

School District Delivers 21st Century Learning Environment

Giddings Independent School District leverages power of network to converge and manage wide array of systems.

EXECUTIVE SUMMARY
<p>GIDDINGS INDEPENDENT SCHOOL DISTRICT</p> <ul style="list-style-type: none"> • K-12 Education • Giddings, TX • 297 employees; 1848 students
<p>CHALLENGE</p> <ul style="list-style-type: none"> • Deliver safe and secure 21st century learning environment that meets student and faculty needs • Provide networked technology platform for new school that will continue to create options and opportunities for years to come • Integrate disparate systems and centralize control and support to minimize costs and maximize performance, efficiency, and resources
<p>SOLUTION</p> <ul style="list-style-type: none"> • Web 2.0 infrastructure • Converged applications • Cisco Connected Real Estate platform
<p>RESULTS</p> <ul style="list-style-type: none"> • Increased connectivity and centralized communications and alerting capabilities • Significant savings on power consumption and better control of energy use through centralized management of HVAC systems and lighting controls • Integrated communications system and easy-to-use technology

Challenge

Giddings, Texas is a small town located in the middle of a very large and very rural state. "We're pretty much an agricultural, oil and gas type community," says Michael S. Kuhrt, superintendent of the school district. The 3.6-square-mile town has a population of about 5500 and an independent school system with approximately 1900 students and 155 teachers serving over 260 square miles.

Two years ago the Giddings Independent School District had the foresight to realize that the future of education required technology to deliver a 21st century learning environment. By connecting students, faculty, and staff, Giddings had a vision of delivering new learning opportunities based on connectivity and real-time interaction for lifelong learning and the opportunity to help its community thrive.

"We were frustrated with an antiquated and unreliable communications infrastructure prone to extensive maintenance that was not serving our students, teachers, or community well," says Kuhrt.

Giddings ISD wanted to make the right investment in its future by delivering a quality educational experience to its community, while at the same time having the flexibility to grow and meet emerging needs. Giddings turned to Cisco® to revamp its infrastructure and help it transform its educational environment into the 21st century standard.

Today, innovative learning opportunities previously unimagined are now a reality for Giddings students. For example, one second-grade teacher is starting a project to connect her class with a second-grade class in St. Croix, U.S. Virgin Islands via online video conferencing. Students from Giddings can interact with students in St. Croix via webcam, providing cross-cultural experiences and learning opportunities never before available.

Furthermore, because many students and teachers in rural areas do not have Internet access in their homes, computer labs and meeting spaces are opened early each morning for high school and middle school students to use before school starts, and they are reaping the benefits. "Whether students are checking email,

going to media streaming sites, or whatever they want to do in their free time before and after school, our collaborative spaces are used quite a bit,” says Jeff Dock, operations director, Giddings ISD. “We have wireless access points throughout the building where students can get on the network, work on projects, and have independent learning opportunities throughout the day.”

“The network infrastructure we began implementing two years ago that will culminate with the opening of our new high school gives us a platform for collaboration that provides our students and faculty a 21st century learning experience.”

- Michael S. Kuhrt, Superintendent, Giddings ISD

Solution

When facing the challenge of designing and building a 21st century high school on a 20th century budget, Giddings knew that it had to deliver for its students while meeting tight budgets. Not wanting to deprive its students of the learning opportunities available in larger cities, Giddings saw the benefits that it was achieving from its Cisco® network infrastructure and created a plan to leverage its state-of-the-art technology for the new high school scheduled to open later this year.

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As a key part of achieving its 21st Century vision for the new high school, Giddings realized the value of boosting its video capabilities to improve collaboration and enhance the classroom experience for its students and faculty. With Cisco TelePresence™, Digital Media Systems Video Portal, and WebEx technology, Giddings will provide students in distance learning programs with a virtual, face-to-face learning experience while they interface with their peers across the world when collaborating on projects or research. As a tool for mentoring programs, the enhanced video applications will allow students to interact with business leaders, advisors, professors, and even student leaders at higher education institutions across the world.

Even before construction began on the new high school, Giddings identified opportunities to leverage its investment to connect, manage, and maintain the school's systems in innovative ways via the network. The school district saw the opportunity to converge systems that are not typically managed through IP networks, such as building management processes.

Giddings turned to Cisco's Connected Real Estate (CRE) solution and partner Calence to unify their voice, video, and data network in the new high school building in order to reduce capital and operating expenses. Cisco CRE connects HVAC (heating, ventilation, and air conditioning), and energy and lighting over a unified IP network. Facilities managers can centrally monitor energy usage to find efficiencies and automate environmental controls.

The CRE solution will provide Giddings with a network that is automated, smart, interoperable, and scalable. Moreover, the CRE solution was a perfect fit for Giddings in that it provided the greatest cost benefit to the school district: lower up-front and maintenance costs, and a strategic integrated platform equipped to handle future technology.

PRODUCT LIST

ROUTING AND SWITCHING

- Cisco Catalyst® 6500 with VSS Switching and 10Gigabit Interfaces
- Cisco Catalyst 4500

WIRELESS

- Cisco 4400 LAN Controller
- Cisco 1131 Access Points

VOICE AND IP COMMUNICATIONS

- Cisco Unified 7941 IP Phones
- Cisco 2800 SRST Gateways
- Atlas IP PoE Speakers via Cisco Solution Plus Program
- Berbee Informacast via Cisco Solution Plus Program

DIGITAL MEDIA

- Cisco Digital Media System Video Signage and Digital Media Players
- Cisco Digital Media System Video Portal
- Cisco Digital Media Encoder 1100
- Cisco Media Experience Engine (MXE) 3000
- Cisco 40-inch LCD Displays

PHYSICAL SECURITY

- Cisco Video Surveillance (VS) Operations Manager
- Cisco VS Encoding Server
- Cisco 2500 IP Cameras
- Cisco Physical Access Manager Appliance
- Cisco Physical Access Gateways
- Cisco PAM Badge Designer and Enroller SW

TELEPRESENCE

- Cisco TelePresence™ 500 Systems

Results

By choosing the CRE solution, the new Giddings' high school will enjoy a host of converged applications and a Web 2.0 infrastructure. CRE will provide a unique integrated network platform to manage heating and cooling and other building systems, communications, safety, physical security, and even bells and alarms and school-wide paging. Through the convergence of disparate systems over an IP network, Giddings is poised to generate cost savings and operational efficiencies in the new building.

The benefits of the CRE approach will include:

- Savings on power consumption and better control of energy use through centralized management of HVAC systems and lighting controls
- Physical security approach that is demanded by communities with video surveillance and door access controls and television monitoring systems
- Centralized communications and alerting capabilities with a converged public announcement system that also provides clock synchronization throughout all school system buildings
- Ability to share and communicate critical information easily via video with Cisco's Digital Media Solution for Digital Signage and Desktop Video Integration

"The benefits of this system continue to emerge. We will address a range of critical areas for our new high school, including physical security, video surveillance, and door access control all via the IP network," says Kuhr. "That is what makes it a truly connected and networked building for the future. It is

not just the technology that is converged, but also the building facilities solutions that are managed through the network. We believe this will be a model school that will drive significant cost savings for our school district, and provide our students a truly unique learning environment."



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