

Mehr Performance für WordPress

Walter Ebert

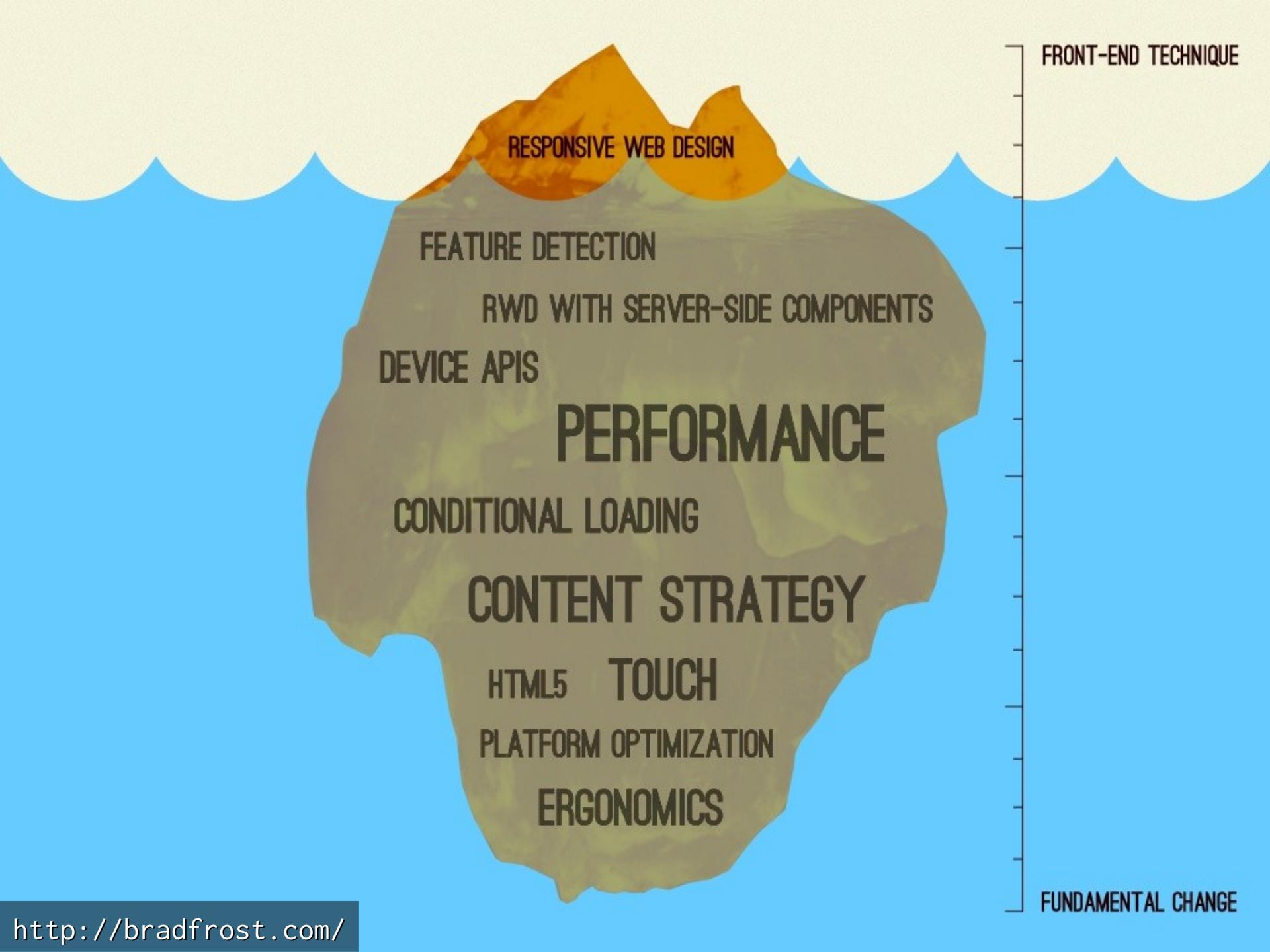
WordCamp Köln
6./7. Juni 2015



@wltrd

walterebert.de

slideshare.net/walterebert

A graphic of a large, textured brown rock floating in blue water. The rock has several concepts written on its surface. In the top right corner of the slide, there is a vertical scale with horizontal tick marks, labeled "FRONT-END TECHNIQUE" at the top and "FUNDAMENTAL CHANGE" at the bottom.

FRONT-END TECHNIQUE

RESPONSIVE WEB DESIGN

FEATURE DETECTION

RWD WITH SERVER-SIDE COMPONENTS

DEVICE APIs

PERFORMANCE

CONDITIONAL LOADING

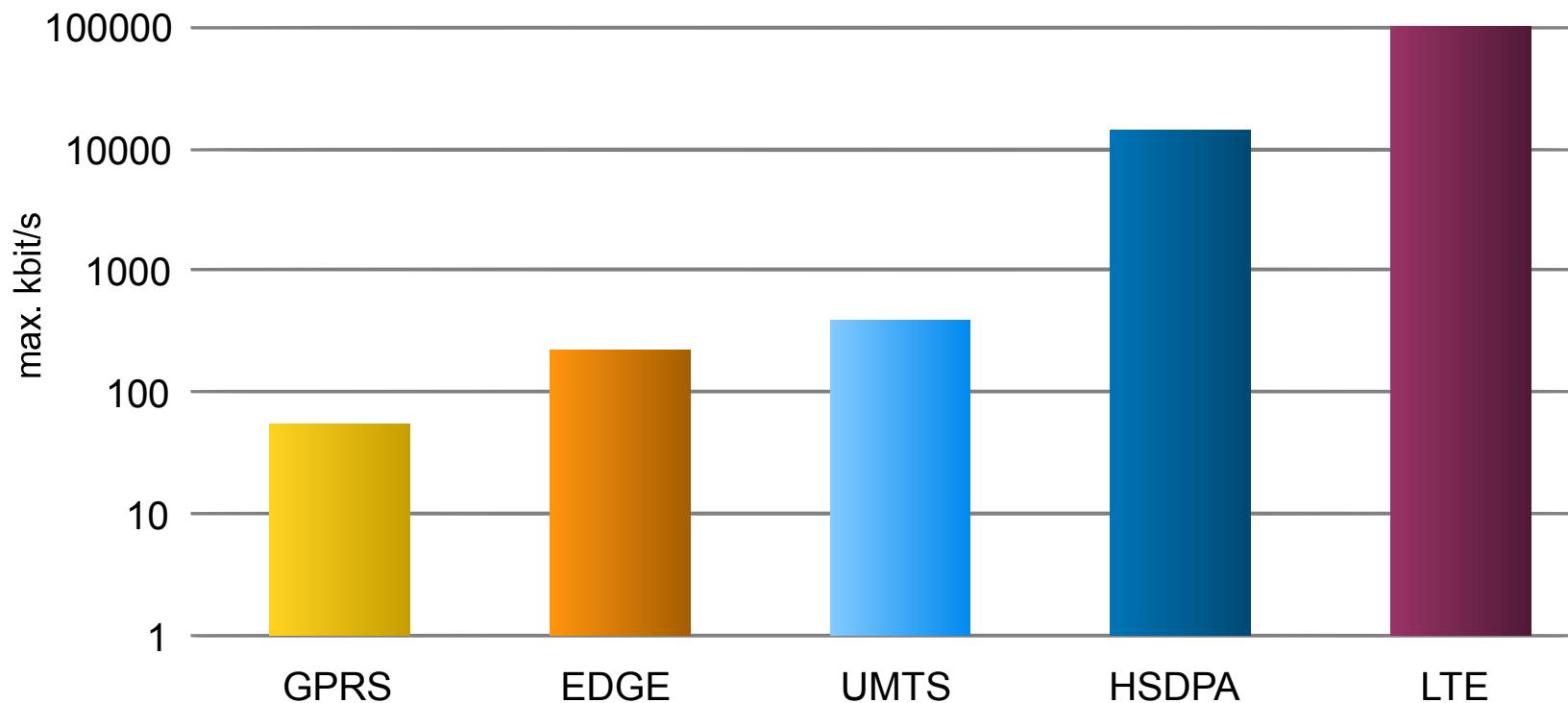
CONTENT STRATEGY

HTML5 TOUCH

PLATFORM OPTIMIZATION

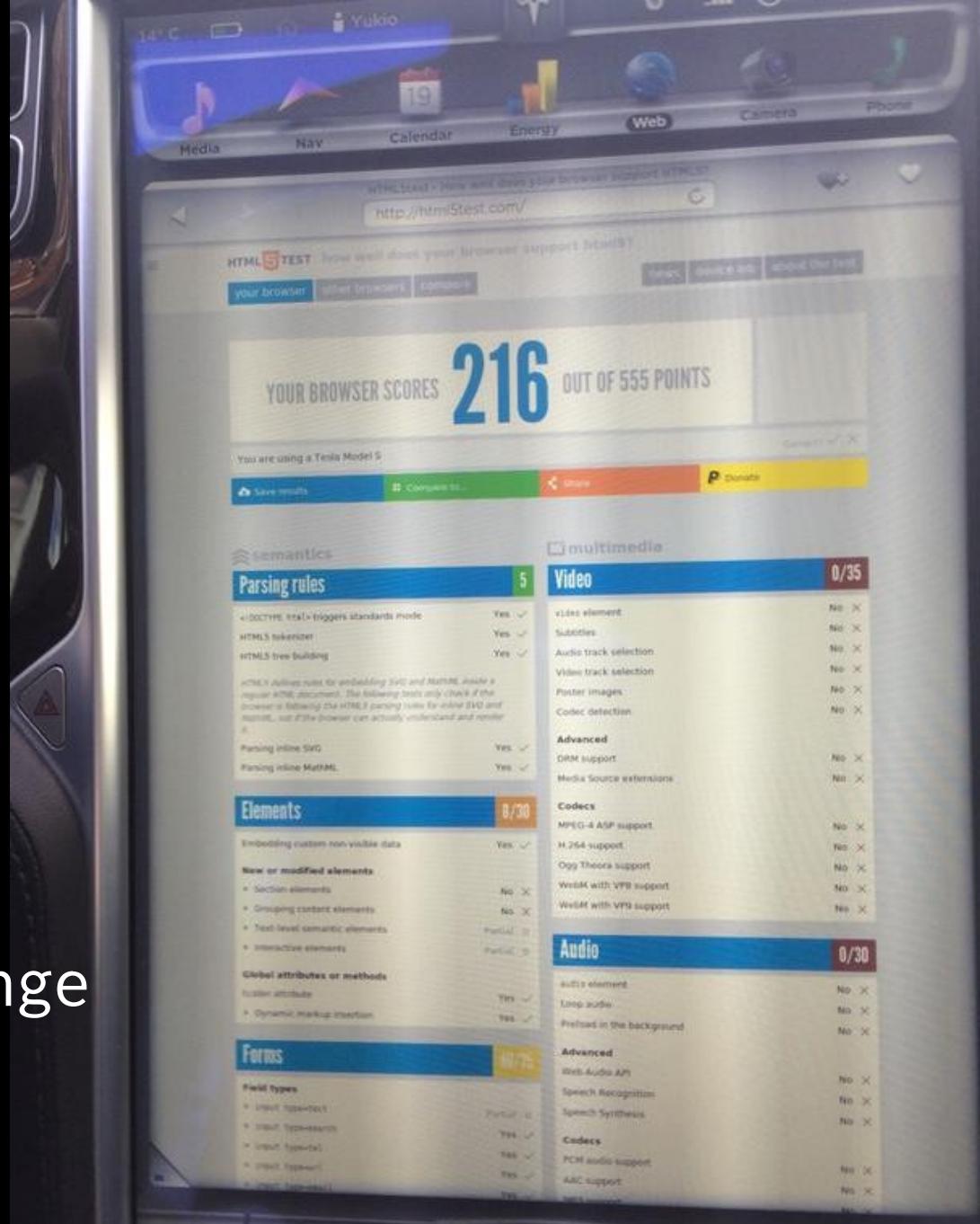
ERGONOMICS

FUNDAMENTAL CHANGE



Nicht nur Mobile

- Autos
- Smart-TVs
- Spielekonsolen
- TV-Sticks
- Smart Watches
- Internet der Dinge



https://twitter.com/klick_ass/status/600714520881963009



PageSpeed Insights

g+1



Mobil



Desktop

0 / 100 Übersicht über die Vorschläge

! Behebung erforderlich:

Bilder optimieren

► Fehlerbehebung anzeigen

Komprimierung aktivieren

► Fehlerbehebung anzeigen

Browser-Caching nutzen

► Fehlerbehebung anzeigen

**! Behebung empfohlen:**

JavaScript- und CSS-Ressourcen, die das Rendering blockieren, in Inhalten "above the fold" (ohne Scrollen sichtbar) beseitigen

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

PageSpeed Insights



Mobile



Desktop

100 / 100 Speed Congratulations! No issues found.

Avoid landing page redirects

Your page has no redirects. Learn more about [avoiding landing page redirects](#).

Eliminate render-blocking JavaScript and CSS in above-the-fold content

You have no render-blocking resources. Learn more about [removing render-blocking resources](#).

Enable compression

You have compression enabled. Learn more about [enabling compression](#).

Leverage browser caching

You have enabled browser caching. Learn more about [browser caching recommendations](#).

Minify CSS

Your CSS is minified. Learn more about [minifying CSS](#).

Minify HTML

Your HTML is minified. Learn more about [minifying HTML](#).

Walter Eber

search

home

blog

too

code

about

co

Changing the

WordPress Ma

Upload File Si

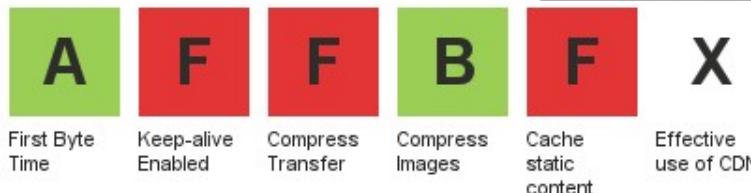
5 April 2015

Default settings for up
usually pretty low. The
maximum upload size i
In WordPress you also
upload size, but it can

Web Page Performance Test for

wpmeetup-frankfurt.de/
From: Falkenstein, Germany - Chrome - Cable

4/4/2015, 2:34:27 PM

**Summary****Details****Performance Review****Content Breakdown****Domains****Screen Shot**

Tester: OWNEROR-C62UVK9-88.198.118.27

[Re-run the test](#)[Raw page data](#) - [Raw object data](#)[Export HTTP Archive \(.har\)](#)[See in ShowSlow](#)[View Test Log](#)

	Load Time	First Byte	Start Render	<u>Speed Index</u>	DOM Elements	Document Complete			Fully Loaded			
						Time	Requests	Bytes In	Time	Requests	Bytes In	Cost
First View	2.214s	0.194s	1.494s	1514	516	2.214s	26	459 KB	2.488s	26	467 KB	\$----
Repeat View	0.458s	0.770s	0.589s	589	516	0.458s	1	0 KB	0.945s	1	7 KB	



WordPress › Blog Tool, P ×

https://wordpress.org

Device: Apple iPhone 6 Plus Network: Good 3G (1 Mbps 40ms RTT)

UA: Mozilla/5.0 (iPhone; CPU iPhone OS 8_0 like Mac OS X) AppleWebKit/536.26 (KHTML, like Gecko) Version/8.0 Mobile Safari/536.26

0 100 200 300 400 500

100

200

300

400

500

600

WORDPRESS.ORG

Search WordPress.org

Ready to get started? Download WordPress

Plugin Description

bbPress bbPress is forum... Activate | Edit | Delete Version 2.5.1 |

BuddyPress Social networking power and flexibility... Deactivate | Edit | Settings | About Version 1.8.1 |

Hello Dolly This is not just famously by... Activate | Edit | Delete

WordPress is web software you can use to create a beautiful website or blog. We like to say that

https://developer.chrome.com/devtools/docs/device-mode

Elements Network Sources Timeline Profiles Resources Audits

Preserve log Disable cache

Name Path	Met...	Status Text	Type	Initiator	Size Content	Time Latency
quant.js secure.quantserve.com	GET	200 OK	appl...	(index):214	3.3 KB 7.7 KB	228.91 ms
data:application/x-...	GET	200 OK	appl...	jquery.js?	0 B 24.1...	19 ms
wp-header-logo-2x.png?1 s.w.org/style/images	GET	200 OK	ima...	jquery.js?	15.7... 15.4...	794.90 ms
admin-bar-sprite.png?d=20... s.w.org/wp-includes/images	GET	200 OK	ima...	jquery.js?	2.7 KB 2.4 KB	174.98 ms
cb=gapi.loaded_0 apis.google.com/_/scs/app...	GET	200 OK	text/...	platform.j...	39.7... 112...	1.54... 116...
cb=gapi.loaded_1 apis.google.com/_/scs/app...	GET	200 OK	text/...	platform.j...	21.0... 56.3...	1.02... 130...
fastbutton?usegapi=1&size... apis.google.com/se/0/_/+1	GET	200 OK	text/...	platform.j...	7.1 KB 21.5...	491.176...
steps-2x.png s.w.org/style/images	GET	200 OK	ima...	jquery.js?	5.5 KB 5.2 KB	391.130...
codeispoetry-2x.png?1 s.w.org/style/images	GET	200 OK	ima...	jquery.js?	5.5 KB 5.2 KB	373.130...
pixel;r=1643780477;a=p-18... pixel.quantserve.com	GET	200 OK	ima...	wordpress...	287 B 35 B	133.132...
b-X-ojsTHeh.js fbstatic-a.akamaihd.net/rsr...	GET	200 OK	appl...	like.php?a...	71.0... 243...	1.75... 101...
LVx-xkvaJ0b.png fbstatic-a.akamaihd.net/rsr...	GET	200 OK	ima...	like.php:1	1.3 KB 1.3 KB	110.109...
rs=AGLTcCNAFql0FUlRCrv... apis.google.com/_/scs/app...	GET	200 OK	text/...	fastbutton...	49.7... 148...	1.39... 95 ms
rs=AGLTcC0aGOuuEjYz6l... apis.google.com/_/scs/app...	GET	200 OK	text/...	fastbutton...	26.7... 71.6...	950.103...
xZQOmYg4x3YaWtTji1kEr... fonts.googleapis.com/roboto/...	GET	200 OK	font...	fastbutton...	59.9... 59.8...	1.54... 110...

Profiler in Eigenbau

```
function meins_profiler() {  
    $profiler = sprintf(  
        '%d queries in %.3f seconds using %.2fMB memory',  
        get_num_queries(),  
        timer_stop( 0, 3 ),  
        memory_get_peak_usage() / 1024 / 1024  
    );  
    echo '<!-- ' . $profiler . ' -->';  
}  
  
add_action( 'wp_print_footer_scripts', 'meins_profiler' );
```

a700 PHP MySQL Memory Usage
#4 5.6.7 5.5.5 11,820,040 bytes

Notices / Warnings

Queries

WP Query

Request

Object Cache

Console

Cron

Profiler

Variable Lookup

Log Viewer

TOTAL QUERIES:

TOTAL QUERY TIME:

68**39.8 ms**

```
SELECT option_value FROM ms_4_options WHERE option_name = 'limit_login_client_type' LIMIT 1
```

```
require('wp-blog-header.php'), require_once('wp-load.php'), require_once('wp-config.php'), require_once('wp-settings.php'), do_action('plugins_loaded'), call_user_func_array, limit_login_setup, limit_login_setup_option, limit_login_get_option, get_option
```

```
SELECT option_value FROM ms_4_options WHERE option_name = 'limit_login_allowed_retries' LIMIT 1
```

```
require('wp-blog-header.php'), require_once('wp-load.php'), require_once('wp-config.php'), require_once('wp-settings.php'), do_action('plugins_loaded'), call_user_func_array, limit_login_setup, limit_login_setup_option, limit_login_get_option, get_option
```

```
SELECT option_value FROM ms_4_options WHERE option_name = 'limit_login_lockout_duration' LIMIT 1
```

```
require('wp-blog-header.php'), require_once('wp-load.php'), require_once('wp-config.php'), require_once('wp-settings.php'), do_action('plugins_loaded'), call_user_func_array, limit_login_setup, limit_login_setup_option, limit_login_get_option, get_option
```

```
SELECT option_value FROM ms_4_options WHERE option_name = 'limit_login_valid_duration' LIMIT 1
```

```
require('wp-blog-header.php'), require_once('wp-load.php'), require_once('wp-config.php'), require_once('wp-settings.php'), do_action('plugins_loaded'), call_user_func_array, limit_login_setup, limit_login_setup_option, limit_login_get_option, get_option
```

<https://wordpress.org/plugins/developer/>

<https://wordpress.org/plugins/debug-bar/>

Page generation time

0.6211

0.3% of 180s limit

PHP Notices (1)

Queries

Queries by Caller

Queries by Component

Request

Template: index.php

Scripts & Styles

Hooks

HTTP Requests

Transients Set

Environment

Debug Bar: Console

Debug Bar: Cron

Debug Bar: Profiler

Debug Bar: Variable Lookup

Debug Bar: Log Viewer

is_front_page()

is_home()

is_main_network()

Database query

0.0381

\$wpdb Queries

	Query
1	SELECT * FROM ms_blogs WHERE domain = 'wptests.localhost' AND path IN ('/wpo/', '/') ORDER BY CHAR_LENGTH(path) DESC LIMIT 1

2	SELECT meta_key, meta_value FROM ms_sitemeta WHERE meta_key IN ('site_name', 'siteurl', 'eout_theme_roots', '_site_transient_theme_r global_terms_enabled', 'ms_files_rewriting' AND site_id = 1
---	---

3	SELECT option_name, option_value FROM ms_4_options WHERE autoload = 'yes'
---	---

4	SELECT option_value FROM ms_4_options WHERE option_name = 'uninstall_plugins' LIMIT 1
---	--

Caller

All

get_site_by_pa

wp_load_core_s

'_site_transient_time
' compress_scripts', '

wp_load_allopt

get_option() +

get_option() +

Performance-Budget

Zum Beispiel

- Antwortzeit < 0,4 S.
- Start Browserrendering < 1,0 S.
- Vollständig geladen < 3,0 S.
- Gesamter Seitenumfang < 0,5 MB

<http://timkadlec.com/2014/11/performance-budget-metrics/>

<http://timkadlec.com/2014/05/performance-budgeting-with-grunt/>

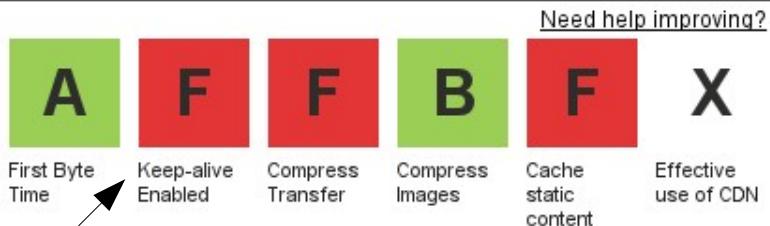
<http://cognition.happycog.com/article/designing-with-a-performance-budget>

<https://www.youtube.com/watch?list=PLYo5nh8xQFpkwsu9QN1CpPGkmCCuTTWDJ&v=yqejmZrtmNg>

Web Page Performance Test for

wpmeetup-frankfurt.de/
From: Falkenstein, Germany - Chrome - Cable

4/4/2015, 2:34:27 PM

**Summary****.htaccess**

Tester: OWNERORPC02HMK9-88198.118.27

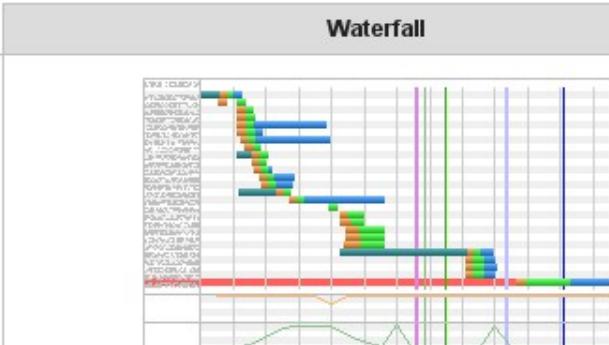
[Re-run the test](#)

<IfModule mod_headers.c>

Header set Connection Keep-Alive
</IfModule>

[Raw page data - Raw object data](#)[Export HTTP Archive \(.har\)](#)[See in ShowSlow](#)[View Test Log](#)

	Load Time	First Byte	Start Render	Speed Index	DOM Elements	Document Complete			Fully Loaded			
						Time	Requests	Bytes In	Time	Requests	Bytes In	Cost
First View	2.214s	0.194s	1.494s	1514	516	2.214s	26	459 KB	2.488s	26	467 KB	\$----
Repeat View	0.458s	0.770s	0.589s	589	516	0.458s	1	0 KB	0.945s	1	7 KB	

WaterfallFirst View
(2.214s)**Screen Shot**

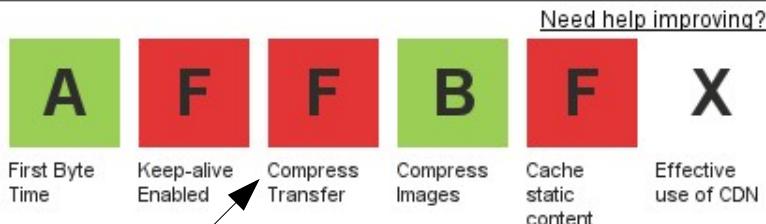
29. WP Meetup Frankfurt – Mehr Performance für WordPress

WP MEETUP FRANKFURT

Web Page Performance Test for

wpmeetup-frankfurt.de/

From: Falkenstein, Germany - Chrome - Cable
4/4/2015, 2:34:27 PM



Summary

Details Performance Review Content Breakdown Domains Screen Shot

Test ID: PWNERRR-062UVK9-88190110-27

Re-run the test

Raw page data - Raw object data

Export HTTP Archive (.har)

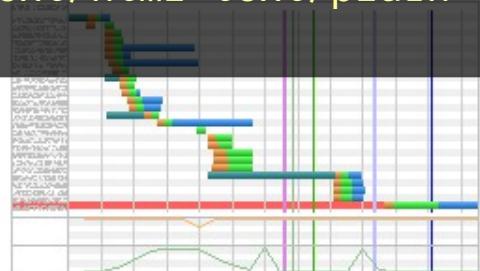
See in ShowSlow

View Test Log

<IfModule mod_deflate.c>

```
AddOutputFilterByType DEFLATE application/atom+xml \
application/javascript application/json application/ld+json \
application/rss+xml application/vnd.ms-fontobject \
application/x-font-ttf application/x-web-app-manifest+json \
application/xhtml+xml application/xml font/opentype \
image/svg+xml image/x-icon \
text/css text/html text/plain text/vtt text/x-component text/xml
</IfModule>
```

First View
(2.214s)



29. WP Meetup Frankfurt – Mehr Performance für WordPress



HOME

TEST RESULT

TEST HISTORY

FORUMS

DOCUMENTATION

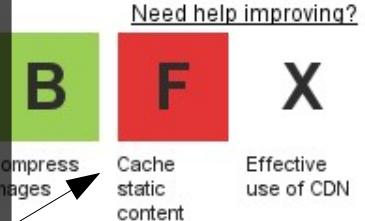
ABOUT

```

.htaccess
<IfModule mod_expires.c>
ExpiresActive on
ExpiresDefault
ExpiresByType text/css
ExpiresByType application/json
ExpiresByType application/ld+json
ExpiresByType application/xml
From: Falkenstein, Germany - Chrome - Cable
4/4/2015 10:34:27 PM
ExpiresByType text/xml
ExpiresByType image/x-icon
ExpiresByType text/x-component
ExpiresByType text/html
ExpiresByType application/javascript
ExpiresByType application/x-web-app-manifest+json
ExpiresByType text/cache-manifest
ExpiresByType audio/ogg
ExpiresByType image/gif
ExpiresByType image/jpeg
ExpiresByType image/png
ExpiresByType video/mp4
ExpiresByType video/ogg
ExpiresByType video/webm
ExpiresByType application/atom+xml
ExpiresByType application/rss+xml
ExpiresByType application/font-woff
ExpiresByType application/vnd.ms-fontobject
ExpiresByType application/x-font-ttf
ExpiresByType font/opentype
ExpiresByType image/svg+xml
</IfModule>

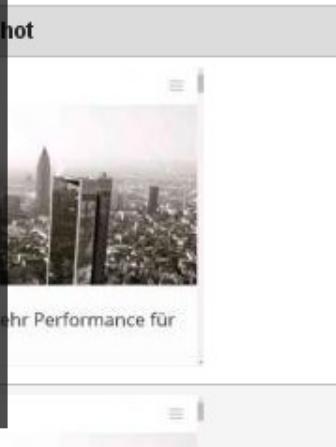
```

"access plus 1 week"
"access plus 1 year"
"access plus 0 seconds"
"access plus 1 week"
"access plus 1 month"
"access plus 0 seconds"
"access plus 1 year"
"access plus 0 seconds"
"access plus 0 seconds"
"access plus 0 seconds"
"access plus 1 month"
"access plus 1 month"
"access plus 1 month"
"access plus 1 month"
"access plus 1 hour"
"access plus 1 hour"
"access plus 1 month"
"access plus 1 month"



[Raw page data](#) - [Raw object data](#)
[Export HTTP Archive \(.har\)](#)
[See in ShowSlow](#)
[View Test Log](#)

Fully Loaded		
Requests	Bytes In	Cost
26	467 KB	\$----
1	7 KB	



Wordpress-4.1.1

http://wordpress/?p=1

700

600

500

400

300

200

100

0

Req/sec

211

254

256

273

627

666

PHP 5.3

PHP 5.4

PHP 5.5

PHP 5.6

PHP 7

HHVM 3.7

Concurrent clients

r/s @ 10

r/s @ 20

r/s @ 40

latency @ 10

latency @ 20

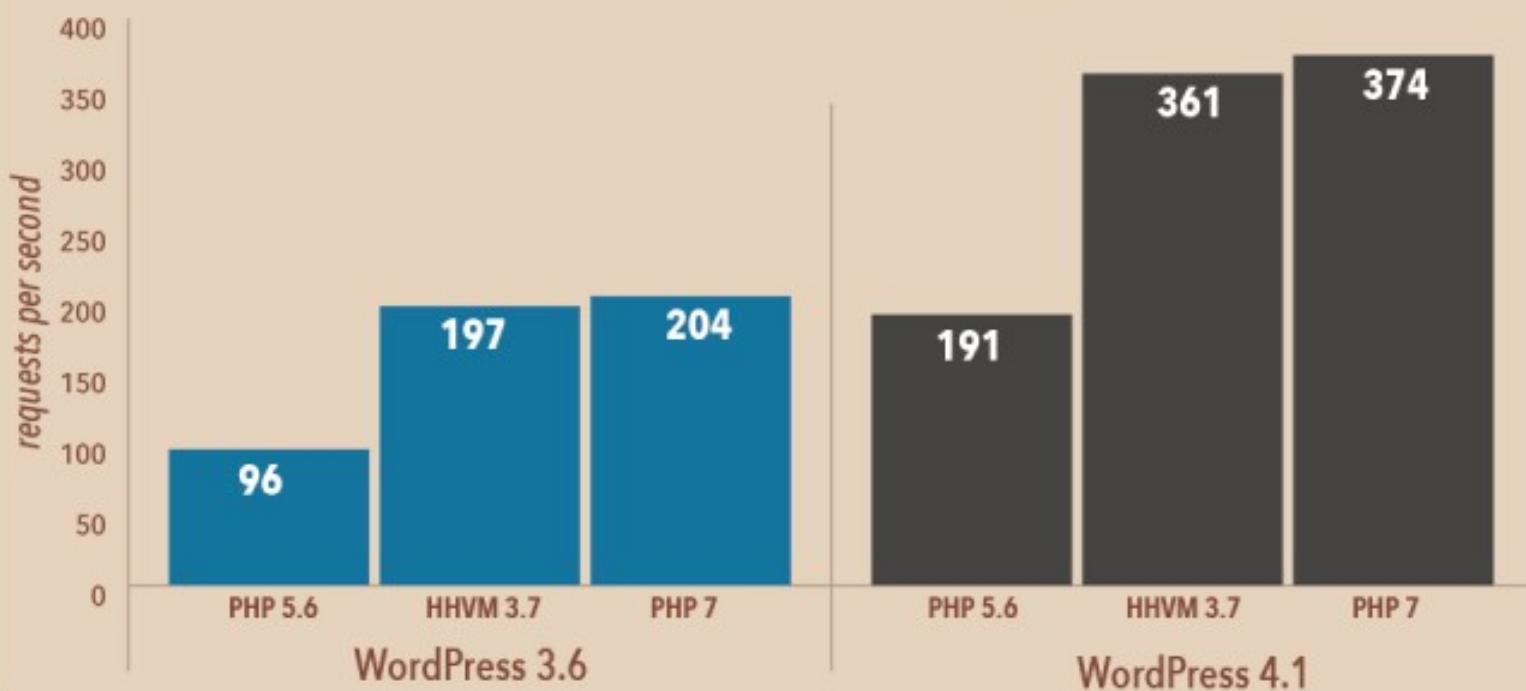
latency @ 40

WordPress Screams on PHP 7

You'll need less servers to serve
the same amount of users!

One WordPress request on PHP 5.6 executes
just under 100M CPU instructions, while PHP 7
only executes 25M to do the same job.

CMS



Datenbank

MyISAM → InnoDB

```
ALTER TABLE `wp_options` ENGINE = InnoDB;
```

/etc/mysql/my.cnf

[mysqld]

query_cache_size = 0

query_cache_type = 0

innodb_buffer_pool_size = 512M

Caching-Plugins

	Startseite	Post	Page
Ohne	574	388	378
W3 Total Cache	21	1	1
WP Super Cache	16	1	1
Hyper Cache	5	5	5
ZenCache	4	4	4

Median Antwortzeiten (ms)

Fullpage file caching, WP 4.2.2, Linux, Apache 2.4.6, PHP 5.6.9, MariaDB 15.1
ab -n 100 -c 3 http://localhost/wpl/

ab -n 100 -c 3 http://localhost/wpl/template-sticky/

ab -n 100 -c 3 http://localhost/wpl/sample-page/

The Magical Page Cache Helper

Cache Buddy

Minimizes the situations in which logged-in users appear logged-in to WordPress, which increases the cacheability of your site.

[Download Version 0.2.0](#)

[Description](#) [Installation](#) [FAQ](#) [Other Notes](#) [Changelog](#) [Stats](#) [Support](#) [Reviews](#) [Developers](#)

Minimizes the situations in which logged-in users appear logged-in to WordPress, which increases the cacheability of your site.

Requires: 4.1 or higher

Compatible up to: 4.2.2

Last Updated: 2015-3-25

Active Installs: 100+

Tags: [cache](#), [caching](#), [faster](#), [performance](#), [speed](#)

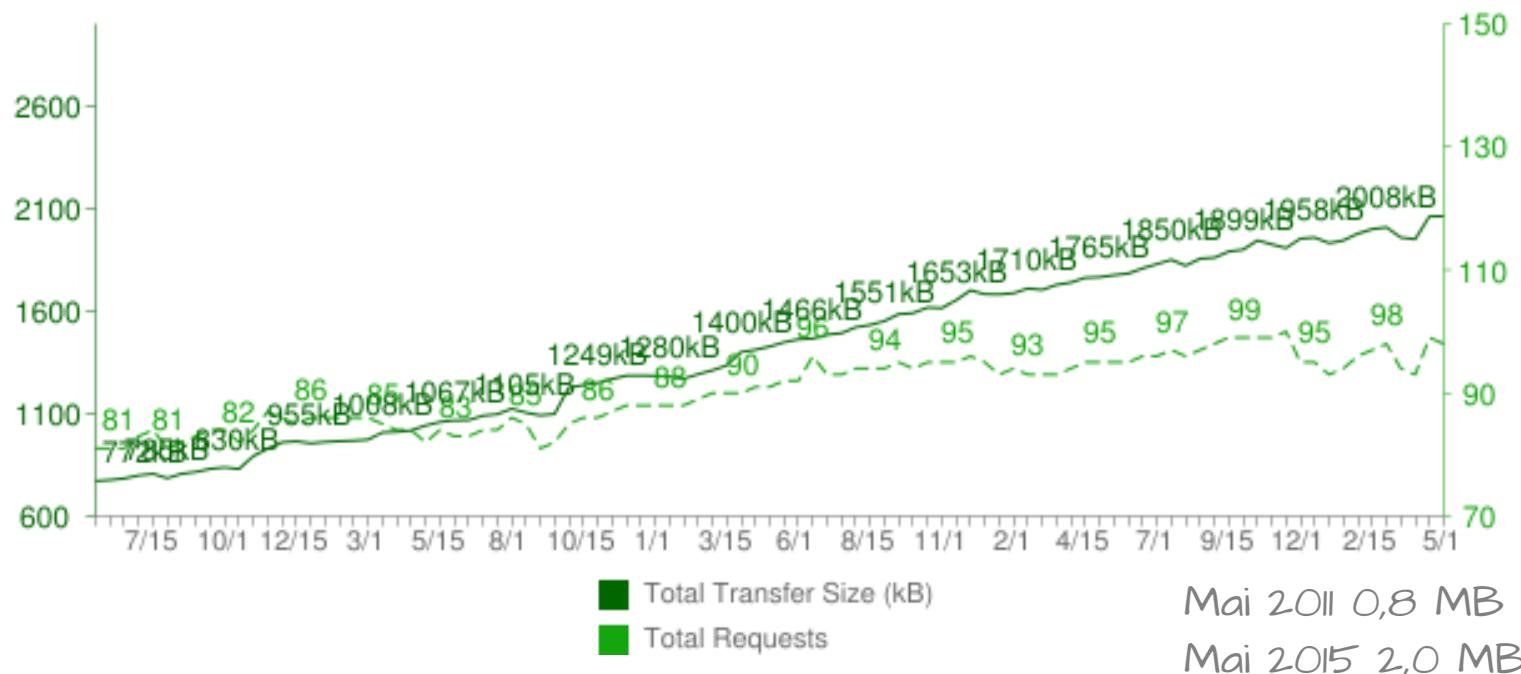
Ratings



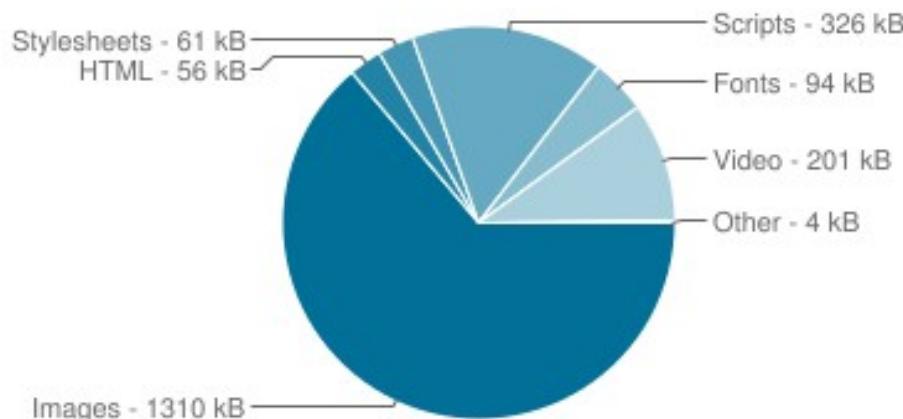
<https://wordpress.org/plugins/cache-buddy/>

<http://de.slideshare.net/markjaquith/cache-money-business>

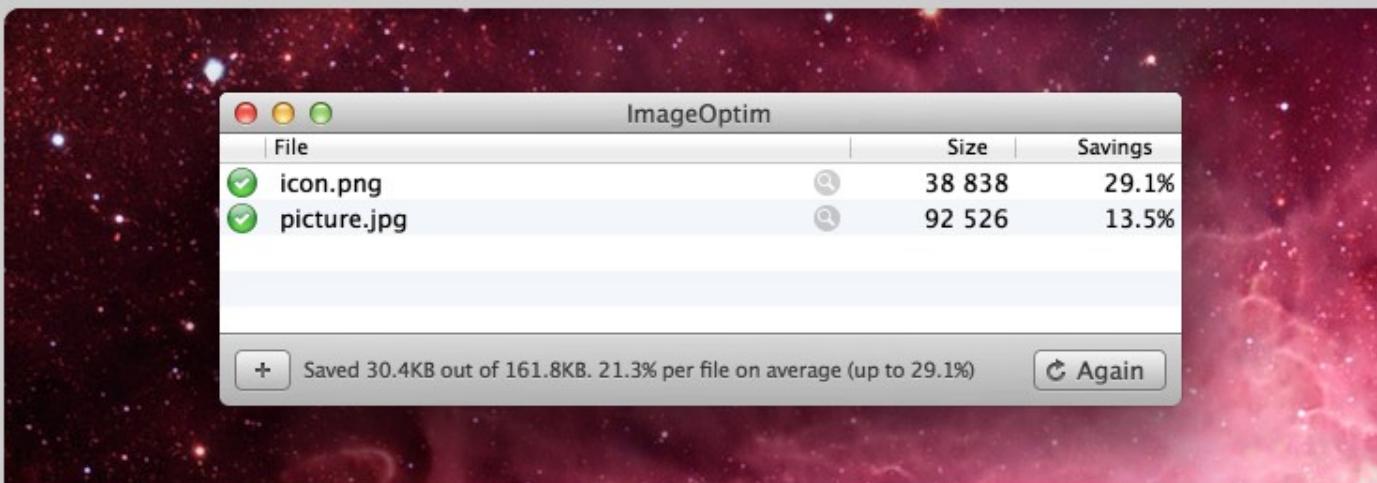
Total Transfer Size & Total Requests



Average Bytes per Page by Content Type



total 2062 kB



ImageOptim is a free app that **makes images take up less disk space and load faster**, without sacrificing quality. It optimizes compression parameters, removes junk metadata and unnecessary [color profiles](#).

[Download](#)

Version 1.5.4
Mac OS X 10.7+

Not using Mac? Check out [Trimage](#)

ImageOptim seamlessly integrates the best optimization tools: [PNGOUT](#), [Zopfli](#), [Pngcrush](#), [AdvPNG](#), extended [OptiPNG](#), [JpegOptim](#), [jpegrescan](#), [jpegtran](#), and [Gifsicle](#).

It's excellent for publishing images on the Web (easily shrinks images "Saved for Web" in Photoshop) and also useful for making Mac and [iPhone/iPad](#) applications smaller (if you [configure Xcode](#)).

- [!\[\]\(5058eead7ec27d72c8ab2b63ea647659_img.jpg\) Leopard \(10.5\)](#)
- [version](#)
- [!\[\]\(cb3523a3f50b62a3af7e0a240f341cd8_img.jpg\) Changelog](#)
- [!\[\]\(9b35053854014919fc241d4f2f4a5665_img.jpg\) Report bugs](#)
- [!\[\]\(acc198bd2b3d56349cdc1e73faf7cd47_img.jpg\) Source code](#)
- [!\[\]\(015226f877a928a40c9086ce0f70d058_img.jpg\) Donate](#)

How to use it

Simply drag'n'drop images or folders into the window! They'll be optimized in-place.

You can also drop files on ImageOptim's Dock icon, or use Services menu in Finder, or launch it from a [shell script](#).

More about PNG

My article "[PNG that works](#)" explains why ImageOptim removes gamma information and shows how to get [even smaller PNG](#) files with transparency that works in ancient versions of IE.

Available in:
English, [French](#),
[German](#), [Spanish](#),
[Portuguese](#), [Italian](#),
[Dutch](#), [Norwegian](#).



Trimage image compressor – 1.0.5

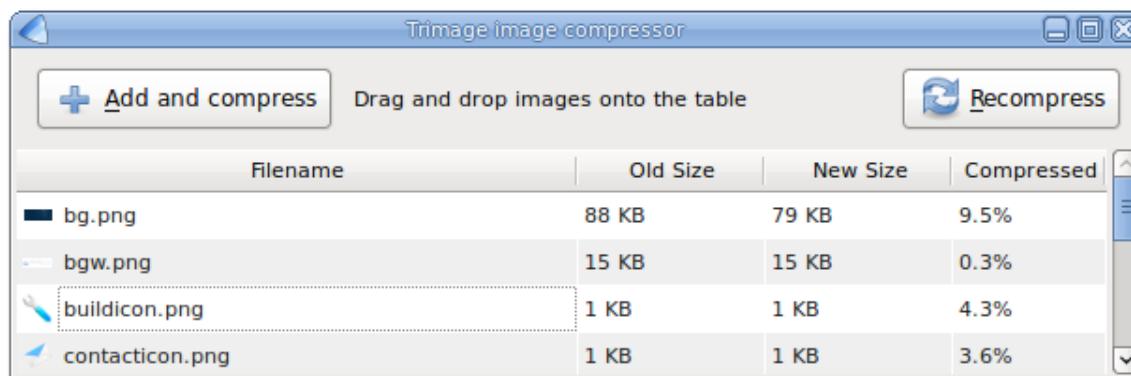
A cross-platform tool for losslessly optimizing PNG and JPG files.

Trimage is a cross-platform GUI and command-line interface to optimize image files for websites, using [optipng](#), [pngcrush](#), [advpng](#) and [jpegoptim](#), depending on the filetype (currently, PNG

and JPG files are supported). It was inspired by [imageoptim](#). All image files are losslessly compressed on the highest available compression levels, and EXIF and other metadata

is removed. Trimage gives you various input functions to fit your own workflow: A regular file dialog, dragging and dropping and various command line options.

Trimage in action



Download

Repositories

Your Photos on a Diet

[TRY IT NOW ↓](#)

Reduce image size by up to 80%, without compromising quality



Photo By: [Zach Dischner](#), Photo Resolution: 5184x3456 | [Download](#)

• • •

UPLOAD PHOTO

JPEGmini 2872KB

Original 18720KB

THIS PHOTO
REDUCED BY

6.5x

e for help





EWWW Image Optimizer

Reduce file sizes for images in WordPress including NextGEN, GRAND FlAGallery and more using lossless/lossy methods and image format conversion.

[Download Version 2.4.1](#)

[Description](#) [Installation](#) [FAQ](#) [Screenshots](#) [Other Notes](#) [Changelog](#) [Stats](#) [Support](#) [Reviews](#) [Developers](#)

The EWWW Image Optimizer is a WordPress plugin that will automatically optimize your images as you upload them to your blog. It can optimize the images that you have already uploaded, convert your images automatically to the file format that will produce the smallest image size (make sure you read the WARNINGS), and optionally apply lossy reductions for PNG and JPG images.

Requires: 3.5 or higher
Compatible up to: 4.2.2
Last Updated: 2015-5-14
Active Installs: 100,000+

<https://wordpress.org/plugins/ewww-image-optimizer/>

[Ratings](#)



Kraken.io
Faster, better images.

Kraken Image Optimizer

This plugin allows you to optimize your WordPress images through the Kraken API, the world's most advanced image optimization solution.

[Download Version 2.0.0](#)

[Description](#) [Installation](#) [FAQ](#) [Screenshots](#) [Other Notes](#) [Changelog](#) [Stats](#) [Support](#) [Reviews](#) [Developers](#)

This plugin allows you to optimize new and existing WordPress image uploads through [Kraken Image Optimizer's API](#). Both lossless and intelligent lossy optimization modes are supported. Supported filetypes are JPEG, PNG and GIF. Maximum filesize limit is 16 MB. For more details, including detailed documentation and plans and pricing, please visit [Kraken.io](#).

Requires: 3.0.1 or higher

Compatible up to: 4.2.2

Last Updated: 2015-4-24

Active Installs: 8,000+

Ratings



<https://wordpress.org/plugins/kraken-image-optimizer/>



Imsanity

Imsanity automatically resizes huge image uploads. Are contributors uploading huge photos? Tired of manually scaling? Imsanity to the rescue!

[Download Version 2.3.5](#)

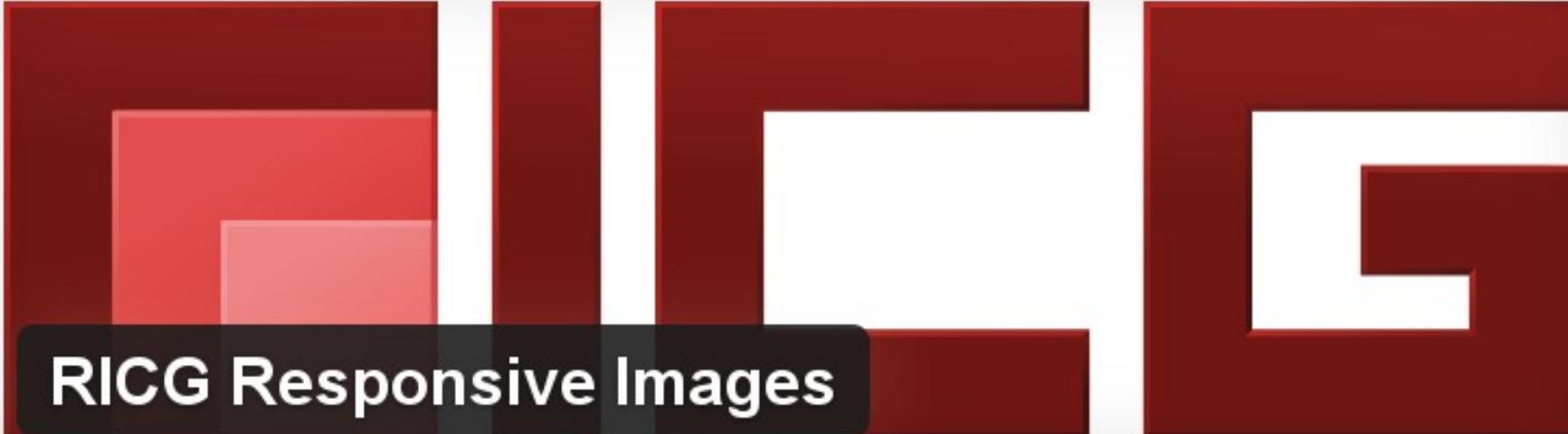
[Description](#) [Installation](#) [FAQ](#) [Screenshots](#) [Changelog](#) [Stats](#) [Support](#) [Reviews](#) [Developers](#)

Imsanity automatically resizes huge image uploads down to a size that is more reasonable for display in browser, yet still more than large enough for typical website use. The plugin is configurable with a max width, height and quality. When a contributor uploads an image that is larger than the configured size, Imsanity will automatically scale it down to the configured size and replace the original image.

Requires: 2.9 or higher
Compatible up to: 4.1.5
Last Updated: 2015-2-28
Active Installs: 80,000+

<https://wordpress.org/plugins/imsanity/>

Ratings



RICG Responsive Images

Bringing automatic default responsive images to WordPress.

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Bringing automatic default responsive images to WordPress.

This plugin works by including all available image sizes for each image upload. Whenever WordPress outputs the image through the media uploader, or whenever a featured image is generated, those sizes will be included in the image tag via the `srcset` attribute.

Requires: 4.1 or higher

Compatible up to: 4.2.2

Last Updated: 2015-5-27

Active Installs: 5,000+

Ratings



BJ Lazy Load

Lazy loading makes your site load faster and saves bandwidth. Uses jQuery and degrades gracefully for non-js users. Works with both images and iframes

[Download Version 0.7.5](#)

[Description](#) [Installation](#) [FAQ](#) [Other Notes](#) [Changelog](#) [Stats](#) [Support](#) [Reviews](#) [Developers](#)

Lazy loading makes your site load faster and saves bandwidth.

This plugin replaces all your post images, post thumbnails, gravatar images and content iframes with a placeholder and loads the content as it gets close to enter the browser window when the visitor scrolls the page. Also works with text widgets.

Requires: 3.5 or higher

Compatible up to: 4.0.5

Last Updated: 2014-10-14

Active Installs: 30,000+

[Ratings](#)

<https://wordpress.org/plugins/bj-lazy-load/>

Child-Themes

```
style.css
/*
Theme Name: Meins
Template: twentyfifteen
*/
@import url( "../twentyfifteen/style.css" );
```

```
functions.php
function meins_wp_enqueue_scripts() {
    wp_enqueue_style( 'parent', get_template_directory_uri().'/style.css' );
    wp_enqueue_style( 'child', get_stylesheet_uri(), array( 'parent' ) );
}
add_action( 'wp_enqueue_scripts', 'meins_wp_enqueue_scripts' );
```

Konditionelles Laden

```
function meins_enqueue_scripts() {  
    if ( is_front_page() ) {  
        wp_enqueue_style(  
            'meins-startseite',  
            get_stylesheet_directory_uri() . '/front-page.css'  
        );  
        wp_enqueue_script( 'masonry' );  
    }  
}  
add_action( 'wp_enqueue_scripts', 'meins_enqueue_scripts' );
```

Oder andere Conditional Tags:
`is_home()`, `is_page()`, `is_single()`,
`is_archive()`, usw.

http://codex.wordpress.org/Conditional_Tags

https://codex.wordpress.org/Function_Reference/wp_enqueue_script#Default_Scripts_Included_and_Registered_by_WordPress

Hooks entfernen

```
function meins_remove_scripts() {  
    if ( ! is_page_template( 'events.php' ) ) {  
        remove_action(  
            'wp_enqueue_scripts',  
            array(  
                'EM_Scripts_and_Styles',  
                'public_enqueue'  
            )  
        );  
    }  
}  
add_action( 'wp_enqueue_scripts', 'meins_remove_scripts', 9 );
```

Hooks entfernen

```
function meins_remove_scripts() {  
    if ( ! is_page_template( 'events.php' ) ) {  
        remove_action(  
            'wp_enqueue_scripts',  
            array(  
                'EM_Scripts_and_Styles',  
                'public_enqueue'  
            )  
        );  
    }  
}  
add_action( 'wp_enqueue_scripts', 'meins_remove_scripts', 9 );
```

-14 HTTP Requests
-220 KB
-2 MySQL Queries

Javascript + CSS

- Dateien minifizieren
- Dateien kombinieren

Plugins

- Autoptimize
- W3 Total Cache

Javascript + CSS

JS-Bibliotheken

- <https://github.com/filamentgroup/shoestring>
- <http://microjs.com/>

CSS-Frameworks

- Pure 17 KB
- MUI 37 KB
- Bootstrap 115 KB

Responsive Design + Server Side Components (RESS)

```
if ( wp_is_mobile() ) {  
    // z.B. keine Werbung  
} else {  
    // Kohle schäffeln  
}
```

Nicht in Kombination mit Fullpage-Caching nutzen

Caching-Funktionen

```
wp_cache_set( 'meine-daten', $data );  
$daten = wp_cache_get( 'meine-daten' );  
  
set_transient( 'meine-daten', $data );  
$daten = get_transient( 'meine-daten' );
```

WP Cron

```
function meins_update_function() {
    $response = wp_remote_get( 'http://example.com/data.json' );
    if ( is_array( $response ) ) {
        set_transient( 'meine-daten', $response['body'] );
    }
}
add_action( 'meins_update_hook', 'meins_update_function' );

function meins_cronjobs() {
    if ( ! wp_next_scheduled( 'meins_update_hook' ) ) {
        wp_schedule_event( time(), 'hourly', 'meins_update_hook' );
    }
}
add_action( 'wp', 'meins_cronjobs');
```

Critical Rendering Path

Critical Rendering Path

a.k.a.

Above the Fold Content

Critical Rendering Path

a.k.a.

Above the Fold Content

a.k.a.

100/100 Punkte

Javascript im Footer laden

```
function meins_scripts() {  
    wp_enqueue_script(  
        'script-name',  
        get_template_directory_uri() . '/js/beispiel.js',  
        array(),  
        '1.0.0',  
        true  
    );  
}  
add_action( 'wp_enqueue_scripts', 'meins_scripts' );
```

jQuery im Footer laden

```
function meins_wp_enqueue_scripts()
{
    if ( ! is_user_logged_in() ) {
        wp_dequeue_script( 'jquery-core' );
        wp_enqueue_script(
            'jquery-core',
            includes_url( '/js/jquery/jquery.js' ),
            array(),
            '',
            true
        );
    }
}

add_action( 'wp_enqueue_scripts', 'meins_wp_enqueue_scripts' );
```

Javascript asynchron laden

```
function meins_async_script( $tag, $handle, $src ) {  
    switch( $handle ) {  
        case 'script-handle-1':  
        case 'script-handle-2':  
        case 'script-handle-3':  
            $tag = str_replace( '<script', '<script async defer', $tag );  
            break;  
    }  
  
    return $tag;  
}  
add_filter( 'script_loader_tag', 'meins_async_script', 10, 3 );
```

Nur für Skripte ohne Abhängigkeiten

https://codex.wordpress.org/Function_Reference/wp_enqueue_script

https://developer.wordpress.org/reference/hooks/script_loader_tag/

<https://www.igvita.com/2014/05/20/script-injected-async-scripts-considered-harmful/>

Critical CSS

```
function meins_critical_css() {  
    echo '<style>' .  
        file_get_contents( get_stylesheet_directory() . '/critical.css' ) .  
        '</style>';  
}  
add_action( 'wp_head', 'meins_critical_css' );
```



pocketjoso / penthouse

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30

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829

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31

Critical Path CSS Generator

91 commits

1 branch

7 releases

2 contributors



branch: master

[penthouse / +](#)

Merge pull request #51 from pocketjoso/handle-moz-document-at-trule ...



pocketjoso authored on Mar 1

latest commit 85db46f1d7



bin	Options parser completed	2 months ago
---------------------	--------------------------	--------------

lib	handle @-moz-document	a month ago
---------------------	-----------------------	-------------

test	Merge pull request #51 from pocketjoso/handle-moz-document-at-trule	a month ago
----------------------	---	-------------

.jshintrc	Options parser completed	2 months ago
---------------------------	--------------------------	--------------

.travis.yml	Add Travis build test	2 months ago
-----------------------------	-----------------------	--------------

AUTHORS	Added AUTHORS file and a changelog section	10 months ago
-------------------------	--	---------------

LICENSE-MIT	Added AUTHORS file and a changelog section	10 months ago
-----------------------------	--	---------------

README.md	minor readme updates	2 months ago
---------------------------	----------------------	--------------

make.js	Updated README standalone usage	2 months ago
-------------------------	---------------------------------	--------------

package.json	handle @-moz-document	a month ago
------------------------------	-----------------------	-------------

penthouse.js	Merge branch 'master' into 0.3.0	2 months ago
------------------------------	----------------------------------	--------------

[Code](#)[Issues](#)

0

[Pull requests](#)

0

[Pulse](#)[Graphs](#)[HTTPS clone URL](#)<https://github.com/pocketjoso/penthouse>You can clone with [HTTPS](#) or [Subversion](#).[Download ZIP](#)



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Critical Path CSS Generator

Speed up your page render time in no time! [What is this?](#)

1. URL TO WEB PAGE TO CREATE CRITICAL CSS FOR

3. Create Critical Path CSS

2. FULL CSS TO EXTRACT CRITICAL CSS FROM. CAN BE MINIFIED.

[Select All](#) [Clear](#)

```
/*Insert your CSS here*/
```

24 characters

Non-Critical CSS

```
function meins_critical_css() {
    echo '<style>' .
        file_get_contents( get_stylesheet_directory() . '/critical.css' ) .
    '</style>';
}

add_action( 'wp_head', 'meins_critical_css' );

function meins_full_css() {
    echo '<link
        rel="stylesheet"
        type="text/css"
        href=""' . get_stylesheet_uri() . '">';
}

add_action( 'wp_footer', 'meins_full_css', 1 );
```

CSS asynchron laden

```
function meins_loadCSS() {  
    echo '<script>' .  
        file_get_contents( get_stylesheet_directory() . '/loadCSS.js' ) .  
    '</script>;'  
}  
add_action( 'wp_head', 'meins_loadCSS', 7 );
```

CSS asynchron laden

```
function meins_loadCSS() {
    echo '<script>'.
        file_get_contents( get_stylesheet_directory() . '/loadCSS.js' ) .
    '</script>';
}
add_action( 'wp_head', 'meins_loadCSS', 7 );

function meins_async_style( $tag, $handle ) {
    switch( $handle ) {
        case 'style-handle-1':
            preg_match( "/href='([^\']+)/", $tag, $matches );
            if ( isset( $matches[1] ) ) {
                $tag = '<script>loadCSS("' . esc_attr( $matches[1] ) . '");</script>' .
                    '<noscript>' . trim( $tag ) . '</noscript>';
            }
            break;
    }
    return $tag;
}
add_filter( 'style_loader_tag', 'meins_async_style', 10, 2 );
```

<https://github.com/filamentgroup/loadCSS>

https://developer.wordpress.org/reference/hooks/style_loader_tag/

Async JS and CSS

Converts render-blocking CSS and JS files into NON-render-blocking, improving performance of web page.

[Download Version 1.7.13](#)

Description Installation FAQ Screenshots Other Notes Changelog Stats Support Reviews Developers

When your page is loaded by browser - all that stuff placed in HEAD tag is loaded before the page content - in blocking way. So the content is delivered to user in the last moment, after all javascript and css files are loaded.

If you are a webmaster or just want to make your web to make better your positions on search engines (yes, they prefer faster webs), just take a look on Google PageSpeed Insights - you'll see that one of the most important things is fastness and one of the reason why your page is not so fast - is "Render-blocking JavaScript and CSS".

This plugin makes ALL scripts loaded by other plugins to be loaded in asynchronous way just like Google PageSpeed Insights recommends. All CSS files will be inserted inline into the document code or moved from the document beginning to the end, just before closing BODY tag (or just where you placed wp_foot() function). There are various methods to do that - they are all in plugin's configuration page.

Requires: 2.6 or higher

Compatible up to: 3.7.8

Last Updated: 2013-11-18

Active Installs: 10,000+

Ratings



4.3 out of 5 stars

5 stars		19
4 stars		3
3 stars		1
2 stars		1
1 stars		3

Author



Plugin makes all scripts to be loaded asynchronously using wp_enqueue_script and also
<https://wordpress.org/plugins/async-js-and-css/>

Can detect scripts included inside of wp_head and wp_footer hooks.

Make the Web Faster

8+1
429
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[Service](#)

Module

[Get Started](#)
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[Optimization SDK](#)
[Public DNS](#)
[Hosted Libraries](#)
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PageSpeed Module

PageSpeed speeds up your site and reduces page load time. This open-source webserver module automatically applies [web performance best practices](#) to pages and associated assets (CSS, JavaScript, images) without requiring that you modify your existing content or workflow.

Features

- Automatic website and asset optimization
- Latest web optimization techniques
- 40+ configurable optimization filters
- Free, open-source, and frequently updated
- Deployed by individual sites, hosting providers, CDNs

	Status	Type	Initiator	Size	Time
		text/javascript	jsapi:21	0B	61ms
		application/x-javascript	jsapi:21	0B	213ms
		text/css	format+en.def...	0B	90ms
			jsapi:21	0B	59ms
			jsapi:21	0B	112ms
			jsapi:21	0B	164ms
			/speed/-49	0B	25ms
			/speed/-63	0B	244ms
			/speed/-319	0B	199ms
			jquery.min.js-18	0B	131ms

Get Started

- [Download and install](#)
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Learn about PageSpeed



Users & Partners

- **350,000+** optimized web sites
- Hosting providers and CDN's, including:



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

http://kau-boys.de/1925/wordpress/meine-session-beim-wp-camp-berlin-2013-performance-optimierung-mit-mod_pagespeed

http://www.wpmayor.com/can-mod_pagespeed-improve-page-load-speed/

How does PageSpeed speed up web-sites?

SPDY / HTTP 2.0

Best Practices

- Viele kleine Dateien
- Eine Domain

Worst Practices

- JS kombinieren
- CSS kombinieren
- Sprites
- Iconfonts
- Data URIs

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