

Livingston ISD Overhauls Core Network and Supports New 1:1 Learning Initiative with D-Link

Excellent price, performance and value prove to be the right combination for this growing school district in Southeast Texas.

Background:

Livingston ISD is a small 5A school district that encompasses over 300 square miles of Polk County, one of the fastest-growing counties in Southeast Texas. The rural school district serves over 5,000 students on six campuses with over 700 employees. Livingston ISD is home to three elementary campuses, one intermediate campus, one junior high school and one high school, where it delivers strong core academic programs and a wide variety of athletics and fine arts to meet the needs of its students.

The Vision: Upgrade network infrastructure to accommodate a new 1:1 initiative, IP-based technologies and future growth

When Technology Director Kip Robins joined Livingston ISD in April 2015, he already knew the network was a problem. His former job was with a service center that supported 53 different school districts in Texas, including Livingston ISD. As he recalls, network uptime was a real issue and maintaining decent performance was a constant struggle.

"Not only was the former network flat (with no VLAN separation), there was no real technical expertise to manage the complexity of a network this size," he said. "It was like a baby gorilla. It was easy to control at first, but as the network grew, it became this giant creature that nobody could control. It did what it wanted, when it wanted."

The network itself included products from multiple vendors, including Cisco, HP and D-Link. Yet the products weren't the problem; it was the lack of a proper network design, configuration and on-site technical knowledge. In addition,

the existing wireless network was unmanaged, and, therefore, completely undependable. There was no security whatsoever, so if a virus struck anywhere, it spread everywhere. Clearly, the district had a mixed bag of problems.

Adding pressure to the situation, the district superintendent wanted to start a 1:1 technology program when the next school year began—and everyone knew the current network was unreliable.

"That was a big driver," said Robins. "The teachers were scared to death because the network couldn't support digital learning for 3,000 4th through 12th-grade students across three campuses. The pressure was on to get the network up to speed—and we only had a few months."

The Solution: 10GB managed Layer 3 switches, plus Gigabit PoE switches, wireless access points and a unified wireless controller that provide secure connections, faster speed, enhanced performance and improved manageability

Everyone agreed that a network upgrade was critical. Yet convincing Robins that D-Link was the right choice was no small feat. As a Cisco-certified technician, Robins was very comfortable with Cisco gear and how those products worked. When he found out that the decision was already made to go with D-Link products instead, he wanted to cry.

"The decision to go with D-Link was made before I got here, based on the excellent value of D-Link products and the comfort level staff members already had with D-Link," said Robins.



Key D-Link Purchase Drivers

Performance

A mix of 10GB core switches, PoE switches and wireless access points help Livingston ISD support its new 1:1 technology initiative and achieve more network speed, security and uptime.

Value

D-Link's affordable pricing, state-of-the-art equipment and technical expertise help Livingston ISD ensure reliability and optimize budget dollars.

Innovation

D-Link's DXS-3600 10GB managed switches offer high-performance, convenient deployment and energy efficiency, making them an ideal Layer 3 solution.



"I tried everything to convince the district to convert the order to Cisco. I even contacted our E-Rate state representative and asked for permission to switch the order."

To Robins' disappointment, a change to Cisco would have cost Livingston ISD over \$250,000 and the district would have lost its annual E-Rate funding. Changing providers was not an option.

However, it didn't take long for D-Link to win Robins over.

"I'm a very organized person and I'm certified in project management, so I like to see an entire project organized and laid out on paper," he said. "On our first day of planning for the summer upgrade, D-Link Professional Services team came in with the level of professionalism that I would expect from any provider. They came in with timelines and clear ideas that were in conjunction with mine. The trust began to build when I realized this team knew what it was talking about."

After a week of on-site planning, the team had determined the new network design and had the entire configuration mapped out.

Phase one included the complete upgrade of the core wired network. Livingston ISD outfitted all sites with core Layer 3 switches to enable efficient routing, and upgraded from a Gigabit network to a 10 Gigabit network, which would future-proof the network for growth over time. The district also added PoE switches to support an upcoming VoIP implementation.

The final three weeks of the implementation were focused on phase two of the project—upgrading the wireless network. D-Link sent two



of its top wireless experts to complete the installation and ensure the network could handle 3,000 new devices in a matter of weeks.

"The fact that we were able to go from network design to full working implementation within five months was surprising, not just to me but to other people I work with, because they had spent years trying to fix many of these problems," said Robins.

"The overall level of organization from D-Link was very impressive," said Robins. "In addition, D-Link did things for our small district that no other vendor would have done. I even got a direct call from one of the D-Link executives who extended his support and provided his personal cell phone number, in case I needed anything. I would never have received that from any other manufacturer."

D-Link in Action: Compact, high-performance switches set the stage for better manageability, security and faster, more robust network efficiency

With the district's long-running history of poor network performance, everyone was holding their breath on day one of the network go-live.

"We had D-Link people on standby in California, plus our own district folks on standby here, because we fully expected to have at least a few problems," said Robins. "But there were none. Not one issue, which is practically unheard of. That simply never happens."

In fact, the network implementation went so well, the district was able to accelerate the timeline for its 1:1 technology device rollout. Originally, the district planned to release Chromebooks one grade level at a time, testing the wireless network after each new release. On day one, devices were passed out to the first grade level—with zero problems reported. On day three, the district released Chromebooks to another grade. Again, no problems. The wireless network was working so well, the district moved up its timetable and had all devices rolled out within that first week.

"Today, more than 200 days into our new network, our teachers and students are delving into digital learning more efficiently than they ever imagined," said Robins. "Our district is 76% low income, so many of these students would never have had this type of opportunity in the classroom. It really does help these students to become better citizens once they graduate from our school. Our communication with parents has improved, too."

case study

Because we have a stable network, teachers now have the confidence they need to plan their daily lessons around digital curriculum, and positive communication with parents has increased dramatically.

"I love nothing more than telling people my story," said Robins. "I originally walked into a D-Link network and wanted to cry, and today I'm eating my words. I get to explain how D-Link has changed my environment. I don't get any complaints about the network anymore, and my phone literally never rings. That is proof in the pudding. D-Link has made my job here incredibly easy. I'm a true believer now."

Livingston ISD's complete product integration includes:

Quantity	Part Number	Description
1	DXS-3600-32S/SI	10GB Core Switch, Layer 3
240	DWL-8610AP	Wireless Access Points
2	DWC-2000	Unified Wireless Controller
9	DGS-3120-48TC/SI	Gigabit Switch
1	DGS-3620-28PC/SI	Gigabit PoE Switch w/ 10GB ports, Layer 3
1	DGS-3120-48PC/SI	Gigabit PoE Switch
1	DGS-3120-24PC/SI	Gigabit PoE Switch
6	DXS-3600-16S/SI	10GB Core Switch
6	DGS-3620-52T/SI	Gigabit Switch w/ 10GB ports, Layer 3
2	DGS-3620-52P/SI	Gigabit PoE Switch w/ 10GB ports, Layer 3
1	DXS-3600-32S/SI	10GB Core Switch, Layer 3
24	DEM-432XT-DD	10GB Fiber Switch Module
2	DEM-431XT-DD	10GB Fiber Switch Module
20	DEM-311GT	1GB Fiber Switch Module
7	DEM-CB50	Switch Stacking Cable

Call or visit the web address below for more information on D-Link networking solutions.

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