

PERFORMANCE MONITORING FOR THE CLOUD

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INTRODUCTION

a new generation of performance

Everyone loves a good one and done service. All you have to do is set it up, see instant success, and then never have to touch again. Well, in today's rapidly changing online marketplace, that doesn't ever work. Client demands are exponentially growing, as attention spans shrink. This is putting inordinate amounts of stress onto admins to maintain website performance without compromising UI or UX, but of course, also ensuring impossibly fast page loads. How the @\$% is anyone supposed to do that?!

Okay, so what if
you finally achieve
the impossible,
now what?

Congratulations,
your site is fast.

**Now how do you
expect to maintain it?**

MONITORING FOR THE CLOUD

That's where cloud performance monitoring comes in. Specifically, we're talking about your network and all of the connections between your website and your clients. Anyone with an online presence, regardless of industry, needs to be monitoring these connections for a whole range of performance factors. Especially if you're tinkering with your network to boost performance, you need to be monitoring and tracking your changes.

Because anyone can learn how to setup a CDN (Content Delivery Network) and minify on-page content, but none of this matter if you are not monitoring how these factors impact your site's performance.

Performance Monitoring

So what are these performance factors we should be monitoring? We consulted the network engineers at Constellix who are industry experts on cloud-based DNS platforms and network monitoring.

Most times when admins begin to slash load times, they initially focus on front-end applications. The back-end processes tend to get taken for granted and put off until an issue arises. Often times these issues are a result of a service interruption from a network provider, or worst case a DNS outage. Ever tried to access a site, but gotten the message "DNS host not resolved"? It's like the website never existed, that's a DNS outage.

DID YOU KNOW?
50% of your one second page load time budget on mobile is taken up by network latency overhead?
[Source]

BRING BACKEND BACK

DNS (or the Domain Name System) is the backbone of the Internet, and the system that attributes IP addresses to domain names like: **www.example.com** answers to **1.1.1.1**. If those connections are lost (say your DNS host gets knocked offline) or there is an issue with your network, then your site is essentially non-existent to the world.



DNS for the Cloud

Over the past few years, many cloud-based DNS monitoring and management solutions have emerged. These platforms offer ways to analyze and route query traffic for optimal Internet performance. However, a recent study found that:

Over 40% of domains still don't use a DNS monitoring solution.

DNS is a core aspect of cloud management, so why are so many people overlooking it? First of all, there are many misconceptions leading sys admins to not implement DNS monitoring on a regular basis.

GET STARTED

Most people believe DNS monitoring is only for high-risk targets, like gaming sites or financial institutions. But, it's more than just looking for malicious traffic or troubleshooting outages. Any business dependent on the Internet, either for eCommerce or communications, needs to have a reliable network monitoring solution in place. So how do you begin? Once you've decided on a monitoring solution that's right for you, you will need to set up various configurations to identify performance issues. Our network engineers recommend the following suggestions:



Set up **checks**. These are kind of like “checkups” for your network, and will probe whatever ports or connections that you specify on a regular interval.



Take advantage of **real-time data**. There are many different kinds of tools that can provide users with a real-time feed of their incoming query traffic by location, resolution times, record type, etc. Constellix Real-Time Statistics allows users to identify and diagnose network issues in real-time, using Big Data analytics. This technology can even be used to anticipate DDoS attacks.



Troubleshoot for actual (not synthetic) end-user latency. Using **real user monitoring** tools, you can ensure optimal end-user connectivity for all of your users, regardless of location. This unique tool can also help you create custom configurations for users in different locations, service providers, or different browsers.



You can also use real user monitoring to verify the performance of your CDN service from **dozens of monitoring nodes** around the world.



Validate SLA's and **enterprise connections** (exclusive to Constellix Sonar RUM). Use monitoring tools to evaluate enterprise connections and service providers (like you or your customer's ISP).

CROSS PLATFORM APPROACH

DID YOU KNOW?

51% of online shoppers in the US say that site slowness is the top reason they would abandon a purchase.

[SOURCE]

All of these recommendations are based on the foundation of a synergistic approach to cloud management. That means you need to focus on both performance monitoring and total network manageability.

Always keep in mind what network alterations or performance metrics you can improve across all of your network management platforms. For example, take the analytics and real user metrics from the Sonar monitoring tools and apply them to your GeoDNS configurations. And don't forget to continue monitoring your domains and configurations after you change them.

THE FUTURE

Next generation DNS monitoring has evolved to incorporate predictive analytics and intelligent routing. These techniques turn the lens away from incoming traffic and look towards clients' own networks to identify performance factors that need optimization. So not only can you optimize your site for better web performance, but now you can actually anticipate issues and react to them before they affect your site. To see these intelligent features in action try out the Constellix traffic management suite. The only platform built for the cloud, with integrated network performance monitoring and DNS management.