

Gilbert Colvin Primary School: Business-class WiFi and network infrastructure

Gilbert Colvin Primary School

“Gilbert Colvin is a successful two form entry primary and nursery school enjoying large green spaces in a quiet residential area. Our purpose is to provide a happy and inclusive environment that encourages every child to persevere and achieve their best possible outcome, supporting each other in this shared ambition.”



Situation

Total Solution were recommended to the Governors of Gilbert Colvin Primary School after the successful deployment of D-Link's Managed WiFi system at Redbridge Borough Teacher's Centre.

We were selected to propose a solution to replace the existing network infrastructure across the school. The existing setup included a total of 4 network switches all of 10/100Mbps speed and with no real WiFi network to speak of.

The school planned to extensively use 2 cabinets of 16 netbook computers anywhere in the school and have a reliable and good performing wireless network to connect to.

The new switching solution needed to also cope with the rigours of a VMWare virtual server infrastructure also being installed at the school, so needed a very fast and reliable network.

The school has replaced all of their computers in the ICT Suite with Apple iMac computers. These will be used extensively for multimedia content and so would benefit greatly from the use of 1Gbps switching.

Lastly, the school previously did not have any network access for the separate nursery building and this would need to be addressed.

Solution

Total Solution recommended the D-Link DWS-3024 Unified Wireless Switch along with 19 DWL-3500AP business class wireless access points to comfortably handle the WiFi networking.





The school wished to keep all existing Cat5e network points available in classrooms (totalling 42) so each access point would need a new Cat5e network point installed at high level in each location. 15 of these new points have been run back to a new 9U staff room network cabinet, containing the existing 42 network points in addition to this new 24-way patch panel.

In the staff room cabinet Total Solution chose to install a 48 port Gigabit switch to run all the existing classroom points, installed the D-Link DWS-3024 Unified Wireless Switch below and plugged the 15 DWL-3500AP access points into it's 24 Gigabit Power over Ethernet (PoE) ports.

Moving to the ICT Suite, we have installed a new 6U cabinet containing a 24 port Gigabit switch containing 24 new Cat5e points for the ICT Suite and a 24 port Gigabit PoE switch to handle Admin computers, extra curriculum network points and the remaining 4 wireless access points.

Next we move to the nursery, which the main school network has been extended to via the use of an aerial catenary wire with external grade Cat5e cable running from the ICT Suite to the Nursery. The Nursery has a new 24 port 10/100 switch with an additional 4 Gigabit network ports, this will be used for 2 new Cat5e network points installed in the nursery, one next to the new interactive whiteboard and one in the cloakroom for a desktop PC.



Lastly, as standard on new network infrastructure installations, Total Solution have setup Virtual Local Area Networking on the new switches, this has some advantages:

Zero chance of curious pupils trying to log into the network switches, as we have used a separate VLAN for management use.

Ability to assign any network point in the school as either on the Admin network (Redbridge Borough) or as Curriculum network

All access point IP addresses are in a separate DHCP scope assigned by the D-Link Unified Wireless Switch, so 3rd party network technicians need not worry about any changes affecting our solution.

Benefits

The school has benefitted from the network in the following ways:

ICT-centric lessons are no longer tied to certain classrooms due to the new blanket WiFi coverage that can cope with high load placed on it by 32 netbooks operating at a time.

The pupils benefit by being able to work faster in the ICT Suite using the new Gigabit connections to their iMac computers, which will help a good deal when creating and editing multimedia content.

Teachers can now get lessons up and running faster as they may be opening several large SMART Notebook files at a time, which a Gigabit network connection to their new laptops will cope with a lot better than the old 10/100Mbps solution. The new network will also allow users to stream HD content across the network without any issues.

For more information

For more information about Total Solution products and services, please call the Total Solution sales team on 0800 2985085.

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