



Biopharmaceutical Software Firm Discovers Advantages in Wireless

As the leading provider of scientific content, discovery informatics, workflow applications and databases to the life sciences industry, Elsevier MDL is at the cutting edge of helping biopharmaceutical customers conduct research and development of new drugs and compounds. Elsevier MDL enables its customers to bring new treatments to market faster and more cost-effectively.

Elsevier MDL's customer list includes tens of thousands of users worldwide in the chemical, pharmaceutical, agrochemical and biotechnology industries, government and education institutions, hospitals and utility companies.

OBJECTIVE

With over 300 employees at its San Ramon, Calif. headquarters, including software developers, executives, sales representatives, marketing managers and finance managers, Elsevier MDL was looking for a way to give workers access to their core enterprise applications. They need access to project management tools and email whether they are at their desks, in conference rooms or roaming the halls.

The company decided to implement a wireless network solution to increase its efficiency, collaborative capabilities and information access to make it an even stronger force in the life sciences field.

In 2001, Elsevier MDL implemented a wireless LAN at a time when standalone access points (APs) were the only option. But as the deployment grew, managing the rapid proliferation of standalone APs quickly became almost impossible. Each AP had to be individually configured, secured and managed. And every time IT wanted to add a new user to the wireless network, staff members had to manually reconfigure all APs across the facility.

Another sore point was that security on this first-generation system was almost non-existent, according to Coy Thorp, network systems architect at Elsevier MDL. Authentication and encryption consisted of the bare minimum of MAC address authentication and static Wired Equivalency Protocol (WEP). "As the user population grew, we reached a point where changing the WEP key was impossible, so we introduced further risk into an already risky implementation," Thorp says.

With security as a top concern, Thorp and his team set out to evaluate various WLAN systems.

SOLUTION

"The thing about security is that all vendors now support the Advanced Encryption Standard as well as authentication, authorization and accounting," Thorp says. "So our decision came down to mobility and management."

Elsevier MDL chose the Trapeze wireless LAN Mobility System because of its combination of secure mobility and ease of implementation and management.

The Trapeze Mobility System deployment consists of Mobility Exchange (MX) switches, Mobility Point (MP) APs, Mobility System Software that integrates the wired network with the wireless, and the RingMaster suite of planning, configuration, management and optimization tools.

COMPANY DESCRIPTION

Elsevier MDL is the leading provider of scientific content, informatics framework and workflow applications that accelerate successful life sciences R&D by improving the speed and quality of scientists' decision making. The company offers the world's most comprehensive collection of factual databases and reference works covering bioactivity, chemical sourcing, synthetic methodology, pharmacology, metabolism and toxicology.

OBJECTIVE

- Design and deploy a wireless LAN with the highest levels of security as well as simplified management and ease-of-use
- Replace a first-generation wireless network that consisted of standalone access points that were not secure and difficult to configure, deploy and maintain
- Give workers access to their core enterprise applications, project management tools and email whether they are at their desks, in conference rooms or roaming the halls

SOLUTION

- Trapeze Mobility System consisting of four Mobility Exchange switches and 14 Mobility Point access points for enterprise-class performance
- IEEE 802.1X Protected Extensible Authentication Protocol with Advanced Encryption Standard encryption provides strong security
- Identity-Based Networking allows users to take their VLAN assignments, security and QoS requirements with them when they roam

RESULTS

- Trapeze RingMaster lifecycle management tool suite reduces operational costs by saving time and effort during pre- and post-deployment planning, configuration, verification, management and optimization of the WLAN infrastructure
- Trapeze's integrated architecture provides a seamless user experience and eliminates the need for IT to manually create VLANs at every switch
- The Elsevier MDL IT team can replace MP access points without impacting the network, saving considerable time

Using Identity-Based Networking, users' access policies — including virtual LAN and subnet assignments, authentication and encryption requirements, roaming policies and quality of service parameters — follow users wherever they roam from wired to wireless.

Employees use Windows laptops, desktops and handheld devices to access the network, and visitors can access the wireless LAN as guests. To ensure that only valid users gain access to authorized resources, Elsevier MDL has standardized on IEEE 802.1X Protected Extensible Authentication Protocol (PEAP) with the Advanced Encryption Standard (AES).

With Trapeze, Elsevier MDL can group its users by VLANs and enforce access control lists (ACLs) from the wired network all the way to the edge of the wireless LAN. Thorp and his team can use VLAN assignments to ensure that guest traffic remains isolated and secure from business-critical data.

“RingMaster is a silver bullet. We can manage the wireless network with the same tool we used to implement and design it.”

— Coy Thorp
Network Systems Architect
Elsevier MDL

RESULTS

The Trapeze deployment has given Elsevier MDL an enterprise-class wireless LAN solution that has exceeded expectations. Key to this success has been the RingMaster lifecycle management tool suite, which provides a number of features that helps reduce operational costs of the network.

The company used RingMaster to perform pre- and post-deployment planning, configuration, verification,

management and optimization of the wireless LAN. “RingMaster is a silver bullet,” says Thorp. “We can manage the wireless network with the same tool we used to implement and design it.”

RingMaster allowed the Elsevier MDL staff to plan wireless coverage for the entire building rather than just floor-by-floor. After the plan was complete, Thorp and his staff merely had to print work orders to show where to install Trapeze MXs and MPs.

And with the system intelligence residing in the MX switches rather than at the MP access points, Thorp's team can easily replace an MP unit without impacting the network, saving considerable time.

Trapeze's integrated architecture provides a seamless user experience, and eliminates the need to create VLANs based on where users might roam. “It doesn't matter which MP or MX users connect to because their permissions follow them,” Thorp says. “It's a big win for us.”

To measure its success, Elsevier MDL looks at how the company is now better able to speed the discovery and development of innovative new drugs by improving the speed and quality of scientists' decision-making process.

The collaboration enabled by the Trapeze wireless LAN Mobility System puts critical information in the hands of scientists so they can make better decisions in an industry where the next discovery could be the one that changes the world.



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