

## **Cloud Computing: Local Authorities adopting for school MIS** **Laboratory tests prove up to 50-fold saving for Web-Based School MIS** **over legacy Windows ‘fat client’**

London, 10 January 2012 — Laboratory load and stress tests verify infrastructure sizing for Local Authority (LA) wide deployment of school MIS and confirm huge savings on the capital outlay in infrastructure; up to 50-fold reduction in RAM and 30% in Processing Power, and much lower running costs with reduced server power, cooling and space requirements leading to more environmental friendly deployment.

Bromcom carried out laboratory tests to compare the hosting of a web-based school Management Information System (MIS) with a legacy Windows desktop alternative. The objective was to assist LAs in taking an informed decision on the merits of continuing with desktop software or switching to a web-based MIS to achieve maximum efficiency within schools and cut costs.

- ✚ LAs are realising the clear advantages of offering schools a centrally hosted MIS. Primary schools in particular benefit from the considerable cost reductions in management and support by using a centrally hosted MIS.
- ✚ Whilst a centrally hosted MIS reduces costs, the differing technologies used by MIS products have a massive bearing on these further cost reductions.

Bromcom, working with a professional test laboratory carried out extensive tests to simulate a large LA environment. The simulation consisted of hosting the database and application for hundreds of schools with the simultaneous access expected for a fully deployed MIS specifically including classroom access by teachers so as to verify the infrastructure sizing for an MIS based on web technology. The results, as anticipated, vindicated the effectiveness of using browser technology for hosting against a legacy Windows desktop ‘fat client’ based MIS.

### **Cloud-based MIS: Web compared to legacy desktop ‘fat client’ applications**

Bromcom anticipated that the Windows desktop ‘fat client’ application would be a limiting factor in deploying a school MIS across LAs and facilitating anytime anywhere access, hence since the early 2000s, has pioneered a web design for its MIS, the approach acknowledged as the best way to make the most of moving to Cloud or centrally hosted deployment. Bromcom’s web-based MIS has been in use across the UK since 2009 and is now fully optimised for Cloud or for central LA-wide hosting as of December 2011.

### **Guaranteed to meet the cost of change from a legacy ‘fat client’ MIS, and enhanced flexibility and a much improved user experience justifies disruption and inconvenience of a changeover**

Legacy desktop ‘fat client’ MIS applications are viewed as a very poor choice for hosting, and laboratory results have demonstrated that the potential savings are such that Bromcom is offering to guarantee that the cost of change to the Bromcom MIS can be met from the savings made by changing from a hosted legacy Windows desktop ‘fat client’ MIS to Bromcom’s MIS Cloud. LAs considering or already hosting the school MIS can be confident that hosting the Bromcom MIS is by far the most efficient approach and will help them provide cost savings and will be the environmentally responsible choice. At the same time, the web-hosted provides the anytime anywhere flexible working and intuitive web experience for the MIS, which justifies any short-term disruption and inconvenience that may occur during changeover. The fact that in the longer term, the legacy ‘fat client’ software supplier is also likely to switch to a web-based solution means that LAs and schools will inevitably confront such a changeover in the future. An earlier changeover will mean bringing forward the benefits that will be experienced.

## So what do tests show about a web-based MIS for Cloud Deployment?

In December 2011 Bromcom carried out two different tests:

1. A comparison of the demands on resources between Bromcom's web-based MIS and a third party legacy desktop 'fat client' MIS.
2. Comprehensive tests in a professional test laboratory were run to verify the sizing of Bromcom's web-based MIS, ramped up to a large LA-wide configuration with 300+ primary schools, including full in-class teacher access.

### Results

#### 1. Resources Comparison

The key differences measured between the two types of MIS were as follows:

- ✚ Memory: **50-fold reduction** in RAM needed per user for the web based application
- ✚ Processing: **30% reduction** in CPU loading for the web-based application

What this greater efficiency of the Bromcom MIS means:

- ✚ Reduced capital cost of server infrastructure - fewer servers/lower specification per user.
- ✚ Environmentally more friendly - lower energy consumption of servers, lower heat output and less energy required for cooling.
- ✚ Real estate – far fewer servers means less space is required in housing (approx. 80% typical reduction).
- ✚ Concurrency – with minimal overheads per user, a substantial number of simultaneous users is readily supported, which is essential for teacher use in the classroom.

The Bromcom Web-based MIS also provides as standard:

- ✚ Zero deployment cost – all client access is made using a standard web browser.
- ✚ Ease of deployment and support – a single copy of the application services multiple schools.
- ✚ Home use – Secure web access at anytime from anywhere. Even smartphone access during field trips etc.

#### 2. Verification of the multiple school sizing

A professional test laboratory was used to verify that much less server hardware is required to run an LA-wide centrally hosted school MIS service. The results affirmed the expectation and it was demonstrated that a 300+ primary school configuration can be run from an infrastructure costing less than £30,000. This means less than £100 per primary school. It is estimated that an initial outlay of £300,000 will be needed to provide the same number of concurrent users for a similar size LA if the legacy 'fat client' MIS is deployed, besides on-going substantially higher running costs. The following are relative comparisons with the same level of simultaneous concurrency for teachers use:

- ✚ Web-based Cloud less than £100 per primary
- ✚ Legacy desktop – centrally hosted £1,000 per primary
- ✚ Legacy desktop – locally hosted £1,500 per primary

Not only is this a substantial saving in itself but it also offers an easy solution that can readily support a higher numbers of simultaneous users.

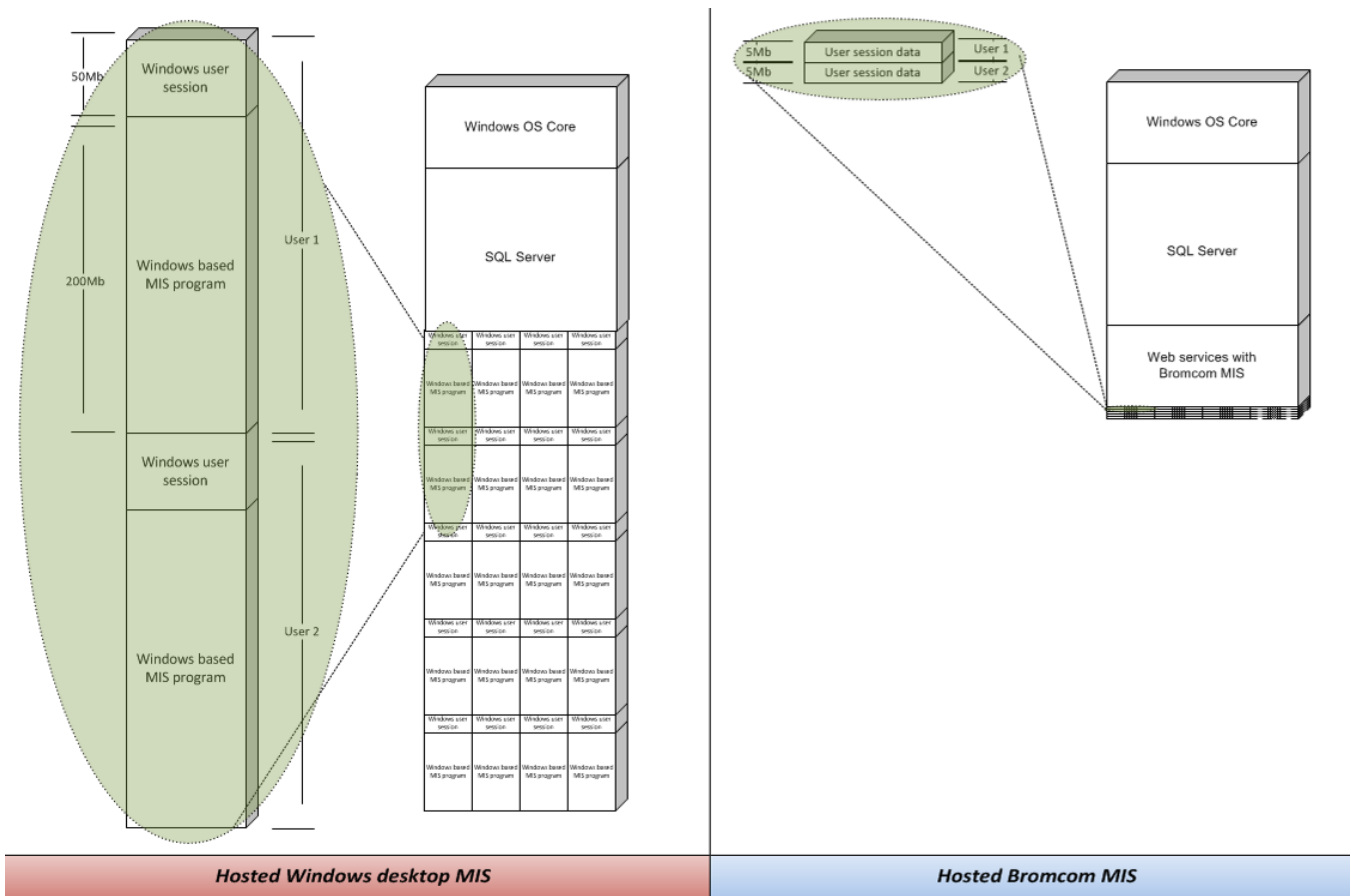
Bromcom has compiled the results in the form of a White Paper available for Local Authorities. Please contact us for a copy (contact details are below.)

## Conclusion

A Windows desktop ‘fat client’ based MIS has to be seen as a legacy product when considering deployment in today’s Cloud or hosted environments. The laboratory tests show that the desktop ‘fat client’ based MIS is inefficient and massively costly in comparison to the web-based MIS alternative that is optimised for LA-wide cloud deployment such as Bromcom MIS. Therefore, schools and Local Authorities are urged to consider moving to a web-based MIS in order to cut costs and to improve efficiency specifically for centrally hosted / cloud deployment but also school based deployment.

**For more information, Bromcom’s white paper is available by emailing [marketing@bromcom.com](mailto:marketing@bromcom.com) or calling 020 8695 8080. Bromcom is also happy to visit in order to demonstrate and discuss how the MIS can improve individual schools.**

The diagram below highlights the relative RAM overheads required by these approaches.



Summary	Windows desktop MIS	Bromcom MIS
Windows OS Core	Required	Required
SQL Server	Required	Required
Web server	Maybe required for optional components	Required
Remote desktop environment	Required – loaded per user	Not Required
Bromcom MIS application	N/A	Required – loaded once for all users
Windows desktop MIS	Required – loaded per user	N/A

### Notes:

- Windows desktop MIS tested under Microsoft Terminal Services on Windows Server 2003 and Remote Desktop Services on Windows Server 2008.
- Bromcom MIS tested under Windows Server 2003 and Windows Server 2008

## Notes to Editors:

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### **About Bromcom Computers Plc**

Bromcom Computers Plc was formed in 1986 and since the early 1990s has moved into the education market and has been leading the technological revolution in schools and colleges by providing new and innovative ICT systems. The company's flagship system in education (the world's first ever wireless electronic attendance registration with its own range of hand-held devices) has been award winning. The system has been enhanced with facilities for teachers to capture a wide range of data from behaviour, to attainment, and send and receive messages raising alert in case of emergency anywhere within a school or college. At its peak over 900 post primary institutions adopted the Bromcom system, making it by far the most popular electronic registration approach against the main alternatives such as swipe card systems. Bromcom has won a range of awards such as the Educational Gold Award to Queens Award and has been featured in radio and TV news items and national newspapers. Its early incarnation was even shown on the BBC TV show, Tomorrow's World. A wide range of other standalone products have been added, such as parent text messaging and PE Teachers mobile registration systems. A parent portal, MyChildAtSchool.com was the first of its type when launched in 2000 and is the leading system with an attractive and intuitive interface hosting a whole wealth of information for parents.

A comprehensive web-based management information system (MIS) for schools and colleges was completed in 2009 and is run across the UK. It was optimised for Cloud Computing deployment in its December 2011 release. A number of Academies and Free schools are adopting the Cloud version of Bromcom MIS to gain the benefits of this new technology.

Bromcom is one of the bidders in the DfE's National Procurement Framework tender for MIS and Learning Platforms, which is timetabled to be operational in March 2012.