Juniper Helps Online Retailer Privalia Scale Its Network to Ensure Business Continuity During Rapid Growth

Summary

Company:
Privalia

Industry:
Retail

Challenges:
- Scale to support fast-growing base of millions of customers
- Ensure business continuity 24x7x365
- Protect investments in existing equipment and enable expansion of new equipment in the future

Selection Criteria:
Privalia tested a range of competitive solutions against some strict criteria, including scalability, multivendor compatibility, performance, and cost.

Network Solution:
- SRX210 and SRX3400 Services Gateways
- EX4200 and EX2200 Ethernet Switches
- AppSecure, AppDoS, AppQoS, IPS, and App-ID
- STRM2500 Security Threat Response Manager

Results:
- Network scaled to support rapid customer growth
- No impact on e-commerce trading or Privalia's customers through the migration period
- Real-time visibility into the applications running over the network
- Built-in platform scalability that allows future growth while protecting initial investment

Privalia is a fast growing e-commerce retailer that has already attracted more than six million users since it was founded in 2007. It runs a private shopping club, giving its members access to high-end brands at bargain prices. It also offers its customers everything from the latest fashions and cosmetics to sportswear and electrical goods, selling products from companies such as Diesel, Lacoste, and Clinique through to Umbro and Bosch. Privalia is based in Barcelona, Spain, and has now expanded its operations to include Brazil, Mexico, Italy, and Germany.

Challenge

Privalia first deployed Juniper Networks technology a few years ago, when its business needed a reliable e-commerce platform and branch network. Since then, its customer numbers have been growing rapidly, and the need for a robust, always-on, e-commerce platform led it to upgrade its network and security platforms across the core data center and warehouse operations.

It needed a network that would scale to support hundreds of thousands of customers simultaneously accessing its systems, with peak demands reaching up to three times more than that during a successful sales campaign. Privalia also wanted to upgrade its security and monitoring capabilities to give greater visibility into and control over the applications and traffic running over its network.

With customers shopping in different time zones around the world, the network also needed to be working 24 hours a day, every day of the year. This was particularly challenging when some of the systems had to be deployed in Privalia's warehouses, which can be hostile environments for IT equipment, suffering from high operating temperatures.

Critically, the entire project needed to be implemented with no impact on customer experience or day-to-day operations.

"The Juniper equipment has to cope with hostile environmental conditions. We push it well beyond its specified limits but, in over three years, we haven't even needed to reboot it. If we were to start the project over again, we wouldn't change anything."

Donato Diaz, IT Network Architect, Privalia

Selection Criteria

Privalia evaluated and stress-tested several alternative solutions before choosing Juniper Networks as the best fit for its needs. A number of factors were important in its decision.

Like many businesses, Privalia had a mixed vendor network environment, so compatibility with other vendors' technology was essential to protect earlier investments. These best-in-class solutions spanned VoIP equipment, interworking with MPLS and BGP routing protocols, and VLAN interoperability for separation of traffic types.

Price/performance was critical, given the drive to deliver higher scale systems. System architecture was also important, as Privalia needed to enable a rich new set of features without impacting system performance. Juniper's separation of control and forwarding provided Privalia with a more robust network, because its forwarding performance would be maintained in a way that was independent of the services that were activated on the platform.

"The way Juniper's system splits its data and control planes is very appealing," says Donato Diaz, IT network architect, Privalia. "No matter what happens at the routing protocol and software layers, we can be sure the data plane will be forwarding packets in hardware at maximum throughput. For example, when we implemented policy-based forwarding on our switches, other vendors' equipment performance dropped off sharply, whereas Juniper's just kept working."

The operating system architecture was also considered critical. Privalia preferred Juniper Networks Junos® operating system because it considered its fundamental structure to be more robust and reliable than other vendors' software.

The final factor that Privalia considered in its evaluation was the ability to upgrade equipment in the future, to protect the investment it was about to make. It was impressed with the modular expansion capabilities of the Juniper systems. For example, the ability to double the capacity of a firewall by simply adding a new module would allow Privalia to increase performance in the future without having to discard its new equipment, if growth continued to exceed expectations.

Solution

Some years earlier, Privalia had already deployed Juniper Networks SRX650 Services Gateway and EX4200 Ethernet Switch. Now it expanded the network in its core data center by deploying SRX3400 Services Gateway high availability (HA) systems in clusters. Connectivity was delivered using additional EX4200 Ethernet switches deployed in a Virtual Chassis configuration, which enables up to 10 interconnected switches to operate as a single, logical device sharing a single media access control (MAC) address, configuration file, and operating system. It also deployed AppSecure, AppDoS, AppQoS, and intrusion protection system (IPS) to provide real-time visibility into what was happening over its network. Finally, it used Juniper Networks STRM2500 Security Threat Response Manager to provide a full repository of logs across all of its systems.

In its production warehouse, Privalia deployed Juniper Networks SRX210 Services Gateway HA devices, with EX2200 Ethernet switches configured in a ring using Spanning Tree Protocol to provide the connectivity.

The network migration was supported by experts from Juniper Networks alongside Privalia's local partner, Seidor

Results

Migration to the new platforms was completely transparent to Privalia's customers; downtime never exceeded more than a couple of seconds throughout the entire project. Representatives from Juniper Networks' technical staff and Seidor, who supported Privalia's IT team throughout the process, were on hand to provide support if necessary.

What matters most to Privalia is that its customers continue to experience a service where the Web platform and e-commerce applications are always available, from any location and at any time of day, regardless of demand.

The network upgrade has allowed Privalia to increase the scale of its e-commerce infrastructure to successfully cope with fast-growing customer demands. The new network allowed the business to operate continually throughout the upgrade process and will continue to deliver Privalia's critical applications—VoIP, security, and e-commerce.

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Next Steps and Lessons Learned

Reliability and scalability of the systems and architecture have been the keys to success of this project. Along the way, Privalia has also increased its familiarity with Junos OS and the advantages it brings. "If we were to start the project over again, we wouldn't change anything," Diaz says.

Privalia now plans to implement Juniper's intrusion prevention system and roll out more Juniper Networks routers, switches, and wireless equipment across its branch network around the world. This will enable the company to continue its rapid growth as one of the world's most innovative e-commerce retailers.

For More Information

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

About Juniper Networks

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