

Historical Page Load Time Monitoring Using WebPageTest and Drupal

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Why is Page Load Time Important?

Because people are impatient.

Why is Page Load Time Important?

Akamai State of Online Retail Performance Report

In 2017, Akamai released these findings in their State of Online Retail Performance report:

- "A 100-millisecond delay in website load time can hurt conversion rates by 7 percent"
- "A two-second delay in web page load time increase bounce rates by 103 percent"
- "53 percent of mobile site visitors will leave a page that takes longer than three seconds to load"

SOURCE: Akamai Online Retail Performance Report: Milliseconds Are Critical

<https://www.akamai.com/uk/en/about/news/press/2017-press/akamai-releases-spring-2017-state-of-online-retail-performance-report.jsp>

Why is Page Load Time Important?

Google's Industry Benchmarks for Mobile Site Performance

Around the same time, Google provided new industry benchmarks for mobile site performance:

from Find Out How You Stack Up to New Industry Benchmarks for Mobile Page Speed



As page load time goes from:

1s to 3s the probability of bounce **increases 32%**

1s to 5s the probability of bounce **increases 90%**

1s to 6s the probability of bounce **increases 106%**

1s to 10s the probability of bounce **increases 123%**

Source: Google/SOASTA Research, 2017.

think with Google

thinkwithgoogle.com

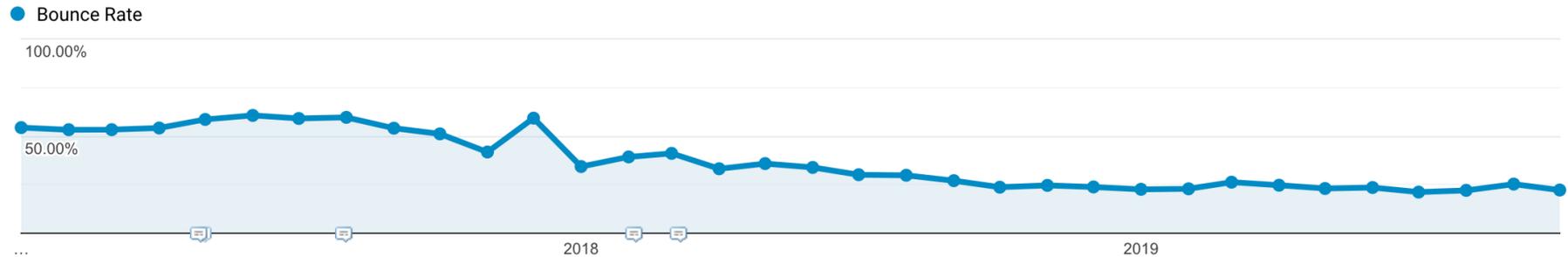
Why is Page Load Time Important?

Real user data for Rackspace.com

- Average Page Load Time since January 1, 2017



- Average Bounce Rate from September 1, 2016 through October 18, 2019



How to Measure Page Load Time

How to Measure Page Load Time

Important Terms and Metrics*

*as defined by WebPageTest

- **Metrics**

- **Time to First Byte (TTFB)** – When very first byte received by the client.
- **Start Render/First Paint** – When anything is first rendered on the screen. (not necessarily content)
- **First Contentful Paint** – When content is first rendered on the screen.
- **Load Time** – When document complete event is triggered (i.e. DOM Ready).
- **Fully Loaded** – Last network activity within 2 seconds of document complete.
- **Speed Index** – How quickly page rendered user-visible content.
- **DOM Elements** – Count of total DOM elements at the end of the test.

- **Views**

- **First View** – All metrics are captured on a browser with cleared cookies/cache. Simulates a first-time visitor.
- **Repeat View** – All metrics are captured again without clearing cookies/cache. Simulates a returning visitor.

SOURCE: WebPageTest Documentation – Metrics

<https://sites.google.com/a/webpagetest.org/docs/using-webpagetest/metrics>

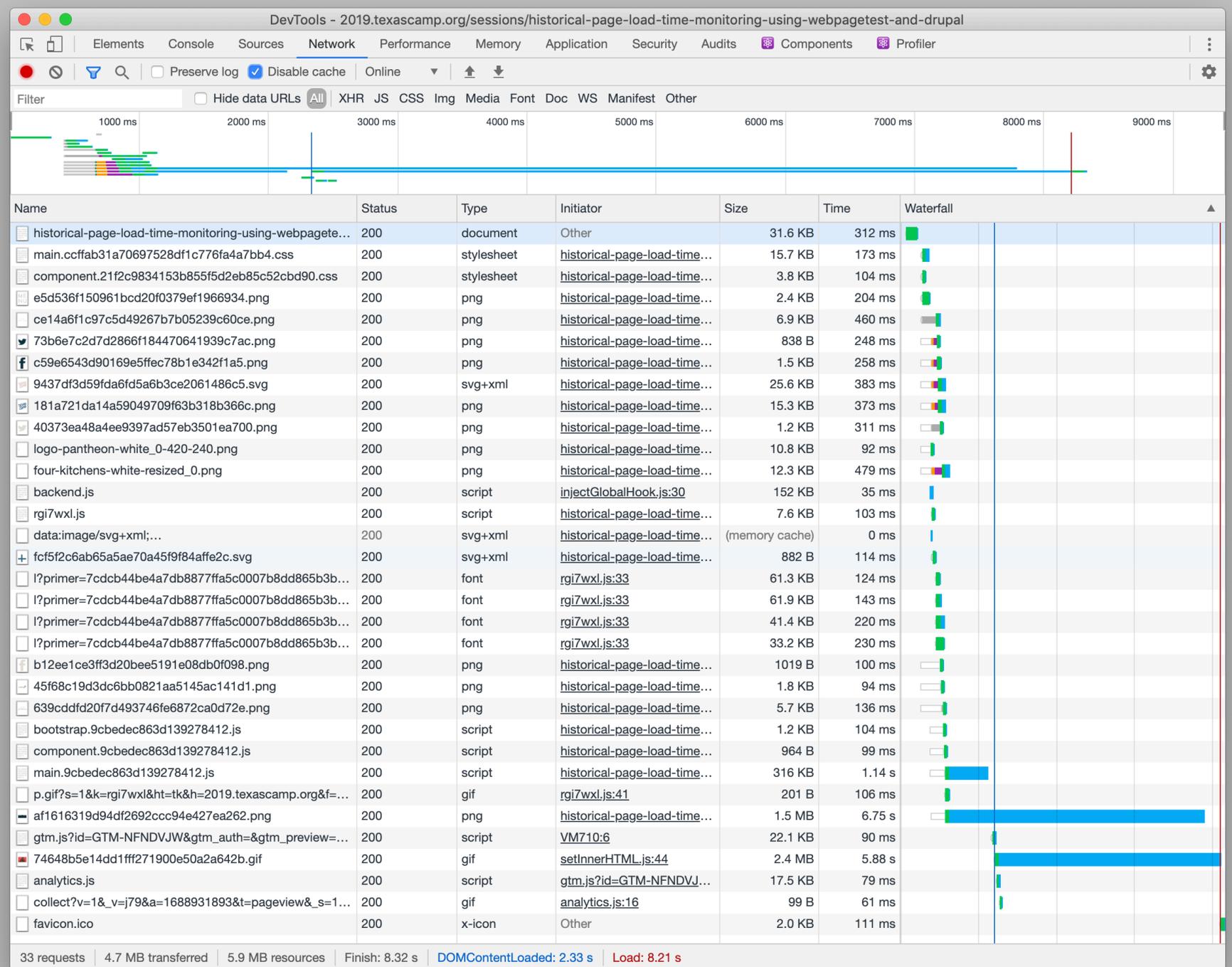
How to Measure Page Load Time

Tools and Resources

- There are many tools out there for measuring page load times. We will focus on:
 - **Google Chrome Developer Tools:**
<https://developers.google.com/web/tools/chrome-devtools/network>
 - **WebPageTest.org:**
<https://webpagetest.org/>
- Additional tools worth exploring:
 - **Google PageSpeed Insights:**
<https://developers.google.com/speed/pagespeed/insights/>
 - **Google Mobile Speed Report:**
<https://www.thinkwithgoogle.com/feature/testmysite/>
 - **GTmetrix:**
<https://gtmetrix.com>

How to Measure Page Load Time

Google Chrome Developer Tools



How to Measure Page Load Time

WebPageTest (WPT) Sample Overview

Web Page Performance Test for

<https://2019.texascamp.org/sessions/historical-page-load-time-monitoring-using-webpagetest-and-drupal>

Need help improving?

A	B	A	A	B	X
First Byte Time	Keep-alive Enabled	Compress Transfer	Compress Images	Cache static content	Effective use of CDN

From: Dulles, VA - Chrome - Cable
10/15/2019, 3:40:37 PM

[Summary](#) [Details](#) [Performance Review](#) [Content Breakdown](#) [Domains](#) [Processing Breakdown](#) [Screenshot](#) [Image Analysis](#) [Request Map](#)

Tester: VM02-07-172.16.20.224
First View only
Test runs: 3
[Re-run the test](#)

[Raw page data](#) - [Raw object data](#)
[Export HTTP Archive \(.har\)](#)
[View Test Log](#)

Performance Results (Median Run)

	Load Time	First Byte	Start Render	First Contentful Paint	Speed Index	Last Painted Hero	First CPU Idle	Document Complete			Fully Loaded			
								Time	Requests	Bytes In	Time	Requests	Bytes In	Cost
First View (Run 2)	8.664s	0.342s	0.700s	0.658s	1.010s	4.100s	2.306s	8.664s	30	4,614 KB	8.849s	31	4,616 KB	\$\$\$\$\$

[Plot Full Results](#)

Test Results

Run 1:

	Waterfall	Screenshot	Video
First View (8.611s) Timeline (view) Processing Breakdown Trace (view)			Filmstrip View - Watch Video

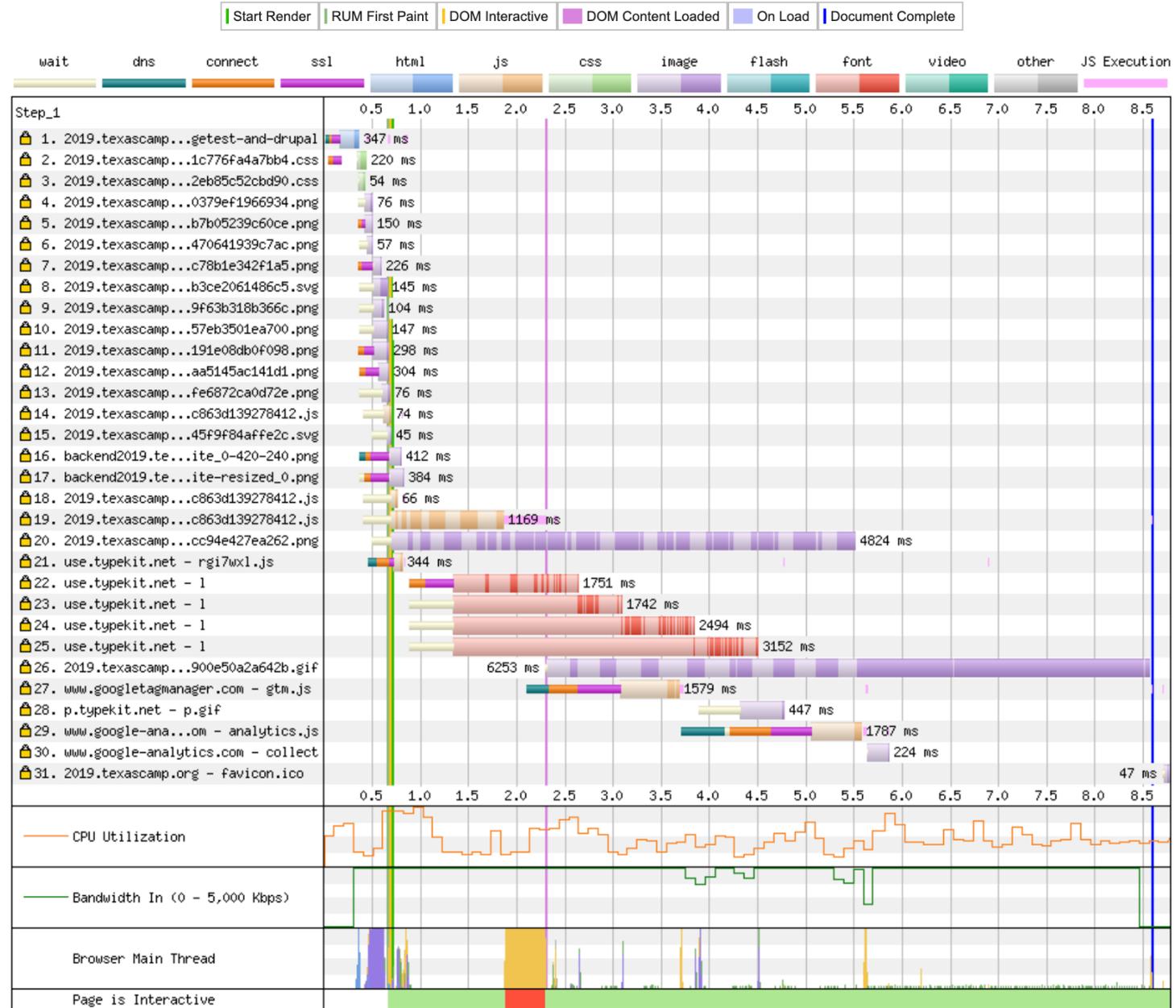
Run 2:

	Waterfall	Screenshot	Video
First View (8.664s) Timeline (view) Processing Breakdown Trace (view)			Filmstrip View - Watch Video

How to Measure Page Load Time

WebPageTest (WPT)
Sample Waterfall View

Waterfall View



How to Measure Page Load Time

WebPageTest (WPT) Sample Request Details

Request Details

Before Start Render
Before On Load
After On Load

Request Details												
#	Resource	Content Type	Request Start	DNS Lookup	Initial Connection	SSL Negotiation	Time to First Byte	Content Download	Bytes Downloaded	Certificates	Error/Status Code	IP
1	https://2019.texasca...bpagetest-and-drupal	text/html	0.163 s	28 ms	35 ms	87 ms	151 ms	46 ms	30.4 KB	-	200	34.237.122.21
2	https://2019.texasca...8df1c776fa4a7bb4.css	text/css	0.347 s	-	36 ms	95 ms	41 ms	48 ms	15.2 KB	-	200	34.237.122.21
3	https://2019.texasca...f5d2eb85c52cbd90.css	text/css	0.362 s	-	-	-	48 ms	6 ms	3.4 KB	-	200	34.237.122.21
4	https://2019.texasca...20f0379ef1966934.png	image/png	0.422 s	-	-	-	63 ms	13 ms	2.1 KB	-	200	34.237.122.21
5	https://2019.texasca...267b7b05239c60ce.png	image/png	0.427 s	-	34 ms	41 ms	71 ms	4 ms	6.5 KB	-	200	34.237.122.21
6	https://2019.texasca...184470641939c7ac.png	image/png	0.444 s	-	-	-	56 ms	1 ms	0.5 KB	-	200	34.237.122.21
7	https://2019.texasca...ffec78b1e342f1a5.png	image/png	0.507 s	-	31 ms	114 ms	78 ms	3 ms	1.1 KB	-	200	34.237.122.21
8	https://2019.texasca...5a6b3ce2061486c5.svg	image/svg+xml	0.507 s	-	-	-	81 ms	64 ms	25.2 KB	-	200	34.237.122.21
9	https://2019.texasca...9709f63b318b366c.png	image/png	0.509 s	-	-	-	99 ms	5 ms	14.9 KB	-	200	34.237.122.21
10	https://2019.texasca...7ad57eb3501ea700.png	image/png	0.51 s	-	-	-	144 ms	3 ms	0.8 KB	-	200	34.237.122.21
11	https://2019.texasca...ee5191e08db0f098.png	image/png	0.511 s	-	50 ms	96 ms	147 ms	5 ms	0.7 KB	-	200	34.237.122.21
12	https://2019.texasca...821aa5145ac141d1.png	image/png	0.569 s	-	53 ms	151 ms	95 ms	5 ms	1.5 KB	-	200	34.237.122.21
13	https://2019.texasca...746fe6872ca0d72e.png	image/png	0.605 s	-	-	-	68 ms	8 ms	5.4 KB	-	200	34.237.122.21
14	https://2019.texasca...edec863d139278412.js	application/javascript	0.617 s	-	-	-	57 ms	17 ms	0.8 KB	-	200	34.237.122.21
15	https://2019.texasca...70a45f9f84affe2c.svg	image/svg+xml	0.654 s	-	-	-	43 ms	2 ms	0.5 KB	-	200	34.237.122.21
16	https://backend2019...-white_0-420-240.png	image/png	0.682 s	48 ms	51 ms	196 ms	114 ms	3 ms	10.3 KB	-	200	34.237.122.21
17	https://backend2019...-white-resized_0.png	image/png	0.683 s	-	51 ms	196 ms	134 ms	3 ms	11.9 KB	-	200	34.237.122.21
18	https://2019.texasca...edec863d139278412.js	application/javascript	0.688 s	-	-	-	58 ms	8 ms	0.5 KB	-	200	34.237.122.21
19	https://2019.texasca...edec863d139278412.js	application/javascript	0.688 s	-	-	-	60 ms	1109 ms	315.7 KB	-	200	34.237.122.21
20	https://2019.texasca...92ccc94e427ea262.png	image/png	0.689 s	-	-	-	183 ms	4641 ms	1,506.2 KB	-	200	34.237.122.21
21	https://use.typekit.net/rqj7wxl.js	text/javascript	0.724 s	74 ms	125 ms	58 ms	75 ms	12 ms	7.4 KB	-	200	104.111.222.25
22	https://use.typekit...2257a9191&fvd=n4&v=3	application/font-woff2	1.343 s	-	156 ms	302 ms	330 ms	963 ms	61.0 KB	-	200	104.111.222.25
23	https://use.typekit...2257a9191&fvd=n4&v=3	application/font-woff2	1.343 s	-	-	-	1293 ms	449 ms	33.0 KB	-	200	104.111.222.25
24	https://use.typekit...2257a9191&fvd=n4&v=3	application/font-woff2	1.343 s	-	-	-	1743 ms	751 ms	61.6 KB	-	200	104.111.222.25
25	https://use.typekit...2257a9191&fvd=n4&v=3	application/font-woff2	1.343 s	-	-	-	2496 ms	656 ms	41.1 KB	-	200	104.111.222.25
26	https://2019.texasca...271900e50a2a642b.gif	image/gif	2.312 s	-	-	-	248 ms	6005 ms	2,416.6 KB	-	200	34.237.122.21
27	m_cookies_win=x">https://www.googlea...w=>m_cookies_win=x	application/javascript	3.073 s	211 ms	308 ms	446 ms	493 ms	121 ms	22.0 KB	-	200	172.217.11.8
28	https://p.typekit.ne...e=js&=1570590574677	image/gif	4.323 s	-	-	-	433 ms	14 ms	0.0 KB	-	200	104.111.222.25
29	https://www.google-a...ics.com/analytics.js	text/javascript	5.051 s	432 ms	412 ms	422 ms	457 ms	64 ms	17.4 KB	-	200	172.217.15.110
30	https://www.google-a...NFNDVJW&z=1459257082	image/gif	5.633 s	-	-	-	220 ms	4 ms	0.0 KB	-	200	172.217.15.110
31	https://2019.texasca...org/favicon.ico	image/x-icon	8.718 s	-	-	-	44 ms	3 ms	1.6 KB	-	200	34.237.122.21

How Does Drupal Come Into Play?

How Does Drupal Come Into Play?

Introducing the Performance Budget Module

Performance Budget

[View](#) [Version control](#) [Automated testing](#)

By [bighappyface](#) on 8 February 2017, updated 8 June 2017

This project is not covered by Drupal's [security advisory policy](#).

Web page performance is as important as ever and, using best-of-breed tooling, performance budgets can be defined and automated to help us keep things the best that they can be.

Key Features

- Multiple budgets
- Plugin design to facilitate adding providers
- Stored results broken out by budget dimension
- Customizable schedule for budget analysis

8.x-1.0 goals

- High test coverage / Dominant unit tests
- Budget Entity, List, and CRUD
- Cron integration for budget analysis schedules
- Pass/Fail alerts
- Pass/Fail thresholds (may be plugin specific)
- Budget enable/disable
- WebPageTest plugin (High Priority)
- Google PageSpeed Insights plugin (Medium Priority)

Supporting organizations:

[Rackspace Hosting](#)

Project information

Module categories: [Performance and Scalability](#)

364 downloads

This project is not covered by the [security advisory policy](#).
Use at your own risk! It may have publicly disclosed vulnerabilities.

Downloads

8.x-1.0-alpha6 released 11 September 2019
[tar.gz \(1000.98 KB\)](#) | [zip \(1.02 MB\)](#)

Development version: [8.x-1.x-dev](#) updated 11 Sep 2019 at 21:53 UTC

Testing result: **PHP 7.2 & MySQL 5.5, D8.8 31 pass** [all results](#)

[View all releases](#)

★ 3

Maintainers for Performance Budget

[WidgetsBurritos](#) – 14 commits
last: 4 weeks ago, first: 2 months ago

[bighappyface](#) – 6 commits
last: 2 years ago, first: 2 years ago

[View all committers](#)
[View commits](#)

Issues for Performance Budget

To avoid duplicates, please search before submitting a new issue.

[Advanced search](#)

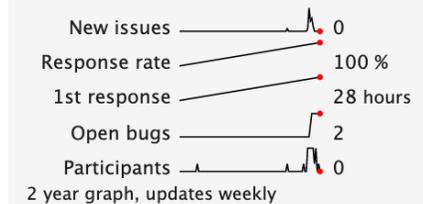
All issues

9 open, 24 total

Bug report

2 open, 5 total

Statistics



Documentation

No documentation guides

Resources

[Read license](#)
[View project translations](#)

How Does Drupal Come Into Play?

About the Performance Budget Module

- Alpha release module for Drupal 8 (Drupal 9 support is on the roadmap)
- Provides historical performance trending capabilities
- Built on the web page archive (WPA) ecosystem
 - https://www.drupal.org/project/web_page_archive
 - Originally a screenshot archiving tool (built on Headless Chrome/PhantomJS)
 - Crawls a list of URLs or XML sitemaps
 - Runs automatically on a custom recurring schedule
 - We later added other functionality (e.g. HTML capturing and visual regression)
 - Became generic capture & compare system
- Early in WPA development cycle we had idea for performance budget module
 - Built WebPageTest capture utility
- Project fell off our radar for almost 2 years
 - Picked back up again to fix D9 deprecation issues
- Then we realized we were sitting on 2 years of performance data. We became curious!

Stop talking already
and show us!

Looking Ahead

Goals of the performance budget module

1. Threshold Monitoring (i.e. actual performance budgeting)
https://www.drupal.org/project/performance_budget/issues/3074048
2. Plugin-based notification system (e.g. email, slack)
https://www.drupal.org/project/web_page_archive/issues/3074051
3. Support private WPT instances
https://www.drupal.org/project/performance_budget/issues/3086671
4. Advanced data normalization
https://www.drupal.org/project/performance_budget/issues/3088194
5. Google PageSpeed Insights support
https://www.drupal.org/project/performance_budget/issues/3088196
6. Plus several other bug fixes, feature improvements and lots of documentation.

Getting Started

Getting Started

Request an API Key from WebPageTest.org

Request API Key

Akamai is providing resources for automated testing through the public WebPagetest instance.

This form allows you to request an API key to use for limited automation of WebPagetest testing. The API key is provisioned for up to 200 "page loads" per day. Each run, first or repeat view counts as a page load (10 runs, first and repeat view would be 20 page loads). That should be sufficient for most low-volume use cases and for building a proof-of-concept for larger testing. If you need to do more testing than that allows then you should consider a private instance. There are pre-packaged AMIs available on EC2 for running a full WebPagetest instance.

Registering for multiple keys, using disposable email addresses or anything else that looks like suspicious activity may result in the keys being cancelled or, in more extreme cases, all testing of the URLs you are trying to test or the networks you are testing from may be blocked across all of WebPageTest.

The API keys are limited to testing from a subset of locations (EC2 regions and the Dulles Chrome, Firefox, IE 9 and Mobile agents). The EC2 locations will offer consistent performance from location to location and can be scaled as necessary to meet demand. If you need to automate testing from other locations then email me directly (pmeen@webpagetest.org).

The results for tests run with the API keys will be available for 30 days from when the test was run.

Once you fill out the details below, you will receive an email with information on how to retrieve your API key.

Email Address (Required):

Name:

Company:

Web Site:

Sponsored by:



To help prevent bots, please complete the captcha:

 I'm not a robot 
reCAPTCHA
Privacy - Terms

Allow Akamai to contact me periodically with offers

Terms of Service

It is important to note that the service is offered on a best-effort basis and there are no guarantees on anything (including but not limited to the availability of the service, the performance of the test agents and the availability of test results). If we detect what appears to be malicious use of the service we reserve the right to block access as

Getting Started

Install the modules inside Drupal

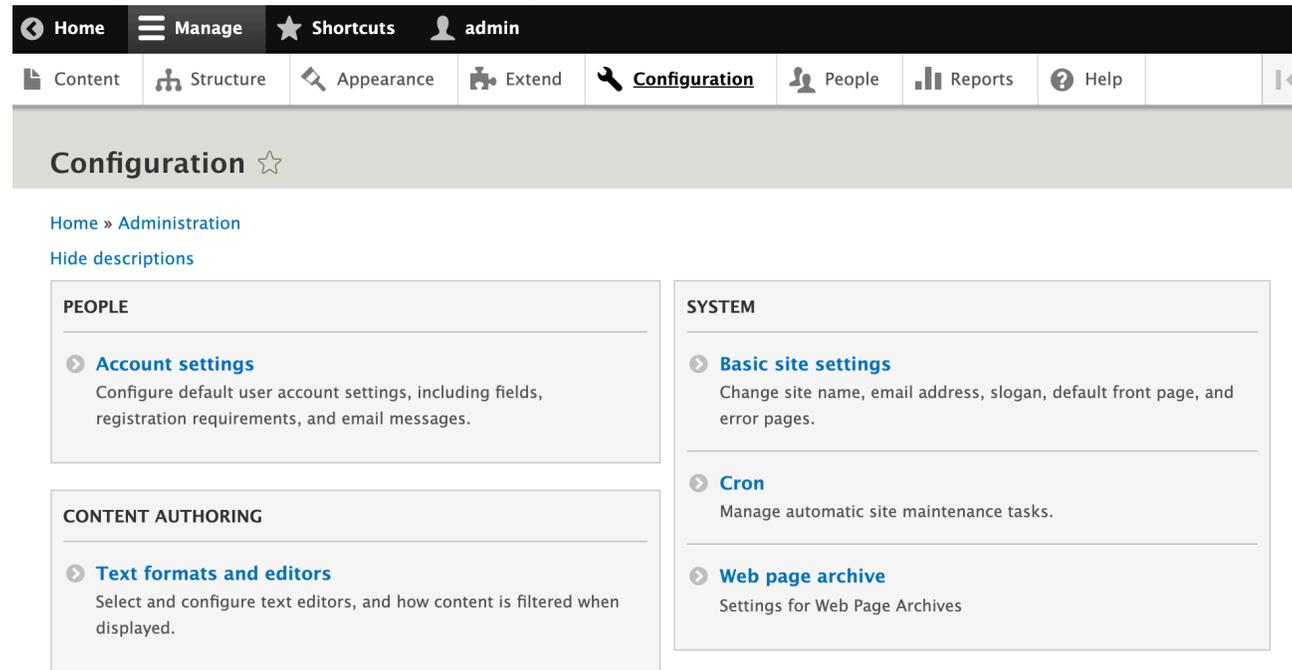
```
$ composer require drupal/performance_budget
```

```
$ drush pm:enable -y performance_budget
```

Getting Started

Setup a new web page archive capture job

- Navigate to /admin/config/system/web-page-archive



The screenshot shows the Drupal Configuration page. The breadcrumb trail is Home » Administration. The page title is Configuration. There are three main sections: PEOPLE, CONTENT AUTHORIZING, and SYSTEM. The PEOPLE section contains Account settings. The CONTENT AUTHORIZING section contains Text formats and editors. The SYSTEM section contains Basic site settings, Cron, and Web page archive.

Home » Administration

Hide descriptions

PEOPLE

- Account settings
Configure default user account settings, including fields, registration requirements, and email messages.

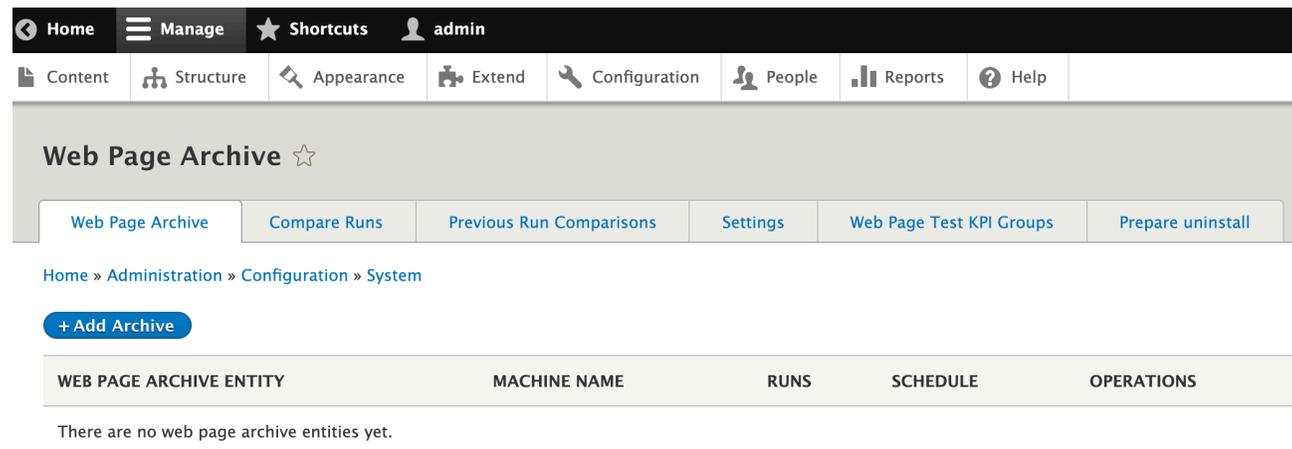
CONTENT AUTHORIZING

- Text formats and editors
Select and configure text editors, and how content is filtered when displayed.

SYSTEM

- Basic site settings
Change site name, email address, slogan, default front page, and error pages.
- Cron
Manage automatic site maintenance tasks.
- Web page archive
Settings for Web Page Archives

- Click “+ Add Archive”



The screenshot shows the Drupal Web Page Archive page. The breadcrumb trail is Home » Administration » Configuration » System. The page title is Web Page Archive. There are several tabs: Web Page Archive, Compare Runs, Previous Run Comparisons, Settings, Web Page Test KPI Groups, and Prepare uninstall. There is a + Add Archive button. Below the button is a table with columns: WEB PAGE ARCHIVE ENTITY, MACHINE NAME, RUNS, SCHEDULE, and OPERATIONS. The table is empty, and the text below it says "There are no web page archive entities yet."

Home » Administration » Configuration » System

+ Add Archive

WEB PAGE ARCHIVE ENTITY	MACHINE NAME	RUNS	SCHEDULE	OPERATIONS
There are no web page archive entities yet.				

Getting Started

Create a new WPA capture job

- Fill out the job details and click “Create new archive”
(NOTE: Only automatic jobs work currently – Drupal.org Issue #3088126)

The screenshot shows the 'Add Archive' configuration page in a Drupal administration interface. The breadcrumb trail is 'Home » Administration » Configuration » System » Web Page Archive'. The page contains several form fields and dropdown menus:

- Label ***: A text input field containing 'My WPT Test'. To its right, it says 'Machine name: my_wpt_test [Edit]'. Below the field is the text 'Label for the Web page archive entity.'
- Run capture job automatically.**: A dropdown menu set to 'Yes'.
- Crontab schedule (relative to PHP's default timezone)**: A text input field containing '*****'. Below it is the text 'Crontab format (see https://crontab.guru/)'.
- Timeout (ms)**: A text input field containing '500'. Below it is the text 'Amount of time to wait between captures, in milliseconds.'
- Capture Type**: A dropdown menu set to 'URL'.
- Honor robots.txt restrictions.**: A dropdown menu set to 'Yes'. Below it is the text 'If checked, capture utility will respect robots.txt crawling rules.'
- Browser user agent**: A text input field containing 'WPA'. Below it is the text 'Specify the browser user agent. e.g. "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_5) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/59.0.3071.115 Safari/537.36"'. There is a small green circular icon to the right of the text.
- Data retention type**: A dropdown menu set to 'Keep all revisions'. Below it is the text 'Determines the data retention policy for a job.' and a warning: 'Warning: Changing this on existing jobs may result in data loss.'
- URLs to Capture ***: A large text area containing 'https://2019.texascamp.org'. To the right of the text area is a small green circular icon.

At the bottom of the page is a blue button labeled 'Create new archive'.

Getting Started

Configure the WPT Capture Utility

- Under “Capture Utility” at the bottom, select “Web page test capture utility”

[Show row weights](#)

CAPTURE UTILITY	OPERATIONS
<div style="border: 1px solid #ccc; padding: 5px;"><input type="text" value="Select a new capture utility"/> ✓ Web page test capture utility</div>	<input type="button" value="Add"/>

[Delete](#)

- Add API key and specify the “Standard Page Load KPIs” KPI group, and leave the chart.js settings as-is.

The screenshot shows the Drupal administration interface. At the top, there is a navigation bar with 'Home', 'Manage', 'Shortcuts', and 'admin'. Below this is a secondary navigation bar with 'Content', 'Structure', 'Appearance', 'Extend', 'Configuration', 'People', 'Reports', and 'Help'. The main content area is titled 'Add Web page test capture utility' and includes a breadcrumb trail: 'Home » Administration » Configuration » System » Web Page Archive'. A green message box indicates 'Saved the My WPT Test Web page archive entity.'. Below this, there are two required fields: 'webpagetest.org API Key *' and 'KPI Groups *'. The 'KPI Groups' dropdown is set to 'Standard Page Load KPIs (standard_page_load_kpis)'. A text area for 'chart.js' settings contains a javascript object:

```
{ title: { display: true, text: Drupal.t('@group): @url!', {'@group': group, '@url': url}), },
```

 A note at the bottom explains that this field is used to define chart options as a javascript object, mentioning variables like `Drupal.t()`, `url`, and `group`.

Getting Started

Trigger job on webpagetest.org and retrieve the results

- Run cron once to queue on the job (Note: ignore the “Failed to process” error)

```
[davi0040@local:[...ers/davi0040/tmp/pbdemo]$ drush cron
[notice] Starting execution of comment_cron().
[notice] Starting execution of dblog_cron(), execution of comment_cron() took 7.2ms.
[notice] Starting execution of field_cron(), execution of dblog_cron() took 0.42ms.
[notice] Starting execution of file_cron(), execution of field_cron() took 0.98ms.
[notice] Starting execution of history_cron(), execution of file_cron() took 33.78ms.
[notice] Starting execution of node_cron(), execution of history_cron() took 0.93ms.
[notice] Starting execution of search_cron(), execution of node_cron() took 10.22ms.
[notice] Starting execution of system_cron(), execution of search_cron() took 12.89ms.
[notice] Starting execution of update_cron(), execution of system_cron() took 7.77ms.
[notice] Starting execution of web_page_archive_cron(), execution of update_cron() took 979.61ms.
[notice] Deleted directory: public://web-page-archive/pb_wpt_capture/wpt_test
[notice] Execution of web_page_archive_cron() took 955.73ms.
[notice] Cron run completed.
[error] Message: Failed to process 0 URLs.
[notice] Message: The capture has been completed.
```

```
[davi0040@local:[...ers/davi0040/tmp/pbdemo]$ echo $?
0
```

- Wait ~5 minutes for webpagetest.org to finish processing and run cron again

```
[davi0040@local:[...ers/davi0040/tmp/pbdemo]$ drush cron
[notice] Starting execution of comment_cron().
[notice] Starting execution of dblog_cron(), execution of comment_cron() took 3.78ms.
[notice] Starting execution of field_cron(), execution of dblog_cron() took 0.56ms.
[notice] Starting execution of file_cron(), execution of field_cron() took 0.78ms.
[notice] Starting execution of history_cron(), execution of file_cron() took 14.76ms.
[notice] Starting execution of node_cron(), execution of history_cron() took 0.44ms.
[notice] Starting execution of search_cron(), execution of node_cron() took 5.86ms.
[notice] Starting execution of system_cron(), execution of search_cron() took 6.77ms.
[notice] Starting execution of update_cron(), execution of system_cron() took 6.99ms.
[notice] Starting execution of web_page_archive_cron(), execution of update_cron() took 13.91ms.
[notice] Execution of web_page_archive_cron() took 10471.26ms.
[notice] Cron run completed.
[notice] Message: Processed 1 URLs.
[notice] Message: The capture has been completed.
```

Getting Started

View Run Results

- Return to main WPA page and click “View Run History” next to your job

The screenshot shows the 'Web Page Archive' management page. At the top, there is a navigation bar with 'Back to site', 'Manage', 'Shortcuts', and 'admin'. Below this is a secondary navigation bar with icons for 'Content', 'Structure', 'Appearance', 'Extend', 'Configuration', 'People', 'Reports', and 'Help'. The main heading is 'Web Page Archive' with a star icon. Below the heading are several tabs: 'Web Page Archive', 'Compare Runs', 'Previous Run Comparisons', 'Settings', 'Web Page Test KPI Groups', and 'Prepare uninstall'. A breadcrumb trail reads 'Home » Administration » Configuration » System'. There is a '+ Add Archive' button. Below that is a table with the following data:

WEB PAGE ARCHIVE ENTITY	MACHINE NAME	RUNS	SCHEDULE	OPERATIONS
My WPT Test	my_wpt_test	1 run	Next run: 2019-10-16 @ 4:05am UTC	View Run History

- Click “View Details” see details about the particular run

The screenshot shows the 'My WPT Test' details page. The navigation bar is identical to the previous screenshot. The main heading is 'My WPT Test' with a star icon. Below the heading is a breadcrumb trail: 'Home » Administration » Configuration » System » Web Page Archive'. There is a '+ View Historical Report' button. Below that are filters for 'Capture utilities' (set to '- Any -'), 'Sort by' (set to 'Revision create time'), 'Order' (set to 'Desc'), and 'Items per page' (set to '10'). An 'Apply' button is below the filters. Below the filters is a table with the following data:

CREATED	CAPTURE UTILITIES	ITEMS CAPTURED	CAPTURE SIZE (BYTES)	OPERATIONS
Tue, 10/15/2019 - 21:36	Web page test capture utility	1	455.5 KB	View Details

Getting Started

Report Summary

- View report summary or click “View Detailed Report” for more information

The screenshot displays a web application interface with a dark navigation bar at the top. The navigation bar includes a 'Back to site' button, a 'Manage' menu, 'Shortcuts', and a user profile for 'admin'. Below the navigation bar is a secondary menu with icons for 'Content', 'Structure', 'Appearance', 'Extend', 'Configuration', 'People', 'Reports', and 'Help'. The main content area is titled 'My WPT Test' with a star icon. Below the title is a breadcrumb trail: 'Home » Administration » Configuration » System » Web Page Archive'. The text 'Displaying 1 - 1 of 1' is shown. A filter section includes an 'Operator' dropdown set to 'Contains', a 'Filter by URL' input field, a 'Sort by' dropdown set to 'Capture URL', an 'Order' dropdown set to 'Asc', and an 'Items per page' dropdown set to '20'. An 'Apply' button is located below the filter section. The report content shows the URL 'https://2019.texascamp.org' and the source 'From: Dulles, VA - Chrome - Cable'. A section titled 'Standard Page Load KPIs' lists the following metrics: 'Average/First View: - Load Time: 8.664s - Fully Loaded: 8.845s - TTFB: 0.456s - Start Render: 0.8s'. At the bottom of the report is a 'View Detailed Report' button.

Getting Started

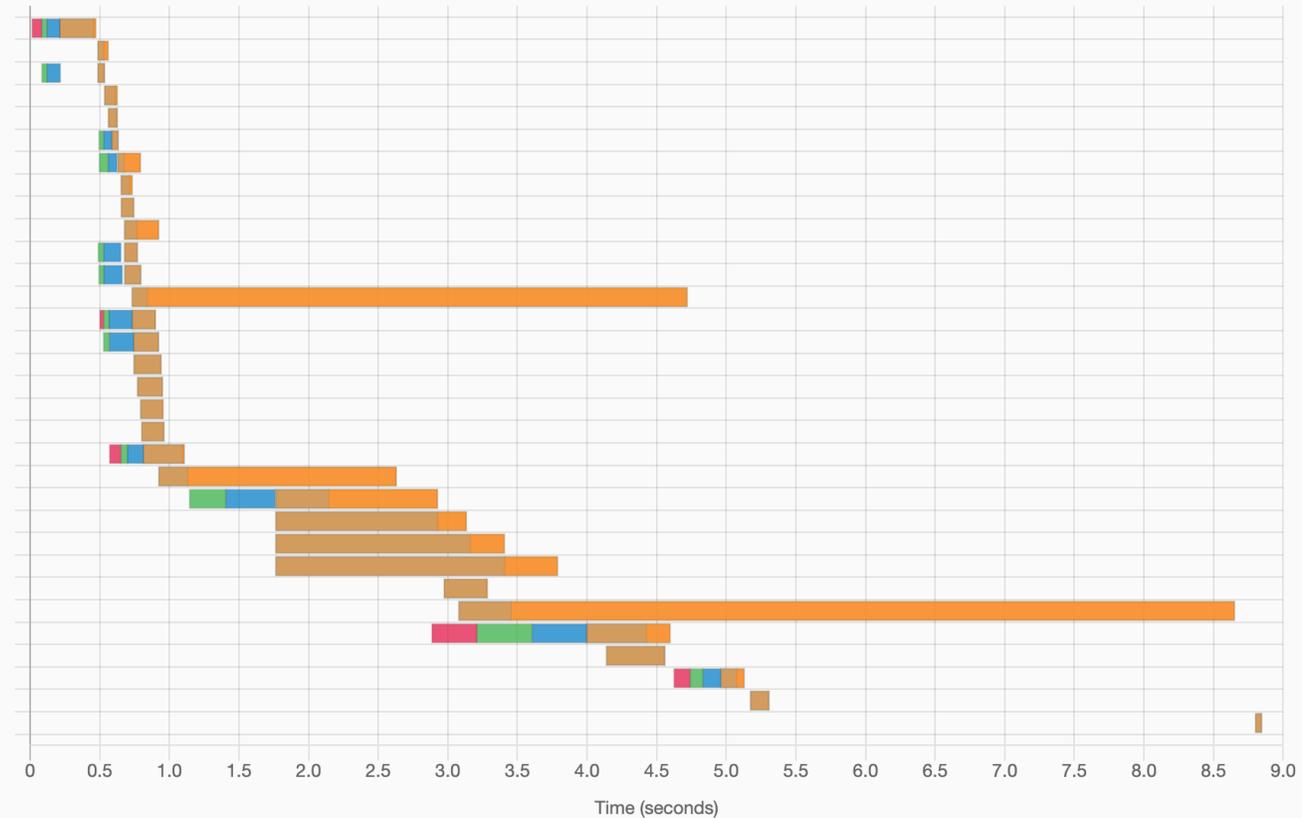
Detailed Report

- Expand and Collapse various sections to investigate further.

Back to site Manage Shortcuts admin
https://2019.texascamp.org

Home » Administration » Configuration » System » Web Page Archive

▼ FIRST VIEW - GANTT CHART



► FIRST VIEW - REQUESTS

► REPEAT VIEW - GANTT CHART

Getting Started

Navigate to the Historical Report

- Rerun cron a few more times to generate additional results then return to the run history page, and click “+ View Historical Report”

The screenshot shows the Rackspace Web Page Archive interface. At the top, there is a navigation bar with links for 'Back to site', 'Manage', 'Shortcuts', and a user profile for 'admin'. Below this is a header for 'My WPT Test' with a star icon. A breadcrumb trail indicates the path: 'Home » Administration » Configuration » System » Web Page Archive'. A blue button labeled '+ View Historical Report' is prominently displayed. Below the button are filters for 'Capture utilities' (set to '- Any -'), 'Sort by' (set to 'Revision create time'), 'Order' (set to 'Desc'), and 'Items per page' (set to '10'). An 'Apply' button is located below the filters. The main content is a table with the following columns: 'CREATED', 'CAPTURE UTILITIES', 'ITEMS CAPTURED', 'CAPTURE SIZE (BYTES)', and 'OPERATIONS'. The table contains two rows of data, each with a 'View Details' button.

CREATED	CAPTURE UTILITIES	ITEMS CAPTURED	CAPTURE SIZE (BYTES)	OPERATIONS
Wed, 10/16/2019 – 01:16	Web page test capture utility	1	449.53 KB	View Details
Tue, 10/15/2019 – 21:36	Web page test capture utility	1	455.5 KB	View Details

Getting Started

Generate the initial historical report

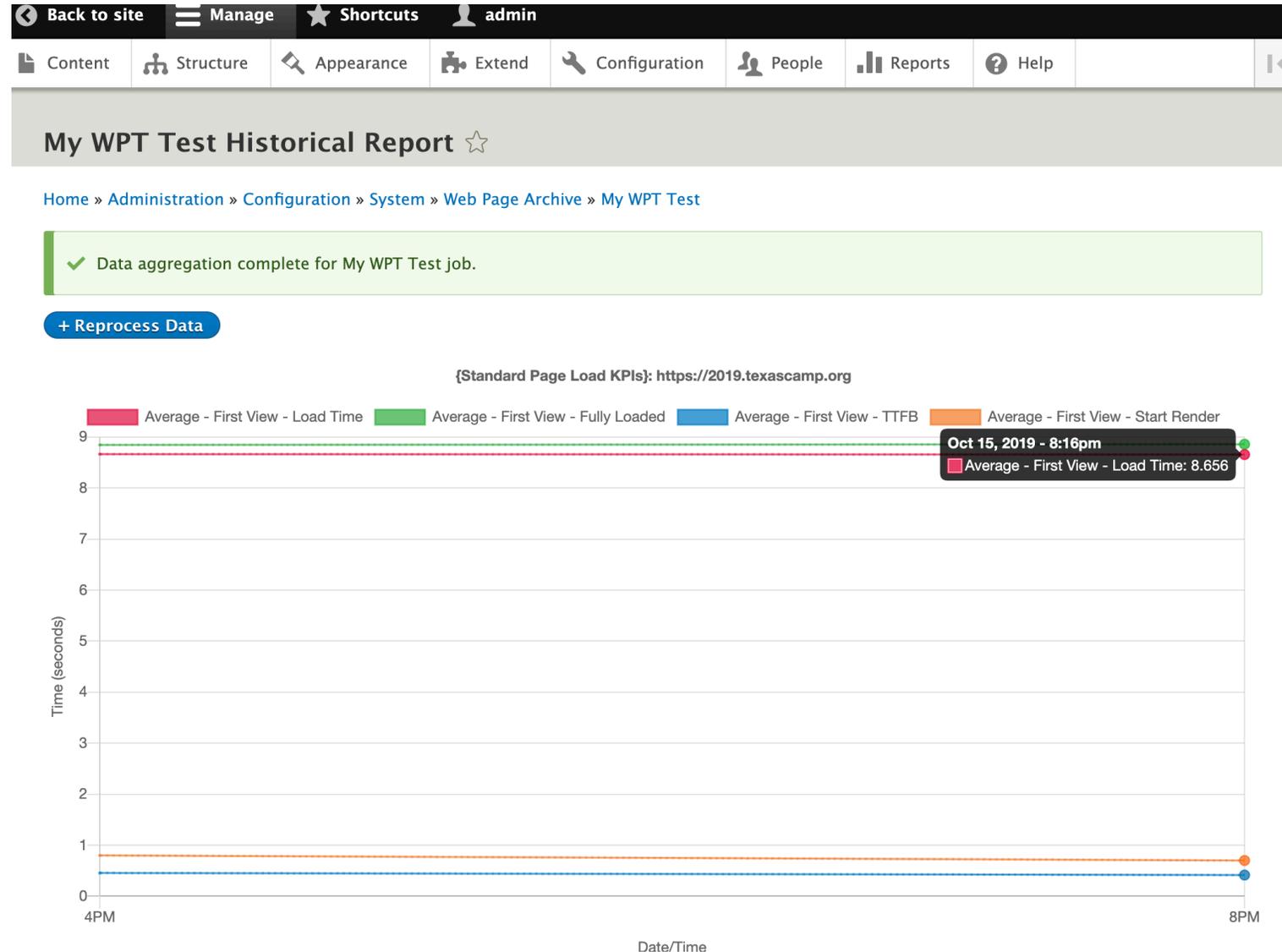
- If it's your first time viewing it, you will need to generate a historical report by specifying a date range (this can be changed later)

The screenshot shows the Drupal administration interface. At the top, there is a navigation bar with 'Back to site', 'Manage', 'Shortcuts', and 'admin'. Below this is a secondary navigation bar with tabs for 'Content', 'Structure', 'Appearance', 'Extend', 'Configuration', 'People', 'Reports', and 'Help'. The main content area is titled 'My WPT Test Historical Report' with a star icon. Below the title is a breadcrumb trail: 'Home » Administration » Configuration » System » Web Page Archive » My WPT Test » My WPT Test Historical Report'. A text instruction reads: 'Press the button below to process all captured webpagetest.org data for this job.' Below this is a 'Date range: *' label followed by a dropdown menu currently showing 'All time'. A note states: 'Specify the date range you want to aggregate KPIs on. Drupal will remember this setting on subsequent reports.' At the bottom of the form is a blue 'Process data' button.

Getting Started

Use the historical report charts

- Move your cursor over the chart to identify individual run information and click if you want to see more detailed run results.



Getting Started

Use the historical report request summary

- Additionally, you can expand and collapse request summary data, which is grouped by hostname.

▼ FIRST VIEW - REQUEST SUMMARY

REQUESTED URL	FIRST TIME CAPTURED	LAST TIME CAPTURED	TOTAL REQUESTS MADE	AVERAGE LOAD TIME
https://www.googletagmanager.com	10/15/2019 - 21:36	10/16/2019 - 01:16	2	1.515s
https://use.typekit.net	10/15/2019 - 21:36	10/16/2019 - 01:16	10	1.380s
https://2019.texascamp.org	10/15/2019 - 21:36	10/16/2019 - 01:16	42	0.680s
https://backend2019.texascamp.org	10/15/2019 - 21:36	10/16/2019 - 01:16	4	0.519s
https://p.typekit.net	10/15/2019 - 21:36	10/16/2019 - 01:16	2	0.354s
https://www.google-analytics.com	10/15/2019 - 21:36	10/16/2019 - 01:16	4	0.342s

▼ REPEAT VIEW - REQUEST SUMMARY

REQUESTED URL	FIRST TIME CAPTURED	LAST TIME CAPTURED	TOTAL REQUESTS MADE	AVERAGE LOAD TIME
https://2019.texascamp.org	10/15/2019 - 21:36	10/16/2019 - 01:16	2	0.351s
https://p.typekit.net	10/15/2019 - 21:36	10/16/2019 - 01:16	2	0.167s
https://www.google-analytics.com	10/15/2019 - 21:36	10/16/2019 - 01:16	3	0.112s

Help Wanted

Help Wanted

Ways you can help

1. Test the module
2. Report bugs
3. Become a case study
4. Work on issues
5. Write documentation
6. Review the code
 - Performance reviews
 - Security reviews
 - Drupal best practice reviews
7. Drupal 9 preparations and testing

Resources

List of helpful resources related to this training

- **Learning resources**

- Akamai Online Retail Performance Report: Milliseconds Are Critical
<https://www.akamai.com/uk/en/about/news/press/2017-press/akamai-releases-spring-2017-state-of-online-retail-performance-report.jsp>
- thinkwithgoogle.com - Find out how you stack up to new industry benchmarks for mobile page speed
<https://www.thinkwithgoogle.com/marketing-resources/data-measurement/mobile-page-speed-new-industry-benchmarks/>
- WebPageTest Documentation – Metrics
<https://sites.google.com/a/webpagetest.org/docs/using-webpagetest/metrics>

- **Performance Tools**

- Google Chrome Developer Tools – <https://developers.google.com/web/tools/chrome-devtools/network>
- WebPageTest.org – <https://webpagetest.org/>
- Google PageSpeed Insights – <https://developers.google.com/speed/pagespeed/insights/>
- Google Mobile Speed Report – <https://www.thinkwithgoogle.com/feature/testmysite/>
- Gtmetrix – <https://gtmetrix.com>

- **Drupal Modules**

- Performance Budget – https://www.drupal.org/project/performance_budget
- Web Page Archive – https://www.drupal.org/project/web_page_archive
- Resource Hints – https://www.drupal.org/project/resource_hints

Thank You

https://www.drupal.org/project/performance_budget

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