

## Increased Computing Access For Students at the Institute of Advanced Technology

The Institute of Advanced Technology (IAT), based in Kenya, is the leading Information and Communications Technology (ICT) in the East African region. Established in 1991, IAT has expanded from a centre of 3 classrooms to a national training institution comprised of 8 campuses including a state of the art school of business. The aim of the institute is to provide students with access to technical education and skill development as a means to fuel the innovative thinking required to be successful in an increasingly competitive world.



### Fleet of Aging Desktops

Today, technology provides students with unlimited access to educational resources. By providing one to one technology access, giving every student the ability to use a computer every day, students have increased opportunities for research, information sharing, and new educational and professional opportunities. The unfortunate reality common to many institutions is a fleet of aging desktops with little budget to replace them, as traditional desktops are expensive and difficult to maintain. IAT was no exception and while over 380 PC desktops were available for use in training centers and classrooms throughout the campus, overtime they become unreliable, requiring ongoing maintenance or PC replacement. To be successful, IAT would need to provide users with increased computing access while also reducing the high cost of maintenance both on hardware and support personnel. As a result it became increasingly clear that they needed to find a more economical and agile infrastructure model that would provide users with a better experience.

### Challenge

Provide users with increased computing access while also reducing the high cost of maintenance both on hardware and support personnel.

### Solution

Deployed 137 PCs, 486 X-series access devices, and 9 L230 access devices, creating 495 computer seats and a new ratio of 4 users connected to every host computer.

### The Search for the Perfect Solution



IAT considered other traditional thin client solutions but found that many solutions were complex, requiring additional third party hardware components and an additional investment in technical support. Fortunately, 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 on the market, providing the essential features needed for a good desktop experience. In addition, NComputing virtual desktop access devices were compatible with existing applications, reliable, and easy to manage eliminating the

### Results

Increased the number of terminal workstations while also reducing hardware capitalization costs, technical support, and power consumption.

### Partner

Smoothtel & Data Solutions, an NComputing reseller in Kenya assisted IAT with the deployment.



expensive IT support and maintenance costs. To architect and implement the solution, IAT worked with Smoothtel & Data Solutions, an NComputing reseller in Kenya to deploy 137 PCs, 486 X-series access devices, and 9 L230 access devices, creating 495 computer seats and a new ratio of 4 users connected to every host computer.

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 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 we design 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 Desktop Virtualization

By implementing NComputing virtual desktops, IAT has realized many benefits. First, the NComputing solution has proven to be compatible with existing IT infrastructures and classroom orientations, allowing IAT to re-use and extend the life span of its existing PC desktops while not incurring new hardware capitalization costs. Second, NComputing virtual desktops are easy to deploy and maintain, drastically reducing the need for technical support and repairs. Third, IAT has reduced the cost of investment by 40% per seat, offering significant savings in operating and capital costs. Fourth, the NComputing solution has created a greener institution for IAT, simultaneously cutting costs and reducing power consumption while achieving environmental goals. And finally, the most important benefit realized is that the new desktop virtualization environment has given IAT the means to scale desktop computing to additional users. The current virtualization environment supports approximately 500 virtual desktops, increasing the number of terminal workstations without increasing the number of physical desktops.

## Planning for the Future

NComputing's technology is changing the economics of desktop virtualization in knowing that, IAT has future plans to extend their NComputing footprint into additional training labs throughout the campus. As a result the increased utilization of ICT in the classrooms and training centers will enable their students to succeed in a diverse, global world where technology is becoming a core component in not only education but in every day life.

## Computer Architecture

- Virtual Desktops: 486 X-series access devices and 9 L230 access devices
- OS Platform: Windows XP SP2 & SP3
- Desktop Virtualization software: vSpace Server
- Peripherals: Lenovo ThinkVision and Acer Mercury-free monitors; IBM, Logitech and Mercer keyboards; and Mercer mice
- Applications: MS Office 2003 & 2007, Adobe Dream weaver, and Nolan Business Solutions tailor made applications