

# CDN

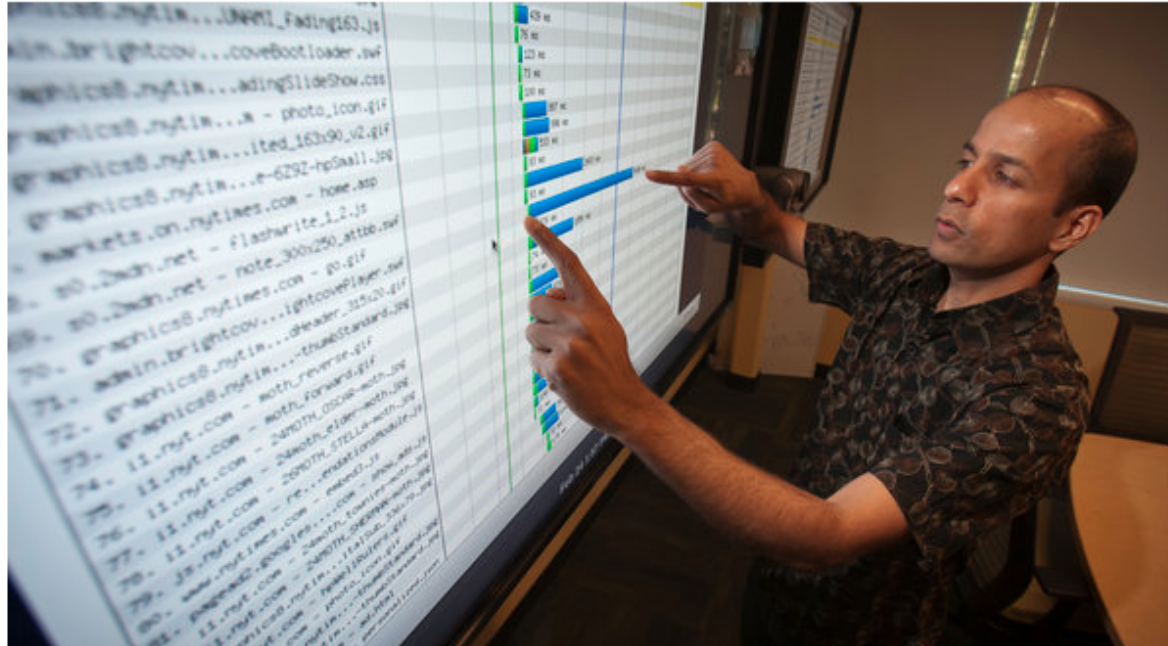
**INTRODUCTION**

**THE WHY + THE HOW**

# How fast is fast enough?

- Would you be satisfied if your site loads in
  - 1 second,
  - 2 seconds,
  - 3 seconds,
  - 4 seconds,
  - 5 seconds?

# For Impatient Web Users, an Eye Blink Is Just Too Long to Wait



Peter DaSilva for The New York Times

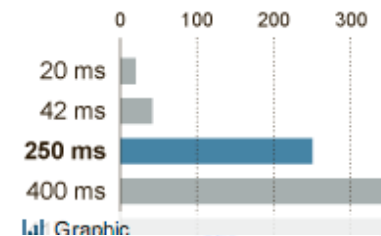
Arvind Jain, a Google engineer, pointed out the loading speed of individual elements of a website on a test application used to check efficiency, at Google offices in Mountain View, Calif.

By STEVE LOHR

Published: February 29, 2012 | 104 Comments

Wait a second.

## Multimedia



No, that's too long.

Remember when you were willing to wait a few seconds for a computer to respond to a click on a Web site or a tap on a keyboard? These days, even 400 milliseconds — literally the blink of an eye — is too long, as Google engineers have discovered. That barely

RECOMMEND

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LINKEDIN

COMMENTS  
(104)

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PRINT

SINGLE PAGE

REPRINTS

<http://www.nytimes.com/2012/03/01/technology/impatient-web-users-flee-slow-loading-sites.html>



People will visit a Web site less often if it is slower than a close competitor by more than **250 milliseconds**.



Foto: Dipl.-Ing. Volker Hilberg, Schwann-Puff-GmbH, Dostmünd

<http://www.heise.de/autos/artikel/Die-skurilsten-Eigenreparaturen-1717729.html>





# IN A FASTER FORWARD WORLD

Wir liefern 30 % des Web-Traffics und machen das Internet geschäftsfähig.

**Schnell. Verlässlich. Sicher.**



← NACHRICHTEN DI., 29 Okt. 2013 [GPSshopper Leverages Akamai Aqua Web Solutions to Accelerate and Optimize Both Mobile Apps and Web Sites Performance](#) →




Leistungsstärke der Intelligent Platform™ nutzen

[Initiative öffnen »](#)




Businessanwendungen und -Website optimieren und sichern.

[Cloud Services »](#)



Akamai Edge 7. bis 11. Okt., Washington, DC

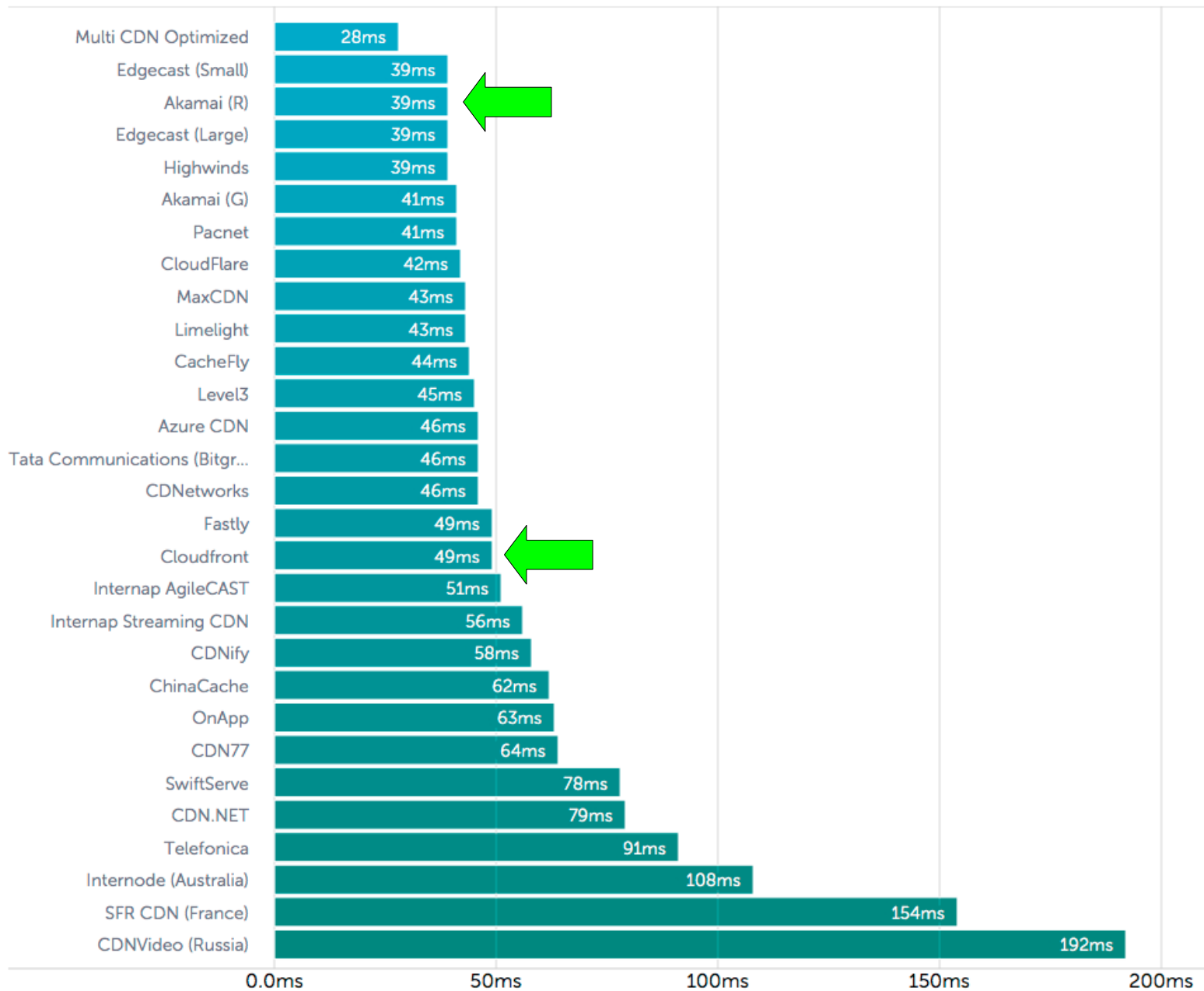
[Video Highlights »](#)



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# Median Response Time

Median response time in milliseconds (shorter is better)



<http://www.cedexis.com/country-reports/>



# Pricing



- Akamai: Fast, but intransparent individual pricing

# Pricing

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- AWS Cloudfront <http://aws.amazon.com/de/cloudfront/>
  - 0,009 \$ / 10.000 GET Requests (EU)
  - 0,12 \$ / GB for first 10 TB
  - ...
  - 0,02 \$ / GB beyond 5 PB

# Pricing

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- Google PageSpeed CDN <https://developers.google.com/speed/pagespeed/service>
  - free (officially limited free trial, but no limit found)

Services Edit Timon Schroeter Global Help

Navigation

- > **Distribution**
- Private Content
  - How-To Guide
  - Origin Access Identity

### CloudFront: Distributions

Create Distribution Distribution Settings Delete Enable Disable Show/Hide Refresh Help

Viewing: Any Delivery Method Any Status 1 to 1 of 1 Distributions

		Delivery M	ID	Domain Name	Comment	Origin	CNAMEs
<input type="checkbox"/>		Web	E3OA3GDA8TPL	d3oy8ukfowuv2n.cloudfront.net	-	www.php-schulung.de	-

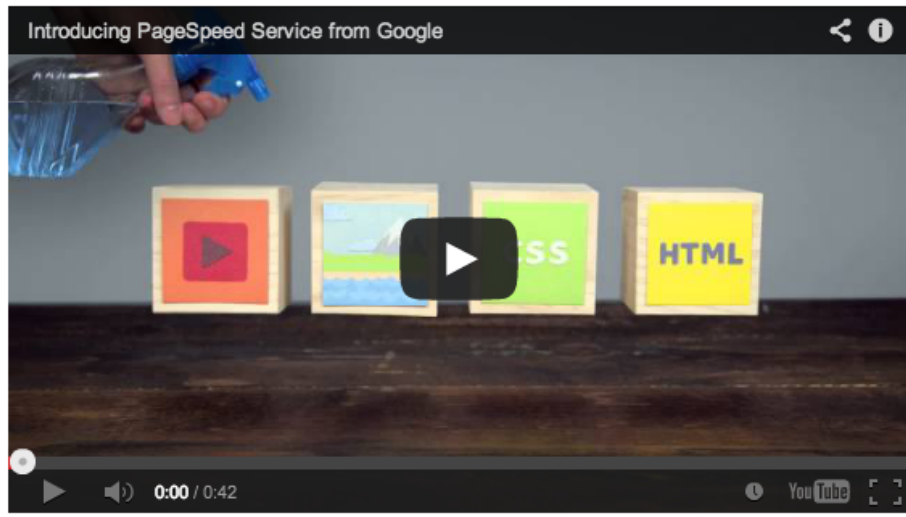
<https://console.aws.amazon.com/cloudfront/home?#distribution:>

PageSpeed Service +1 1.2k

- Overview
- PageSpeed
  - Analysis
  - Optimization
    - Service
      - Get Started
      - Resources
      - Pricing
      - Customer Gallery
    - Module
    - Optimization SDK
  - Public DNS
  - Hosted Libraries
  - Protocols & Standards
  - Best Practices
  - Community

# Turbocharge your web site with Google's PageSpeed Service

PageSpeed Service makes web pages load faster for your users.



[Sign up now](#)

- Limited free trial
- Quick and easy to set up
- Keep your edge with the latest optimization technologies
- Fast and secure with Google infrastructure
- Happier users, better conversion

[Measure speed increase](#)

Test how much faster your pages will load with PageSpeed Service

[Learn more](#)

Watch a short video that explains how PageSpeed Service works

[Customer testimonials](#)

See how PageSpeed Service is benefiting others

[Manage my account](#)

Access your account, for current customers

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<https://developers.google.com/speed/pagespeed/service>

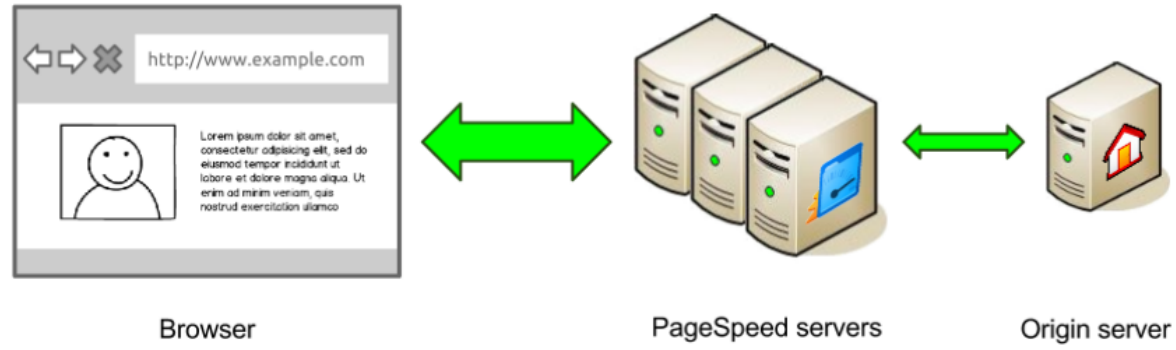
My Project ▼

- Overview
- Services
- Team
- API Access

**PageSpeed Service**

- Overview
- Configure Rewriters
- Bandwidth
- Caching and Errors
- Audit Log
- Block Requests
- Troubleshooting

[Setup Guide](#) [How-to Videos](#) [Contact Support](#)



Hosted By You	Served By Google	Status
browser-test.net	www.browser-test.net	Enabled <a href="#">(Run speed test)</a> X
php-entwickler-berlin.de	www.php-entwickler-berlin.de	Enabled <a href="#">(Run speed test)</a> X
work2enjoy.com	www.work2enjoy.com	Enabled <a href="#">(Run speed test)</a> X
php-schulung.de	www.php-schulung.de	Enabled <a href="#">(Run speed test)</a> X

<https://code.google.com/apis/console/>

# Results

- Show Video, Filmstrip from Disk
  - [http://www.webpagetest.org/result/130802\\_3A\\_77b47a](http://www.webpagetest.org/result/130802_3A_77b47a)
- Waterfalls
  - before:  
[http://www.webpagetest.org/result/130802\\_SR\\_bc205](http://www.webpagetest.org/result/130802_SR_bc205)
  - after:  
[http://www.webpagetest.org/result/130802\\_RT\\_d39df](http://www.webpagetest.org/result/130802_RT_d39df)

# PageSpeed CDN

- Optionally optimizes your content
- All the standard things like combine and minify CSS & JS etc.
- and a lot more ...



# Inline small resources



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[Documentation](#) [How-to Videos](#) [Contact Support](#)

If you encounter a serious problem with your sites, consider temporarily disabling all the rewriters.

[Disable all rewriters](#)

List of rewriter settings:

[Serve Resources through Google](#)

Apply updates from Google

[Inline small resources](#)

Apply updates from Google

This rewriter replaces references to small resources with its contents, for example it will replace

```

```

with

```

```

This will reduce the number of requests made to the server.

[Inline CSS](#) files that are smaller than  bytes

[Inline JavaScript](#) files that are smaller than  bytes

[Inline Images](#) referenced from HTML that are smaller than  bytes

and referenced from CSS that are smaller than  bytes

[Inline Image previews](#) for images greater than  bytes

[Inline Resized Mobile previews](#)

# Recompress & crop images

Configure Rewriters

Bandwidth

Caching and Errors

Audit Log

Block Requests

Troubleshooting

[⊕ Inline small resources](#)

[⊕ Prioritize Content](#)

[⊕ Optimize HTML](#)

[⊖ Optimize Images](#)

Apply updates from Google

Apply updates from Google

Apply updates from Google

Apply updates from Google

## Lossy Optimization:

[Recompress JPEG](#)

[Convert JPEG to WebP](#)

[Convert PNG & GIF to JPEG](#)

Quality for compressing images (0-100)  %

## Lossless Optimization:

[Lazyload Images](#)  On page load  On scroll

[Add dimensions](#)

[JPEG Color sub-sampling](#)

[Progressive JPEG](#)

[Recompress PNG](#)

[Remove meta data](#)

[Remove color profile](#)

[Resize on the server](#)

[Convert GIF to PNG](#)

[Resize image using rendered dimensions](#)

[⊕ Optimize CSS](#)

Apply updates from Google

[⊕ Optimize Javascript](#)

Apply updates from Google

# Load visible content first



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[Documentation](#) [How-to Videos](#) [Contact Support](#)

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[Disable all rewriters](#)

List of rewriter settings:

[Serve Resources through Google](#)

Apply updates from Google

[Inline small resources](#)

Apply updates from Google

[Prioritize Content](#)

Apply updates from Google

[Flush Resources Early](#)

[Pre-resolve DNS](#)

[Prioritize visible content](#)

[Cache HTML](#)

Specify non-cacheable parts

[Optimize HTML](#)

Apply updates from Google

[Optimize Images](#)

Apply updates from Google

[Optimize CSS](#)

Apply updates from Google

[Optimize Javascript](#)

Apply updates from Google

# Good options for experimenting

- AWS Cloudfront
- Google PageSpeed CDN

**Have fun!!!**



**Thank you  
for your attention!**



# Questions?

## Ideas, wishes, comments?