School District Improves Learning Environment with Medianet

Cisco medianet solution helps SEMS Veracruz build sustainable network for digital media and video security applications.

EXECUTIVE SUMMARY
SEMS VERACRUZ
• Education
• Veracruz, Mexico
• 700+ Schools
BUSINESS CHALLENGE
• Improve education quality
• Create safer environment for students
NETWORK SOLUTION
• Cisco Education Solution, encompassing switching, routing, communications, wireless, and video
• Cisco Digital Media Suite
• Cisco Networking Capabilities for Medianet
BUSINESS RESULTS
• Created simpler, more cost-effective network environment for rich media applications
• Improved learning environment through digital media players
• Provided better monitoring of school grounds with digital surveillance cameras

Business Challenge

The SEMS Veracruz school district supports more than 700 high schools, many of which specialize in industrial technologies. Recognizing the value of rich media to enhance the learning environment, the district had integrated digital video applications into the schools using their IP network and satellite distribution. As rich media rapidly became more mainstream, SEMS Veracruz wanted to increase its use in the classroom to facilitate knowledge sharing in a modern learning environment. Those goals presented significant challenges.

Traditional IP networks are not well-equipped to manage the diverse and demanding technical requirements of rich media applications. Interactive applications, for example, are highly sensitive to delay and require consistently high performance that can be difficult to guarantee using a standard IP network.

In addition to performance challenges, rich media applications can complicate installation when technicians do not have specialized training in network switching and routing. Errors in switch port selection might result in the network being unable to use a rich media device, or even locate it on the network. Or, content could stream to the wrong location, where video intended for administrators was actually viewed by students.

SEMS Veracruz wanted to create a network environment that simplified the process of installing rich media equipment and applications, and controlled costs as additional applications were added to the network.

"We understood the value that we could bring to the district with more rich media applications," says Paulo Camacho, head of information technology for SEMS Veracruz. "We also understood the difficulties. What we needed was a cost-effective solution."

Network Solution

The answer was a Cisco® Education Solution. Working together, Cisco and SEMS Veracruz created a new network foundation for the school district using Cisco switching, routing, communications, wireless, and video technology. The network and application environment includes a Cisco 3925 Integrated Services Router (ISR), a Cisco 3700 Series Multiservice Access Router, a CiscoWorks LAN Management Solution (LMS), and Cisco Unified Communications.

The Cisco Education Solution supports rich media using specialized software. The Cisco Digital Media Suite helps users collaborate and share ideas with the Cisco Show and Share® webcasting and video-sharing application. Cisco Digital Media Manager, a web-based media-management application, helps users easily manage, schedule, and publish digital media. And central to the rich media solution is Cisco Networking Capabilities 2.1 for Medianet, which helps reduce IT costs, simplify video deployment, and improve the video experience.

> "Autoconfiguration makes it possible to easily deploy and maintain an infrastructure with digital media players and video cameras, even with limited availability of network experts."
> — Paulo Camacho, Head of Information Technology, SEMS Veracruz

A medianet is an end-to-end architecture that includes advanced, intelligent technologies and devices in a platform that is optimized for the delivery of rich-media experiences. The platform is media-, endpoint-, and network-aware, which extends the network boundary to rich media devices. Integrating rich media into the network simplifies the deployment and scaling of rich media applications while optimizing and enhancing video performance.

The initial deployment focused on 20 schools and included eight digital media players and eight digital surveillance cameras. Three of the digital media players and three of the cameras are installed at the district's Coordinación Sectorial Desarrollo Académico (COSDAC) headquarters in Mexico City. The remaining players and cameras are located in four different schools. The digital media players will initially provide video streaming and broadcasting, while the cameras will support video security applications.

Business Results

SEMS Veracruz now has a network infrastructure that can readily support a growing resource of rich media solutions. All the network components work together and build on an infrastructure that is sustainable and cost-effective.

One of the most valuable features of the entire solution for SEMS Veracruz is the autoconfiguration capability of Cisco Networking Capabilities 2.1 for Medianet. With autoconfiguration, the network recognizes a new device and provides the right network services for fast configuration and accurate operation. It allows workers without specialized IT skills to correctly install rich media hardware such as digital video players and digital surveillance cameras.

Integrating new devices is now a plug-and-play experience that is easily managed by local technicians, saving time and money. The district expects that the ability to more easily deploy new applications now and in the future will result in significant long-term cost savings. "Autoconfiguration makes it possible to easily deploy and maintain an infrastructure with digital media players and video cameras, even with limited availability of network experts," says Camacho.

The SEMS Veracruz IT staff also likes the new network, and understands the potential cost savings of expanding the solution to other districts in the state. They see additional potential in using the network as a means for broader rich media solution implementation in the entire state education network.

The results are reduced costs, better productivity, faster implementation, and greater growth potential. "It's all about making the deployment and maintenance of video endpoints simpler, faster, easier, and cheaper," says Camacho. "And with autoconfiguration, we can also easily move, add, or change video endpoints, all without specialized staff."

PRODUCT LIST
• Cisco Education Solution
• Cisco Digital Media Suite
• Cisco Networking Capabilities 2.1 for Medianet

Next Steps

The Cisco Education Solution and rich media applications are running well, with no problems reported. SEMS Veracruz will continue to use the solution over a period of one year (2011-2012) and then move forward with the project to add more Cisco solutions for rich media applications. These additions will supplement the current Cisco Show and Share webcasting and video-sharing application, and other basic education solution portals now in place. "The funding agreements are in the works," says Camacho. "We're excited about moving forward."

For More Information

For more information about Cisco Networking Capabilities for Medianet, please visit:

http://www.cisco.com/go/medianet

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