BROCADE

SUCCESS STORY

Overstock.com

EXECUTIVE SUMMARY

Technical Solution

Brocade BigIron MG8 high-performance, 10 Gigabit Ethernet (10-GbE) switches power the network backbone, and BigIron and FastIron Edge switches with 10 GbE uplinks deliver high-capacity aggregation and Layer 2/3 intelligence at the network's edge.

In the data center, Brocade NetIron routers run BGP-4 over Gigabit Ethernet links to the company's ISPs. ServerIronXL application switches balance traffic loads across servers. And throughout the network BigIron Layer 2/3 switches connect at gigabit speeds to the back-end storage.

The new state-of-the-art wireless LAN has Brocade IronPoint access points arrayed throughout the headquarters, giving Overstock.com employees secure, high speed wireless access.

Results

- Reliable backbone that withstands immense daily activity and scales seamlessly during holiday traffic peaks
- 10-GbE capacity on the backbone and Gigabit Ethernet connectivity at the edge
- Top performing, scalable load-balancing solution that keeps Web site constantly available for customers
- Wireless LAN that gives employees secure, mobile access

Overstock.com Selects Brocade for Massive Datacenter Overhaul

In early 1999, online shopping was beginning to skyrocket. Myriad retail sites populated the internet, catering to every conceivable niche, from groceries to pet food to books. Some would flourish and others would eventually falter, but online retailing had clearly arrived. According to Jupiter Communications, over $7 billion was spent during the 1999 holiday season. Moreover, 90 percent of online shoppers described themselves as "largely satisfied" with their online experience, while only 4 percent expected to decrease their online spending in 2000.

But it was Patrick Byrne's idea, hatched earlier in the year, which would alter online shopping forever. Simply put, Byrne saw the potential for offering online consumers the excess inventory of brick-and-mortar retailers at steeply discounted rates. It was a classic win-win scenario: instead of working upstream against traditional, powerful retailers, Byrne posited working with them, giving them an efficient way to liquidate excess inventory while offering consumers rock-bottom prices on brand-name merchandise.

Launched only in the second half of 1999, Overstock.com™ that year realized gross bookings of $1.8 million; by 2004, that figure had soared to $541 million. In its first six years, Overstock.com witnessed approximately 100 percent growth, year after year.

Underneath, however, the challenge is readily apparent: how to power a property that is one of the most visited shopping sites on the internet, with a technology backbone that can withstand immense daily activity and still scale seamlessly to meet the needs of fourth quarter traffic that is 50 to 70 percent higher.

Introduction

In 2004, Overstock.com's Salt Lake City campus was about to sprawl. The company desperately needed to expand its datacenter and build out its new corporate headquarters.

Long an Oracle shop, Overstock.com had undergone a series of database upgrades that had served it well.

But as the datacenter project loomed, it was the network's foundation that needed to be addressed. Overstock.com was transitioning from DS-3 speeds on the internet to gigabit speeds and required scalability and latency that would serve them for the entire year, including the holiday crush. The company mandated a 10Gb-upgradeable network platform, and sought a robust wireless LAN at the new corporate offices to replace the HP edge switches and Cisco Catalyst 5500s that powered the old corporate headquarters.

As it finalized plans for the datacenter upgrade and corporate office build-out, Overstock.com was well down the path with Cisco. But it was by no means a done deal.That was when Brocade came in to present its offerings.

The Overstock.com network was not uncharted territory for Brocade. In fact, in 2001, the company went toe-to-toe with Cisco's local directors, PIX firewalls and Catalyst switches. At that time, Brocade was chosen to replace that architecture, with two Brocade NetIron routers and two ServerIronXL application switches. From those modest beginnings, Brocade began proving itself.

"In the early years, financial investment in network infrastructure is essential but difficult to come by," said Shawn Schwegman, senior vice president, technology, Overstock.com. "Brocade gave us the best value for our working capital."

That early experience with Brocade was critical, as Brocade quickly garnered a reputation for—among other things—impeccable support. "Software fixes are quickly identified and regression tested into production versions of code," said Schwegman. "Brocade is very nimble and makes this process quick and painless. Likewise, often times we need onsite support on short notice, and they deliver. Brocade takes service and support seriously. When coupled with solid products, this is a powerful solution for Overstock.com."

The Challenge

Overstock.com chose Brocade BigIron MG8 high-performance 10-Gigabit Ethernet (10-GbE) switches to power the backbones at its new headquarters. BigIron and FastIron Edge switches with 10-GbE uplinks were installed to deliver high-capacity aggregation and Layer 2/3 intelligence at the network's edge. For its new state-of-the-art wireless LAN, Brocade IronPoint access points were arrayed throughout the headquarters, giving Overstock.com employees secure, high-speed wireless access.

In the datacenter, Overstock.com's network was built out with Brocade NetIron routers running BGP-4 over Gigabit Ethernet links to the company's Internet Service Providers (ISPs). While Overstock.com runs SUSE Linux servers on Dell platforms to host the site's front end, Brocade ServerIronXL applications switches provide the load balancing for all traffic to and from those servers. On the back end, data is stored on EMC equipment. Throughout, the network is Ethernet-connected at gigabit speeds, with Brocade BigIron Layer 2/3 switches connecting to the back-end storage.

"Our main challenges were scalability and performance under load," said Schwegman.We needed equipment that would perform consistently and handle the traffic peaks that occur in the fourth quarter of the year without service degradation. Brocade has helped us achieve this level of performance with a solution that will accommodate future growth."

The Solution

The reputation of Brocade for stellar support has now grown exponentially, to embrace the sheer power and reliability of its solutions, as well. Said Barney, "Overstock was convinced that our latency characteristics and ability to scale were unmatched by Cisco. Secondarily—but no less important—was stability. Overstock believed we easily met both criteria, and we have."

One technical point critical for Overstock was the ability to switch Layer 2 and route Layer 3 traffic within the same switch, which Schwegman described as a "very important and key component to our solution. Brocade does this very well, with the same architecture, without the need for additional components at a later date."

With its expanded datacenter up and running and new corporate headquarters fully populated, Overstock.com retains a relentless focus on the future. It is clear that, aside from Brocade technical prowess and customer support, it was the ability of Brocade to grow alongside Overstock.com that cinched the deal.

"Brocade—more than any other vendor I've seen—provides the whole package, from value to support to performance and reliability," said Schwegman. "They are, in a word, exactly the kind of vendor that makes long-term sense for Overstock.com."

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