

The Bulletin

Technical Tips

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Virtualization Technology will Re-shape IT Infrastructure

In a fiercely competitive auto industry, Mazda North America depends on IT to inject the same "Zoom-Zoom" that characterizes their cars into its business operations. As Mazda's IT initiatives such as increasing field managers' effectiveness grew, so did its server count – from 150 to nearly 300. "With a one-application-per-server approach and pressure to heighten system availability, all we could see was server sprawl. Complexity rose to the point where our IT staff was spending most of its time just maintaining those servers," says Jim DiMarzo, CIO of North America Operations. In addition, increasing energy costs were causing power and cooling expenses to overtake equipment costs.

To help solve their problems, Mazda turned to virtualization technology. As virtualization technology becomes increasingly affordable and more consistently provides measurable business value, more and more organizations are following in Mazda's footsteps.

Virtual Machines (VMs) - the heart of Virtualization Technology At the heart of virtualization solutions are virtual machines (VMs), which allow multiple instances of operating systems to run on the same physical server at the same time. The primary benefit of VMs is increasing the number of software applications you can run reliably on a single physical server. Historically, due to concerns over potential conflicts, applications such as email or timekeeping software have each been installed on their own physical server.

Server Consolidation – the Key to Cost Reduction Virtualization techniques help contain server sprawl. For example, virtualization technology allowed Mazda to consolidate 75 of their servers onto five powerful, energy efficient servers. It also enabled them to decrease the number of people required to manage almost 300 virtual and physical machines from eight to five. In addition, VMs have allowed Mazda to reduce the amount of power as well as data center and office space they require.

Additional Benefits – Cost-effective Business Continuity, Rapid Software

Deployment, Improved Legacy Application Management There are several additional benefits virtualization technology provides. For example, organizations can help ensure high availability for critical applications using virtualization solutions. These solutions enable them to act as if their application is supported by multiple machines without the cost, complexity and time required to support physical machine clusters.

Virtualization technology enables organizations to implement a disaster recovery platform that allows them to make all their company information available within hours in the event of hardware loss without investing in costly one-to-one mapping of production hardware to disaster recovery hardware.

Virtualization solutions also enable organizations to move or implement new applications within hours rather than days because virtualization technology helps shield software from hardware variability.

In addition, organizations can migrate legacy operating systems and software applications to VMs running on upgraded hardware for enhanced reliability and resource management.

Looking Forward – Virtualization Technology will Re-shape IT

Infrastructure Virtualization is becoming an increasingly cost-effective way, even for midsize organizations, to obtain more value from IT. We expect virtualization to be one of the most significant factors shaping IT infrastructure and operations over the next several of years. As a result, we have invested in becoming certified as a VMWare Partner. We anticipate incorporating virtualization techniques in 2008 as part of a program to reduce hardware costs and provide much more affordable disaster preparedness.

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If you have questions or concerns about your particular situation, please e-mail me at tpsnyder@xantrion.com. I will use your input to direct future columns. =====