

Measuring Performance with SpeedCurve & WPT

2020-11-02

Hello



I'm Kevin Farrugia, working as a consultant at Tipico since May 2019.

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Lab vs RUM

LAB

- Simulated
- Great for development & monitoring progress
- Lighthouse, WebPageTest

RUM

- Real Users
- Real performance, good for identifying bottlenecks
- Google Analytics, CrUX

Lab Tests

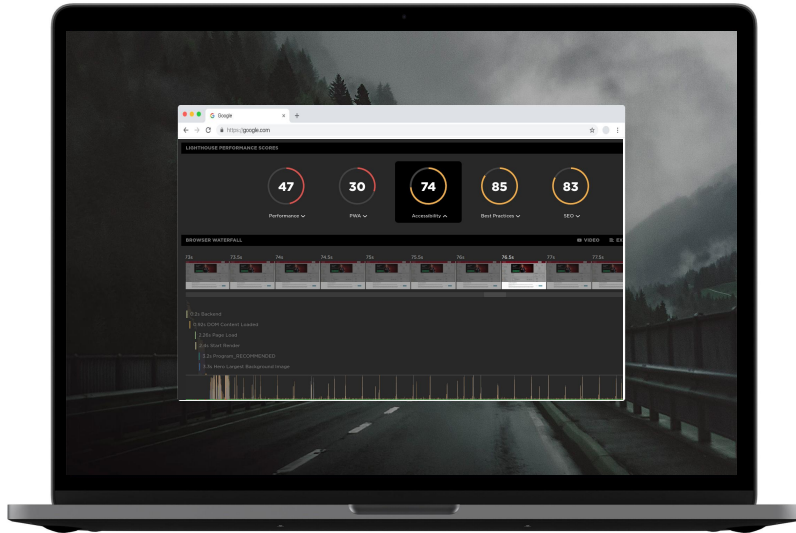
Lab Tests

- Continuous monitoring
- Deployments
- Ad-hoc

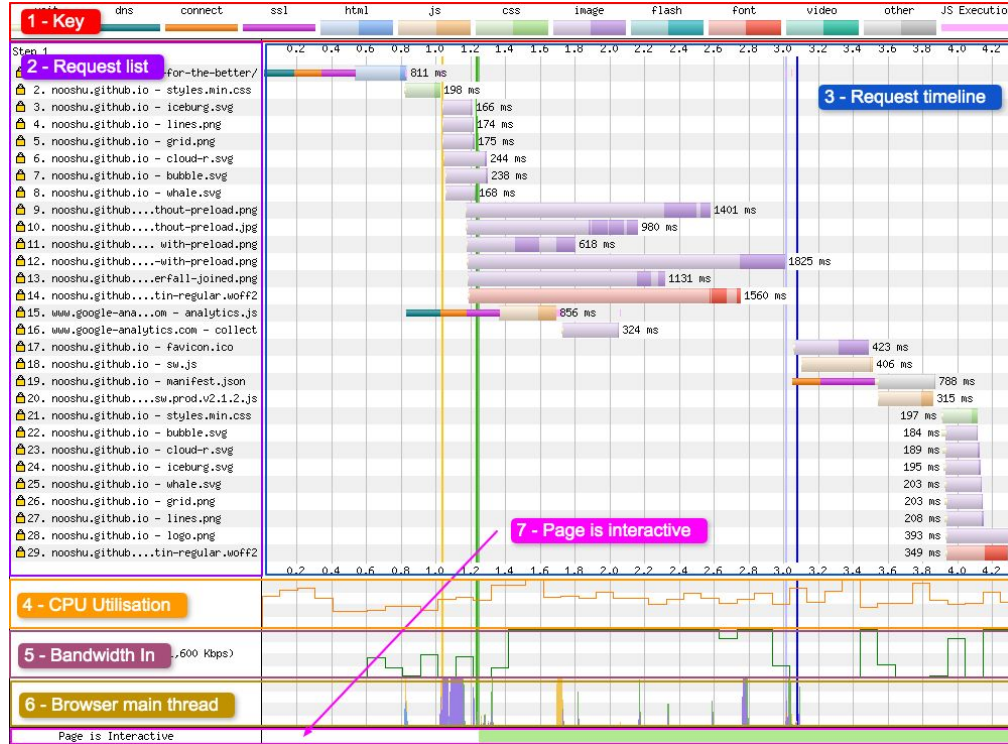
Continuous Monitoring

- Go to: <https://speedcurve.com/tipico/settings>
- ❑ Create tests for a new site & web page
- ❑ View results
- ❑ Setup monitoring

Results #1

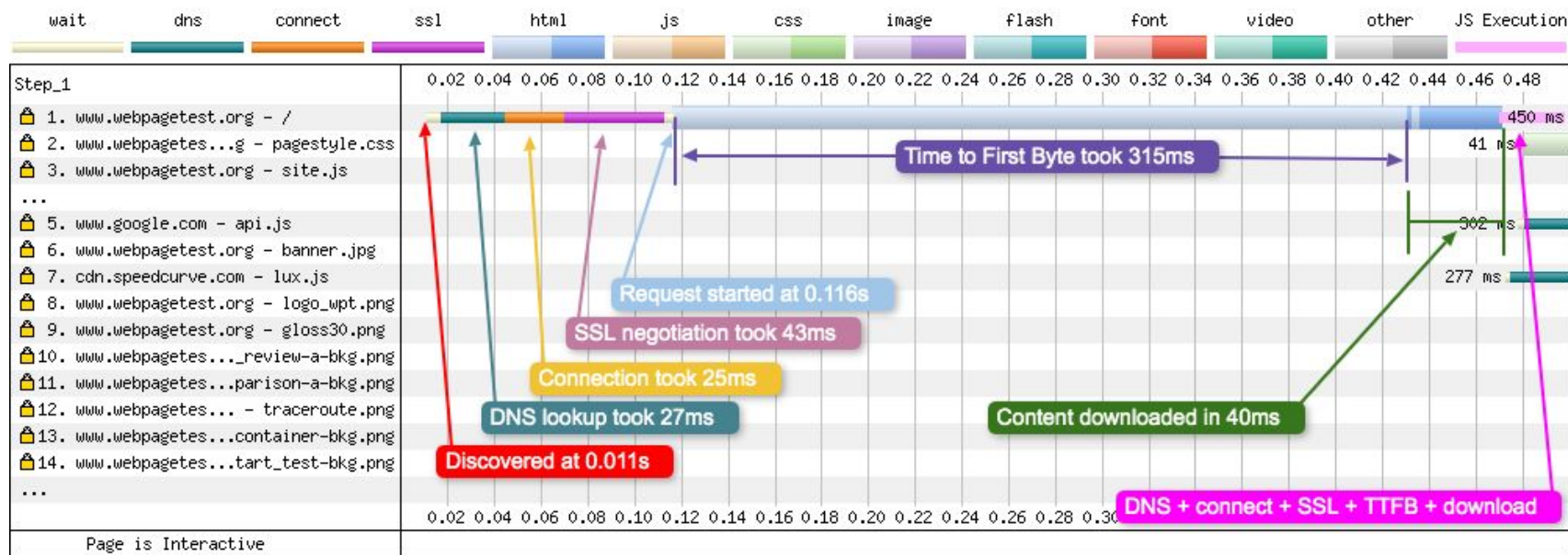


WebPageTest

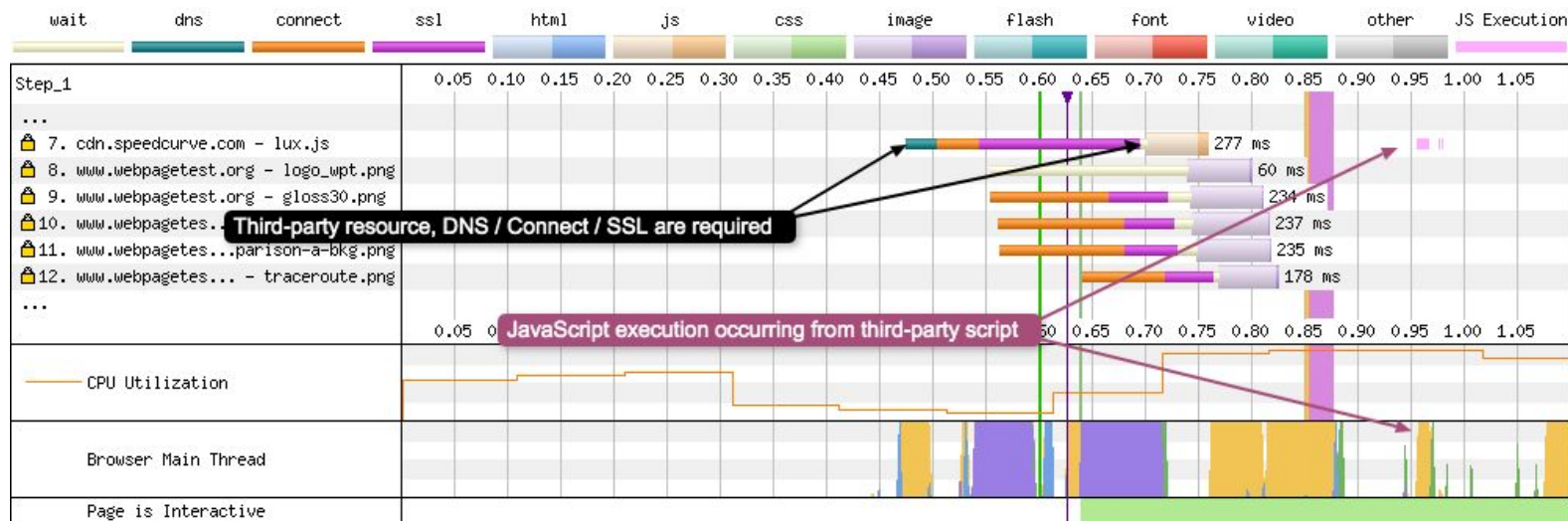


Source: <https://nooshu.github.io/blog/2019/10/02/how-to-read-a-wpt-waterfall-chart/>

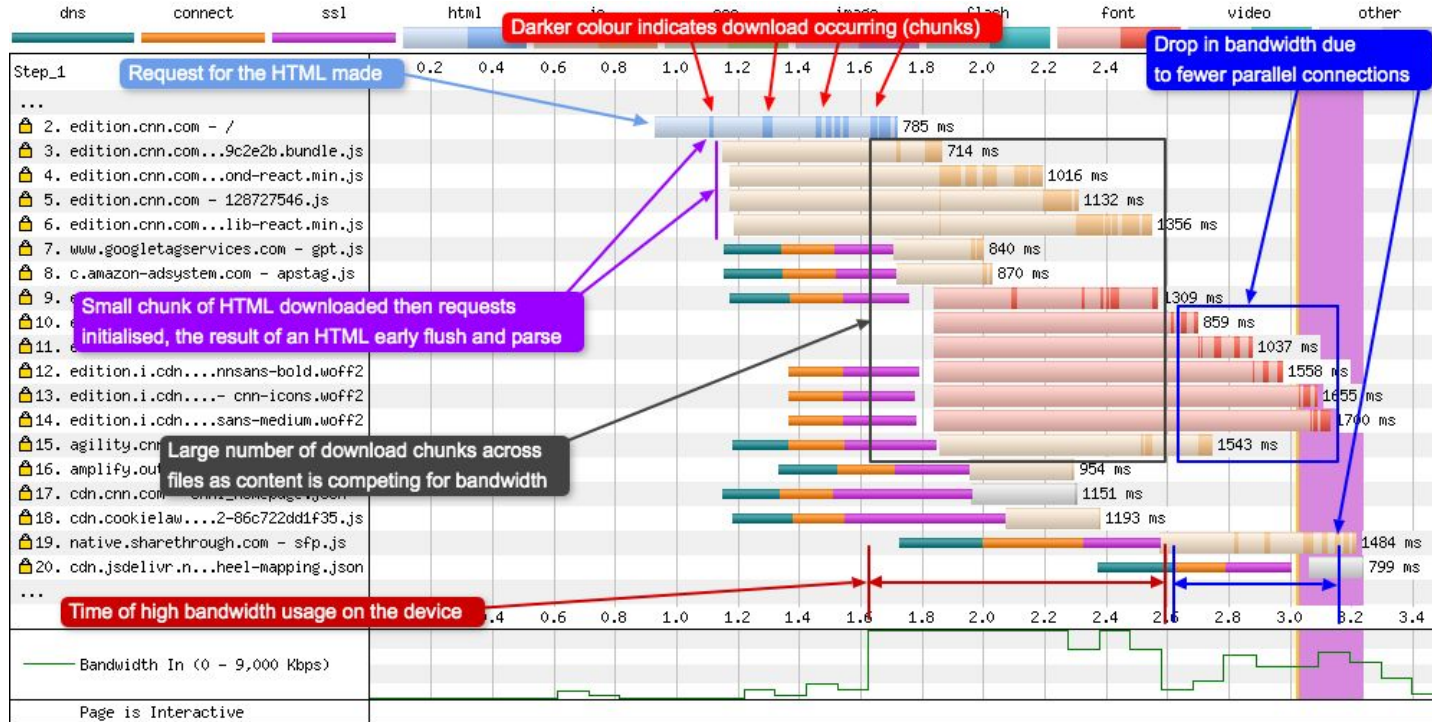
WebPageTest - index.html



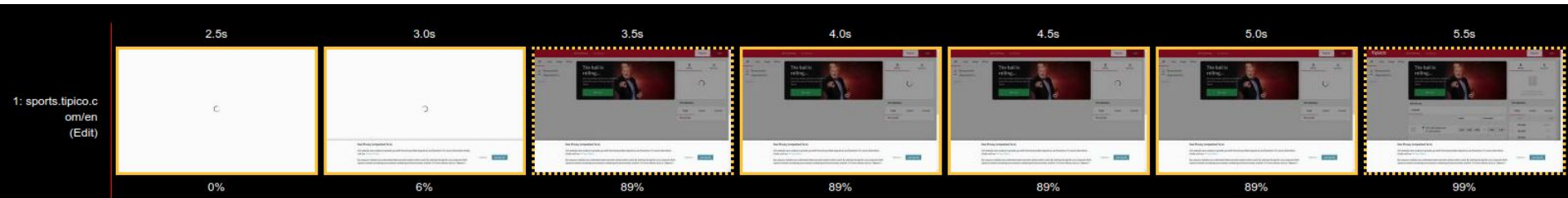
WebPageTest - JavaScript asset



WebPageTest - Download Chunking



Timeline & Video



Web Page Test Scripting

- Documentation:
<https://github.com/WPO-Foundation/webpagetest-docs/blob/master/user/Scripting.md>

Consent Popup



```
setViewportSize      1903 969
```

```
setCookie https://sports.staging.irl.aws.tipicodev.de/  
_evidon_consent_cookie={"consent_date":"2020-06-04T16:55:30.544Z","consent_type":1}  
setCookie https://sports.staging.irl.aws.tipicodev.de/ evidonConsentGiven=all  
setCookie https://sports.staging.irl.aws.tipicodev.de/ consentCategoryCookie=all  
navigate https://sports.staging.irl.aws.tipicodev.de/de
```

Consent Popup



```
setViewportSize      1903 969
```

```
setCookie https://sports.staging.irl.aws.tipicodew.de/  
_evidon_consent_cookie={"consent_date":"2020-06-04T16:55:30.544Z","consent_type":1}  
setCookie https://sports.staging.irl.aws.tipicodew.de/ evidonConsentGiven=all  
setCookie https://sports.staging.irl.aws.tipicodew.de/ consentCategoryCookie=all  
navigate https://sports.staging.irl.aws.tipicodew.de/de
```

```
// Usage:
```

```
// setCookie    <path>    <value>
```

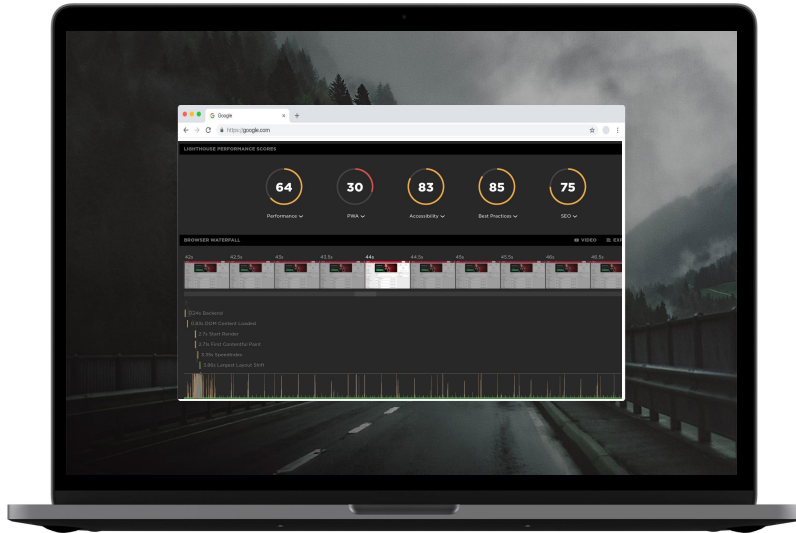
```
//
```

```
// <path> - Path where the cookie should be used/stored
```

```
//<value> - Cookie value (if expiration information isn't included it will be stored as a  
session cookie)
```

```
// Note that it is tab-delimited
```

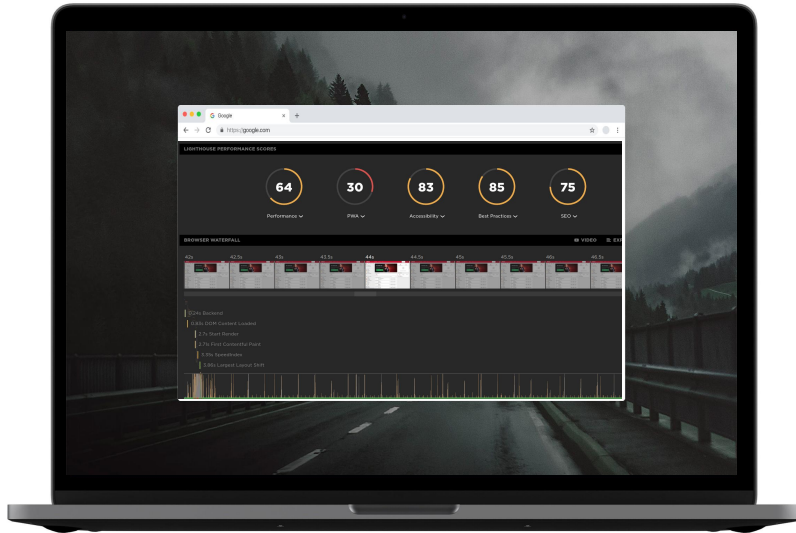

Results #2



https://speedcurve.com/tipico/test/201102_SV_7288a0be819e1a1b211e2d224ec34c34/

Overview

Results #2



https://speedcurve.com/tipico/test/201102_SV_7288a0be819e1a1b211e2d224ec34c34/



Overview

Polling



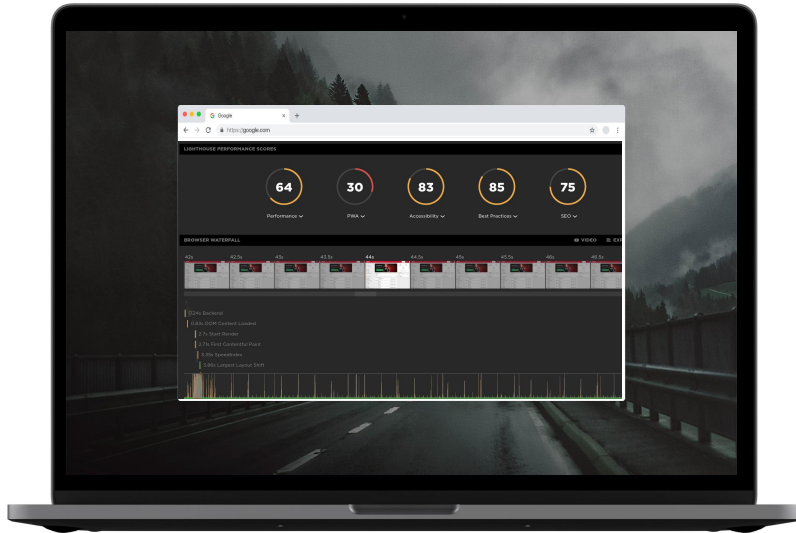
```
setCookie https://sports.staging.irl.aws.tipicodev.de/  
_evidon_consent_cookie={"consent_date":"2020-06-04T16:55:30.544Z","consent_type":1}  
setCookie https://sports.staging.irl.aws.tipicodev.de/ evidonConsentGiven=all  
setCookie https://sports.staging.irl.aws.tipicodev.de/ consentCategoryCookie=all  
setCookie https://sports.staging.irl.aws.tipicodev.de/ no-poll=1  
navigate https://sports.staging.irl.aws.tipicodev.de/de
```

Polling



```
setCookie https://sports.staging.irl.aws.tipicodev.de/  
_evidon_consent_cookie={"consent_date":"2020-06-04T16:55:30.544Z","consent_type":1}  
setCookie https://sports.staging.irl.aws.tipicodev.de/ evidonConsentGiven=all  
setCookie https://sports.staging.irl.aws.tipicodev.de/ consentCategoryCookie=all  
setCookie https://sports.staging.irl.aws.tipicodev.de/ no-poll=1  
navigate https://sports.staging.irl.aws.tipicodev.de/de
```

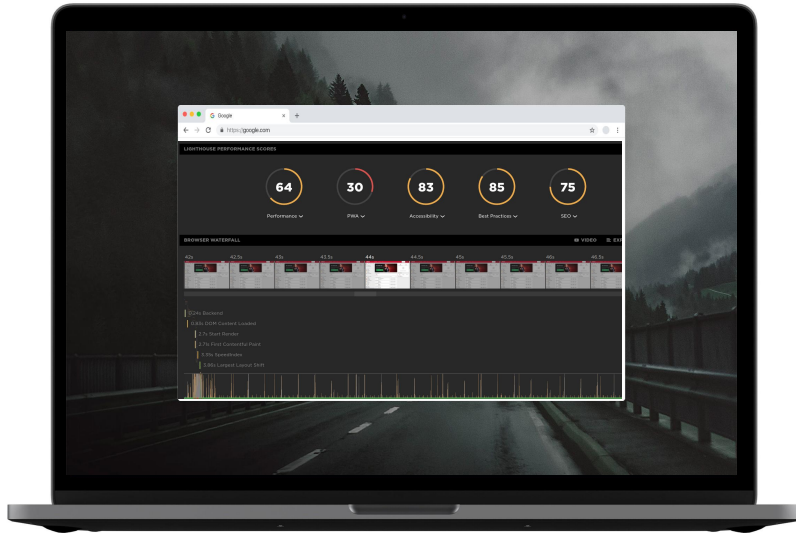
Results #3



https://speedcurve.com/tipico/test/201102_VT_bfc7cfcb3a7d357293a1db3ca24dd35a/

Overview

Results #3



https://speedcurve.com/tipico/test/201102_VT_bfc7cfcb3a7d357293a1db3ca24dd35a/



Overview

Repeat Visitor



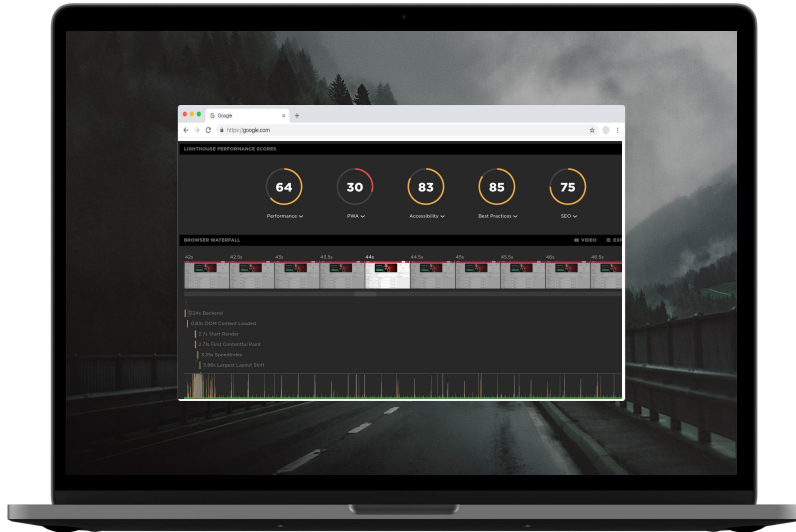
```
logData    0
setCookie https://sports.staging.irl.aws.tipicodew.de/
_evidon_consent_cookie={"consent_date":"2020-06-04T16:55:30.544Z","consent_type":1}
setCookie https://sports.staging.irl.aws.tipicodew.de/ evidonConsentGiven=all
setCookie https://sports.staging.irl.aws.tipicodew.de/ consentCategoryCookie=all
setCookie https://sports.staging.irl.aws.tipicodew.de/ no-poll=1
navigate   https://sports.staging.irl.aws.tipicodew.de/de
exec document.body.innerHTML=""
sleep      2
logData    1
navigate   https://sports.staging.irl.aws.tipicodew.de/de
```

Repeat Visitor



```
logData    0
setCookie  https://sports.staging.irl.aws.tipicodew.de/
_evidon_consent_cookie={"consent_date":"2020-06-04T16:55:30.544Z","consent_type":1}
setCookie  https://sports.staging.irl.aws.tipicodew.de/ evidonConsentGiven=all
setCookie  https://sports.staging.irl.aws.tipicodew.de/ consentCategoryCookie=all
setCookie  https://sports.staging.irl.aws.tipicodew.de/ no-poll=1
navigate   https://sports.staging.irl.aws.tipicodew.de/de
exec document.body.innerHTML=""
sleep      2
logData    1
navigate   https://sports.staging.irl.aws.tipicodew.de/de
```


Results #4



https://speedcurve.com/tipico/test/201102_F8_a370c01357db2b0e9c3d8c7a4fb889f5/

Overview



Overview

Logged In Visitor



```
addHeader X-Forwarded-For: 10.10.24.10

logData    0
navigate   https://account.staging.irl.aws.tipicodev.de/login
sleep     2

setValue   name=username   test_account
setValue   name=password   SuperSecretPassword1!
submitForm name=login
sleep      2

exec document.body.innerHTML=""

logData    1
navigate   https://sports.staging.irl.aws.tipicodev.de/de
```

Logged In Visitor



```
addHeader X-Forwarded-For: 10.10.24.10
```

```
logData    0
```

```
navigate    https://account.staging.irl.aws.tipicodev.de/login
```

```
sleep      2
```

```
setValue   name=username    test_account
```

```
setValue   name=password    SuperSecretPassword1!
```

```
submitForm    name=login
```

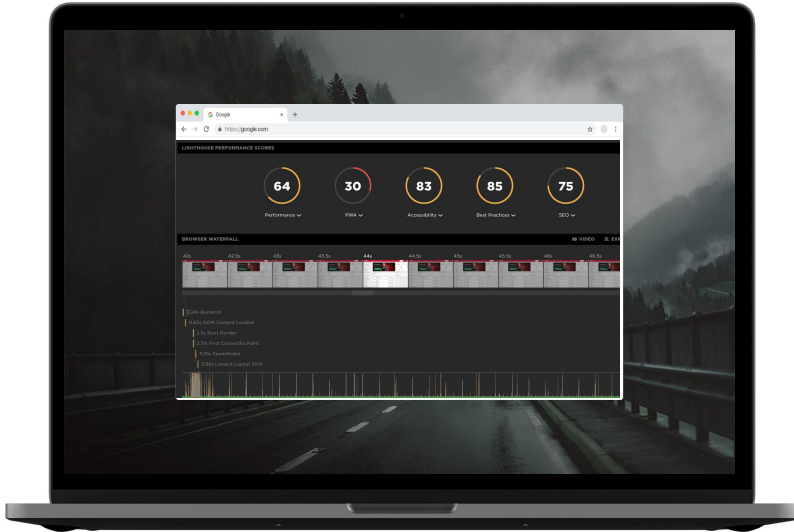
```
sleep        2
```

```
exec document.body.innerHTML=""
```

```
logData     1
```

```
navigate     https://sports.staging.irl.aws.tipicodev.de/de
```

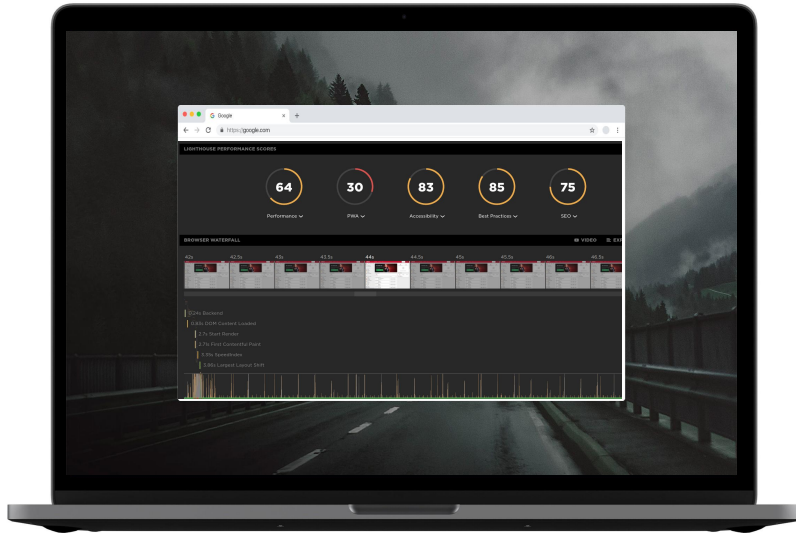
Results #5



https://speedcurve.com/tipico/test/201102_5S_99daa306293cfcfb53ca99d6695ed43d/

Overview

Results #5



https://speedcurve.com/tipico/test/201102_5S_99daa306293cfcfb53ca99d6695ed43d/



Overview

Continuous Monitoring

- Go to: <https://speedcurve.com/tipico/settings>
- ✓ Create tests for a new site & web page
- ✓ View results
- ❑ Setup monitoring

Setup Monitoring

- Custom dashboards: [Web Vitals \(Desktop\)](#)
- Web Hooks
- Email Notifications

Dashboard Settings

DASHBOARD NAME

Web Vitals (Desktop)

WEEKLY EMAIL REPORT

☒ Send this dashboard as a weekly email report ([view email preview](#))

EMAIL RECIPIENTS

Enter a comma-separated list of email addresses

farrugiak@tipico.com

TEAM VISIBILITY

- ☐ Visible to the whole team
☐ Just visible to me

BUDGET ALERT SETTINGS

☒ Customise where performance budget alerts for this dashboard are sent

EMAIL ALERTS

Enter a comma-separated list of email addresses

WEBHOOK ALERTS

Enter a comma-separated list of webhook URLs

https://hooks.slack.com/services/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

CANCEL

SAVE

Continuous Deployment

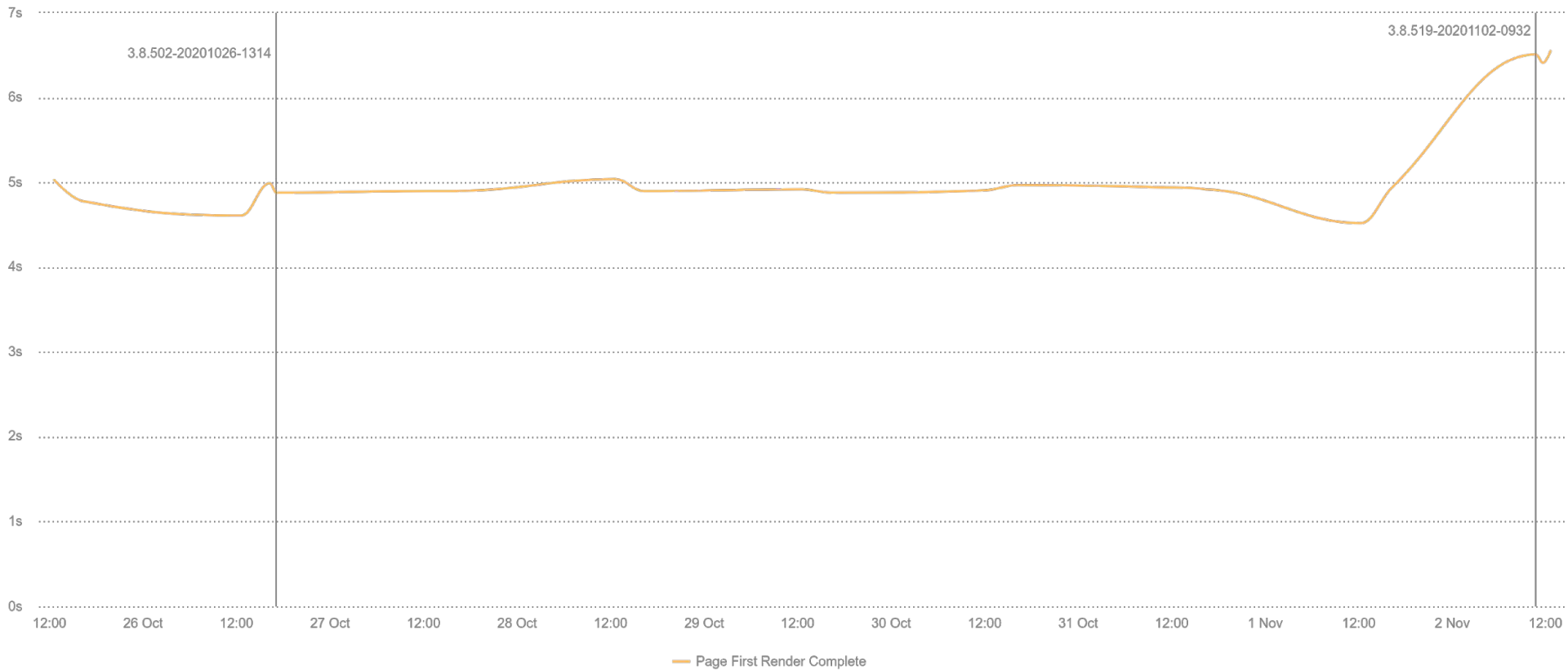
- SpeedCurve API

<https://api.speedcurve.com/#speedcurve-v1-api>



```
echo sh(returnStdout: true, script: "curl \"https://api.speedcurve.com/v1/deploys\" -u  
${key}:x --request POST --data site_id=12345 --data note=${ARTIFACT_ID}")
```

Continuous Deployment

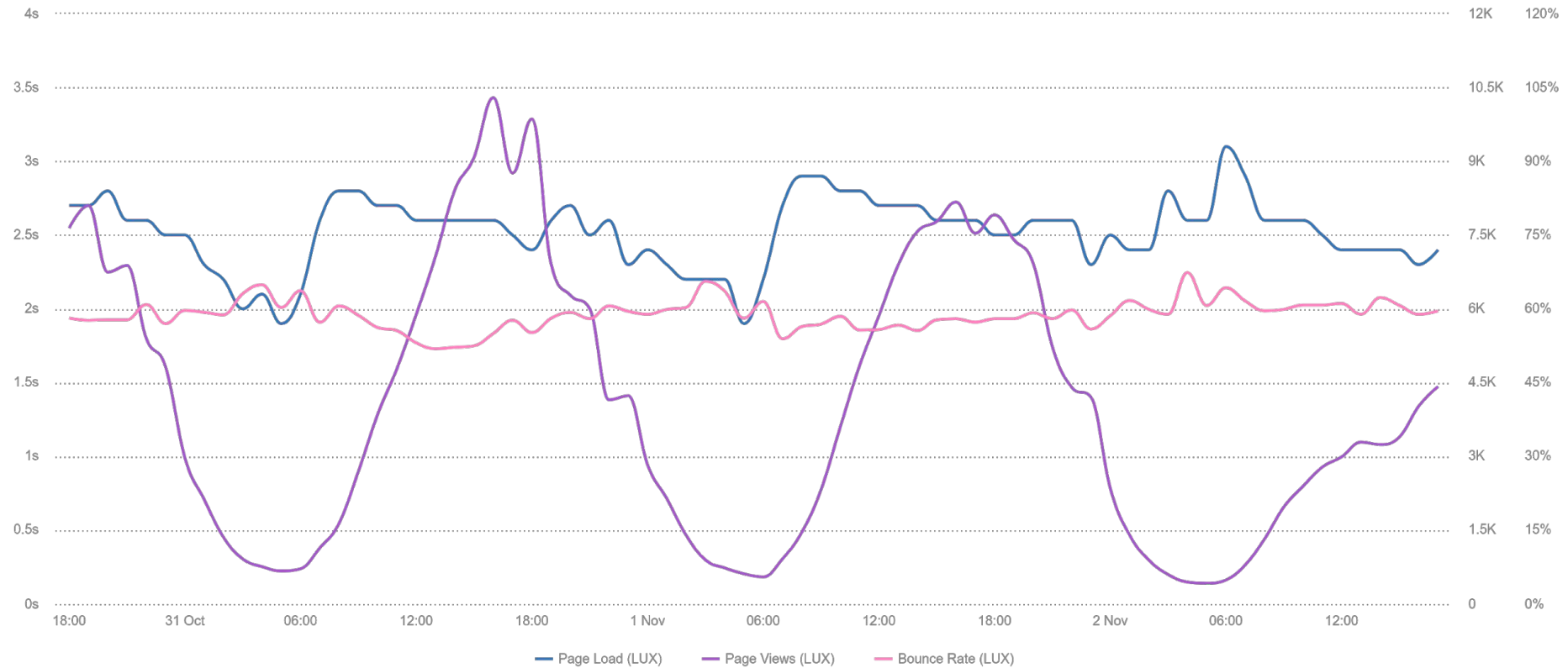


Continuous Monitoring

- Go to: <https://speedcurve.com/tipico/settings>
- ✓ Create tests for a new site & web page
- ✓ View results
- ✓ Setup monitoring

Real User Metrics

SpeedCurve LUX



Installation

- <https://support.speedcurve.com/en/articles/1266080-get-started-with-lux-real-user-monitoring>



```
<script>
LUX=(function(){var
a=("undefined"!==typeof(LUX)&&"undefined"!==typeof(LUX.gaMarks)?LUX.gaMarks:[]);var
d=("undefined"!==typeof(LUX)&&"undefined"!==typeof(LUX.gaMeasures)?LUX.gaMeasures:[]);var
j="LUX_start";var k=window.performance;var
l=("undefined"!==typeof(LUX)&&LUX.ns?LUX.ns:(Date.now?Date.now():+(new ...ar
d=b[a];LUX_al.push(d)}));try{LongTaskObserver.observe({type:["longtask"]})}catch(e){}});
</script>
<script src="https://cdn.speedcurve.com/js/lux.js?id=..." async defer
crossorigin="anonymous"></script>
```

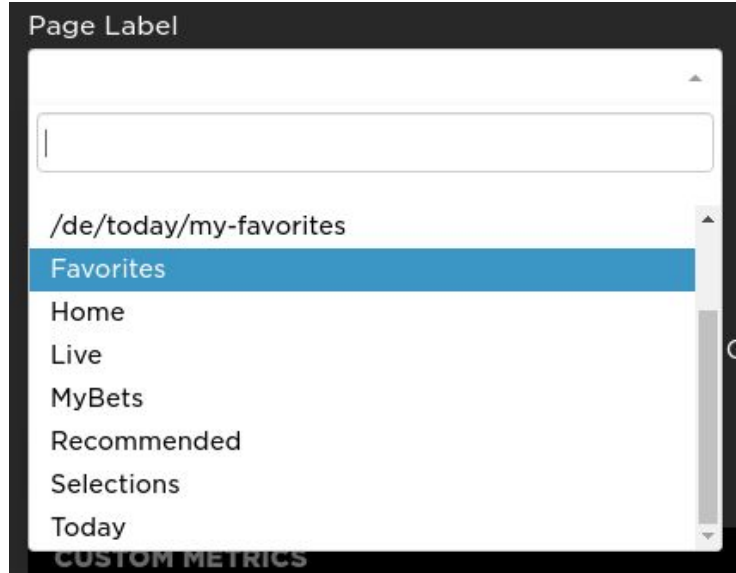
LUX Labels

- Defaults to page title
- Useful to group similar pages



```
LUX = window.LUX || {};  
LUX.label = 'home';
```


LUX Labels



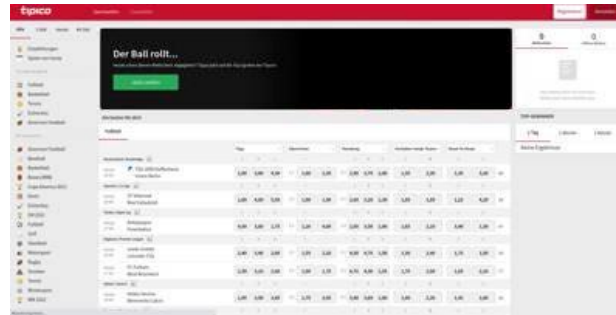
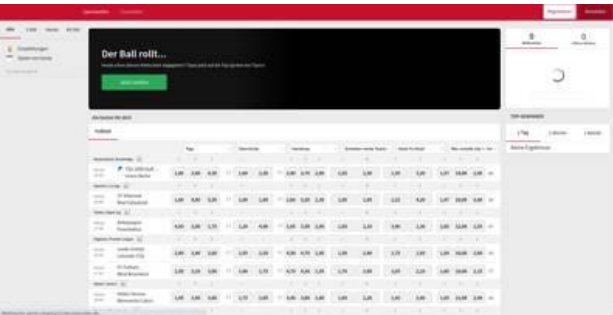
LUX & User Timing API

- Page First Render Complete



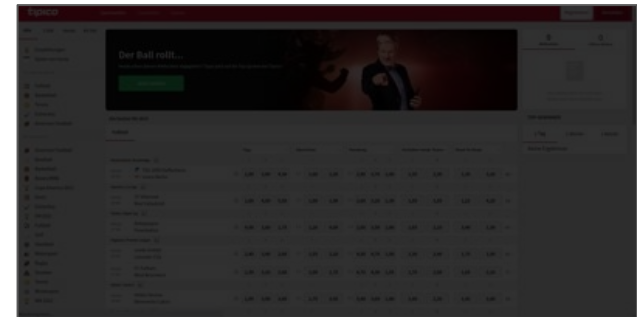
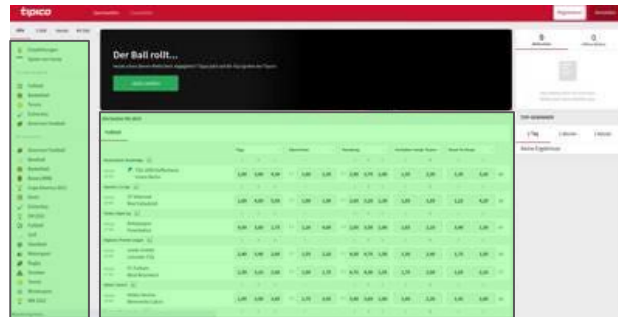
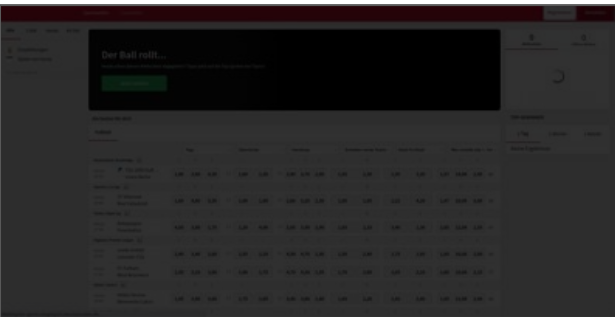
Page First Render Complete

- Ignores successive page renders
- What is the meaning of “render complete”?



Page First Render Complete

- Ignores successive page renders
- What is the meaning of “render complete”?



Page First Render Complete



```
performance.measure("page-first-render-complete", undefined, "render-complete");
```



```
const profileRender = (id, phase) => {
  performance.mark("render-complete");
};

const myComponent = () => (
  <React.Profiler id="Navigation_Tree" onRender={profileRender}>
```

Page First Render Complete

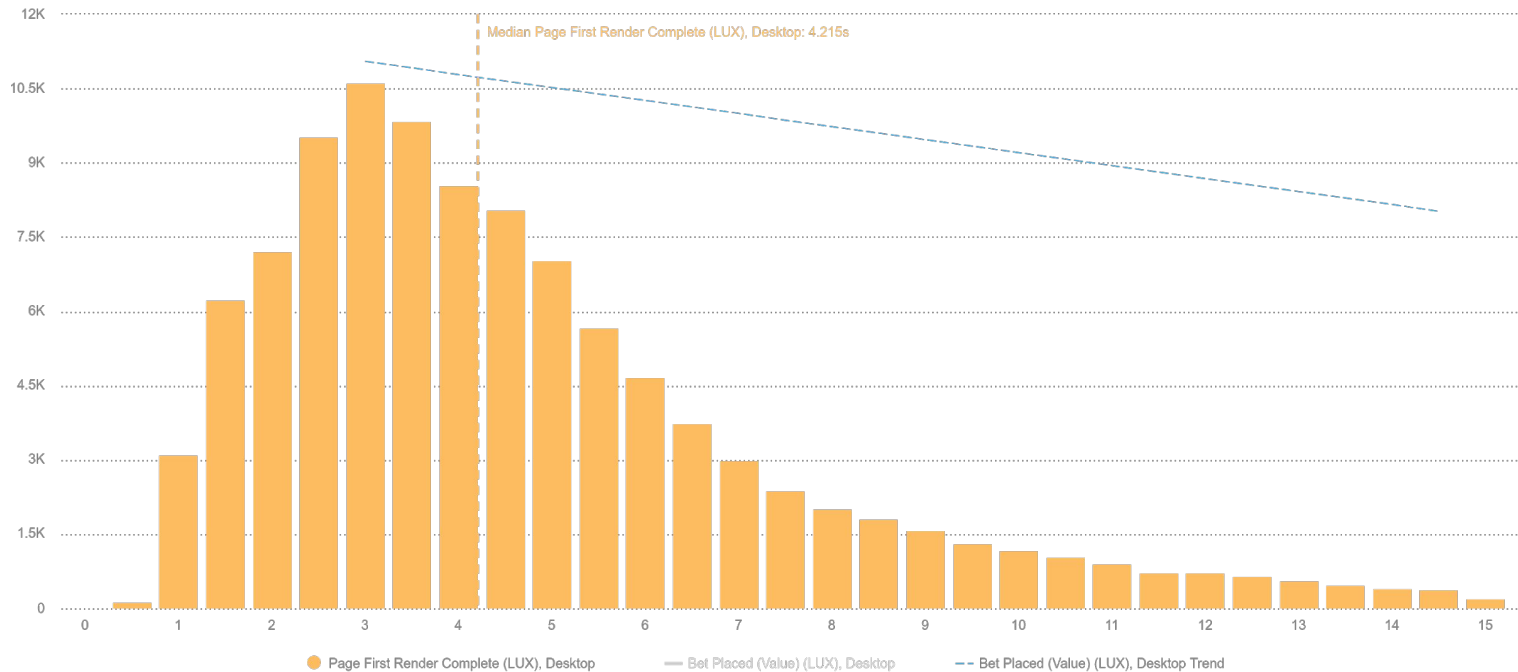
```
PerformanceMark {detail: null, name: "page-render-complete-end", entryType: "mark", startTime: 1624.535000009928, duration: 0}
PerformanceMark {detail: null, name: "page-render-complete-end", entryType: "mark", startTime: 1625.320000006468, duration: 0}
PerformanceMark {detail: null, name: "page-render-complete-end", entryType: "mark", startTime: 1626.0250000050291, duration: 0}
PerformanceMark {detail: null, name: "page-render-complete-end", entryType: "mark", startTime: 1664.7900000098161, duration: 0}
PerformanceMark {detail: null, name: "page-render-complete-end", entryType: "mark", startTime: 1672.195000006468, duration: 0}
PerformanceMark {detail: null, name: "page-render-complete-end", entryType: "mark", startTime: 5552.155000012135, duration: 0}
PerformanceMark {detail: null, name: "page-render-complete-end", entryType: "mark", startTime: 5556.179999999586, duration: 0}
PerformanceMark {detail: null, name: "page-render-complete-end", entryType: "mark", startTime: 9789.380000001984, duration: 0}
PerformanceMark {detail: null, name: "page-render-complete-end", entryType: "mark", startTime: 9791.770000010729, duration: 0}
```

First Render

Updates (~ 4 sec)

Bet Placement

- Correlation between Page First Render & Average Bet Value



Thank You