



KEY HIGHLIGHTS

INDUSTRY: MANUFACTURING



CHALLENGE

Reduce infrastructure running costs and consolidate server infrastructure at datacenters in Malaysia and the United States.

SOLUTION

TRW turned to VMware virtualization to reduce its server footprint and save on power and cooling costs under a company-wide 'Green IT' initiative.

VMWARE AT WORK

- ESX 3.5, High Availability (HA), Distributed Resource Scheduler, VMotion, VMware Workstation and VMware Server, and VirtualCenter

DEPLOYMENT ENVIRONMENT

- VMware ESX 3.5 running on four Dell PowerEdge R900 servers, each with four Intel® Xeon® processors and 128GB of RAM
- VMware ESX 3.5 running on 14 Dell PowerEdge 2950 servers, each with two Intel® Xeon® processors and 32GB of RAM
- One Dell PowerEdge R900 server for disaster recovery
- EMC CX700, CX3-80 and CX300 storage area networks with total storage capacity of 26TB
- Host operating systems: Microsoft Windows Server 2003
- Guest operating systems: Microsoft Windows Server 2003, SUSE Linux Enterprise
- Applications running on virtual machines include: Microsoft SQL Server 2005, IBM Cognos 8, Progress 9.1E, SAP NetWeaver 2004s, SAP ECC 6.0, MySQL MaxDB 7.6, Apache Web Server

"Without virtualization, we would have had to purchase more UPS systems, server racks and cooling units in our datacenters."

Chin Kar Wai, Service Delivery Manager
TRW Global IS

TRW Automotive

TRW Automotive is a global automotive parts manufacturer and supplier. The company provides more than 40 vehicle makers with braking, steering and suspension systems, seatbelt systems, body control systems, safety electronics and engine components. It operates 209 manufacturing plants in 27 countries worldwide.

In mid-2007, TRW commenced a project to consolidate its server infrastructure at its datacenters in Malaysia and the United States to reduce operating costs. "We initiated a 'Green IT' project that would require us to reduce our server footprint and power costs associated with running these datacenters," said Chin Kar Wai, Service Delivery Manager, TRW Global IS.

TRW turned to server virtualization to meet its requirements. Today, TRW has eliminated more than 200 physical Dell PowerEdge servers across both datacenters and is running 240 VMware virtual servers on four Dell PowerEdge R900 servers and 14 Dell PowerEdge 2950 servers. One standalone Dell PowerEdge R900 is used for disaster recovery.

"This result was very impressive. We are saving between 70 and 80 percent in power costs per annum in our Malaysian datacenter alone," said Kar Wai.

The Dell PowerEdge servers run Intel® Xeon® processors with dual and quad-cores, allowing TRW to optimize its server resources. The Intel® Xeon® processor incorporates Intel® Virtualization Technology, which improves the performance of VMware's virtualization solutions.

"Intel has a clear roadmap and the Intel® Xeon® processors work well in the VMware environment," said Kar Wai.

Results

- Achieved server consolidation ratio of 20:1
- Increased CPU utilization from 40% to 85%
- Reduced server deployment times from two weeks to one to two days
- Cut total annual power and cooling costs by 70% to 80%
- Saved 50% in annual datacenter cooling costs in Malaysia alone
- Enabled one IT staff member to manage up to 50 servers
- Saved 80% on the potential cost of additional UPS systems across the datacenters