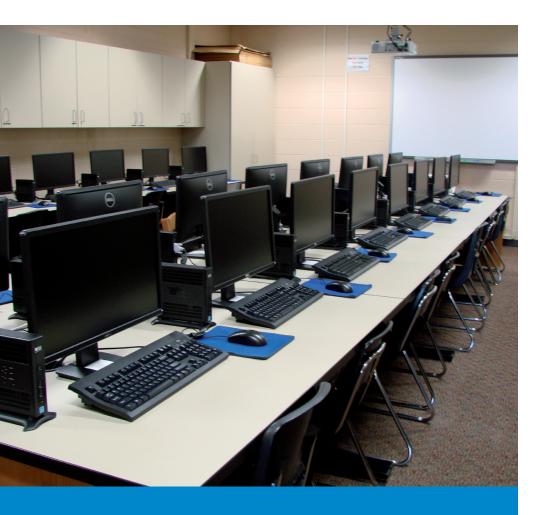# Staying agile to adopt emerging educational models

Aurora Public Schools can meet future requirements and help students compete with a Dell hybrid desktop solution that requires less time and money to manage and scale

> "Although cost and manageability were initially our top two priorities, the adaptability of our Dell Wyse solution is quickly becoming our single greatest benefit."
>
> *Robb Nachtigal, Technology Coordinator, Aurora Public Schools*

Business need

To facilitate learning, Aurora Public Schools needed affordable desktops that were easy to manage and flexible enough to support the changing needs of teachers and students.

Solution

The district engaged solutions integrator Logical Front to deploy a hybrid desktop solution based on end-to-end Dell technologies that include virtual desktops in labs and traditional workstations in classrooms.

Benefits

- Boosts student learning potential
- Meets immediate and future needs for a flexible student desktop
- Reduces capital expenditures by 42 percent and fuels long-term TCO savings
- Eliminates at least six hours a week in IT management tasks and reduces risk
- Provides a viable long-term IT and financial roadmap

Solutions at a glance

- Client Solutions
- Cloud Client-Computing
- Digital Business Services
- Networking
- Storage

To ensure that students have the skills needed to thrive in the 21st century, K-12 schools in big cities and rural communities are adopting digital tools to support learning. In the midst of this transition, there's also tremendous innovation in educational IT, including applications and client-access solutions. Staying current with these new trends requires an agile mindset and IT infrastructure that can support change and make the most of taxpayer-funded budgets.

> "In our traditional environment, one single change request could take as long as four hours to implement. ... With Dell VDI, I can implement that same request in as little as 20 minutes and I effectively spend no time resolving support requests."
>
> *Robb Nachtigal, Technology Coordinator, Aurora Public Schools*

Aurora Public Schools (APS) educates 1,200 K–12 students in Aurora, Nebraska. IT plays a critical role in day-to-day learning. Teachers rely on classroom PCs to quickly access lessons and manage everything from daily calendars to grading. Students access applications and coursework from PCs in labs as well as their individual, school-owned mobile devices.

Despite all of its innovation, the district's 345 PCs needed a refresh. All devices ran Windows XP, and each one was nearing or beyond end-of-life, preventing the deployment of new applications. As IT outages and maintenance costs increased, so did risk. Robb Nachtigal, technology coordinator at Aurora Public Schools, says, "Our infrastructure was in a brittle state. We had to come up with a manageable, cost-effective solution that we could deploy at once to avoid a critical IT failure. The infrastructure had to be extremely flexible to support all of our different students, departments and subjects. We also had to create a long-term plan for maintaining and funding new technologies into the future."

An adaptable solution that's easy to maintain and costs 42 percent less

After working with solutions integrator Logical Front, APS found an ideal hybrid solution based on end-to-end technologies from Dell. It combines traditional workstations with a non-persistent virtual desktop infrastructure (VDI). Nachtigal says, "Even though we didn't have the hardware or budget to run a persistent virtual desktop for every user, we could still gain the benefits and features of VDI where it made the most sense with a Dell Wyse vWorkspace solution. The VDI solution with Dell vWorkspace and Logical Front cost about 42 percent less than the other industry-leading solutions."

By choosing Dell, APS could also meet immediate and long-term financial requirements. "The actual cost per

Products & Services

Services

Dell Financial Services

Dell ProSupport and ProSupport Plus for Enterprise

Dell ProSupport for PCs and tablets

Hardware

Dell Chromebook™ 11 devices

Dell EqualLogic PS6100X array

Dell Networking 6248 GbE managed switches

Dell OptiPlex 3020 Small Form Factor desktops

Dell PowerEdge R720 servers with Intel® Xeon® processors

Dell Wyse D90D7 thin clients

Software

Dell Wyse vWorkspace

Microsoft Hyper-V virtual server

Microsoft Remote Desktop Services

workstation in our VDI was about 61 percent more per device than a traditional environment, but the total cost of ownership of VDI is less when you factor in its 50 percent longer lifespan as well as the significant reductions in implementation, support and management costs," explains Nachtigal. "With Dell Financial Services, I could absorb the higher upfront cost, spread that out over time and take advantage of the TCO benefits of VDI. Now, our district is in a great position to plan both financially and practically for the next generation of technology changes."

In IT there's no such thing as one size fits all

To give teachers and staff uninterrupted access to their own personal desktop, APS replaced existing PCs with 75 Dell OptiPlex 3020 Small Form Factor desktops. The district also replaced all of the PCs in labs with 200 Dell Wyse D90D7 thin clients so that students use virtual desktops. Nachtigal says, "The thin client approach maximizes my efficiency and there's certainly a cost benefit to go with Wyse thin clients. Logical Front's experience in the educational field and with vWorkspace was instrumental in helping us to get the right solution to meet our needs. Its service has been excellent throughout the implementation phase and after."

Giving students reliable access to desktops

To ensure that virtual desktops are consistently available and fast, engineers deployed five Dell PowerEdge R720 servers with Intel® Xeon® processors

and a Dell EqualLogic PS6100X array with 14TB of capacity. The array stores all user and application data, while the server supports desktops using Dell Wyse vWorkspace, Microsoft Remote Desktop Services and a Microsoft Hyper-V virtual server. The servers and array connect to the school's network using two Dell Networking 6248 GbE managed switches. To facilitate high availability, APS relies on Dell ProSupport for its servers, switches and clients. For the mission-critical SAN, the district uses Dell ProSupport Plus. "Our Dell PowerEdge servers are consistent and stable, and our EqualLogic array and Dell Networking switches work great," says Nachtigal. "Even though Dell has always provided high-quality , cost-effective hardware and software solutions, we use Dell ProSupport as an extra layer of insurance."

Frees up at least six hours per week to do more for students

Today desktop maintenance takes less time because the hybrid solution is reliable, and the virtual desktops are centrally managed from the vWorkspace console. "I no longer deal with break-fix issues or viruses, and I spend significantly less time on management," Nachtigal says. "In our traditional environment, one single change request could take as long as four hours to implement and we had to wait for an after-hours update window. I typically spent at least six hours a week addressing problems. With Dell VDI, I can implement that same request in as little as 20 minutes and I effectively spend no time resolving support requests."

Giving students the right tool for the job to improve outcomes

APS also has a more flexible infrastructure that can support new devices and applications ensuring long-term agility. For example, APS recently rolled out Adobe software for the district's art, graphic design, digital media and business departments. And after testing Dell Chromebook™ 11 devices running Wyse virtual desktops, the district purchased another 100 Chromebooks for high school juniors and seniors in the honors English program. Commenting on the overall benefits of its new solution, Nachtigal says, "Although cost and manageability were initially our top two priorities, the adaptability of our Dell Wyse solution is quickly becoming our single greatest benefit."

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