Fast Websites

Евгений Лейченок, 21 мая 2013

Задача

1. Пользователь должен тратить меньше времени на ожидание, чем сейчас

А зачем это нужно?

1. Чем быстрее пользователь начнёт работу - тем лучше
2. Каждая секунда ожидания уменьшает потенциальные продажи [*]
3. Google, скорость загрузки страниц и SEO [*]
4. Каждый запрос - DNS lookup + HTTP request + headers + 4J [*]

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

А чем мы можем помочь?

> *80-90% of the end-user response time is spent on the frontend. Start there.*
>
> ***Steve Souders,*** ***http://www.stevesouders.com/blog/2012/02/10/the-performance-golden-rule/***

А что почитать?

- Steve Souders "High Performance Web Sites"
- Steve Souders "Even Faster Web Sites"
- Stoyan Stefanov "Web Performance Daybook Volume 2"
- Peter Smith "Professional Website Performance"
- Nicholas Zakas "High Performance JavaScript"

14 правил от Steve Souders

http://stevesouders.com/hpws/rules.php

14 правил от Steve Souders...

1. Make Fewer HTTP Requests
2. Use a Content Delivery Network
3. Add an Expires Header
4. Gzip Components
5. Put Stylesheets at the Top
6. Put Scripts at the Bottom
7. Avoid CSS Expressions

...14 правил от Steve Souders

1. Make JavaScript and CSS External
2. Reduce DNS Lookups
3. Minify JavaScript
4. Avoid Redirects
5. Remove Duplicated Scripts
6. Configure ETags
7. Make AJAX Cacheable

Сжимаем JavaScript

- Closure Compiler Service (advanced mode)
- YUI Compressor
- UglifyJS (javascript)
- /packer/
- r.js (AMD)

jQuery 1.9.1 - 240KB -> 91KB -> 33KB

Сжимаем CSS

- YUI Compressor
- r.js (AMD)
- CSS Compressor (online)
- Minify CSS (online)
- Robson CSS Compressor (online)
- Sqwish (node.js)

Twitter Bootstrap 2.3.2 - 124KB -> 104KB -> 23KB

Сжимаем графику

- pngcrush, pngout, OptiPNG, Image Worsener
- jpegtran, jpegoptim
- gifsicle
- Smush.it (online)

Сжимаем HTML

- HtmlCompressor
- WebMarkupMin (.NET)
- HTML Minifier

Сжимаем шрифты

- Font Squirrel

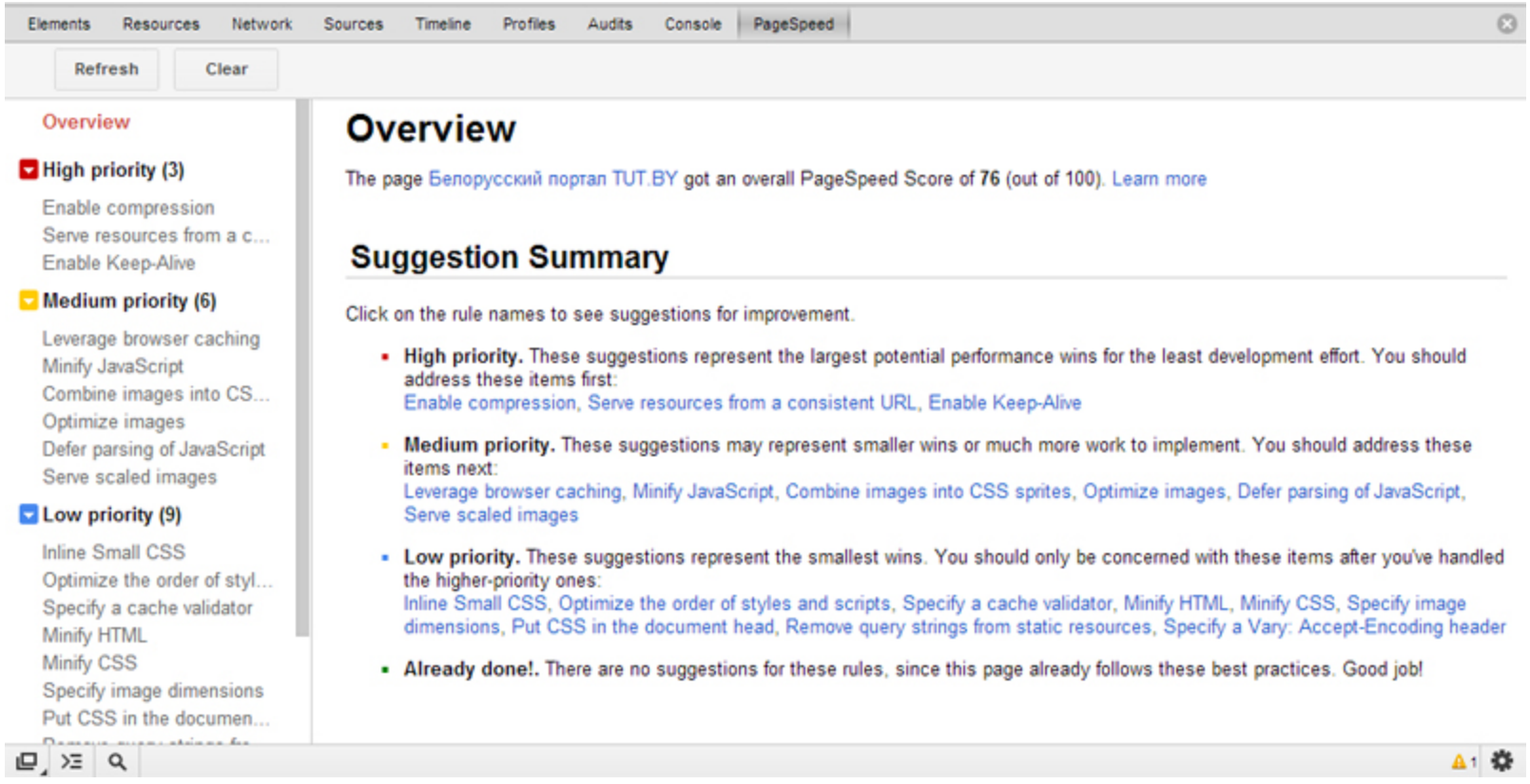
Komika Hand (ttf) - 54KB -> 10KB (10 символов)

Сжали. Что дальше?

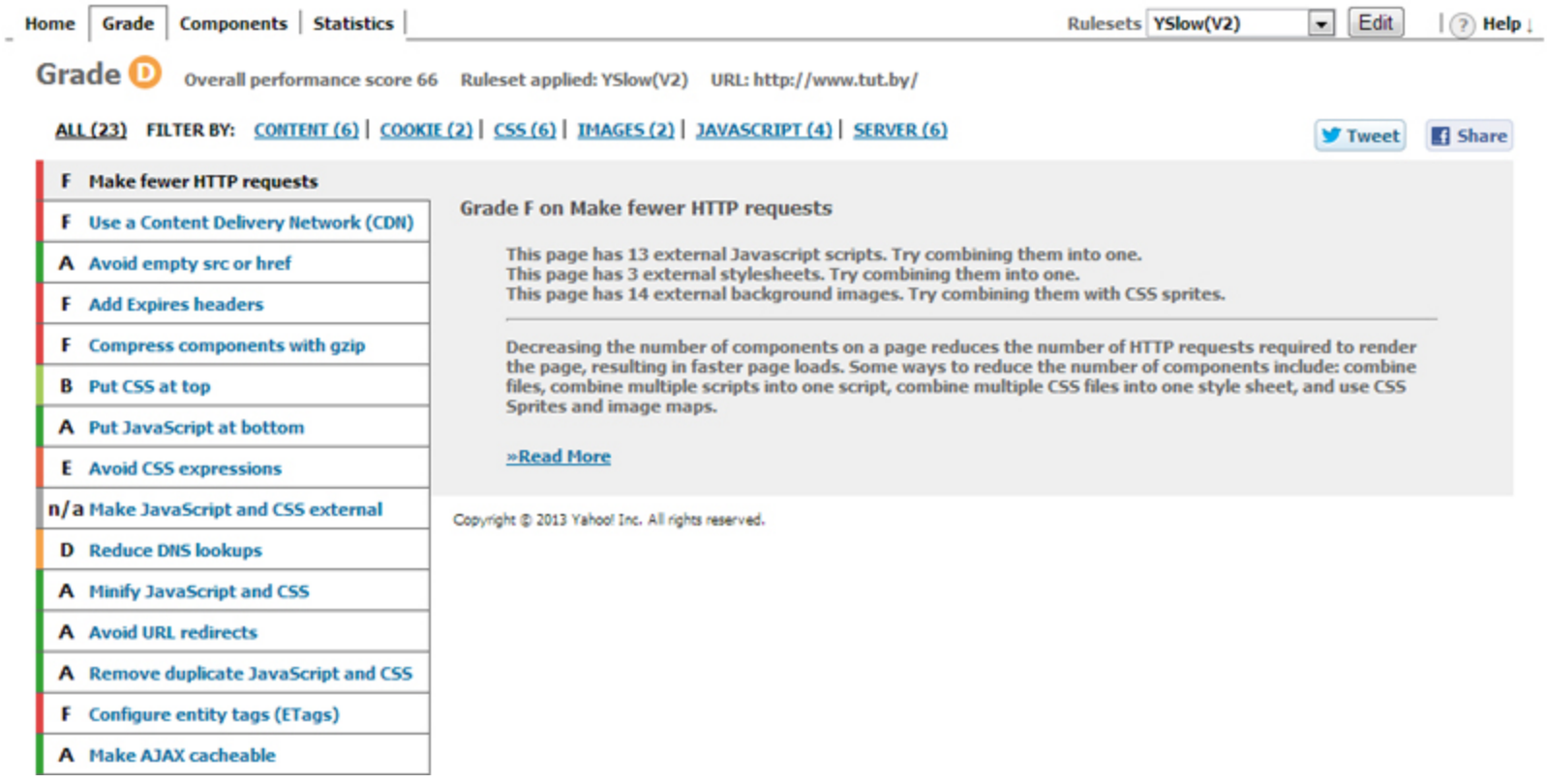
- Lazy loading, contextual loading [*]
- Deferred parsing
- COMET, Web Sockets
- Web Workers
- CSS images and fonts
- Fast JavaScript & CSS [*]
- …

Инструменты

PageSpeed


Elements
Resources
Network
Sources
Timeline
Profiles
Audits
Console
PageSpeed
Refresh
Clear
Overview
High priority (3)
Enable compression
Serve resources from a c...
Enable Keep-Alive
Medium priority (6)
Leverage browser caching
Minify JavaScript
Combine images into CS...
Optimize images
Defer parsing of JavaScript
Serve scaled images
Low priority (9)
Inline Small CSS
Optimize the order of styl...
Specify a cache validator
Minify HTML
Minify CSS
Specify image dimensions
Put CSS in the documen...
Overview
The page Белорусский портал TUT.BY got an overall PageSpeed Score of 76 (out of 100). Learn more
Suggestion Summary
Click on the rule names to see suggestions for improvement.
High priority. These suggestions represent the largest potential performance wins for the least development effort. You should address these items first:
Enable compression, Serve resources from a consistent URL, Enable Keep-Alive
Medium priority. These suggestions may represent smaller wins or much more work to implement. You should address these items next:
Leverage browser caching, Minify JavaScript, Combine images into CSS sprites, Optimize images, Defer parsing of JavaScript, Serve scaled images
Low priority. These suggestions represent the smallest wins. You should only be concerned with these items after you've handled the higher-priority ones:
Inline Small CSS, Optimize the order of styles and scripts, Specify a cache validator, Minify HTML, Minify CSS, Specify image dimensions, Put CSS in the document head, Remove query strings from static resources, Specify a Vary: Accept-Encoding header
Already done!. There are no suggestions for these rules, since this page already follows these best practices. Good job!
1

YSlow


Home
Grade
Components
Statistics
Rulesets
YSlow(V2)
Edit
Help
Grade D
Overall performance score 66
Ruleset applied: YSlow(V2)
URL: http://www.tut.by/
ALL (23)
FILTER BY:
CONTENT (6)
COOKIE (2)
CSS (6)
IMAGES (2)
JAVASCRIPT (4)
SERVER (6)
Tweet
Share
F Make fewer HTTP requests
F Use a Content Delivery Network (CDN)
A Avoid empty src or href
F Add Expires headers
F Compress components with gzip
B Put CSS at top
A Put JavaScript at bottom
E Avoid CSS expressions
n/a Make JavaScript and CSS external
D Reduce DNS lookups
A Minify JavaScript and CSS
A Avoid URL redirects
A Remove duplicate JavaScript and CSS
F Configure entity tags (ETags)
A Make AJAX cacheable
Grade F on Make fewer HTTP requests
This page has 13 external Javascript scripts. Try combining them into one.
This page has 3 external stylesheets. Try combining them into one.
This page has 14 external background images. Try combining them with CSS sprites.
Decreasing the number of components on a page reduces the number of HTTP requests required to render the page, resulting in faster page loads. Some ways to reduce the number of components include: combine files, combine multiple scripts into one script, combine multiple CSS files into one style sheet, and use CSS Sprites and image maps.
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Online-инструменты

- Pingdom
- GTmetrix
- WebPagetest
- Google Analytics

HTTP Archive

- Текущая статистика
- История
- Тренды

Спасибо!

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