

Civil Engineering Firm Optimizes File-sharing



Mulkey Engineers & Consultants readies for future with optimized WAN performance and centralized management.

EXECUTIVE SUMMARY

Customer Name: Mulkey Engineers & Consultants

Industry: Civil engineering

Location: Southeastern United States

Number of employees: 131

BUSINESS CHALLENGE

- Speed file-sharing and other data and voice applications and services among data centers and branch offices
- Centralize and virtualize WAN management for cloud-readiness

NETWORK SOLUTION

- Cisco Unified Computing System (UCS)
- Cisco Wide Area Application Engine (WAE) appliances in data center and branch offices

BUSINESS RESULTS

- Faster file-sharing and improved application performance
- Greater ease of WAN management
- Greater scalability of network resources and readiness for cloud services

CHANNELS/INTEGRATOR PARTNER

- Con fiance

Business Challenge

Operating a business that depends on storing and sharing a huge number of modest-sized files can tax a network as much as dealing with massive file sizes. The former issue drove Mulkey Engineers & Consultants, an award-winning civil engineering firm in the southeastern United States, to deploy a WAN optimization solution.

Specializing in sustainable solutions, Mulkey provides roadway, bridge, and building design and engineering services, surveying and environmental services, and construction inspection and other services to state and municipal agencies and private firms across three states. The firm maintains offices in Apex, Raleigh, and Charlotte, North Carolina; metro-Atlanta, Georgia; and Newberry, South Carolina, with its central data center in a colocated facility in Raleigh. The sites are connected by a Multiprotocol Label Switching (MPLS) network, with full voice and data services carried over the links. In addition to a portfolio of typical business applications such as word processing, spreadsheets, and email, Mulkey engineers also make heavy use of SQL databases and a range of specialized, graphics-intensive engineering applications including MicroStation from Bentley Systems and product suites from AutoDesk and ArcGIS.

"We use a number of 3-D graphic-intensive engineering applications," says Barry Pierce, Mulkey's IT manager. "Also, one engineering document might have a hundred other documents either attached to it or referenced within it."

Mulkey first adopted a WAN optimization solution from Riverbed Technology to speed transmission of thousands of such files over its network. But that was five years ago, and in early 2011, the company's Riverbed appliances were nearing the end of their useful life.

Network Solution

WAN optimization was unquestionably a permanent part of the firm's IT infrastructure. "Once you have it in a high-volume worksharing environment like ours, 'WAN-op' quickly becomes a necessity," says Aaron Denny, Mulkey's network engineer. "That was confirmed every time we turned off one of the appliances for maintenance. We would start hearing complaints about the 'slow' network within minutes."

But the need to replace its Riverbed appliances gave Mulkey's IT staff a chance to consider their options, which by 2011 included a range of Cisco® Wide Area Applications Services (WAAS) offerings, including the Cisco virtual Central Manager (vCM), the first and only cloud-ready WAAS solution for storage-intensive environments.

"The Riverbed appliances had worked well for us," says Pierce, "but we had a broad set of requirements and considerations, from capabilities to costs."

"Looking to the future, we're sure our Cisco virtualized WAN optimization solution will scale with our requirements, our growth, and our shift toward more and more private cloud services."

— Barry Pierce, IT Manager, Mulkey Engineers & Consultants

So why did the company decide to switch from Riverbed to Cisco?

To start with, Mulkey already had an array of Cisco equipment running its core network, including both data and voice. "We're familiar with Cisco performance, reliability, and support, so we have a high level of confidence that anything we buy from Cisco will *work*," says Pierce. "In addition, the fact that our long-time technology partner, Confiance, heartily endorsed the Cisco WAAS solution gave us extra confidence in our decision."

Still, Mulkey wanted to be sure that the solution that it chose would not only work but would work out of the box. "Our old Riverbed appliances were 'plug-and-play,'" says Pierce. "We didn't want to spend thousands of dollars on something new and need someone to come in and help us get it up and running." But Mulkey's network engineer read up on Cisco WAAS beforehand, asked a few questions, and was satisfied that the Cisco solution, including the vCM, would be quick and easy to deploy, as indeed it turned out to be.

The first step in the deployment was to add appliance-type Cisco Wide Area Application Engines (WAEs) at each of Mulkey's locations. "We prepared and configured the devices here at our main IT location, then shipped them to the branches," says Pierce. "We were finished in a few days."

Just as important, for ongoing maintenance of the network, was the Integrated Management Controller of the Cisco Unified Computing System™ (UCS®) server that was the core of the Cisco solution. "To get the same level of centralized management capabilities in Riverbed's newest solution would have required an additional 'optional' purchase," says Pierce.

Finally, the virtualized central management capability available only in the Cisco vCM gives the Mulkey IT staff common, centralized control of both the physical Cisco WAAS appliances and other virtualized equipment, including the virtualized Windows servers in the firm's data center.

PRODUCT LIST

- Cisco 274, 574, and 674 Wide Area Virtualization Engines (WAVEs)
- Cisco WAAS virtual Central Manager (vCM)
- Cisco UCS C210 Server Value Bundle
- Cisco Unified Computing System (UCS) C210 M2 Server
- Cisco Catalyst® 3560-X switch with 24 ports

Business Results

With the Cisco vWAAS solution, Mulkey Engineers & Consultants is enjoying even faster file transmission than before. That speed translates to improved application performance. For telecommuters and others in the firm's high-volume worksharing environment, that means fewer trips to the nearest office and less travel in general. "All our users are happier," says the firm's IT manager, "because they can download and open files in seconds."

The solution has also empowered the firm with the reliable file version control that comes with centralized file management. "When you have more than one version of a file in different locations, you're going to have errors," says Pierce. "Version control helps to eliminate those errors and protect us from the legal action that might result from them."

Because of the greater balance of benefits delivered by Cisco vWAAS, Mulkey also realizes an overall lower cost of ownership. "We're saving money, not necessarily instantly, but over time," says Pierce. "With centralized management, we save on resources every time we execute system upgrades and patches."

"Looking to the future," he adds, "we're sure our Cisco virtualized WAN optimization solution will scale with our requirements, our growth, and our shift toward more and more private cloud services."

For More Information

To find out more about Cisco Wide Area Applications Services, go to: <http://www.cisco.com/go/waas>.



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