



## Thin Clients and Schools – Answers to common questions

### Background

Thin client technology has existed since the dawn of computing. Starting as green screens, connected to giant mainframes, thin clients enabled organisations to benefit from the early mainframe computers, which spread throughout industry in the 1970s. The 1980's saw the arrival of the PC with its own operating system and applications held locally. Graphical user interfaces proved popular with users and the PC became the standard desktop for many organisations. In the 90s the thin client began to make a comeback. No longer just able to deliver green screen, thin clients could now display the latest Windows applications and once again the benefits of centralisation lead to a mini revolution in application delivery.

Today thin client technology continues to develop and is utilised by all market sectors, including education. Continual improvements in the application delivery solutions have led to the growing replacement of PC networks with thin client, as organisations strive to reap the benefits of reduced cost of ownership, lower power consumption and flexible working.

Many of the new build education projects, including the academy program and BSF are utilising thin client technology to provide a more sustainable computing platform and enable staff and pupils to access the network from any location, securely.

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## Overview

This short whitepaper will aim to address some of the many questions asked by schools in relation to thin client technology. We shall begin by re-capping the benefits that thin client can bring to a school and then focus in more detail on the common questions associated with the technology.

## Benefits summary of thin clients

- Quicker to boot. Thin clients are much quicker to boot up than PCs. This means that pupils can be logged on and using applications quickly.
- Easier to manage. Thin clients are much easier to update and manage than PCs. The result is less interruption to lessons and less downtime in general. If a new computer is required in a classroom, it only takes minutes to deploy a new thin client. The less disruption, the more teaching.
- Provide remote access. Thin clients can be used to provide students and staff with remote access to the entire school network, securely.
- Greener and cheaper. The school's computers now consume nearly 90 percent less electricity, with a similar reduction in the school's CO2 footprint.
- Longer life expectancy. As thin clients have no moving parts they have a much higher mean time between failure, compared with PCs. Therefore a thin client device should last twice as long as a PC.
- Thin clients are more compact. Some thin clients can be fixed on the back of a standard TFT creating more desk space, enabling more devices in each classroom.
- Perfect for wireless. Most thin client solutions are low in bandwidth requirements and are therefore perfect for deploying in wireless environments. Schools can IT enable classrooms with no cabling in minutes using web books and wireless access points.
- Better security. Users can't install their own software on a thin client. Thin clients are not worth stealing because they don't work without the server connection.
- Quieter classrooms. Thin clients have no moving parts to get hot, so they don't need a fan. This means they run silently for a higher quality learning environment.
- Data security improved. In a thin client environment all data is stored and remains on the central file servers.

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## How can thin client fit into your existing network?

The majority of thin client solutions are based on Microsoft software and can fit perfectly into most school's existing networks. Unless the school is a new build, most schools add thin client to their network as a tactical solution to solve a particular requirement. Some of these are listed below:

- Provide remote access to pupils and staff to applications
- Provide flexible classrooms using wireless networks and laptops
- Upgrade a classroom with old PCs
- Provide IT access in open space areas

Once a thin client solution has been added it is relatively simple to extend it to other areas of the school and it will soon become a core part of the IT system.

## Conclusion

Thin client technology is advancing at a terrific rate enabling it to meet the needs of most of the users in a school network. There is still much confusion over the capabilities of a thin client network in the education sector which is possibly holding back the adoption of the technology. As issues such as multimedia capabilities become a thing of the past the opportunities for schools to benefit from thin client are growing.

Leading thin client resellers such as Nviron Limited have demonstration centres at their offices to enable schools to see the latest technologies. Nviron can also install pilot systems to enable schools to test thin client in house.

## Useful links

[www.citrix.com](http://www.citrix.com)

[www.vmware.com](http://www.vmware.com)

[www.microsoft.com](http://www.microsoft.com)

[www.igel.com](http://www.igel.com)

## About Nviron

Nviron Limited are based in Cheshire and have provided organisations with IT solutions, support and managed services for over twenty years. Nviron limited offer a wide range of solutions and have developed an excellent reputation with customers and vendors, through the provision of outstanding services.

Nviron have realised the advantages that thin client solutions can offer schools and have partners with Citrix and VMware to deliver the best of breed technology to enable schools to benefit from flexible learning and lower TCO. For more information go to: [www.nviron.co.uk](http://www.nviron.co.uk)