

Chung Hua University

Chung Hua University Denies Admission to Malicious Content

Situation

Chung Hua University is a young but dynamic institute of higher learning in Taiwan, with a record of achievement that points to a bright future. Located in Hsinchu, a center of research and manufacturing for Taiwan's thriving high-tech industry, Chung Hua opened in 1990 with only 200 students and ambitious plans. Following expansion efforts which made it the fastest-growing university in Taiwan, Chung Hua University today encompasses 22 undergraduate departments, 11 Masters Programs, two Doctoral Programs and an evening extension program, with a combined student body surpassing 8,000 in 2004.

One of Chung Hua's most valuable assets is its "digitized campus:" the university-wide computer network which provides more than 10,000 users with e-mail service, high-speed Internet connections, access to research and study materials, class assignments, university information, and numerous other services. Unfortunately, the upsurge in worm and mixed threat activity that began in 2003 left IT administrators struggling to maintain network and system security against a rising tide of malicious code. To protect its network from Internet-borne viruses and malicious hacker attacks, Chung Hua University began evaluating the need for a new Unified Threat Management (UTM) security solution, a process that eventually led to the deployment of the Fortinet FortiGate-4000 antivirus firewall system.

Challenge

Chung Hua University clearly needed a solution to protect critical network resources from attack and preserve system reliability and stability. The school's IT administrators had several priorities for any new security solution. First was its ability to protect e-mail. E-mail was by far the major channel for virus transmission, and outbreaks frequently knocked out the mail server for hours. Although 'blended threats' now routinely use multiple methods of transmission, e-mail remains the single most common vector of attack. A second priority was the detection and prevention of DDoS attacks - from either direction. Michael Jiang explains: "We would expect a defense to block attacks from outside the university, but we also wanted to know about any going the other way, as a tool to help detect internal hosts that have been compromised by hackers. It's important to prevent attacks from originating on our network, if only to avoid potential liability issues."

Chung Hua's effort to choose a security solution focused attention on network and host security with new urgency as virus and worm attacks continued to escalate early in 2004.

Fortinet.com/contact

Tel: +1-408-235-7700 - Sales: +1-866-868-3678 - Tech Support: +1-866-648-4638



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- Michael Jiang
Network Supervisor
CHU Computer Center

Headquarters:
 Hsinchu, Taiwan

Industry:
 Tertiary Education

Company Profile:
 One of Taipei's top research universities

Products Involved:
 FortiGate FG-4000

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Solution

The Chung Hua University team was most impressed with FortiGate's smooth integration of a broad array of functions, including antivirus, firewall, virtual private networking (VPN), intrusion detection and prevention, and content-filtering, making it a superior "all-in-one solution".

In its series of FortiGate Antivirus Firewalls, Fortinet has pioneered a new kind of networking device which can reside at the edge or core of the network and scans all traffic entering and leaving it in real-time at multi-giga-bit speeds. It enables the deployment of application-level services such as antivirus scanning and content filtering in network gateway devices along with network-level services, using hardware acceleration to execute these tasks at real-time speeds, without degrading network performance. FortiGate Antivirus Firewalls are fully-integrated units that combine ICSA-certified firewall and VPN functions with the world's first and only ASIC-accelerated ICSA-certified antivirus gateways.

Other key factors included the university's unified management interface which made the system very easy to install and maintain and contributed to the FortiGate-4000 system's cost of ownership advantages compared to other systems.

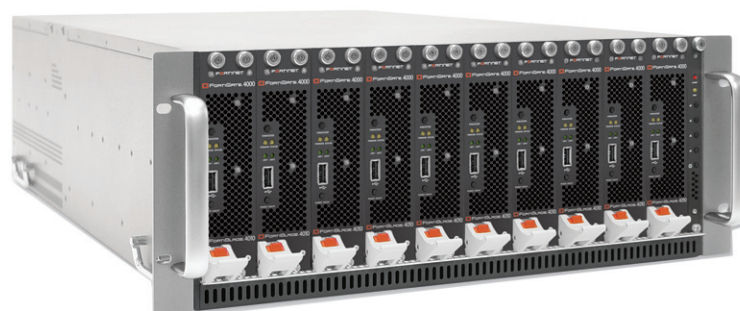
The FortiGate-4000 is a high-capacity, high-availability system designed for the complex needs of large enterprises and service providers. The FortiGate-4000 chassis supports up to 10 FortiGate blades that provide scalable capacity and enable it to grow as the customer's needs change. Like the other FortiGate appliances, the FortiGate-4000 offers a full suite of network-level and content security functions. It is built on Fortinet's unique FortiOS software, ASIC-accelerated architecture, and employs complete content protection technology to reassemble and analyze content and behavior across thousands of packets while maintaining real-time performance.

"We wanted a security solution that would integrate seamlessly with our present network, and offer us a robust, cost-effective solution that we could count on. The FortiGate-4000 platform offered us unparalleled security with route- and policy-based controls, Denial of Service (DoS) and application protection and malicious content-based scanning, and with the performance necessary to handle our many broadband connections," said Michael Jiang, Network Supervisor of Chung Hua University Computer Centre. With the improved security infrastructure in place, the University can now protect users and data from even the most sophisticated blended threats or network-based DoS attacks.

Success

Initial deployment of the FG- 4000 Antivirus Firewall was fast and easy, thanks to its intuitive browser-based configuration and clear documentation. Now the FortiGate unit is protecting the Chung Hua University campus backbone and its 1.0 GB/sec connection to the Internet. The system scans network traffic in real time at true network speed for viruses, worms and other threats, using databases that are automatically updated as needed to block the newest malware. In addition, it provides firewall, VPN, content filtering, IDS, IPS and traffic-shaping services.

The well-integrated security features work closely together, and much of the security process can be automated.



FortiGate4000

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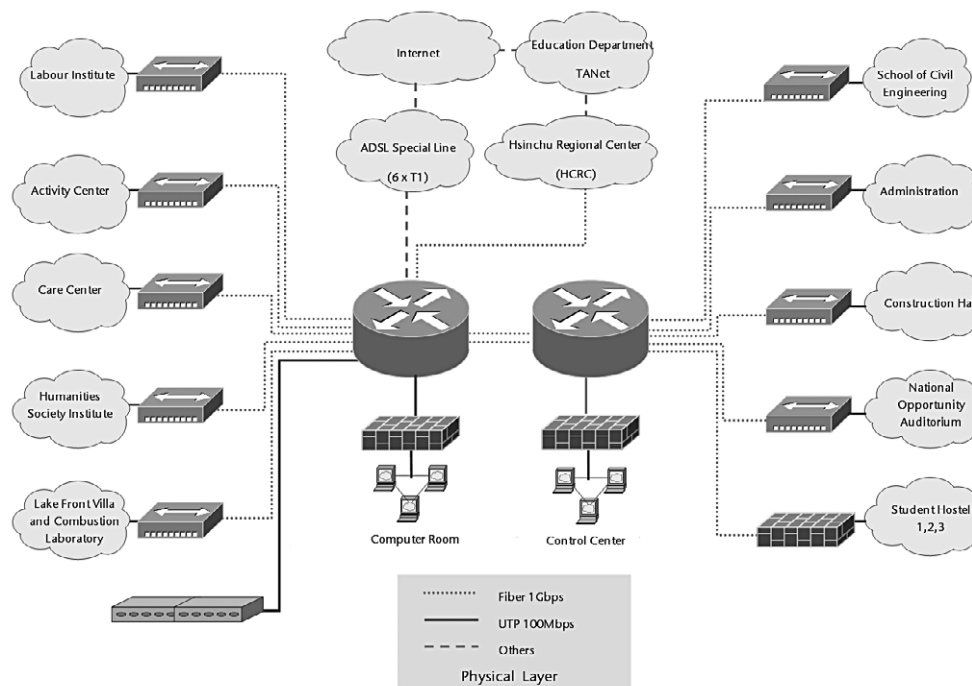
Benefits

- Firewall can be set to automatically close a port if intrusion prevention mechanism detects an attack
- Clear and easy to navigate administrative interface consistent on all Fortinet Antivirus Firewall systems
- Management and policy creation are simple, set through a single console
- Reduced incidence of outbreak attacks saves thousands in lost data, downtime and loss of IT resources
- Scans gigabit speed network traffic in real time for viruses, worms and other threats,
- Automatically updated virus and intrusion signature databases using FortiProtect and FortiGuard services to detect and block latest malware

Bottom Line

"By eliminating the need for several point products from other vendors, Fortinet reduced our total cost of ownership, and simplified the workload for administrators. There's no need to patch multiple OSs, maintain multiple licenses, and update multiple signature databases, etc.

The Unified Threat Management (UTM) security features are performing at or above our expectations, especially the antivirus and intrusion prevention /detection features. We've seen no degradation in our network performance, even when scanning real-time Web traffic for attacks and inappropriate content. When a new virus strikes, we only need to confirm that our FortiGate unit has been automatically updated to consider ourselves protected, rather than waiting until the software on every host is updated. The FortiGate units have thus helped shrink our 'window of vulnerability' to new viruses. Every virus outbreak FortiGate prevents from reaching our network could represent thousands of dollars in lost data, downtime and IT resources avoided. I believe the FortiGate-4000 Antivirus Firewall is paying for itself quickly as it gives us a new level of network protection." - Michael Jiang, Network Supervisor, Chung Hua University Computer Center



Learn more at Fortinet.com

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