

Low-cost computing for education

NComputing Virtual Desktops Empower Students at Rocana Institute for Technology

Approved by the National Board for Technical Education (NBTE), The Rocana Institute for Technology (RIT), based in Enugu, the eastern part of Nigeria was established as a Technical and Vocational Education and Training (TVET) center. The aim of the institute is to provide the citizens of Nigeria with access to technical education and skill development as a means to fuel the level of innovative thinking and self-reliance required to be successful in an increasingly competitive world.

Meet Budget Constraints

Technology and computer equipment provide students with access to learning tools and educational resources that enable them to search for information in any subject area. The unfortunate reality is that most institutions of education do not have the financial budget to deliver on that promise, as traditional desktops are expensive and difficult to maintain. To be successful, RIT needed to provide users with increased computing access while also reducing maintenance costs and technical support staff. Initially RIT considered deploying traditional PCs but were discouraged by the high costs for acquisition and maintenance. Time was critical as RIT was given a two-month deadline to implement the new project from start to finish. School officials were aware that it would take over two months to prepare, test, and adjust classroom and office space for traditional PC desktops. As a result it became increasingly clear to RIT that they could not settle on the traditional way of delivering computing to the institute if they were to meet their budget and goals of reducing technical staff and maintenance costs. They needed a new way of doing computing that would be cost effective, low maintenance, and efficient allowing users to easily access learning tools and educational resources.



Students can now use computers for classwork in the school's computer lab.

Opportunity with Desktop Virtualization

Rocana Institute for Technology assessed traditional zero and thin client technology but found that these solutions were expensive and required third-party hardware components, adding to the overall cost and speed of deployment. As a result, RIT saw the opportunity to introduce desktop virtualization as a more economical and agile infrastructure model. After evaluating several desktop virtualization vendors, RIT chose NComputing for its management simplicity, cost savings, and ability to provide more access stations to users on a secure network.

Challenge

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

Solution

Deploy 10 L230 access devices, 24 X-series virtual desktops, and 6 PC desktops, creating a new ratio of approximately 5 users to one host computer.

Impact

Reduced capital expenses by 77%; decreased energy consumption; reduced maintenance costs by 89%; and enhanced virtual environment for students.

Partner

First Tradien Technologies, an NComputing reseller, assisted The Rocana Institute of Technology with their deployment.

In addition, the NComputing systems were compatible with existing applications, reliable, and easy to manage. Expensive third party systems would not be required to keep them running, which had been the case for PC desktops. To architect and implement the solution, RIT turned to First Tradien Technologies, an NComputing partner in Enugu City to purchase 10 L230 access devices, 24 X-series virtual desktops, and 6 PC desktops, creating 34 computer seats and a new ratio of approximately 5 users to 1 host computer.

The NComputing solution works because PCs are so powerful that the vast majority of users only need and use a small fraction of the desktops computing capacity. NComputing taps into this unused capacity from a single PC or server and simultaneously shares it with many users. Each user's monitor, keyboard, and mouse are connected to a small and highly reliable NComputing access device, which is then connected to the shared computer. The access device itself has no CPU, memory, or moving parts—so it's rugged, reliable, and easy to deploy and maintain.

Increase IT Efficiency and Reduce Power Consumption

The adoption of NComputing virtual desktops has brought outstanding benefits to the Rocana Institute of Technology. First, the use of NComputing's virtual desktops and centralized management in the datacenter has enabled RIT to provide increased computing access and faster set-up rates without increasing technical support staff. Second, virtualization through the NComputing solution has brought significant benefits to the institution in terms of time and labor. With the new virtualization environment, RIT has managed the entire infrastructure with fewer staff, successfully deploying 30 virtual desktops in less than 20 hours. Third, power consumption has been reduced as NComputing access devices use less electricity than PC desktops and do not generate heat. Finally RIT has achieved over 77% in capital savings resulting in an 89% reduction in maintenance costs. "Without the NComputing solution we would not have had the capacity and finances to equip the computer lab and maintain 34 computer seats," explained Project Manager, Izuchukwu Ofoma. In addition the school quickly realized that they would not have the budget to replace computers every three years in order to meet the future computing needs of the students. NComputing solution eliminated this challenge because virtual desktops are solid-state devices that have no moving parts, making their life expectancy more than double that of a traditional PC.

A Better Academic Vision

With benefits so compelling, RIT has plans to deploy NComputing virtual desktops across additional departments including accounts and data entry processes. In addition to saving time, money, and resources, the deployment of NComputing virtual desktops has allowed the Rocana Institute for Technology to fulfill its academic vision.

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Project Manager