



green
open source
hosting

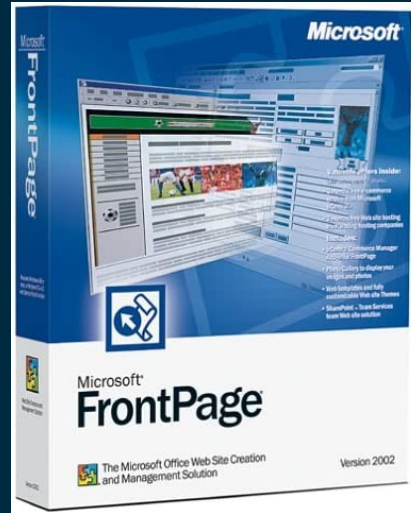
Sustainable websites & Sustainable Business

Ramon Fincken – CEO Halvar.io

DrupalCon
BARCELONA 2024
24-27 SEPTEMBER



About me



yourdomain.com
A little text to describe your forum

PHPBB3
Creating Communities

You last visited on 03 Aug 2009 06:38 am
The time now is 03 Aug 2009 06:38 am
yourdomain.com Forum Index

Forum	Topics	Posts	Last Post
Test category 1			
Test Forum 1 This is just a test forum.	1	1	23 Oct 2009 12:01 am Meow →

Mark all forums read

Who is Online
All times are GMT

Our users have posted a total of 1 article
We have 1 registered user
The newest registered user is Meow

In total there is 1 user online :: 1 Registered, 0 Hidden and 0 Guests
Most users ever online was 1 on 03 Aug 2009 06:38 am
Registered Users: Meow

This data is based on users active over the past five minutes

New posts | No new posts | Forum is locked

Powered by phpBB © 2001, 2005 phpBB Group

http://get.adobe.com/flashplayer

Your account | Contact | United States (Change)

Solutions | Products | Support | Communities | Company

Home / Downloads / Flash Player

Adobe Flash Player

Download Adobe Flash Player

Adobe Flash Player
Macintosh OS X
Different operating system or browser?
Learn more | System requirements | Distribute

Flash Player version 10.0.42.34
66 MB

```
650 * @type array $category_net_in An array of category IDs (NOT in).
660 * @type string $category_name Use category slug (not name, this or any children).
661 * @type array|int $comment_count Filter results by comment count. Provide an integer to match
662 * comment count exactly. Provide an array with integer 'value'
663 * and 'compare' operator ('=', '>', '>=', '<', '<=') to
664 * compare against comment_count in a specific way.
665 * @type string $comment_status Comment status.
666 * @type int $comments_per_page The number of comments to return per page.
...
2146 }
2147 }
2148 // Matching by comment count.
2149 if ( !isset( $q['comment_count'] ) ) {
2150 // Numeric comment count is converted to array format.
2151 if ( !is_numeric( $q['comment_count'] ) ) {
2152 $q['comment_count'] = array(
2153 'value' => intval( $q['comment_count'] ),
2154 );
2155 }
2156 }
2157 if ( !isset( $q['comment_count']['value'] ) ) {
2158 $q['comment_count'] = array_merge( array(
2159 'compare' => '=',
2160 ), $q['comment_count'] );
2161 }
2162 // Fallback for invalid compare operators is '='.
2163 $compare_operators = array( '=', '>', '>=', '<', '<=' );
2164 if ( ! in_array( $q['comment_count']['compare'], $compare_operators, true ) ) {
2165 $q['comment_count']['compare'] = '=';
2166 }
2167 }
2168 $where .= $wpdb->prepare( " AND ( $wpdb->posts.comment_count { $q['comment_count']['compare'] } %d",
2169 $q['comment_count']['value'] );
2170 }
2171 // MIME-Type stuff for attachment browsing
```



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What this talk is not about



<https://www.imdb.com/title/tt0701083/mediaviewer/rm2559510528/>



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What this talk is about

```
isVideo = ( type == "image" ) || ( !isImage ) || ( !isImage );  
isUrl = ( type == "url" ) || ( !isImage );  
isElement = ( type == "element" ) || ( !isImage );  
isObject = ( typeof subject == "object" );  
  
// Check if boxer is already active, return default  
if ( $("#boxer").length > 1 || ( !isImage || !isVideo ) )  
    return;  
}  
  
// Kill event  
_killEvent(e);  
  
// Cache internal data  
data = $.extend({}, {  
    $window: $(window),  
    $body: $("body"),  
    $target: $target,  
    $object: $object,  
    visible: false,  
    resizeTimer: null,  
    touchTimer: null,  
    gallery: {  
        active: false  
    }  
});
```



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But first, the dictionary

“Capable of being maintained or continued at a certain rate or level.”

“Designating forms of human activity (esp. of an economic nature) in which environmental degradation is minimized, esp. by avoiding the long-term depletion of natural resources”



Let's start with websites (Because building stuff is awesome)

```
switch (true) {  
  case $shorts && !$videos:  
    $command .= '/shorts';  
    break;  
  
  case !$shorts && $videos:  
    $command .= '/videos';  
    break;  
}
```

When I wrote this code,
only God & I understood what it did.



Now...
only God knows.

ProgrammerHumor.io



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How CPU (processor) speed and PHP really work



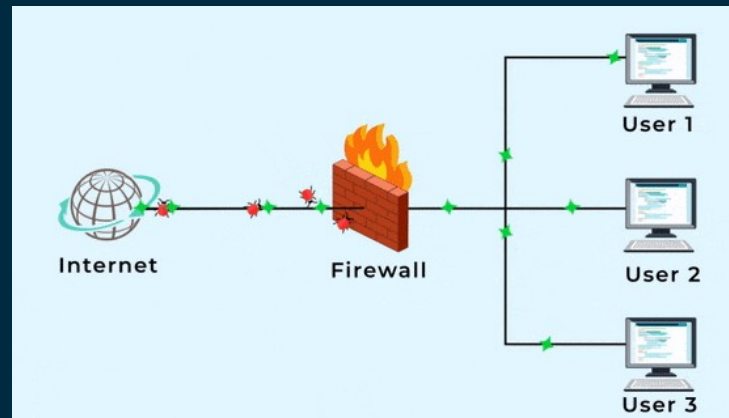
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Therefore, next to smart code:

Use PHP APC/Opcache, redis/Valkey, varnish,
CDN, ..

But also internet and content firewalls



<https://www.simplilearn.com/tutorials/cyber-security-tutorial/what-is-firewall>

And .. smart code!



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Making your code smart more sustainable

```
<?php  
  
if( some_very_slow_function() && $var_that_might_exist ) {  
    // Do stuff here  
}
```

```
<?php  
  
if( $var_that_might_exist && some_very_slow_function()) {  
    // Do stuff here  
}
```



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Cache ~~all~~ the expensive things!

Next to Page Cache and Dynamic Page Cache,
→ D8 has CacheableDependencyInterface

[Max-age, context and tags] === 'your friend'

Info and examples:

<https://www.drupal.org/docs/drupal-apis/render-api/cacheability-of-render-arrays>

<https://www.drupal.org/docs/8/api/cache-api/cacheable-dependency-interface-friends>

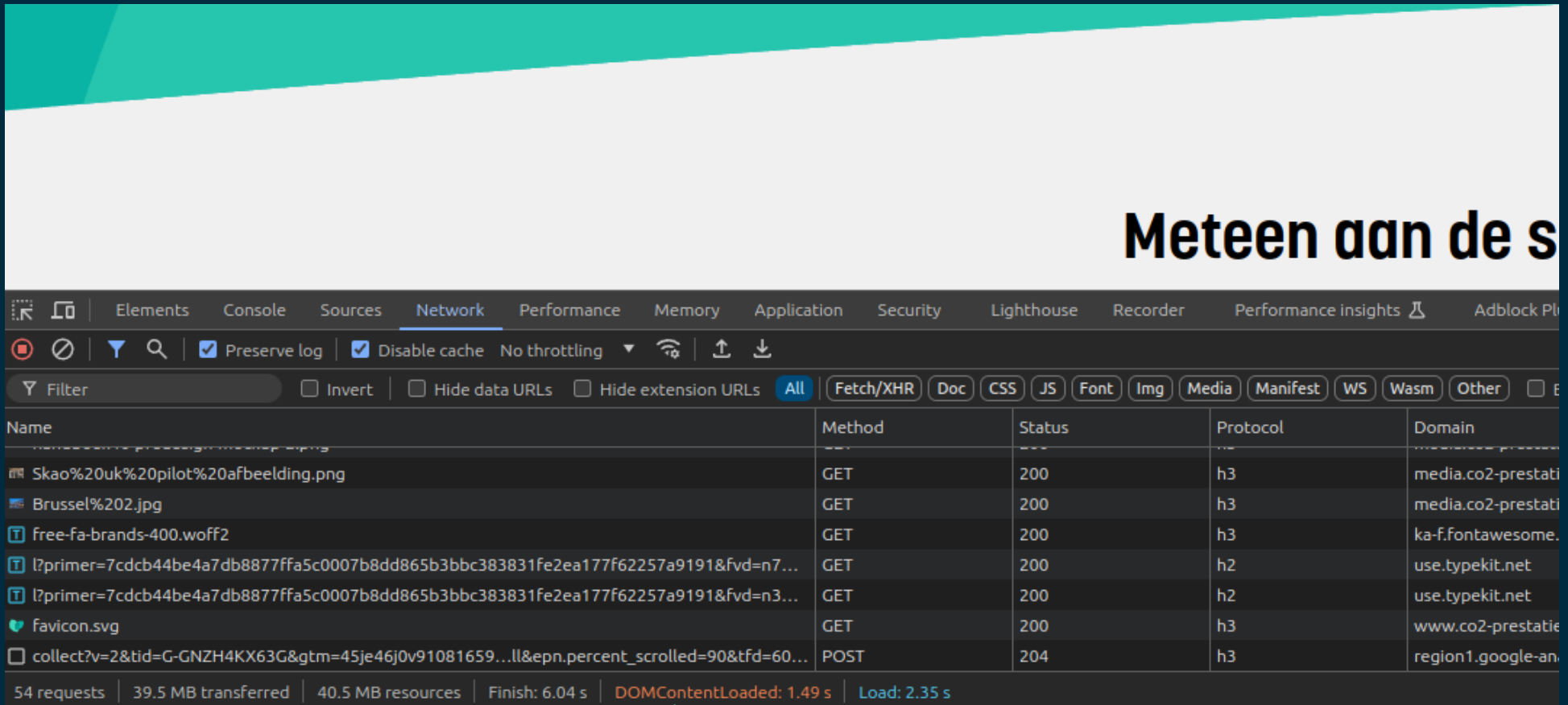
<https://www.drupalatyourfingertips.com/caching>



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Low hanging fruit (aka doing stuff right)



The screenshot shows the Network tab of a browser's developer tools. The page title is "Meteen aan de s". The network log shows several resources loaded, including images and fonts. The summary at the bottom indicates 54 requests, 39.5 MB transferred, 40.5 MB resources, a finish time of 6.04 s, and a DOMContentLoaded time of 1.49 s. Two arrows point from the DOMContentLoaded and 40.5 MB resources values to the bottom right corner of the slide.

Name	Method	Status	Protocol	Domain
Skao%20uk%20pilot%20afbeelding.png	GET	200	h3	media.co2-prestati
Brussel%20.jpg	GET	200	h3	media.co2-prestati
free-fa-brands-400.woff2	GET	200	h3	ka-f.fontawesome.
l?primer=7cdcb44be4a7db8877ffa5c0007b8dd865b3bbc383831fe2ea177f62257a9191&fvd=n7...	GET	200	h2	use.typekit.net
l?primer=7cdcb44be4a7db8877ffa5c0007b8dd865b3bbc383831fe2ea177f62257a9191&fvd=n3...	GET	200	h2	use.typekit.net
favicon.svg	GET	200	h3	www.co2-prestati
collect?v=2&tid=G-GNZH4KX63G>m=45je46j0v91081659...ll&epn.percent_scrolled=90&tfid=60...	POST	204	h3	region1.google-an.

54 requests | 39.5 MB transferred | 40.5 MB resources | Finish: 6.04 s | **DOMContentLoaded: 1.49 s** | Load: 2.35 s



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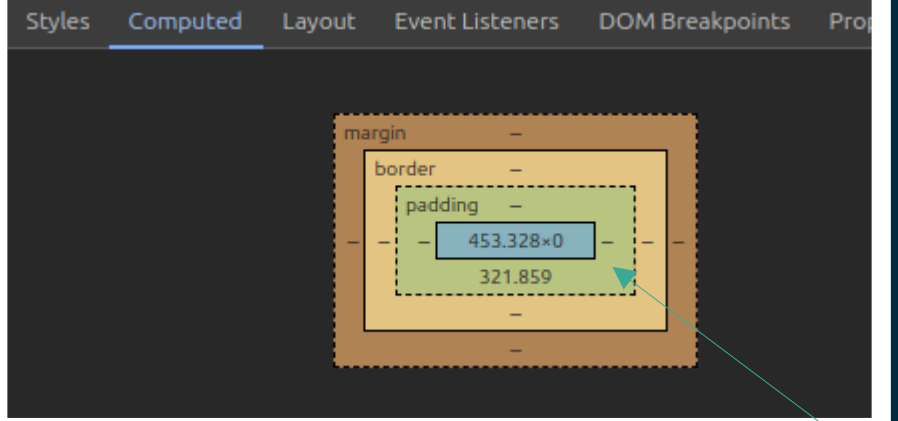
20 juni 2024 12:16

HEIJMANS INTRODUCERT AFVALMONITOR IN SAMENWERKING MET RENEWI



11 juni 2024 12:00

VAN TIENTALLEN MAATREGELEN NAAR EEN DOELGERICHT PLAN RICHTING NUL UITSTOOT



EMISSIES VOOR BOUWSEC

Prestatieladder

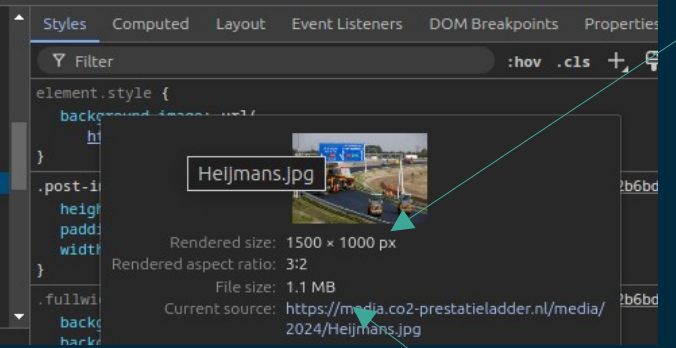
Meld je aan

Console Sources Network Performance Memory Application Security Lighthouse Recorder Performance insights Adblock Plus

```
tial-block numblock-2 "></div>
-->
tial-block numblock-3 "></div>
tainer">
ontainer center"></div>
rid-list"> grid
"item-grid news-item" style="position:relative">
/nl/news-item/heijmans-introduceert-afvalmonitor-samenwerking-met-renewi">
ss="post-image" style="background-image:url(https://media.co2-prestatieladder.nl/media/2024/Heijmans.jpg)"> </div> == $0

="post-tags"> </div>
="post-image-text"></div>

"item-grid news-item" style="position:relative"></div>
"item-grid news-item" style="position:relative"></div>
no-dupe-container dupe-grid-16 dupe-item-grid-news-item dupe-post-image
```



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Could'nt resist to calculate a single image

You can CDN all you want but ... you are still sending 1.500.000 pixels (1500*1000 pixels) **1.1 MB** filesize per image.

That is presented at .. 148.584 pixels (453*328 pixels) which is 10 times less pixels.

I have done some maths on that size:

png	= 285 kb (4 times smaller)
jpg 90%	= 71.7 kb (15 times smaller)



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So ...

→ Panda/Smush is nice but ... *please* select/upload the (approx.) pixels you intend to use

→ Where possible: webp/avif formats

→ Use a green webhost (and I mean really green, not just green energy)

Question: Does anyone know why green power is easy ?

→ Use caching (remember Varnish and CacheableDependencyInterface and friends)



Gear, goodies and promotion materials



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Gear, goodies and promotion materials



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Traveling has a big impact

Single trip Amsterdam – Barcelona

Total Bus & Rail Footprint = 0.01 tonnes of CO₂e [Offset Now](#)

Total Flights Footprint = 0.35 tonnes of CO₂e [Offset Now](#)

1 stop
5 hr 55 min LTN
165 kg CO₂e
+53% emissions ⓘ

Nonstop
98 kg CO₂e
-9% emissions ⓘ



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Make it easy on yourself:

- Buy a train off-peak-hours subscription
- Install the flixbus app (or any other)
- Pick your hotel near your congress venue, or well connected with public transport
- Offset your travels and ICT via Justdiggitt (or any other)

Ramon Fincken (Halvar vm223)

Congratulations on giving the coolest gift

5 BUNDS

Congratulations! You've just given the coolest gift possible: a water bund or as we also like to call it, an earth smile. A water bund is a half-moon shaped pit that captures rainwater, which allows seeds in the soil to sprout and vegetation to grow back. They are dug by communities in our project areas in Kenya. This positively benefits the livelihood of the communities, water availability, biodiversity, food security – and eventually our climate. Because, a greener planet is a cooler planet!

BEFORE

AFTER

YOUR IMPACT:

- 10500 LITRES
- 620m²



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The party sustainability goes on

If you have any questions, ask me now, visit our stand (win great ANC headphones), or email us: **hei @ halvar.io**

We will make time to discuss your sustainable challenges and show you way more than we could on stage today :)



<https://www.halvar.io/s/dc2024/>



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Halvar hosting

GDPR / AVG / DSGVO-safe Open Source hosting that is also **200 % sustainable**.

Go crazy with installing whatever you want:

Drupal, Symphony, WordPress, Cake,
Matomo, PhpBB, your custom CMS, ..

We even offer pure static HTML hosting.



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How do we get to the 200% green energy match?

For all details see <https://www.halvar.io/faq/>

100% green power is the easy part

Each VM gets justdiggitt bunds (up to 10500 litres of water that can be retained and 620m² of refreened land).

Our laptops are second hand so as some of our serverparts.



How do we get to the 200% green energy match? (cont.)

For all details see <https://www.halvar.io/faq/>

We travel by train and bus (Amsterdam – Turins as well).

We have 1 NFC / QR business card each.

Even our bank (ASN bank) is only investing in sustainable projects.

