

Next Generation Firewall from Palo Alto Networks

Creating a Safe and Efficient Campus Network Environment

“ With accurate identification rate, intuitive interface, detailed reports, and rapid data analyses, the Palo Alto Networks PA-4020 can accomplish what traditional firewalls cannot do.”

- Shao-Lun Lee, Director of Computer Center, OIT

Case Background

Founded by Yu-Ziang Hsu, president of Far Eastern Group, in October, 1968, OIT, or Oriental Institute of Technology, was originally a two-year junior college, later changing to its current name in 2000. Benefiting from its affiliation with the Far Eastern Group, OIT can closely monitor industrial developments and provide professional training for students whom top enterprises seek after they graduate. In the future, OIT will continue to enhance educational quality for all disciplines ranging from IT and telecommunications, engineering, management, medical and nursing. Lastly, OIT will upgrade its campus IT infrastructure, following the school development roadmap.

Tough Challenges Facing OIT

As an educational institute, OIT faces the same challenges that trouble other schools – on one hand, OIT has to construct a campus network environment that is both convenient and fast to encourage innovation among faculty members and students; on the other hand, OIT has to secure IT infrastructure and protect all its members from possible Internet threats and attacks. What’s more, emerging network applications, P2P abuse, and negligence of any smallest detail will lead to various issues such as network paralysis, hacker exploits, data theft and other illegal online behavior.

Years ago, OIT adopted a network framework addressing network security. Basically, a traditional firewall was deployed to manage access control policies and block P2P applications. However, as internet technologies evolved over the years and hacker techniques became more sophisticated, the campus network performance deteriorates once the incumbent firewall started to filter packets and applications. At the same time, existing network equipment failed to distinguish among applications since web applications nowadays use the same ports. Additionally, popular P2P applications that allow students to share files take up the entire outbound bandwidth at the expense of legitimate academic activity. P2P infringement concerns also created unnecessary workloads for the school as law enforcement agencies constantly sought user logs from targeted IPs.



Organization:

Oriental Institute of Technology

Industry:

Education

Challenge:

Unable to effectively control emerging internet applications, which cause abusive bandwidth usage, endless hacker attacks and P2P infringement concerns

Solution Adopted:

Replace the traditional firewall with Palo Alto Networks PA-4020, the next generation firewall, to construct an IT security management platform, to effectively control bandwidth resources and provide users with a safe network environment

Results:

- Significantly improve application filtering, recognition, and management ability
- Effectively eliminate network threats
- Provide users with a faster and superior network service performance
- Lower total equipment ownership and human resource cost

"Not only can we lower total hardware ownership in the long run with Palo Alto Networks' PA-4020, but we can spare valuable manpower resources for other meaningful activities."

Shao-Lun Lee,
Director of Computer
Center, OIT

POC Preferred Brand - Palo Alto Networks

Facing all these tough challenges, OIT started looking around for new solutions. NetFos Technology and Mikotek International presented OIT with the Palo Alto Networks PA-4020 solution and it made a deep impression on the staff at the purchasing department. "Its Layer 7 analyzing and filtering ability is quite amazing. With the user visibility and easy policy configuration feature, it solves most problems we were facing," said Shao-Lun Lee, Director of Computer Center, OIT. "As far as I know, there has never been a single product offering such complete features. So, we choose the Palo Alto Networks PA-4020 as our primary firewall here at OIT to shoulder the gate keeping responsibilities for our 5,600 faculty members and students."

The deployment of Palo Alto Networks' PA-4020 has been very easy. With the help from technical crews at the Palo Alto Networks distributor, OIT quickly completed user policy configurations for the entire campus environment. After the Palo Alto Networks' PA-4020 went online in the fall semester of 2010, the computer center was able to identify all applications (especially authorized ones) - while effectively blocking P2P applications used by students to download multimedia files or play online games, thus sparing scarce network resources. OIT's staff were able to distinguish user identities and set user permissions more accurately, including auditing piracy practices among users and performing all static analysis with the powerful report features. What is even more impressive to the OIT team is that is that they can now enjoy all the above features without sacrificing network bandwidth performance. With the Single Pass Parallel Processing (SP3) framework from Palo Alto Networks, OIT got their money's worth on their investment.

