

North Carolina schools expand computer access despite limited budgets

SITUATION

Working under tight budget constraints, school districts throughout North Carolina needed to find an affordable solution to upgrading old computers and adding more computer access.

SOLUTION

Thanks to the NComputing X300, over 25 school districts throughout North Carolina now benefit from a total of more than 10,000 additional computer seats. Because the X300 enables four to seven users to share a single PC, the districts saved a substantial amount of money over having to buy individual PCs.

RESULTS

With fewer computers to buy, North Carolina school systems can now afford to upgrade their computers more often. The environmentally-friendly X300 also saves schools money on maintenance and electricity and requires fewer computers to be replaced each year.



Computer lab powered by NComputing in the McDowell School District.

In North Carolina, over 25 school districts have found a way to stretch their IT dollars while placing more students in front of computer screens. The districts purchased NComputing desktop virtualization solutions that enable four to seven students to access a single PC simultaneously. The results add up to big savings, newer PCs, and happier kids.

Challenge

Computers are more important than ever before in education as students depend on them for a wide variety of school work—everything from developing basic technology skills to researching and writing to using specific education programs for learning. The current challenge for schools is increasing computer access

for students. Yet many schools have to keep within the constraints of a tight IT budget. Insufficient funds usually means schools have to hang on to old computers beyond the normal four-to-five year replacement period, and that leads to a host of other problems, such as higher maintenance costs, frequent crashes, and not always being able to run the latest version of their educational software—a frustrating scenario for IT directors, who want more but have to work with less.

With eight elementary, one middle, and three high schools, McDowell County Schools in Marion, North Carolina represents a typical scenario.

“One of our top priorities is to engage, prepare, and educate students on using technology,” says Barry Pace, director of technology at McDowell. “But limited state and local budgets were making it a challenge to keep our PC labs up to date. We were forced to maintain six-to-nine year life cycles on the computers.” Like many school districts in North Carolina, McDowell County needed an affordable solution that would give students more access to better computers.

Solution

McDowell School District’s Pace and his counterparts in 25 other North Carolina school districts found their answer in the NComputing X300, a virtual desktop solution that enables four to seven students—depending on whether they use one or two X300 kits in each PC—to benefit from a single shared personal computer.

Each X300 kit includes virtualization software, a PCI card, and three access devices. The card, which plugs into a standard PCI slot in the host computer, has three RJ-45 ports that connect via standard network cables (which are included and also supply



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power) to the access devices. Standard peripherals, such as keyboard, mouse, monitor, speakers, and headphone, hook up to each access terminal to create a separate workstation. The cost of the NComputing X300 comes out to as little as \$70 for each added user.

"We piloted our first X300 in a junior high science classroom and determined that the X300 was certainly capable of supporting four students on a single 3.2 GHz desktop with 1GB of memory in any classroom in our school," says Pace.

Although up to seven students can work on a single host, according to McDowell's network engineer Kelly Combes, schools deploying NComputing should pilot their specific usage environment to determine the best ratio of users per PC. "We have some environments where seven users per PC works well and others that work better with four users—either way, the cost savings are substantial," says Combes.

Benefits extend well beyond the initial dollar savings. The NComputing devices are easier to maintain and use less electricity than individual PCs—just one watt for each X300 user versus a typical 115 watts per PC. Electricity savings alone can pay for the cost of each seat in just one year.

Perhaps best for the future is that the NComputing solution will keep paying off for years. Because the total number of PCs is limited, the number that have to be replaced every three to five years is much lower. And because NComputing access terminals almost never break, maintenance costs are much lower.

Results

To date in North Carolina, the McDowell County district alone has benefited from an additional 1,000 seats of computer access by deploying 350 NComputing X300 kits on over 300 PCs. McDowell has installed the systems mainly in elementary classrooms in 11 of its 12 schools. The district has found a 1:4 setup, with one PC hosting four students, to be the ideal arrangement for its needs.

Use of the new system has caught on. Since 2006, over 25 school districts in North Carolina have used NComputing systems to deploy over 10,000 computer seats in hundreds of schools. The growing popularity of the system comes as a result of district IT managers sharing their experiences with their counterparts in other school districts.

What do districts do with all the money they save? They usually buy more computer access seats to advance their goal of increasing PC to student ratios. Using NComputing solutions, for example, a district with a fixed annual computer purchase and upgrade budget of \$100,000 can afford 188 additional computing seats—an increase of 131% over individual PCs.

Students are excited about having access to newer technology, and IT managers are thrilled with the X300's efficiency, ease of use, compatibility with standard software, and overall lower maintenance requirements. What's more, principals, administrators, and taxpayers are pleased to see their limited budgets stretching so much further.

"I was blown away when I saw NComputing's X300 in action," says Dr. Louis Johnson of the Rockingham school district in North Carolina. "Now my students no longer have to wait in line to use a computer."