

Zoo Atlanta installs an IBM Proventia Network Multi-Function Security system to guard against Internet threats and spam.



Overview

■ **Challenge**

Decrease security threats to Zoo Atlanta's network quickly and affordably

■ **Solution**

Installed an IBM Proventia® Network Multi-Function Security (MFS) system to add a true demilitarized zone (DMZ) between the zoo's internal network and the Internet

■ **Key Benefits**

- *The Proventia Network MFS system increases user productivity and network uptime by blocking the following on a monthly basis: thousands of known viruses and 10 to 20 unknown viruses; hundreds of network attacks; tens of thousands of spam e-mails; and thousands of illicit or time-consuming Web sites.*
- *The system helps protect the zoo's internal network from more vulnerable wireless network segments.*
- *It also helped establish an acceptable Internet usage policy for the organization.*

Making information security a priority

Zoo Atlanta, one of the United States' oldest operational zoos, receives 600,000 visitors annually, employs 200 personnel and conducts extensive research on some of the world's most endangered plants and animals. While providing important research that benefits society at large, the zoo also offers entertaining and educational programs to the public.

Increasingly, the Internet is becoming a necessary component of Zoo Atlanta's communications toolset. Onsite researchers use it for long-distance telephone communications and remote researchers use it for offsite access. The Internet also helps the animal park's administrators work more efficiently by allowing them to order animal food and general supplies online.

As administrators increased their usage of the Internet for credit card purchases, and researchers expanded their usage for zoological and botanical work, the zoo's network became a more tempting target for network information security attacks. Before recent security upgrades, the zoo

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was unaware of the number of Internet attacks penetrating its network. In addition to the threat of active attacks from hackers, the zoo also had to contend with the day-to-day loads of e-mail worms, viruses, spam and downloaded spyware.

Relying on deficient security

Six years ago it became apparent that network security was an issue for Zoo Atlanta’s IT team; yet funding for critical, behind-the-scenes activities such as IT and information security had never been a priority. It was a stark realization that Zoo Atlanta’s network security solution was inadequate for protecting the park’s priceless research and thousands of daily credit card transactions.

“Every day I was worried that we were going to find out just how inadequate our security really was,” says Fred Vignes, Zoo Atlanta’s information security director. Vignes remembers when the zoo’s network was hit by the CodeRed worm, and when one attack forced Zoo Atlanta to shut off Internet access for two days while the IT team manually cleaned

every infected system on the network. In another incident, Zoo Atlanta’s Internet service provider shut down its Internet connection because of a massive denial of service attack that was overwhelming the connection.

For the zoo’s thousands of dedicated Panda Cam viewers, and those relying on the Internet for information about ongoing research and animal welfare, the inability to access Zoo Atlanta’s Internet resources for even a few hours was frustrating and detrimental to business.

Securing the network with IBM Internet Security Systems

When Zoo Atlanta first started looking into network security, the IBM Internet Security Systems™ (ISS) team helped

the zoo design its network security and advised staff on the kinds of hardware and software to use in the initial design stages. In 2005, IBM ISS presented its Proventia MFS system to Zoo Atlanta as a pivotal step in managing security.

Designed for small businesses and remote or branch office locations, the Proventia MFS system is ideal for organizations that need network security but whose size and budget may not allow for a large enterprise solution. The Proventia solution can be installed either at the gateway of the network or on the network itself.

IBM ISS installed the midsize Proventia Network MFS system for Zoo Atlanta behind the network gateway to help

Proventia Network MFS system features and benefits

Feature	Benefit
Firewall	Basic access control in and out of the network
Virtual private network (VPN)	Secure remote connectivity to the network and secure connectivity to other office locations
Intrusion prevention system (IPS)/ intrusion detection system (IDS)	Protects the network from remote hacker attacks
Anti-virus	Basic protection against known viruses
Virus protection system	Advanced protection against unknown viruses
URL filtering (Web site filtering)	Blocks users from surfing illicit or dangerous content on the Internet
Anti-spam	Blocks unproductive spam and reduces the overall load on e-mail servers

protect resources from inbound threats such as hackers, viruses, worms, spyware and spam. The appliance is also designed to stop outbound information theft resulting from unwanted spyware applications already residing on the zoo's desktop systems. The solution functions to create a true DMZ between the Internet and Zoo Atlanta's internal network. So if a hacker attacks the network, the appliance can immediately alert the IT staff to the threat.

How Internet security has thwarted attacks

Since installing the Proventia Network MFS system, Zoo Atlanta has realized how large a security problem it had. Within hours of installation, the system alerted the zoo's IT team to numerous unsuccessful hacker attempts and showed a reduction in the amount of e-mail traffic coming into the network. Report logs showed that nearly 49 percent of all incoming e-mail to the zoo was spam. Less spam leads to less time and expense for e-mail management. "We set up the Proventia Network Multi-Function Security system and immediately saw a cost savings in terms of increased worker productivity," notes Gerald Cummings, senior network administrator at Zoo Atlanta.

When IBM ISS installed the new system, the zoo originally did not turn on the solution's content filtering feature because

it didn't think it needed it. Content filtering allows network administrators to restrict user access to Web sites across the Internet. Although the Proventia Network MFS system is preprogrammed to automatically block access to more than 80 million URLs, the list can be easily edited to block or unblock specific URLs as requested. After the solution was deployed, a zoo employee was redirected to a site she didn't want to see, so she went to the IT team to fix it. Within 15 seconds, the offending site was no longer available through Zoo Atlanta's network.

Conversely, another zoo employee, who was unable to access a legitimate reptile food site, requested access to the URL. Simply and easily, the IT

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team used the Proventia solution's Web-based management interface to unblock that particular site. "Over the next few weeks, we sat down with our COO and

developed an Internet usage policy, something we didn't have previously, and distributed it to all Zoo Atlanta employees," comments Vignes.

Envisioning a wireless future

Recently, Zoo Atlanta upgraded to a wireless system, enabling it to add several new features to the network to help make visitors' trips to the zoo even more enjoyable—features like fast-pass access through ticketing gates for season ticket holders. However, wireless technology presents even more potential vulnerabilities.

Not only is the zoo planning for wireless features with point-of-sale (POS) devices and other business essentials, it plans to add additional assets as network use grows. Zoo Atlanta is also currently upgrading many core applications and services. They plan for network upgrades to be constructed with wireless technology instead of fiber, to eliminate digging up what little ground space isn't taken up with exhibits, walking paths and other amenities.

The zoo has activated many wireless network hotspots around its campus which are insulated by the Proventia Network MFS system from the zoo's internal network. The Proventia Network MFS system has helped Zoo Atlanta track not only



the threats coming into the network, but also the internal risks resulting from liability and damaging application downloads.

In addition to the cost benefits and enhanced productivity resulting from the Proventia Network MFS system installation, the zoo also enjoys peace of mind when its vendors release new threat alerts, because it knows its network is protected. "You have no idea how much better I sleep at night with Proventia on our network," says Vignes.

For more information

To learn more about IBM Internet Security Systems solutions, contact your IBM representative or IBM Business Partner, or visit:

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