server infrastructure using VMware and a NetApp MetroCluster, VW India now has a reliable and scalable IT solution to support business operations.”

Sameer Pise
Chief Information Officer
Volkswagen India Private Ltd

VMWARE FOOTPRINT

- VMware vSphere featuring
- vSphere vMotion
 - vSphere Storage vMotion
 - vSphere Distributed Resource Scheduler
 - vSphere High Availability
- VMware vCenter Server

APPLICATIONS VIRTUALIZED

- Production-supporting application
- Logistics application
- Oracle and SQL database applications

PLATFORM

- IBM System x3650 servers
- NetApp Metro Cluster storage system
- Brocade 300 SAN Switch
- Microsoft Windows Server 2003, Microsoft Windows Server 2008, Red Hat Enterprise Linux

PARTNER

- MIEL

consequently the return on its hardware investments.

The implementation process began with a proof-of-concept exercise. After six months of testing and assessment, the team was confident the technology was ready to support the plant’s critical systems.

After issuing a request for proposal, the company engaged VMware Premier Partner MIEL to deliver a business continuity solution with a near-zero recovery point objective and a near-zero recovery time objective.

MIEL had a very strong relationship with Volkswagen India and the manufacturer knew the partner had the skills in VMware technologies to undertake the project.

Working with the project sponsor on the steering committee, MIEL collaborated with VMware and the supporting hardware vendors to help ensure the project was completed smoothly, on time and within budget.

Volkswagen India’s IT infrastructure now comprises more than 60 virtual machines running on six IBM System x3650 2U servers connected to a NetApp MetroCluster storage system. This infrastructure now runs most of Volkswagen India’s business-supporting applications.

The virtualization project also involved establishing a second datacenter on the Volkswagen India campus. The IT team has been able to create an active-active configuration where processing workloads can be shifted between the two centers as required.

As well as enabling the firm to optimize its use of available resources, the configuration allows the entire infrastructure to operate in one datacenter if necessary, ensuring continued business operations in the event of a disaster.

The Volkswagen IT team regularly tests this environment by undertaking disaster recovery exercises. To date, these tests have proven the infrastructure is meeting Volkswagen India’s business requirements.

Business Results & Benefits

The Volkswagen India IT team is now confident it has in place a reliable and scalable platform that can support its operations. Since it moved a business-supporting application to the virtualized infrastructure in 2010, the firm has enjoyed high availability levels.

“We now have both hardware-level and datacenter-level redundancy,” Kapoor said. “The platform can also be scaled to meet future changes in business demand—we expect to be able to support forecast growth for at least the next three to four years.”

Volkswagen India is now also achieving greater returns on its hardware investments. The company has achieved a server consolidation ratio of 1:8 and improved utilization rates from around 10 percent to more than 80 percent.

In addition, the company has reduced the provisioning time for new servers from weeks to minutes, improving the IT team’s ability to rapidly respond to changing market demands. Power and cooling costs are down by 86 percent, significantly reducing Volkswagen India’s overall operating costs.

The continuous replication afforded by VMware virtualization and NetApp storage has reduced recovery point and recovery time objectives from 24 hours to near zero, ensuring the business can continue to operate without interruption in the event of a disaster.

Looking Ahead

Volkswagen India is confident its virtualized infrastructure will continue to provide it with a reliable, scalable and highly available platform to support future growth.

“The car market is constantly changing and we must be in a position to make quick amendments to our production to meet new demands,” Kapoor said. “With our virtualized infrastructure, I am confident that we will be able to do this.”

