

City Government Virtualizes Security at the Gateway

Wichita switches to Trend Micro™ InterScan™ Messaging and Web Security Virtual Appliances for simplicity and efficiency

“Trend Micro InterScan Messaging Security Virtual Appliance evaluates and blocks up to 75% of our email server connection requests right at the gateway.”

— Kevin Norman, IT Operations Manager, City of Wichita, Kansas

EXECUTIVE SUMMARY

Customer Name: City of Wichita

Industry: Municipal government

Location: Wichita, Kansas

Web Site: www.wichita.gov

Number of Employees: 3,700

CHALLENGE:

- Protect the municipal government's digital assets and maximize the productivity of city employees that deliver services to the community.
- Conserve network bandwidth.
- Minimize the time required to administer updates and manage security solutions.

SOLUTION:

- Deployment of Trend Micro virtual appliances for web and messaging security at the gateway

BUSINESS RESULTS:

- Threats are stopped at the gateway, before they impact user productivity, network bandwidth, or server processing power.
- Users are shielded from extremely high volumes of spam.
- Updates to the application and virtual appliance operating system are simplified, with no need for hardware refreshes.
- Security is highly available, with automatic failover in the event of server failures within the VMware™ VSphere environment (using VMotion, DRS, and HA).

Challenge

The IT team for the City of Wichita has always faced the budget challenges that come with being a government organization. The recent economic downturn has hit cities hard across the U.S., and Wichita's technology specialists have been challenged to continually lower operating costs and total cost of ownership for numerous infrastructure resources that are critical to the delivery of a broad range of community services.

Virtualization has helped the IT organization gain the benefits of consolidation by improving overall server utilization rates and simplifying management. Working with VMware solutions, IT has been able to configure 60 virtual servers on only four physical servers. The virtualized server farm is being expanded this year, and each new computing project is evaluated for its virtualization potential.

With the virtual server data center well established, IT operations manager Kevin Norman challenged systems analyst Dana White to evaluate gateway security alternatives best suited to the virtualized datacenter.

Solution

Like many other “.gov” entities, the City of Wichita gets hit with high volumes of spam and other web, email, and blended threats. For example, in one month this year, more than two-million email server connection requests were received. Each connection request, if accepted, can result in a single email message or multiple messages that could include every City email account. These high levels of traffic require that IT choose security solutions that can keep up in terms of scanning and filtering capacity, and that help the City conserve its overall network and server resources.

For more than a decade, the City of Wichita's IT team has relied on Trend Micro™ gateway security solutions to provide a first layer of defense. The City was an early adopter, starting with software versions of the solutions on Microsoft Windows servers. Trend Micro InterScan™ Web Security Suite gave the City malware scanning, real-time web reputation checking, and URL filtering. Trend Micro InterScan Messaging Security Suite added multitiered antispam and reputation filtering with antivirus and antispymware protection. During a typical month, InterScan Messaging Security evaluates and rejects the majority (75%) of all email connection requests, due to real-time analysis of sender reputation by the Trend Micro™ Smart Protection Network™ infrastructure. Then, multitiered content filtering blocks additional spam and infected messages before they hit users' inboxes.

The gateway solutions are part of Trend Micro™ Enterprise Security, a tightly integrated offering of content security products, services, and solutions that is powered by the Smart Protection Network. This next-generation cloud-client infrastructure combines sophisticated

cloud-based reputation technology, feedback loops, and the expertise of TrendLabsSM researchers to deliver real-time protection from emerging threats. Trend Micro Enterprise Security delivers maximum protection from emerging threats while minimizing the cost and complexity of security management.

While the City was introducing virtualization into the datacenter, Norman's team was one of the first organizations to check out the new virtual appliance deployment options for gateway security. The virtual appliances reduce the time to protect users from emerging threats while simultaneously lowering operating costs in the datacenter.

Since the beginning, the Trend Micro gateway security solutions have been so effective that users will often complain if even a single spam message makes it through to their inbox. "End users notice that they get less spam here than at home, but they really don't realize how much email is being filtered out before it even hits our servers," said Norman. "Trend Micro InterScan Messaging Security Virtual Appliance is evaluating and blocking 75% of our email server connection requests, and then filtering an additional 12-20% of incoming messages right at the gateway."

White added, "Sometimes we stop filtering a user's email and let them see what InterScan Messaging Security is shielding them from. We are so confident in the Trend Micro gateway email solution that we have reduced the amount of quarantined email being reviewed for false positives. Our end users can manage the minimal amount of spam they receive from within their inboxes. We also configured our inboxes to enable a "Honey Pot" to help us do better at filtering and sometimes help Trend Micro by submitting samples. This also allows our end users feel like they are part of the solution. All of this cuts down on help desk calls."

Results

"We were already familiar with the basic features and capabilities of the Trend Micro gateway security solutions, and it was easy to test and move to the virtual appliances," said Norman. "Of all the deployment options, InterScan virtual appliances are definitely easier for us to install and keep up to date in our environment because the security technology and the hardened Linux operating system are preconfigured and deployed, patched, and maintained as a unit."

The virtual appliances also improved overall performance for gateway security. "We used to have to maintain two systems: an outward-facing box connected to another copy of the security software on a server inside the firewall," said White. "Network reputation checking was carried out on the outside and other scanning was done on the inside. This was because our servers didn't have enough horsepower to handle all of the scanning on a single system. This was an incoming email solution only. With the virtual appliance, a single copy of InterScan Messaging Security handles both outbound and incoming traffic and all security functions. The virtual appliance is much more efficient and now we can do a whole lot more on one virtual machine compared to our previous approach with software and dedicated appliance configurations."

The consolidation of gateway security onto a virtual platform has simplified other administrative tasks as well. "The email querying process is easier with InterScan Messaging Security Virtual Appliance," said White. "I used to have to go out to multiple log files or figure out which log files to search. Now, with the virtual appliance configuration, we have made leaps and bounds in the form of better querying of logs and we have not had to manually go look at logs. Now I just do queries and get the information I need to respond to a user's inquiry."

In addition to saving time for IT and improving overall performance, the Trend Micro gateway security virtual appliances give the City a more resilient solution. "One of the things we like about the messaging and web virtual appliances is the high availability we get from them," said White. "Now, if a server fails, VMware restarts our Trend Micro virtual appliances on another box. It's all automatic—we don't have to do anything."

"We've developed a great working relationship with the Trend Micro staff through the years," said Norman. "They have helped us learn about all of the different platform choices, and made it easy to transition security to a virtual environment."

DEPLOYMENT ENVIROMENT

- 1 site
- 2,300+ PCs
- 200+ servers
- VMware VSphere 4
- Multiple versions of system software including Windows 7 and Windows Server 2008
- Trend Micro InterScan Messaging Security Virtual Appliance 7.0
- Trend Micro InterScan Web Security Virtual Appliance 5.0

Company Profile

The City of Wichita is the largest municipal organization in Kansas, distinguished by a long tradition of professional government and committed to providing efficient, high-quality services to its citizens. The goal of the City is to provide an environment to protect the health, safety, and well being of all who live and work in the community. Wichita is located in the south central part of Kansas and is the largest city in the state with 360,000 people.

Trend Micro Security

- **Trend Micro Enterprise Security**
<http://us.trendmicro.com/us/home/enterprise/>
- **Trend Micro Smart Protection Network**
<http://www.smartprotectionnetwork.com>
- **InterScan Messaging Security Virtual Appliance**
<http://us.trendmicro.com/us/products/enterprise/intercan-messaging-security-virtual-appliance/index.html>
- **InterScan Web Security Virtual Appliance**
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