VMware vSphere drives efficiency at Weir India’s datacenter

VMware vSphere helped Weir India meet both their business and technical goals. The virtualized environment has not only helped save space and consolidate servers, but has ensured guaranteed uptime for applications, no dependency on any operating system, optimal utilization of resources, and improved CPU utilization by 80%.

Background

Weir has a global presence with operations in over 70 countries, employing more than 13,000 people. The company started its India operations in 2003. Weir Minerals India specializes in delivering and supporting world-class slurry equipment solutions including pumps, hydrocyclones, valves, screen machines and screen media, rubber and wear resistant linings for global mining and mineral processing, power sector and general industry. Their products have superior hydraulic designs, and are made of corrosion and abrasion resistant materials.

Weir India grew rapidly from 30 employees to 1200 employees and expanded to other divisions (power and industrial division) with acquisition of BDK valves in Hubli, India. In 2005, Weir Group established another subsidiary company, EnSci in Bangalore with an objective of providing engineering and IT services. EnSci has been instrumental in the design and manufacture of slurry equipment solutions, such as pumps, valves and hydro cyclones spanning across mining, automotive and oil and gas industries.

Challenge: Managing Growth

Managing multiple offices, a growing workforce, and a burgeoning number of applications were a few of the challenges for the growing business at Weir India.

With its datacenter in Bangalore, three additional offices located in Bangalore, another one in Hubli, and 12 sales and marketing offices throughout India, Weir’s IT department soon had its hands full, as it was responsible to provide and maintain the backbone for all divisions and employees. From its humble beginnings with 3-4 Dell servers supported by EMC CLARiiON storage, the growth demanded many additional software applications to operate productively.

Each application had to be installed on a dedicated server due to software conflicts and incompatibility of the operating system and other hardware requirements. By 2006, Weir India housed more than 120 applications in its datacenter running on nine servers.
The servers occupied significant floor space in the datacenter and it became a challenge to manage the server sprawl. The servers were also getting old and maintenance was expensive. Girish Gowda, Head - IT Infrastructure explains, “Each application resided on its own dedicated server. There were nine servers running more than 120 different applications. We wanted to consolidate the applications and servers.”

The datacenter was also rapidly running out of server resources to support development and testing requirements. “Some of the physical hardware was under-utilized, whereas some of them were over-utilized. The software development team always wanted more machines to be provisioned for development and testing,” says Girish. He adds, “There was incessant demand for additional storage, RAM and processor speed to meet requirements.”

The Solution
Proof Beyond Doubt
Weir India was an early adapter of virtualization technology and started its VMware implementation in 2008. “Fortunately, as we were aware of virtualization, we started experimenting with a free version of VMware server. We found that the VMware solution was robust and useful, enabling centralized management and rapid application development through virtual machines. We soon wanted to virtualize our production environment,” says Girish.

Weir India looked for a local partner with the expertise and capability to deliver VMware solutions. They chose Frontier Business Systems as the partner for this project. With the help of Frontier, they conducted a proof-of-concept which spanned 30 days in which they tested applications, such as Domain Controller, DB2, SQL Server, Web Server and in-house applications in the virtual environment. The proof of concept met with success. With VMware vSphere, they could quickly provision new machines and easily configure multiple applications that worked seamlessly with other software applications and hardware devices. While Weir India had experimented with virtualization earlier, they found Frontier’s virtualization expertise very useful.

Confident with the findings of the proof of concept, Weir India has moved ahead and has virtualized over 90 percent of its workload. Most of its production applications reside on 148 Virtual machines hosted on 12 Dell Servers running VMware vSphere 4.1. They have virtualized business critical applications such as Domain Controller, McAfee Antivirus software, Blackberry server, Web applications, ERP systems, Citrix applications, HRM, Tally and databases - Oracle11g, IBM DB2, and Microsoft SQL 2008. Virtualizing these applications has not only enabled Weir India to optimize the performance of these applications but has also ensured that the core applications are available 24 hours a day, seven days a week. Their IT environment is easier to manage and maintenance costs have reduced. The IT team no longer has to take the application servers off-line for maintenance. They simply move the environment to a different physical host while installing a patch or servicing the hardware.

Earlier, data backup was done on tape, which has now eased up with snapshots and cloning features available with VMware.

Business Results & Benefits
VMware vSphere has helped Weir India meet both its business and technical goals providing numerous benefits. Though they initially adopted virtualization just to save space and consolidate servers, they soon gained confidence in VMware’s capabilities and virtualized their critical applications as well.

The virtualized environment has ensured guaranteed uptime for applications, no dependency on any operating system, optimal utilization of resources, load balancing based on performance and hardware resources required, and no performance crunches.

Girish Gowda remarks, “Post implementation, Frontier provided us with detailed documentation on the configuration, customization, installation, and basic trouble shooting of the virtualized IT infrastructure. This helps any new team member get easily acquainted with the VMware deployment. Engineers who are not even a part of the team involved in the project are able to manage the setup by referring to the documentation provided. Frontier also helps address our issues making our life easier.”
“New VMs can be provisioned easily in as quickly as two hours. Earlier, we had to rent out hardware, experiment on it, then purchase new hardware and migrate the environment to the new hardware, which took up to three months.”

Girish Gowda
Head - IT Infrastructure
Weir India Private Limited

much simpler. Their contribution has been significant in making this project a grand success.”

Some of the other benefits that Weir India has achieved with their virtualized infrastructure include:

**Server Consolidation**

Currently, Weir India has 148 virtual machines hosted on 12 physical servers, thus achieving a server consolidation ratio of 12:1. The number of stand-alone physical test and development servers has reduced.

**Cost Savings**

The virtualized infrastructure has provided dramatic savings, both in terms of time and money. Weir India reduced recurring costs for additional servers, annual maintenance, power consumption, and administration. “With virtualization, our backup window has also reduced; the Recovery Point Objective (RPO) and Recovery Time Objective (RTO) has also reduced to a great extent,” adds Girish.

**Reduced server and application provisioning time**

VMware has enabled Weir India to quickly react to changing business needs. “If additional machines are required for new applications, VMs can be provisioned easily in just two hours. Earlier, we had to hire hardware, experiment on it, then purchase new hardware and migrate the environment to the new hardware, which took up to three months,” says Girish. In addition, once a project is complete, the virtual machine is available for other projects thereby optimizing server resources. Applications can be provisioned on a virtual machine in less than five minutes.

**Looking Ahead**

With the confidence VMware has been able to instill in the Weir India team, they are now planning to deploy VMware vCenter Operations Manager to automate and manage the performance of their VMware environment more efficiently.