

Parallels® VDI

Customer Success Story: Donna Independent School District

Overview

The Donna Independent School District (DISD) operates 20 student campuses throughout the Rio Grande of Texas. The public school district is the educational home for 15,000 students and 1,000 teachers who rely on classroom computer systems as a core part of their curriculum for innovative technology education.

The Challenge

Computer technology is a core component of the daily curriculum at DISD. The public school district was faced with an infrastructure of rapidly aging PCs. Ninety percent of its 3,600 PCs were more than three years old, out of warranty and quickly becoming obsolete. In fact, some PCs were simply not operational at all and the maintenance time and costs for its 10 full-time PC technicians were skyrocketing.

Beyond the poor state of its existing classroom PC infrastructure, DISD wanted to increase the average number of student desktops from two per classroom to four while also adding additional instructional labs. Yet the cost of adding new PCs was estimated at \$5M in replacement costs. Not only would new PCs be costly, their electricity use, ongoing maintenance due to student abuse and security management would also continue to be a resource drain. This initiated DISD's research into a desktop virtualization project.

"Our field technicians were spending the majority of their time responding to PC hardware and software issues in the field," said Richard Weaver, Network Administrator. "And because most service calls require physical touch with the PC, repairs would often interfere with classroom instruction. We desired a new solution that would not only cost less to implement, but also ensure that long-term management and maintenance expenses would remain low."

Implementation

To meet all of DISD's requirements, Parallels teamed with Austin Ribbon & Computer (ARC) and Quest software to implement a Virtual Desktop Infrastructure (VDI) solution running on Parallels containers with Quest vWorkspace. The combination of all vendors enabled DISD to easily deploy 5,200 desktops leveraging inexpensive Wyse thin clients to cost effectively meet its objective of replacing the aging PCs and increase classroom desktops from two to four.

Results

With 5,200 of its planned 5,600 virtualized desktops now installed, DISD is seeing an immediate return on its implementation. During the evaluation stage of the project, DISD started to use VMware ESX until it was discovered that VMware would be significantly more expensive as a result of their inability to meet the scaling requirements of the project. Due to the demands of the software used by DISD, VMware was only able to provide 30-34 virtual machines per physical server. Parallels VDI currently delivers 65 virtual servers per physical server. This allowed DISD to double the thin clients for the same dollar amount on their hardware while utilizing less power and cooling. As an added bonus, the virtual servers are running at only 60% utilization allowing for plenty of headroom for growth.



Fast Facts

Company: Donna Independent School District

Headquarters: Donna, Texas

Website: <http://www.donnaisd.net>

Critical Needs

- Lower overall student desktop costs
- Double number of classroom computers
- Centralize desktop management and security
- Leverage existing virtual environment without adding infrastructure costs

"The virtual desktop solution gives us remarkable advantages in terms of cost savings, resource optimization and energy efficiency – allowing us to double our number of classroom computers while saving 50% in maintenance costs."

– Marie Evans,
Technology Director

"Ease of management was very important. Parallels application templates make it easy to deploy new software across large number of PC's within 20-30 minutes."

– Richard Weaver,
Network Administrator

Just about anything can go wrong supporting over 15,000 students and 1,000 teachers on a daily basis. On those days when it does, the ability to deploy application templates across the desired PC's within minutes significantly reduces the recovery process. In the K-12 environment, departments like to buy software and place the CD's on the technician's desk along with the request to install within 24 hours on 500 units. "Parallels makes it so easy to make application templates, build once and then simply deploy across the desired PC's -- in 20 to 30 minutes it is all done," says Weaver.

The biggest consideration for the solution was ease of manageability. "It's great to have the latest technology and be on the bleeding edge, but it doesn't mean anything if you can't manage it," says Weaver. DISD likes the granularity of the Parallels VDI solution to go down to the individual container to customize functionality. For example, if a lab in the high school needs more horsepower or a new container, IT can take care of it easily within minutes. "It also enabled us to more efficiently apply security best practices by disabling USB drives so students don't infect desktops with viruses and data isn't unknowingly transported outside the school's firewall," says Weaver.

The IT staff really like the visibility Parallels software provides on software licensing. In the past each PC needed to be accessed for audits. With Parallels, IT personnel simply look at a web panel, print out the report and send it to Microsoft.

Choosing thin clients over PCs has proven to be an excellent decision not only for cost savings but also security. The DISD solution has become an excellent theft deterrent. "Theft is something we would be increasingly concerned about had we opted to replace our desktop systems with PCs," says Weaver. "If a child takes a thin client from the classroom, it is simply inoperable." The use of centralized storage has prevented corruption of classroom generated content.

Another feature of the DISD solution is the ability for students to log in remotely from home to finish projects started while in the classroom. This overcomes one of the biggest hurdles facing the K-12 environment and eliminates the need for the student to have the exact same software at home as in the classroom. The DISD solution delivers the desktop to the student at home without concerns about viruses or infections. Content is filtered and all security features apply. The student needs a PC and internet connectivity.

During the summer months, the maintenance crews need to thoroughly clean each classroom to prepare for the next school year. In the past, IT needed access to each classroom to load new software. Frequently, completion of the two tasks came face-to-face with conflicts in timing. Parallels VDI helped to eliminate these conflicts by letting IT load new software for the upcoming school year without direct access to the physical devices. "In the virtual environment the desktop exists in the server closet allowing maintenance and IT to complete their tasks independently," says Weaver.

Results

- 40-50% reduction in work orders
- Parallels VDI license reports perfect for audits eliminating the need to manually count or visit each PC
- Parallels virtual servers currently operating at 60% utilization with plenty of headroom for growth.
- Desk side support savings of estimated \$800,000 over 4 years
- Support work orders reduced by 40-50%
- Energy cost savings of \$60,000 per year
- Future replacement & upgrade savings of \$400,000 over 4 years for thin client replacement (5-6 years) and server replacement (4 years)
- 90% reduction in desktop power consumption

"We were easily able to nearly double the available number of desktop systems for students while increasing security, manageability and energy savings."

— Marie Evans,
Technology Director

"Increasing horsepower to hungry applications is totally dynamic and transparent to the user. There are lots of advantages to manipulating resources while the system is up."

— Richard Weaver,
Network Administrator