

CASE STUDY:

ITC Holdings Corp adopts Enterprise-wide Virtual Infrastructure



LOGICORPS
ENTERPRISING IT



ITC Holdings Corp is the fastest growing electric transmission provider in Michigan and is currently expanding services across the Midwest. With a workforce rapidly approaching 1,000, Logicorps proposed the virtualization to not only save ITC Holdings operational and hardware costs but to provide room for additional growth.

Server virtualization is one of the most significant technology trends in IT today. Managing server hardware and software as separate infrastructure components make it possible to significantly increase data center operating efficiencies. VMware is the industry standard for virtualization. VMware technology works to separate the software from the underlying hardware, allowing a single computer to run multiple operating systems and applications. Virtualization allows businesses to substantially lower IT costs and provide more flexibility in choosing operating systems.

The Logicorps team is a VMware Enterprise Partner. Enterprise Partners are required to have a higher level of expertise with the ability to assist customers, design, plan and implement both traditional computing infrastructures and virtual infrastructures. As a VMware Enterprise Partner, Logicorps is authorized to sell the complete VMware product line.

INDUSTRY

Energy & Utilities

ORGANIZATION

ITC Holdings Corp is the United States' first fully-independent for profit electric transmission company. Their business is transmitting high voltage electricity in bulk from power generating facilities across Michigan and other Midwestern regions. The three operating companies – ITCTransmission, Michigan Electric Transmission Company, LLC (METC), and ITC Midwest – serve an area of nearly 80,000 square miles in five states. Their service area has a population of more than 13 million people. They operate approximately 15,000 circuit miles of overhead and underground transmission lines, carrying more than 25,000 megawatts (or 25 billion watts) of electric power.

SITUATION

ITC Holdings was moving to a brand new \$300 million corporate headquarters building as a result of the company's explosive growth. The move offered a perfect opportunity to reduce hardware costs and improve availability.

SOLUTION

Logicorps proposed and implemented a virtualization solution utilizing VMware products which reduced the number of servers in the new headquarters facility while still allowing for rapid provisioning of new services and future growth.

TECHNOLOGY IMPLEMENTED

- Dell R900 server hardware
- Dell EqualLogic
- VMware ESX version 3.5 and Virtual Center Server
- VMware Converter for physical to virtual conversion
- Microsoft SQL back-end and all servers running Windows Datacenter 2003 or Redhat Linux



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MORE WITH LESS

The Logicorps virtualization solution by way of VMware and Dell EqualLogic drastically reduced the physical server count in the new corporate headquarters data center. The Logicorps team consolidated approximately 60 physical servers down to 13 physical boxes. At the end of the 6 month project, the total physical server count will have been reduced 78 percent, thereby reducing energy and power requirements as well as hardware costs.

The solution allows for high availability. With more physical servers comes more hardware issues and downtime as a result. Running the VMware virtual solution – and much less physical hardware – decreases downtime due to server hardware malfunctions.

It was a complex project, and with ITC Holding's move to the new headquarters, the deadline was looming. "The deadline was tight, and there were some harrowing moments, but it's a small price to pay for the end result – a highly available, scalable solution for ITC's data center," said Jeremiah Megie, Logicorps Lead Network Administrator and virtualization project lead.

ROOM FOR GROWTH

As ITC Holdings continues its growth, the Logicorps virtualization solution can allow to an estimated capacity of more than 200 virtual servers depending on the future load. Currently running 100 virtual servers with 6 percent utilization, an additional 100 servers with approximated costs of \$15,000 each, saves an additional \$1.5 million in hardware costs. The solution leaves ample room for additional growth without additional costs.

RESULTS

- Contributed to Green initiatives by saving on physical server power requirements.
- Server response is improved.
- Uptime has never been better, with less outages.
- Increased flexibility.
- Maximum redundancy.
- Maximum efficiency.
- Increased critical update functionality.
- Ability to utilize a "no cost" isolated testing laboratory.
- Reduced server configuration and setup time.
- Server images and templates are run directly off the Dell EqualLogic SAN group. Zero local storage.

MOVING FORWARD

The results of this project have been extremely positive and ITC Holdings Corp has been very pleased with the virtual solution. As a result of the successful server virtualization project, Logicorps is now building a complete disaster recovery solution (Site Recovery Manager) with another VMware implementation in combination with Dell EqualLogic technology. In addition, the firm approved a virtual desktop solution, which Logicorps managed, additionally lowering capital and maintenance costs per user for ITC Holdings Corp.



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