

National Development

"We have a long-standing relationship with Covisia – we trust our sales rep and system engineers. Covisia is one of the top Citrix partners in our geographic area, and its certified engineers have proven their expertise. They go the extra mile to provide quality technology and services."

Mark Webb, IT Director, National Development

THE CHALLENGE

Since 1983, National Development has been one of New England's leading development and investment firms. Having completed more than fifteen million square feet of projects, the company takes pride in its commitment to quality, creativity, and community. As National Development's IT Director, Mark Webb plans future IT strategies for the firm. He realized server virtualization should play a key role in the company's network infrastructure.

"Server virtualization allows several virtual servers to run on one physical server, which reduces hardware costs as well as electrical costs associated with powering and cooling the servers," Webb said. "Server virtualization also helps expand disaster recovery capabilities since it's much easier to restore virtual machines to unlike hardware than it is to restore physical servers. Server virtualization also requires less hardware to duplicate an existing network infrastructure."

Converting to a virtualized infrastructure would also help address other IT challenges at National Development. Many existing servers were aging and needed to be replaced, and demand was increasing for additional disk space/file storage. From an operations perspective, Webb realized that virtualization would allow IT to roll-out new servers faster. "Virtualization allows IT to start building servers the same day a request comes in," Webb said. "All we need to do is order a new Windows license."

After determining that a virtualized infrastructure was the proper strategy for National Development, Webb then turned to his next challenges: selecting the proper technologies to meet the company's needs and finding a solution-provider partner with a high level of expertise to deploy the technologies.

THE SOLUTION

Webb reviewed proposals from several system integrators including Covisia Solutions, which had recently converted its own network infrastructure to a Citrix XenServer virtualized environment. Covisia connected Webb with experts at Citrix to educate him on the strengths of XenServer versus other virtualization platforms.

"Citrix has made great strides with server hardware vendors to optimize the performance of the XenServer hypervisor," Webb said. "For example, XenApp handles several more clients when virtualized on XenServer as compared to other competitors. The final selling point was the cost, which literally made XenServer a low-risk investment."

Key Benefits of Covisia's Citrix XenServer and Dell Deployment

- Replaces aging servers with fewer new physical servers by using virtualization technology to run multiple virtual servers on each physical server.
- Lowers energy and cooling costs as well as carbon footprint to help make the company greener by reducing the physical server count.
- Allows for easy migration of running virtual servers from one physical server to another to allow hardware maintenance to be performed during business hours.
- Provides a central pool of fast, expandable storage to which IT can easily reassign various servers and quickly resize system and data partitions.
- Facilitates disaster recovery by allowing virtualized servers to be restored to unlike hardware and by offering the capability of adding a second SAN to a remote office and replicating live data changes over existing WAN infrastructure.

A key factor in the decision to go with XenServer was the long-standing relationship between National Development and Covisia, which began in the late 1990s. "The fact that Covisia runs their production environment on XenServer was also a big plus," Webb added. "It demonstrated their strong belief in the technology."

In addition to the Citrix XenServer 5.0 Virtualization Platform, Covisia system engineers also helped National Development select the other technology components to meet the project requirements. For the Storage Area Network (SAN) component, National Development decided to partner with Dell, which demonstrated its EqualLogic SAN and showed how to configure and manage the technology. Other technologies that Covisia and National Development deployed collaboratively included two HP Proliant servers and two Cisco Catalyst switches. Covisia worked alongside National Development to implement the entire solution, which went smoothly and progressed on schedule.

To give National Development the ability to migrate running virtual machines in production from one physical XenServer to another, Covisia located the virtual machines on the Dell SAN, which offers a central place to store files, can be accessed by the Xen environment, and is able to host any other files on the network. This allows National Development to easily expand the centralized disk storage space.

A future project for National Development involves locating another SAN in a remote office connected by a T1 network. "With the off-site SAN in place, we can execute block-level synchronization between the two SANs," Webb said. "So if something should happen to our main office, we will have a current back-up of our files on the remote SAN. And by virtualizing servers, the virtual machines can be restored easily to a new server without having to deal with the headaches of restoring physical servers to unlike hardware."

THE BENEFITS

By deploying the Citrix XenServer virtualization platform, National Development consolidated six servers from a physical environment onto two servers in the virtual environment and has the capacity to add an additional two virtual servers. "This saves on hardware costs, but it also reduces our energy costs to power and cool the servers, so virtualization has made the company greener," Webb said.

For the IT staff, the new virtualization solution has created an environment in which it is much easier to build and manage servers. The staff can now perform hardware maintenance during business hours rather than in the evening or on weekends. "We can also build one template server with all the latest service packs and then convert that server to a virtual template," Webb said. "That means the next time we need to build a server, we can start with the appropriate template and change the security identifier. We can have a new server set-up in a few minutes with the exact configuration of previous servers and all the hot fixes already installed."

The Dell SAN allows the company to maintain a central pool of storage to which IT can easily assign space to both virtual and physical servers. It is also easy for IT to resize a server disk partition that resides on the SAN even if it's a system partition. "The SAN also facilitates disaster recovery," Webb said. "We can add a second SAN to one of our remote offices and replicate changes over our existing WAN infrastructure. We can then have real-time duplication of our live data in a remote site."

Although National Development incurred a sizeable upfront cost for deploying the new servers, the switches and the SAN, the fully redundant solution deployed by Covisia has been a worthwhile investment. After the initial capital investment, National Development recycled existing Windows Server licenses and upgraded servers to new licenses at a significantly lesser cost than purchasing brand new server hardware with Windows licenses and local disk storage.

"We would have run into many more issues budget-wise if we attempted to replace the existing physical servers with new physical servers," Webb said. "We now have six new virtual servers running on two physical boxes, and I have installed a third physical XenServer myself. We also have plans to upgrade most of our remaining server infrastructure to our new virtual environment. The upfront investment in virtualization will save us significantly in the long run."

In Summary

National Development partnered with Covisia Solutions to deploy a new virtualization infrastructure and Storage Area Network (SAN) featuring technologies from Citrix, Dell/Equallogic, HP and Cisco. The solution has allowed National Development to consolidate six physical servers into two servers to reduce investments in future server hardware. Virtualization has allowed the company to reduce power and cooling costs as well as its carbon footprint to help make them greener. The solution allows IT to perform hardware maintenance while servers remain running, provides a central pool of storage to which IT can easily assign to various servers, and facilitates disaster recovery by offering the ability to restore virtual servers to unlike hardware and to add a second SAN to a remote office.

About Covisia Solutions

Covisia Solutions is a full-service IT solutions provider focused on helping organizations align their IT operations with their business to improve information access and security, reduce complexity and cost, and manage technology to meet the needs of competitiveness, growth and change. Covisia Solutions can help your IT organization deliver for business.

