

Service Provider Deploys Cisco Application Delivery Solution to Offer Customers Superior Service

Quality Technology Services deploys Virtualized Cisco ACE to provide the premier application infrastructure to improve overall performance and client service segmentation.

EXECUTIVE SUMMARY
<p>QUALITY TECHNOLOGY SERVICES</p> <ul style="list-style-type: none"> • Service Provider • Overland Park, Kansas • 300 Employees
<p>BUSINESS CHALLENGE</p> <ul style="list-style-type: none"> • Needed load balancing solution that would segment multiple clients in a shared environment • Needed an application delivery solution to provide maximum availability and superior throughput • Allow for future scalability as servicing needs grow
<p>NETWORK SOLUTION</p> <ul style="list-style-type: none"> • Upgrade network foundation to a virtualized application delivery solution to enable client segmentation and isolation while providing maximum availability, scalability and throughput.
<p>BUSINESS RESULTS</p> <ul style="list-style-type: none"> • Top reliability, maximum availability, and highest performance in the industry • Using the virtualization capability to perform multiple functions from one device without having to purchase additional hardware • Scalable performance via software licensing as the business needs grow without the need to buy additional devices.

Business Challenge

Headquartered in Overland Park, Kansas, Quality Technology Services (QualityTech) is a full service technology infrastructure company with a national footprint. The company provides day-to-day IT operational support, full service technology infrastructure and data center expertise to assist customers with everything from the basic facility for collocation to floor space, power, cooling, security, etc., all the way through managed network services, managed database operating systems, SAN storage, tape backup and more.

QualityTech currently has six data centers that are located in Florida, New York, New Jersey, California, Georgia and Kansas. The infrastructure at QualityTech is primarily comprised of Cisco technology, and includes Cisco Catalyst 6500 Series and Cisco 7600 Series Wireless Services Modules. Each data center is segmented with a pair of Catalyst 6500 switches that run various sections of the data center. The company operates multiple clients into a particular facility. From an internet perspective, the company has redundant 10 gig connections to an ISP at each data center for failover.

According to Ron Norys, director of networking for QualityTech, the IT team was challenged with bandwidth and throughput issues when it came to segmenting individual clients and running multiple clients on shared equipment.

“Being a service provider, segmentation, isolation, and security are extremely important to our customer base,” says Norys. “We needed a solution that would enable us to provide better segmentation from a client perspective while gaining more availability, scalability and throughput.”

“We basically needed a device that would segment a customer’s particular network within the environment and by using the virtual context features of the ACE modules we are now able to do that. Since implementing ACE, we now have our clients set up to get a portion of the network that allows us to load balance and perform HTTPS, HTTP and any kind of SSL offload required.”

—Ron Norys, Director of Networking, Quality Technology Services

Network Solution

Norys and his team evaluated solutions from three vendors before selecting Cisco® Application Control Engine (ACE) modules for the Cisco Catalyst® 6500 Series with Cisco Catalyst 6500 Series Supervisor Engine 720.

“We took a look at a couple of other vendor products and found that while they did have similar capabilities to the ACE, they were more expensive and the segmentation piece was lacking,” says Norys. “The ACE surpassed the other solutions we tested and enabled us to utilize the context while making the most of the firewall switch, which was very attractive to us. We have a 20-contact license and SSL capabilities with 15,000 PPS and 4 gig capability through the ACE. We’re currently segmenting each of our data centers with a pair of Catalyst 6500 switches that basically run the designated area of the data center and we utilize the ACE modules on what we call ‘zones’ that enable us to take advantage of the firewall capabilities.”

In terms of deploying the ACE modules, Norys says the set up process was intuitive and presented no issues.

“Installing the ACE modules was as quick and easy as sliding them in, the system recognizing them and with minimal configuration we were up and running,” says Norys. “Deciding how to configure was somewhat of a challenge to the extent that we had so many choices available to us such as whether or not to configure in bridging mode, routing mode and how to best operate. In terms of utilizing the context, which was fairly new to some of our IT staff, the ACE was intuitive and we all caught on quickly.”

According to Norys, the scalability and virtualization features of the ACE were instrumental in the team’s selection.

“From a scalability perspective, we were looking for a device that handles 15,000 transactions per second in addition to being able to handle many different virtualized networks,” says Norys. “The ACE surpassed our expectations for scalability, throughput and transactions per second, and already had the virtualization capabilities built inside the device.”

Norys says the ACE modules also provided QualityTech with the much needed load balancing functionality.

“We have a relatively small- to medium-sized environment at each one of our data centers where we run multiple clients in a particular facility and share equipment,” says Norys. “From a client perspective, we needed something that both provided segmentation and lots of throughput. The

ACE modules allowed us to segment individual clients in the environment and also gave us the much needed high availability and high scalability.”

Business Results

The ability to perform multiple functions from a single device, using the ACE virtualization capability is one of the biggest benefits Norys and his team have experienced as a result of upgrading to the ACE modules.

“Much of what we are utilizing ACE for are SSL offloads, HTTP as well as HTTPS traffic and the Round-Robin load balancing features,” says Norys. “Having the ability to utilize so many functions from one device without having to purchase the hardware piecemeal has made it so much easier for us to manage.”

The ACE module’s throughput and compatibility with the Blade technology QualityTech uses was another compelling factor in the selection, according to Norys.

“Much of our decision stemmed from the ACE’s throughput capabilities and the fact that it worked with our Blade technology and tested so well in our data center,” says Norys. “The amount of throughput that the ACE modules provided was definitely a factor in our selection along with how it integrated seamlessly with our other Cisco products, making it much easier for us to manage and support.”

Norys says that in terms of the ability to isolate, the ACE using the virtual context feature, has delivered the results that surpassed the team’s expectations.

“We basically needed a device that would segment a customer’s particular network within the environment and by using the virtual context features of the ACE modules we are now able to do that,” says Norys. “Since implementing ACE, we now have our clients set up to get a portion of the network that allows us to load balance and perform HTTPS, HTTP and any kind of SSL offload required.”

Norys says as he looks at future QualityTech service offerings, he is making plans to utilize more of the ACE module’s features that he and the team are not currently using including SSL.

“I’ve already begun looking at the SSL features of the ACE modules and have begun investigating how we might start using encryption through ACE in the future,” says Norys. “There are already many more capabilities within the ACE modules that we have not begun to tap into. As we evaluate our current service offerings for our clients and what they need from a data center perspective, we can assess future services and match them up with the unutilized features in ACE.”

PRODUCT LIST

Cisco Application Networking Services:

- Cisco® ACE module for the Cisco Catalyst® 6500 Series
- Cisco Catalyst 6500 Series Supervisor Engine 720

For More Information

Find out more about Cisco ACE module for the Cisco Catalyst 6500 Series, please visit <http://www.cisco.com/go/ace>.



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