



NetApp®
Go further, faster

Success Story

DedicatedIT Builds Cloud on Citrix/NetApp for Enterprise-Class IT Services to SMBs



KEY HIGHLIGHTS

Industry
IT services

The challenge
Implement affordable yet high-performance, high-availability storage for internal and external cloud-based IT services.

The solution
Standardize on NetApp® unified architecture solution for efficiency and to maximize uptime of cloud-based services built on Citrix virtualization platform.

- Benefits**
- Offer enterprise-grade IT services at an SMB price point
 - Use nearly 1TB less capacity
 - Manage 6TB in six hours per month
 - Provide nondisruptive scaling
 - Implement one-rack data center
 - Adapt affordably to growth and opportunity

CUSTOMER PROFILE

DedicatedIT provides premium IT network support and consulting to small businesses of 10 to 150 employees. The company offers network support services for businesses with minimal or no IT staff. A Gold Certified Microsoft Partner, a NetApp Gold VIP, and a Silver Citrix Solution Advisor, DedicatedIT specializes in design, implementation, and support for server and desktop virtualization, application delivery, storage area networking, and business continuity solutions. (Source: www.dedicatedit.com)

THE CHALLENGE

Implement affordable yet high-performance, high-availability storage for the company's HostMyIT cloud-based IT services

The DedicatedIT client base spans a diverse set of professional service organizations, from real-estate and interior design businesses to medical, legal, and accounting firms. The common denominator that brings each to DedicatedIT is the need for reliable yet affordable IT services. Adam Steinhoff, CEO and president of DedicatedIT, explains, "To keep their businesses running, our customers require 24x7 or nearly 24x7 IT services availability. But unlike larger companies with corporate-size IT organizations and budgets, these businesses typically operate with very limited staffing and financial

resources. The challenge for us is to deliver enterprise-grade IT services without the enterprise price tag."

To help businesses address this challenge, DedicatedIT offers an IT-as-a-service (ITaaS) solution—what Steinhoff calls an "instant IT department." Sharing IT infrastructure resources, including pooled storage, can help businesses reduce costs while expanding access to IT services. DedicatedIT also offers consulting services to supplement customers' in-house resources. In both business models, DedicatedIT's behind-the-scenes services enabler is a cloud infrastructure built on a Citrix® XenServer™ virtualization platform. "We're ultimately a subscriber of our own service," comments Steinhoff. "So whether it's an external cloud client using Microsoft® Exchange or one of our own network architects performance-testing a new configuration, they're both running the process on our cloud infrastructure."

Steinhoff points out that enterprise-class storage is critical to maintaining availability of cloud-based services. "When we started our business some 10 years ago, it was enough to utilize a low-end storage solution for our own in-house services that were typically not mission critical. Today, the applications we support are essential to

“We estimate the savings from utilizing NetApp deduplication and thin provisioning technologies in our XenServer environment to be nearly 1TB.”

Adam Steinhoff
CEO and President, DedicatedIT

client businesses, so uptime is paramount. Additionally, with the increased density and complexity of our virtual-server environment, we need more than a bucket of hard drives—we need storage management tools that can help us maximize utilization and efficiency, as well as availability. At the same time, DedicatedIT and its customers are small businesses, so the solution must be affordable.”

THE SOLUTION

Standardize on NetApp for efficiency and to maximize uptime of cloud-based services

Steinhoff says that of the storage systems evaluated by the DedicatedIT team, only NetApp met all requirements with a differentiating combination of administrative and storage efficiencies, performance and availability, and economy. “The NetApp solution also gives us the benefit of deep integration with the XenServer platform. That allows us to automatically leverage advanced NetApp storage technologies.”

For the DedicatedIT cloud infrastructure, a NetApp FAS2050 system provides 6TB of SAS capacity. XenServer storage repositories are accessed via FCP, databases, and other application data via iSCSI, and file shares are accessed via the CIFS protocol. The FAS2050 currently provides storage

resources to three physical servers running 30 virtual machines.

The cloud infrastructure supports an array of Linux® and Microsoft Windows®-based applications, including all of DedicatedIT’s business and application-support systems, such as Citrix XenApp™, Citrix EdgeSight® application performance monitoring software, clustered Microsoft Exchange and SQL Server® systems, Office SharePoint Server®, and Office Communications Server. External clients access programs such as Intuit QuickBooks and a broad array of Microsoft-branded applications, including Microsoft Exchange Server, SQL Server, Office, and Office SharePoint Server.

DedicatedIT leverages Citrix Essentials™ for XenServer. Citrix XenServer also provides the Citrix Virtual Storage Manager to streamline the configuration and provisioning of the virtual machine storage by taking advantage of NetApp storage advanced features, including Snapshot™ technology, cloning, thin provisioning, and data deduplication.

BUSINESS BENEFITS

The cloud from both sides now: enterprise-class IT services to internal + external clients

HostMyIT, the cloud infrastructure built on the XenServer platform and NetApp storage,

enables DedicatedIT to affordably deliver enterprise-class application performance and availability to both internal and external clients. The NetApp solution integrates numerous high-availability features, including the FAS2050 active-active controller configuration and RAID-DP®. DedicatedIT also leverages NetApp Snapshot point-in-time copy technology to make frequent local backups of virtual machines, application data, and user file shares. It also uses the technology for replication to a second, smaller NetApp system to enable within-hours recoverability in the event of a primary system failure.

NetApp high-availability features in conjunction with Citrix XenMotion help DedicatedIT protect against hardware failure, minimize maintenance downtime, and improve recoverability. Steinhoff notes, “With the size of our business and the type of applications we’re running, it’s no longer acceptable to bring down an entire system for overnight maintenance. Most of our clients require around-the-clock access to IT services to maintain business continuity. This infrastructure allows us to deliver the uptime clients expect and deserve.”



Not head-in-the-clouds technology: measurable efficiencies and SMB affordability

Steinhoff emphasizes that the NetApp solution helps DedicatedIT deliver enterprise-class services at a price point geared to small and mid-size businesses (SMBs). “The NetApp FAS2050 serves as a powerful entry system that can scale seamlessly with our business needs. When we grow beyond the 104TB capacity that this system supports, we can easily move to another within the same product family. The 2050 is actually our second-generation NetApp solution, so we know firsthand the benefits of being able to do nonforklift upgrades to larger NetApp systems that share the same architecture and Data ONTAP® operating system.”

DedicatedIT realizes additional savings in storage efficiencies. “We estimate the savings from utilizing NetApp deduplication and thin provisioning technologies in our XenServer environment to be nearly 1TB,” maintains Steinhoff. “Those capacity savings have a cascading effect when you consider the reductions that can then be realized in data center space and energy usage. Leveraging the XenServer platform and NetApp storage, we’re able to run our entire business from a single rack.”

In terms of administration, the direct integration between XenServer interfaces and the rich capabilities of NetApp storage enable the XenServer administrator to easily automate routine tasks, including the creation of storage repositories with predefined specifications such as RAID type, provisioning type (thin or default), deduplication (on/off), and protocol. Steinhoff adds, “Other storage systems give you a place to store files, but NetApp actually helps unlock the more advanced functionality of XenServer. And the NetApp solution is inherently easy to manage. Factor in the benefits of the SnapManager® software suite and overall you can achieve considerable time savings. We currently spend fewer than six hours a month managing 6TB of NetApp storage.”

Silver linings: agility, business flexibility, and competitive advantage

“We’ve been doing cloud computing since before it was called that,” observes Steinhoff, before commenting that DedicatedIT has been delivering applications to external clients for more than five years. Building that infrastructure on the XenServer platform and NetApp storage has not only enabled DedicatedIT to deliver enterprise-grade IT services to customers, it has also allowed the company to establish and develop its business with a significantly lower capital investment than would have been possible

with a traditional server and storage infrastructure.

“At the same time,” continues Steinhoff, “we have tremendous agility to bring on new clients and applications. The XenServer-on-NetApp infrastructure enables within-minutes server and storage provisioning. Without the replication efficiencies of NetApp, we’d be wasting a lot of time and capacity generating physical copies of data and virtual machines.”

In contrast, DedicatedIT can leverage NetApp FlexClone® technology, for example, to very quickly create both dev/test and production virtual machines. And, the common storage blocks among the copies do not occupy additional capacity. The technology helps DedicatedIT realize storage savings and improve in-house IT staff productivity, and external clients benefit from fast turn-on of new application services.

Steinhoff believes that the cloud infrastructure built on the Citrix/NetApp solution helps level the playing field among managed-services providers. “We’ve built our cloud using the same enterprise-class virtual-server and storage technology that many of the largest providers use. But we’re not forcing our clients to use specialized applications—they can use the same Microsoft-branded applications they already use.

“Other storage systems give you a place to store files, but NetApp actually helps unlock the more advanced functionality of XenServer. And the NetApp solution is inherently easy to manage. Factor in the benefits of the SnapManager software suite, and overall you can achieve considerable time savings. We currently spend fewer than six hours a month managing 6TB of NetApp storage.”

Adam Steinhoff
CEO and President, DedicatedIT

Furthermore, as a smaller, local provider, we can sit down face to face to discuss their needs and challenges and ultimately develop a right-sized solution.

“We’ve also had excellent technical support from NetApp, and can pass that knowledge on to our customers. NetApp is a storage company offering a storage product—I’m a big fan of companies that do what they do best, all day long, every day. The NetApp solution is proven, easy to administer, and backed by NetApp expertise. Together with the Citrix platform, NetApp has allowed us to build a very flexible IT services model that delivers efficiencies, high service levels, and cost savings. As a result, DedicatedIT is able to present a competitive offering of enterprise-class IT services affordably priced for the small or mid-size business.”

SOLUTION COMPONENTS

NetApp products

NetApp HA FAS2050 system
NetApp Snapshot, deduplication technologies
NetApp FlexClone, SnapManager for SQL, SnapManager for Exchange, Single Mailbox Recovery software
NetApp SupportEdge

Protocols

NetApp NAS/SAN

Environment

Microsoft Windows
Citrix XenServer, Essentials for XenServer



www.netapp.com

NetApp creates innovative storage and data management solutions that accelerate business breakthroughs and deliver outstanding cost efficiency. Discover our passion for helping companies around the world go further, faster at www.netapp.com.

© Copyright 2010, NetApp, Inc. All rights reserved. No portions of this document may be reproduced without prior written consent of NetApp, Inc. Specifications are subject to change without notice. NetApp, the NetApp logo, Go further, faster, Data ONTAP, FlexClone, RAID-DP, SnapManager, and Snapshot are trademarks or registered trademarks of NetApp, Inc. in the United States and/or other countries. Microsoft, Windows, SQL Server, and SharePoint are registered trademarks of Microsoft Corporation. Linux is a registered trademark of Linus Torvalds. All other brands or products are trademarks or registered trademarks of their respective holders and should be treated as such. CSS-6263-1209