

Online Investment Firm Trades in Data Center for Cisco-based Solution

Cisco Advanced Services teams up with Scottrade to create a data center solution that leads the industry in online Web speed.

EXECUTIVE SUMMARY

BUSINESS CHALLENGE

- Data center lacking the power and capacity to meet changing market requirements and sustained growth.
- Increased complexity due to integration of sophisticated trading platform and other business applications.
- Very short window from concept to cutover of new data center solution.
- Limited resources and skill sets to design the architecture and accomplish the migration.
- Smooth integration required across multiple partners required.

NETWORK SOLUTION

- State-of-the-art data center solution that helped to increase responsiveness, capacity, and the value of Scottrade's online trading platforms and services.
- Network architecture that allowed Scottrade to use technology to gain a competitive advantage.

BUSINESS RESULTS

- Aligned project goals with Scottrade business initiatives.
- Identified interdependencies and coordinated efforts with internal staff and other vendors to meet aggressive project deadline.
- Delivered a secure, high-capacity data center with low latency to support Scottrade's high-speed trading platform and future growth.
- Resulted in Scottrade being rated #1 in the industry in Website speed.

Business Challenge

Founded in 1980, Scottrade is a leading branch-supported online investment firm. The company is unique in the industry because it boasts very low commission rates while offering easily accessible, local branch office support of online trading in more than 300 branch office locations nationwide. Its online trading site, Scottrade.com, offers customers the convenience of placing many orders online for just US\$7 per trade. The newly redesigned Website provides advanced stock-trading features, allowing customers to manage their accounts, trade, find stock research, and get quotes over the Internet. Additionally, Scottrade staffs each physical branch location with a licensed branch manager, brokers and assistants.

Having experienced tremendous business growth in recent years, Scottrade was pushing its data center to the limits. The company needed a data center that would allow it to add features for its customers while still providing fast, accurate online trades. The CIO's vision was to create a secure, high-speed data center that could take the company to the next level of online customer service and handle the

increasing complexity and capacity needs. Due to its rapid growth, the company needed to complete this project quickly.

Scottrade had an aggressive goal to finish the project in less than 12 months and go online with the new data center while maintaining a high-level of customer service. Having the right resources on-site was key to the success of the project. Scottrade did not have a large IT organization to begin with and engineers had multiple assignments. Scottrade sought a business partner that could not only help build the new data center, but also support IT and the application staff in their roles and coordinate the project across multiple vendors.

Scottrade enlisted Cisco® Advanced Services to help plan, prepare, and design an end-to-end data center solution that included a broad range of products and helped Scottrade increase its responsiveness, capacity and the value of its online services.

Network Solution

Engaging Cisco Advanced Services early in the project life cycle was crucial to the success of the project, especially given the aggressive timelines. Cisco took the unique approach of bringing together all the groups, networking, security, and applications, to understand their roles and tasks. A series of sessions was conducted to gather and hash out the details of the company's business goals. The approach helped Cisco design a solution that addressed the business requirements and resonated with all the key players within Scottrade. Additionally, the Cisco team was flexible in meeting Scottrade's timelines, often working over weekends and holidays to complete the job.

"Managing the relationship with all the groups involved in the project was a challenge," says Faiyaz Shahpurwala, Cisco vice president. "We focused on solving business problems with the customer; engaging with them early to understand their customers, business and existing data center infrastructure; and then devising a strategy and architecture to deliver the exact solution they needed."

The new Scottrade Data Center was built for 10 gigabit, high-speed, low-latency, scalability and redundancy. The design is a three-tiered Cisco Catalyst® 6500 switch infrastructure with Cisco 7600 Internet edge and server load balancing modules positioned in the distribution layer. The solution is also designed to provide a secure environment for critical financial data. Cisco DDoS protection based on Guard and Detector was deployed to protect against denial of service attacks.

"Cisco acted as an extension of Scottrade's team, allowing for the easy flow of information," says Ian Patterson, CIO at Scottrade. "They took ownership of the project deliverables to ensure timely deployment and bridge the gap between the various teams involved."

To complete the project, Cisco Advanced Services had to understand the very complex combination of systems that comprise Scottrade's data center, all of which work together to enable fast and accurate online stock trades. Timing and exact execution of trades are key to being successful. The Cisco team used various Cisco and partner tools to understand the application flows and response times, and worked with other software and server vendors to understand all aspects of the trading platform.

Cisco collaborated with cross-functional teams, vendors, and providers involved in the data center project, and worked closely with engineering to test and validate the solution. The team's ability to test the applications with their test and automation tools allowed Scottrade to benchmark the capabilities of the data center design before going to production.

Cisco Advanced Services interacted with nontraditional players like facilities, cabling, rack and stack, and HVAC vendors, who provided valuable insights and opened up new challenges for the Cisco team.

By applying industry best practices and working closely with partners to leverage their knowledge, Cisco employed an innovative way of doing business that helped Scottrade bridge the gap between various teams so they could drive toward common goals.

"We have adopted an end-to-end strategy in the data center and have made a transition from a vendor to a partner to better assist customers in realizing their business vision and employing technology to gain competitive advantage," says Umar Shafiq, lead data center architect for Cisco Advanced Services.

Business Results

Cisco Advanced Services collaborated effectively with partners at all levels to align project goals with the business initiatives of Scottrade's various business units. The result was the delivery of a state-of-the-art data center solution that meets the capacity and application complexity requirements of Scottrade's growing business while minimizing impact to the IT organization.

Throughout the project, Scottrade viewed the Cisco Advanced Services team as a partner rather than just a vendor. Playing the role of "Trusted Advisor," the team brought the solution together, managing applications, and the server and storage teams to develop the end-to-end solution that Scottrade needed.

As a result of its more efficient data center, Scottrade continues to grow while ranking first in response time, a key category for attracting and maintaining customers in the financial trading industry.

"Cisco was not only an expert on point products, but the team brought together the people, resources, and products needed to create one of the top data centers in the country," says Scottrade's Patterson. According to Cisco's Shahpurwala, Cisco Advanced Services has and will continue to grow beyond developing just networking solutions to be truly instrumental in helping customers meet their business objectives.

For More Information

To find out more about Cisco Advanced Services and other data center services, visit <http://www.cisco.com/go/dcservices>. To find out more about Cisco Data Center Solutions, visit <http://www.cisco.com/go/datacenter>.



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