



# Connecting students with digital tools

Teachers and students at Hutto Independent School District stay on task in class by gaining 100% reliable WiFi for half the cost with Dell EMC and Intel®



K-12 Education

United States

## Business needs

To inspire students to be bold, innovative thinkers who are academically prepared for an unlimited future, Hutto Independent School District (ISD) needed to give teachers and students faster, easier and more reliable access to digital tools.

## Solutions at a glance

- [Client Solutions](#)
- [E-Rate Solutions](#)
- [Education Solutions](#)
- [Networking](#)
  - [Aerohive® AP250 access points](#)
  - [Dell EMC Networking N3000 switches](#)

## Business results

- Faster WiFi and intuitive tools equate to fewer disruptions
- Eases growth by improving network flexibility and control
- Simplifies IT use and management
- Increases ROI

# 100%

reliable technology sparks student engagement and teacher adoption



# 50%

lower classroom technology costs



Slow or unreliable internet access can derail a lesson. And if such disruptions occur repeatedly, teachers will understandably resist using digital resources. As an early adopter of the digital classroom, Hutto Independent School District (ISD) understands these challenges. So when it came time to add an elementary school, the district designed a new model based on network and client technologies that give teachers and students quicker, always dependable access to digital tools — while saving money.

Hutto ISD is one of the fastest-growing K–12 districts in Texas. Over the last decade, its population has increased by sevenfold, from 1,000 to 7,000 students. When the district decided to build its new Howard Norman Elementary School, administrators and IT staff wanted to create a more effective digital classroom. Underpinning the success of the new model was the district's WiFi. Initially, IT staff planned to scale existing architecture and contacted the district's incumbent network vendor for a proposal. Keith Reynolds, senior network engineer at Hutto ISD, says, "When I saw the quotes for the new campus, I was shocked. The prices were so high, they were ridiculous."

*"Our client and network solutions from Dell EMC are 100 percent reliable and we've reduced technology spending in classrooms by 50 percent."*

**Travis Brown**

Director of Technology, Hutto Independent School District

## The right foundation for success

Instead, the district contacted one of its other vendors, Dell EMC. "We'd get all the same capabilities — and more — with a Dell EMC network," says Reynolds. "Plus, the solutions are very easy to work with and they cost 70 percent less compared with the incumbent switch vendor."

Hutto's existing surveillance and automated door-lock systems run on six Dell EMC PowerEdge servers with Intel® Xeon® processors in an M1000e chassis. Video footage and other data resides on Dell EqualLogic Storage arrays with 60TB of capacity. Travis Brown, director of IT at Hutto ISD, says, "We get amazing support from our Dell EMC team. I can send our representative a question or concern in a text message, and he just takes care of it. We never get any pushback."

## An entire class can jump on WiFi at once without wait times

To build its WiFi network at Howard Norman, Hutto had Dell Deployment Services install and configure 62 Aerohive® AP250 access points. The district is also deploying AP250s at other campuses. "Compared with our other WiFi solution, we have a lot more visibility and control over Aerohive access points," says Brown. "We can configure the WiFi usage in a classroom from HiveManager, including which clients are associated with which radios. I can also see channel interference."

The increased insight and control makes a tremendous difference in troubleshooting. For example, there's a teacher at Howard Norman who uses digital tools a lot. IT staff configured the two software-definable access point radios in her class so they use dual 5 GHz instead of 2.4 GHz, increasing the WiFi capacity. They also changed a setting so the devices work together to automatically balance network traffic. "Everyone in the class gets fast WiFi, even if all 35 kids jump on at once," says Brown.

IT staff accelerated network response times for all users at the school by building a single multi-use WiFi network with one name or service set identifier (SSID). Reynolds explains, "By using the Private Pre-Shared Key feature, our Aerohive access points intelligently connect people and devices to the resources they are authorized to access based on the password they provide. So WiFi air time isn't being chewed up by authentication processes, and we reduce complexity by avoiding SSID sprawl."

## An easier way to support rapid growth and new educational models

To ensure Howard Norman's wired network can scale to meet new requirements including a 10-gigabit backbone, the district deployed 12 Dell EMC Networking N3000 switches, along with the Dell EMC servers with Intel® Xeon® processors. "We get the flexibility we want with Dell EMC Networking N3000 switches," says Brown. "We are able use the N3000 as a switch or a router right out of the box. I can't do that with the comparable switch from our other vendor without additional software licensing. The N3000s also integrate with HiveManager. So we're looking forward to managing our Dell EMC switches and AeroHive access points using one console."

While Hutto was deploying the new network at Howard Norman, IT personnel also transitioned the core network to a software-defined model based on the VMware® NSX network virtualization platform. Doing so gives IT staff greater control over new and existing network resources, and it also boosts operational efficiency. Brown says, "We collapsed our dual core into a single logical point. As far as devices are concerned, our network fabric is the VMware virtual switch. Today, if I want to provision a new network, I just hit four buttons on the VMware console and it's done. Each situation is unique, but I can estimate the process is 75 percent faster."

*"The flow in classrooms is more seamless. Kids grab a Dell Chromebook like they'd grab a paper or pencil."*

**Travis Brown**

Director of Technology, Hutto Independent School District

# Increasing student engagement with tools that are half the cost

Hutto also created a new client model at Howard Norman that's increasing teacher adoption and return on investment (ROI). Rather than installing several PCs in each room or funding a 1:1 program, Hutto provides every class with a cart of Dell Chromebooks. Each device has a touchscreen, rubberized edges and Intel Celeron processors, so they're intuitive, durable and fast. Every room also has a 65-inch TV that connects to the teacher's Chromebook over WiFi. Not only is this solution less expensive than interactive smartboards, it's also easier to use.

"Our client and network solutions from Dell EMC and Intel are 100 percent reliable and we've reduced technology spending in classrooms by 50 percent," says Brown. "We can have 625 people on the network at a time, and we don't have any problems. In addition, the flow in classrooms is more seamless. Kids grab a Dell Chromebook like they'd grab a paper or pencil. Teachers are more comfortable with the technology because it's easy to use and the devices don't break. That's a successful digital classroom."

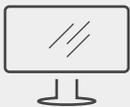
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