

Case study



FLEXIBLE NETWORK ACCELERATION

Replify Optimise nationwide school WAN links

Background

Classroom 2000 (C2k) is an ambitious project to connect all Northern Ireland's schools, both Primary and Secondary, with a dedicated and safe private data network, classroom PCs, email for teaching staff, and a set of engaging learning applications for the pupils.

The C2K network is a large hierarchical IP network. Secondary Schools and large Primary schools act as aggregator hubs, with the smaller Primary schools served mainly by 2Mb or slower links (down to 128k). The combination of constrained bandwidth, contention through aggregation, and high latency meant that pupil and teacher experience was not

going to be acceptable and some form of WAN optimization was required.

HP selected a traditional hardware-based

WAN optimization solution before becoming aware of alternative software-based approaches such as Replify Accelerator. Their choice was acceptable for the Secondary schools but it was not suitable for the 900 Primary Schools for two reasons:

Cost – it was simply not affordable to put expensive hardware devices into each Primary school

Maintainability – it was decided that it would not be cost-effective to support a population of 900 WAN

appliances; many of which would be in small, remote, schools with no IT expertise on hand.

HP then became aware of Replify's capability and evaluated our Accelerator Client. They concluded that it offered the same levels of WAN Acceleration as the chosen hardware vendor, but a fraction of the cost, and with the option of deploying solely onto the remote PCs with no need for a site appliance in each school.

The challenge

- To provide LAN-like performance for web-based learning applications
- To minimize traffic on the C2k network and avoid contention between users
- To provide teachers with an effective email service capable of handling periodic high volumes of large documents (student projects, exam papers etc.)
- To scale to 900 locations and 30,000 users
- To avoid the need to deploy any additional hardware in the schools



The solution

On the basis of the intensive evaluation HP selected Replify to provide the WAN optimization solution for the primary schools.

A simple design was developed based on a load-balanced set of virtual appliances within the data centre providing the C2k services. Replify Accelerator Clients were to be deployed on each PC rolled out via a desktop management solution and configured through group policy. The clients were to run in silent mode, not visible to the end-users.



Over a period of months, Replify worked closely with HP to ensure that the product would perform at the scale required, provide the necessary status and reporting, and allow HP to manage the PC population across the schools effectively.

The benefits

In March 2010 the system went live and over two weeks ramped to full deployment. Since then the solution has been in continuous operation, supporting 900 schools, over 25000 installed PC clients, with an average peak daily use of between 15000 and 20000 users



The system was originally sized conservatively to run on a platform of 12 HP blade servers. Once the system was fully ramped it was clear that the system was running highly efficiently and the platform was reduced to 10 blades leaving considerable spare capacity to cope with new services such as video.

Monthly monitoring of the system shows that, even without the additional cache-sharing benefits that a Replify site Virtual Appliance would deliver, the

solution is providing more than 80% offload for the web-based learning applications along with substantial reductions in email and file transfer data volumes.

HP are now looking forward to deploying Replify's next generation of Accelerator client supporting CLAN – our cache pooling technology which will offer even better offload and acceleration.

“Before we looked at Replify, we had no affordable means of providing a responsive and engaging learning experience for the Primary school pupils. Replify have delivered on the promise shown during the evaluation and worked closely with us throughout the solution design and deployment phases to make sure we satisfied the end-customer.” Philip Irwin - Head of Managed Services Northern Ireland, HP

Network managers can see for themselves the improvements that can be achieved through Replify's solution by visiting; www.replify.com

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