

Providing Next-Generation Security for Today's Healthcare



EXECUTIVE SUMMARY

Business Challenge

- Upgrade data centers
- Increase performance to handle growth
- Help ensure security to meet regulatory compliance

Solution

- Cisco ASA Next-Generation 5585-X Firewalls
- Cisco Identity Services Engine
- Cisco Email Security Appliance

Business Results

- Consolidated firewall services
- Increased bandwidth for more capacity
- Allowed scalability to meet future needs

Molina Healthcare uses Next-Generation Firewalls to secure data for patients and clinicians in 14 states.

Business Challenge

Molina Healthcare, a Fortune 500, multi-state healthcare organization, provides health services to financially vulnerable families and individuals covered by Medicaid, Medicare, and other government-funded programs in 14 states. Molina Healthcare has health plans, medical clinics, and a health information management solution. No other organization of its kind does all three.

Over the past two years, Molina has doubled in size. “We grew dramatically after Obama’s re-election, preparing for the implementation of the Affordable Care Act. In fact, we’ve doubled our size in every department in the organization. And this expansion has been through organic growth,” says Hector Estrada, director, Infrastructure as a Service Delivery, who manages a team of server, storage, network, and backup engineers for Molina Healthcare.

Dramatic growth led to capacity issues for Molina, and the organization knew that it had to upgrade both its collocated disaster recovery (DR) data center in Texas, and its main data center in New Mexico.

“We needed an increase in performance to handle our current and future growth,” says Estrada. “We have an inordinate amount of Internet traffic -- an average of 500 megabits per second (Mbps), and remote employees who require VPN access. We also needed a circuit big enough to power our Cisco TelePresence® solution, which we use to communicate with businesses and organizations outside Molina Healthcare, including state government offices, IT hardware and software vendors, and others.”

“You know, ‘Next-Generation’ is part of the name and to us it means the functionality the firewall provides with SGT, CX, and IPS modules all part of a single appliance. It’s going to allow us to scale successfully over the coming years.”

Hector Estrada

Director, Infrastructure as a Service Delivery, Molina Healthcare

And the solution needed to have reliable security. Health Insurance Portability and Accountability Act (HIPAA) compliance drives much of the stringent security posture at Molina. To comply with regulations, Molina Healthcare must know who and what is on the network, in addition to what they are accessing. While the organization provides both Medicare and Medicaid services, its contracts for service rest with individual states. “HIPAA is the overall security umbrella that we abide by, but we get audited heavily by the states to which we provide services. Much of our compliance is actually specified in our contracts,” says Estrada. “We don’t have an option to miss.”

The healthcare organization also manages a huge volume of email for its more than 8600 employees and contractors as they coordinate care for patients across the country. Any email with personal health information (PHI) within it must be encrypted to protect the data.

Solution

Molina installed Cisco ASA 5585-X Next-Generation Firewalls at both data centers, leveraging the Cisco Secure Data Center solution. At the DR data center, the Next-Generation Firewalls are deployed to protect server-to-server traffic. In addition, a second set of firewalls is deployed at the edge to protect the public traffic, managed by Cisco Prime™ Security Manager.

“The firewall has been deployed in our new collocation disaster recovery data center. We had to move from our old data center, and so we took this opportunity to upgrade to the latest technologies that Cisco has available,” says Estrada.

The organization’s primary data center in New Mexico handles the majority of the company’s Internet traffic. The Cisco ASA 5585-X firewalls provide granular visibility into and control over client traffic flows, along with intrusion prevention system (IPS) services. The platforms also provide industry-leading performance, capacity, virtual private network (VPN) connectivity through the Cisco AnyConnect® Secure Mobility Client, and scalability. They allow Molina to meet its security needs while reducing the hardware footprint and simplifying the infrastructure.

Molina also takes advantage of the Next-Generation Firewall’s multitenancy capabilities. “The data center firewalls are segregated by application type, so we have application servers, database servers, and services servers such as domain controllers and Microsoft Exchange. We also have a separate context for management servers. So any traffic to any of those four areas traverses the firewall, and we apply security measures as needed.”

The ASA 5585-X lets Molina create virtual firewalls, as well. “We’re heavy into virtualization here at Molina, and we often create virtual firewalls for lines of business and, in some cases, even by application type.”

Cisco Identity Services Engine (ISE), combined with the Secure Group Tagging (SGT) capabilities provided by Cisco TrustSec®, is anticipated to further secure the edge of the network, enabling Molina to more closely support its security policy requirements while streamlining traditional network access administration. The Molina team plans to leverage the ISE posture assessment functionality in allowing personal mobile devices onto the network, a key component of the organization’s bring-your-own-device (BYOD) policy.

Molina also has employed a new corporate wireless solution, using Cisco Wireless LAN Controllers and Wireless Service Module 2 (WiSM2), with Cisco Aironet® 3600 Series Wireless Access Points, to improve productivity enterprisewide. This enables employees to work with greater flexibility away from their desks, using laptops, tablets, and smartphones in conference rooms and other locations, as well as to set up training sessions anywhere. In clinical settings, staff has more mobile access to Molina's new Electronic Medical Record (EMR) system, using tablets and other devices.

The company is pairing the use of ISE with MobileIron's mobile device management solution, so that Molina employees (and guests or contractors) can access their email and other productivity applications anywhere, using any device, no matter where they are.

Encrypting for the Last Hop

To manage the company's email, Molina is using the Cisco Email Security Appliance (ESA). "We needed a tool that could encrypt messages before they were sent. So we integrated the ESA with our data loss prevention (DLP) system. We set rules that automatically mark for encryption any email that has personal health information in clear text," says Ryan Jarantilla, supervisor for IT security architecture at Molina.

Jarantilla continues. "The Cisco ESA is the last hop before email goes to the outside world. It goes through Exchange, then our DLP program, and finally the ESA if it needs to be encrypted. We use it to manage almost 9,000 employees' and contractors' emails, both outbound and inbound. All our SMTP traffic is routed through the ESA."

Business Results

The Cisco ASA 5585-X platforms and other Cisco data center upgrades already are yielding benefits in the areas that matter most: performance, management, and reliability. In Molina's primary data center, the organization used to have eight firewalls deployed. But the power of the Cisco Next-Generation Firewalls has allowed Molina to consolidate its firewalls services. "We are actually going to be able to cut our firewalls in half because the Next-Generation Firewalls are more robust than what we were using before," says Estrada, "giving us the security we need and have come to expect from Cisco."

The company's edge network bandwidth has also increased from a couple of 100 Mbps Internet circuits to a dual Gigabyte Internet circuit. "The circuits allow us to handle voice and video, and establish TelePresence sessions outside the Molina network that traverse the Internet. We can also handle our steadily increasing number of remote employees, and they can work around the clock without being hampered by the network," Estrada says.

Estrada continues, "We've positioned ourselves to take advantage of the growth that's going to come with the implementation of the Affordable Care Act and healthcare reform. And our Cisco solution is going to be able to handle our growth." Estrada adds one final thought. "You know, 'Next-Generation' is part of the name and to us it means the functionality the firewall provides with SGT, CX, and IPS modules all part of a single appliance. It's going to allow us to scale successfully over the coming years."

PRODUCT LIST

Security

- Cisco ASA 5585-X Next-Generation Firewall with IPS and CX Modules
- Cisco ASA 5525-X Next-Generation Firewall
- Cisco Email Security Appliance
- Cisco AnyConnect Secure Mobility Client
- Cisco Identity Service Engine
- Cisco TrustSec
- Cisco Prime™ Security Manager

Routers and Switches

- Cisco Nexus 7000, 5000, 2000 Series Switches
- Cisco Nexus 1000V Switch
- Cisco ASR 1002-X Aggregation Services Routers
- Cisco 3800, 3900 Series Integrated Services Routers

Collaboration

- Cisco TelePresence

Wireless

- Cisco 5500 Series Wireless LAN Controllers
- Cisco Wireless Service Module 2
- Cisco Aironet 3600 Series Wireless Access Points with 802.11ac AP modules and Cisco CleanAir technology

For More Information

To find out more about the Cisco ASA-5585-X Next-Generation Firewall, go to:
<http://www.cisco.com/go/firewall>.

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