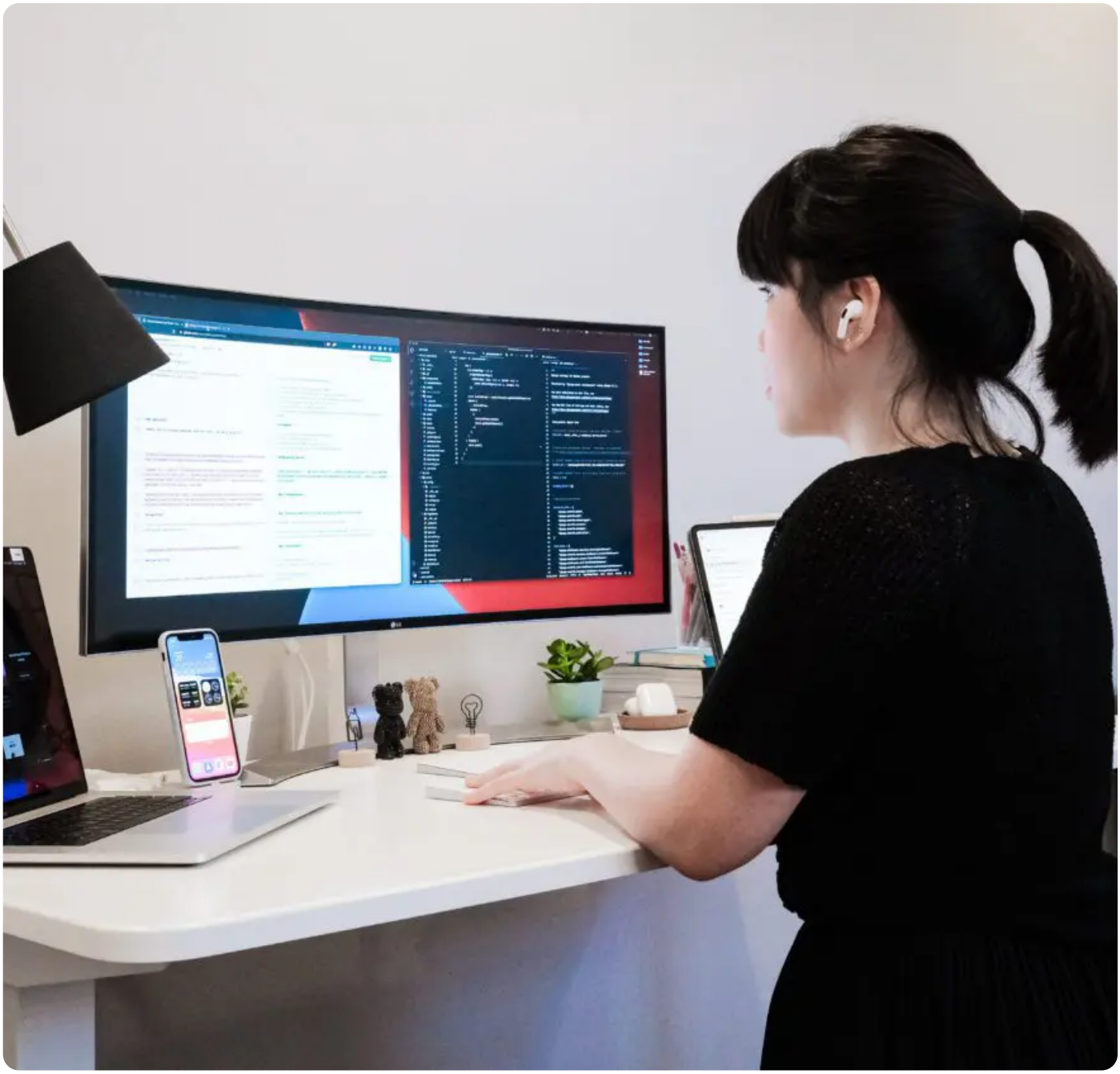
# Website Performance Monitoring and Optimization Best Practices

By: Alex Evans | November 11, 2021



Websites are a must-have for any business that wants to survive in a highly competitive



So how do you ensure that your website is up and running? Just use monitoring best practices. Let's start with the basics.

## What is site performance monitoring and why is it important?

Website monitoring is the comprehensive check of responsiveness and performance made to minimize fault time, optimize pages loading and ensure the best possible user experience.

Ignoring website performance is a major issue for most businesses. Historically, the largest online retailer Amazon experienced a 40-minute website crash in 2013. The outage cost the company approximately $4.72 million in lost sales. More recently, the Facebook crash in October 2021 cost an estimated $100 million!

This proves once again the direct correlation of money to website performance and the stakes involved in keeping company websites up and running.

The website is also a kind of company business card on the Internet. People normally start looking for information about a particular brand or solution online. Therefore, page loading speed is one of the factors that form the first impression of the company as a whole.

All in all, website monitoring makes it possible to know about problems before users notice them and solves many issues: from service quality control to web server capacity planning.

## Site optimization: what needs to be monitored?

The general approach to site optimization is as follows: it's important to monitor the performance of all web service components, the load on the system, the network availability of the server and the health parameters of the hardware. Moreover, it's crucial to collect specific, individual metrics that help identify and understand the causes of problematic site behavior and plan for server resource expansion. Let's take a look at what you need to check and what you need to do.

### *To check:*

- Website response time

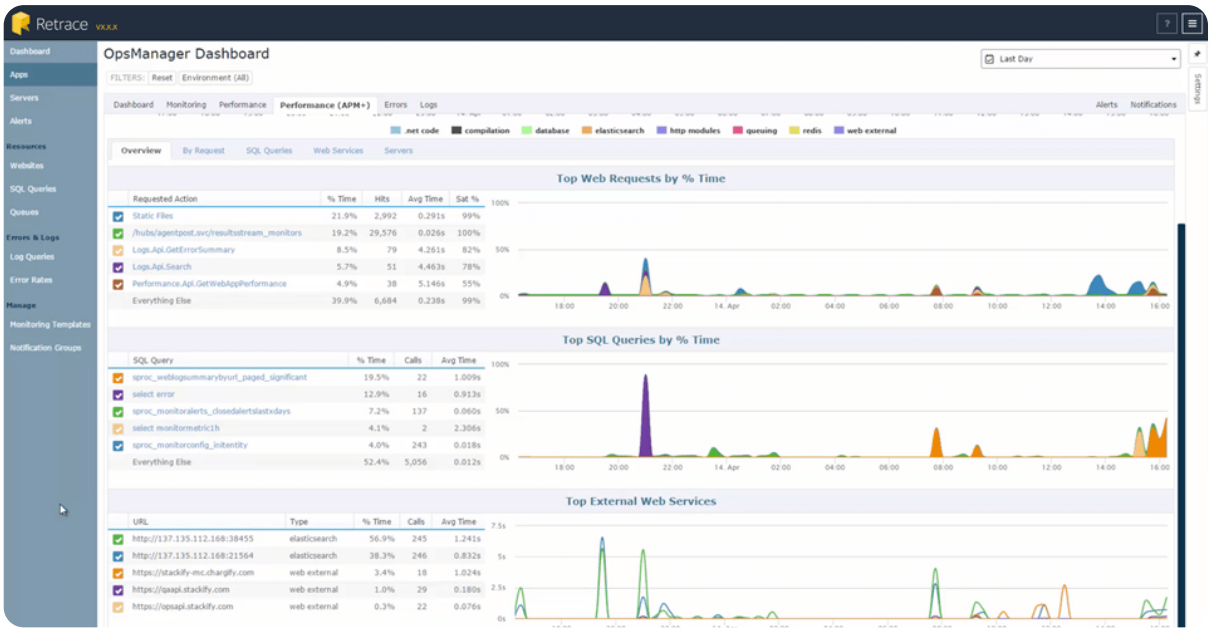
- Virtual hosts running on a web server



- Analyze web server logs and notifications
- Analyze server errors via Syslog and Windows Event Log
- Consolidate the status of servers that make up a failover cluster or load balancer
- Monitor servers and databases underlying your web servers
- Monitor CPU utilization, memory, bandwidth and other server KPIs
- Gather hourly, daily, weekly, monthly and yearly downtime statistics

Most of these parameters can be analyzed using Application Performance Monitoring (APM) tools, which can help businesses gain a deeper understanding of the health and performance of both websites and web applications.

For example, Retrace APM works like a library installed in a codebase and provides deep integration. At the same time, the system allows you to measure the performance of web applications and ensure compliance with expected levels of service. The APM tool is designed to quickly troubleshoot and fix problems before they lead to user complaints.




## How often should you check your website performance?

Running performance tests once a year is definitely not enough. Site performance can change at any time depending on many factors such as web host configuration, code modification, the amount of traffic you receive, the content on the website and more.

Businesses need to develop a habit of monthly monitoring, at the very least. Regularly testing



optimizations is not enough to provide a bulletproof business position.

Internal and external website optimization cannot be ignored, and there are numerous cost-effective processes that boost website attractiveness. First of all, you need to carry out technical optimization, which implies:

- **Checking the correctness of robots.txt**: this file is responsible for indexing the website and closing duplicate pages
- **.Htaccess validation**: this file is responsible for redirecting the user from non-existent pages to the necessary ones
- **Code updates**: this implies the removal of unnecessary tags that increase the length of the code
- **Checking the 404 error settings**: the search engine should remove the page from the index if it doesn't exist on the website

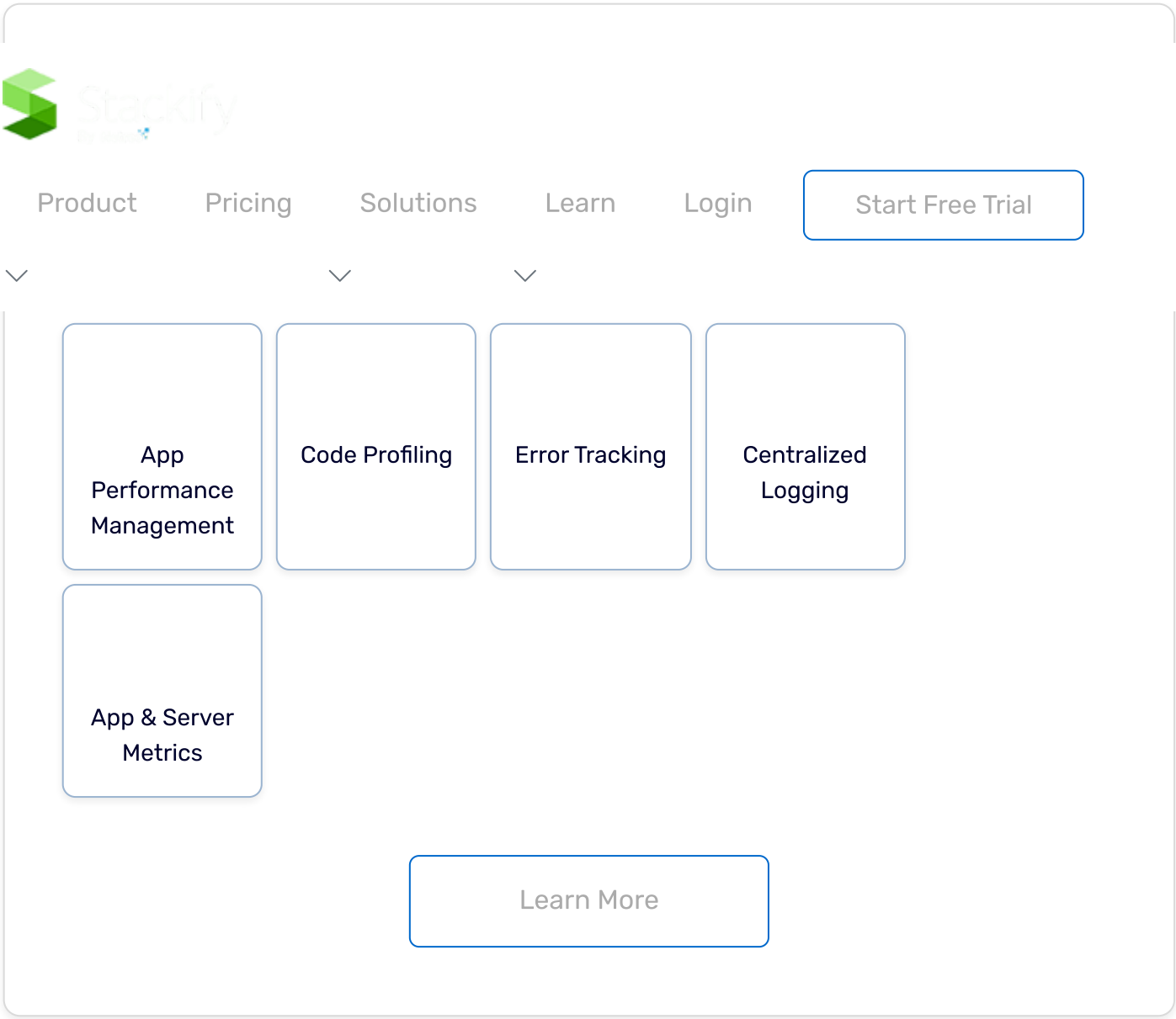
Secondly, you need to work out the external site optimization, which includes meta tags, optimizing the content on landing pages and organizing internal page linking. Also, external site optimization implies a content marketing strategy: publishing interesting new and useful content for users, video tutorials professionally edited with an online video editor, exchanging links with other quality thematic resources and more.

All these are standard for modern web usability and effectiveness, which are getting tougher every year. Implementing these standards is the choice of businesses that don't want to have users calling their websites run-of-the-mill or not worth revisiting.

## Final thoughts

A successful website always offers its visitors the best possible experience. This means diversification by delivering stunning content, great designs and incredible performance. Take away any of these elements and your customer experience is bound to crash.

When it comes to performance testing, focusing on load times alone is not enough. Instead, apply different types of tests to get a more accurate picture. And get into the habit of doing them often. And use Retrace to identify more issues in QA and enjoy a website that gives you better features and metrics.




Author

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Alex Evans is a word enthusiast, copywriter and SEO savvy technology geek who is passionate about creating content that delights and inspires business audiences, builds authority and brings brands closer to business goals.

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