Case Study

Grain Insurance and Guarantee Co. Solves Upstream DNS Problems Using Dotcom-Monitor™

Summary

Industry: Insurance

Business Challenge: Ongoing, intermittent DNS issues, affecting website accessibility and the ability of the company to service its customers through its website

Strategy: Use Dotcom-Monitor™ traceroutes to document the problem with their DNS service as the provider denied there were any issues on their end

Result: The DNS service provider admitted they had an issue with their upstream network provider and tasked the provider to correct the problem

With headquarters in Winnipeg and offices in Ontario, Nova Scotia and Saskatchewan, Grain Insurance and Guarantee Company (www.graininsurance.com) delivers insurance products in virtually all corners of Canada. In business since 1920, Grain Insurance has developed a reputation as an innovator by developing specialized insurance programs for the constantly changing needs of Canadian business.

Through its website, Grain Insurance provides news, information, insurance application forms and career information. As an insurance company, Grain Insurance depends on its website and web services as critical business applications.

Grain Insurance uses Dotcom-Monitor to check the availability, accessibility and performance of its website and email servers. Using Dotcom-Monitor monitoring stations in Calgary, New York and London, Grain Insurance can ensure web availability for its customers and business partners in North America and the United Kingdom.

Recently, Dotcom-Monitor alerted Grain Insurance to a problem with one of its DNS servers. The problem was detected by Dotcom-Monitor's Calgary station, which generated an SMS alert to Grain Insurance's IT group.

"The Calgary monitoring station gives us the coverage we need in our most important geographic market, so we jumped on the alert," said Guy Barnabe, IT Service manager for Grain Insurance. "We had seen the problem before, but we use a DNS service and they wouldn't admit there was any problem on their end. Part of the issue is you never know what the true impact of a DNS problem is, but it is a problem when customers can't connect to your site."

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As part of its website monitoring, Dotcom-Monitor performs a DNS resolution check, which is the same process used when a web browser accesses a website for the first time. DNS resolution takes place when a client (or end user) computer queries a name server to obtain the IP address with which it wants to connect. If a name server in the local domain cannot resolve the request, it queries other servers to locate a server that can. If the DNS server is not available or it's unable to resolve the request, the client computer will not connect to the website.

The DNS infrastructure could be fairly complex, representing a chain of multiple DNS servers linked together to provide the end user with name resolutions. If any link in this chain breaks or becomes unavailable, the website may become unavailable.

Dotcom-Monitor uses a proprietary process to check every link in a DNS resolution mechanism, starting from the DNS root servers, such as A.ROOT-SERVERS.NET, and propagating all the way down to an end server to retrieve the final results. If Dotcom-Monitor detects problems in any servers along the way, it flags the step where the problem is detected and generates an alert.

For Grain Insurance, Dotcom-Monitor provided Barnabe with a DNS traceroute, which clearly identified the link causing the problem. He in turn sent the traceroute to his DNS service provider. Dotcom-Monitor also provided network traceroute information, which showed packet loss from the Calgary monitoring station to the DNS server responsible for the resolution. At the same time, a Minnesota monitoring station did not show any packet loss to the same DNS server.

"At first they said they didn't have a problem and they didn't response to pings, but the traceroute showed exactly what was going on with the name look-up, and after five days they were able to run their own tests and eventually admitted there was a problem," Barnabe said. "More specifically, they said there was an upstream problem with their network provider, and that while the provider does a really good job of handling DNS attacks, there were some underlying router table problems.

"Without Dotcom-Monitor, we might have never known there was an issue, and the effect on our business would have been incalculable. Without the traceroute, our DNS service wouldn't have found their issue. As it was, it took days to correct. I just wish they used Dotcom-Monitor so we and the rest of their clients wouldn't have problems like this."

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Dotcom-Monitor

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Dotcom-Monitor™ is a global leader and innovator in advanced website monitoring services. Founded in 1998, Dotcom-Monitor has helped more than 2,000 companies save money by ensuring maximum website uptime—at a cost up to 50 percent less than other services. Dotcom-Monitor watches businesses from the outside by simulating real-world, end-user actions. With monitoring stations located in major markets worldwide, Dotcom-Monitor ensures that clients are open for business around the world, 24 hours a day. No additional or no hardware is required to use Dotcom-Monitor's services. For more about Dotcom-Monitor, go to www.dotcom-monitor.com.