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## Success Stories

# Burt's Bees Reduces, Reuses, and Recycles Its IT Resources with VMware and NetApp



### KEY HIGHLIGHTS

#### Industry

Natural personal care products

#### The challenge

A more sustainable IT approach to resource usage was needed to address Burt's Bees' rapid company expansion and 100% annual data growth while still staying congruent with Burt's Bees' "greater good" company model.

#### The solution

VMware® server virtualization and NetApp® storage

#### Benefits

- Reduced data storage capacity needed for virtual machines by more than 50%
- Gained greater use per VMware ESX server
- Achieved shorter and more reliable system backup and recovery

### CUSTOMER PROFILE

Given its Maine-based founders' humble start in 1984 pitching environmentally friendly honey and candles, Burt's Bees has undergone quite a metamorphosis in the past 20+ years. Today, the company has changed not only its location (to North Carolina), but has evolved into one of the most successful natural personal care product manufacturers in the world. Yet, even with 2007 retail sales topping \$250 million, Burt's Bees remains true to its original—and growing—beliefs: to fulfill "the greater good" with products, processes, and philosophies that are not only good for consumers and the company's employees, but also good for the environment.

### THE CHALLENGE

#### Adapt to expansion and rapid data growth by reducing IT waste, maximizing and reusing IT resources

When Tres Vance, manager of Technical Infrastructure, joined Burt's Bees it didn't take long to identify growing information demands that would require a new way of thinking. Instead of using a traditional computing model that would throw more hardware at a problem and introduce more waste in the IT environment, Burt's Bees chose to build a framework for sustainable computing that would mesh more closely with Burt's Bees' abiding "greater good" philosophy.

Data had been growing at 100% year over year, prompting the need to buy more servers with direct-attached storage (DAS). Yet, Tres saw many examples in which server-attached storage, with its associated power requirements, was either being severely underutilized (as was the case with the company's Microsoft® Exchange Server) or overutilized (the company's ERP system consistently operated at capacity, with routine monthly growth of 15GB to 20GB).

As he looked at Burt's Bees' business growth plans and the anticipated increase in new applications, new workflows, and servers, Tres decided that a more sustainable approach to technical infrastructure was in order. To help reduce the server footprint and use fewer server resources, Burt's Bees began to move most of its core applications into a virtual server environment based on VMware. On the storage side, Tres also knew that shared storage would work best with VMware and enable better use of storage resources than what he'd seen with DAS.

Unfortunately, the company's first efforts to couple VMware with high-capacity, cheaper ATA-based shared storage soon began to fall short in performance and scalability, just as the company's VMware installation began expanding to the enterprise level. It was then that Tres contacted NWN Corporation, a storage reseller and partner of NetApp and

“Burt’s Bees reinforces sustainability throughout the organization, including IT... We decided to look for a storage vendor that was sustainable in its own right and had technology that thought about the environment first. That’s how we came across NetApp. We chose NetApp because its processes and culture aligned pretty closely to our own.”

Tres Vance

Manager of Technical Infrastructure, Burt’s Bees, Inc.

other vendors, in order to help identify storage vendors whose technological and business approach offered the best fit for Burt’s Bees. Tres was hopeful his next choice of shared storage would not just work well with VMware but also help his team implement faster, more robust off-site backup and recovery in the event of a disaster.

#### THE SOLUTION

##### **Combine VMware with NetApp to gain more efficient use of both servers and storage**

In discussing NetApp with Burt’s Bees, NWN included a tour of NetApp’s data centers, along with a detailed discussion about how NetApp’s core storage system and data reduction technologies, including NetApp data deduplication, NetApp Snapshot™, and NetApp flexible volumes, could not only successfully support the needs of Burt’s Bees’ VMware environment but also help reduce the company’s physical storage footprint.

Just as important to Tres as the technology fit was the overall philosophy and approach a vendor like NetApp took toward sustainability and reducing its own impact on the environment. Tres was impressed with what he saw and heard. “We looked at NetApp and saw their ISO 14001 certification and the way NetApp’s data centers were designed for airflow and cooling in order

to minimize the environmental impact of the systems. It was very powerful for us,” he said. “There was a lot we wanted to emulate. It really reinforced our own tenets of ‘the greater good’ being able to evaluate the vendor for what they do in their own data centers, their own environment, and their own operations.”

After taking NetApp’s system for a few test drives, Tres became increasingly convinced that NetApp was the right choice. “We threw a lot of random and sequential [data] I/O at it, including putting an untuned Microsoft SQL Server™ with ungodly amounts of I/O against it. We really tried to crush it. NetApp’s system wasn’t challenged in any way,” he said. “We tried to crash the server and did whatever we could to tie up the storage ops per second. Still the processors on the VMware ESX server held. Everything was optimal. Even the untuned SQL Server just behaved. That gave our business applications and business groups a lot of confidence in the direction we had gone both with the virtual server platform and with the NetApp storage platform.”

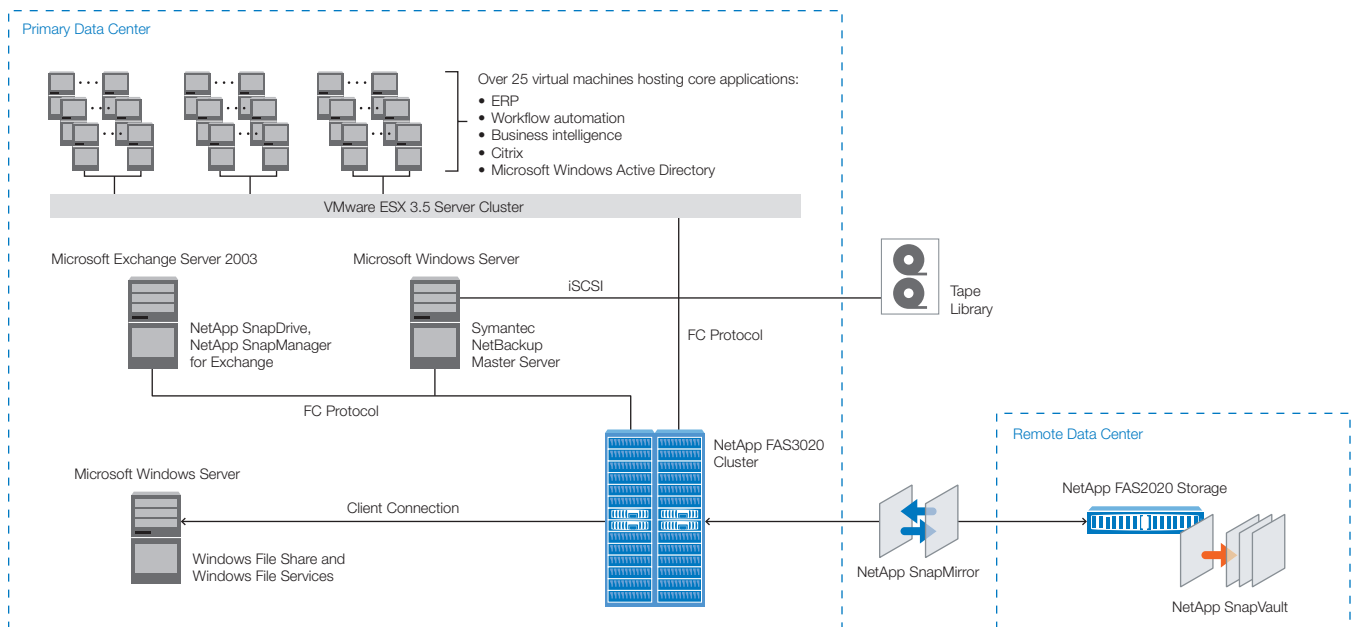
Burt’s Bees implemented three NetApp storage systems. Two NetApp FAS3020 clustered systems are used at its primary site to support many of its core production applications. A third NetApp FAS2020

system is responsible for maintaining a synchronous copy of the 3020 systems’ production data via NetApp SnapMirror® and for ensuring easy failover and failback capabilities in the event the primary site’s data ever becomes inaccessible.

Core applications supported by the NetApp FAS3020 cluster include over 45 virtual machines balanced across three VMware ESX servers. The NetApp 3020C systems also support a file share with file and print services, a Symantec™ NetBackup™ Master Server, and the company’s Microsoft Exchange Server environment.

On the data protection side, Burt’s Bees now incorporates not only SnapMirror but NetApp Snapshot technology for Microsoft Exchange, along with SnapManager® for Exchange and NetApp SnapVault® for faster backup to primary and secondary storage, rapid brick-level recovery of individual mailboxes, and mailbox messages.

Since implementing the system, Tres reports that his efforts to upgrade system components have been flawless and completely nondisruptive to production operations. Likewise, unlike past experiences with other vendors who often leave you on your own when it comes to support or troubleshooting, Tres uses the word “proactive” to describe



**Figure 1) How Burt's Bees uses its NetApp storage.**

A NetApp FAS3020 clustered storage system is in use at the company's primary data center to support many of Burt's Bees' core applications running under VMware. NetApp storage is also used to support three other Microsoft Windows servers running Microsoft Exchange, file services, and a Symantec NetBackup Master Server. Using NetApp data deduplication and flexible volumes functionality, Burt's Bees has been able to make its storage capacity go three times farther than competing systems. A second NetApp system, a NetApp FAS2020 device, is installed at the company's remote site. NetApp SnapMirror is used to maintain a constant, off-site copy of primary data sets. Other NetApp data protection technology is also in use, including NetApp SnapManager for Exchange and SnapVault.

the consistent high quality of NetApp's technical support. From its clear Web-based upgrade instructions to NetApp's habit of placing a call to check on questionable operations, Tres has only positives to report about NetApp.

## BUSINESS BENEFITS

### At least a 50% reduction in duplicates and storage capacity needed to support each VM

Tres has been especially pleased with how much extra storage capacity he's been able to reclaim for VMware through the use of NetApp data deduplication. Estimating a savings of at least 50% on capacity reclaimed when allocating new or current virtual machines, Tres explains the impact as follows: "One of the big technologies that NetApp has that others either don't have or do in a different way is primary storage deduplication. When I allocate a virtual machine in the VMware world, that means I can have 10 machines with the same operating system drive. NetApp allows me to basically create one copy of that operating system drive and nine other shortcuts or pointers," he said. "When you're growing a business and adding new servers and new workflows, you need to know you're not going to constantly be doing a one-to-one for all the storage. That can create a lot of

heat in your data center you would then have to displace with bigger air handlers. That whole environment snowballs pretty quickly."

In contrast, Tres said NetApp data deduplication, when combined with NetApp flexible volumes, allows you to store more data with less storage capacity required. After reclaiming the storage space with deduplication, you can subsequently shrink each NetApp virtual storage volume. With deduplication alone, Tres estimates capacity on the NetApp system is equivalent to roughly three times the capacity that would be required on a competing storage system in order to support his plans to move all of Burt's Bees' server applications to VMware over the next 12 months. NetApp's deduplication benefits also extend past VMware, providing an estimated average reduction of 40% of duplicate data on other systems, such as the company's file server. By moving Burt's Bees' file server onto the NetApp system, Tres estimates deduplication will allow him to reclaim roughly 300GB to 400GB for every terabyte of storage found on the original server.

### Greater use per ESX server via NetApp off-host processing of duplicates and backups

Noting the performance issues with his prior shared storage system, Tres is happy that the current NetApp system is ready to

support even more virtual machines than he currently has balanced on his existing three ESX servers. "With the other system, once we got past our tenth virtual machine, performance became problematic with all the VMs trying to hit the disks in different places. We haven't had that problem with NetApp," he said.

Additionally, after being quickly won over by the success of his company's SnapManager for Exchange installation, Tres is also excited about future plans he now has in place to expand the use of SnapManager to VMware with the help of NetApp SnapManager for Virtual Infrastructure. He anticipates such a move will supplant his current virtual machine backup processes using VMware Consolidated Backup (VCB) with Symantec NetBackup for VMware. In place of VCB, he anticipates that using NetApp SnapManager for Virtual Infrastructure will lead to a faster, completely off-host backup process in which NetApp Snapshot can back up changes to one or a set of virtual machines in a few seconds, instead of the typical hour or so it currently requires. He's also excited about the speed at which he can recover the data.

"If you think about it, NetApp Snapshot essentially allows you to take a whole volume and take a snapshot of it without a performance hit to the host," Tres explained.

“NetApp’s data deduplication, storage for virtualized environments, and flexible volumes have really meshed well with both VMware and Burt’s Bees. We anticipate virtualizing all of our physical servers within the next year. We wouldn’t be able to do that with another storage platform. We’d have to have at least three times the storage we have now with NetApp.”

**Tres Vance**

Manager of Technical Infrastructure, Burt’s Bees, Inc.

“If that host is a VMware ESX server hosting 20 to 30 virtual machines, to be able to do 20 or 30 virtual machine snapshots or backups at one time is just tremendous. It means you have off-host capabilities for recovery that let you create instant, point-in-time copies of each VM. That’s very powerful. Without impacting the host, we can then use other technologies like NetApp SnapVault to completely offload backup from our production machine. There would be no increase in CPU or disk. NetApp Snapshot takes care of that. To now be able to coordinate that with VMware gives you a much better recovery point than some of the other solutions that are out there.”

#### SOLUTION COMPONENTS

##### NetApp Products

NetApp FAS3020C clustered storage system

NetApp FAS2020 storage system

NetApp deduplication

NetApp flexible volumes

NetApp Snapshot and SnapRestore® software

NetApp SnapManager for Exchange

NetApp SnapManager for Virtual Infrastructure

NetApp SnapMirror

NetApp SnapDrive®

NetApp SnapVault

##### Protocol

IP SAN (for backups and Microsoft Exchange)

FC SAN (for core production database applications)

NAS (via CIFS) (for file services and file shares)

##### Environment

Applications: Microsoft Office-based applications, Microsoft Exchange, Microsoft SQL Server, and other database applications, including ERP, financials, warehouse management applications, and business intelligence applications

Operating System: Microsoft Windows® servers, Citrix for virtual workstations, VMware for server virtualization

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