CISCO

Digital photos come to life with software-defined networking

Shutterfly backs its 100 percent customer satisfaction guarantee with a high-performance, scalable network.

> "We can continue to innovate and support increasing workloads while providing a great user experience."
>
> *- Arslan Munir, Director of Cloud Engineering, Shutterfly*

With customer numbers growing and data storage increasing to support high-definition (HD) photos and videos, Shutterfly needed innovation and expansion for its data center.

Challenges

- Maintain a compelling user experience as traffic and data grow
- Automate switch provisioning to save time and money
- Simplify management and scalability

Every modern smartphone is able to take high-quality pictures and record photos and videos, making everyone a photographer and filmmaker. Can you imagine the sheer volume of data that's created daily?

Shutterfly, a web-based service where users can create personalized photo books and share them with family and friends, understands this challenge. As its archive of billions of images approaches 200 PB and file sizes continue to grow, the company is standing behind its promises to users: free, unlimited photo storage and 100 percent customer satisfaction. However, scaling the network to accommodate ever-increasing image traffic was becoming difficult.

Case Study | Shutterfly

Size: 3,000 Employees   Location: Redwood City, California   Industry: Image Publishing

"To maintain a great customer experience, we needed to replace legacy switches with a new standard that could enable automation and zero-touch provisioning," says Arslan Munir, director of Cloud Engineering at Shutterfly. "We needed consistent network building blocks, so we could scale easily and provide excellent application performance to our millions of users."

Upgrade network with Cisco Nexus® 9000 Series Switches across multiple data centers.

Solutions

- Deployed fixed and modular switches in a leaf-spine architecture to optimize network traffic
- Deliver an SDN infrastructure enabling automation and zero-touch provisioning
- Upgrade to new Nexus 9200 switches for faster performance

Gaining flexible control

Using the automation and programming capabilities of Cisco Nexus 9000 Series Switches, Shutterfly gained flexible control of its underlying network infrastructure.

"Provisioning tasks that used to take 3 to 4 person hours are now automated, saving approximately $400 each time," says Jeremy Franzen, director of Network Operations. "Mean times to detection and resolution have been reduced, helping us keep the site available and performing well."

Scaling to the speed of business

Not long after Shutterfly upgraded its network, its website received more traffic than ever before.

"During the holidays—our busiest season—we were able to sustain a 40 percent increase in traffic with no performance degradation whatsoever,"

40% MORE TRAFFIC SUPPORTED

UP TO **4** HOURS LESS PROVISIONING TIME

says Munir. "The new Nexus 9200 switches promise to give us even higher speeds of up to 100Gbps, enabling us to offer new and better services while continuing to deliver on the exceptional user experience our customers expect."
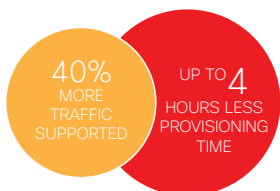
Consistent application performance

The new network architecture ensures that any host is just a single hop away from any other host, enabling consistent performance across Shutterfly's data centers.

A supportive technology partner

Shutterfly engaged Cisco Advanced Services to assist with design and deployment, speeding time to value. Cisco Network Optimization Service provides ongoing support and best-practices advice.

"Cisco's guidance has been invaluable in defining the architecture for our next-generation data centers," says Munir.

Results	• Sustained a 40 percent increase in traffic with no performance issues • Saves 3–4 hours and $400 each time a switch is provisioned • Reduces mean times to detection and resolution

Building a high-performance private cloud

Shutterfly is working with Cisco to offer network as a service (NaaS) through OpenStack APIs. "Cisco Nexus 9000 Series Switches support the plug-in for OpenStack Networking, which will be key to deploying a multitenant private cloud with true workload mobility," says Munir.

"We can successfully sustain the ever-changing and increasing needs of our users while continuing to innovate and offer new and better services without compromising the customer experience," says Munir.

Products & Services

Routing and Switching
- Cisco Nexus 9500 Series Switches (modular)
- Cisco Nexus 9300 Series Switches (fixed)
- Cisco Nexus 9200 Series Switches
- Cisco NX-OS

Services
- Cisco Advanced Services
- Cisco Network Optimization Service