Insurance Company Streamlines Secure Web Traffic

Topdanmark uses Cisco ACE appliances to enforce rigorous security policy while increasing web application performance.

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<tr><td colspan="1">EXECUTIVE SUMMARY</td></tr>
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EXECUTIVE SUMMARY

TOPDANMARK
- Industry: Insurance
- Location: Ballerup, Denmark
- Number of Employees: 2500

CHALLENGE
- Load-balance high volumes of encrypted traffic
- Enforce security policy as easily and cost-effectively as possible
- Simplify development and testing of new services

SOLUTION
- Cisco ACE 4710 Application Control Engine

RESULTS
- Greatly simplified processing of encrypted web traffic and policy enforcement
- Increased web server performance
- Accelerated migration between development, testing, and production environments

Challenge

Topdanmark is the second-largest general insurer and sixth-largest life insurance company in Denmark. For more than 100 years, the company has provided insurance and pension services to citizens, including half of the nation's farms.

Topdanmark annually handles approximately 90,000 auto claims and fields more than one million telephone calls. The company's website also provides claim services for customers, helping them to shop for retirement plans, calculate insurance policy costs, and report damages. Topdanmark also is required to provide insurance quotes online to external websites that allow the public to compare prices between insurance companies. Price quote data must be secured while traveling to and from Topdanmark's data center, so it is always encrypted.

When it was time to upgrade its existing Cisco content services switches, the company decided to choose another Cisco solution because the networking and systems teams were already familiar with the Cisco management interface. This time, they chose the Cisco® ACE 4710 Application Control Engine appliance to provide a wide range of intelligent load-balancing capabilities.

Solution

Topdanmark relies on the Cisco ACE 4710 appliance's intelligent Layer 7 capabilities to terminate Secure Socket Layer (SSL) traffic and inject packet state information into HTTP headers before it is passed to the company's backend systems. Incoming encrypted traffic to the company's web-enabled services first passes through a pair of Cisco ACE appliances, which terminates SSL traffic, load-balances, and provides decryption. The traffic next passes through security inspection by Topdanmark's Portal Protect security infrastructure. This system employs multiple authorization and authentication capabilities to verify IP sources.

Outgoing traffic is also encrypted by the Cisco ACE appliances. By removing encryption and decryption tasks from Topdanmark's web servers, the Cisco ACE appliances help improve performance of the company's web servers, as well as optimize traffic flow within its internal network.

A second set of redundant Cisco ACE appliances provides Layer 4 load-balancing for decrypted traffic between back-end systems. The Cisco ACE provides an extensive set of application health probes to help ensure that traffic is forwarded to healthy systems.

> "With just a few lines of code, we can move an entire configuration from one environment to another. Cisco ACE will help us accelerate delivery of new services, and we can do it on a single appliance, without having to purchase additional devices and without affecting our centralized operations."
>
> **– Thomas P. Petersen, Systems Programmer**

Results

"The Cisco ACE appliances help us maintain the high levels of security required for transporting financial data," says Thomas P. Petersen, systems programmer for Topdanmark. "In addition to providing protection against threats, it gives us an efficient way to easily communicate with our Portal Protect security system for policy enforcement."

Typically, Cisco ACE 4710 appliances serve as a last line of server defense, providing protection against application threats and denial-of-service (DoS) attacks with features such as network and protocol security. Without the Cisco ACE, Topdanmark would have had to create proprietary client and server applications to communicate between its servers and security system. In addition to being time consuming and costly to develop, the applications would have not been able to easily manage the high traffic volumes that the Cisco ACE appliances routinely manage. The ability to terminate SSL traffic, decrypt it, and load-balance it between web servers in a single appliance with high performance eliminated the need for special software development with its associated management requirements.

Because source IP addresses are available in packet headers, Topdanmark also gains high visibility into traffic origin and authentication. This visibility is critical for meeting network audit requirements.

Petersen says that the Cisco ACE is also easy to manage. The Topdanmark IT team is familiar with the command line interface, which avoided the need for the team to learn a new management system and also reduced the number of physical devices that would otherwise be needed.

One feature that Topdanmark is just starting to explore is Cisco ACE virtual contexts. Virtual contexts support resource segmentation and isolation, allowing the Cisco ACE appliance to act as if it were several individual virtual appliances within a single physical appliance. IT managers can configure up to 250 virtual devices that are secure and isolated from each other on a single Cisco ACE platform. With virtual contexts, Topdanmark can deliver defined levels of service for multiple uses, such as testing and development, or to separate business units from one Cisco ACE appliance. The Topdanmark team is preparing to launch a new execution platform and is using Cisco ACE virtual contexts to greatly simplify code migration between development, testing, and production environments.

PRODUCT LIST
Routing and Switching
• Cisco ACE 4710 Application Control Engine

"With just a few lines of code, we can move an entire configuration from one environment to another," says Petersen. "Cisco ACE will help us accelerate delivery of new services, and we can do it on a single appliance, without having to purchase additional devices and without affecting our centralized operations."

Next Steps

Petersen also envisions using virtual contexts to expose different application capabilities to different business units. The virtual context capability will let business units tailor application traffic as needed but not affect critical features, such as security configurations, which are maintained by the IT team in the secure central context. At Topdanmark, Cisco ACE is helping a 100-year-old company improve delivery of insurance services to its modern clients nationwide.

For More Information

To find out more about Cisco ACE 4710 Application Control Engine visit:
www.cisco.com/en/US/products/ps6906/index.html.

To learn more about Topdanmark, visit www2.topdanmark.dk.

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