

Cloud Data Center Provides Firm Foundation for Rapid Growth at zulily

Summary

Company:

zulily

Industry:

Cloud Builder: Internet Retailer

Business Challenges:

Design a flexible and agile campus and data center network that will scale with a fast growing business.

Technology Solution:

- EX4550, EX4300, and EX4200 Ethernet Switches
- SRX240 Services Gateway
- WLC880 Wireless LAN Controller
- WLA532 Wireless Access Point
- Junos Space Network Director

Business Results:

- Has built a flexible, reliable infrastructure that can adapt to soaring business growth
- Is able to react with the speed and agility demanded of the application-driven economy
- Can deliver and deploy applications quickly, everywhere they're needed

zulily prides itself on bringing moms special finds for their families every day. zulily offers great deals on unique products for women, kids, men, and the home. Founded in 2010, zulily expects to bring in more than \$1.1 billion in sales in 2014, making it one of the country's largest web-only retailers.

Business Challenge

zulily has 3.7 million active customers as of Q1 2014, and works diligently to keep them coming back for more. Thousands of deeply discounted items go on sale every day, and zulily's flash sales typically take place over three days.

"Our ultimate goal is to make sure that when mom shows up tomorrow, she will find something interesting on the site to buy. If we're going to miss a customer because I can't get something through the studio fast enough or pushed into production, then eventually that's going to hurt the business," says Don Allen, senior director of technical operations at zulily. "That's why we have to be flexible."

When zulily moved into a new corporate headquarters in downtown Seattle, it saw the opportunity to rebuild its data center and campus IT infrastructure to be a firm foundation for the cloud.

"We want the flexibility to turn and change should the need to change arise. The only way to deal with that is to build a flexible infrastructure that you can pull in the right direction, and move things around, and not have to reconfigure from scratch."

Don Allen, Senior Director of Technical Operations, zulily



Technology Solution

zulily needed a cloud data center solution that would support its fast moving business culture. Data center network reliability, performance, and security were paramount, but even more critically, zulily wanted an open, flexible network that would support its collaborative and rapidly iterative DevOps approach and work with its other toolsets. zulily's data center solution needed to provide a strong foundation for its private cloud and integrate easily with its production site, hosted at a public cloud provider. In addition, zulily wanted a unified solution for its campus wired and wireless LAN that would support the company's rapid growth.

zulily chose Juniper Networks® MetaFabric™ architecture, which is based on routing, switching, security, and automation solutions, for its data center expansion. The company uses Juniper switching and security solutions in its data center, including Juniper Networks EX4550, EX4300, and EX4200 Ethernet Switches and the SRX240 Services Gateway. It also uses EX4200 and EX4300 switches for its campus and wiring closet switching. The high-performance, highly available EX Series Ethernet Switches are carrier-class solutions for data centers, campuses, and branch offices.

zulily leverages a hybrid cloud, which consists of a private cloud when it needs more control and a public cloud for its retail site. The ability to move flexibly among these environments is key. "We want to make sure we can take a DevOps model and have deployment tools that allow us to move servers and do the configuration at the network and server layer in a similar fashion," says Allen. "If you really want to be able to move fluidly between private, public, and your own hosting, then you need to standardize. Standards are the foundation for building in automation, and we are confident that we can continue on our journey to the cloud with Juniper."

In its corporate headquarters, the Juniper campus network supports a typical office environment as well as design studios. Each day, zulily's stylists shoot thousands of photos in its design studios to promote the site's deals. Each step to getting a deal on the site—taking photos, editing them, writing copy, and posting the deals online—means data is constantly moving around.

"With a seamlessly scalable infrastructure from Juniper, and the network programmability, zulily can stay agile as consumer trends change and in-demand brands change."

Don Allen, Senior Director of Technical Operations, zulily

After the success of the Juniper wired network, zulily chose to roll out Juniper Networks WLC880 Wireless LAN Controller and WLA532 Wireless LAN Access Points. Wi-Fi blankets the corporate headquarters, allowing workers to move around anywhere in the office with their laptops and tablets. Speedy,

reliable Wi-Fi is even available in the building's atrium, which reaches up six stories and serves as the gathering spot for corporate events.

Security among the company's locations, including Seattle, Columbus, Reno, and London, is assured by Juniper Networks SRX240 Services Gateway. SRX Series Services Gateways consolidate security, routing, switching, and WAN connectivity and provide site-to-site IPsec VPN protection.

zulily uses Juniper Networks Junos® Space Network Director for unified management of its Juniper networks. Junos Space provides centralized software control, management, and application programmability, making it easy to quickly provision new services.

Allen also appreciates the integration of routing, switching, and security in Juniper Networks Junos® network operating system. Using Junos OS reduces network complexity and makes it faster to deploy new network operating services. "When you realize that an SRX Series gateway and an EX Series switch are the same, except for the security profile, it makes sense," he says. "With Junos OS, you're not learning something new every time. You know the interface as you go through the configuration."

Business Results

zulily now has network solutions that deliver the speed and agility demanded of the application-driven economy. MetaFabric architecture delivers a high-performance, scalable data center network solution built on an open framework, giving zulily the maximum level of network programmability and automation. This drastically simplifies the evolution to private cloud-based operations, and that provides the agility the company needs to offer bargains to customers every day.

"We want the flexibility to turn and change should the need to change arise," says Allen. "The only way to deal with that is to build a flexible infrastructure that you can pull in the right direction, and move things around, and not have to reconfigure from scratch."

zulily has designed the network with a high level of consistency so the location of a new design studio is not constrained by the network. Allen designed the campus and data center networks to be modular, so even heavy-duty work, such as the studios, can be accommodated anywhere in the building without the need to reconfigure the network. For example, IT relies heavily on Juniper's Virtual Chassis technology, which enables multiple interconnected EX Series switches to operate as a single, logical device, consolidating switch layers to reduce management overhead, while programmability delivers the necessary flexibility.

The consistency principle is also well suited to the company's fulfillment center in Reno. Unlike most retailers, zulily does not maintain its own inventory. "If a company wants us to do an event, our model allows us to begin immediately," says Allen. "We just need a sample so we can start taking pictures, and then we get it up on the site quickly and sell it through to customers," says Allen.

Once a sale is complete, zulily receives the merchandise from the vendor and ships the customers' orders. That way, zulily can sell deeply discounted products without stocking a massive warehouse. "If you look at our fulfillment center, everything is moving through every day," he continues. "The hotspot tomorrow could be anywhere in the building, so I have to design the network to be flexible. We can trunk where we need to or add switches to the Virtual Chassis, but we don't have to reconfigure the network, or worse, run a huge cable across because we're having a hotspot for the day because of the way we're picking."

Next Steps

With Juniper's adaptable, intelligent, and seamlessly scalable network solutions, zulily's investment is protected as it moves further into the cloud. "With a seamlessly scalable infrastructure from Juniper, and the network programmability, zulily can stay agile as consumer trends change and in-demand brands change," concludes Allen.

For More Information

To find out more about Juniper Networks products and solutions, please visit www.juniper.net.

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Don Allen, Senior Director of Technical Operations, zulily

About Juniper Networks

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