CISCO

Mobility makes a difference

Katy Independent School District launches successful BYOD program and conquers the digital divide.

"The ability to embed technology into each learning space helps ensure the success of our users."

- Darlene Rankin, director of Instructional Technology, Katy Independent School District

Connecting 76,000 users across 60 locations sounds more like a job for a midsize city than a school district. But this is Texas after all.

Challenges	• Integrate mobile devices into learning experience • Support more than 40,000 concurrent Wi-Fi users • Empower faculty and staff with access to online and mobile tools

At Katy Independent School District (Katy ISD), putting digital resources in students' hands is a large-scale effort. The district is working to provide students with 21st-century education through bring-your-own-device (BYOD) programs and by providing district-owned devices to students who can't bring their own.

Many student resources are in a digital format and include video, audio, simulations, and animations. Teachers and students need continued access to technology devices and a robust network to ensure consistent access to content.

With one wireless access point for every 2.5 classrooms, the network sometimes became congested, compromising performance. "We needed greater density to support more users with multiple devices as digital content requires greater bandwidth," says Joe Christoffersen, director, Technology Operations, Katy ISD. "We also wanted centralized management for all access points throughout the district."

Case Study | Katy Independent School District

Size: 67,200 Students	Location: Katy, TX	Industry: Education

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A wireless mobility solution provides reliable, fast connectivity for 40,000 concurrent users.

Solutions	• Installed Cisco® 802.11ac-based Wi-Fi access points in classrooms and outdoor locations
	• Managing wired and wireless networks centrally with Cisco Prime™ Infrastructure

Getting the most from digital resources

Teachers can use video and Internet resources in lessons without dropped or slow connections. Biology students use mobile devices to view images from microscopes, while chemistry students participate in online, interactive labs.

Supporting enhanced learning

Schools that received mobile devices immediately saw an increase in student achievement.

"Utilizing the plethora of digital resources, students are able to take an active role in their learning because they are asked to create, collaborate, and problem solve," says Rankin. "They're more engaged."

Improving staff efficiency

A reliable and scalable infrastructure and centralized network management save valuable IT resources.

High marks from teachers

Katy ISD scored highly on the Texas Campus School Technology and Readiness (STaR) self-assessment, with most teachers rating network performance as "above average" or "excellent."

"Our Wi-Fi network just works," says Rankin. "It's as reliable as the light switches in the classrooms."

Results	• Provides an excellent Wi-Fi experience for students, staff, and guests
	• Enables successful BYOD and digital equity programs
	• Improves teacher and student satisfaction

Making connections for the future of education

Katy ISD is using the Internet of Everything (IoE) to improve efficiency and make network connections even more valuable to classrooms. Staff use mobile devices to monitor pumps and heating, ventilation, and air conditioning (HVAC) systems, while students can check the power draw of roof-mounted solar panels.

Products & Services

Wireless and Mobility
- Cisco Aironet® 3700 Series access points with Cisco High Density Experience (HDX) for 802.11ac
- Cisco Aironet 3600 Series access points
- Cisco Aironet 1500 Series Outdoor Mesh Access Point, 1552E and 1532E with single-band antennas
- Cisco 5508 Wireless Controller

Routing and Switching
- Cisco Catalyst® 3850 Series Switches (network edge)
- Cisco Catalyst 6509 Switch (network core)

- Cisco Catalyst 6513 Switch with Cisco Wireless Services Module 2 (WiSM2)
- Cisco Nexus® 7000 Series Switches (data center)

Security
- Cisco ASA 5585-X Adaptive Security Appliance

Systems Management
- Cisco Prime Infrastructure

Services
- Cisco SMARTnet® Service

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