



KEY HIGHLIGHTS

INDUSTRY: ENERGY/UTILITIES

CHALLENGE

Arrest server sprawl that had started to strain ETSA's Utilities' primary data center while delivering an inexpensive, dynamic, easy-to-manage infrastructure.

SOLUTION

VMware Infrastructure 3 with failover and seamless virtual machine migration functionality reduced the number of physical servers required and ensured ETSA Utilities' information technology staff could meet business requirements.

VMWARE AT WORK

- VMware Infrastructure 3 Enterprise, featuring:
 - ESX Server 3.0
 - VMotion
 - Distributed Resource Scheduler (DRS)
 - High Availability (HA)
 - Virtual Consolidated Backup (VCB)

DEPLOYMENT ENVIRONMENT

- ESX Server running on four IBM x3850 servers with 3GHz four-socket dual-core Intel Xeon processors and 32GB RAM
- ESX Server running on one IBM x3650 server with 3GHz two-socket quad-core Intel Xeon processor and 32GB RAM
- IBM DS4500 storage array
- Guest operating systems: Microsoft Windows Server 2003 SE, SuSE Linux (SLES10)

"VMware offer a full virtual infrastructure and this is critical to enabling an organization such as ours to implement virtualization with confidence."

Keith Rutherford, Manager Information Technology
ETSA Utilities

ETSA Utilities

ETSA Utilities provides electricity distribution services in South Australia and is the fifth-largest distributor in the Australian National Electricity Market.

The organization operates three data centers with a primary data center in Adelaide hosting about 90 percent of its server infrastructure. In 2006, with server numbers growing by 20 per year, the center reached capacity and was starting to experience strain.

"We had about 200 of our 220 physical servers located in this data center," said Keith Rutherford, Manager Information Technology at ETSA Utilities. "With the center on the third floor of a six-storey building, we could not exceed weight distribution limits.

"While we superseded three ageing airconditioning units with one new high-powered unit, the heat generated by the infrastructure meant we had to keep running one of the old units to keep the data center cool," he added. "We also had to install a new 40 KVA UPS as demand on our existing 80 KVA supply was reaching the load tolerances of circuit breakers and power cables."

ETSA Utilities selected VMware server virtualization to reduce the strain on its infrastructure. "The release of VMware Infrastructure 3 with VMotion and High Availability gave us the confidence to undertake a virtualization project to reduce the load on our data center," Rutherford said. The organization is also implementing ESX Server across two or three hosts in a disaster recovery center.

Results

- Reduced greenhouse gas emissions by 105 tonnes by decommissioning a net 13 physical servers in the first stage of virtualization
- Enhanced average CPU utilization from about 1% to 30%
- Achieved a server consolidation ratio of 13:1
- Reduced server provisioning times—including procurement—from up to four weeks to 60-90 minutes
- Removed 2-2.5 tonnes in weight from data center
- Saved A\$240,000 by not having to purchase 30 physical servers

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