Hewlett Packard Enterprise

The Sky's the Limit

ShoreTel's data center platform meets Cloud customers' current and future needs

Objective
Design a highly scalable, standardized network infrastructure to support massive customer growth into the midmarket

Approach
Engage with HPE Network Consulting to rapidly build two data centers and launch new services within eight months

IT Matters
- Delivers a unified solution for wired and wireless callers in a cloud-managed environment
- Enables mobile users to transfer calls and enjoy features usually limited to wired networks
- Provides an integrated security solution that minimizes latency and maximizes throughput
- Offers a path to software-defined networking with SDN-capable components

Business Matters
- Supports 10-fold capacity and business growth within just eight months
- Delivers security, networking, servers, services, and support from a single vendor
- Manages procurement for two new data centers in a four-month period, meeting deadlines
- Rolls out a modern service for mobile workforces with a highly competitive price point

ShoreTel has been a pioneer in hosted Voice over Internet Protocol (VoIP) systems since the mid-1990s, delivering enterprise-class phone systems to more than 3 million end users worldwide. ShoreTel developed its own cloud-based solution for today's workforces with quality of service typically associated with wired systems. ShoreTel worked with HPE to deploy a FlexFabric network that increases the capacity of the service 10-fold.

Connecting the world

Ever since the telephone became part of the business world, big players have looked for better ways to use the technology to communicate with those inside and outside

the business. Today, the idea of installing massive switchboards and hiring operators to patch calls throughout a company seems very "Mad Men" retro, but even then the concept was solid: deliver a scalable, flexible communications system that connects people to vital information.

When ShoreTel entered the field in the mid 1990s, its business solutions were built on new technology that allowed voice communications to be delivered over data networks—revolutionizing phone systems forever. That revolution has enabled everything from personal VoIP products to cloud-based phone systems.

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— Dennis Schmidt, *Vice President of Network Systems Engineering, ShoreTel*

It's all fine if your employees are sitting in cubicles and using company phones wired to the company network. But how do you deliver the reliability and security of a wired network to today's geographically dispersed workforce?

ShoreTel has the answer in the new ShoreTel Sky cloud-based service: A modern, hosted service that allows end users to transfer calls between co-workers regardless of device and location. Imagine having a switchboard operator in your smartphone, and you'll get the picture.

Startup ingenuity, enterprise ideas

Launching this cloud-based service with a minimal technology footprint in a New York data center, the service rapidly gained traction—scaling to more than 100,000 customers—and became a key component of the company's growth plan.

"As demand for our best-in-class cloud service grew, it quickly became clear that a technology refresh was needed," explains Dennis Schmidt, vice president of network systems engineering for ShoreTel. "We were really victims of our own success. It was time to refocus our strategy on taking this proven idea and turning it into a world-class solution for the midmarket."

In the meantime, Hurricane Sandy struck the east coast of the United States in late October, damaging the ShoreTel Sky data center. "We knew we had a lot of issues to clean up—literally—from a storm-damage perspective, as well as from a standardization and management perspective."

Delivering a State of the Art Managed Service

ShoreTel also had an aggressive timeline to bring that enterprise solution online. "Hurricane Sandy happened in late October, and we made a commitment to begin onboarding new customers by the first of the year.

With some big decisions on the horizon, the ShoreTel team began investigating which solutions would allow for the kind of scalability and rapid growth they had in mind. The team looked at what its current networking vendor could offer and also considered HPE solutions.

A strategic alliance

Because the ShoreTel team needed to ramp up services quickly in addition to scaling those services from a regional offering to a national presence, their solution search widened considerably. "We quickly went from searching for the best products to searching

for the best technology partner," recalls Schmidt. "We realized some vendors didn't have all the pieces we wanted."

The team wanted to work with a vendor who could offer a broader spectrum of solutions. "When we started looking at the big picture of what we wanted to deploy for ShoreTel Sky, we were drawn to HPE for their security and their networking gear as well as their services and support," Schmidt says.

ShoreTel Sky engaged with HPE Network Consulting to meet its aggressive timeline and roll out a significantly scaled out service in eight months. "Between monitoring, billing IP's, firewalls and support tools, we needed to bring 180 new systems online in two new data centers," Schmidt recalls. "And with HPE Network Consulting, we were able to source everything we needed in four months—it's the single best data center sourcing strategy I've ever seen."

Flexible solutions, solid foundations

Those data centers included HPE FlexNetwork 12500 Switch Series for core switching, HPE FlexNetwork 6800 Series Hybrid Services Router for WAN services, HPE ProLiant Servers (BL460c Gen8, BL660c, DL380p Gen8), HPE BladeSystem c7000 Enclosures and HPE Operations Manager i software (formerly HPE OpenView) in an HPE FlexFabric deployment that brings simplicity, scalability, and single-pane-of-glass management to ShoreTel Sky. HPE Proactive Care helps enable 24x7 operations and increases IT's focus on the business with an enhanced call experience and problem prevention.

From a security standpoint, Schmidt was searching for a deep, integrated solution on which to build the service. TippingPoint Intrusion Prevention System (IPS) offered

Schmidt and team the most value for their network. "We need the best inline solution to clean up our traffic, and offers not only the best filter accuracy, but also low latency that doesn't slow down our mission-critical applications," Schmidt says. "For us, security can't be a bolt-on solution—it's tantamount to our business, and that's why we chose TippingPoint IPS."

Scaling business by 10-fold

When the calendar year was drawing to a close, the first data center was already in testing, and Schmidt could see the integrated solution from HPE was giving ShoreTel Sky the speed, security, and capacity to meet its massive growth targets.

"HPE is a wonderful technology partner, giving us the ability to rapidly scale our ShoreTel Sky voice communications capacity to more than a million users- all in less than 8 months," Schmidt explains. "And that's a huge thing for us. We really invested a lot of trust in HPE Network Consulting that they could help us deliver a product to market on time, and they proved the value of that relationship by giving us assurances, giving us access to executives and engineers, and ultimately by delivering what they said they would. We bet our reputation on building this entire solution with HPE, and they proved their value."

Launching into the cloud

In the end, Schmidt's solution deployed the first of the year as planned, without drama, and without a rush of support calls. "I always say the hallmark of a production environment should be a kind of quiet nonexistence," Schmidt says. "And when we went online, we got the exact reaction we wanted: things just worked, and we had the perfect amount of dead air space."

Customer at a glance

Hardware
- HPE FlexNetwork 12500 Switch Series
- HPE FlexNetwork 6800 Series Hybrid Services Router
- HPE BladeSystem c7000 Enclosures
- HPE ProLiant BL460c Gen8, 660c Blade Servers
- HPE ProLiant DL380p Gen8 Server

Software
- HPE Operations Manager
- HPE ArcSight ESM

HPE Services
- HPE Network Consulting Services
- HPE Proactive Care Services
- HPE Education Services

As ShoreTel Sky pushes into the midmarket and beyond, its customers will receive the benefits of all those data center solutions first hand. "What happens is that our customers will experience this new cloud offering, with ShoreTel's commitment to quality of service," Schmidt relates. "When you have big customers in the healthcare and financial services worlds, downtime is not an option."

A modern solution for a mobile and dispersed workforce

The team of ShoreTel Sky and HPE has created a secure communications model to meet the needs of today's mobile and geographically dispersed workforces. "And because we've built this service on a highly scalable model, it means our customers get this very robust communication environment for less than they would pay for a traditional managed service."

As more customers come on board and density increases, Schmidt and team continue to add functionality to their systems by implementing Software-Defined Networking (SDN), which is already supported by its new HPE FlexFabric architecture.

Schmidt sums up, "With the breadth of HPE as a whole organization bringing value and data center platform expertise to our solution, we can continue to scale this as much as we need to in the future without fear of performance or security issues."

About ShoreTel Inc.

ShoreTel, Inc. is a leading provider of IP phone systems and unified communications solutions. Headquartered in Sunnyvale, Calif., ShoreTel has regional offices and partners worldwide. For more information, visit **shoretel.com**.

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