VIRTUALIZATION FOR EDUCATION

Decreasing budgets combined with aging facilities and equipment makes it increasingly difficult to manage the IT needs of multiple buildings, faculty, and student needs. Virtualization for education will reduce costs, offer reliable and faster services and allow for easily adaptation to required changes. Virtualizing your education IT needs offers:

- Management for computer lab applications
- District-wide automatic application deployment
- Faculty, staff and student access to school applications from a variety of computers and mobile devices
- Ability to run multiple operating systems
- Common Virtualization Used in Educational Environments

The most common type of virtualization used by schools include desktop and application virtualization. Virtualized desktops allow you to run multiple operating systems from a single desktop – instead of individually installing Windows 7 on each student computer in the school, Windows 7 will run on a virtual machine over the server and each computer can access it.
Application virtualization allows you to quickly install new applications on one machine that provides access to all computers on campus, as well as enable access from mobile devices. The overhead costs of installing new applications are much lower in a virtualized environment, because you can maximize software licenses. Virtualization will save money over installing multiple copies of software, troubleshooting problems on each individual machine, and free up the IT department to focus on efficiency instead of fixing multiple computers. The entire physical and virtual infrastructure can be managed with a unified set of tools and often from a single, remote location.

**Virtualization Benefits for Schools**
Making the change to a virtualized environment offers a number of financial benefits, and benefits to both students and teachers.

- Each user receives optimal desktop solutions (teachers,
staff, students, etc) since access can be configured to each type of user
- Total cost of ownership for computer equipment is reduced and the return on investment is increased across your computing infrastructure
- Less physical space is required for servers
- Can quickly make changes to applications and test different environments without the need for significant physical resources or increased costs
- Security across the network is increased, protecting data and minimizing risks for widespread failure
- All computers from computer labs, classrooms to libraries and regardless of their physical age will offer the same PC experience
- Teachers can access databases, student records and documents from any computer with an internet connection
• Resources can easily be shared over the network, opening the door for improved teaching capabilities and efficiency
• Applications can be accessed from any compatible mobile device on or off campus, allowing for distance learning
• Students can run both Mac and Windows operating systems side by side on a PC to explore the various tools and operating systems without needing to reboot
• Reduce costs by about 50% when you eliminate capital expenditures, management and maintenance of desktop environments and operational expenditures associated with a non-virtualized environment.
• Reduce energy consumption by 80% of individual computers by extending the life of existing hardware.

Increased Flexibility from Virtualization
When you create a virtualized environment, each element is isolated and independent from the other elements. This allows for easier changes within the system, whether you are adding, updating or supporting each of the elements that make up your network.