Dell PowerEdge Servers in Education
Idaho School District Reaps the Rewards of Going Virtual

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Executive Summary

Pocatello/Chubbuck (ID) School District uses its virtual desktop infrastructure to create a uniform experience for students while also reducing the amount of time spent on application and desktop management to just 20 hours for the entire school year.

A Uniform Experience

Systems administrator Kevin Chatfield used to spend anywhere from 300 to 400 hours per year handling application and desktop management for his district. Based on a 180-day school year, that meant Chatfield had to allocate roughly two hours a day to managing installations, deploying software, and providing support for the broad range of devices and computers used by Pocatello/Chubbuck School District #25 in Pocatello, Idaho.

Focused on reducing that burden while also creating a uniform user experience across the district, Chatfield—who had used a virtual application and desktop solution during his years in the healthcare field—introduced the idea of using a similar solution across the district in 2017. "We had so many computers in use that doing system refreshes was very expensive," says Chatfield.

"We really just wanted to streamline the situation and have a uniform experience for elementary, middle school, and high school students—wherever they were—so that they didn't suddenly end up having older computers because they moved to a different school," says Chatfield. When shopping around for a solution that would meet its needs, the district was also looking for one that would deliver a high-performance user experience for its career technical education (CTE) courses.

"Our CTE courses are run by coordinators who have their own budgets, so getting them to understand that they need to purchase graphic cards for Photoshop labs, for example, can be difficult," says Chatfield. "In the end, the centralized infrastructure leads to more streamlined application management, which winds up being easier for us to handle."

The Right Choice

Working with Connection® Public Sector Solutions, the district purchased and installed Dell PowerEdge Servers, licensed Horizon VMware software, and integrated Dell Wyse clients to create its virtual desktop environment.

"When I was in healthcare, I was using Horizon and I fell in love with it," says Chatfield. "It's a good solution, so that selection process was pretty easy." For the thin client servers, the district was focused mainly on cost and Chatfield realized "No one could compete with Dell on that level."

With about 200 virtual desktop infrastructure (VDI) devices currently deployed, the district is on a mission of growing that number to 18,000 over the next three years. VDI, which is used primarily in Pocatello/Chubbuck's computer lab—as well as in several classrooms—gives students a uniform computing experience regardless of where they're sitting or who is teaching their class. "We were tired of students having different experiences," Chatfield says, "depending on where they went within the district."

Systems administrator Kevin Chatfield used to spend anywhere from 300 to 400 hours a year handling application and desktop management for his district. Using Dell PowerEdge Servers, he now only spends 20 hours a year.

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Acknowledging that the capital investment associated with a VDI deployment can be significant, Chatfield says the benefits outweigh any initial financial investment. Using VMware's App Volumes portfolio of application and user management solutions, for example, the district has simplified its app management process and significantly whittled down the time that Chatfield used to spend on the process.

"Just from an ease of management standpoint, VDI has probably lessened my time to completion on certain tasks that used to take hundreds of hours to complete," says Chatfield. "Today, I probably spend about 20 hours total on app management throughout the course of the school year. I can just do an application update or patch once and it's done across all of the machines and devices."

On the Road to 18,000

To other districts considering virtual desktop infrastructures, Chatfield says his best advice is to do your research and to understand that the initial capital outlay will pay off, once the environment is up and running, through time savings and improved security that's enabled by centralized patching and application management.

"Take the time to understand the solutions, knowing that VMware may make the most sense in some situations, but that Citrix may work somewhere else," says Chatfield. "Ultimately, you'll be making an amazing investment in your district's future, giving students a cleaner computing environment to learn in, and creating fewer headaches for your district."

An Uber Solution for K–12 Districts

Dell EMC VDI Complete is an end-to-end client virtualization solution comprising hyper-converged infrastructure (HCI) using Dell EMC VxRail or vSAN Ready Nodes (RN) on Dell EMC PowerEdge servers. The benefits of using VDI Complete include reduced project risk for deploying a VDI environment, lower total cost of ownership by leveraging software-defined storage and optimizing infrastructure usage, simplified data center operations, and predictable deployment of an all-VMware stack that leverages ESXi Hypervisor and Horizon brokering software on Dell servers.

Referring to VDI Complete as an optimized end-to-end solution that incorporates numerous products and platforms, Rishi Manocha, Marketing Head, Cloud Technologies at Dell EMC, says districts typically take a three-pronged approach to implementation. First, they pick the infrastructure (in this case, either VxRail or vSAN Ready Nodes); then they select the platform (Horizon 7 or Horizon Apps); and then they choose the optional add-ons or end points (such as Dell Wyse thin clients or NVIDIA graphics cards).

While it may appear complicated, Manocha says VDI Complete simplifies application and desktop virtualization for organizations by reducing the time and complexity associated with selecting, buying, and deploying a virtual desktop infrastructure. "If a district tried to do this on its own," says Manocha, "it would spend at least twice the time to procure and deploy a VDI environment versus using the VDI Complete solution which is fully optimized and validated."

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>
> Kevin Chatfields
> Systems administrator

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And when that same district needs support, it can pick up the phone and call a single vendor instead of having to work with multiple technology suppliers. "Because we're providing all of the components through an end-to-end, solution-based approach, there's no hopping from one vendor to the next to get your answers," says Manocha. "One company will help you diagnose and fix the issue."

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