D-Link assists RGS Worcester to deliver a 21st century learning experience to its pupils

About RGS Worcester
The Royal Grammar School, Worcester is one of the leading independent coeducational day schools in the West Midlands. RGS Senior School has approximately 800 pupils aged 11-18, including a Sixth Form of 240. There are a further 450 pupils aged 2-11 in the two RGS Preparatory Schools, RGS The Grange (two miles north of Worcester City Centre in the village of Claines), and RGS Springfield (a two-minute walk from the Senior School in Britannia Square).

The RGS family of schools have high academic standards but also offer a wide range of sporting and cultural opportunities to all its pupils. It has invested heavily in its educational facilities over the last two years and the school is amongst the best in the West Midlands.

The school has seven ICT teaching suites that are all fully equipped with new multimedia computers, with a fully managed ‘follow me’ print service for both staff and pupils, fast broadband Internet access and a host of software applications. They allow students to be involved in a whole spectrum of activities, ranging from researching and producing coursework, through to producing a film or a website.

The Challenge – Support a rise in multimedia content and enable an increasing number of devices to access the network on a daily basis
As a forward-thinking school with impressive modern educational facilities, RGS really sees the value in having the latest technology for its pupils and staff to enhance the teaching and learning experience as well as assist in the overall management of the schools. However, the rapid rise in multimedia content and increased usage of internet-enabled mobile devices by staff and pupils was starting to put a strain on its existing network and storage capabilities. Up to 800 devices now access the network on a daily basis, comprising a mixture of smartphones, tablets, laptops and desktop computers. Furthermore, its existing wired solution had become increasingly expensive to support as it was reaching end-of-life. It also lacked the feature set required to enable enhanced security protocols to be introduced.

As such RGS wanted a network which was future-proof and able to meet its growing data demands. Its new wired network required a 10-Gigabit backbone, with redundancy and would also provide 10-Gigabit connectivity for each ICT suite. In addition, it also needed to support and integrate with the school’s site wide 802.11N wireless network. From the storage perspective, RGS wanted to replace its six legacy RAID systems with a more flexible and easy to manage storage solution. This would provide the school greater redundancy and scale up to meet the school’s growing capacity requirement.

Robert Berry, Director of ICT at RGS commented: “We wanted to be able to rely on our technology to deliver interactive and engaging teaching to our pupils. As such, we really needed to increase the resiliency and reliability of our network, especially as more and more people were trying to use it concurrently and access stored files. Having this new networking capability was extremely important as we were looking to increase our full multimedia virtual learning capabilities, as well as support a BYOD (Bring Your Own Device) solution.”

The Solution – Intelligent high-performance green switching and scalable storage from an education specialist
After evaluating a number of solutions, RGS opted to work with D-Link. The initial product that was selected for the school’s wired network was a pair of D-Link’s latest DGS-6600 chassis switches. Robert Berry explained: “Prior to the project we had a limited understanding of D-Link and its products, but we soon discovered D-Link had an impressive understanding and knowledge of the education sector.”

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What attracted RGS to the DGS-6600 was the product’s flexible modular architecture, as well as its scalability, which would provide a high level of investment protection for the school’s 10-Gigabit packet switching. Furthermore, the switch was IPv6 compliant, which meant it could provide the school with the performance, high-availability and future-proof architecture it needed both now and in the future.

An additional benefit of the chassis switch was its power saving technology. This means that the switch can automatically power down ports that are not in use, only turn on fans when a specific temperature is exceeded, and turn PoE on/off per port by a pre-defined timer, which overall reduces power consumption and helps the school remain eco-friendly as well as reducing utility bills.

To meet its storage requirements RGS opted for D-Link’s DSN-6000 iSCSI SAN network storage solution. The DSN-6000 allowed RGS to easily increase its network storage capacity, meaning that it could store all of its data (e.g. database, exchange server, staff materials, students’ work) without having to worry it would run out of space within six months. Furthermore, the DSN-6000’s remote replication capabilities provide RGS with continuous data protection in the event of a system failure. Snapshot technology ensures data can be restored quickly and easily without the need for a lengthy restore from back up.

Robert Berry continued: “D-Link really stood out from the competition because it offered a lifetime warranty. During the current economic climate, we really need to be careful with our spending on ICT. Both the D-Link switch and SAN were of a much higher specification than we originally thought might be affordable. Other competitors were up to 40% more expensive as regards their warranty. For this reason, it made complete commercial sense to go with D-Link when total cost of ownership was factored in.”

The Benefits – Effectively supporting virtual learning environments with a reliable high speed network and anytime access to data

The school has recently introduced full multimedia virtual learning portals to enhance pupils’ development. Following the implementation, the load on the school’s network has doubled overnight with no degradation in performance. This means that the users are now able to download or stream content without it affecting usage elsewhere in the school. Amongst the benefits, this has enabled RGS to deliver the latest multimedia content to all its users, concurrently and enable pupils and staff to continue to have fully mobile accounts. Everyone can access, edit and use any sized multimedia file they like.

With the DSN-6000, RGS has also been able to increase network directory speed across the whole school. This means that users experience very little latency when accessing their data; to such an extent that it feels like data has been stored locally. Furthermore, due to the scalability of its new storage network RGS has been able to continue to provide unlimited storage to its staff and pupils. Due to the ease RGS has found provisioning storage using the DSN-6000, the school has in effect now created its own ‘in-house’ cloud, whereby staff and pupils can remotely and securely access their data over the internet.

"D-Link has gone the extra mile during this implementation with both ourselves and our chosen reseller, with the training offered being second to none. We have also got peace of mind if we do encounter problems, help and support will be immediately on hand. For instance, stock is available in the UK meaning that we don’t have to wait a considerable amount of time for replacement parts which means downtime is kept to an absolute minimum,“added Robert Berry.

For more information: www.dlink.com/uk