



DEBUGGING PAGE PERFORMANCE WITH BROWSER TOOLS



MIKITA DUBKO

FRIENDLY BEARD, WEB STANDARDS



TBILISI JS
MEETUP #3

Дебаг производительности страницы средствами браузера

Никита Дубко, «Веб-стандарты»



Mikita Dubko

- Lead Product Manager
- "Web Standards" podcast
- performance lover
- from Belarus

Performance



Time 



Money 

How Rakuten 24's investment in Core Web Vitals increased revenue per visitor by 53.37% and conversion rate by 33.13%



By measuring real users' Web Vitals, Rakuten 24 also found that a good Largest Contentful Paint (LCP) can lead to a conversion rate increase of 61.13%.



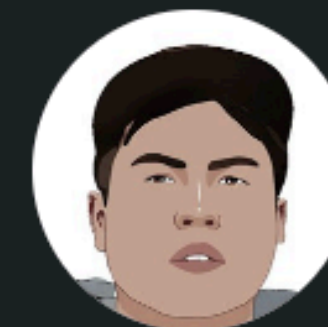
Hayoung Lee



Linh Duong



Ryunosuke Akiba



Shogo Kashiwase

Metrics

- Backend API response
- DataBase requests
- Network delays
- **Frontend loading**
- **Interactions**
- Perceived performance

Core Web Vitals ⚡

(Loading)

LCP

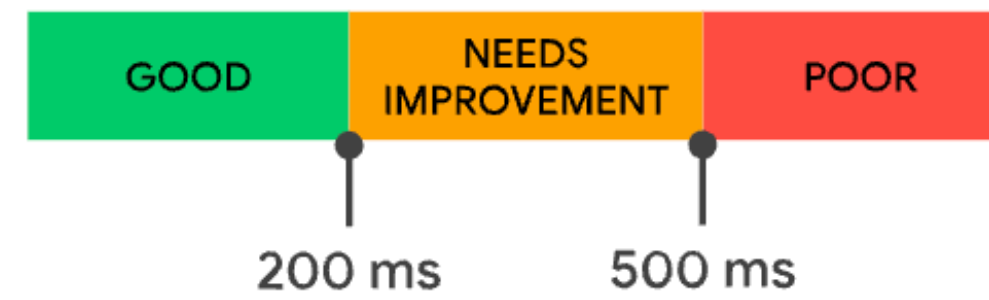
Largest Contentful Paint



(Interactivity)

INP

Interaction to Next Paint



(Visual Stability)

CLS

Cumulative Layout Shift



Lab  vs RUM 

Real User Monitoring

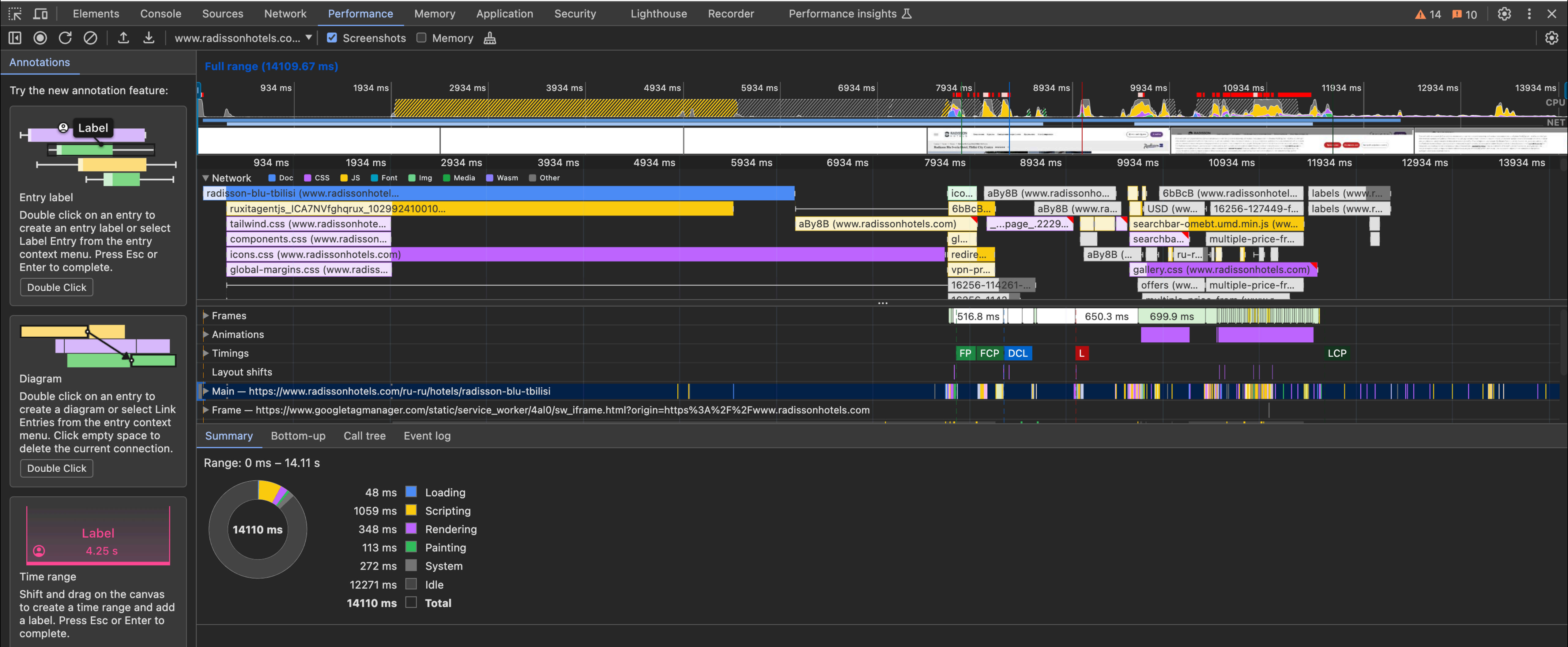
Lighthouse





Chrome for Developers

Chrome UX Report





[Home](#) > [Docs](#) > [Chrome DevTools](#) > [More panels](#)

Was this helpful?  

Performance panel: Analyze your website's performance



Dale St. Marthe



Use the **Performance** panel to analyze your website's performance.



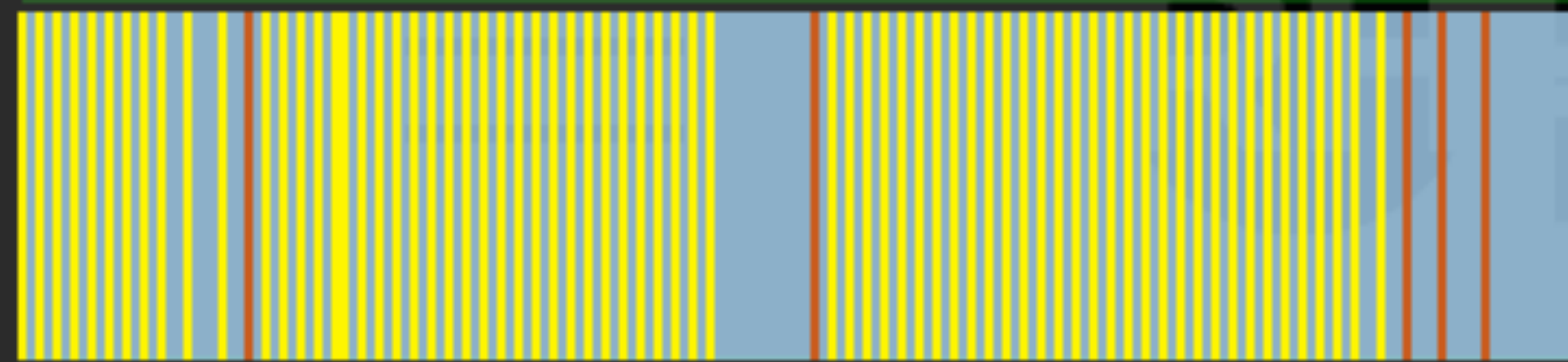
Configuration

CPU: 4x slowdown ▼

Network: Slow 4G ▼

Frame Rate

58.2 fps



GPU raster

on

GPU memory

39.4 MB used

916.5 MB max



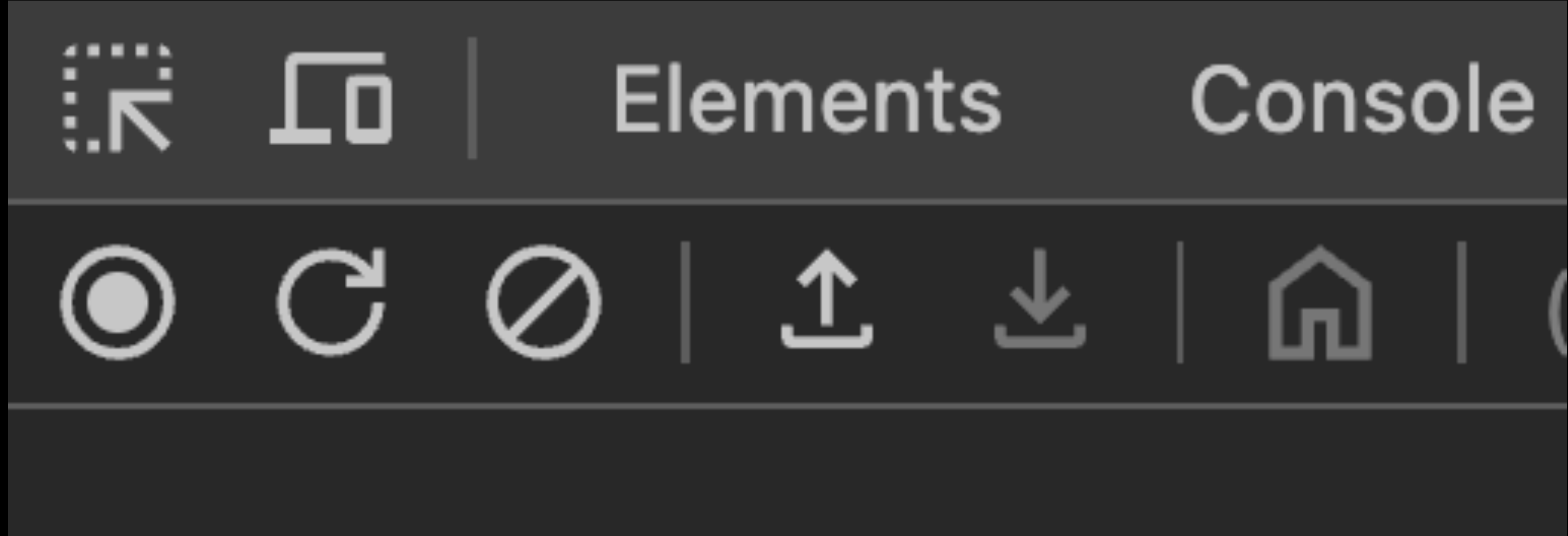
Let's inspect it 🔍

performance.mark()
performance.measure()




```
node --inspect-brk index.js
```

about:inspect




```

28 traceEvents : [
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30   {"args":{"name":"CrBrowserMain"},"cat":"__metadata","name":"thread_name","ph":"M","pid":29157,"tid":259,"ts":0},
31   {"args":{"name":"Compositor"},"cat":"__metadata","name":"thread_name","ph":"M","pid":29226,"tid":32259,"ts":0},
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```



cpupro

A viewer for CPU profiles captured in V8 runtimes like Node.js, Deno or Chromium browsers

Open file (.cpuprofile, .devtools, .json, .jsonxl) or drop a file on the page

CPUpro is a server-less application that processes profiles locally without transmitting data elsewhere, it securely opens and analyzes your profiles directly on your device.

Supported formats:

- [V8 CPU profile](#) (.cpuprofile)
- [V8 log](#) preprocessed with [--preprocess](#) (.json)
- [Chromium Performance Profile](#) (.json)
- [Edge Enhanced Performance Traces](#) (.devtools)

Try out example:



V8 CPU profile



V8 log (preprocessed)



Chromium Profile



Edge EPT



Know your tools 🤗

Chrome DevTools — спрятанные полезности

Никита Дубко
Яндекс



**24 и 25
октября**



Веб-стандарты



mefody.dev

4 507 subscribers



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Mute



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Автор — @dark_mefody

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