

Q & A ON WEBSITE PERFORMANCE MEASUREMENT TECHNOLOGY

What is agent-based performance measurement?

The basic idea is to get lots of PCs deployed around the Internet and have them download pages from a website periodically. For example once every 15 minutes. The PCs measure download speed and send the details to a central site where reports are created.

How many agents do you need to get a comprehensive picture?

There are 10,000 - 15,000 ISPs in the world, depending on how you count them. Many of those span entire countries or even the world. You would need something like 50,000 agents or more to cover them all.

Can't statistical techniques be used to reduce the number of agents?

Possibly, but you would still need several hundreds if not thousands of agents.

Do the agents generate much traffic?

Yes, it's surprising how much. Consider this modest example:

- 3 Web servers in the site
- 50 agents
- Test 10 pages every 10 minutes
- Average 50 Kbytes per page

If you allow for typical TCP/IP overheads, this testing will generate 1.2 megabits per second of traffic.

Is that level of traffic a problem?

If you have a 2 Mb line, you're pushing it above 50% utilization, which means there's very little useful bandwidth left for customers. Even if you have more capacity, it's hard to see how that kind of traffic load will help performance.

But don't I get lots of good information?

You're still only seeing a tiny slice of the website's performance profile. Fifty agents cover something like 1/1000-th of the locations in the Internet. To get a better picture, you'd end up with several megabits per second of additional traffic at your website.

Isn't this like a distributed denial of service attack?

Yes. It's also like hitching a large mobile laboratory onto a Porsche to measure its top speed.

And what about the other 10,000 pages on my website?

The agents aren't watching them, so you'll have no idea what's happening.

And won't I have to wait 10 minutes to find out about performance problems?

Potentially. And there's no reasonable way to change that. Even at the rate of every 10 minutes, your servers are getting so hot the ops team will be turning up in beachwear.

Do agents get the same response times as my customers?

Only if your customers are directly attached to T1 links at major Internet exchanges. That's how most agents connect. If your users are behind firewalls or using dial-up connections, their experience won't have much to do with what the agents measure.

What about services that use less centralized agents?

That can help. But don't forget there are many variations in user configurations. Different modem speeds, different quality lines, different operating systems and so

on. It's just not possible to cover all these with agents.

What about cost? I've seen some offers that look very attractive.

Yes, there are some inexpensive packages for agent-based measurement, but the service is very basic. Downloading your home page once an hour from 30 locations tells you very little about your site's performance. When you move up to a more detailed service, it's easy to spend five to ten thousand dollars, or even more.

How else can you measure website performance?

One approach is "client-side" measurement, where special software is installed in real customers' PCs. The software then observes the response time customers experience.

Do customers like having special code installed in their PCs?

Would you like to be greeted at the supermarket by a clerk who straps a monitor to your belt?

What's a better approach?

Server-side measurement -- the approach used by the Triometric Web Analyzer. It's a non-intrusive technology that uses protocol analysis. You connect the Web Analyzer system to the same network as the Web servers -- or a nearby network. By monitoring the packets and performing detailed analysis, it can tell you what your customers experience.

How can Triometric Web Analyzer tell me the customer's experience when it's located at the website?

By carefully watching TCP/IP and HTTP protocol details. Specifically, the client sends acknowledgments when it receives information from the server. By timing these acknowledgments and other aspects of the protocols, Web Analyzer can accurately measure the response time customers experience.

Doesn't the delay across the Internet affect the Web Analyzer's measurements?

No. All the packets the Web Analyzer sees are delayed by the same amount of time on average, so the delays cancel each other.

Our website gets millions of hits a day. How can Web Analyzer keep up?

The Triometric Web Analyzer is currently deployed successfully in sites with very high traffic loads. Web Analyzer is designed for speed, including multi-threading, early packet filtering, and algorithms that analyze each packet as quickly as possible. It's also possible to split Web Analyzer across multiple systems to scale up for extremely heavy traffic loads.

Sounds like nice technology, but who cares?

Your customers will. Because of Triometric's measurement technology, the Web Analyzer can measure the response time for all customers regardless of where they are in the Internet. And it can do that for all pages on your website. And it's measuring real downloads, not theoretical transactions from agents.

Once you have Triometric Web Analyzer's measurements, you will know where your website shines and where it needs attention. The Triometric Web Analyzer gives you the information you need to improve performance and make sure your customers' experience at your website is excellent.

For more information, visit www.triometric.net or contact us directly on +44(0)1784 497360