

Virtualization

As both a preferred IBM and VMware partner, I.R.I.S. ICT can help you with your virtualization projects. With the combination of an enterprise product like VMware Infrastructure 3 and IBM hardware we can help to improve your server utilization, productivity and simplify system resource allocation with hardware and software designed for virtualization.

VMware software can virtualize servers, storage and networking, allowing multiple unmodified operating systems and their applications to run independently in virtual machines while sharing physical resources.

IBM System x servers and BladeCenter systems built on IBM X-architecture technology deliver adaptive performance, simple modularity, efficient power and cooling and proactive management capabilities, making them ideal platforms for virtualization.

With highly reliable and flexible System x servers, the IBM BladeCenter and System Storage offerings running VMware software, applications and services may be deployed in highly secure and portable virtual machines, which can be provisioned, consolidated and managed centrally, simplifying the IT infrastructure and driving down the total cost of ownership.

Advantages

Today's IT intensive enterprise must always be on the lookout for the latest technologies that allow businesses to run with fewer resources while providing the infrastructure to meet today and future customer needs. Virtualization utilizing Intel Virtualization Technology is the cutting edge of enterprise information technology. Intel is closely working with VMware, XENSource, Jaluna, Parallels, tenAsys, Virtuallron, RedHat, Novell and other VMM developers.

- Server Consolidation: It is not unusual to achieve 10:1 virtual to physical machine consolidation. This means that ten server applications can be run on a

single machine that had required as many physical computers to provide the unique operating system and technical specification environments in order to operate. Server utilization is optimized and legacy software can maintain old OS configurations while new applications are running in VMs with updated platforms. Although a server supporting many VMs will probably have more memory, CPUs, and other hardware it will use little or no more power and occupy the same physical space reducing utilities costs and real estate expenditures.

- Testing and development: Use of a VM enables rapid deployment by isolating the application in a known and controlled environment. Unknown factors such as mixed libraries caused by numerous installs can be eliminated. Severe crashes that required hours of reinstallation now take moments by simply copying a virtual image.

- Dynamic Load Balancing and Disaster Recovery: As server workloads vary, virtualization provides the ability for virtual machines that are over utilizing the resources of a server to be moved to underutilized servers. This dynamic load balancing creates efficient utilization of server resources. Disaster recovery is a critical component for IT, as system crashes can create huge economic losses. Virtualization technology enables a virtual image on a machine to be instantly re-imaged on another server if a machine failure occurs.

- Improved System Reliability and Security: Virtualization of systems helps prevent system crashes due to memory corruption caused by software like device drivers. VT-d for Directed I/O Architecture provides methods to better control system devices by defining the architecture for DMA and interrupt remapping to ensure improved isolation of I/O resources for greater reliability, security, and availability.