

Pharmaceutical Services Company Accelerates Virtual Desktops



Quintiles relies on Cisco Wide Area Application Services to optimize performance of desktop virtualization infrastructure

EXECUTIVE SUMMARY

Customer Name: Quintiles
Industry: Pharmaceutical Services
Location: Global headquarters in Durham, North Carolina, U.S., with 110 sites in 62 countries worldwide
Number of Employees: Approximately 25,000

BUSINESS CHALLENGE

- Adopt desktop virtualization to enable centralized, secure data and application services while maintaining consistent network performance
- Accelerate onboarding of new employees during period of rapid growth
- Adopt "BYOD" concept, securely managing network access by employees' chosen devices such as tablets and smartphones

NETWORK SOLUTION

- Extend WAN optimization to 100 percent of sites to optimize traffic given existing bandwidths
- Install centralized, policy-based access management for all network data and services

BUSINESS RESULTS

- Fast, centralized resource deployment and onboarding of new employees
- Secure, centralized data and access control
- High levels of employee satisfaction

Business Challenge

"The goal is to spread desktop virtualization to as many employees as it makes sense for us to do," says Brian Kachel, director of global network services for the global pharmaceutical services company Quintiles. "And because we're doing it at such a rapid pace, we're learning as we go."

They're learning a lot. Use case by use case, Kachel and his IT colleagues at Quintiles are discovering just how many employees can be served by desktop virtualization, how many business benefits it can deliver, and how important WAN optimization and centralized policy management are to their virtualization solution.

By far the largest pharmaceutical contract services enterprise in the world, Quintiles supports its customers through every phase of drug development and lifecycle management, from molecule and compound development to testing, clinical trials, and commercialization. The company maintains 110 physical locations, including laboratories, research and development centers, and hospitals as well as corporate and administrative offices, spread across 62 countries. Each location has its own wide area network (WAN), and all are connected to Quintiles's two production data centers in Raleigh, North Carolina (near the company's headquarters) and Dublin, Ireland.

Being engaged in such a broad range of activities and services, Quintiles employees use some 300 off-the-shelf applications, from typical business office applications to Oracle and PeopleSoft. In addition, the company's IT staff have built and maintain several proprietary, customized applications in-house.

"Given the large number of clinical fields and extensive patient populations involved in pharmaceutical R&D, Quintiles employees work with enormous amounts of data of many different types," says Kachel. "One of our key differentiators is that we deliver data to our customers in custom formats to fit their needs. We don't want to limit them or ourselves to off-the-shelf applications for data aggregation, reporting, and analysis."

With a far-flung network of data-intensive operations, Quintiles has been a long-time customer for Cisco Wide Area Application Services (WAAS). "It must have been seven or eight years ago, I think we became Cisco's second or third WAAS customer," says the network services director. "We were desperate to enable employees to access large documents more quickly. So we deployed 60 or 70 of Cisco's first-generation WAAS appliances to accelerate the document management application we were using."

From that initial deployment, Quintiles went on to install WAAS at its data centers and all branch locations, in a variety of form factors including Wide Area Virtualization Engine (WAVE) appliances, Services-Ready Engine (SRE) modules for Cisco Integrated Services Routers Generation 2 (ISR G2s), and router-integrated, IOS-based WAAS Express software. "The form factor depends on the number of users and any other requirements at any particular site," says Kachel.

Then, in 2010, Quintiles embarked on a new IT initiative, the centralization of data and applications based on a virtual desktop infrastructure (VDI), and took their deployment of Cisco WAAS to the next level.

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— Brian Kachel, Director, Global Network Services, Quintiles

Network Solution

"When we started, we had a very specific business use case for deploying VDI to about 2000 employees," says Kachel. "Then we realized there's a good use case for this other group of 1000, and a good case for another 500, and so on."

What were those use cases?

First, VDI makes possible rapid deployment and onboarding of new users. "We can provide new users access to enterprise data without worrying about provisioning them with new laptops and disk images and virtual private networking (VPN) tunnels," says Kachel. "Instead, it's as simple as 'You have a PC. Here's how to log on, get authenticated, and go.'"

Second, Quintiles was focused on centralizing, and thus securing, its data. "Where's the safest place for our data? The data center. With VDI, our users can have access to it, but it *stays* in the data center," says Kachel. "In effect, virtualization serves as an impenetrable wall around our data."

Third, the Quintiles IT staff saw that VDI can save money by extending the useful life of aging hardware. “Instead of replacing users’ laptops every three to five years, we could say, ‘Here, just install this lightweight application and you’ll recover the fast access you’ve been used to,’” says Kachel.

Finally, Kachel and his staff, as well as Quintiles management, saw that business technology was in a rapid transition to what some people call “commercialization” and others call “BYOD” for “Bring Your Own Device.” “It’s unstoppable,” says Kachel. “Employees own all kinds of devices, from Macs to tablets to smartphones, and they want to use those devices to access the network and do their jobs. You just can’t tell them ‘No.’”

When Quintiles selected Citrix to provide its VDI solution, Cisco and Citrix went to work to develop a jointly tested, validated, and supported solution to optimize virtual desktop delivery in the company’s WAAS environment. The result was a zero-touch, high-quality user experience for Citrix XenDesktop and XenApp over the WAN, which Quintiles was able to beta test before a public version was released.

The final piece of the solution was Cisco Identity Services Engine (ISE), which enabled Quintiles to implement comprehensive, centralized, policy-based management of access to all network data and services.

“ISE gives us the ability to build and manage a true borderless network with strictly controlled but seamless access,” says Kachel. “In real time, we can tailor every user’s access to data and applications according to who they are, where they are, and what device they’re using.”

Business Results

The deployment of VDI at Quintiles continues, but it is already paying dividends in a variety of ways, some that were anticipated and some that were not.

The company is in a growth cycle, so the quick onboarding of new hires and new locations made possible by virtualization has proven its value almost immediately. “Through acquisitions, for example, we recently added nine new U.S. locations to our network,” says Kachel. “To turn such places into ‘standard’ Quintiles sites, the IT staff used to need two or three months and a few site visits to provision laptops and user IDs, provide training, and all the rest.

“But our senior management said that was unacceptable. They wanted the new sites fully onboard immediately. So we had all the new users download our Citrix VDI application, take some online training, and that was that: they were on the network, with access to all systems, without a single site visit by IT staff.”

Kachel and his colleagues have been able to add new users to the network not just faster, but also at little or no expense. “Typically, you always equip your network with capacity to scale,” he says. “With VDI combined with WAN optimization, we have room to grow without adding extra servers or storage.”

Telecommunications is another area where the WAN optimization delivered by Cisco WAAS has helped speed network deployment while reducing costs. As Kachel explains, in recent years the big telecom carriers have slowed their investments in infrastructure; as a result, customers may now have to wait up to six months for a carrier to provision the high-bandwidth Ethernet links that used to be readily available.

“But with WAAS, we can make do with a couple of T1 circuits at a location and be fairly confident that we’ll get reliable performance while we’re waiting for Ethernet links,” Kachel says. “At \$600 a month for the T1 lines versus \$4000 for the faster links, we’ve even considered the possibility that we might not need the higher-bandwidth links after all.”

Like many large enterprise networks, Quintiles' network is a work in progress. Kachel, his colleagues, and Quintiles management continue to identify business use cases for virtualization and other services, including voice and video, and that process drives discussion of the company's network infrastructure. Cisco is a participant in that discussion, which takes place, according to Kachel, on a daily basis.

At the time Kachel was interviewed for this story, the company's virtual desktop infrastructure powered by Citrix XenDesktop and Cisco WAAS had been deployed to 6000 Quintiles employees, with more being added almost daily. Some 500 to 1000 users were accessing the network through their "bring your own" devices.

How many will eventually be served by VDI? "At this point, we don't know," says Kachel. "Will it be all 25,000? Probably not. 20,000? It might be. Is it going to be another 6000? Most definitely. And as we're rolling out those 6000, we'll learn: Is this too many, just enough, can we go to 18,000?"

With all 110 sites in its network equipped with Cisco WAAS and manageable with Cisco Identity Services Engine, Quintiles is putting in place the foundations for a complete Virtualization Experience Infrastructure (VXI), the Cisco end-to-end solution for delivering a next-generation virtual workspace with unified virtual desktops, voice, and video. Kachel can't say yet whether that is the plan, but unified communications are definitely one subject in his ongoing discussions with Cisco.

For now, he has plenty of assurance that the company's VDI initiative and, more generally, its WAAS-powered high-performance network and ISE-based policy enforcement, are great successes for the people who count: Quintiles employees.

"The feedback from users has been tremendous," says Kachel. "People love the ease of access from multiple devices. New hires feel like they're 'insiders' within days.

"The network is a platform for our employees to work and succeed. When it works the way it should, it plays a big role in employee satisfaction. I call it 'retention through technology.'"

PRODUCT LIST

- Cisco Wide Area Virtualization Engine (WAVE) appliances
- Cisco Wide Area Application Services (WAAS) Services-Ready Engine modules for Cisco Integrated Services Routers Generation 2 (ISR G2s)
- Router-integrated WAAS Express software
- Cisco Identity Services Engine (ISE)
- Citrix Systems XenDesktop and XenApp

For More Information

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



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