

Bachelorproef: Improving Drupal's page loading performance

Wim Leers

Promotor: Prof. dr. Wim Lamotte

Co-promotor: dr. Peter Quax

Begeleiders: Stijn Agten & Maarten Wijnants

Doel

- **Snellere websites**
 - Snelheid = tevredenheid = meer bezoekers

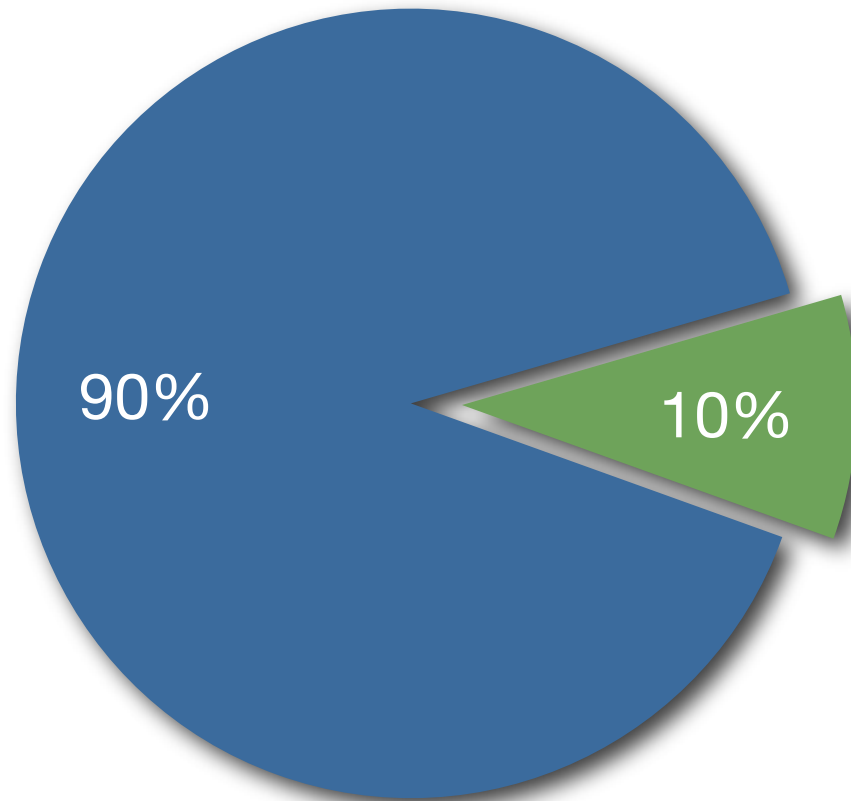


Doel

- **Snellere websites**
 - Snelheid = tevredenheid = meer bezoekers
- Google: +0.5s → -20% zoekacties



Terminologie: page loading performance



- CSS, JS, afbeeldingen ...
- HTML

Terminologie: CDN



Drupal



Drupal

- Systeem om websites mee te bouwen



Drupal

- Systeem om websites mee te bouwen
- Honderdduizenden websites



Drupal

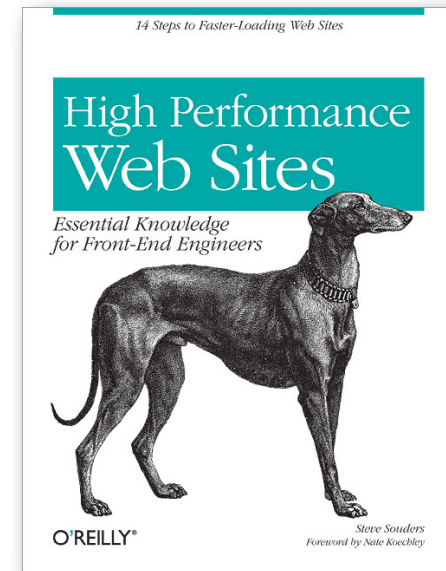
- Systeem om websites mee te bouwen
- Honderdduizenden websites
- Disney, Verenigde Naties ...



Drupal's page loading performance

- Eén van de meest effectieve maatregelen:

“Gebruik een CDN”

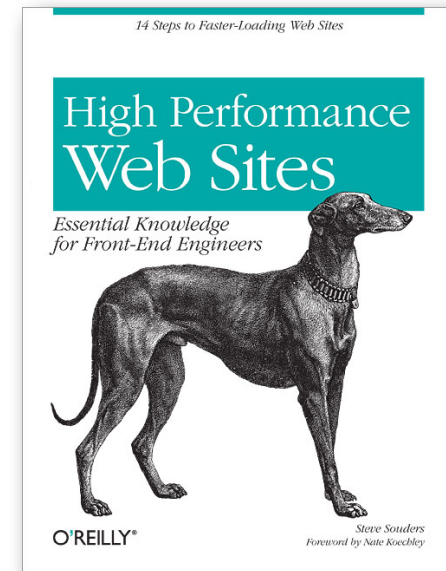


Drupal's page loading performance

- Eén van de meest effectieve maatregelen:

“Gebruik een CDN”

- *Drupal*: nog niet mogelijk!



Profiling: Episodes

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- Meet “episodes” bij het laden

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- **Reële metingen:** JS in browser, bij iedere bezoeker
- Geen simulatie!

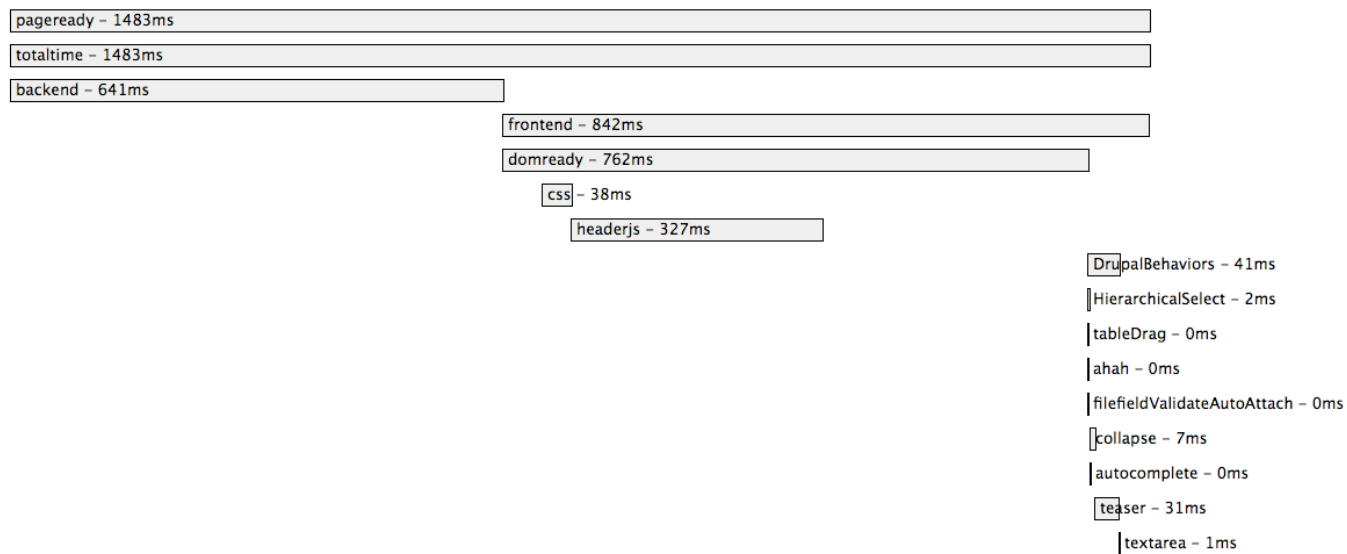
Episodes module

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- **Drupal module** die Episodes integratie toevoegt

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Episodes Server module

Episodes Server module

- **Drupal module** die verzamelde metingen visualiseert

Daemon

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4. **Syncing:** ondersteunt veel protocollen (FTP, Amazon S3 ...) — uitbreidbaar!

Daemon

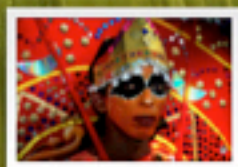
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5. **Resultaat:** SQLite DB met CDN URL's



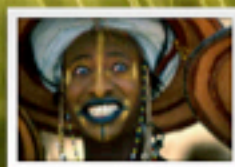
HD
249.88 GB, 167.58 GB free



monitored
No items



party.jpg
500 × 333



scary smile.jpg
500 × 333



traditional clothing.jpg
160 × 240

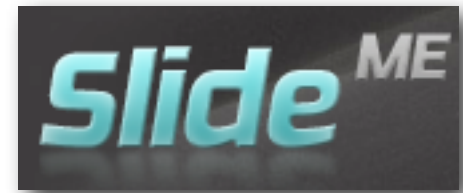
CDN integratie module

CDN integratie module

- **Drupal module**
 - Drupal core patch
 - CDN URL's (SQLite DB daemon)

Feedback

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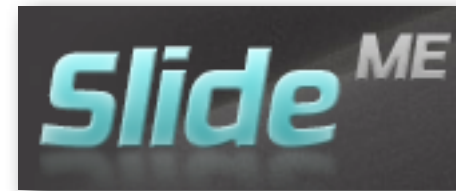
website: SlideME.org



website: workhabit.com

Feedback

- Zeer positief:



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- Zeer positief:
 - Over structuur van daemon:
“Clear and self-explanatory.”



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Feedback

- Zeer positief:
 - Over structuur van daemon:
“Clear and self-explanatory.”
 - Effectief gebruik waarschijnlijk



website: SlideME.org



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Test case

The screenshot shows a web browser window with the address bar displaying "News | DriverPacks.net". The website header features the "DriverPacks.net" logo on the left and a green banner on the right that reads "RÉPARER WINDOWS Prévenir les erreurs de Windows" with a "GRATUITEMENT" button and the URL "www.Quad-Cleaner.com". Below the header is a navigation menu with buttons for "News", "Downloads", "Forum", "Bugtracker", "Well-known users", "About", and "Donate".

The main content area is highlighted in yellow and contains the following text:

What are the "DriverPacks"?

Each DriverPack is a package of drivers that fit a certain category. There are for example DriverPacks for Sound devices and for Graphics devices. For each of these DriverPacks we include *every* device driver of that category. On top of that, we solve tricky problems — such as driver conflicts — for you.

They are intended to be used while creating a Windows 2000, XP, 2003 or Vista (and soon Windows 7) installation disc/image. We also provide you with the software to make that as simple as possible.

We've built this to **simplify the lives of network administrators and employees of pc shops**, but also enthusiast pc users.

Sounds cool? Then explore our [downloads](#) and come and say hi in our [forum](#)!

On the right side of the page, there is a "Latest DriverPacks" section with tabs for "XP", "Vista", and "7". Below the tabs is a list of links:

- [Chipset 9.02](#)
- [Mass Storage 9.01](#)
- [Graphics A 8.12.1](#)
- [Graphics B 8.12.1](#)
- [Graphics C 8.12.1](#)

Below the list is a message: "Welcome from *Belgium!* For the fastest experience, you are downloading the images, CSS and JS from our static file server in Belgium." Below this is a status bar showing "35 online".

At the bottom left, there is a "New site live!" announcement:

New site live!

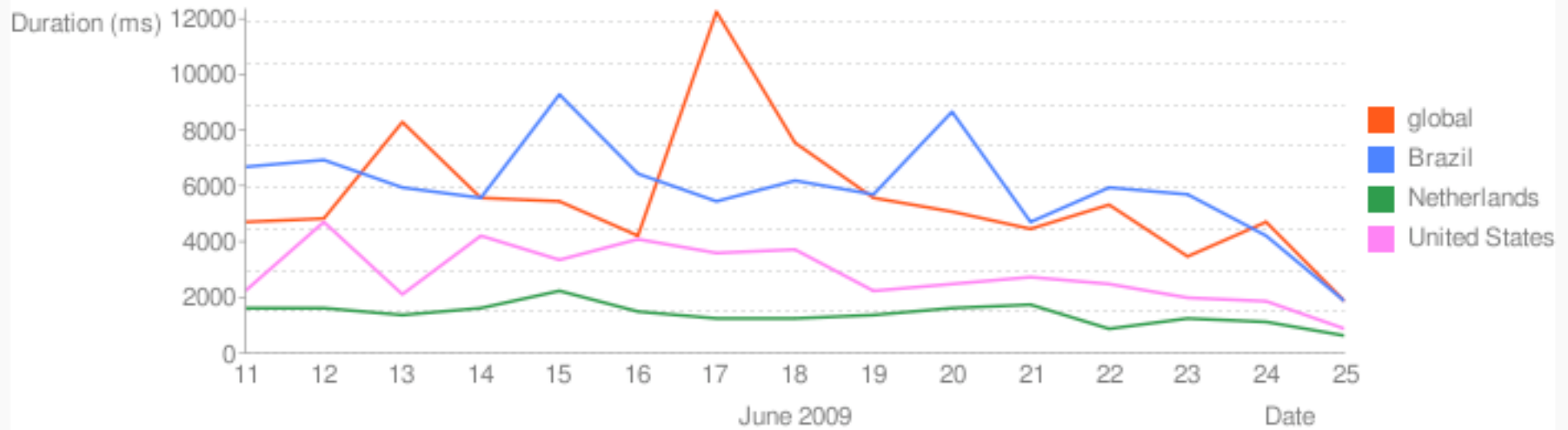
Posted on Thu, 06/11/2009 - 03:14 by [Wim Leers](#)

Finally the time has come! The new web site went live today!

At the bottom right, there is a "save on Delicious" widget with the following tags: windows drivers software unattended xp installation tools hardware slipstream driver. It shows that it has been saved by 548 others.

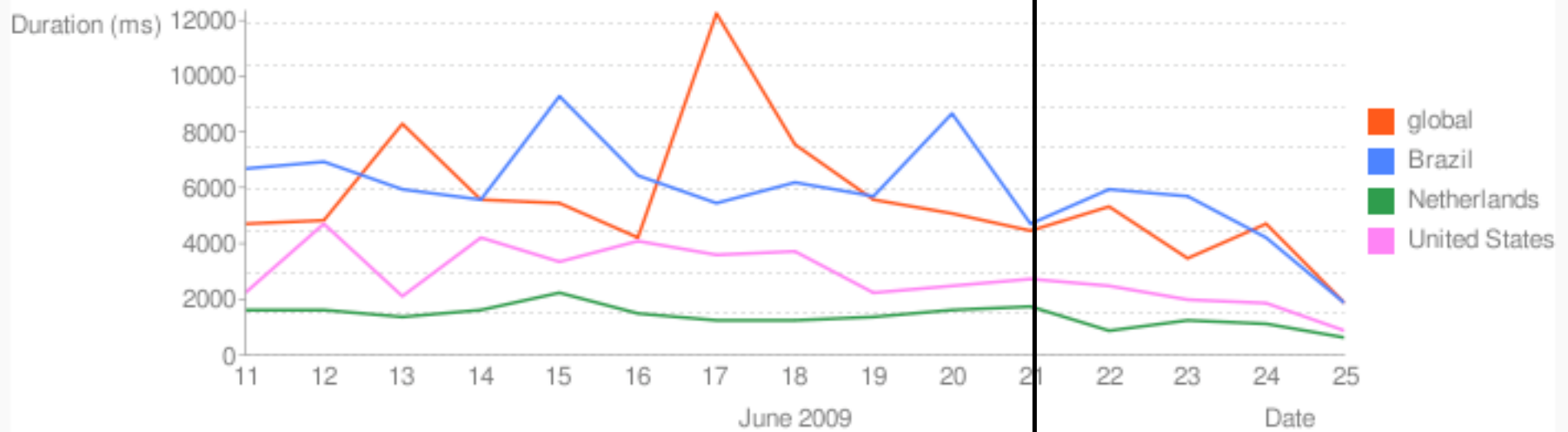
Test case

Comparison of frontend episodes



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Conclusie

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2. Episodes → page loading performance monitoren

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1. Snelheid website zeer belangrijk
2. Episodes → page loading performance monitoren
3. Daemon → flexibele CDN-integratie