



COMPUWARE APM
DYNATRACE® | GOMEZ®

Qcon, London, March 2013

Managing the performance outside of the test center

Alain HELAILI, EMEA Solution Director – alain.helaili@compuware.com

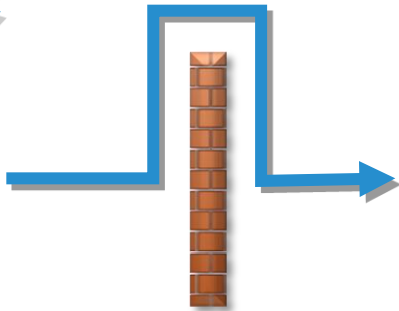
Testing & Lifecycle

Business

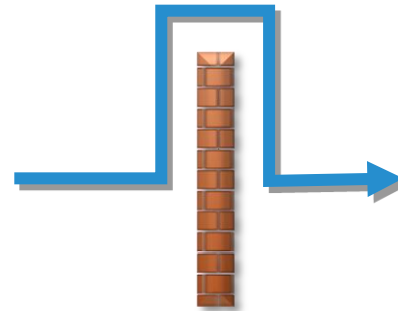


Dev

(local, remote, outsourced)



Test/QA

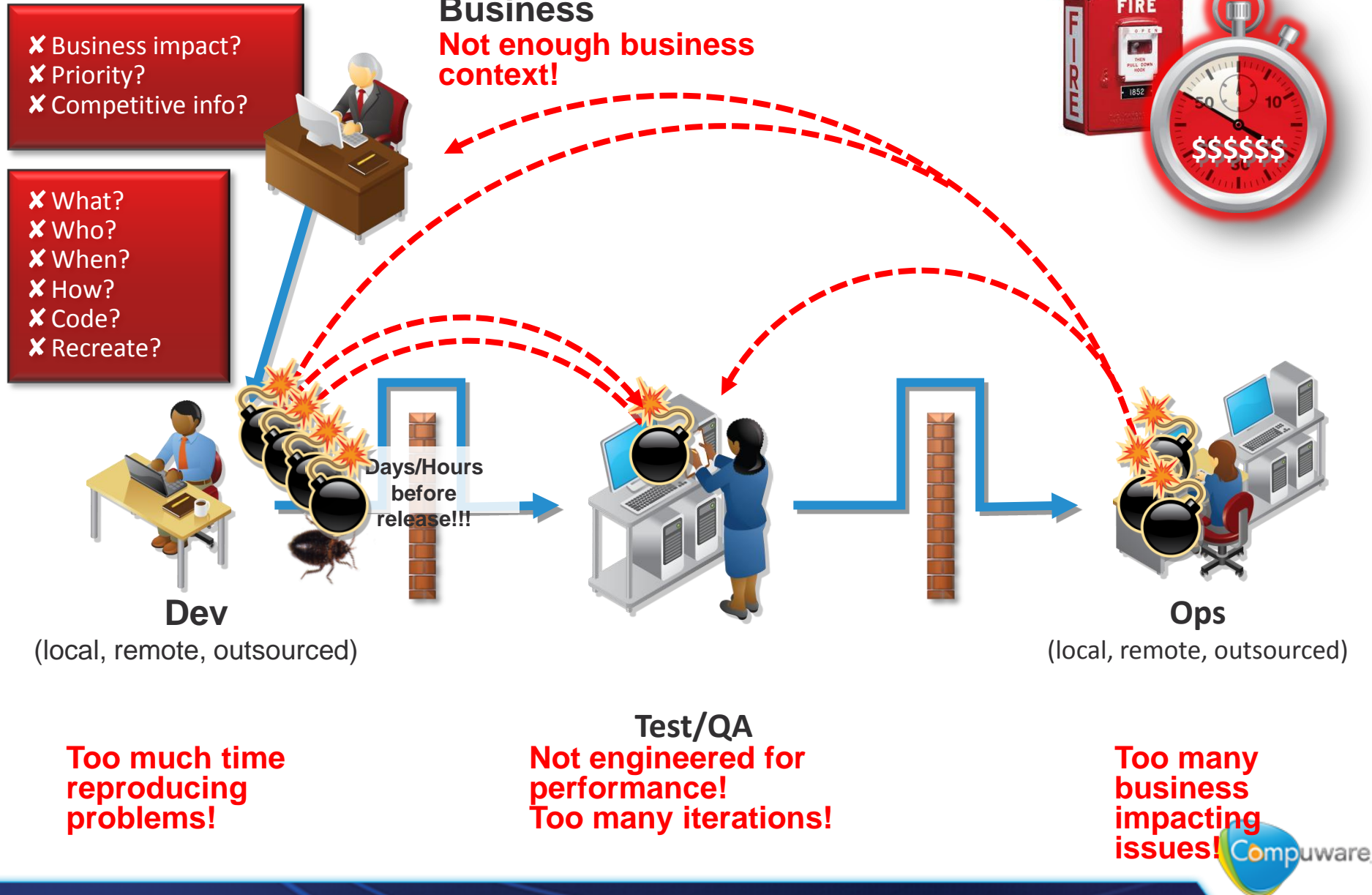


Ops

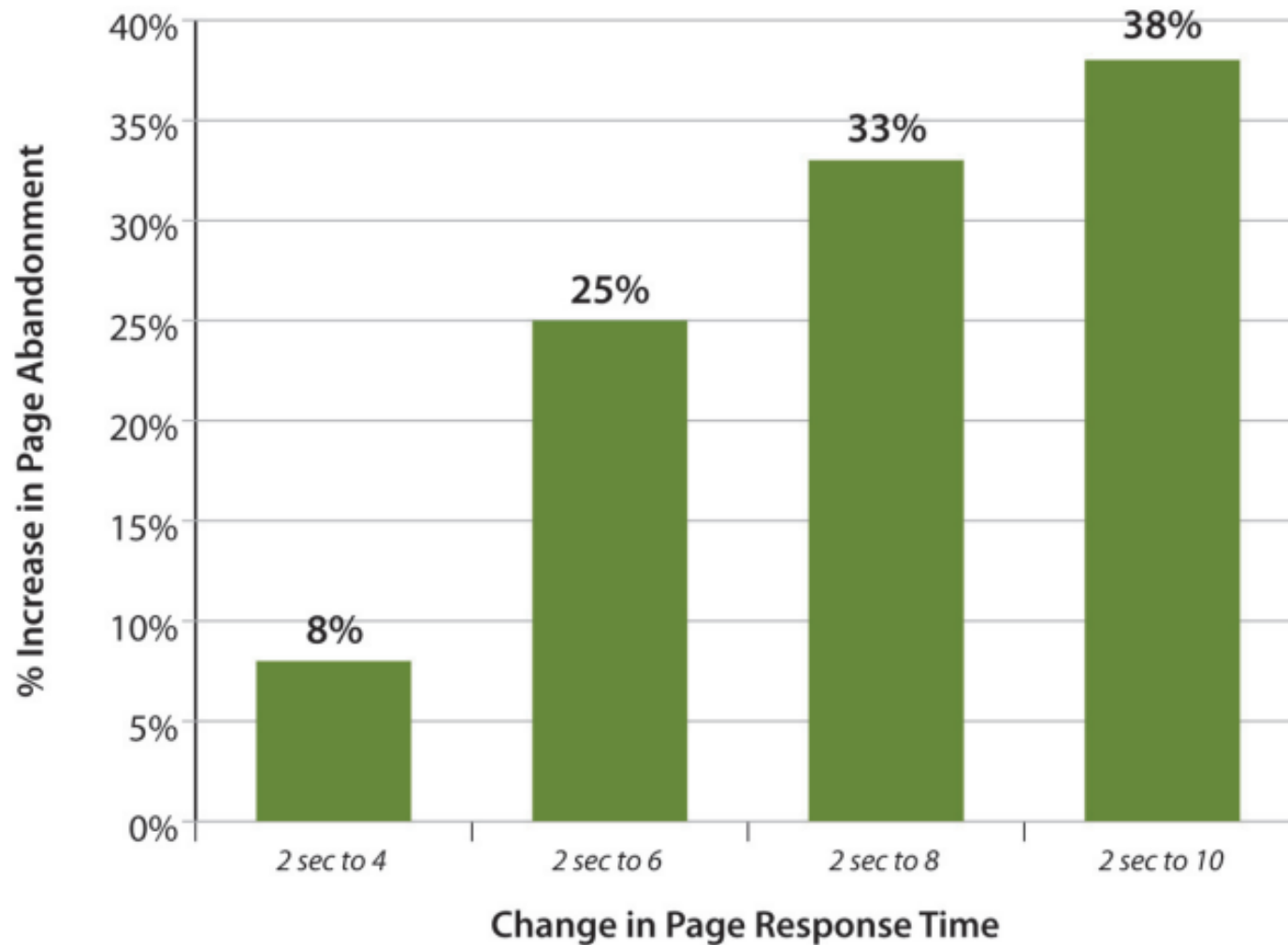
(local, remote, outsourced)

- Cloud load testing
- Monitoring

Testing & Lifecycle

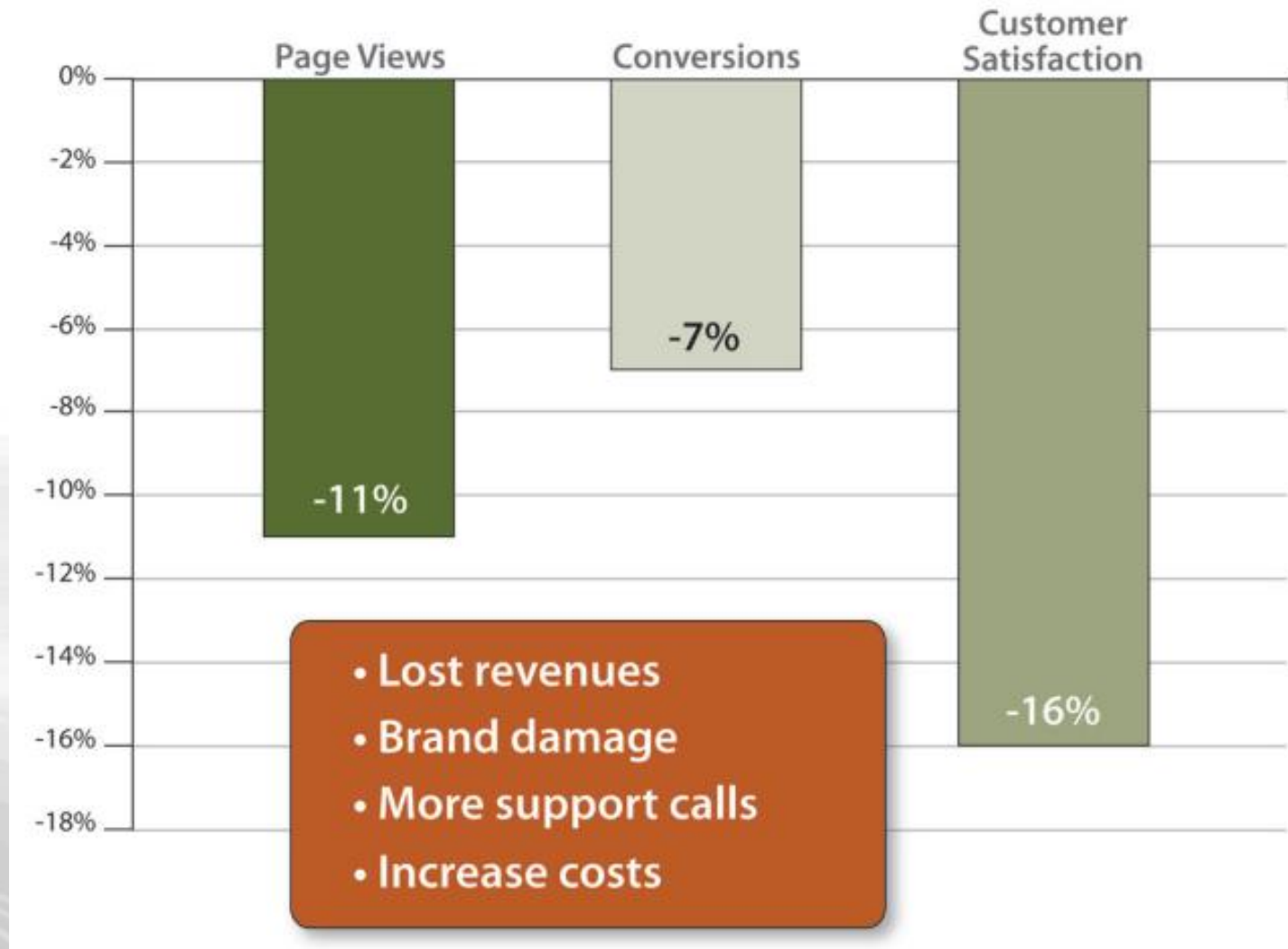


Add couple seconds...

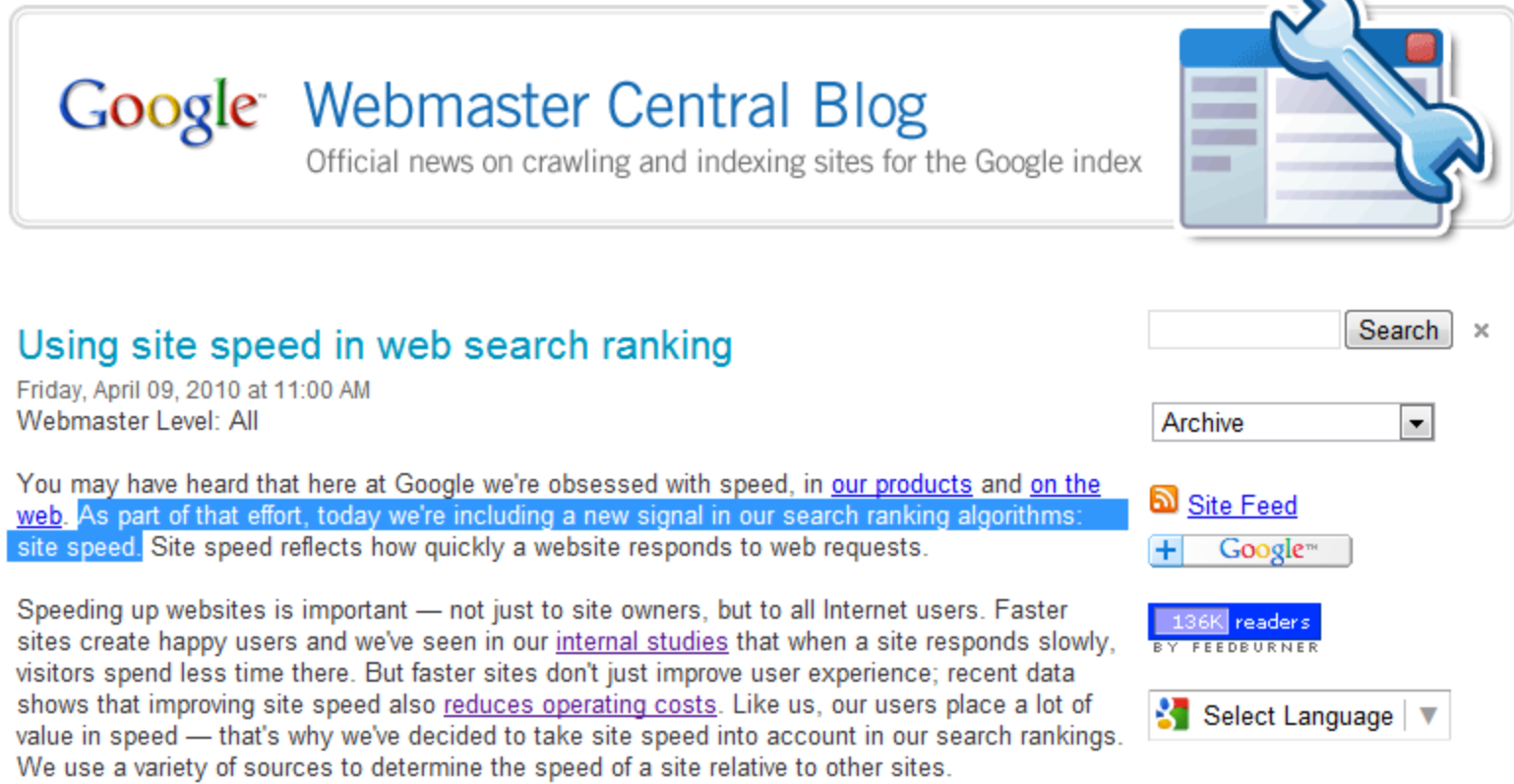


Source : http://www.gomez.com/pdfs/wp_why_web_performance_matters.pdf

... but even one second matters



Why Web Performance Matters



The screenshot shows the Google Webmaster Central Blog interface. At the top, the Google logo is followed by 'Webmaster Central Blog' and the subtitle 'Official news on crawling and indexing sites for the Google index'. To the right is an icon of a wrench and a screwdriver. Below the header, the article title 'Using site speed in web search ranking' is displayed in blue, followed by the date 'Friday, April 09, 2010 at 11:00 AM' and 'Webmaster Level: All'. The article text begins with 'You may have heard that here at Google we're obsessed with speed, in [our products](#) and [on the web](#). As part of that effort, today we're including a new signal in our search ranking algorithms: [site speed](#). Site speed reflects how quickly a website responds to web requests.' The text continues: 'Speeding up websites is important — not just to site owners, but to all Internet users. Faster sites create happy users and we've seen in our [internal studies](#) that when a site responds slowly, visitors spend less time there. But faster sites don't just improve user experience; recent data shows that improving site speed also [reduces operating costs](#). Like us, our users place a lot of value in speed — that's why we've decided to take site speed into account in our search rankings. We use a variety of sources to determine the speed of a site relative to other sites.' On the right side of the blog post, there is a search bar, an 'Archive' dropdown menu, a 'Site Feed' link with a RSS icon, a 'Google' button with a plus icon, a '136K readers BY FEEDBURNER' badge, and a 'Select Language' dropdown menu.

50% reduction in hardware costs*

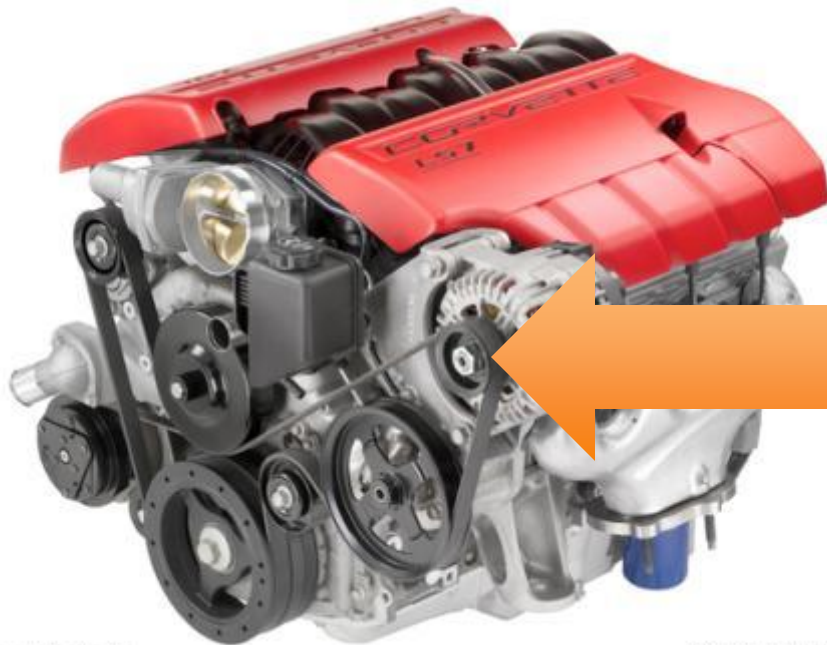
Source: Steve Souders @ Velocity Conference 2009

<http://radar.oreilly.com/2009/07/velocity-making-your-site-fast.html>



How **fast** is your
web site?

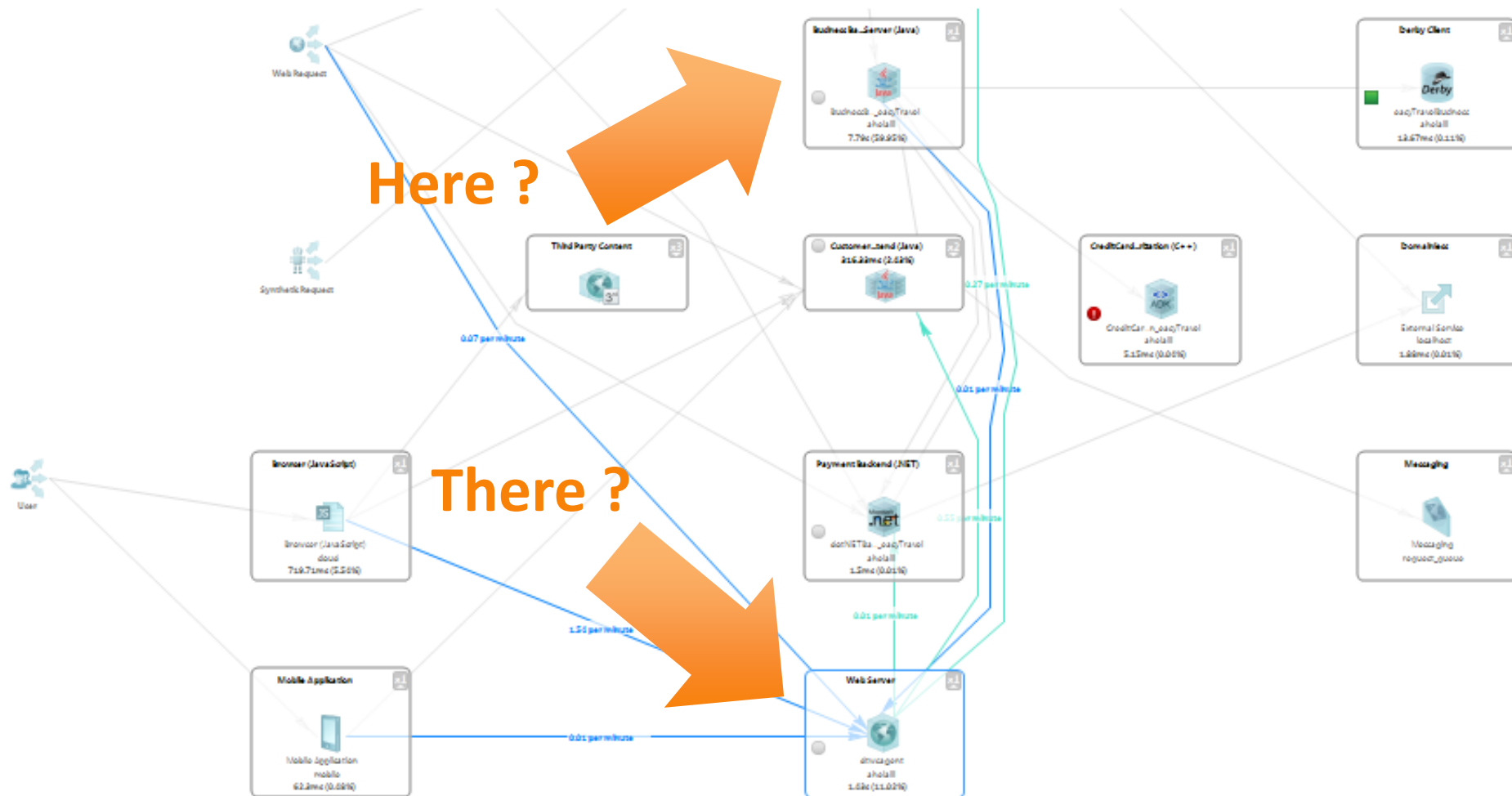
Is the
speed of
this wheel
telling you
much?



Chevrolet Corvette 200

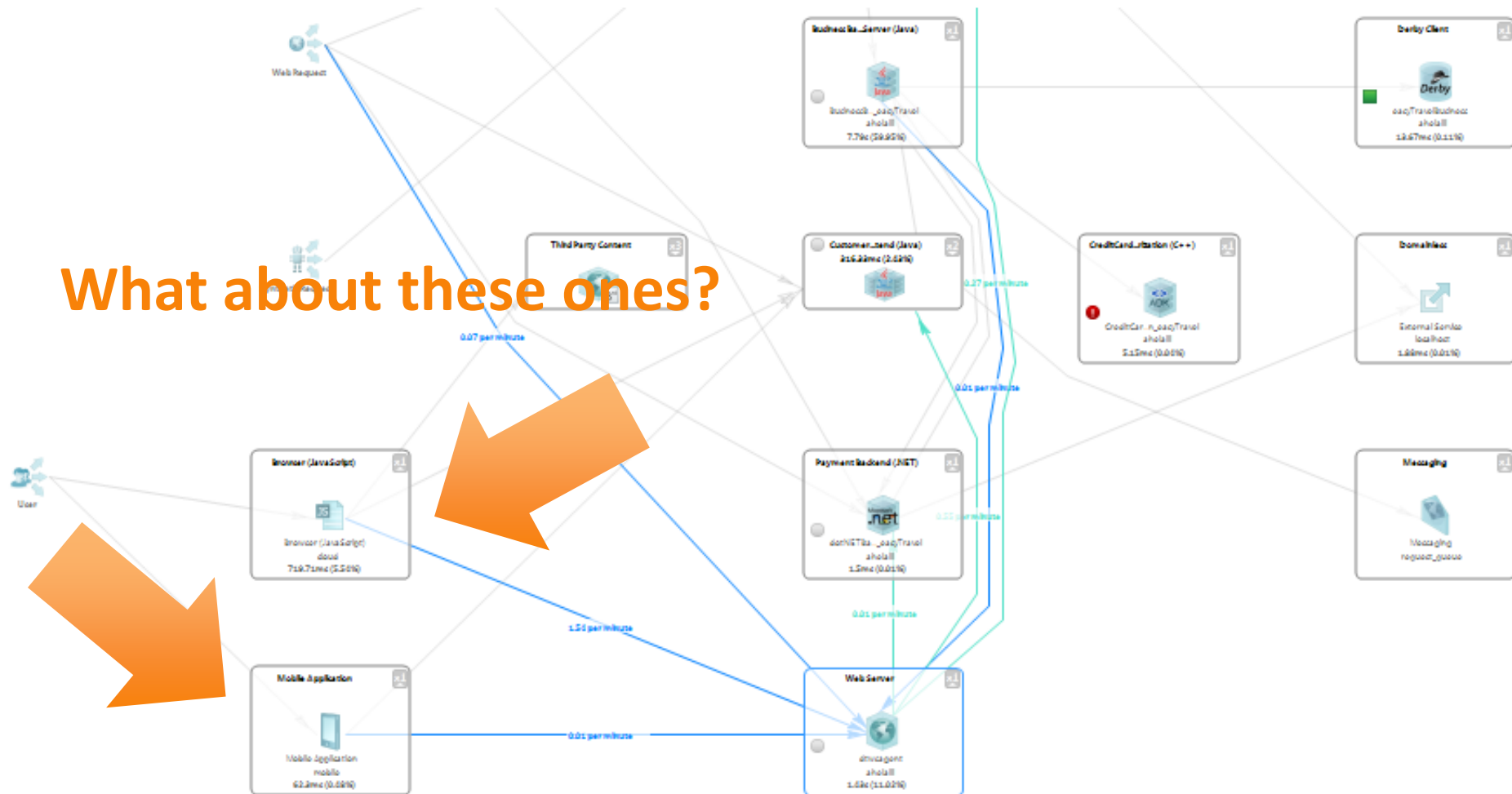
2010 "LS7" 7.0L V-8 (LS7)

So what should we look at?

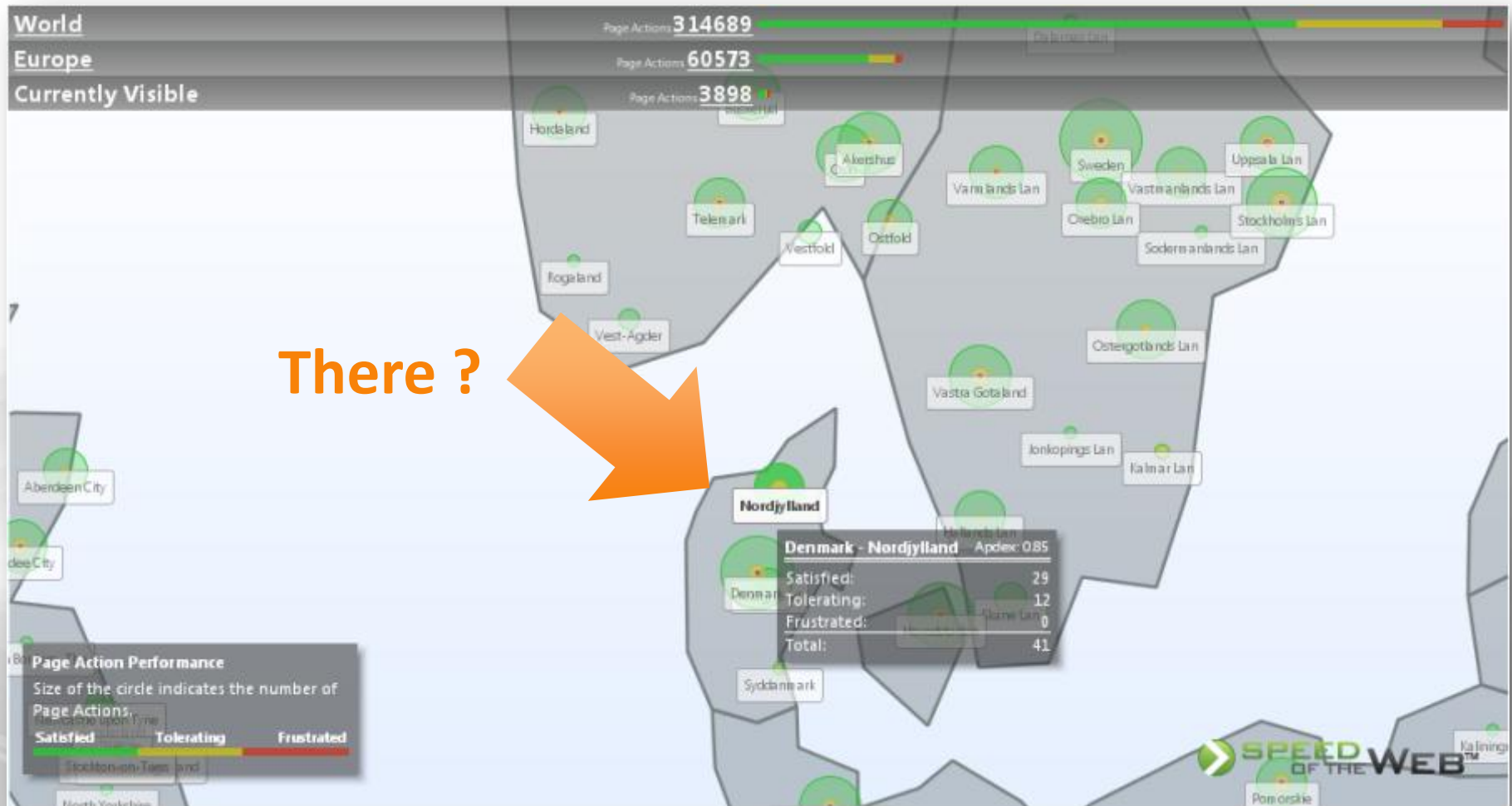


So what should we look at?

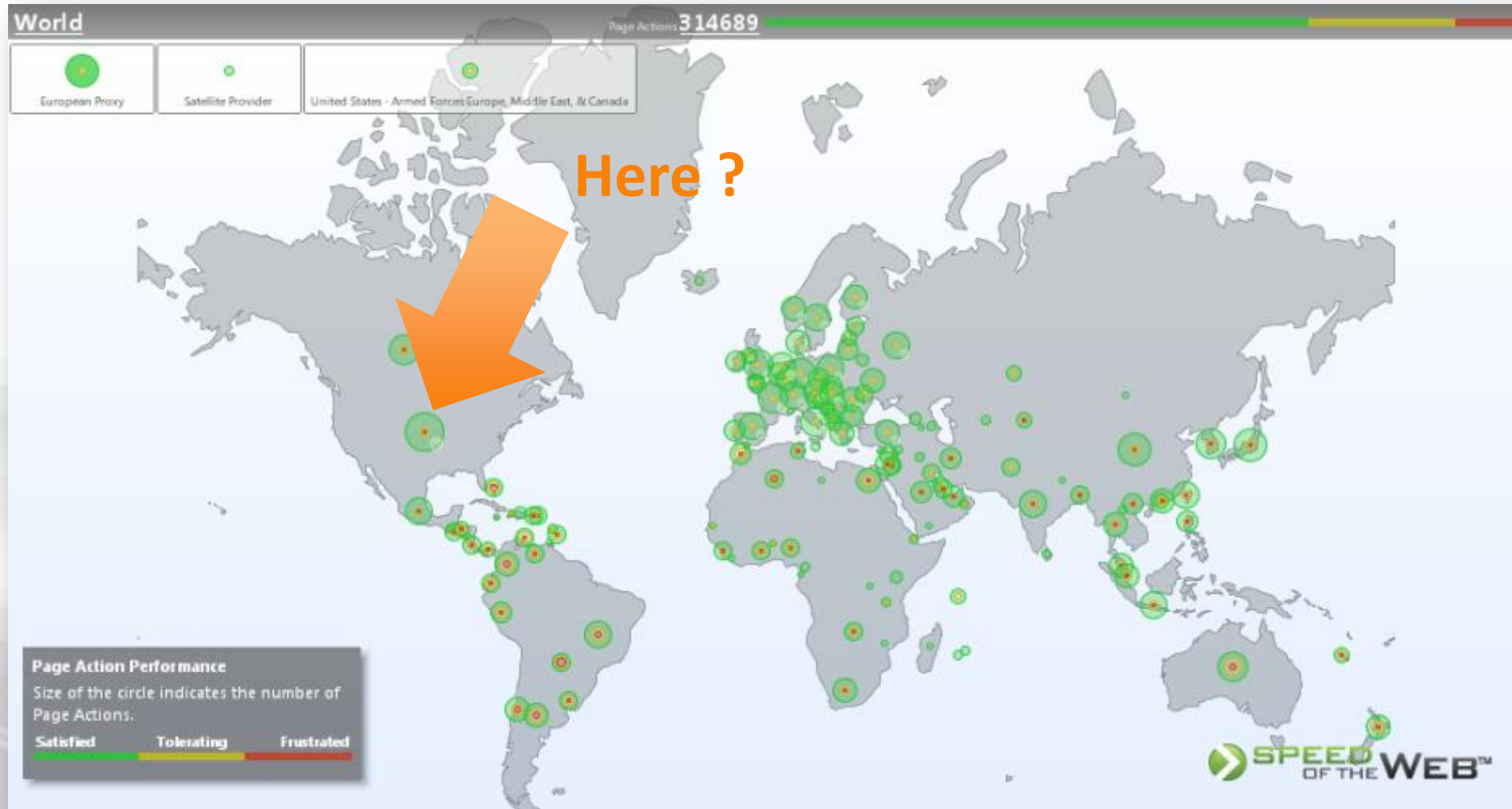
What about these ones?



So what should we look at?

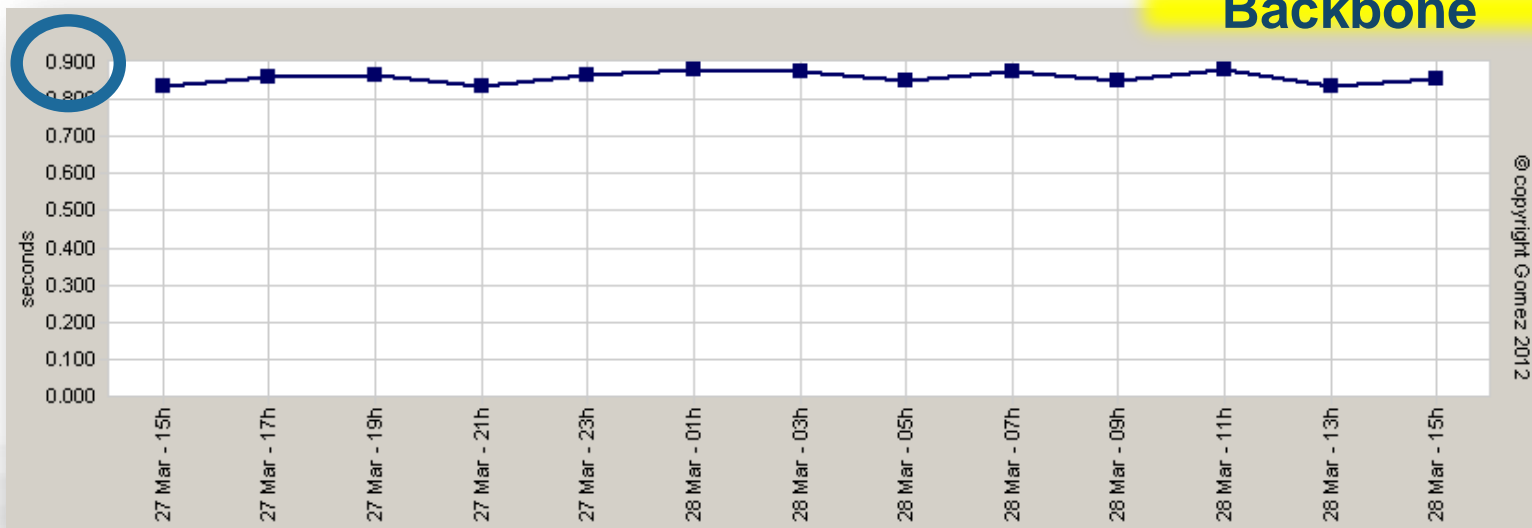


So what should we look at?

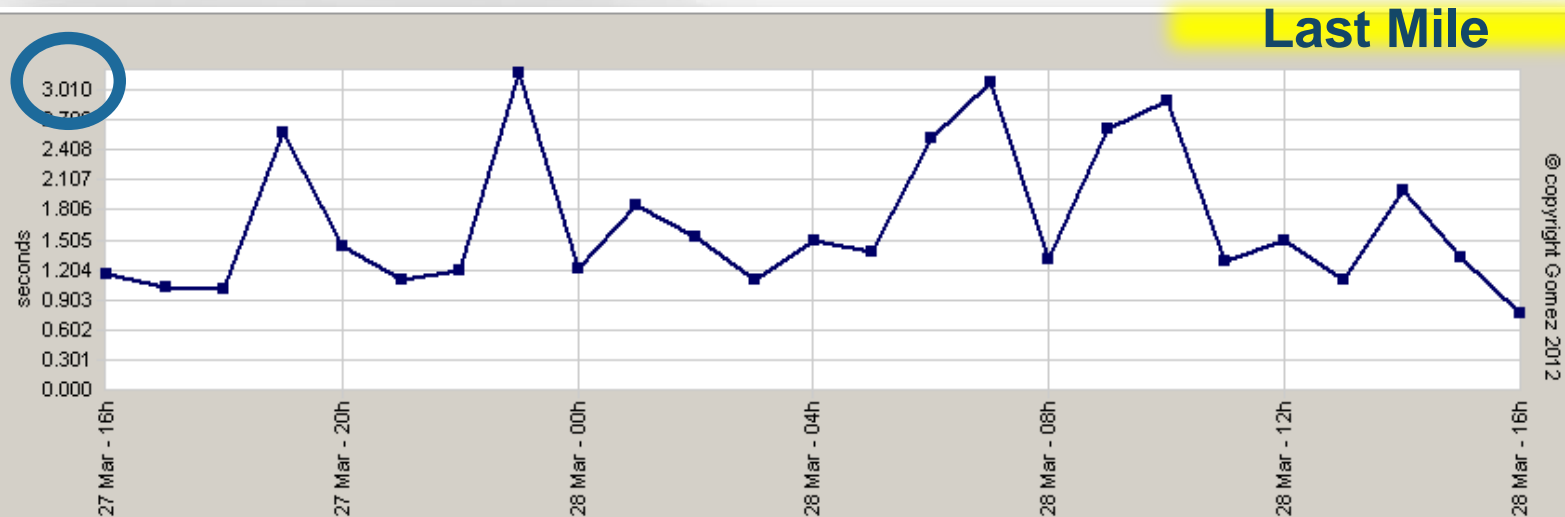


So what should we look at?

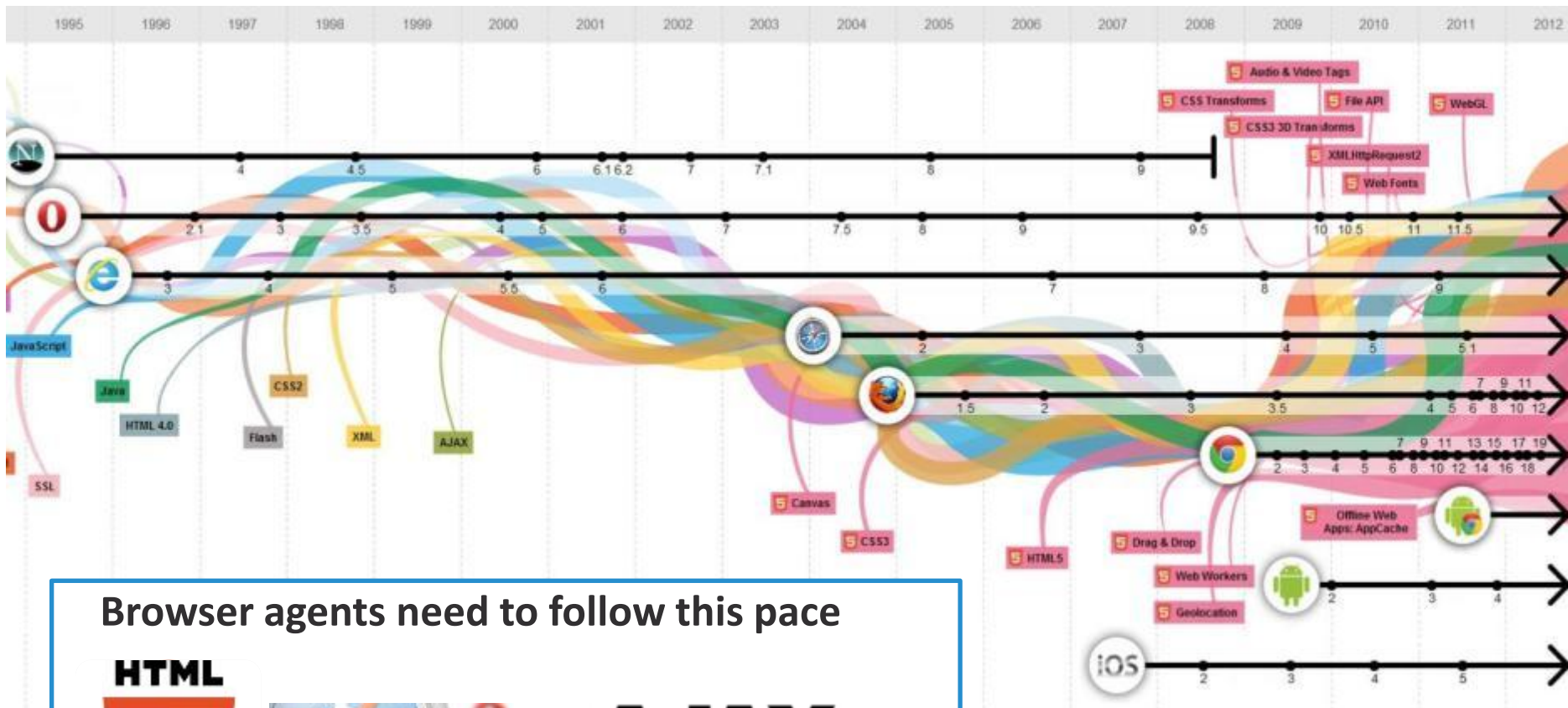
Backbone



Last Mile



Accelerating Browser Evolution



Browser agents need to follow this pace

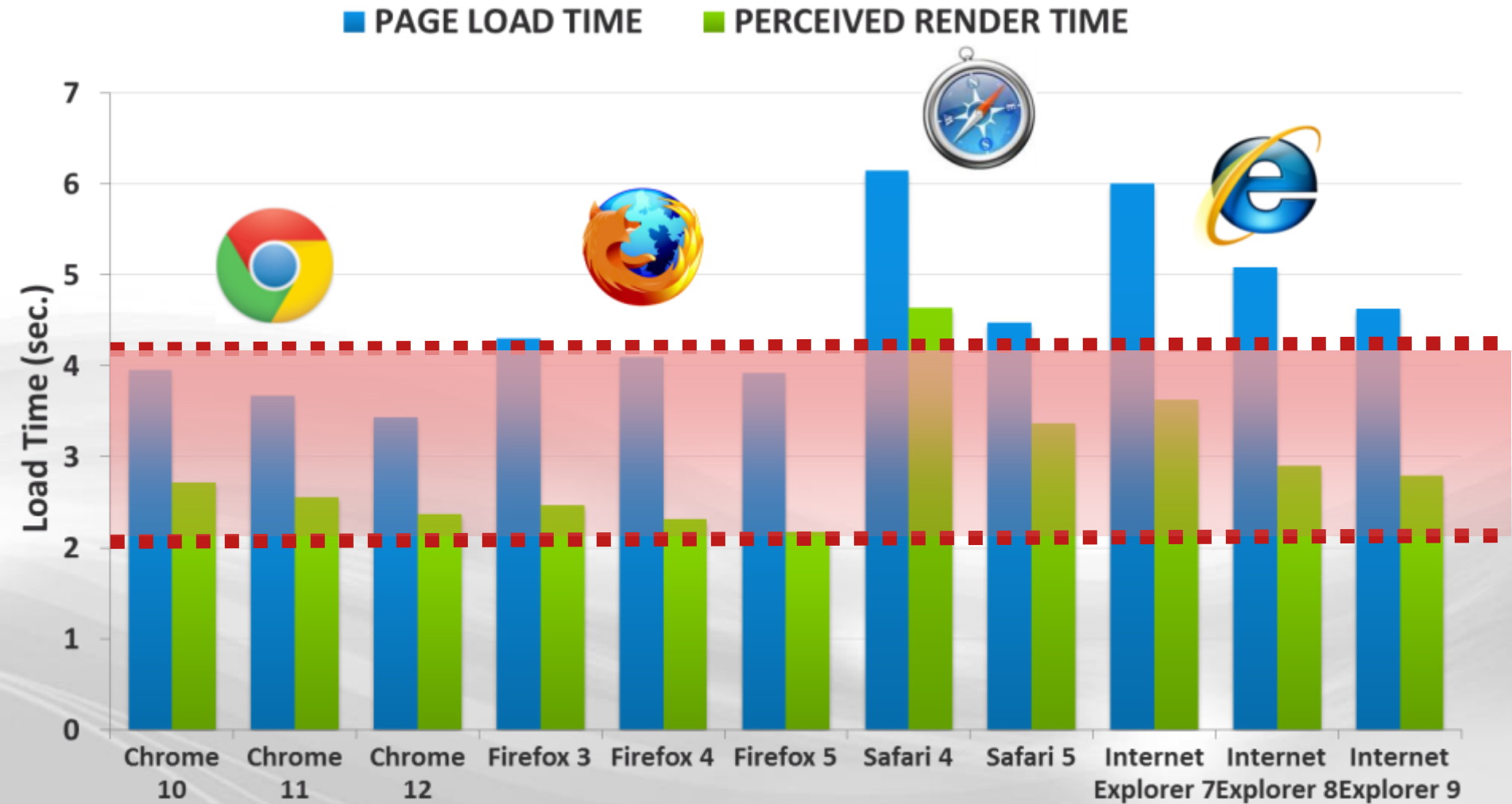
HTML



AJAX

jQuery
mobile framework.

Various results, same application



TV & Video

CD TV, LED TV, 3D TV

Home Appliances

Coffee, Vacuum, Microwaves

Cameras

DSLR & Video

Tablets & Laptops

iPad, Android, Agora

Audio

Digital Sound

Phones

iPhone, Android



Live Price

Prepay & save

Save


Hot Stock


Your Shopping Cart

	Item Price	Qty.	Sub Total
 <div>42" 3D LCD TV (Full HD) KA_303430KA_... WILL Will usually dispatch within 24 hours. 1 year warranty Upgrade to 3 Years for just \$100.00 more Blu-ray Player with KA_30P210P1A_... WILL Will usually dispatch within 24 hours. 3 year warranty Upgrade to 5 Years for just \$100.00 more Gift Certificate or Promo Code?Click here.</div>	\$489.00	1	\$489.00
Internet Explorer 7 TAX (6.8%)			\$41.83
Total Due			\$657.00


All prices include GST where applicable

Continue to Payment

**7 DAY**
MONEY BACK GUARANTEE


Safe & easy online payment

100% Australian Owned


We deliver to any location in Australia

**Internet Explorer 7**

INTERNET EXPLORER 7 TAX

It appears you or your system administrator has been in a coma for over 5 years and you are still using IE7. To help make the Internet a better place, you will be charged a 6.8% tax on your purchase from Kogan.com

This is necessary due to the amount of time required to make web pages appear correctly in IE7.

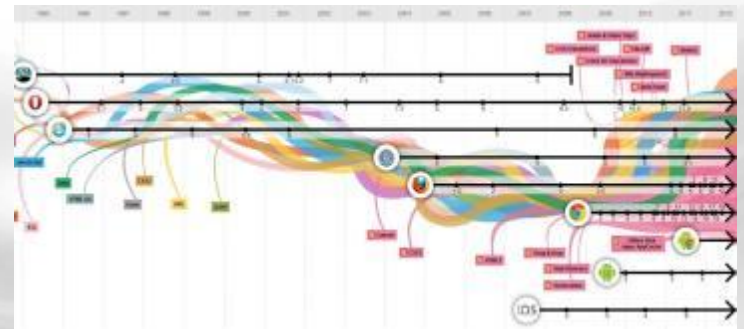
AVOID THE TAX, USE A BETTER BROWSER:





Which device?

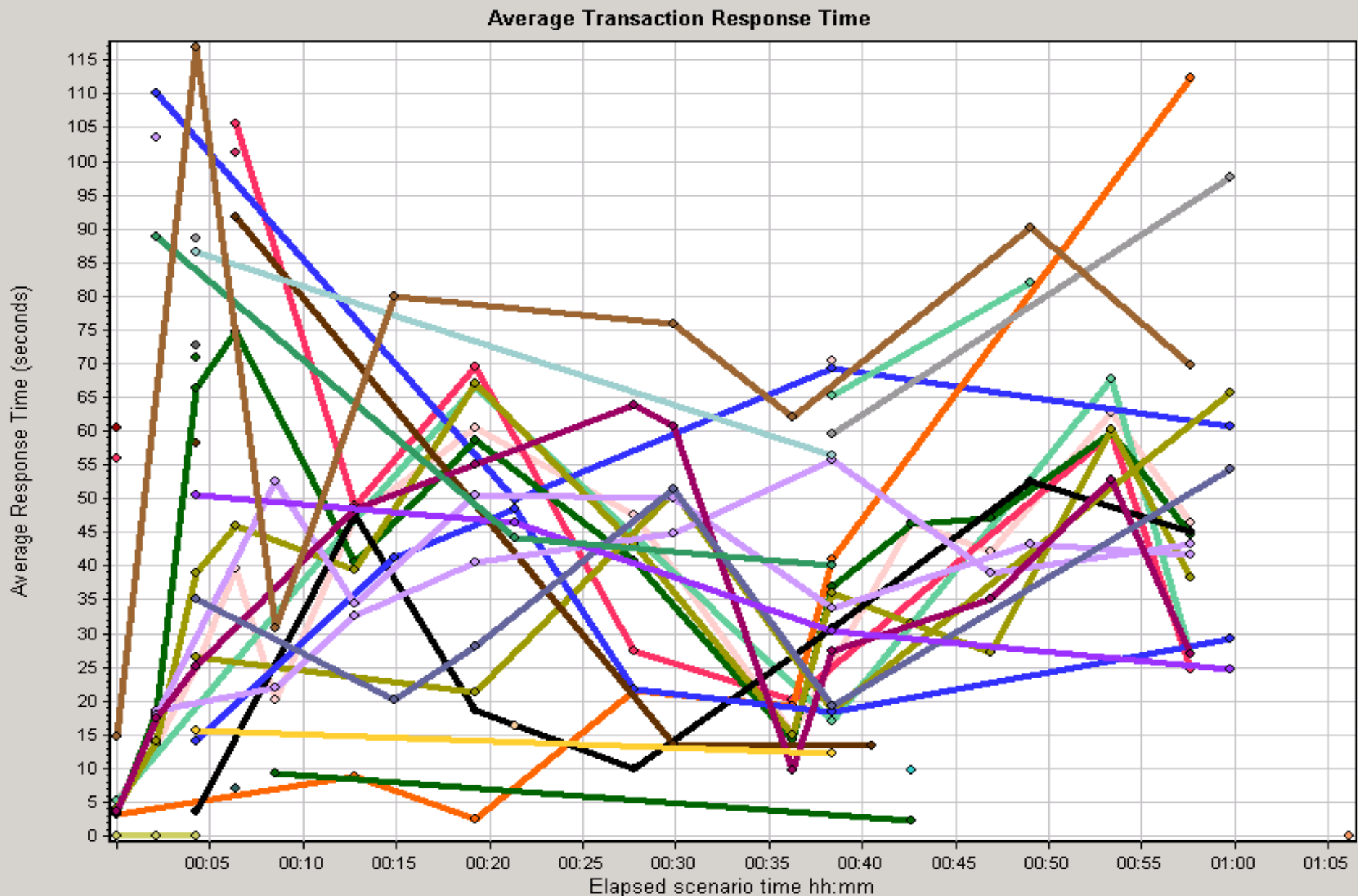
- How long did it take to sell 1 million unit?
 - 3 years for the IBM PC
 - 73 days for the iPhone 1
 - 3 days for the iPad2
-and the iPhone 5 reached 2 millions in 1 day



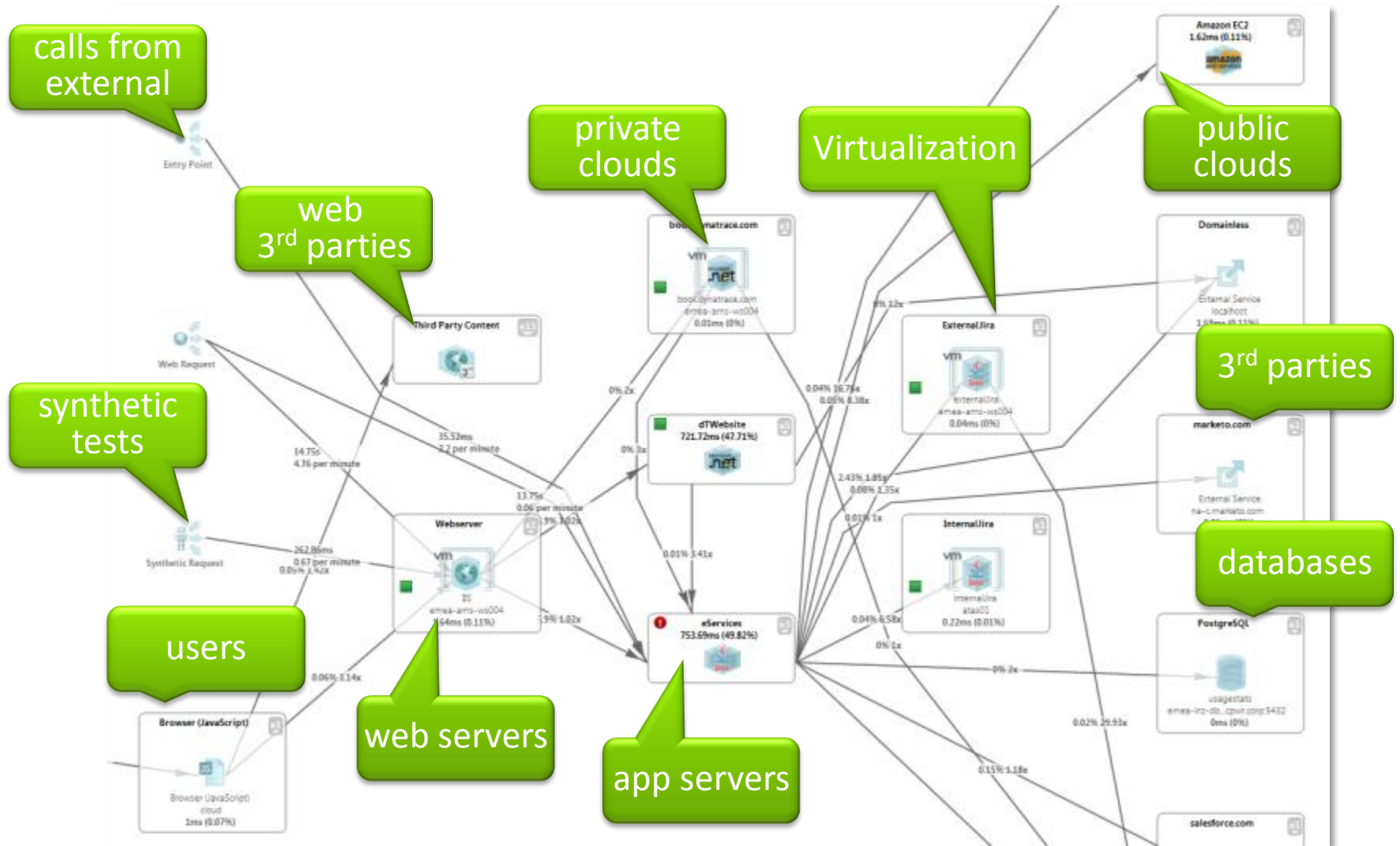


**All right,
let's give
up then!**

Why traditional testing is not enough



Why traditional testing is not enough



Why traditional testing is not enough

- More and more seen as cost rather than value
 - Hard to match real-life environment
 - Hard to match real-life scenarios
 - Takes time to setup
 - Not deep enough
 - Not often enough
 - Too close to go-live date most of the time

**Turn the production
environment into *your*
test workbench**

What is **testing** after all?

A set of activities we
undertake to **reduce**
uncertainty about the **quality**
of the system under test

Seth Eliot (<http://blogs.msdn.com/b/seliot/>)

Test many things from many places



APM Instant Test Center

Learn how your website performs across browsers, compared to your competitors and on mobile applications. Take an Instant Test today.

Multi-Browser Performance

Site Slow Across Browsers Or Locations?

Take the free Gomez Multi-Browser Website Performance Test to determine how fast your Website loads across two browsers and four geographies.

[Take Free Test Now »](#)

Website Performance Test

How Fast Is Your Site?

Test your Website using the world's most comprehensive testing network. Use Gomez's instant testing to find performance problems before your customers do.

[Take Free Test Now »](#)

Website Performance Comparison

Is Your Website As Fast As Your Competitors'?

Speed matters – don't lose customers due to web performance. Get a free Custom Benchmark report to find out how your website performance compares to your competition.

[Take Free Test Now »](#)

Cross-Device Compatibility

Does Your Website Render Properly Across All Devices?

Take the free Cross-Device Website Compatibility Test and find out if your website displays correctly across four real mobile devices.

[Take Free Test Now »](#)

Instant Load Test

Are You Ready For More Website Visitors?

Take the free Instant Load Test and see what happens when your website traffic increases.

[Take Free Test Now »](#)

Mobile Website Performance Test

How Fast Is Your Mobile Site?

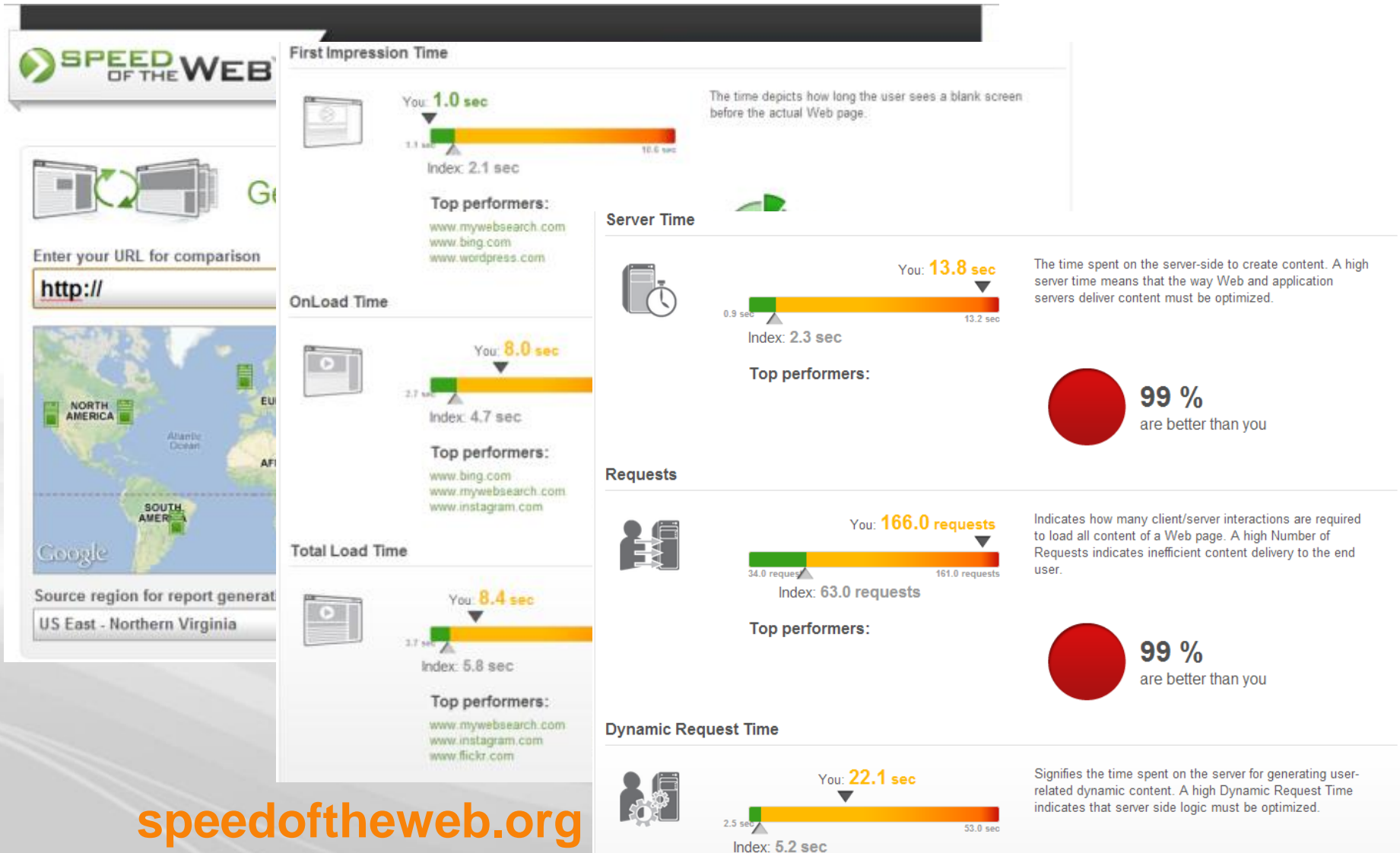
Are you meeting your customers' mobile website performance expectations? Take the Gomez Mobile Website Performance Test across 19 global locations and wireless carriers to find out.

[Take Free Test Now »](#)

www.gomez.com/resources/instant-test-center



Test many things from many places



Analyse the client side

Find all Key Performance Indicators(KPI) for the selected page

These values help you compare with other versions of the same page to identify problems or regressions .
[Learn more on Key Performance Indicators](#) and how they get calculated.

First Request	34ms	On Server	6470ms	DNS	853ms	Network	10395ms	Total Size	2254kb
First Impressio	2815ms	On Client	4095ms	Connect	9190ms	JavaScript	5319ms	# of Requests	174
OnLoad Time	10477ms	Ø Interactive	6ms	Transfer	15587ms	Rendering	967ms	# of XHR	4
Total Load Tin	10817ms			Ø Wait	98ms				



Following table lists details about all 12 different mime-types and their impact on caching



Resources are served from 30 different domain(s) where 19 domain(s) serve only single resources

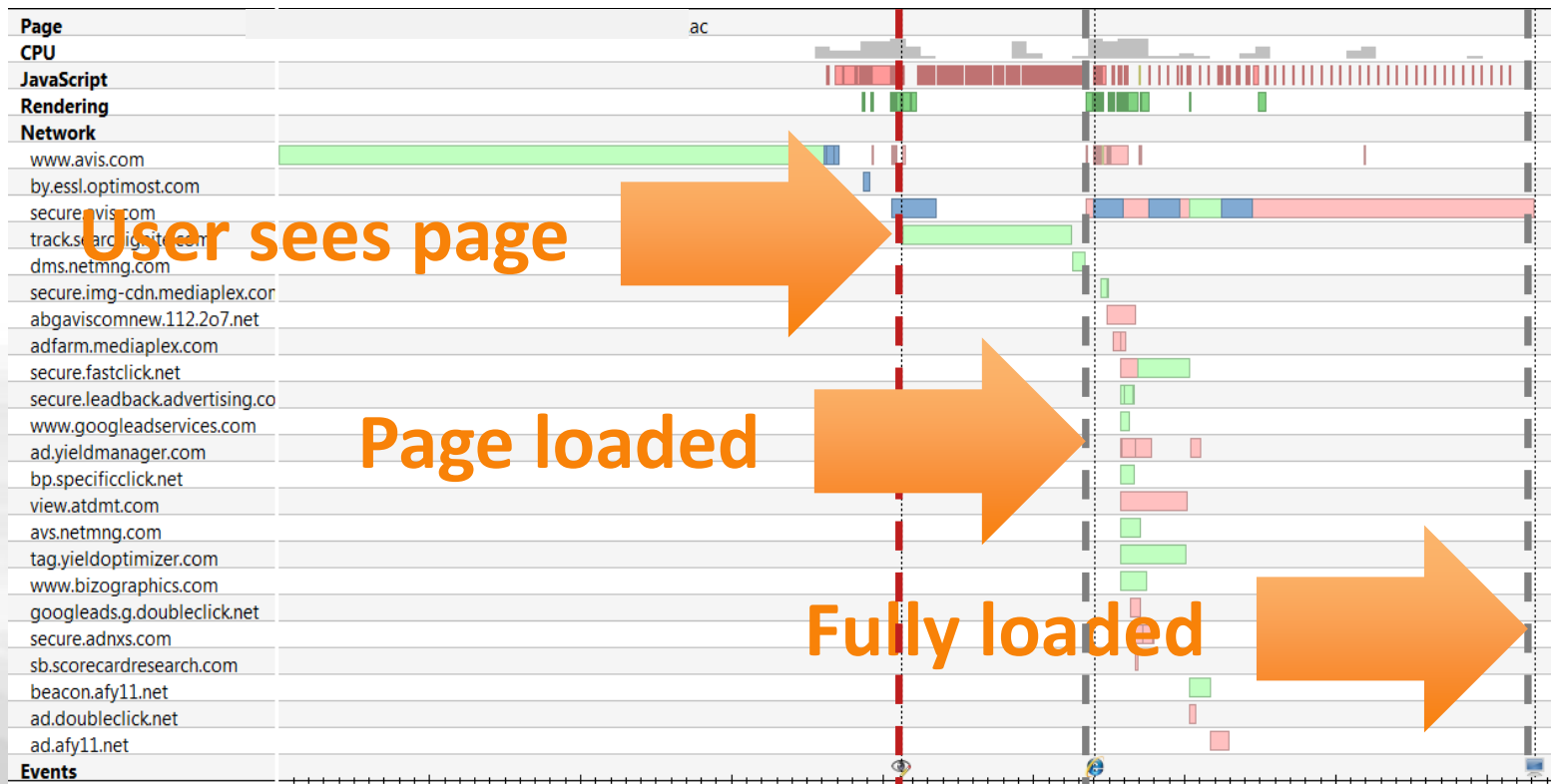


[Eliminating single resource domains](#) saves 6923.26ms on DNS and Connect Time

URL	Count	Size [bytes]	Total [s]	DNS [s]	Wait [s]	Connect [s]	Server [s]	T
TOTAL	170	2309050	57.96	0.85	17.21	9.19	15.12	
www.airfrance.fr	124	1114730	39.30	0.02	16.72	0.22	10.06	
mfr.a2dfp.net	3	47877	1.88	0.02	0.02	0.78	0.65	

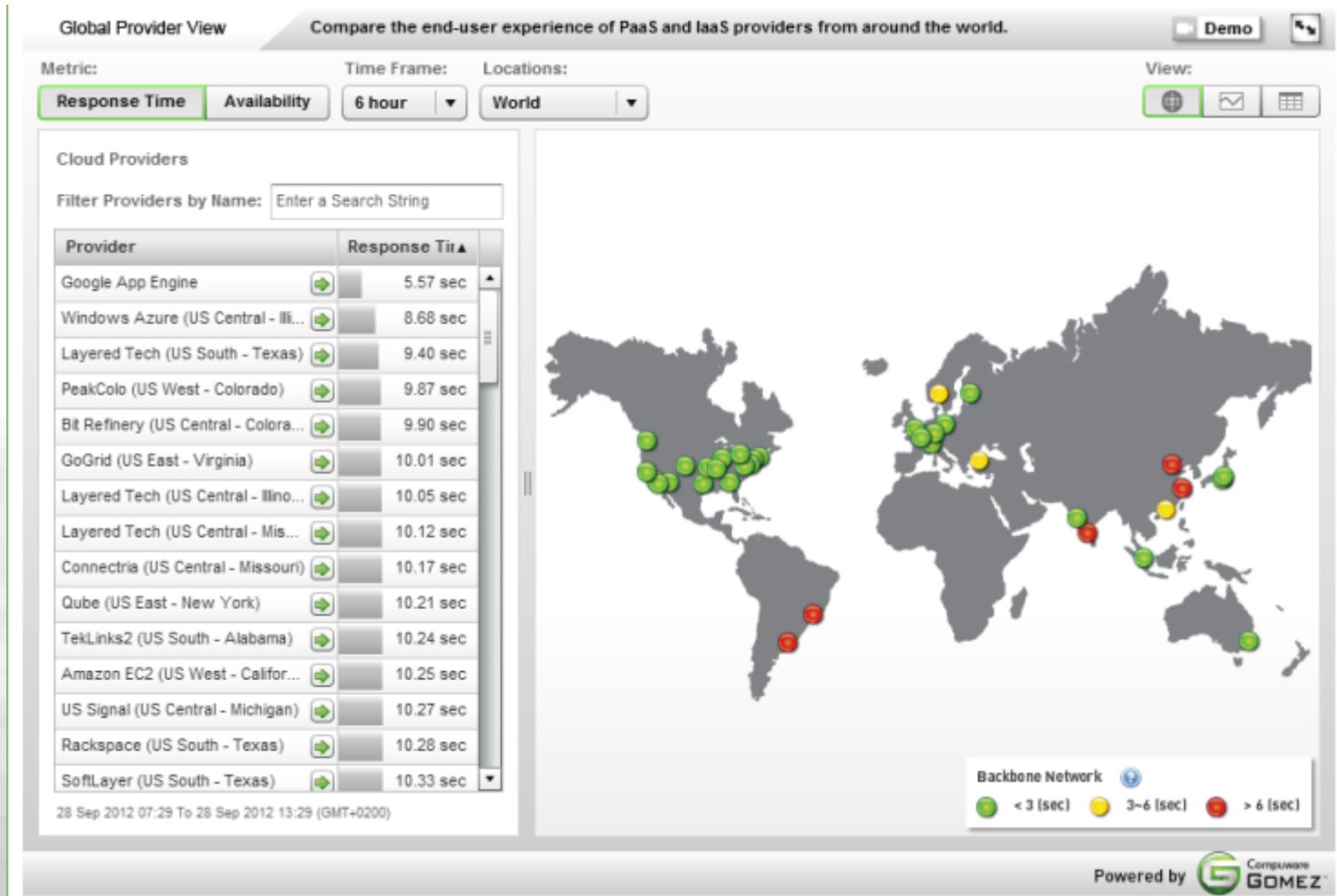
Ajax.dynatrace.com

Analyse the client side



Ajax.dynatrace.com

Analyse your CLOUD provider



cloudsleuth.net/global-provider-view

Analyse your CDN provider

Cloud Performance Analyzer

Discover how CDNs can improve web application performance around the world.



View Options

- ☒ Origin (Amazon EC2 East)
- ☐ Edge Cached (CDN)



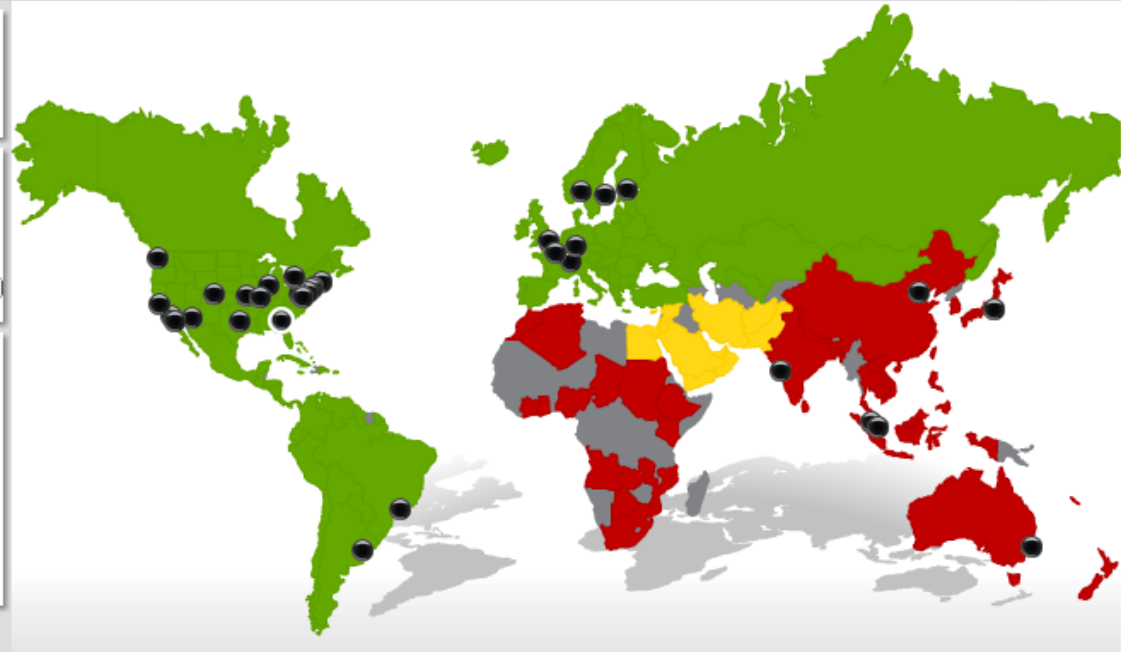
Response Time Key *

- Less than 13 seconds
- Between 13 and 16 seconds
- Greater than 16 seconds

* These measurements are based on response time of a two-page web site and various content types

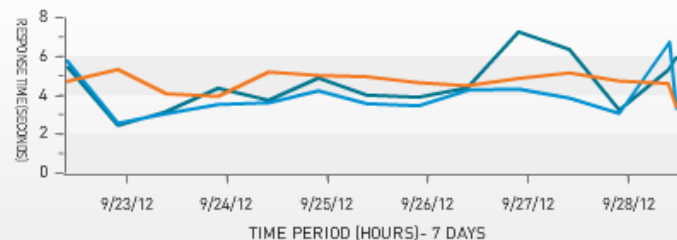
● Backbone Network Nodes

Borderless Application Details



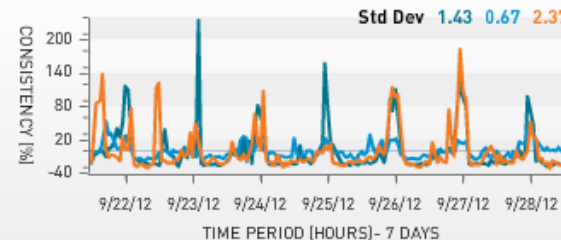
User Experience Chart Click Data Node for Detailed View

Southeast



Consistency Chart

City: Atlanta



Origin

■ Amazon EC2 East

CDN

■ CDNetworks

■ CloudFront

cloudsleuth.net/cdn-performance-analyzer

Analyse your 3rd party content

NEWS

Comment 11

f Like 133

Tweet 521

in Share 114

+1 29

Study: Yesterday's Facebook Outage Also Slowed Down Major Media And Retail Sites



FREDERIC LARDINOIS ✓

Friday, June 1st, 2012

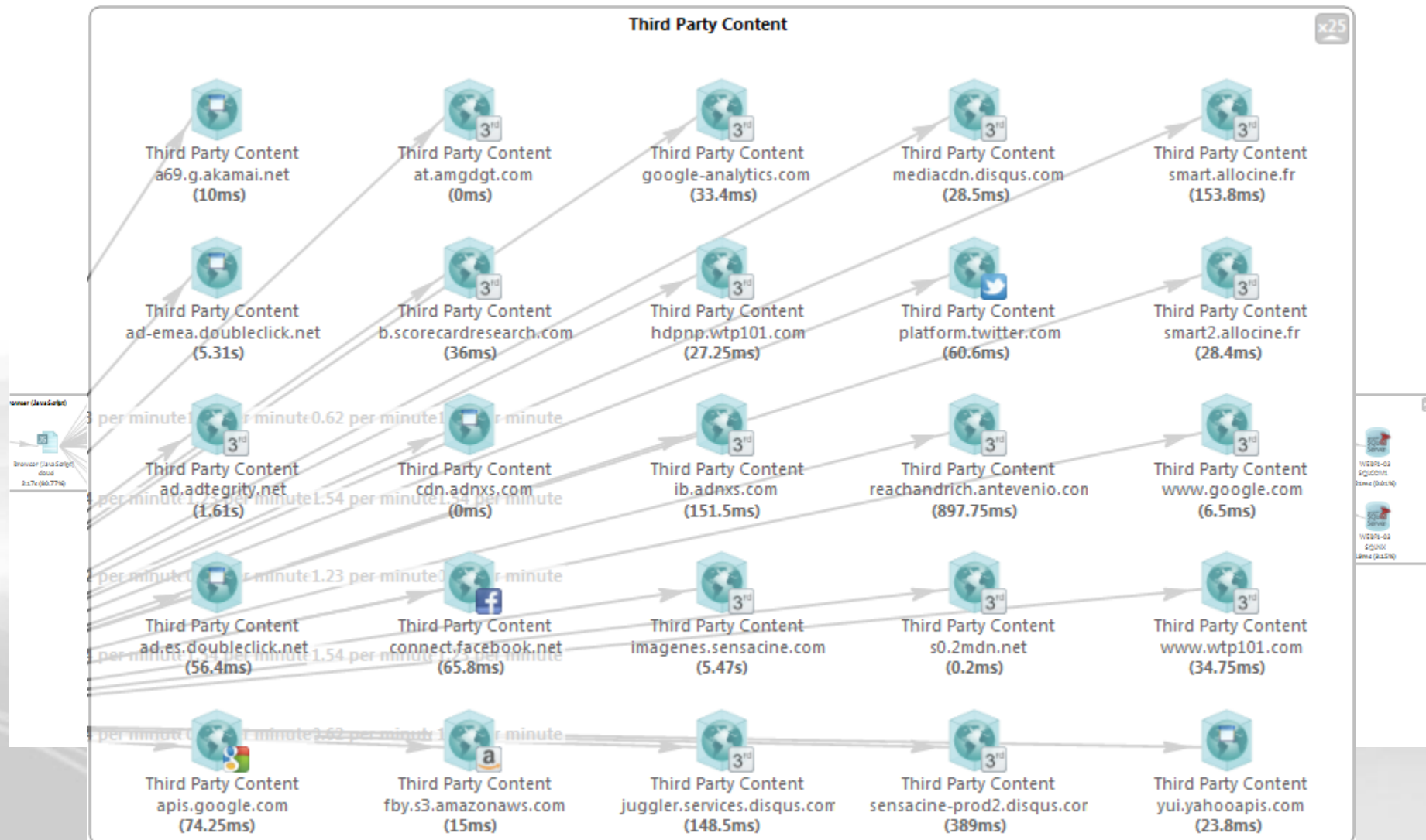
11 Comments



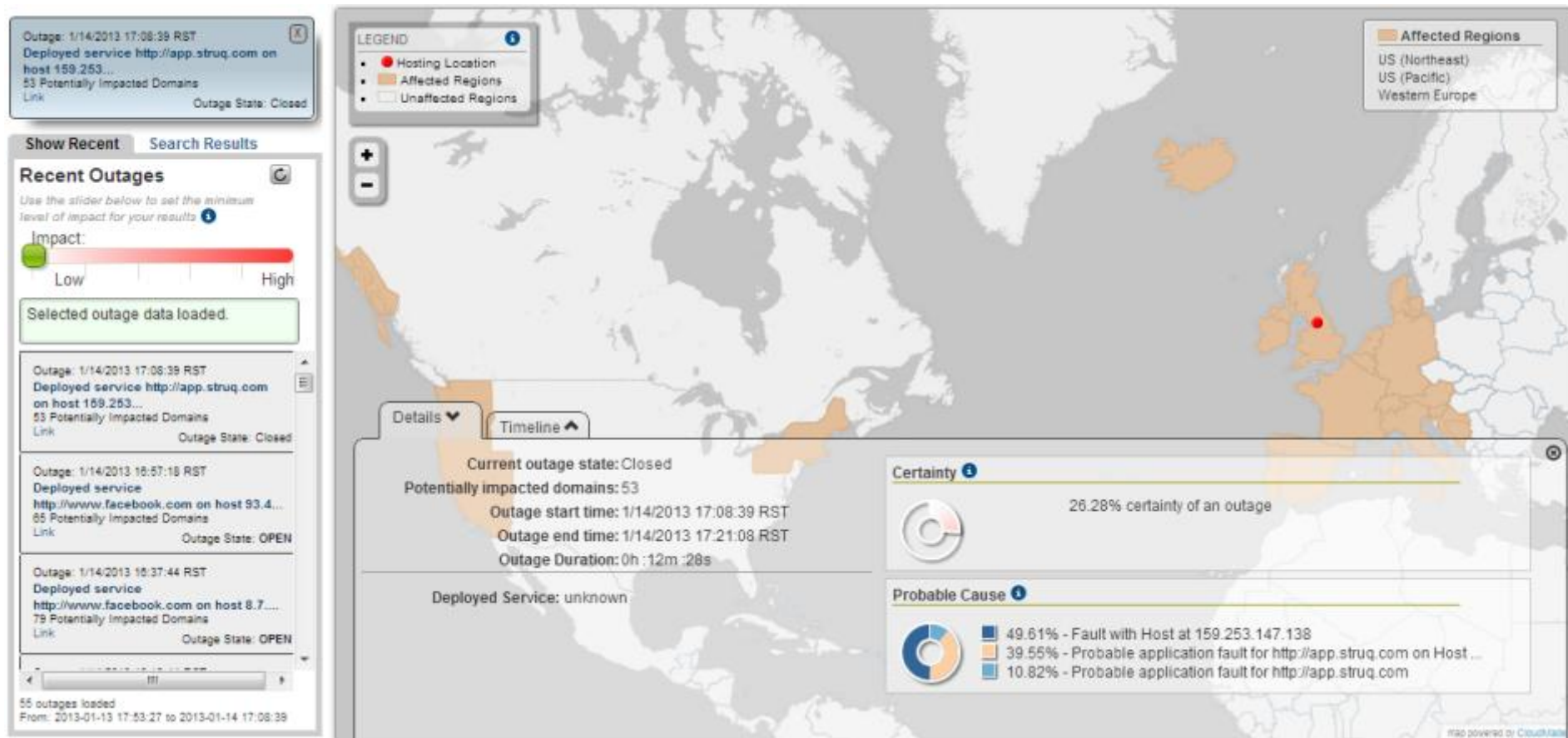
It's a testament to how important Facebook has become in the web ecosystem that the social network's **performance issues yesterday** didn't just affect the site itself (and its 900 million users) but also a wide variety of other sites as well. Performance monitoring company **Compuware APM**, which analyses the performance of thousands of top sites, just sent us some interesting data about how Facebook's problems yesterday correlated with significant slowdowns across major U.S. media and retail sites.

As our friends over at GigaOm **pointed out today**, "Facebook's faltering didn't lead to any

Analyse your 3rd party content

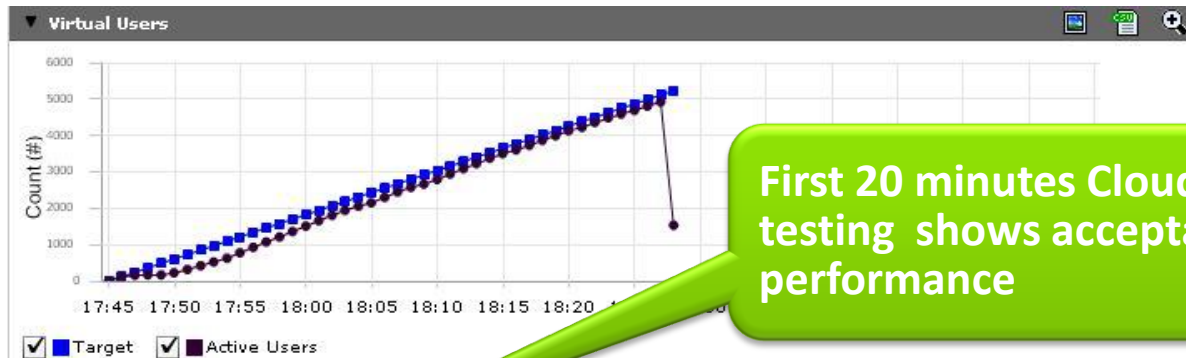


Monitor your 3rd party content



www.outageanalyzer.com

Load Test from the (right side of the) Cloud



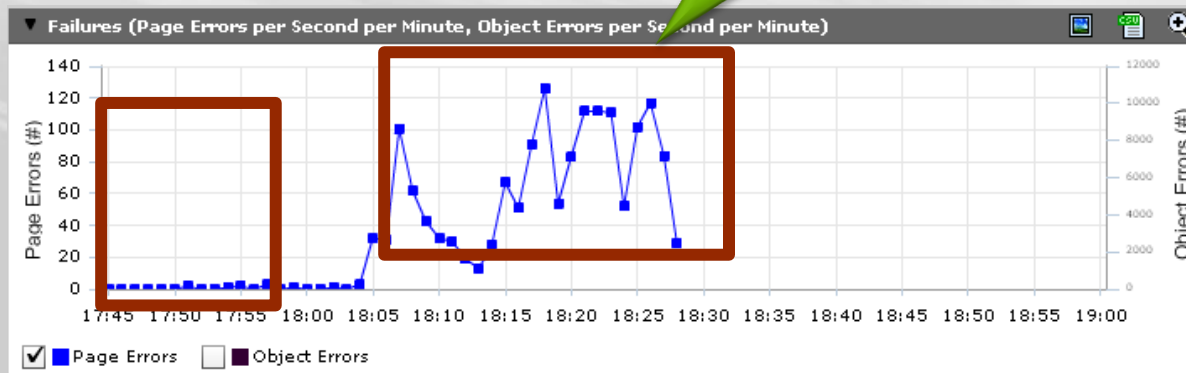
First 20 minutes Cloud testing shows acceptable performance



After 2500 users Response time climbs. Availability drops. Error rate climbs

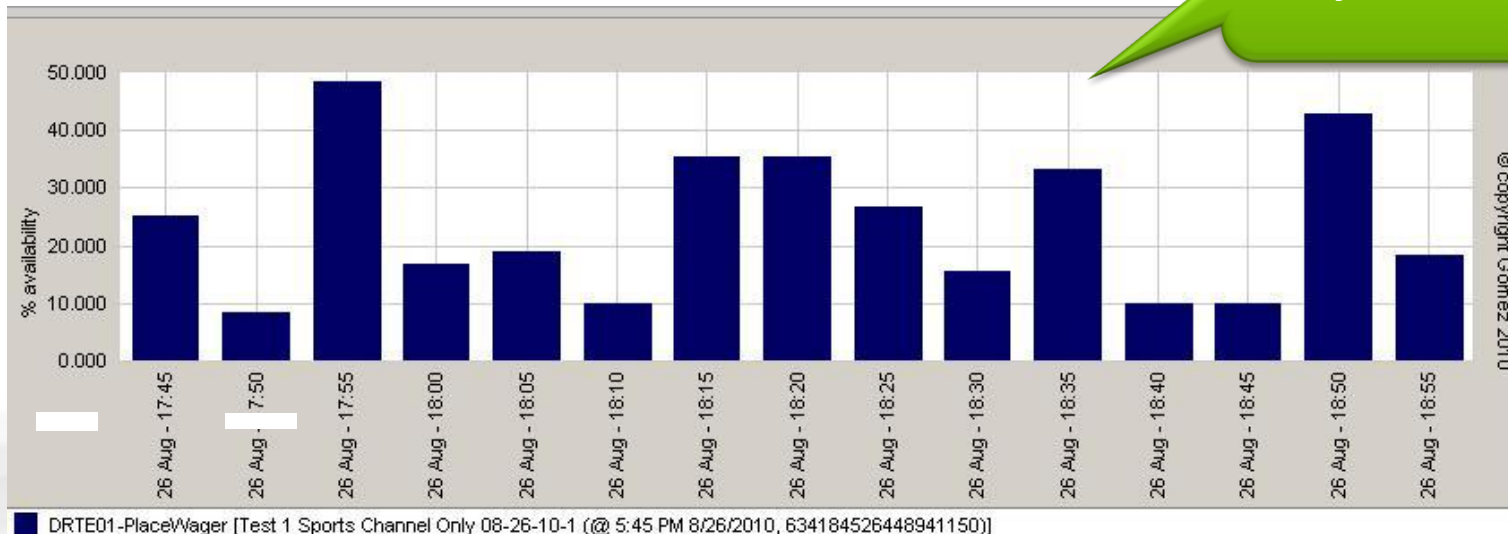
Active Successful Transaction Summary Information

Script Name	Min (Sec)	Avg (Sec)	Successful	Failed
-PlaceWager	11.523	53.585	38183	2018



Load Test from the (right side of the) Cloud

Last Mile shows different story



View: Time/Availability (line/bar) Component: End-to-end
Time Breakdown: 5 minutes Quick Filter: None

Availability is terrible even at minimal load for real users

Data Summary

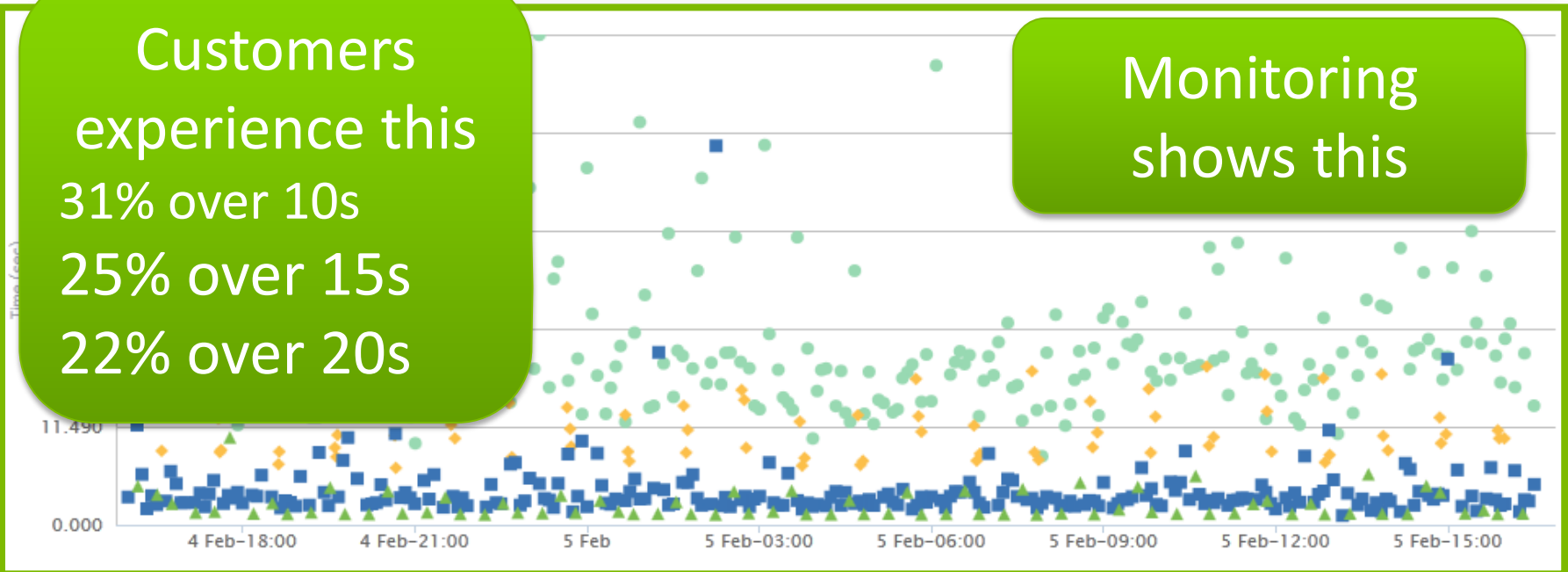
Update

Test Name	Avg Response Time (sec)	Availability (%)	Total Errors (#)	Total Tests (#)	Details
DRTE01-PlaceWager [Test 1 Sports Channel Only 08-26-10-1 (@ 5:45 PM 8/26/2010, 634184526448941150)]	148.232	24.47	179	237	 

Look at real transactions... not just the average one

Customers
experience this
31% over 10s
25% over 15s
22% over 20s

Monitoring
shows this



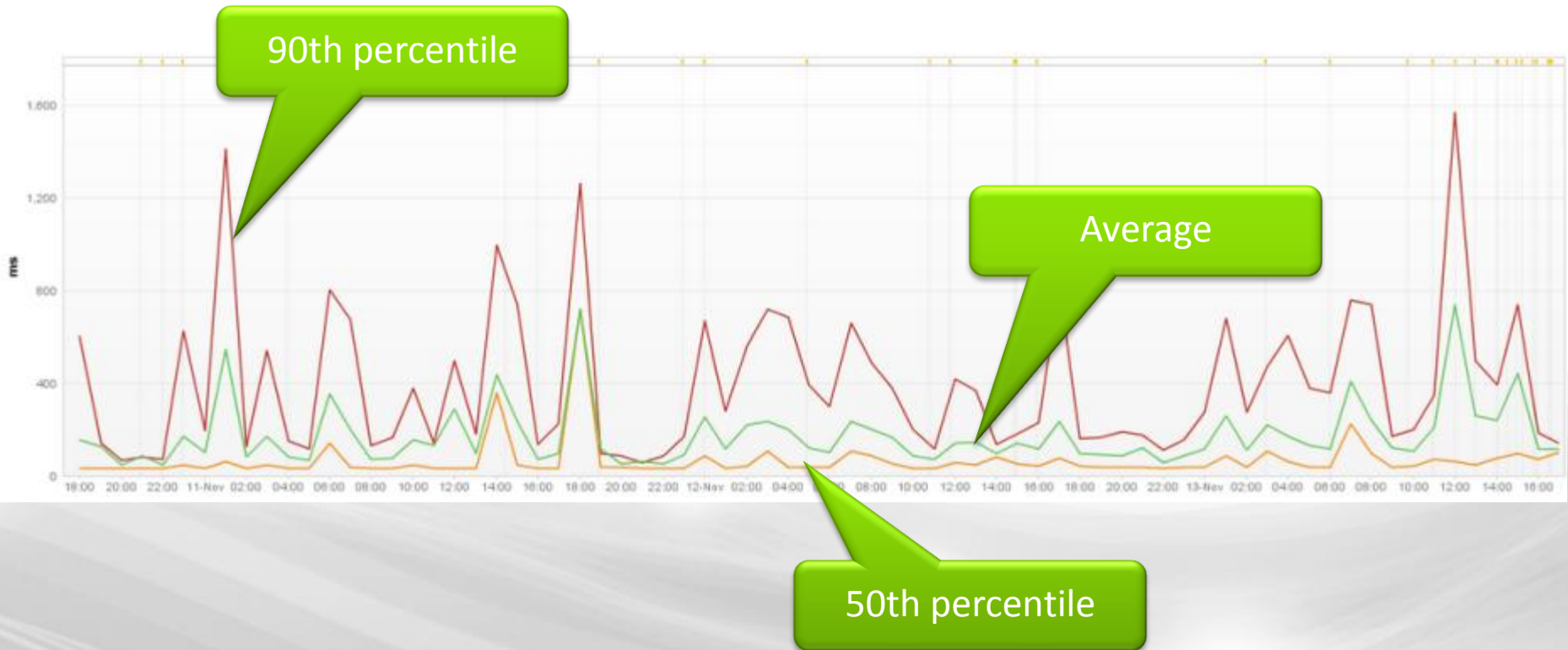
SLAs measure this

> Hide data

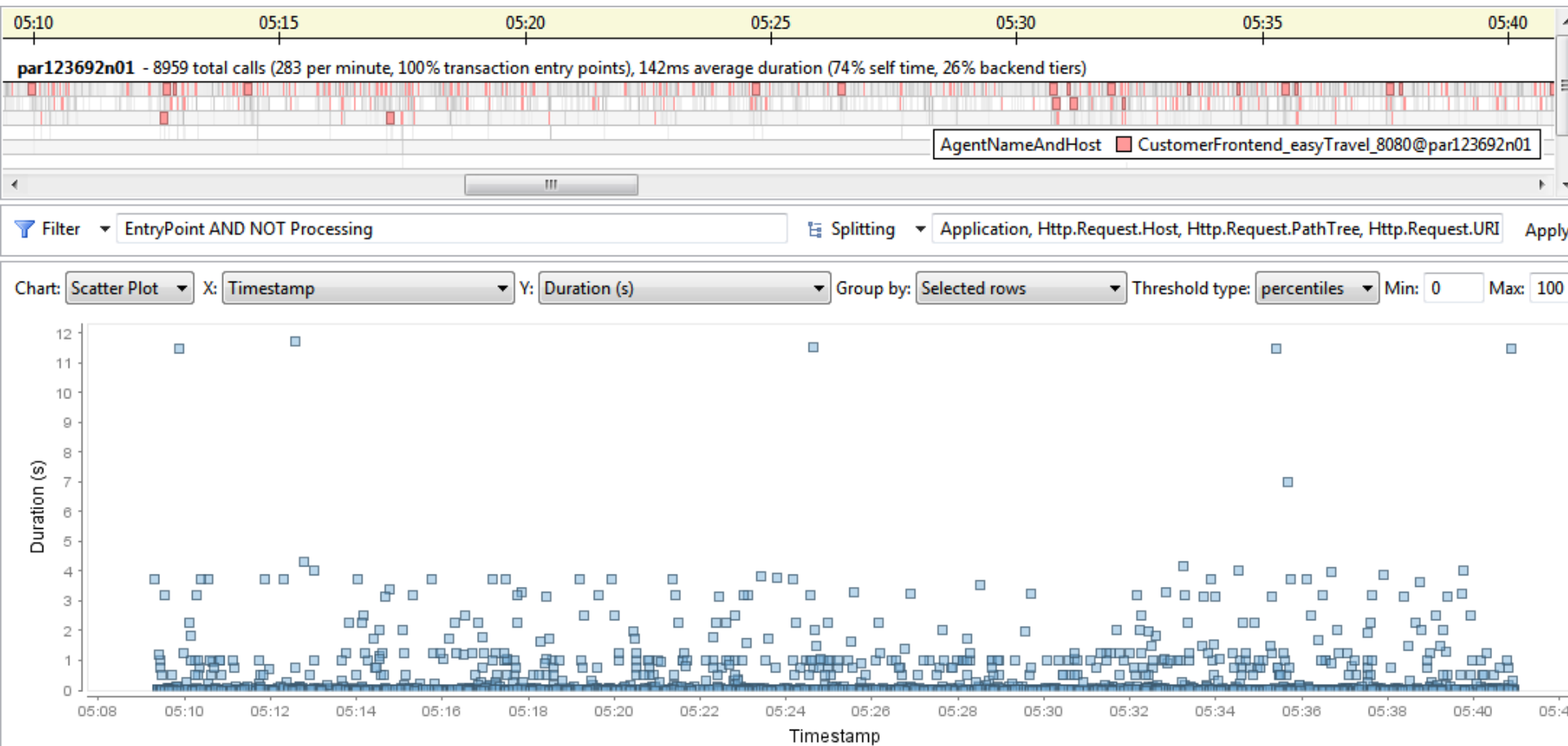
Click and drag in the plot area to zoom in.

Name		Average Response (sec)	Average Availability (%)	Product
Chicago		3.984	100.00	
Dallas		5.022	100.00	
Los Angeles		6.358	100.00	
New York		4.617	100.00	

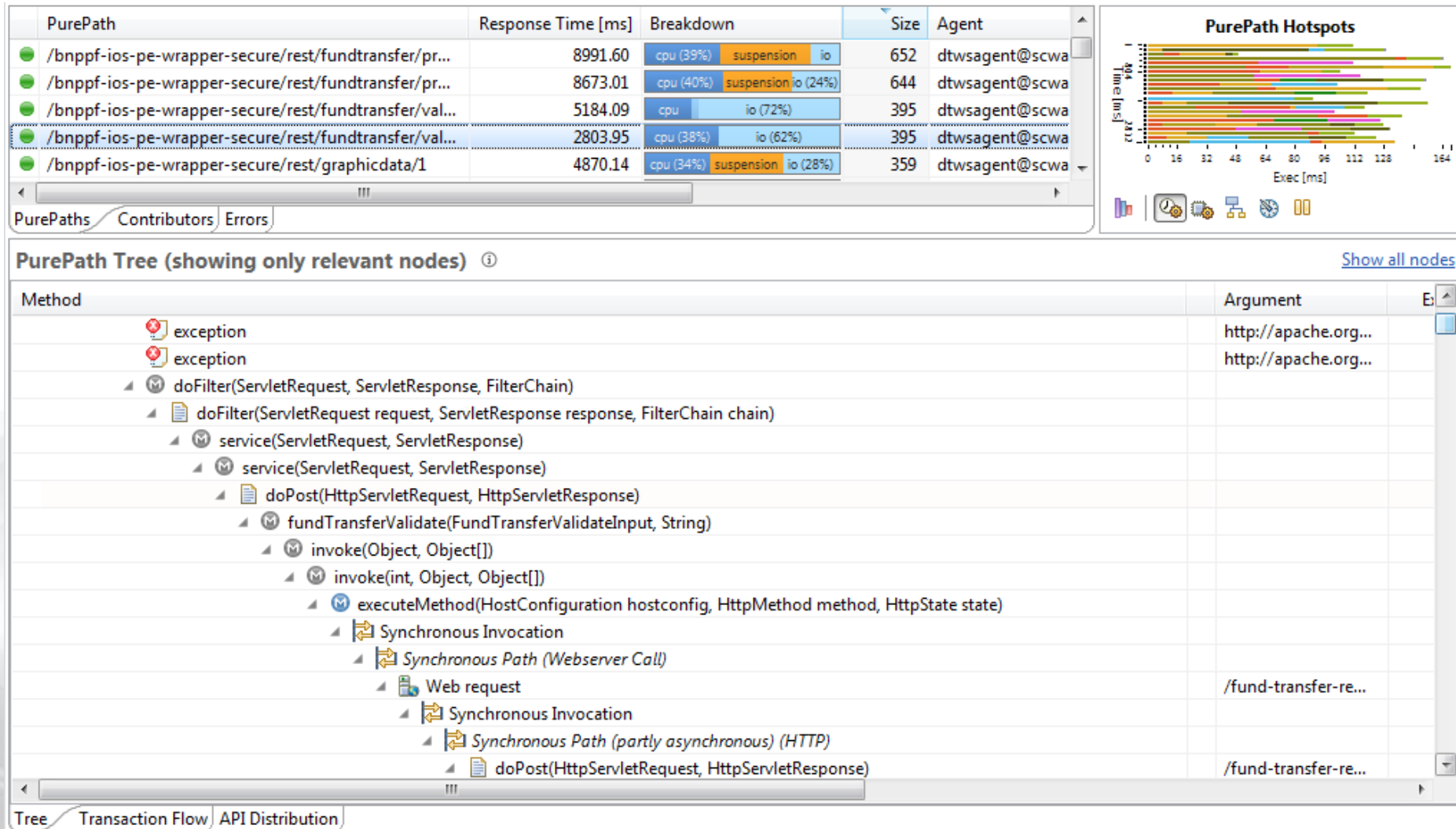
Look at real transactions... not just the average one



Look at real transactions... not just the average one

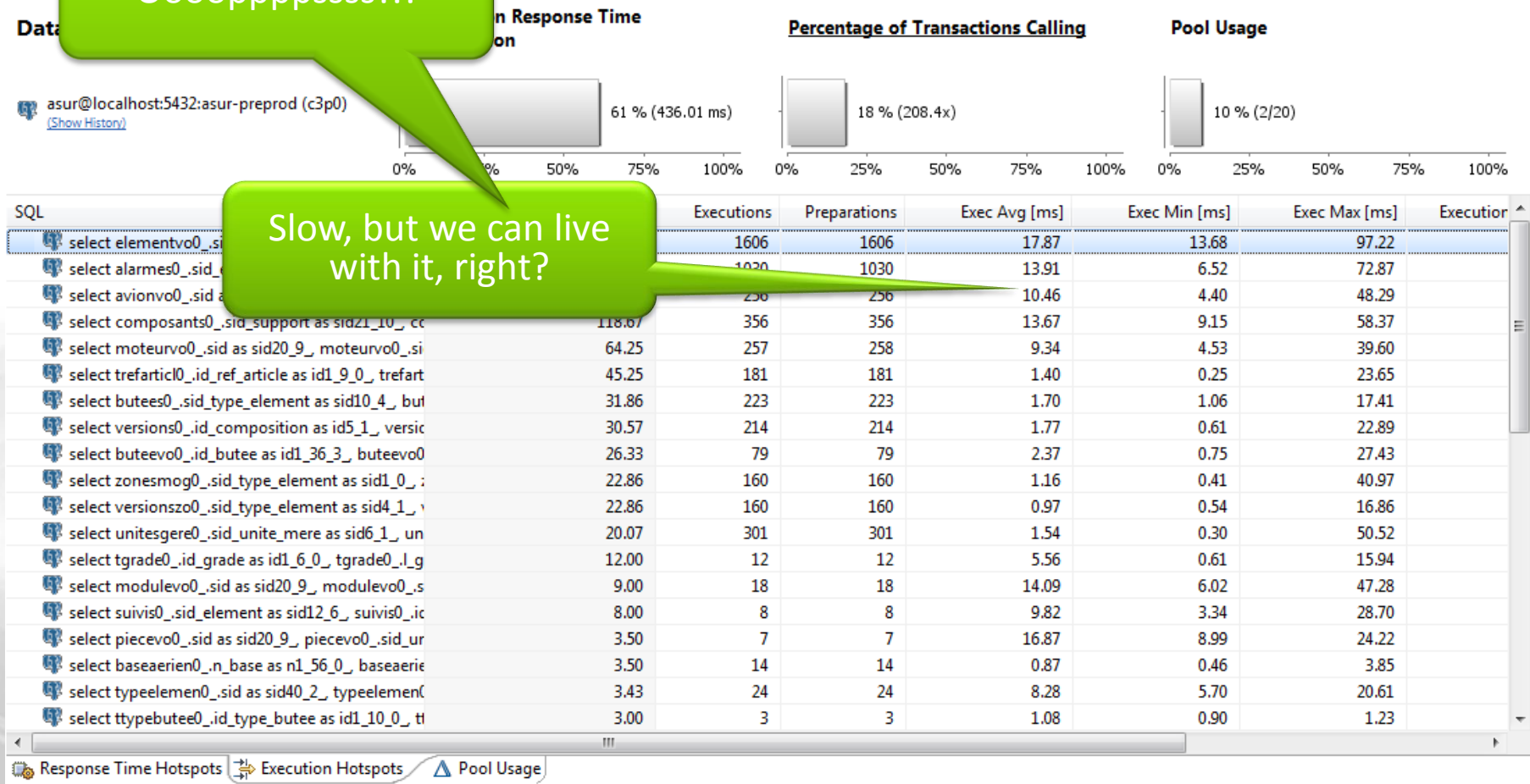


Look at real transactions... not just the average one



Look at real transactions... not just the average one

Oooopppssss!!!



Conclusion

- Analyze the client side
- Analyze & Monitor Cloud
- Analyze & Monitor
- Analyze

**Stop Monitoring
Start Managing the performance**

... and become the ops team best buddy