

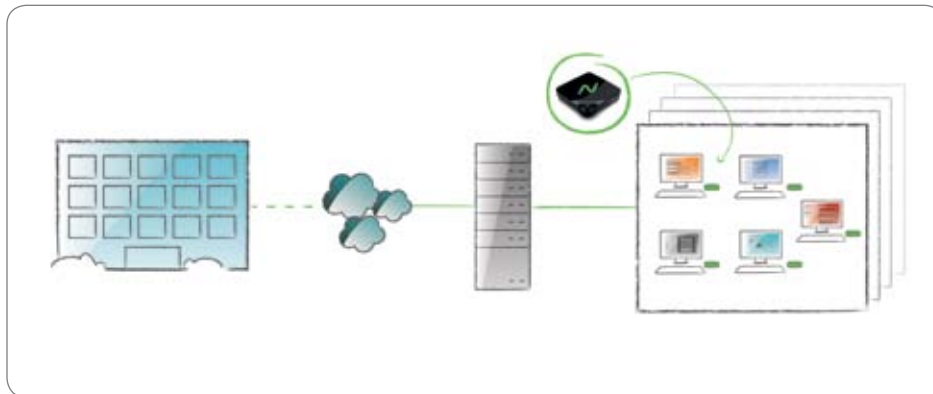
Low-cost computing for education

Students Gain Improved Accessibility

Located in St Augustine, Florida, St Johns School District is a very large and dispersed district comprised of 17 Elementary Schools, 7 Junior High Schools, 7 High Schools, and 7 Alternative & Charter Schools, with a population of approximately 29,334 total students. Information technology is a core component in education and like most school districts as student populations grew, IT budgets tightened. The solution for St Johns was to search for a computer infrastructure that would expand computer resources for students and teachers on a limited budget while also reducing the workload for its IT staff.

Deliver Widespread Access to Technology

St Johns faced a challenge common to many school districts today—provide increased computing access district-wide with smaller IT teams and reduced budgets. Prior to introducing desktop virtualization, approximately 14,000 PCs and Macs were in use across the entire district, many of which were outdated and unreliable. As a result it became crucial for St Johns to identify a cost effective solution that could expand the physical hardware and deliver widespread access to technology for its students. The bigger challenge was to find a way to reduce the workload for its IT staff. With only 18 IT specialists, this converted to 777 aging systems to manage for every 1 IT staff, dispersed across 38 campuses. Tom Pisani, the District’s Network Specialist envisioned a new and simplified way of computing that would be conducive to a 1 to many computer architecture requiring only one server to be managed simultaneously.



St. John's new system is more efficient and easier to maintain.

Search for the Perfect Solution

St Johns considered traditional thin client solutions but found that many solutions were complex, requiring additional third party hardware components and additional investment for technical support. However, NComputing’s end-to-end desktop virtualization solution was cost effective, and with the highest user density per dollar compared to any PC or thin client technology on the market, it provided the essential features needed for a good desktop experience. In addition, NComputing virtual desktops were compatible with existing applications, reliable, and easy to manage. Expensive IT support and maintenance would not be required which had been a former challenge for the school district.

Challenge

Expand computer resources on a limited budget while also reducing workload of IT staff.

Solution

Deploy 3,000 NComputing virtual desktops and 28 host servers, each virtual machine supporting 5 users.

Results

- Provided increased computing access without increasing technical support staff
- Reduce computer hardware costs by 60%
- Proven compatibility with existing education-based applications

In 2009, St Johns installed its first NComputing virtual desktop in one of its labs and the ease of its deployment, reliability and affordability quickly caught on throughout the district. The first large project was quickly completed and included 250 X-Series virtual desktops. By 2010, over 1500 X-Series virtual desktops had been deployed. Shortly thereafter, an additional 1500 L-Series access devices were purchased and in less than three years, St Johns had deployed over 3000 NComputing virtual desktops. These 3,000 new systems are being hosted by just 28 host servers, each virtual machine supporting 5 users, which can be managed remotely, saving the overworked IT staff considerable time and money.

Only NComputing can deliver a highly optimized and performant, end-to-end desktop virtualization solution because it designs and delivers the entire stack, from its proprietary software (vSpace Server) and unified protocol (UXP) to the physical access devices. Because of this, NComputing virtual desktops provide a more affordable and better desktop experience compared to other thin clients. Today's 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 desktop virtualization software provides each user with a rich multimedia computing experience and their own computing session. Each server host is scheduled to power on in the morning and power down in the afternoon to save energy and eliminate any wait times when students first power up in the lab. Each student's monitor, keyboard, and mouse are connected to the shared PC through a small and very durable NComputing virtual desktop access device. The access device itself has no CPU, memory, or moving parts—so it's rugged, reliable, and easy to deploy and maintain.

Deployment Architecture

- Virtual Desktops: 1500 X-Series virtual desktops and 1500 L-Series virtual desktops
- OS Platform: Windows Server
- Desktop Virtualization Software: vSpace Server
- Host Software: 7 Virtual Machines; Microsoft Hyper V; LanSchool Management; Windows Server 2008 R2; Windows 7 Experience, Microsoft Hyper V
- Host Hardware: Dell Server R710; 4-146 Gb 10K drives striped in raid 5; 2-6 core Intel X Series; 48 GB Ram; 4-Gigabit network cards; 1-Dell iDRAC port

NComputing Simplifies IT Management

St Johns has realized many benefits from the deployment of NComputing's virtual desktops. First, NComputing's end-to-end desktop virtualization solution has resulted in savings of over \$800,000, proving to be less expensive than other standalone clients and PCs. Second, the use of NComputing's virtual desktops and centralized management console has enabled St Johns to provide increased computing access to students and staff without increasing both the technical support workload or staff. Pisani explains how the ability to manage 250-300 virtual desktops remotely from one server has improved the efficiency and reliability of the district's computing resources. Third, set-up rates are much faster and easier as Pisani now has the capacity to deploy 130 virtual desktops in a half day with a staff of five. Each virtual machine is custom designed and tailored to the specific requirements set out by the district's different user populations.

In addition, a former goal for St Johns was to deliver a quality of service and user experience similar to that of a traditional PC. Since deploying NComputing's virtual desktops, the district has far exceeded their expectations. For instance 33 out of 37 applications were tested and proved to be compatible with NComputing's solution. Students use the virtual desktops to conduct research over the Internet, write and view documents, stream media and video, and utilize education-based applications. The interoperability of NComputing's virtual desktops has made the transition seamless, allowing teachers and students to continue using what they already know.