

# Web Testing Tools You Can Use



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Automation Engineer | Writer | Speaker | Board Member



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@ckenst

# Your printout probably doesn't match my slides



Or: <https://github.com/ckenst/testing-todays-web-apps>

@ckenst

# Goals

- Try some tools
- Ask Questions
- Learn from one another
- Find something you can use / apply whenever you get back to work
- **Note:** Everything we use here should work on Windows & Mac

# *Some* things we may talk about\*

- A whole lot of browser extensions
  - Bug Magnet, Form Filler, Check my Links, more...
- GitHub
- Big List of Naughty Strings
- Developer Tools
- Docker
- Postman
- CypressIO

\* assuming we get the time

# What do you use? Why are you here?

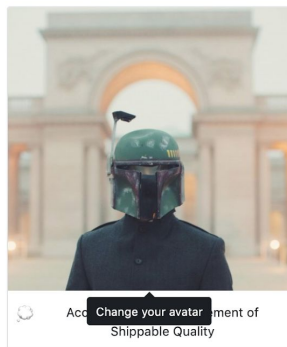
1. What tools do you currently use in your testing?
2. What are some tools you want to know more about?

# Browser Extensions

- **Form Filler**
  - Quickly generate random data for all kinds of forms inputs
- **Bug Magnet**
  - Quickly locate test data for forms to test boundaries, credit cards, etc.
  - Make your own?
- **SiteImprove Accessibility Checker**
  - Does your site have the most basic level of accessibility in place?
  - If not are you at risk for legal action?
- **Check My Links**
  - Quickly discover invalid or redirected links on a page
- **VisBug**
  - Debug web visuals like a UX designer

# Are you on GitHub?

- Are you using GitHub as a resource?
- Do you have your own GitHub profile?



**Chris Kenst**  
ckenst

Edit profile

Automation Engineer | Writer | Speaker |  
Board Member. Created and maintains an  
OSS list of testing conferences and  
workshops at [testingconferences.org](https://testingconferences.org)

@bloomnation

Santa Monica, CA

[www.kenst.com](https://www.kenst.com)

## Organizations



Overview Repositories 33 Projects 0 Packages 0 Stars 210 Followers 115 Following 93

## Pinned

Customize your pins

[TestingConferences/testingconferences.github.io](https://github.com/TestingConferences/testingconferences.github.io)

A simple list of Software Testing Conferences and Workshops

CSS ★ 56 🍴 124

[testing-guides](#)

A set of guides and catalogs to help test software

★ 45 🍴 10

[images-catalog](#)

Catalog of images for testing

PostScript ★ 9 🍴 1

[webdriverio4.js](#)

Front-end GUI automation written using JavaScript, Jasmine, Chai and WDIO4

JavaScript

[ama](#)

Forked from holman/ama

Ask me anything

★ 1

[testing-todays-web-apps](#)

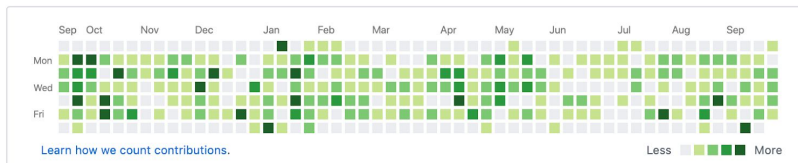
Workshop on Testing Today's Web Applications: Tools You Can Use

JavaScript

1,019 contributions in the last year

Contribution settings ▾

2019



2018

2017

2016

2015

# Big List of Naughty Strings

- <https://github.com/minimaxir/big-list-of-naughty-strings>
- Naughty Strings?

```
#      Numeric Strings
#      Strings which can be interpreted as numeric
0
1
1.00
$1.00
1/2
1E2
1E02
1E+02
-1
-1.00
-$1.00
-1/2
```



# Try the Big List of Naughty Strings app

- Node Library: <https://www.npmjs.com/package/big-list-of-naughty-strings>
- Node Validation app:  
<https://www.npmjs.com/package/naughty-string-validator>

node

```
> var naughty = require('naughty-string-validator');  
> naughty.getRandomNaughtyString();
```

# Developer Tools



I'm a Florist

Help

Sign up

Log in

## AGOURA HILLS, CA. FLOWER DELIVERY

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California (CA) > Agoura Hills > Flower Delivery

Delivery Zip Code



Elements

Console

Sources

Network

Performance

Memory

Application

Security

Audits

EditThisCookie

1 2

Filter

Default levels

at Je (gtm.js?id=GTM-W6TLW8:946)

Our embeddable contains third-party, open source software and/or libraries. To view them and their license terms, go to <http://goto.zendesk.com/embeddable-legal-notice> [common\\_vendor.eb3555b...js:1](#)  
[welcome.js:24](#)

```
..c' '::::'. .':codc cl,
. .od; 'dddddodc;coddddddac .lk0x:
.d, .:c .ldddddodddodddoddd; ..klko.
.chris. .. 'oddddddodddoddddl. ..
... 'oddddddodddoddddl. .:c:..
;,,,,,'. .cdddddodddoddd; ,,,icll:
'karen;;. .,jason,,. .anthony;
;,',,,,. .,;,,,,;ll;
;,,,,. .,;,,,,;ll;
.taylor;;. .,;c'
.ckkdooodo;. .;sergey;
'vladimir;. .;oddooodl.
;alexandr; .:lc;....
;imaks. .,;::::;
;oc .nickn.'
.nicke,.
; ;c;.
```

BloomNation

If you're looking at this, maybe you should be working for us instead!  
Visit <https://www.bloomnation.com/jobs/> today.

Manifest: property 'start\_url' ignored, should be same origin as document. [manifest.json:1](#)

# Developer Tools

Elements

Console

Sources

Network

Performance

Memory

Application

Security

Audits

EditThisCookie

Application

Manifest

Service Workers

Clear storage

Storage

▼ Local Storage

https://www.bloomnation.com

https://js.stripe.com

https://m.stripe.network

▼ Session Storage

https://www.bloomnation.com

https://js.stripe.com

https://m.stripe.network

IndexedDB

Web SQL

▼ Cookies

https://www.bloomnation.com

https://js.stripe.com

https://m.stripe.network

Clear storage

https://www.bloomnation.com

Usage

983 B used out of 166988 MB storage quota.

[Learn more](#)

983 B

983 B

IndexedDB

983 B

Total

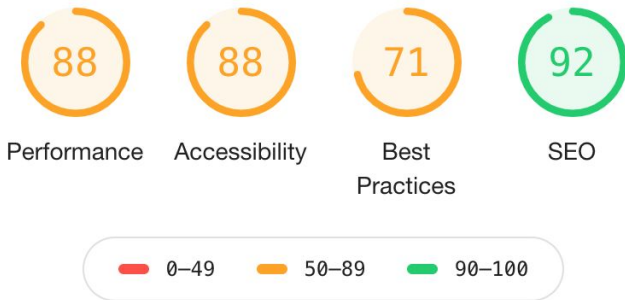
Clear site data

Application

☒ Unregister service workers

# Performance & SEO Tests

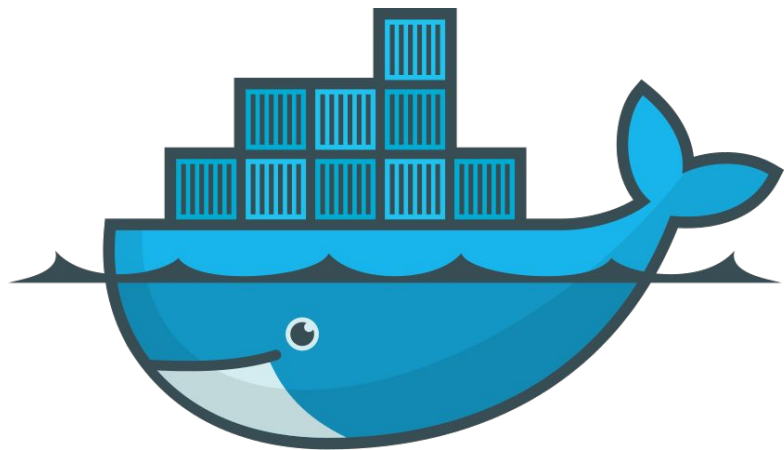
- <https://www.webpagetest.org/>
- DevTools Audit for SEO, Performance, etc.



## There were issues affecting this run of Lighthouse:

- Chrome extensions negatively affected this page's load performance. Try auditing the page in incognito mode or from a Chrome profile without extensions.

Docker



docker

# Docker

- Containers - isolate applications (kind of like Virtual Machines), but...
- Provide pre-configured, cloneable, application runtime environment.
- Library of containers at <http://hub.docker.com>
- Solves many of the problems with “test environments”
- Verify installation: docker run hello-world
  - Run a command in an image
  - Try images via docker pull
  - Create a docker image via docker build

# Postman

The screenshot displays the Postman application interface. The top bar includes a 'New' button, 'Import', 'Runner', and 'My Workspace' tabs. The left sidebar shows a 'Collections' view with a tree structure containing 'Local' (19 requests), 'Prod' (30 requests), 'QA' (12 requests), 'Restful Booker' (2 requests), and 'Health Check'. The 'Restful Booker' collection is expanded, showing a 'GET Get all bookings' request.

The main panel shows the 'GET Get all bookings' request configuration. The URL is set to `{{baseUrl}}/booking?checkin="2015-10-09"`. The 'Send' button is visible. Below the URL bar, the 'Params' tab is active, showing a table of query parameters:

KEY	VALUE	DESCRIPTION
checkin	"2015-10-09"	
Key	Value	Description

The 'Body' tab is also visible, showing the response status: 200 OK, Time: 404ms, Size: 341 B. The response is displayed in the 'Pretty' view as a JSON array:

```
1 {
2   {
3     "bookingid": 5
4   },
5   {
6     "bookingid": 8
7   },
8   {
9     "bookingid": 3
10  }
```

# HTTP Status Codes (the good ones)

1xx Informational	2xx Success	3xx Redirection
100 Continue	200 OK	300 Multiple Choices
101 Switching Protocols	201 Created	301 Moved Permanently
102 Processing	202 Accepted	302 Found
	203 Non-authoritative Information	303 See Other
	204 No Content	304 Not Modified
	205 Reset Content	305 Use Proxy
	206 Partial Content	307 Temporary Redirect
	207 Multi-Status	308 Permanent Redirect
	208 Already Reported	
	226 IM Used	



# HTTP Status Codes (the bad ones)

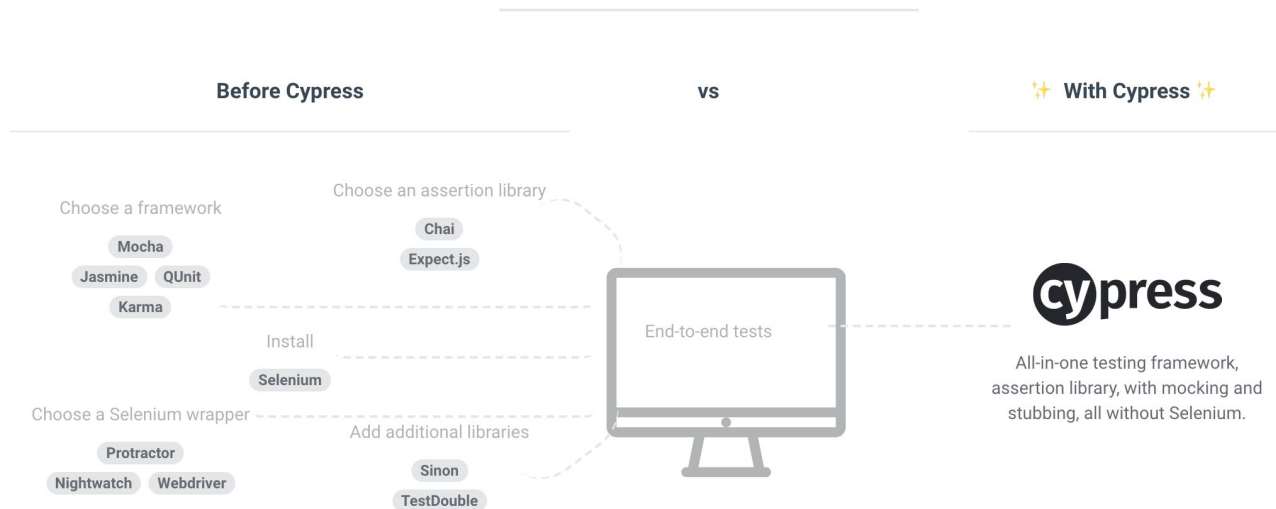
4xx Client Error		5xx Server Error
400 Bad Request	414 Request-URI Too Long	500 Internal Server Error
401 Unauthorized	415 Unsupported Media Type	501 Not Implemented
402 Payment Required	416 Requested Range Not Satisfiable	502 Bad Gateway
403 Forbidden	417 Expectation Failed	503 Service Unavailable
404 Not Found	418 I'm a teapot	504 Gateway Timeout
405 Method Not Allowed	421 Misdirected Request	505 HTTP Version Not Supported
406 Not Acceptable	422 Unprocessable Entity	506 Variant Also Negotiates
407 Proxy Authentication Required	423 Locked	
408 Request Timeout	424 Failed Dependency	507 Insufficient Storage
409 Conflict	426 Upgrade Required	508 Loop Detected
410 Gone	428 Precondition Required	510 Not Extended
411 Length Required	429 Too Many Requests	511 Network Authentication Required
412 Precondition Failed	431 Request Header Fields Too Large	599 Network Connect Timeout Error
413 Payload Too Large	444 Connection Closed Without Response	
	451 Unavailable For Legal Reasons	
	499 Client Closed Request	

# CypressIO

- Non-Selenium based Web Automation Framework
- *Fairly* straightforward
- Fun UI that can help build tests

Until now, end-to-end testing wasn't easy. It was the part developers hated. Not anymore. Cypress makes setting up, writing, running and debugging tests easy.

*"Can't say enough about @Cypress\_io! Makes testing modern and legacy code a snap. The GUI tools are amazing and the CLI just works. Having a video of each test spec is 🤩" - Nick DeNardis*



# Writing our first test

- I'm using Visual Studio Code, a free code editor. I highly recommend it.
- Start Cypress with `npx cypress open`
- Let's visit <http://todomvc-app-for-testing.surge.sh/>
- What else can we do?

# Technical Testing & Tools You Just Used

- Lots of chrome extension to increase your effectiveness
- More familiar / experienced with Chrome's DevTools for understanding locators and the powers of possibly automating directly in the browser
- How docker helps us reduce complexity
- API testing with Postman!
- Wrote some UI tests using Cypress using it's fun Test Runner to help us
- Essentially we've covered  $\frac{2}{3}$  of the Automation Testing Pyramid!

# Questions?

- Let me know what works and what doesn't work
  - Share your success and failures
- Get In Touch:
  - [chris@kenst.com](mailto:chris@kenst.com)
  - @ckenst on twitter, linkedin, github
  - [www.kenst.com](http://www.kenst.com)



@ckenst

# Shout out to Alan Page

- [Alan Page](#) of Unity
- He originally gave this workshop at STAREAST and then recommended I do it here at STARWEST
- I recommend checking out his blog: <https://angryweasel.com/blog/>
- More importantly Alan Page and Brent Jensen have an amazing podcast called AB Testing
  - They are also authors of the Modern Testing Principles: <https://www.angryweasel.com/ABTesting/modern-testing-principles/>



# Thank You! Let's stay In Touch

- Let me know what works and what doesn't work for you
  - Share your success and failures
- Contact
  - [chris@kenst.com](mailto:chris@kenst.com)
  - @ckenst on twitter, linkedin, github
  - [www.kenst.com](http://www.kenst.com)



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