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Don Wood
Director of Technology
DNSstuff.com



DNSstuff.com Drops Downtime from Minutes to Milliseconds with F5 BIG-IP Devices

Industry

E-commerce (DNS Diagnostics)

Challenges

- Reduce website downtime
- Maintain high performance and site reliability

Solution

F5® BIG-IP® Global Traffic Manager™
F5 BIG-IP® Local Traffic Manager™

Benefits

- Downtime reduced from minutes to milliseconds
- Improved site performance and scalability
- Sales and reputation no longer exposed to performance issues
- Time and resource savings

Overview

DNSstuff.com is the leading source for on-demand troubleshooting and problem-solving tools for DNS and networking issues. The 100,000 users who visit DNSstuff.com each day rely on the site when they are experiencing critical DNS and network configuration problems. Any downtime can have a serious impact on customers' businesses as well as on DNSstuff.com's revenue and reputation.

Using F5 BIG-IP Global Traffic Manager and BIG-IP Local Traffic Manager, DNSstuff.com reduced its downtime whenever a server fails from minutes or hours to mere milliseconds. Customers can count on the performance, stability, and reliability of the site whenever they need it, and the company is positioned to expand to several more data centers worldwide.

Challenges

When businesses have critical problems with email, websites, or connectivity, they turn to DNSstuff.com. Sixteen million unique users access the site annually and it produces about 15,000 DNSreports for users each day. In addition to the DNS health checking that its flagship product, DNSreport provides, the site offers dozens of fast, accurate, and comprehensive tools that give users the diagnostic data to configure, maintain, and resolve DNS and network configuration issues.

DNSstuff.com's hosting provider offered failover/system monitoring that checked the company's 17 servers every 8 to 10 minutes. When a server went down, traffic was redirected to a backup server. But the company found that the 8- to 10-minute delay was resulting in an unacceptable amount of downtime for the site.

“Every minute of the day, customers are buying products from us,” says Don Wood, Director of Technology at DNSstuff.com. “So every minute we're down has a very real impact on our bottom line. It also impacts our reliability and reputation in the marketplace.”

The company began to look for a traffic management solution and quickly realized that the Foundry load balancer its hosting provider offered did not meet its minimum needs. To achieve the high performance and availability DNSstuff.com required, it needed many more sophisticated capabilities, including high availability, compression, SSL offload, and most importantly, high performance hardware designed specifically for application delivery.

Solution

After looking carefully at the specifications of various products, DNSstuff.com determined that only F5 BIG-IP Local Traffic Manager (LTM) and BIG-IP Global Traffic Manager (GTM) provide the full



range of capabilities required to meet its needs. But because the hosting facility did not offer F5 products to its customers, DNSstuff.com had to bring the two companies together and try to convince their data center to add F5 to its product line.

“Our hosting provider was committed to the Foundry product, which is at a lower price point, but we weren’t happy with the product’s performance,” Wood says. “We went to great lengths to show them why the F5 product is something they should offer to their customers. It’s not expensive if it keeps your website up and running.”

The hosting provider agreed to let DNSstuff.com try BIG-IP LTM in its data center so the provider’s engineers could become familiar with the product.

DNSstuff.com first deployed two BIG-IP GTM devices at two different locations outside its data centers. When a user types “www.dnsstuff.com” into a browser, BIG-IP GTM uses a number of different criteria to assess the health and performance of the various virtual servers on the BIG-IP LTM devices deployed at each of DNSstuff.com’s data centers. BIG-IP GTM supplies the client with the IP address of the virtual server on BIG-IP LTM that is best able to handle the request at that moment. The client then makes a request to that virtual server and BIG-IP LTM transparently sends the request to the best server. The BIG-IP devices accomplish this using a unique combination of high performance software and hardware that works at a blazing fast speed.

Benefits

The F5 implementation has boosted DNSstuff.com’s reliability by essentially eliminating downtime on the website. The site and the tools it provides now have faster, more stable performance and the company is in a solid position to expand and add several more data centers worldwide.

No more downtime

Now that BIG-IP GTM is in place, if one of the DNSstuff.com servers fails, requests are redirected to an available server almost instantaneously. “BIG-IP GTM has had an immediate and profound effect on our reliability. If a server ever goes down, it reduces our downtime from 8–10 minutes down to a couple of milliseconds,” Wood says.

For a network engineer trying to debug an issue that has brought his company’s email system to its knees, 10 minutes makes an enormous difference. And for DNSstuff.com’s fully web-based business, it makes a big difference in reputation and sales.

“I remember once, we had 18 hours of downtime because one of our servers was down. It was a nightmare,” Wood recalls. “Since we put our BIG-IP GTMs in place, we haven’t experienced more than a total of a couple of minutes’ downtime

Better performance at every turn

Wood is hard-pressed to limit the benefits DNSstuff.com realizes from BIG-IP LTM to just a few points. “There are many, many performance improvements with the BIG-IP LTM device, and I couldn’t list all of them, but they are all very effective for us,” Wood says.

From taking load off the servers through compression and SSL offload to the vastly improved

scalability and reliability achieved through intelligent traffic management, DNSstuff.com is in a much stronger position to provide the fast and accurate data its customers rely on.

Time savings for everybody

Time and resource savings is another perk of the F5 implementation. “For example, we just did a software release and we needed to redirect all our traffic to a page that said, ‘Please bear with us while we update our website,’” Wood explains. “To accomplish that without BIG-IP LTM, I would have had to decrease the TTL (time to live) and then change all of our A (address) records to a different IP address. Then after it was over I’d have had to change it all back. It would have been a lot more work.”

By contrast, Wood just took one of the servers offline and BIG-IP LTM immediately served the backup with the alternate website on it. “The whole thing took me two seconds to click the button and shut it off,” Wood says. “There are many benefits as a result: my time, the customers’ time, our reliability, our reputation, and so on.”

Scalability for the future

With BIG-IP GTM and BIG-IP LTM in place, DNSstuff.com now has the scalability it needs to continue improving the services it offers its customers. “A lot of our tools depend on seeing the Internet from different vantage points, so the bigger the footprint, the more we can characterize the Internet and make our tools more effective,” Wood says. “We plan to expand to several more data centers around the world, and our BIG-IPs help us coordinate those resources.”

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