

Olathe District Schools

CASE STUDY

Olathe District Schools Selects Trapeze Smart Mobile to Provide Multi-Campus Mobility for 26,000 Students and 4,300 Administrators



The Olathe School District, the third largest school district in Kansas, is recognized by educators and national publications as one of the best districts in the nation.

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—Richard Markman
Assistant Director,
Network Services for ODS

The Olathe School District, 20 miles outside of Kansas City, is recognized by educators and national publications as one of the best districts in the nation based on high academic scores, small class sizes, innovative programs, a high spending rate per student on instruction, and highly educated, well-paid teachers. It boasts ACT and SAT scores above Kansas state averages and more than 95 percent of graduates pursue post-secondary education. The school board and parents associations recognize that computers and the web are great tools for enriching the education of their children. Identified by Money Magazine as the United States 13th most desirable city to live in, Olathe is growing rapidly. Currently the third largest school district in Kansas, it expects to be the second largest district very soon.

Objective

With a large student population that's growing at 1000 students per year and an increasing need to use computers to facilitate student assessment testing and to augment curriculum, Rita Lyon, Executive Director of Technology for Olathe District Schools (ODS) and her team were faced with a daunting task. Rita puts it plainly, "Take a typical elementary school of 600 students and a computer lab with 24 PCs – at that ratio the students have a little over 1 hour a week to use computers in their studies. One solution is to put more computers

in the classrooms. That's a real estate problem – there's simply not enough space in all the classrooms to put even three PCs. On top of that, you have to wire all of them to the network. We have 50 schools, administrative offices, 26,000 students and 4,300 staff. In a lot of respects we're like a large enterprise. In fact, we are the third largest employer in the county. We quickly realized our only option was to use notebook computers and deploy an enterprise-class wireless connectivity solution."

Solution

ODS, like many school districts, had some experience with wireless technology. They had outfitted their media centers with wireless coverage. "When we first deployed wireless a few years ago we had the expectation that when you plugged it in, it worked", said Jennifer Cutler, Technology Solutions Architect for ODS. "Slowly we discovered it doesn't. As client devices move around and interference is introduced from other sources, the previous system proved unreliable and unmanageable."

They planned to take a systematic and pragmatic approach to outfitting their campuses with wireless LANs. They did an initial 60 day trial at the start of 2006 with pilots in two high schools and a junior high. Unlike other product vendors, Trapeze distinguished itself by having the system up and running in one day and by checking-in

DESCRIPTION

- 3rd largest district in Kansas
- 4 High Schools
- 8 Junior High Schools
- 32 Elementary Schools
- 2 Early Childhood Centers
- 4 Alternative Education Sites
- 8 Support facilities
- 26,000 students
- 4,300 staff

OBJECTIVE

- Enable schools to expand usage of computers for curriculum and online testing.
- Ensure high levels of security.
- Manage entirely from one location.
- Control the rollout and deployment.

SOLUTION

- RingMaster software helps ODS plan the deployment of MP-372 and MP-422 access points in every school.
- Schools have coverage in all rooms including locker rooms, offices, and common areas like cafeterias.
- Each school has a Mobility Exchange MX-216R Wireless LAN Controller.
- RingMaster monitors security and manages configurations from one location.

RESULTS

- Notebooks and Wi-Fi enabled PDAs can be moved around the schools while maintaining connectivity.
- Teachers can place many notebook PCs in close proximity wherever they're needed to administer assessment tests or courses.
- Administrators can centrally monitor for rogue access points and eliminate them.
- Administrators can configure access points dynamically when they are placed at their locations.
- Visitors, like auditors, parents, and visiting teachers, can be provided secure wireless access.

Olathe District Schools (continued)

daily with the ODS team. After the successful pilot, ODS decided to only focus on Trapeze Smart Mobile as its potential wireless LAN.

The next phase of the project was to put a wireless network into full production at one school. Rita Lyon's team identified a school that was near full capacity with a teaching staff that aggressively embraced and applied computer technology to their curriculum. Manchester Park Elementary was chosen for the next test and Trapeze performed admirably. The system was up and running with full school coverage in less than one week. At Manchester Park, they have a pool of 50 notebook computers which are constantly circulating about the school. They are able to maintain connectivity and performance wherever the notebooks move. This even includes cases where all of the laptops are in close proximity to each other. This would have choked their previous wireless system; the Trapeze Smart Mobile wireless LAN handled it easily.

The final test was to put the system to work in a high school. The challenge was greater because, in addition to wireless connectivity for their computers, each student has a WiFi enabled palm device. Effectively, there may be over 1400 clients accessing the WLAN at any given time. To accommodate this dynamic environment, ODS needed coverage in every part of the school. Classrooms, hallways, cafeterias, gyms and even locker rooms needed wireless coverage. Trapeze RingMaster software allowed the staff to effectively plan, deploy, manage, and report on the network.

"All along the way, security of the wireless LAN was a constant priority", said Richard Markman, Assistant Director, Network Services for ODS. "We have pretty savvy school board members that have heard plenty of nightmares about WLAN security." Once again, Trapeze Smart Mobile delivers. A key requirement for ODS is

the ability to monitor and, if needed, shut down rogue access points. Many schools are located next to residences, so it was important that they did not shut down access points from friendly neighbors. The Trapeze Smart Mobile WLAN can detect and distinguish a neighbor's wireless router from a rogue access point. It adjusts the configuration of the network to minimize the interference from and for the neighbor. Additionally, Trapeze provides tremendous security capabilities to keep visitors and internal clients from accessing and infecting the network. The concerns of the school board and parents have been put to rest.

Results

ODS is in process of rolling out the rest of its deployment. It has all of its high schools on line and is in process of bringing all 32 elementary schools online. When they complete later this year, they will have 50 sites online. All of the networks are managed centrally using RingMaster software. "With RingMaster we can determine which access point in which school may be having problems or I can monitor traffic loads or security alerts" said Richard Markman.

Looking ahead, Rita sees the wireless LAN becoming more important to ODS. "Visitors, students, auditors, vendors and administrators all expect to have access to our WLAN when they come to our sites", said Rita. "It's just a requirement of doing business. Unlike an enterprise, we don't have the luxury to turn our technology on a 3 year depreciation cycle. We will look to get 5 to 10 years out of our infrastructure. With the Trapeze Smart Mobile architecture we know that we can anticipate and consider new WLAN topologies like 802.11n without having to rip out and replace our wireless controller. The Trapeze support and sales teams and the Trapeze Smart Mobile WLAN have exceeded our expectations."