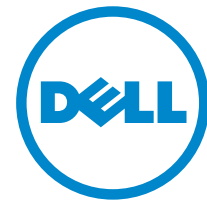


Xtium provisions Tier-1 Apps and Virtual Desktops 30 times faster with Dell EqualLogic and VMware vSphere 4.1



- Virtual Hosting And Recovery
- Cloud Backup/Recovery/Archiving
- Flexible Computing
- Virtualization



“Customers are enjoying new services that are making them more efficient and providing new opportunities for revenue.”

Tim Vogel, Chief Technology Officer, Xtium LLC

Customer Profile

Company:	Xtium LLC
Industry:	Hosting Solutions
Country:	United States
Employees:	< 100
Web:	www.xtium.com

Business Need

Xtium needed to deliver SAP “test drive” environments complete with Microsoft SQL Server databases to enable SAP customers to try and buy software, while meeting SaaS expectation of swift installation and delivery. To meet SAP’s requirements, it needed to fully provision these customers within 24 hours.

Solution

Xtium upgraded to Dell™ EqualLogic Firmware 5.0 to enable the use of thin clones—thin-provisioned, writeable copies of data volumes—and leverage direct integration with their VMware vSphere 4.1 environment with vStorage APIs. The company is now able to make copies of golden images for SAP customers as well as for virtual desktop infrastructure (VDI) project with unprecedented speed and efficiency, using optimized disk space.



Benefits

- 30x faster provisioning of clones for SAP test drive environments (2 minutes vs. 1 hour)
- 5x faster copies using Xcopy for single instances of SAP test drives and virtual desktops
- 75% reduction of CPU utilization and 95% reduction in SAN network traffic for copy process using Xcopy
- 90% savings of disk space using thin clones
- 70% more hosted virtual machines (VMs) on fewer physical resources with atomic locking
- 50% fewer volumes to manage
- 72% less time to VMotion VMs between physical servers
- 76% less time to boot multiple virtual desktops, improving customer service

Business opportunities for cloud providers are paving the way for new services to customers that go beyond cost savings and set the bar higher for speed and convenience in delivery of IT services.

“As we increase each customer storage profile with more and more storage, we’re just adding building blocks. The Dell EqualLogic platform scales easily without ripping and replacing.”

Tim Vogel, Chief Technology Officer, Xtium LLC

A case in point is Xtium, an infrastructure-as-a-service (IaaS) provider with private cloud, virtual hosting and disaster recovery offerings. With operations centers in Valley Forge, Pennsylvania and Las Vegas, Nevada, Xtium’s services feature “10x the service at 1/3 legacy costs, 100 percent recovery and 99.999 percent availability.”

Enterprise software giant SAP approached Xtium with a specific challenge: it wanted to be able to provide “test drive” environments complete with Microsoft SQL Server databases quickly and inexpensively, so that prospective customers could experience an instance of their own to test SAP software for 30, 60 or 90 days, prior to making the deployment commitment.

“This was a departure from the old model of enterprise software engagements, where you had three months to provision hardware and install the software and databases on top of it,” says Tim Vogel, CTO of Xtium. “SAP wanted to be able to tell customers ‘You can have it tomorrow.’”

Providing Robust Services With Lean Focused Staff

Xtium succeeded in filling SAP’s and its customers’ requirements and now is one of the select handful of certified VMware, SAP and Microsoft hosting providers. In an industry in which companies are often reluctant to virtualize business-critical applications, Xtium offers a virtualized SAP production hosting offering with aggressive SLAs because it is confident in the Dell and VMware infrastructure used to support their offering.

In fact, Xtium has built its business on VMware and Dell EqualLogic virtualized iSCSI SANs. An early adopter of virtualization, Xtium chose VMware because of its market acceptance and its robust set of tools for fast implementation and maintenance. As the next generation IT disaster recovery solution provider, Xtium replicates customers’ environments exactly as they are. “If the customer wants their environment back for any reason, we can just hand it back as VMDKs,” says Vogel.

The Dell EqualLogic platform for enterprise performance and scalability was also an easy choice.

“We wanted to provide a platform that we could easily support with lean, expertly focused staff and still provide the very robust services that you would find in a high-end environment—and

Technology at Work

Hardware

Dell™ EqualLogic™ PS6000E, PS5500E, PS5000X, PS5000XV iSCSI SANs

Dell PowerEdge™ R610 servers with Intel® Xeon® processors 5500 series

Software

Microsoft® SQL Server® database (64-bit Standard)

SAP CRM 7.0

VMware® vSphere 4.1

VMware View

Windows Server® 2008R2

provide it cost effectively,” says Vogel. “As we build from each customer storage footprint to one with more and more storage, we’re just adding building blocks. The Dell EqualLogic platform is a perfect fit. It provides very high-scale functionality that we’re very pleased with. It scales easily without ripping and replacing.”

New Firmware Delivers Enhanced Integration

Xtium has more than 18 Dell EqualLogic arrays, including Dell EqualLogic PS6000E, PS5500E, PS5000X, PS5000XV and some older models. The company also uses Dell PowerEdge R610 servers with Intel Xeon processors 5500 series as VMware ESX hosts.

More recently, Xtium has taken advantage of the Dell EqualLogic Firmware 5.0 with enhanced support for the VMware vStorage API. The result of more than two years of collaboration between Dell EqualLogic and VMware engineers, the new firmware delivers powerful integration and new features that help companies differentiate their services while streamlining infrastructure and making IT personnel more effective.

To provide SAP with its test drive environments, Xtium took full advantage of the support that Dell EqualLogic Firmware 5.0 provides for the VMware Xcopy API as well as Dell’s thin clone capability in the new firmware. The company also uses the same enhancements in their hosted virtual desktop infrastructure (VDI) offering, which customers use to increase access and as a disaster contingency.

30x Faster Provisioning Of Test Drive Environments

“For projects like virtual desktops and the SAP test drives which copy a single golden image, the EqualLogic thin clone technology is powerful,” says Vogel. “It provides 30 times faster cloning capability without requiring extra disk space for anything but incremental changes to the clones. The Xcopy API functionality is a huge benefit when we need to clone one-off virtual machines to bring up additional environments for customers. Not only does it offload the task from the server to the storage and thus reduce the stress on the server, it also performs the task much faster because it’s copying directly from the storage. We’re super happy with both of the new additions.”

“We’re seeing about a five-to-one benefit on Xcopy in speed with the new Dell EqualLogic firmware,” Vogel continues. “The CPU utilization for the copy process is reduced by 75 percent, and SAN network traffic is reduced by 95 percent. In addition, we’re going from an hour to make a full copy of an environment, down to literally two minutes to make a thin clone for an SAP test drive or VDI instance. We can do full provisioning of a test drive environment 97 percent faster than we could have previously. And with the thin clones, we use much less disk for the test drives—50 gigabytes versus 500 gigabytes, saving 90 percent of our disk space.”

Xtium is also making good use of the Dell Multipath Extension Module (MEM) for VMware vSphere 4.1, which provides multiple redundant network connections to Dell EqualLogic iSCSI arrays and introduces additional

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advanced capabilities such as automatic connection load-balancing without any additional configuration.

Ratcheting Up Profits

Atomic locking in the EqualLogic 5.0 Firmware is another important feature for Xtium. "Traditionally, locking issues made us concerned about the number of VMs we are putting on any one LUN," says Vogel. "Atomic locking in the new firmware reduces locking overhead by more than 76 percent, so we're much less concerned. We can put more hosted VMs on fewer physical resources and realize more profit, while reducing the number of volumes to manage."

Improved scaling with Virtual Machine File System (VMFS) configuration also makes it possible to put more VMs on a VMFS volume. "In some cases, we've been able to scale from 10 or 12 VMs per VMFS volume up to as many as 64 VMs per VMFS volume to more effectively leverage the host cost profile," says Vogel.

VMotion is a critical feature of VMware for Xtium, since it enables the managed hosting provider to move virtual servers between physical machines without interrupting users when performing maintenance. "With the new firmware's enhanced integration with VMware vStorage APIs, moving a server using VMotion takes 72 percent less time," says Vogel.

In addition, the time it takes to boot multiple desktops in a VDI is reduced by 76 percent, according to Vogel, so management of virtual desktops also takes less time.

Achieving Dynamic Growth

Xtium is benefiting from the automatic load balancing features of Dell EqualLogic storage, especially for its VDI and SAP test drives. "It's very valuable to be able to have the data that's needed frequently on the very fast SAS disk and the least-recently used data on less-expensive SATA disk," says Vogel. "Having the self-management between the two tiers is a big benefit to us."

The new enhancements to the EqualLogic firmware come at no extra charge to Xtium, and the company has been happy to take advantage of the built-in software features that Dell EqualLogic iSCSI SANs have always provided.

Thin provisioning of storage volumes, for example, has been available in the EqualLogic feature package for years, although thin clones are a new feature. "We use just-in-time provisioning to defer capital expenditures for customers avoiding over-provisioning storage to customers; by closely monitoring usage we can add storage capacity only when it's truly needed," says Vogel. "Growth events are only metered as customers cross thresholds without anyone having to buy all the storage upfront on a just-in-case basis."

The combination of the new technologies is allowing Xtium to deliver new and enhanced services. "Customers are enjoying services that are making them more efficient and providing new opportunities for revenue," says Vogel. "And the new Dell EqualLogic firmware enables us to grow dynamically, so it's a win-win."



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