Unity Builders Group (UBG) is a Calgary-based real estate management firm overseeing various homebuilder companies with a construction volume of approximately $330 million (CAD) (just over 1,200 homes) annually. There are 13 companies under the UBG umbrella, which maintains Canadian offices in Calgary, Edmonton, and Canmore and U.S. locations in San Antonio, Texas, and Colorado Springs, Colorado.

Two years ago, Unity Builders Group had hit a wall in terms of their IT infrastructure. The existing environment was made up of older, less efficient equipment (3 VMware ESX 2.5 servers running nearly 300 mailboxes on Microsoft Exchange Server 2003 in a virtual environment) which led to a lack of efficient storage utilization. Added to this was the fact that the company was experiencing significant growth (a 50% increase in the Exchange environment) over a relatively short time frame. A new technological direction was needed to improve performance and reliability while reallocating related storage, and it would take the efforts of a complete IT solutions provider to make it happen.

While Unity Builders Group was running some of their VMware servers at ESX 3.0.1 (NetApp storage powered by the FAS270 model appliance), Exchange 2003 was hosted on ESX 2.5 so they were unable to benefit from some of the newer advanced features of VMware Virtual Infrastructure 3 (VI3) such as VMotion®, DRS (Distributed Resource Scheduler), or High Availability (HA).

Long View Systems (Long View) expert technicians began by carefully evaluating UBG’s existing IT infrastructure and designed a complete solution to meet their unique business needs. This solution included a Citrix farm virtualized on a rebuilt NetApp storage environment designed to meet increased space requirements. Then, since Exchange 2007 was shipping and seemed to offer some significant benefits over 2003 (e.g. less I/O intensive), they opted to perform the upgrade and related data migration (400+ users over a two week period) following extensive research and testing. At the same time, all VMware servers were upgraded to ESX 3.0.1.

Long View Helps Improve Operational Efficiency for Unity Builders Group by Virtualizing Microsoft Exchange Server 2007

CLIENT OVERVIEW

Unity Builders Group (UBG) is a Calgary-based real estate management firm overseeing various homebuilder companies with a construction volume of approximately $330 million (CAD) (just over 1,200 homes) annually. There are 13 companies under the UBG umbrella, which maintains Canadian offices in Calgary, Edmonton, and Canmore and U.S. locations in San Antonio, Texas, and Colorado Springs, Colorado.

BUSINESS CHALLENGE

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APPROACH & SOLUTION OVERVIEW

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SOLUTION OVERVIEW

- VMware powered virtualization (® VI3, Vmotion, DRS, HA)
- NetApp storage (FAS270, Snapshot™)
- Microsoft Exchange Server 2007
- Citrix remote access
- Symantec™ Enterprise Vault™

BENEFITS

- Network improvements lower CPU utilization and improve storage efficiency
- NUMA (Non-Uniform Memory Access) optimizations improve multiple VM (Virtual Machine) performance
- Improved efficiency of IT resources resulting in lower energy costs and output
- Sustainable infrastructure capable of keeping pace with ongoing growth
- A more secure system capable of remote access
B © A R S U L T S & B E N E F I T S

This completely rebuilt data center, designed, tested and deployed by Long View using industry-leading technology from VMware, NetApp, and Citrix, was integrated, consolidated, and up-to-date resulting in significant improvements in system performance, business productivity, and service quality. The virtualized environment is now able to take full advantage of powerful VMware tools, including VMotion, DRS, and HA, which dramatically increase system flexibility and decrease the time it takes to deploy new servers and virtual machines (VMs).

The storage rebuild increased utilization efficiency while the improved network components lowered CPU utilization and optimized Non-Uniform Memory Access (NUMA) resulting in increased performance and decreased energy output and the associated cost savings. Additional benefits include reduced hardware dependencies (less maintenance or risk of failure) and the ability to recover applications and data quickly, easily, and remotely. Moreover, Unity Builders Group is now running a secure, sustainable infrastructure capable of keeping pace with ongoing growth. With Long View's ongoing observation and advice, it will continue to serve them well into the future.

<table>
<thead>
<tr>
<th>Technology</th>
<th>Function</th>
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<tbody>
<tr>
<td>VMotion</td>
<td>Allows the migration of VMs from one server to another without interrupting service</td>
</tr>
<tr>
<td>DRS</td>
<td>Provides automatic load balancing across EXS servers to ensure each one is never overloaded or underutilized</td>
</tr>
<tr>
<td>HA</td>
<td>Provides protection by automatically restarting VMs on other servers should an entire ESX server fail</td>
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NetApp’s FAS270 storage system comes with 3TB of storage capacity. Microsoft Exchange best practices suggest using RAID 10 (striping and mirroring) for back-end storage. However, mirroring—which requires double the storage capacity—can prove to be an expensive option. NetApp’s technology uses RAID-DP® to provide the high I/O performance required by Exchange at significantly less cost without sacrificing resiliency. In fact, NetApp’s Double Parity RAID implementation actually provides better resiliency than RAID 10 (RAID-DP is 163x less likely to lose data than RAID 10). NetApp’s integrated Snapshot™ technology makes it easy to capture consistent, point-in-time images of Exchange data for backup, and it puts the backup workload on the storage system rather than on Exchange servers. Snapshot is the foundation on which NetApp builds a variety of related services.

<table>
<thead>
<tr>
<th>Technology</th>
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<tbody>
<tr>
<td>SnapManager® for Exchange</td>
<td>Integrates with Exchange to coordinate actions between the Exchange server and storage to create fast, consistent backups</td>
</tr>
<tr>
<td>SnapManager for Virtual Infrastructure</td>
<td>Provides capability to back up running VMs quickly and easily</td>
</tr>
<tr>
<td>SnapMirror®</td>
<td>Creates a simple and reliable mechanism for asynchronous replication to a remote site, allowing for different storage infrastructures between sites</td>
</tr>
<tr>
<td>Deduplication</td>
<td>Works with your primary storage to eliminate duplicate copies of blocks and reduce the amount of storage required</td>
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CONCLUSION

Long View’s combination of VMware and NetApp technologies in rebuilding Unity Builders Group’s IT infrastructure for virtualizing Exchange 2007 has been a real win for UBG, allowing them greater system reliability and flexibility with strong application performance and data protection. Management of VMs as well as system resources has been simplified and transport, testing, and deployment of VMs are all performed quickly and easily at less energy consumption. VMs and application data are protected and can be recovered instantly from either a primary or remote location.

The broad range of options offered by Long View ensures a great deal of flexibility to meet UBG’s business needs now and in future. Ultimately, UBG chose Long View, not only based on their strong technical aptitudes, but on the basis of their consistent interest in working with them and the intense amount of energy they applied to the project. Long View consultants spared no effort in aggressively evaluating and implementing the logistics and operational aspects of the infrastructure refresh.

SOLUTION PARTNERS

Citrix
NetApp
Microsoft
Symantec
VMware

ABOUT LONG VIEW

Long View Systems is an IT Services and Solutions organization with over 600 technical consultants across North America. Long View provides clients with the best IT people and offers complete solutions focused around IT infrastructure, user support and technology procurement. For more information, visit www.longviewsystems.com

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