



KEY HIGHLIGHTS

INDUSTRY: PUBLIC SECTOR

**CHALLENGE**

To maximize resource efficiency and improve system stability, particularly for Microsoft Exchange and data-intensive GIS applications.

SOLUTION

VMware Infrastructure has greatly improved system reliability, reduced costs and IT staffing requirements, and freed time and money for software development.

VMWARE AT WORK

- VMware Infrastructure 3, featuring ESX 3.5, VMotion, Distributed Resource Scheduler, High Availability, Consolidated Backup
- VMware vCenter Server

DEPLOYMENT ENVIRONMENT

- Eight ESX servers and one vCenter Server on IBM HS21 BladeCenter quad-core servers with 2.5GHz per core and 16GB of RAM per blade
- IBM System Storage N3700 with 4TB of storage
- Guest operating systems: Microsoft Windows Server 2003, Microsoft Windows Server 2008
- Virtualized applications: Geographic information system (GIS), Microsoft Exchange Server 2007, BlackBerry server, call center management, customer service website, Microsoft Active Directory, file server and antivirus

"VMware helped us reduce the support time and monitor and maintain the system at a central location using the vCenter Server. We now think 'virtual machine first' whenever there is a new server to be installed. We also save time by provisioning new machines from template and save money by not having to purchase hardware."

Lennox Cheok, Assistant Vice President, Information and Communication Technology
Iskandar Regional Development Authority

Iskandar Regional Development Authority

Iskandar Regional Development Authority (IRDA) was formed in 2007 as the single government agency empowered to plan, promote, process, stimulate, facilitate and undertake development in Iskandar Malaysia. IRDA plays a key role in charting the development of Iskandar, which spans 2,217 square kilometers and recorded a GDP of about US\$20 billion in 2005.

To support this activity, IRDA maintains a large geographic information system (GIS) and its IT team provides high-capacity email services to staff to cope with maps, drawings and other development-related data. According to Lennox Cheok, Assistant Vice President, Information and Communication Technology, IRDA, many of the authority's 160 Microsoft Exchange Server 2007 users have large mailboxes of around 2GB. The authority commenced operations in 2007 with nine physical servers running Microsoft Windows Server 2003 or Microsoft Windows Server 2008 and one application per server. It implemented VMware Infrastructure in 2008 to expand its computing capacity without increasing physical server numbers or expanding its team of four IT professionals. IRDA was also keen to increase reliability and cut the management time required to address the impact of server breakdowns and extended delays in restoring Microsoft Exchange Server 2007. Today, IRDA runs 30 virtual machines on eight physical servers, with capacity to add more virtual machines on the existing hardware.

IRDA is planning to create a VMware-based DR site in mid-2009. This will include a 'hot' site enabling real-time recovery of critical systems and a 'warm' site for less vital systems. The organization has also been impressed by the way VMware servers can failover to alternative hardware and the responsiveness of VMware's Platinum support service. "There was a case when our email server was down and VMware responded within 10 minutes," said Cheok.

Results

- Saved RM500,000 in hardware costs alone, freeing funds for software development and ICT projects
- Ran eight virtual machines within a single physical server with resources to achieve further consolidation
- Raised server uptime from approximately 99% to 99.97%
- Maintained the same IT staffing despite tripling server numbers