



## Health system boosts patient care through mobilized data access

Scripps Health uses Citrix to optimize network management



**Scripps Health  
and Citrix**

**Challenge: Expand digital access to data, applications, and services throughout the healthcare system**

To increase the quality of healthcare provided to the community, Scripps Health decided to upgrade to a new electronic health record system. The organization also wanted to expand its digital information services, providing ambulatory and emergency-room care teams with secure access to patient information, supporting secure texts, and creating new information kiosks.

Making digital healthcare information more widely available required Scripps Health to extend mobile access to a broader variety of devices so that clinicians and patients could retrieve data from anywhere. The organization adopted a new bring-your-own-device policy that allows staff to work anywhere at any time while improving employee productivity and patient care.

As Scripps Health expanded information access, its user community grew rapidly—from 400 to 5,000 concurrent users. To provide responsive service to these workers, IT leaders wanted to deploy a scalable, highly available, and high-performance technology platform. Specifically, the IT team wanted to use the same version of its Citrix NetScaler App Delivery Controller solution across two development and two production appliances. To efficiently manage the growing technology landscape, Scripps Health also wanted a single interface to provide centralized management, analytics, and orchestration across the entire Citrix NetScaler deployment.

**Solution: Optimize network management with Citrix NetScaler Management and Analytics System**

In addition to the NetScaler appliance, Scripps Health already used other Citrix solutions—including Citrix XenDesktop and XenMobile technology—to deliver desktops and software while managing mobile devices. To address its mobility, performance, and management challenges, the organization deployed Citrix NetScaler Management and Analytics System, a virtual appliance that runs on the Citrix XenServer platform. The technology provides administrators with visibility across the network. It also automates

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**Rodney Sackett** | Sr. Systems Engineer for Desktop Engineering and Architecture | **Scripps Health**

management jobs that need to be executed across multiple instances for increased IT productivity.

NetScaler MAS helped Scripps Health simplify fleet management and application service orchestration of its NetScaler appliances. A more intuitive user interface makes it easier for administrators to navigate and interpret information. It also improves manageability, simplifying tasks such as SSL certificate management.

Enhanced visibility and powerful analytics streamline network troubleshooting for large and small system issues. “It’s nice to be able to go to a single point and see how we’re doing on CPU usage or memory usage across the board,” says Rodney Sackett, senior systems engineer for desktop engineering and architecture at Scripps Health.

For example, faced with escalating system usage, administrators used NetScaler Management and Analytics System to identify a memory leak. With previous network tools, it would have remained undetected until the system crashed. “With NetScaler Management and Analytics System, we can see issues right away and address them

proactively rather than figuring out what happened after the fact,” says Sackett. “In just a quick glance, we can look at bandwidth, throughput usage, which servers are online, and whether one went down, all through a single pane of glass.”

The solution also delivers secure mobile access to data and applications. The Citrix NetScaler Unified Gateway platform provides external security and compliance with an ICA Proxy for delivering XenApp virtual apps and XenDesktop virtual desktops. The addition of Citrix XenMobile and MicroVPN technology for an on-demand per-app VPN connection allows clinicians to gain secure remote access to Scripps Health systems and run any Citrix-based applications on their mobile devices.

**Key Benefits**

Patients, staff, and the IT team at Scripps Health all realize significant benefits from the deployment of NetScaler Management and Analytics System.

**Enhancing customer care**

The new system is both more stable and highly available, experiencing no IT outages related to the Citrix solution in two years.

**About Scripps Health**

Scripps Health is a private, nonprofit, integrated health system in San Diego, California. Founded in 1924, the organization strives to improve community health through excellent medical care, preventive services, and wellness screenings for every stage of life, while advancing medicine through clinical research and graduate medical education. Ranked among the top 15 health systems in the nation, the organization is on the forefront of genomic medicine and wireless health technology.



Five acute-care hospitals on four campuses



15,000 employees, including more than 3,000 affiliated physicians



700,000 patients treated annually

## Citrix NetScaler delivers high availability and security

Citrix NetScaler gives enterprises the tools and technologies they need to evolve their data centers into efficient, highly reliable software-defined networks.

NetScaler empower Scripps Health to accommodate even the largest high-traffic environments, while delivering high availability with security for users and data. For example, Intel SR-IOV technology in the Citrix NetScaler solution provides a mechanism that allows a single-root function (e.g., a single Ethernet port) to appear as multiple separate physical devices. It increases I/O performance and scalability, thereby making a significant impact on improving overall server utilization.

"The NetScaler SDX multitenant SDX appliance allows us to maximize the box performance to support more applications and use cases with fewer appliances," says Rodney Sackett, senior systems engineer for desktop engineering and architecture at Scripps Health.

Workers can log on to the system in less than 20 seconds—down from 45 seconds or more with the organization's previous technology solution. Both staff and patients now have easier, faster access to the healthcare system and electronic medical records, no matter which device they use, which improves customer care.

### Improving staff experience

The solution makes it easier for busy clinicians to quickly access data, whether they are working in one of the health system facilities or from a remote location. "When a user signs on, the system works every time," says Sackett. "Citrix has a lot of connectors on the back end with many touchpoints to make that happen. It's easy for the user to simply click one button and know that it works."

Citrix technology is also flexible enough to handle the creative demands of clinicians. "What the physicians are trying to accomplish just blows your mind," says Sackett. "As an end-user solution provider, I want to support that. Having those technology options from Citrix is huge."

### Freeing IT for more valuable work

By automating and streamlining routine management and maintenance tasks, NetScaler Management and Analytics System is helping Scripps Health's IT staff work more proactively and productively. Enhanced visibility and powerful analytics help the IT team

manage more than 700 virtual machines that provide critical user services. "With NetScaler Management and Analytics System, we can easily see what's going on, so we spend less time chasing problems," says Sackett.

### Looking ahead

To help workers be more efficient and provide superior patient care, the IT team wants to stay current with the latest tools. "Whether the technology is MRI graphics or 3-D graphics cards, our users expect us to make it available when they want it," says Sackett. "Our goal is to make sure that we're ready when our users want something new."

The health system also plans to integrate its technology with SecureAuth, a third-party product that provides two-factor authentication. This enhancement will enable service delivery to remote users through XenApp software or the XenDesktop solution.

Scripps Health also intends to standardize on Citrix technology wherever possible. "When we use Citrix, things are simpler for the user; they run faster than they do on a PC, and upgrades are easier for IT," says Sackett. "The more we put into Citrix, the more mobile our end-user community is. The more mobile they are, the better patient care they can provide."



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