



9

TIPS FOR
BENCHMARKING
YOUR WEB PERFORMANCE

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INTRODUCTION

WHAT IS WEB PERFORMANCE OPTIMIZATION (WPO)?

Web Performance Optimization (WPO) is the science of making websites faster.

For website owners, deciding when, how, and how much to do WPO depends on a number of factors – an important factor is how the site's performance compares to the competition. Performance comparisons are done through **performance benchmarking tools**.

Online benchmarking tools are a simple and revealing way to compare the performance of your website against competitors. But there's much more to benchmarking than just ranking a handful of sites from fastest to slowest – you can also learn about what's slowing down your site, how your competitors' sites are built, and what you can do to get ahead.

“If you can't measure it, you can't improve it.”

- Lord Kelvin, 19th Century Physicist and Engineer

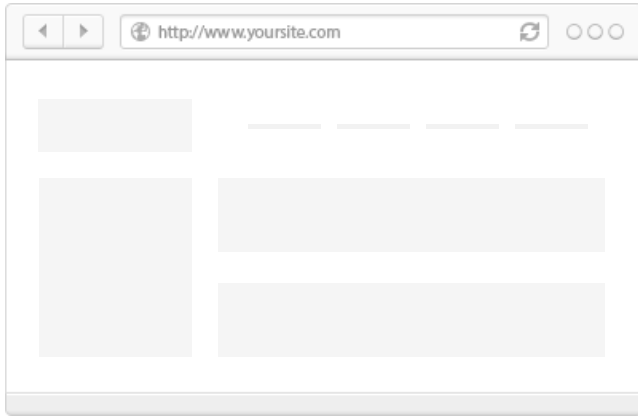
Here are 9 tips to ensure that you get the most actionable information from your benchmarking program.

TIP #1

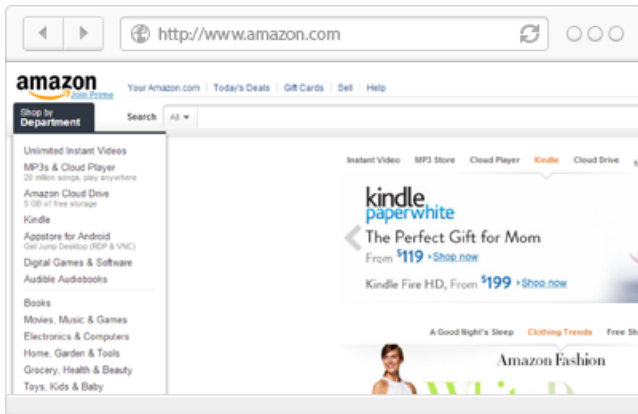
THINK OUTSIDE YOUR IMMEDIATE COMPETITORS

Every market is different, and so is every benchmark. If you sell authentic German cuckoo clocks (that is to say, a very “niche” item) and you compete with fewer than 10 other sites dedicated to cuckoos, then it’s easy to conclude that your benchmark should include those competitors.





VS.



However, most markets on the web involve more gray area. A niche site might primarily compete with Amazon; it might also have a blog component that competes for pageviews with another blog, making it a de facto media site in that dimension. These cases require a different approach to benchmarking. You might even find you get the most out of a benchmark including sites that don't actually *compete* with you, but are similar in content and format. If you have your finger on the pulse of websites like yours, the benchmark can be just as informative as if it were composed of your competitors.

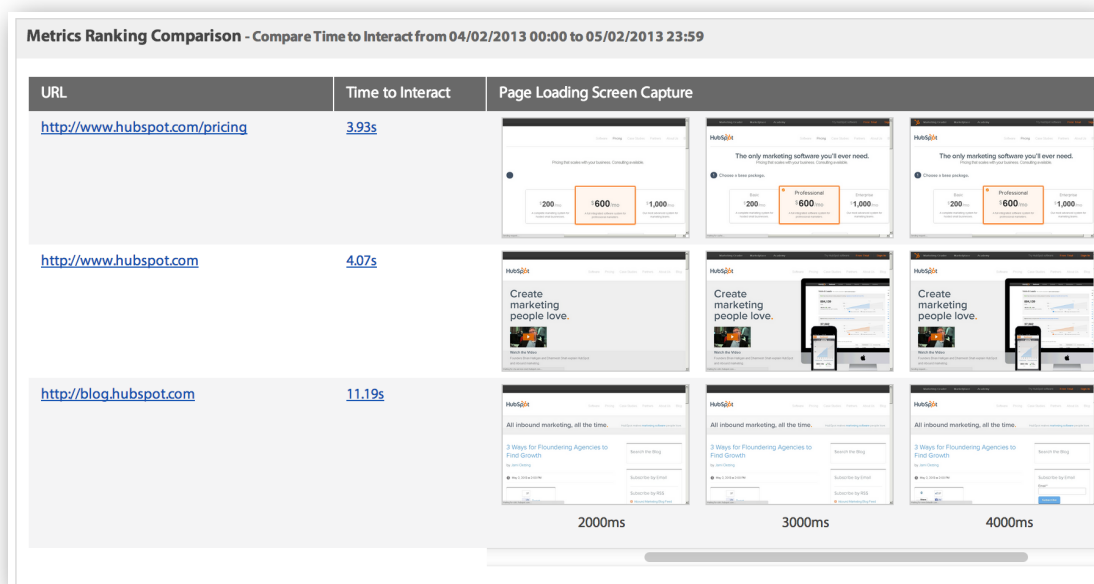
TIP #2

DON'T LIMIT YOURSELF TO THE HOMEPAGE

Home page performance is key (most traffic = most important) but site owners want to see visitors hop along to multiple pages, ideally toward some sort of conversion. That means consistently great performance throughout the site must be the goal.



In fact, it's not uncommon to create benchmarks composed of several pages from one's own site. Since you already use a performance monitoring solution to track your pages (you DO...right? If you don't, you can start using our [free one here!](#)) a benchmark tool can be a complement to those monitors by enabling you to quickly spot trends in whole-site performance on a single page.



A variation of this use case would be to select a handful of competitors and track roughly equivalent pages (i.e. a catalog page and a product detail page) from each.

TIP #3

COLLECT A MEANINGFUL SAMPLE SIZE

It's tempting to dive in right away, but benchmarks become more useful the longer they run. The first samples will provide a ranking of sites from slowest to fastest, but that can easily change once outliers have been smoothed out by more samples. Collect at least 5-10 samples before analyzing the results.



TIP #4

MEASURE MULTIPLE METRICS

The default web performance stat is usually something along the lines of “Time To Interact” (Yottaa’s term) “Load time” (Webpagetest.org) or “Response time” (Gomez). This is as it should be: the total page load is what matters most to the user.

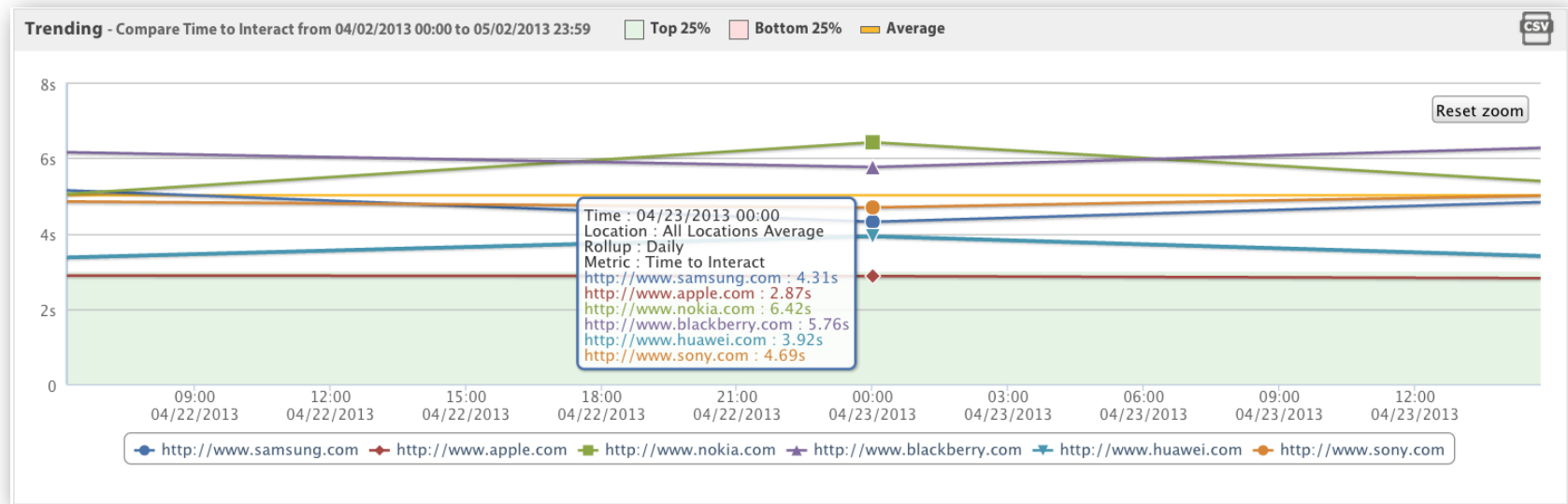
FRONT-END PERFORMANCE METRICS

- ✓ TIME TO TITLE
- ✓ TIME TO START RENDER
- ✓ TIME TO DISPLAY
- ✓ TIME TO INTERACT

BACK-END PERFORMANCE METRICS

- ✓ DNS TIME
- ✓ CONNECT TIME
- ✓ TIME TO FIRST BYTE
- ✓ TIME TO LAST BYTE

However, other timing metrics can be valuable as you analyze a benchmark trending chart. Look at metrics like Time to Start Render or Time to Title – incremental stages in the load process – across competitor sites to see where weaknesses lie. If Site A is faster than Site B, try to identify the first stage at which Site B starts to diverge. It may reveal why that site is slower. (For more on metrics: [17 Performance Metrics You Should Care About](#))



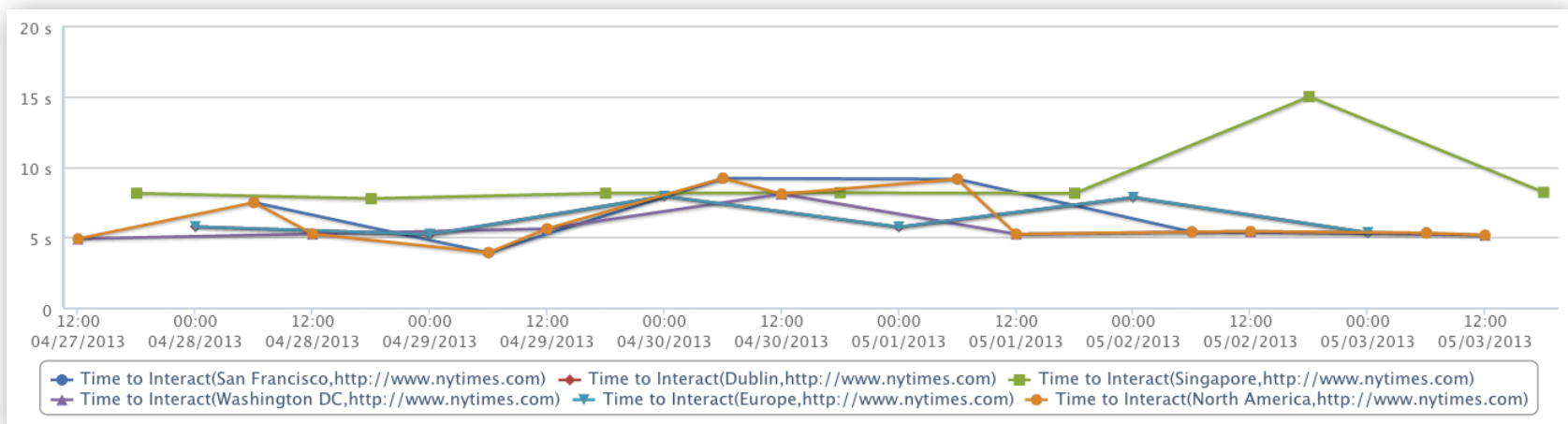
TIP #5

MONITOR FROM DIFFERENT LOCATIONS WORLDWIDE

Even if your site traffic is mostly local, it's still well worth the time to monitor benchmarks with worldwide locations. It could reveal weaknesses in your site performance that become relevant when there are problems in the wider Internet, changes to your infrastructure, or traffic spikes from overseas.



If your business is growing and has international aspirations, knowing how your site will perform vs. competitors in different global arenas is not just a good idea – it's dangerous not to do.



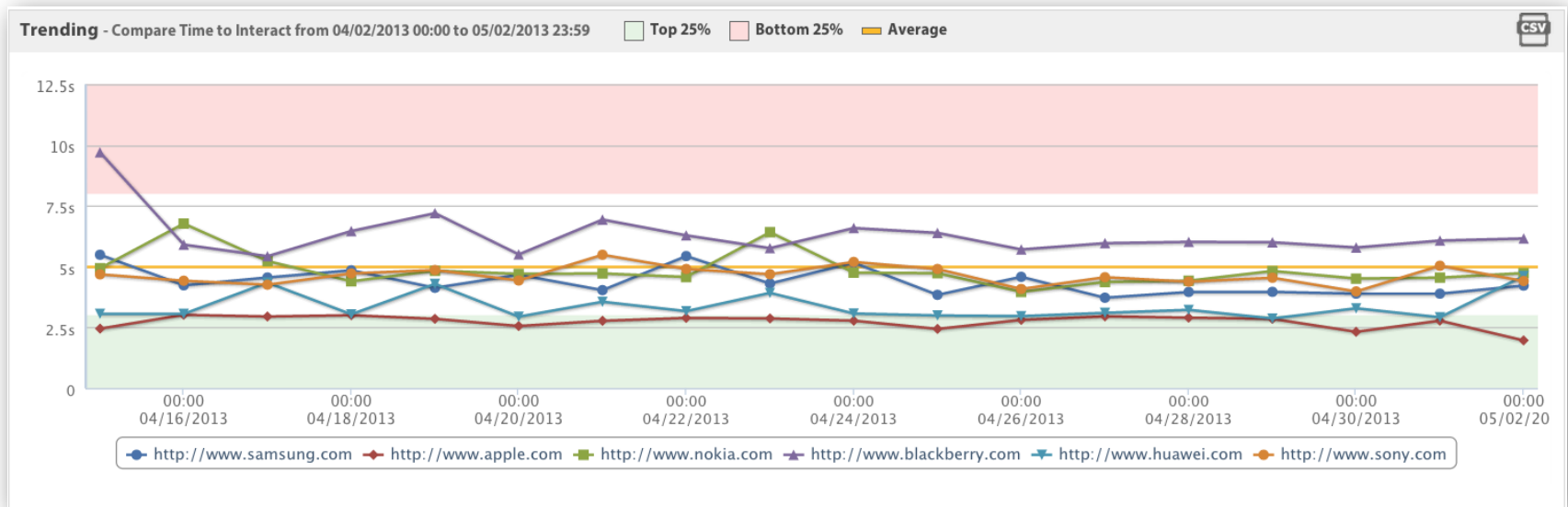
TIP #6

DON'T STOP AT THE 36,000-FOOT VIEW

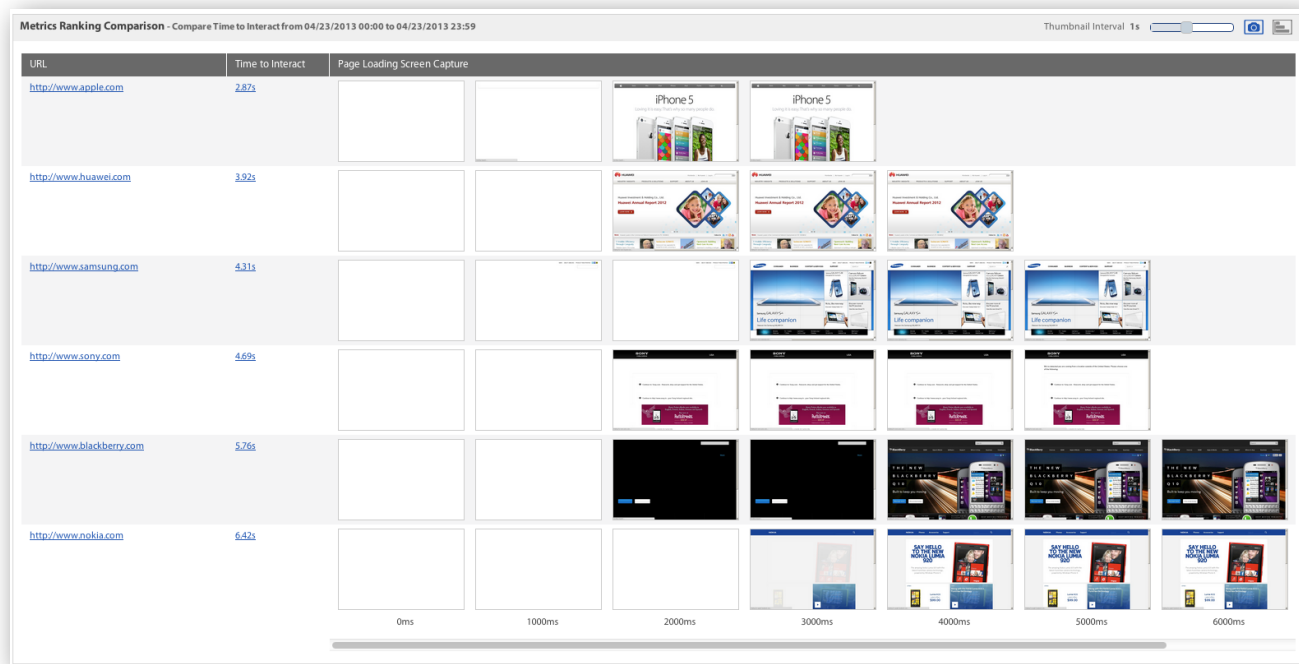
Benchmarks offer a high-level view of performance. A chart showing your site vs. competitors is conceptually simple and perfect for boardroom presentations. But that does not mean benchmarks are superficial.



The data collected to create the chart is just as detailed as most performance monitors. That means you can follow your nose down to the details. See an interesting outlier? A strange pattern developing over a few days? Plain old bad performance? Dig down to find out what's behind it.



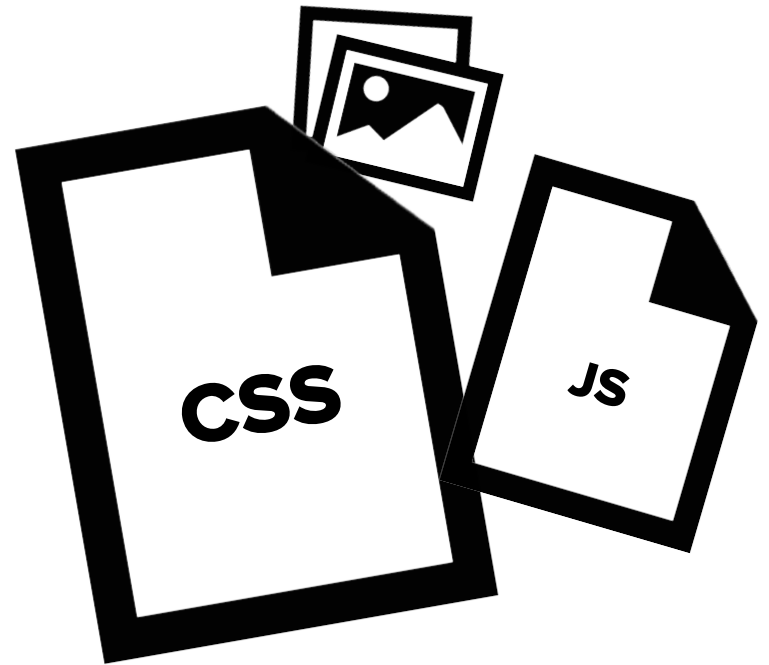
You can start this process by zooming to a segment of the trending chart by constricting the date range, or looking at page load screen shots to see when elements appear on the page at a given time increment. From here you can drill even further down into the samples themselves to find waterfall charts and other detailed performance data that can explain the “whys” and “hows” of page performance.



TIP #7

USE CONTENT METRICS TO YOUR ADVANTAGE

If faster sites are the goal, optimizing site content is the way to get there. Use a benchmark to find out everything you can about your site's content.



1.1MB

AVERAGE PAGE SIZE

59

AVERAGE # OF ASSETS

Specifically, use benchmarking data to see how your site compares to your competitors in number of page assets, number of images, size of images, and a slew of other content categories. See where the patterns in content size correlate to web performance timing metrics like Time to Interact. If you're wondering why your rival's site is faster, checking out that company's content metrics will reveal why.

“If your site is 15MB, it’s not HTML5 – it’s stupid.”

- Christian Heilmann, Principal Developer Evangelist @ Mozilla

TIP #8

COMPARE ACROSS INDUSTRY AVERAGES

It might be the case that your site looks great next to the sites you chose to benchmark it against. It might also be the case that your site performance is still deficient. Use Internet-wide averages to lend some context to the data you see in your benchmark.

PAGE LOAD TIME ✓

2.21s

Better than 95% of websites

PAGE SIZE ✗

1.20MB

Worse than 78% of websites

Here's a handful of resources to get you started:

Yottaa blog post - a snapshot of metrics across the web

<http://www.yottaa.com/blog/bid/232993/Metrics-A-snapshot-of-performance-and-content-metrics-across-the-web>

PhoCusWrite report on travel sites

<http://connect.phocuswright.com/2010/06/phocuswrightakamai-study-on-travel-site-performance/>

Radware State of The Union 2013 report

<http://marketingland.com/retail-website-load-times-continue-to-decline-with-a-22-decrease-during-the-last-year-37604>

TIP #9

SET GOALS TO IMPROVE PERFORMANCE

Now that you know where you stand versus your competitors, use that information your advantage: set goals and make plans to meet them.





This could mean short-term goals, like improving site speed by 500 milliseconds in the next development sprint, or longer-term goals, like always staying ahead of your main competitor. Benchmarking also provides information that can help you to set reasonable performance SLAs with a web hosting or web performance optimization service.

“Speed is the most important feature. ”

- Fred Wilson, Managing Partner @ Union Square Ventures

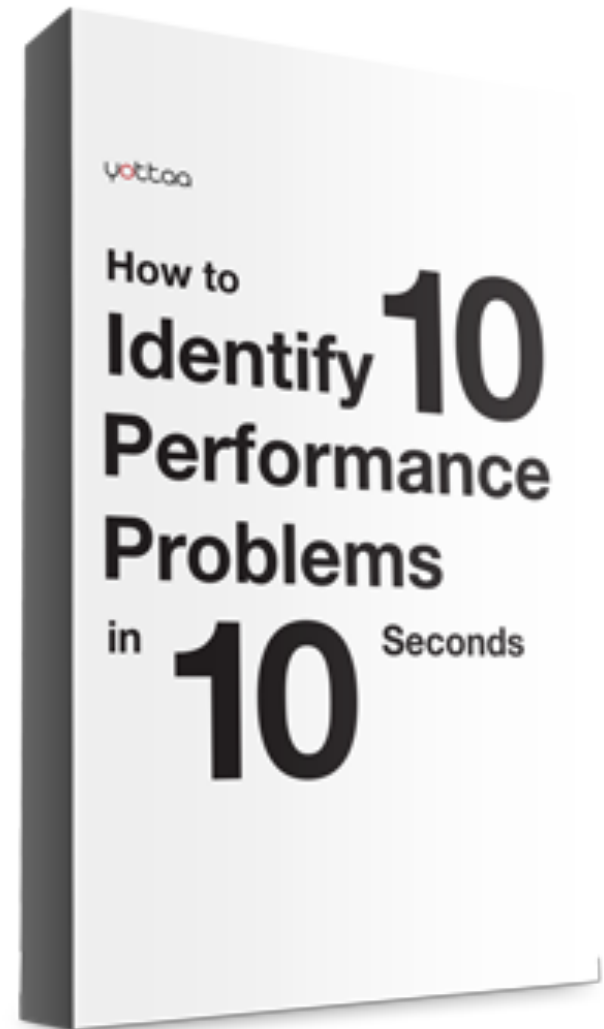
FREE EBOOK

HOW TO IDENTIFY 10 PERFORMANCE PROBLEMS IN 10 SECONDS

Since you've made it all the way to the end of this eBook, we'd like to surprise you with a free copy of **How to Identify 10 Performance Problems in 10 Seconds!**

This free how-to guide illustrates 10 easy ways to spot common web performance problems. With the right tools, it takes only a few seconds to identify performance problems slowing down your site!

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