

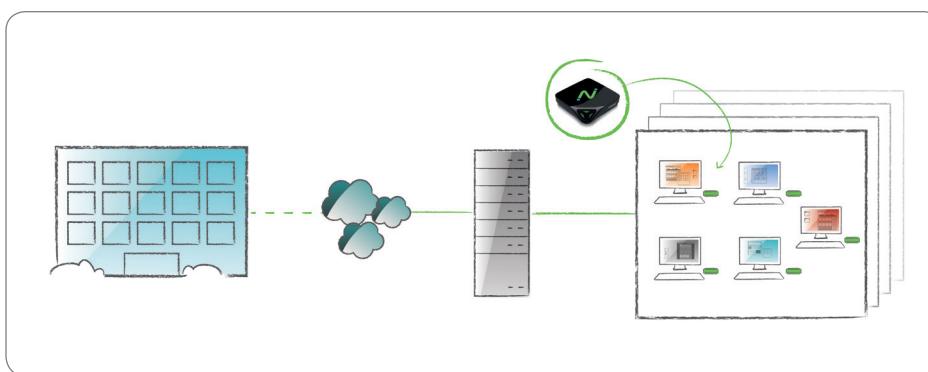
Willow River School District Delivers

## High Quality Education through NComputing Virtual Desktops

It is a tale school districts will find all too familiar- aging and unreliable PC desktops with limited resources and IT budgets to replace them. Located in rural Minnesota, Willow River School District was no exception and faced tough challenges that would hinder its commitment to educational excellence and technological innovation. The PCs in the elementary and high school classrooms and computer labs were on average 5-7 years old. They were no longer reliable and the school did not have the tens of thousands of dollars required to replace them with new standalone towers. In addition, the existing computer infrastructure was difficult to monitor with several cases of vandalism in the high school computer labs reported. As a result, it became increasingly clear to Willow River that they could no longer settle on the traditional way of delivering computing to the district if they were to meet their budget goals. They needed a new way of computing that would be cost effective, low maintenance, and secure, allowing users to easily access learning tools and educational resources.

### NComputing was the right fork to pick

Initially, Willow River schools considered deploying refurbished computers but were discouraged because of their short lifespan and high maintenance costs. In addition, Willow River considered traditional thin client solutions but found that many solutions were too complex requiring additional third party hardware components and additional investment in technical support. As a result, Willow River saw the opportunity to introduce desktop virtualization from NComputing as a more economical and agile infrastructure model with the highest user density per dollar compared to any PC or thin client on the market providing the essential features needed for a good desktop experience. Furthermore, NComputing virtual desktop access devices were compatible with existing applications, reliable, and easy to manage eliminating the need for expensive IT support and maintenance costs.



Willow River's new system is more efficient and easier to maintain.

In 2008, Willow River Schools worked with CDWG, an NComputing reseller to install its first NComputing virtual desktop in the high school library. Because of the ease of its deployment, reliability, and affordability, the solution quickly caught on throughout the district. In less than 3 years, 6 X-series virtual desktops, 1 U-170, and 92 L-series access devices have been deployed for use in classrooms and computer labs. What is even more impressive is that the 92 L-series access devices are supported by 9 virtual machines running on just one host server that is managed remotely, saving the IT department considerable time and money.

### Challenge

To provide a lower cost, more reliable, highly performing alternative to traditional PC desktops

### Solution

Deploy 6 X-series virtual desktops, 92 L-series virtual desktops, and 1 host server, supporting a new ratio of 92 users connected to 1 host server

### Results

- Significant cost savings
- Centrally managed and administered user desktops
- Reduced power consumption
- More engaged learning environment for students

### Partner

CDWG, an NComputing reseller, assisted Willow River Schools with their deployment



Today PCs are so powerful that the majority of applications only use a small fraction of the computer's capacity. NComputing's award-winning vSpace™ Server software provides each user with an individual rich multimedia computing experience. Each student's monitor, keyboard, and mouse are connected to the shared PC through a small and very durable NComputing virtual desktop device. The access device itself has no CPU, memory, or moving parts- so it's rugged, reliable, and easy to deploy and maintain. And, because NComputing designs the entire stack; software, protocol and hardware, only NComputing can deliver a highly optimized and performant, end-to-end desktop virtualization solution.

## Benefits realized with NComputing desktop virtualization

The schools within the Willow River school district have realized many benefits from the deployment of NComputing's virtual desktops. First, NComputing's end-to-end desktop virtualization solution has resulted in significant cost savings, proving to be less expensive than the traditional one PC per student solution model. Second, the use of NComputing's virtual desktops and centralized management console has enabled Willow River to provide increased computing access to students without increasing the technical support workload or staff. Dan Weber, Technology Director for the school district, explains how the ability to manage 92 virtual desktops remotely from one server has improved the efficiency and reliability of the districts computing resources. Each virtual machine is custom designed and tailored to the specific requirements set out by the district's different user populations. By consolidating these hosts, system maintenance and technical support is reduced as applications can be managed from one central server. Fewer software installations or instances of a program means that upgrades, virus checks, and other maintenance activities can be streamlined. Third, power consumption has been reduced as NComputing access devices use less watts of energy compared to traditional PC desktops and do not generate heat. Finally, the adoption of desktop virtualization has created a more engaged and innovative learning environment for students and teachers. Students use the virtual desktops to conduct research over the Internet, write and view documents, stream media and video, and utilize education-based applications. In addition, Microsoft applications were tested and proved to be compatible with NComputing. The interoperability of NComputing's virtual desktops has made the transition seamless, allowing teachers and students to continue using what they already know.

## The future for Willow River

Looking ahead, Mr. Weber has plans to virtualize additional computer labs with NComputing. In addition to increasing productivity and lowering IT costs, the deployment of NComputing virtual desktops has allowed Willow River Schools to fulfill its academic vision.

"NComputing has allowed me to give a top of the line computing experience to all my students and faculty at a fraction of the cost of putting in normal PC desktops."

**Dan Weber**  
Technology Director  
Willow River School District

## Deployment Architecture

- Virtual desktops: 6 X-series access devices and 92 L-series access devices
- OS Platform: Windows Server 2008 R2
- Desktop Virtualization Software: vSpace Server
- Server Virtualization Software: Hyper-V
- Peripherals: Acer V193 W monitors and a combination of Logitech and Microsoft keyboards and mice
- Applications: MS Office 2010, IE 9, and Firefox 7