



Working **Well**: The Future of Web Testing

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NETFLIX

Testing Gives Us Confidence That Software Works

Testing **Should** Give Us Confidence
That Software Works **Well**

Works Well:

Works Well:

Accessible

Performant

Necessary

chrome

@trentmwillis #dotjs

chrome **--headless**

Chrome DevTools Protocol

chrome `--headless`
+
Chrome **DevTools** Protocol
=
New Possibilities

Puppeteer

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```
const browser = await puppeteer.launch();

const page = await browser.newPage();
await page.goto('https://example.com');

await page.content();
await page.screenshot({ path: 'screenshot.png' });

await browser.close();
```

QUnit-In-Browser

```
const title = 'Home page successfully renders';
const url = 'https://localhost:8000/';

QUnit.test.inBrowser(title, url, function(assert) {

  const content = document.getElementById('content');
  assert.ok(content, 'main content is rendered!');

});
```

How is this the future?

How is this the future?

Less about “how”

More about “what”

Accessibility

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axe-core

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```
QUnit.test.inBrowser(title, {  
  url,  
  injections: ['node_modules/axe-core/axe.min.js']  
}, async function(assert) {  
  
  const content = document.getElementById('content');  
  const results = await axe.run(content);  
  assert.equal(results.violations.length, 0);  
  
});
```

```
const pages = [ /* pages in site */ ];
pages.forEach(page => {

  QUnit.test.inBrowser(`${title} - ${page}`, {
    url: page,
    injections: ['node_modules/axe-core/axe.min.js']
  }, async function(assert) {

    const content = document.getElementById('content');
    const results = await axe.run(content);
    assert.equal(results.violations.length, 0);

  });

});
```

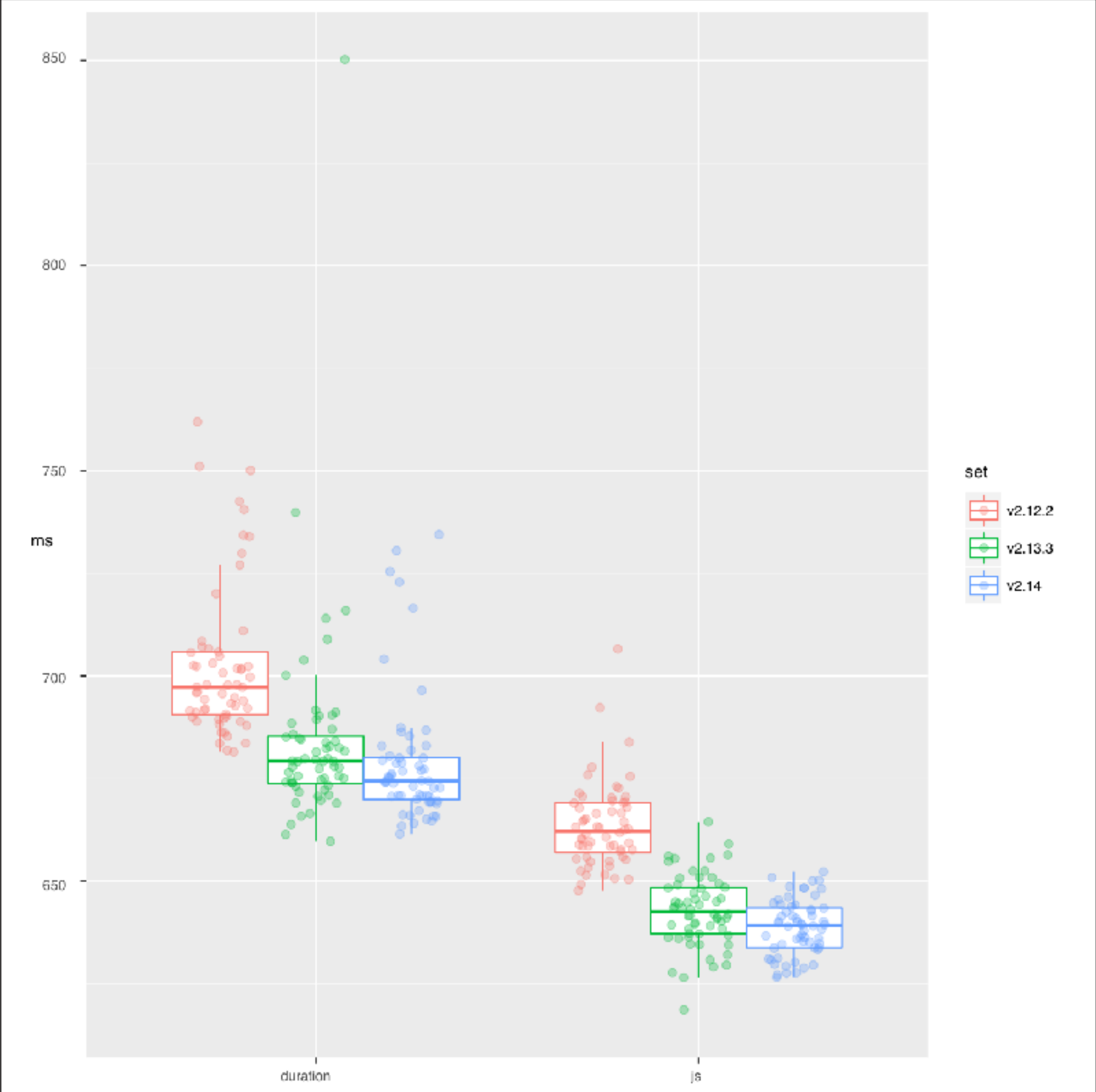
Performance

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macro-benchmark

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ember-**macro**-benchmark



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Code Coverage

Code Usage

URL	Type	Total Bytes	Unused Bytes	
/rs=ACT90oFcuqeAIZKgN_i7p0gUVf5FJbWmk	JS	415 893	193 290 46.5 %	
https://www.google.com/	CSS+JS	292 747	188 288 64.3 %	
/rs=AA2YrTvsJ4NG6EEJaw_kUXxLJ4pi7Db7G	JS	140 749	100 089 71.1 %	
https://apis.google.com/... /cb=gapi.loaded_0	JS	138 750	89 990 64.9 %	
ht/rs=ACT90oE78GyTaignaLd10ShHriearn9i4g	JS	125 995	76 665 60.8 %	

```
await Profiler.startPreciseCoverage();  
// Trigger some action  
const { result } = await Profiler.takePreciseCoverage();  
// Assert against results or track over time
```

Functionality

Functionality + Quality



**The Future Is
Accessible**



**The Future Is
Performant**



**The Future Is
Necessary**



The Future Is Bright

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