

OPTIMISING ACCESSIBILITY, AFFORDABILITY AND SUSTAINABILITY

ICT when you want it, where you want it



DEAR EDUCATION PROFESSIONAL



For me, Education isn't just a 'vertical market sector' for Sun Microsystems, it's been my passion and the core of my career for many years. That's one of the reasons I'm delighted to be able to tell you about Sun Microsystems' Education Proposition.

We develop and supply some of the most advanced IT solutions in order to facilitate processes, network users and store data in schools, colleges and universities throughout the UK – and the world. One of these, our Desktop Architecture, was originally developed for large scale businesses, but is rapidly gaining plaudits for the way it solves many of the issues facing today's schools and colleges – including access, reliability, flexibility, security and cost.

As a member of the 'Corporate Leaders Group on Climate Change', I am also pleased that by deploying Sun Microsystems' Desktop Architecture you can make a significant contribution to carbon reduction goals.

I hope you find the information in this brochure of interest, and feel sure that Sun – working alongside our community of Partners and Distributors – can help you achieve both your computing and your specific educational objectives.

KIM JONES
PRESIDENT AND MANAGING DIRECTOR,
SUN MICROSYSTEMS UK & IRELAND

SUN DESKTOP ARCHITECTURE FOR THE EDUCATION SECTOR

- Simplified and lower cost IT management and application deployment
- Increased working flexibility and efficiency for staff and students
- Substantially reduced power consumption, heat, noise and carbon footprint
- Increased security
- Smaller physical footprint
- Lower operational risk including easier disaster recovery



IT plays a central role in our education system, yet schools and colleges face a unique combination of issues when it comes to their computing infrastructures.

Leadership and innovation: Schools are seeking to extend learning with ICT beyond the classroom, assess and record learners' progress more efficiently whilst promoting more independent learning and entitlement for all students.

Finance: funding for initial provisioning often doesn't include ongoing finance for managing and upgrading.

Efficiency: Logging on can waste up to ten minutes of lesson time, and it may be only then that some PCs are found to be not functioning.

Space: In an ideal world, there's one PC for every student. Additionally, Management Information and curriculum systems often require separate desktop computers – doubling physical space – and cost.

Security: Physical security, viruses, unauthorised access to data and the Internet are issues that can be difficult to manage.



Flexibility: Conventional PC networks can be inflexible, requiring software to be installed and upgraded on every machine and giving compatibility problems when integrating Apple Macs or other technologies.

Work-life balance: Teachers have an intense and concentrated workload outside pupil contact time, a situation exacerbated by the inability to access work remotely. Students cannot always access their work from their home PCs.



Environment: An estate of several hundred desktop computers consumes a significant amount of power, and may require specialist cooling whilst ICT rooms often suffer from excessive noise and heat levels.

SUN DESKTOP ARCHITECTURE FOR THE EDUCATION SECTOR

- Access your desktop from anywhere
- Enables learning beyond the classroom
- Empowers users through flexible access
- Allows remote access to applications, folders, files and printers
- Hold all data securely on the network

SUN MICROSYSTEMS' VIRTUAL DESKTOP COMPUTING SOLUTION

Sun Microsystems' Desktop Architecture, is a virtual desktop solution which delivers centralised services, applications and data either to Sun Ray desktop clients or to a range of PCs, Apple Macs, notebooks, small form factor PCs, handheld devices and even mobile phones. The choice of device is dependent on the user's role and their planned outcome for the IT session.



A Sun Ray device has low power consumption, emits no heat or noise, and requires *no* local management at all. The service to the device is not dependent on local operating systems and can therefore

deliver a complete range of applications and data over its lengthy lifespan to suit the organisation's future plans. Schools and colleges are using Sun Ray to replace end of life desktops or to increase availability in new ICT suites.

A highly advanced server platform provides the centralised services, applications and data and this can also be accessed through a mixture of PCs, Apple Macs, notebooks, small form factor PCs, handheld devices and even mobile phones. Secure, authorised availability to applications and files from any device, on the premises or remotely, allows teaching staff and students to continue, complete and save their work from anywhere.

When using Sun Ray an organisation can, if they wish, introduce smart cards as an alternative to a standard log in process. The same smart cards can combine functionality such as ID, physical access control, cashless vending, library services and more.

Schools and colleges who have chosen Sun Microsystems' Desktop Architecture, report that they have seen significant

benefits such as increased efficiency and flexibility, and a reduction in the total cost of IT ownership. Power savings contribute to both their carbon footprint reduction targets and the organisation's running costs. Most of all, their IT staff

have a lower administrative burden and have been able to provide a more flexible approach that combines the best of the latest technology to meet the needs of everyone – students, teachers and administrative staff.



CASE STUDY THE BILLERICAY SCHOOL

“Operational experience over the last fifteen months has confirmed the suitability of our decision”

THE BILLERICAY SCHOOL



> KEY BENEFITS

- Increased efficiency and flexibility
- Lower management, energy and long term provisioning costs
- Improved continuity for students
- Improved work-life balance for teachers



THE SCHOOL

The Billericay School is a mixed intake comprehensive secondary school and sixth form college in Billericay, Essex. Specialising in maths and computing, its roll numbers approximately 1650 students aged between 11 and 18 (years 7 to 13).

THE ISSUES

In summer 2006, the school began to explore alternatives to a traditional client server infrastructure. Its annual £100,000 budget to replace 650-700 PCs, and the associated logistics, had become restrictive. Management was also a major issue, as was the cost of electricity to power them and the requisite air conditioning in ICT suites. Noise generated in the suites was also a problem.

THE PROCESS

Having decided on thin client architecture, the school spent the

following year visiting similar sites and speaking to solution vendors. They were on the point of making a decision when they received a contact call from Sun Microsystems regarding Sun Desktop Architecture.

The decision to buy Sun was not a difficult one. Having met with Sun and the dedicated Education Channel Partner Cutter Project Ltd, the school visited a reference site and discovered that the Sun solution was the most efficient and flexible; it would also offer considerable long term savings. It also presented a smaller physical footprint – the client devices proposed being Sun Ray 270s which integrate the interface and 17 inch display in one unit.

THE SOLUTION

After just four weeks' consultation, implementation was carried out over three days during the 2007 summer holiday. 400 Sun Ray 270s – representing 70% of the school's desktops – were installed throughout the school, ready to run without needing a pilot, testing or backup. (Over 250 PCs are still used for CAD, Media and Art, and six are retained in each ICT suite. Apple Macs are used in music).

Teaching staff, students and administrators alike started to benefit immediately.

Start up is ten times faster than on the previous PC network. Log ins are virtually instant. Printer output has been reduced. And the IT team can focus on higher value tasks.

Teachers can log into the SIMs or curriculum system or students' work from the one desktop. Work-life balance and morale are improved, as they can log in from their home PCs with the same functionality, even being able to call a student and talk through their work with shared visibility. Printing can also be instigated from home.

Students who are unwell or excluded can also log on from home, minimising disruption.

Clive Darley is Assistant Head Teacher and ICT Specialist:

“When we considered all of the advantages of a Sun Ray System against that of an expensive perpetual replacement cycle of PC hardware, it was a logical choice in terms of cost, future proofing, and maintenance to select a virtualised desktop system to run the majority of our curriculum and administrative network.”

CASE STUDY BRADFORD ACADEMY

“Sun Rays allow excellent system and physical security”

BRADFORD ACADEMY



> KEY BENEFITS

- Lower provisioning, management and maintenance costs
- Familiar standard Windows desktop
- Faster to use, more efficient and flexible
- Remote access and working
- Attractive, contemporary appearance



THE SCHOOL

Bradford Academy is a new flagship secondary school that has a specialism in Citizenship with Enterprise. Replacing Bradford Cathedral Community College, the academy opened in September 2007 at the cost of £25m to cater for students from year 7 to sixth form in inspiring, spacious buildings with state-of-the-art facilities.

THE SCENARIO

Recognising the pivotal role of technology in increasing the attainment of students of all academic levels, Principal Gareth Dawkins was determined to provide the most up to date and accessible IT infrastructure.

THE PROCESS

Dawkins' brief to two suppliers was for a mixed estate with a significant thin client element, based on accessibility, flexibility, manageability, security and economy. The final choice rested on the supplier's ability to include as well as recommend installing Sun's Desktop Architecture solution, which ticked every box at significantly lower cost.

THE SOLUTION

As well as 'traditional' classrooms, the Academy features open access areas where students can undertake course work, homework or access the Internet (filtered both locally and for the whole of Bradford). Initially, it was here and in the Cyber Café where 100 Sun Ray 270 thin clients were installed, now supplemented by further stations in corridor breakout areas, the library and staff room.

“Students are actively encouraged to use the equipment before and after classes and during breaks” says **IS Director Mark Berry**. “Some even come in as early as 7.30... they can buy breakfast, log in and get on with their day. The standard Windows desktop means they don't even realise that it's not a standard PC.”

He adds “Traditionally it's difficult to put IT in school open access areas, but the Sun Rays allow excellent system and physical security.”

Working from home outside school hours is a massive benefit for both students and teaching staff. All software, documents and folders can be accessed by remote log in. It is also planned to introduce smart cards which will allow log in as well as providing access control, use of the library and cashless vending.

Gareth Dawkins is delighted with the decision to buy Sun's Desktop Architecture:

“The Sun Rays are robust and child-friendly, as well as having a much quicker log in and log out than fat clients. Remote access is also a major benefit.” **He adds** “Power consumption is lower, they generate less heat and they look very attractive to fit in with our environment.”

CASE STUDY CLEO

“It's promoted flexible working and enabled savings on time and travel”

CLEO



> KEY BENEFITS

- More flexible working by teaching staff
- Easier and lower cost of network support
- Remote access to folders, files, applications and printers



THE ORGANISATION

CLEO (Cumbria and Lancashire Education Online) is one of ten English Regional Broadband Consortia (RBCs). It provides high quality private broadband network for around 1,000 schools across both counties, as well as a range of additional services supporting the use of broadband technology in and out of the classroom.

THE SCENARIO

CLEO had received requests from a number of schools – via the councils' Local Authority Support Teams – for a system enabling teaching staff to gain access to their respective school Management Information Systems (MIS) whilst away from the premises.

The existing infrastructure used Virtual Private Networks with Remote Desktop for Windows, however this relied on the use of Local Authority laptops with specific software installed.

THE PROCESS

Lancaster University, where CLEO is based and a user of Sun T1000 and T5000 servers, trialled alternative remote access solutions and recommended Sun's Desktop Architecture.

THE SOLUTION

CLEO Remote Desktop Access, as the organisation's solution is called, has been rolled out to over 1,000 licensed users in 100 schools, ranging from a secondary school with 87 users to a primary school where only the Head Teacher is licensed. More are joining all the time.

Remote Desktop Access is available to any school that requests it. CLEO purchased 5,000 concurrent SGD user licences in 2007; usernames and passwords will be enabled for all staff but logging on will be on a 'first come, first served' basis.

The provisioning request is made through the local authority, after which it is authenticated and submitted to CLEO's project board for funding approval. No charges are incurred by the schools.

Remote Desktop Access is via Java-enabled web browser on any standard desktop PC or terminal server. Staff can securely access their MIS and other applications plus their files, folders and printers. Access is via a log in, followed by their normal network log in.

“Teaching staff have substantially benefited from the ability to work more flexibly, whilst network managers can access other networks without having to attend their physical locations, saving the time and cost of travel!” says **CLEO's Broadband Services Consultant Iain Midgley**.

CASE STUDY LITTLE HEATH SCHOOL

“It’s transformed our ICT”

LITTLE HEATH SCHOOL



> KEY BENEFITS

- Lower provisioning, management and maintenance costs
- Lower electricity consumption, more environmentally friendly
- Faster log on time
- Robust
- Compact footprint



THE SCHOOL

Little Heath School is a comprehensive numbering 1650 students from year 7 to sixth form. Occupying a large site in Tilehurst to the west of Reading, it specialises in science and maths.

THE SCENARIO

An estate of 700 computers for teaching and learning spread over the school’s sprawling site was causing considerable support issues for technicians. IT-related electricity bills were also rising steeply, occasional damage was taking place and desk space was at a premium. Deputy Head Teacher Katie Smart was determined to get the IT infrastructure up to industry standard by replacing the legacy system with a state-of-the-art solution.

THE PROCESS

The school’s IT support vendor UKN Group immediately suggested Sun Microsystems’ Desktop Architecture. Following a live demonstration and a visit to a similar site, Katie could see how installing the Sun solution would solve many of the school’s IT-related problems... and at a considerably lower provisioning cost than replacement desktop PCs.

THE SOLUTION

Summer 2006 saw the installation of Sun Ray 2 Virtual Desktop clients in one of the maths ICT suites. The connectivity device was concealed within the desks, but in the other maths room, English, history and business studies rooms – as well as the staff room – they are located adjacent to the screens. Specialised PCs were retained for media studies.

Once logged on (in considerably less time than a PC), students and teachers have easy access to curriculum work, folders and files via a standard Windows desktop. ICT suites have a switch enabling teachers to cut power to the students’ screens when required, helping to focus attention to the front of the class.

As part of its IT modernisation programme, the school is considering other areas for the Sun Ray clients and has had the entire premises re-cabled in readiness. It is also examining options to extend the functionality of the Sun solution, including remote working for teachers and students, access to SIMS and the use of smart cards to log in.

UKN delivers a managed support agreement which includes helpdesk services – the first point of contact for teaching staff in the event of a problem or query – and remote or on-site fix.

Katie Smart says “It’s a robust system that works well, doesn’t take up technicians’ time, keeps costs down and takes up very little room. It’s transformed our ICT.”

CASE STUDY THE DUSTON SCHOOL

“We get instant control and start up and that vital consistency in the classroom”

THE DUSTON SCHOOL



> KEY BENEFITS

- Low cost of provisioning and management
- Ease of maintenance
- Speed of use
- Scope of delivery
- Improved work-life balance for teachers
- Closer integration



THE SCHOOL

The Duston School is a mixed intake comprehensive secondary and sixth form college in Northampton, with almost 1200 students on roll. A PFI project, the newly-built school opened in September 2007.

THE ISSUES

2006 saw The Duston School with a substantial budget deficit, inadequate IT support resource and faced with having to re-equip its entire IT Infrastructure.

THE PROCESS

IT Manager Mark Porter was keen to adopt thin client technology, but faced with a £250,000 bill was on the point of ordering conventional PCs. One colleague had moved to a school using Sun’s Desktop Architecture solution, and after talking with nearby Caroline Chisholm School and The Cutter Project’s

Andy Trevor, Mark opted for Sun’s Virtual Desktop clients, at half the cost of the competitive system.

THE SOLUTION

180 Sun Ray 2s with 19 inch monitors were installed in five classrooms. Separate server farms are used for the staff, which includes SIMS and curricular systems, with 14 X64 servers and two 4500s for storage. (20% fat clients have been retained in dedicated media ICT suites).

Log in takes 20 seconds (as opposed to up to 30 minutes five years ago), and students have instant access to all their files and curriculum work on a standard Windows desktop. All teaching staff are equipped with laptops, from which they can access SIMS. They will also be issued with smart cards to enable access to student files via the Sun Rays. This access is further extended to the home via the ‘Global Desktop’ link on the schools’ website, for all users.

Assistant Head Teacher Mark Taitt says “We get instant control and start up and that vital consistency in the classroom. Our teachers can also choose to go home at a sensible time, log in and produce reports, assessments, mark,

even email students or call them to set work. It’s far easier, and has reduced workload. It’s an integrated setup which fits perfectly with our educational ethos.”

Mark Porter says “There’s no comparison with fat clients for support and management. Reliability is awesome – we just haven’t had any problems. If something does crop up, we simply raise a service desk ticket and the problem is resolved remotely – often in seconds.”
Porter adds “Damage rates are fractional. There’s a high level of respect for this system – because log in is so quick there’s low boredom, and very little vandalism. It’s also very quiet.”

Continuing to implement Sun’s Desktop Architecture over the coming years will help push the school’s operating budget back into the black, not just because of lower operating costs and power savings, but simply because the constant churn of traditional workstation replacement has stopped.

As part of Northampton’s Area Improvement Partnership, Duston may become the IT hub for other schools – especially its feeder primary schools – to provide consistency of service and reduce their administrative burden.

EDUCATION SECTOR TESTIMONIALS

“When we looked at different thin clients a few years previously we weren’t compelled to make a change from our standard desktop PCs. Things have moved on considerably since then and we are now extremely pleased with our choice to bring Sun Ray into the classroom.”

VIJAY OZA, SENIOR TEACHER, RESPONSIBLE FOR ICT STRATEGY
– BISHOP DOUGLASS SCHOOL



> “Staff have been delighted with Sun Desktop Architecture which gives them the flexibility to access college systems from home. Rolling out new software is now so much quicker and easier to manage.”

David Finch, Director of ILT – Central Sussex College

> “Staff appreciate being able to access information and programs at anytime from anywhere so they do not have to stay in school to complete reports and other electronic information. By having access from anywhere, the Sun system allows us to keep sensitive information on the network instead of on staff laptops. Our students can access their data from home, and our teachers have much more flexibility in how they choose to access the systems.”

Stephen Peverett, Network Manager – Lodge Park Technology College

> “The Sun Rays look fabulous in our new ICT suites and they’re so quiet! We now have over 100 in the school.”

Paul Parker, Music College Director – Northampton School for Girls

> “School ICT costs have become increasingly disproportionate to whole school budgets, therefore we needed to look at ways we could increase accessibility whilst maintaining sustainability. After much discussion and consultation with our managed service provider, Vissensa, it was felt that Sun’s Desktop Architecture would enable Weydon School to extend the life of its existing equipment and when combined with Sun Ray Virtual Desktop Client technology allowed a lower unit cost solution to be implemented.

We see the partnership between Weydon School, Vissensa and Sun as being a future proofing solution in as much as anyone can future proof in the world of ICT.”

Mark Tredwin, Deputy Headmaster – Weydon School

> “The Sun system implemented by the Cutter Project in our school has provided substantial cost and time savings. Sun Desktop Architecture allows our staff and students to access the applications they need whenever and wherever they want them. Best of all, it just works!”

Sam Mort, Network Manager – Whitley Abbey Business & Enterprise College

CONTACT SUN TODAY

For more information about Sun Desktop Architecture, to arrange a sales call, a demonstration, or a visit to an existing school or college using the technology please contact our Education Line of Business on 0800 731 0658 or email ukschools@sun.com or ukcolleges@sun.com

DISTRIBUTION PARTNER

Sun Microsystems Desktop solutions are implemented via our network of Sun authorised partners. The component parts thereof are supplied by our value added distributor Avnet Technology Solutions – www.ts.avnet.com/uk

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