Hewlett Packard Enterprise

Case Study

HTC, Inc.

Telecommunications leader transforms storage management with HPE Storage Operations Manager

Objective
Establish end-to-end visibility, centralized management of multiple storage environments

Approach
Deploy HPE Storage Operations Manager software

IT Matters
- Gain end-to-end, near real-time, comprehensive dashboard
- Strengthen storage management, capacity planning
- Deploy solution in <1 hour; achieve value in minutes
- Speed discovery by 8x through automation

Business Matters
- Improve utilization; delay future purchases; reduce costs
- Plan proactively to meet peak demands
- Answer manager, project planner questions quickly
- Free budget, IT staff time for innovation

Horry Telephone Cooperative, Inc. (HTC), based in Myrtle Beach, S.C., is the largest telecommunications cooperative in the United States. Located in coastal hurricane territory, HTC needs robust disaster avoidance, and also aims to prevent business interruptions from more-ordinary issues such as power outages. HTC's IT infrastructure includes solutions from Hewlett Packard Enterprise (HPE)—HPE 3PAR StoreServ Storage supporting seamless failover between two data centers; HPE StoreOnce Backup; and HPE StoreVirtual Storage for client and server virtualization with VMware® vSphere®. HTC implemented HPE Storage Operations Manager (SOM) for granular, end-to-end, near real-time dashboard visibility and centralized control over its storage environment. Results include faster problem resolution; better capacity planning; and IT freedom for innovative projects including desktop virtualization.

A hurricane rips through the South Carolina coast. An air conditioner malfunctions. A slow application leaves agents waiting for information to serve their customers. HTC's IT infrastructure is built to withstand both large-scale disasters and garden-variety failures. HPE 3PAR StoreServ Storage enables seamless failover between two datacenters. HPE Storage Technology Services in 2013 assisted with a four-week consulting project for an HPE 3PAR StoreServ upgrade. HPE StoreOnce and HPE Data Protector provide backups. HPE StoreVirtual Storage enables client and server virtualization with VMware vSphere. It all runs on HPE ProLiant rack mount and blade servers, using HPE networking, with HPE OneView software easing server management. "We plan for large natural disasters but sometimes it's the small things that get you, something as simple as a power outage if your generator doesn't kick in on time," says Philip Sellers, senior system

administrator at HTC. "With our HPE solutions, we're well positioned to handle any sort of disruption."

Enhancing storage visibility and control

Through its extensive fiber optic network, HTC offers high speed Internet, digital cable, digital wireless, home security, local and long distance telephone, and advanced business services in Myrtle Beach and surrounding areas. Sellers is part of an HTC internal IT team that handles ISP services and virtualized back-end applications, supporting operations including order taking, finance, and customer-billing portals. Staying with Hewlett Packard Enterprise across platforms brings ease of integration, Sellers says. "We are mostly a one-vendor HPE shop. I know that end to end, from HPE 3PAR StoreServ to the HPE ProLiant servers and the HPE SAN switches, it's all been thoroughly tested to work together with VMware in supported configurations."

"HPE SOM gives us consolidated, near real-time access to storage-environment information. The dashboard keeps us informed at a high level with the ability to drill down into more detail."

– Philip Sellers, senior system administrator, HTC

HTC purchases HPE solutions through Charlotte-based High Performance Technologies, Inc. and stays in close touch with Hewlett Packard Enterprise development teams. The telecommunications firm already had strong management of its storage environment using HPE Storage Essentials, but wanted better cross-platform visibility and control. Sellers shared this feedback with the creators of the next-generation software, HPE Storage Operations Management. "A lot of times as a user, you look at a product and say, 'I wish it did this or I wish it did that,'" he says. "As early evaluators of HPE SOM, we were able to influence its development."

HPE SOM brings next-generation storage management

HPE Storage Operations Manager is a centralized heterogeneous storage resource management solution that enables visualization of physical and virtual storage assets with storage path awareness, reporting and analysis to drive optimization and performance across the storage infrastructure. The solution centralizes usage policies, trends historical data, and forecasts future requirements to meet objectives and business strategies.

"Before HPE SOM, we had multiple storage consoles we needed to manage from, different places to check," Sellers says. "HPE SOM aggregates our total environment—our primary and backup arrays—so that we can get a full picture of what's going on. We can drill down and see at specific levels how things are performing, what our utilization trend is, and how much time we have until a device or storage pool is full."

Easy implementation, fast time to value

HPE Storage Operations Manager was easy to deploy with just a few clicks, Sellers says, and it started delivering results within minutes. "HPE SOM delivers an extremely fast time to value. Installation takes less than an hour including initial configuration. Importantly, the software is customer-installable without outside services. Initial discovery of devices starts immediately after adding the connection information and data becomes available in a couple of minutes after collections kickoff. Within 24 hours, SOM begins to produce analytic data from HPE Service Health Reporter and bring it back into the SOM interface."

With its modern HTML-5 interface, HPE SOM requires no plug-ins and no additional software, Sellers adds. The solution runs in several different web browsers and on tablet

Case study
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Industry
Telecommunications

Customer at a glance

Application
Virtualized Production and Test/Dev environments for line-of-business applications to take orders, support financial operations

Hardware
- HPE 3PAR StoreServ 7000 Storage
- HPE Enterprise Virtual Array (EVA) Storage
- HPE StoreOnce Backup
- HPE StoreVirtual Storage
- HPE ProLiant DL300 and DL500 Servers
- HPE BladeSystem
- HPE ProLiant BL460 Server Blades
- HPE Networking
  - HPE B-series Storage Switches

Software
- HPE Storage Operations Manager
  - HPE Service Health Reporter
- HPE Data Protector
- HPE OneView
- HPE 3PAR Thin Provisioning
- VMware vSphere

Services
- HPE Storage Technology Services

devices—in essence any form factor a user might want—and is fast and simple to use. "You can roll over a pie chart and it will pull out additional information. You can click into that and drill down. It gets you to information faster, with fewer clicks. And it's information that you care about as a systems administrator."

HPE SOM collects data from storage arrays, SAN fabric and switches, and connected hosts, and correlates that information so HTC can discover relationships and map end-to-end. With virtualization, HPE SOM extends this to a datastore and the virtual machine level so HTC can choose a virtual machine and trace all the way back to the SAN connections and backend array related to it. Visualization and correlation are two of the most powerful features in HPE SOM, Sellers says.

Proactive capacity planning, reclaiming unused storage

HTC must serve customers around the clock even during hurricanes, holidays, and times of peak or unexpected demand. HPE SOM enables proactive capacity planning. On one occasion, the software revealed that HTC was close to the edge on disk-to-disk backups; the company quickly added capacity and thus avoided having to delete valuable backups to free up space. The software also enables cost-saving reclamation of unused storage space, by revealing Logical Unit Numbers (LUNs) on which no I/O is taking place. HTC was already running lean, thanks to HPE Storage Essentials and HPE 3PAR Thin Provisioning, Sellers says, but HPE SOM gives an easy way to identify dead space, improve utilization, and thereby delay future large storage purchases. In larger environments of siloed teams, HPE SOM can greatly reduce time spent pinpointing problems, by bringing inefficiencies and misconfigurations to light.

Even at HTC, where a small, multidisciplinary systems administration team doesn't have problems of cross-silo communication, HPE SOM reduces maintenance and upkeep overhead. Agent installation takes less than two minutes on each host and can be scripted or pushed using automation software. HPE SOM enabled HTC to quickly identify five free 16GB network switches. "The software talks to the free Brocade Network Advisor SMI-S tool, which talks directly to the HPE B-Series SAN switches," Sellers says. "When a new switch is introduced in the fabric, SOM automatically discovers it on the next check-in. In my environment, based on the 'freshness' criteria we defined, this happened in less than 15 minutes. Without SOM, it would have been a manual process, logging into each switch, manually collecting and tracking the information. It would have taken eight times longer or more because of repeating the steps on each of our eight switches."

IT gains yield powerful business benefits

The IT benefits of HPE SOM translate into powerful business advantages for HTC. All of the information in HPE SOM can be exported to and manipulated in Microsoft® Excel and other programs. "It's easy to get answers to questions management asks, like how many Windows® 2003 or Windows 2012 SAN-connected systems we have. HPE SOM reduces the time it takes to give managers or project planners the information they need—and lets systems administrators attend to higher level issues than storage management, such as our desktop virtualization initiative. Before, we spent a lot of our budget and IT time just keeping the lights on, keeping things up and running. Now our resources are free to drive innovation."

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4AA6-3233ENW, December 2015, Rev. 1