Metropolitan Networks Case Study
- Peter Symonds College, Winchester

Increased visibility brings increased security to Sixth Form College

Peter Symonds College is one of the largest sixth form colleges in the country with about 2,800 full-time 16-19 year old students on the main campus and an adult education site about a mile away which accommodates some 3,000 part time students, most of whom are on very short courses for an hour or two a week. About 100 of the full-time students are boarders. The College is connected to the Internet via a 10Mb (recently upgraded from 2Mb) link to the JANET network.

"The support we have received from Metropolitan Networks has been excellent and we have just extended our maintenance contract for a further year."
Charles Parish, IT Director, Peter Symonds College.

At Peter Symonds College in Winchester, a very limited Internet connection was being compromised by a variety of traffic including peer2peer file-sharing traffic. This slowed the use of the Internet for study during the college day and also after hours for evening classes. Metropolitan Networks implemented a PacketLogic to block this traffic at the application layer, stopping the unwanted traffic immediately. Metropolitan Networks were then able to optimise the available internet bandwidth to different groups of users at different times of the day.

Issue:
The 2 mbps internet connection at Peter Symonds College was running at 99% capacity almost constantly. P2P file sharing traffic had become prolific, and was using up what was already a limited resource. Part of the difficulty of controlling P2P lies in the application's ability to switch ports. Any time a P2P port was blocked, they would simply use another one, avoiding firewall security measures in the process.

The challenge at Peter Symonds College was a complex one. How do you make such a limited internet connection available to every classroom, office, and boarding house all of the time?

Solution:
The first part of the solution was to block unwanted traffic. As PacketLogic is able to view traffic at the application layer, it was able to eliminate ALL forms of P2P traffic immediately, regardless of which ports they were utilising. With P2P activity put to a halt, and bandwidth usage levels substantially reduced, Charles's IT Support team went on to optimise the rest of the college's internet traffic, using PacketLogic's powerful traffic management tools. IT Director Charles Parish explains:

"The appliance allows us to view, in real time, the types of traffic flowing through it, e.g. web browsing, email, Real Player or file-sharing. We can see what traffic, and what kind of traffic is coming from or to a particular computer by drilling down into our subnets and looking at an individual station. Or we can begin by looking at individual services and drill down from there to see where they are coming from and going to.

"We can view statistics which the appliance has gathered over several hours, days or weeks to see patterns of usage. If we see that these may be a problem we can set up rules to block certain types of traffic or restrict it at certain times of the day. We can even set up rules to apportion bandwidth at certain times if other conditions are met. These offer a measured and proportional response allowing us to be as flexible as possible."

Result:
By taking advantage of PacketLogic's advanced functions, Peter Symonds College was able to win back its internet bandwidth. After categorising the college's computers into groups such as: computer labs, admin, wireless, and boarders, advanced rule-sets were applied to each group, specifying what was, and what was not acceptable usage of the college's internet, as well as deciding the appropriate amount of bandwidth allocated to each group.

Some rules governed usage during college time and others for out of college hours. Other rules even allowed bandwidth to be borrowed from another group if it wasn't being fully utilised. The combined application of these specific rules has led to full optimisation of network traffic-flow, the availability of internet services to all users, as well as adding further protective measures to aid in network security.

Summary:
"We have found the PacketLogic box to be an excellent tool to limit abuse of our Conditions of Use and to allow competing users of our bandwidth to receive an appropriate share. It also helps us prevent unwanted activity such as illegal file sharing in the college. The interface is easy to use and the support from Metropolitan Networks has been excellent; we have just extended our maintenance contract for a further year."

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