

How Verizon Digital Media Services Grew SSL Cert Volume 7X without Hiring Additional Analysts

The way the world consumes media is changing. Users can now watch their favorite digital media 24 x 7 on every screen. Verizon Digital Media Services helps many of the largest online media and web properties deliver video, webpages, applications and more with a fast, reliable platform.

At peak times, Verizon delivers between 5-10 percent of the world's internet traffic. Media providers use Verizon's Edgecast Content Delivery Network (CDN) to stream 150 million hours of video each month. These customers demand the highest performance and fastest delivery times they can get from their service provider.

Along with speed and reliability, customers demand that the CDN deliver their content to users securely. Customers can request DigiCert certificates directly from Verizon.

Challenge: Facing 7X Growth in Certificate Requests

Richard Marcus, manager of security operations and compliance for Verizon, was concerned about the manual nature of deploying certificates across their servers. This existing process would not scale upon demand and would require adding more resources to his team. Each deployment, including securing SSL/TLS certificates, required human intervention. This was true for even simple tasks, such as ordering a cert, retrieving keys and storing them. As such, the turnaround times grew as demand grew.

Since 2013, demand for DigiCert certificates grew nearly 7x. Automating at least some of these processes was required. This growth in demand could only be addressed with some level of automation. Sustaining the manual process was not an option.

Solution: Taking Out the Human Element via API

Richard and his team needed an automated process that could scale with the growing customer demand for certificates. They also needed the ability to respond to and resolve security-related incidents immediately.

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“The challenge was, do we hire a bunch of analysts to do this work or can we figure out a way to automate it?”

Richard Marcus, Manager of Security Operations and Compliance, Verizon Digital Media Services

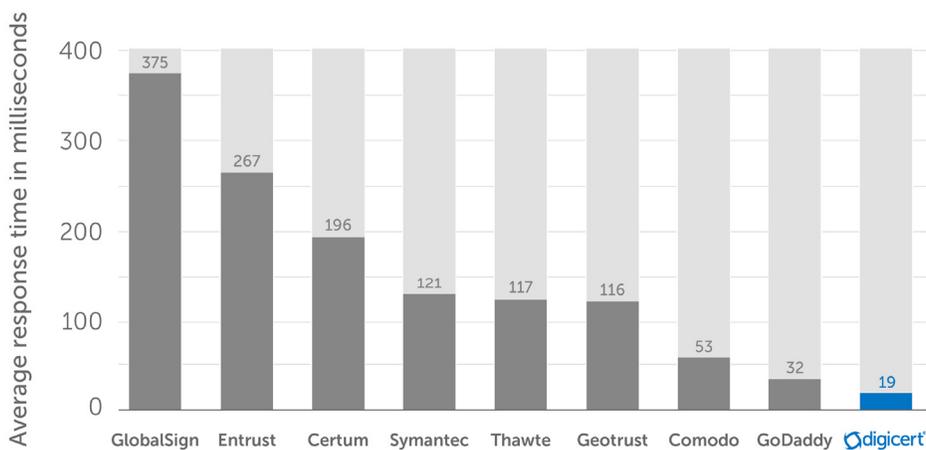
Richard developed the necessary automation by leveraging DigiCert's API. "We started integrating the API with our internally built Key Management Infrastructure (KMI) so we could maintain control and deploy certificates on demand when we need. This enables us to deploy certificates just about as fast as DigiCert can validate them," Richard explained.

Verizon's Edgecast customers value security as much as they do performance. As such, Richard and his team suggested that all customers request DigiCert certificates through the Edgecast CDN, rather than provide their own. He explained, "When you combine the CDN with the super-fast OCSP times you get from DigiCert certificates, you get extremely fast performance. We've done performance measurements over the years for DigiCert OCSP times, and experienced consistent performance response times throughout."

Netcraft measures average OCSP response speeds of the industry, and consistently finds DigiCert ranking above competitors. The following graphic shows the most recent performance measurement.

"The performance is amazing, the cost is low, and the management is easy."

Richard Marcus, Manager of Security Operations and Compliance, Verizon Digital Media Services



OCSP response times by provider as measured by Netcraft.

Using the DigiCert API has also given Richard and his team a timely solution for resolving industry-wide events like Heartbleed in 2014. He explained,

“From a security standpoint, the best capability the API gives me is the ease of management of those certificates as an incident responder.”

Heartbleed gave the Edgecast CDN a true test of its new-and-improved certificate management process. Out of abundance of caution, Richard and his team had to assume that the private keys of thousands of certificates had been compromised. This meant rekeying each certificate, something that would take several months for his team to complete manually. “We used the DigiCert API, rekeyed all the certificates, and pushed them out – no big deal. We got that handled in a matter of days, if not less,” Richard explained.

Result: Securely Powering 10% of the World’s Web Traffic

The up-front investment Verizon made to integrate with the DigiCert API allowed for long-term scaling of its application, and the reduction in overall support costs. Richard and his team shrunk certificate turnaround times from weeks to a matter of a few hours, giving customers the ability to start securely delivering content right away. Although certificate volume increased 7X in the last four years, Verizon has avoided spending resources on hiring new analysts, and has put that money into further developing their internal KMI, which will allow Richard and his team to continue automating their certificate management.

Results:

- Improved certificate turnaround times from two weeks to same-day deployment
- Increased certificate volume 7X without hiring additional analysts
- Rekeyed thousands of pre-Heartbleed certificates in a matter of days, rather than months

“During peak times, our CDN is responsible for delivering up to 10% of the world’s web traffic. The DigiCert API is the only thing that’s allowed us to scale to encrypt such high volumes of traffic. To put it simply, The DigiCert API is helping us secure the internet”

Richard Marcus, Manager of Security Operations and Compliance, Verizon Digital Media Services

About Verizon Digital Media Services

Verizon Digital Media Services owns the only single, end-to-end digital media platform that can prepare, deliver, display and monetize online content. Combined with its global content delivery network (CDN), comprehensive monitoring and compliance capabilities and intelligent video workflows, Verizon’s platform powers the leading services, apps and websites for the world’s largest publishers, media companies and enterprises. Verizon’s platform is built on the world’s largest, most connected network, and spans over 100 points of presence (PoPs) on five continents, ensuring the most optimal delivery of content to every user, worldwide. Offering superior performance, enterprise features and capabilities, Verizon’s Edgecast Content Delivery Network features a multi-layered secure approach, from a Web Application Firewall to DDoS, DNS, bot mitigation and more to protect websites against a wide range of attack methods – for flawless, instant-on, secure experiences, anytime, anywhere.

For more information on Verizon Digital Media Services, please visit verizondigitalmedia.com.

For more information, visit www.digicert.com or call 1 801 701 9690