



Samvardhana Motherson Reflectec (SMR) Integrates VMware Technology to Reduce Datacenter Footprint and Improve Manageability

INDUSTRY

Automotive

LOCATION

Germany

KEY CHALLENGES

- Manage server sprawl
- Improve manageability
- Optimize IT resource utilization

SOLUTION

VMware vSphere helps reduce datacenter footprint while improving the manageability and reliability of SMR's IT infrastructure, both at its primary datacenter and remote plants worldwide.

BUSINESS BENEFITS

- Improved reliability and manageability of the IT infrastructure
- Improved application availability resulting in improved productivity
- Achieved a server consolidation ratio of 16:1
- Achieved an ROI of 524 % over 5 years
- Reduced cost of ownership by 70 % over 5 years
- Achieved a payback on investment in < 0.5 years
- Reduced CO2 emissions by 3.3 million lbs. over 5 years

VMware helped SMR Automotives manage their datacenter efficiently and remotely. VMware features such as vMotion and storage vMotion have added flexibility to SMR's virtual infrastructure, improving uptime, and business continuity. More importantly, SMR Automotive realized substantial monetary benefits as well as reduced their carbon footprint with their virtualized infrastructure.

Samvardhana Motherson Reflectec (SMR) is one of the world's largest manufacturers of rear view mirrors for passenger cars. The company develops, produces, and distributes exterior and interior mirrors, blind spot detection systems, and a whole range of other automotive components to major car manufacturers in North America, Europe, Asia, and Australia with a global market share of 22%.

SMR Identifies Blind-Spots in their IT Environment

SMR's datacenter in Germany forms the hub of its IT infrastructure. It originally housed around 80 physical servers running over 50 business critical applications, such as QAD ERP (on PROGRESS database), Microsoft Exchange 2010, Microsoft SharePoint 2010, EDI, and a number of line-of-business applications. These critical applications were deployed in a clustered environment using multiple SANs on EMC storage. The non-critical applications used DAS storage. Data was regularly backed up on to a tape library, which was shipped off-site as a part of their business continuity plan.

As with many other businesses with large operations, managing several servers and applications was becoming a challenge. With the company's business and operations growing rapidly, the additional servers and hardware installed at the datacenter to support the growth was leading to manageability challenges. "The growth in the number of servers had led to a corresponding increase in power and cooling requirements, as well

as maintenance and support. Several of our servers were over five years old and required a replacement. Our technical team was anxious to find a way to better manage our server environment," explains Gaurav Gulati - Global CIO, SMR Automotive Services.

SMR has a centralized IT team that manages most of the IT remotely. A local IT team at each of SMR's plant locations works closely with the central team to provide end user support and front end IT operations. With the growing server sprawl at the datacenter in Germany, SMR was compelled to station additional IT resources in Germany to manage servers and hardware. This defeated their objective of leveraging a centrally located team to manage the datacenter remotely.

"The limited space at our datacenter and the manageability of the whole infrastructure was a real concern for us. Our priority was to first focus on consolidating the servers at the datacenter, and look at a solution which was flexible, could grow with our needs and enable us with centralized management capabilities," says Alexander Fritz - manager, virtualization

“The virtualization project with VMware has helped improve the reliability and manageability of our datacenters, and ensured 24x7 uninterrupted production for our manufacturing facilities, thereby saving significant cost for us each year,”

Gaurav Gulati
Global CIO
SMR Automotive Services

VMWARE FOOTPRINT

- 50 Virtual Machines running on 3 physical servers
- VMware vSphere 5.0 for Server Virtualization 5.0
- VMware vCenter Site Recovery Manager 5.0

APPLICATIONS VIRTUALIZED

- Microsoft SharePoint 2010
- File servers
- Domain controllers
- CAD/CAM applications
- Citrix Xenapp

PLATFORM

- Windows 2003 and 2008
- Red Hat Linux

project.

SMR's EDI (Electronic Data Interchange) application receives customer schedules, sends and receives orders, invoices, advanced shipping notices, shipping schedules, and routing carrier instructions - all in real time. Any downtime would severely disrupt the business operations. Christophe Sib - Director ERP adds, "The automotive industry works on a very stringent schedule where every minute is critical to our supply chain and business. If we don't send or receive our electronic notifications in time, our supply chain is severely impacted, which in turn impacts the business. Improving application uptime, manageability, and performance were very important for an organization like ours that has an ongoing interaction with customers and suppliers."

Gaurav and his team were confident that virtualization was the answer to most of their challenges, and they undertook a project to evaluate virtualization solutions from various vendors.

Driving ahead with VMware

As part of their evaluation, the team at SMR deployed a proof-of-concept at one of their datacenters in France, followed by Spain. Each location had approximately 15 physical servers. Less critical applications, such as file servers, domain controllers, DNS, and DHCP that were hosted locally were virtualized.

While evaluating vendors, the team closely monitored and compared the manageability, reliability, and flexibility of the solution. It was here that VMware emerged as SMR's preferred virtualization partner.

"We wanted a good return from our investments in virtualization; so we didn't cut any corners. Features such as manageability, vMotion, and storage vMotion were not upto the mark in the other vendor's solutions, so we didn't want to invest in technology which could not match what was already available from VMware," said Gaurav Gulati.

"The user experience and manageability drastically improved with virtualization. After the success of the proof-of-concept, we decided to take the next step

and virtualize our German datacenter, where most of our infrastructure was deployed with VMware. Subsequently, similar projects in India, Australia, and other global SMR location have been completed."

SMR's IT Infrastructure Mirrors its Values of Excellence and Integrating Best Solutions

SMR virtualized its datacenter in Germany with VMware vSphere 5.0 over two phases. In the first phase, all business critical and internal applications, such as vendor portals, EDI servers, file servers, licensing servers, CAD/CAM applications were virtualized. Out of 80 physical servers, around 50 servers were virtualized and consolidated to just three physical servers. As the ERP solution did not support virtualization, it was excluded from the scope of the project.

Virtualization accelerates speed and efficiency in the data center

VMware enabled SMR to meet their objective of managing their datacenter remotely and efficiently. By using the DRS (Distributed Resource Scheduler) feature, the IT team could efficiently balance workloads between the physical hosts remotely. This enabled SMR to dramatically reduce energy consumption without sacrificing reliability or service levels. In fact, SMR has projected a reduction of CO2 emissions by 3.3 Million lbs. over a 5-year period from their German datacenter itself. VMware vMotion and storage vMotion have added flexibility to SMR's virtual infrastructure. It is now very easy for the IT team to move virtual machines between shared locations improving uptime and business continuity. In case of any system failure, VMware high availability and fault tolerance provide continuous protection for applications and eliminate any chance of data loss. This has ensured that business critical applications, such as EDI and SharePoint are available 24x7 allowing operations to continue seamlessly. With VMware virtualization, it is now easier for the IT team to take a backup of the virtual machines with



snapshots and cloning features available with VMware.

In addition to server consolidation, SMR also plans to leverage the benefits of disaster recovery for their datacenter with VMware vCenter Site Recovery Manager. Gaurav Gulati confidently remarks, "We have invested in the VMware SRM licenses, although that part of the project will be deployed in our second phase. We knew that by investing in VMware virtualization, we are building a platform on which it is much easier to deploy a Disaster Recovery (DR) solution. So, while designing our architecture, we have already provisioned for DR on the same platform."

VMware virtualization has impacted SMR's operations in a positive way. SMR has realized a number of monetary benefits with their virtualized infrastructure. For example, they have projected a return on their investment (ROI) at a whopping 524 % and a reduced cost of ownership by 70 % over five years.

"With the global economic slowdown, we wanted to invest only in those projects that could give us a very high and tangible ROI. Our virtualization project with VMware has helped us achieve a very significant and fast ROI," concludes Gaurav Gulati.

Looking at the road ahead

With the numerous benefits achieved in the first phase of virtualization, SMR plans to extend the benefits to its other plants as well. Plans are on to virtualize the entire plant-level infrastructure, such as file servers, domain controllers and other internal applications. SMR is also very happy with the results achieved with a pilot of VMware vCenter Operations Manager it conducted. "Managing the infrastructure in a more efficient and proactive manner is crucial for us. We've been satisfied with the results of the pilot we ran with vCenter Operations Manager and that may be the next step for us," says Alexander Fritz. In addition, they are also considering migration of their Microsoft Exchange servers to the virtualized infrastructure.

