

# WEBSITE PERFORMANCE

IMPROVEMENT, TOOLS & APPLICATIONS

## THE PERFORMANCE TEST

USE CHROME DEVTOOLS TO RUN A LIGHTSPEED AUDIT

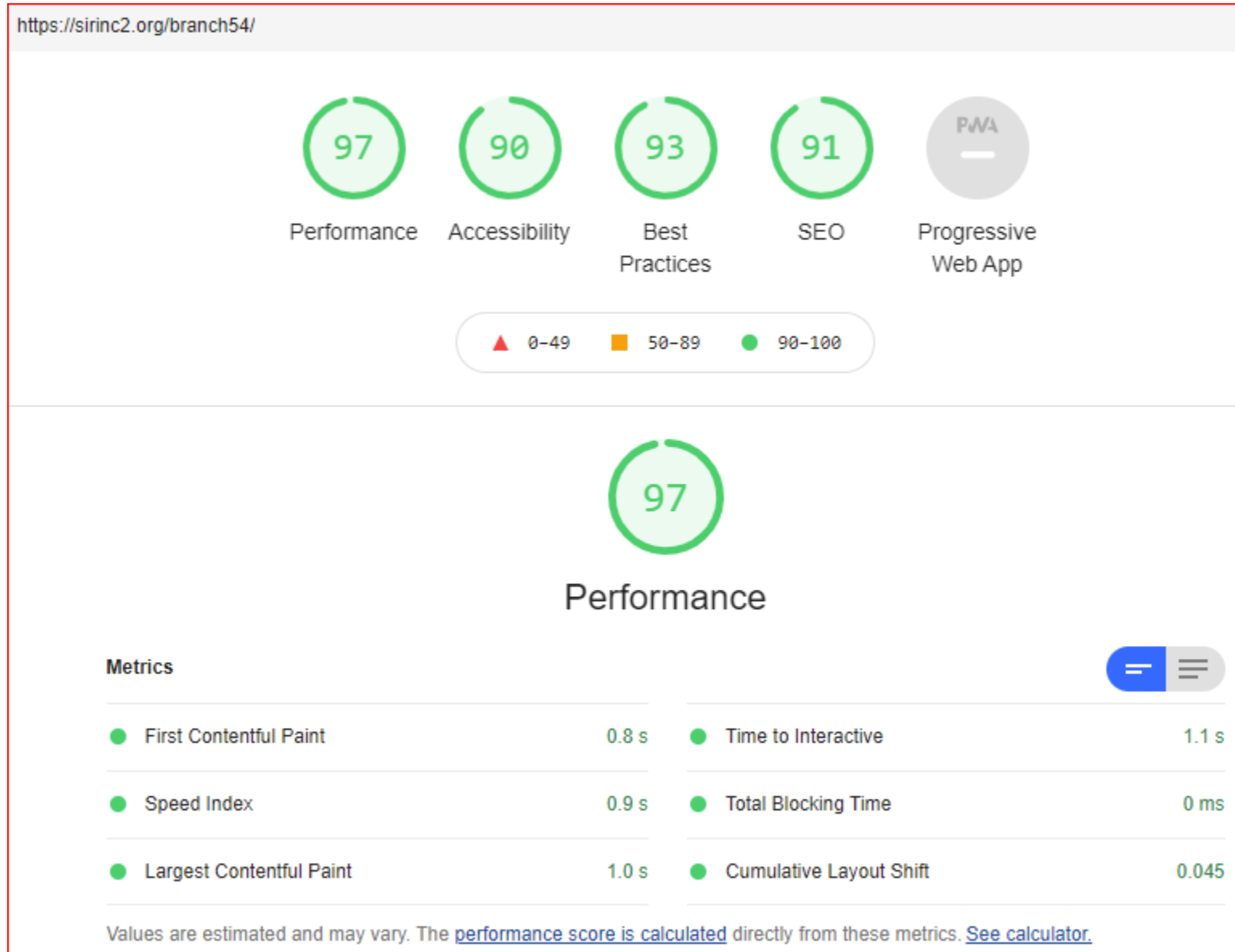
OPEN WEBSITE USING AN INCOGNITO GOOGLE BROWSER WINDOW

This window will ignore your local cache

Open your Google Chrome browser, look for 3 dots in upper right corner, click select new incognito window.

- You will get an Incognito Window, look for 3 dots in upper right corner
- Click “More Tools”
- Select “Developer Tools” and “Lighthouse”
- Enter the URL for your website and then click “Generate Report”

# GOOGLE PAGESPEED INSIGHTS PERFORMANCE REPORT





## Performance

### Metrics







|  |   |
|--|---|
| <p>■ <b>First Contentful Paint</b> <b>2.7 s</b></p> <p>First Contentful Paint marks the time at which the first text or image is painted. <a href="#">Learn more.</a></p>      | <p>■ <b>Time to Interactive</b> <b>5.2 s</b></p> <p>Time to interactive is the amount of time it takes for the page to become fully interactive. <a href="#">Learn more.</a></p>                            |
| <p>■ <b>Speed Index</b> <b>4.2 s</b></p> <p>Speed Index shows how quickly the contents of a page are visibly populated. <a href="#">Learn more.</a></p>                        | <p>● <b>Total Blocking Time</b> <b>80 ms</b></p> <p>Sum of all time periods between FCP and Time to Interactive, when task length exceeded 50ms, expressed in milliseconds. <a href="#">Learn more.</a></p> |
| <p>▲ <b>Largest Contentful Paint</b> <b>5.0 s</b></p> <p>Largest Contentful Paint marks the time at which the largest text or image is painted. <a href="#">Learn more</a></p> | <p>● <b>Cumulative Layout Shift</b> <b>0.014</b></p> <p>Cumulative Layout Shift measures the movement of visible elements within the viewport. <a href="#">Learn more.</a></p>                              |

Values are estimated and may vary. The [performance score is calculated](#) directly from these metrics. [See calculator.](#)

## PERFORMANCE IMPROVEMENT OPPORTUNITIES

**Opportunities** — These suggestions can help your page load faster. They don't [directly affect](#) the Performance score.

| Opportunity                           | Estimated Savings   |
|---------------------------------------|---|
| ■ Eliminate render-blocking resources |  0.61 s <span>▼</span> |
| ■ Preload key requests                |  0.56 s <span>▼</span> |
| ■ Properly size images                |  0.35 s <span>▼</span> |
| ■ Reduce unused CSS                   |  0.32 s <span>▼</span> |

**Diagnostics** — More information about the performance of your application. These numbers don't [directly affect](#) the Performance score.

- ▲ Ensure text remains visible during webfont load ▼
- Avoid chaining critical requests — 29 chains found ▼
- Keep request counts low and transfer sizes small — 54 requests • 1,013 KiB ▼
- Largest Contentful Paint element — 1 element found ▼
- Avoid large layout shifts — 5 elements found ▼
- Avoid non-composited animations — 2 animated elements found ▼

## GOOGLE LIGHTSPEED PERFORMANCE

| <u>Performance</u> | <u>First Contentful Paint</u> | <u>Speed Index</u> | <u>Largest Contentful Paint</u> | <u>Time to Interactive</u> | <u>Total Blocking Time</u> | <u>Cumulative Layout Shift</u> |
|--------------------|-------------------------------|--------------------|---------------------------------|----------------------------|----------------------------|--------------------------------|
| <b>39</b>          | <b>NO DATA LOGGED</b>         |                    |                                 |                            |                            |                                |
| <b>62</b>          | 4.1                           | 7.2                | 5.5                             | 5.3                        | 80ms                       | .007                           |
| <b>83</b>          | 1.5                           | 1.6                | 1.7                             | 1.6                        | 0                          | .078                           |
| <b>94</b>          | 1.1                           | 1.1                | 1.2                             | 1.3                        | 0                          | .047                           |
| <b>96</b>          | 1.0                           | 1.2                | 1.0                             | 1.1                        | 40ms                       | .044                           |

\*Time is in seconds unless noted

## ACTION TO IMPROVE GOOGLE LIGHTSPEED PERFORMANCE

| <u>Performance</u> | <u>First Contentful Paint</u> | <u>Speed Index</u> | <u>Largest Contentful Paint</u> | <u>Time to Interactive</u> | <u>Total Blocking Time</u> | <u>Cumulative Layout Shift</u> |
|--------------------|-------------------------------|--------------------|---------------------------------|----------------------------|----------------------------|--------------------------------|
|--------------------|-------------------------------|--------------------|---------------------------------|----------------------------|----------------------------|--------------------------------|

39 NO DATA LOGGED

IDENTIFIED AND REMOVED UNUSED PLUGINS

Two Themes active: Elementor and Weaver Xtreme  
Removed Elementor

Several Themes installed but not active  
Removed Twenty Twenty, Twenty Nineteen and a few more plugins

PERFORMANCE INCREASED TO 62

## ACTION TO IMPROVE GOOGLE LIGHTSPEED PERFORMANCE

| <u>Performance</u> | <u>First Contentful Paint</u> | <u>Speed Index</u> | <u>Largest Contentful Paint</u> | <u>Time to Interactive</u> | <u>Total Blocking Time</u> | <u>Cumulative Layout Shift</u> |
|--------------------|-------------------------------|--------------------|---------------------------------|----------------------------|----------------------------|--------------------------------|
|--------------------|-------------------------------|--------------------|---------------------------------|----------------------------|----------------------------|--------------------------------|

**39 NO DATA LOGGED**

|           |     |     |     |     |      |      |
|-----------|-----|-----|-----|-----|------|------|
| <b>62</b> | 4.1 | 7.2 | 5.5 | 5.3 | 80ms | .007 |
|-----------|-----|-----|-----|-----|------|------|

### **LOADED AND ACTIVATED SMUSH PLUGIN.**

**SMUSH WILL Optimize images, turn on lazy load, resize, compress & improve your Google Page Speed**

My Website has over 500 images so this had a big impact

Additional work to resize images will provide additional improvement

New performance test:

|           |     |     |     |     |   |      |
|-----------|-----|-----|-----|-----|---|------|
| <b>83</b> | 1.5 | 1.6 | 1.7 | 1.6 | 0 | .078 |
|-----------|-----|-----|-----|-----|---|------|



## ACTION TO IMPROVE GOOGLE LIGHTSPEED PERFORMANCE

| Performance<br>_____ | First<br>Contentful<br><u>Paint</u> | Speed<br>Index<br>_____ | Largest<br>Contentful<br><u>Paint</u> | Time to<br>Interactive<br>_____ | Total<br>Blocking<br>Time<br>_____ | Cumulative<br>Layout<br>Shift<br>_____ |
|----------------------|-------------------------------------|-------------------------|---------------------------------------|---------------------------------|------------------------------------|--|
|----------------------|-------------------------------------|-------------------------|---------------------------------------|---------------------------------|------------------------------------|--|

**39**      **NO DATA LOGGED**

**62**            4.1            7.2            5.5            5.3            80ms            .007

**83**            1.5            1.6            1.7            1.6            0            .078

Installed and activated Plugin W3 TOTAL CACHE to add browser, page, object and database caching as well as minify and content delivery network (CDN) to WordPress.

New Performance test 94

**94**            1.1            1.1            1.2            1.3            0            .047

## ACTION TO IMPROVE GOOGLE LIGHTSPEED PERFORMANCE

| <u>Performance</u> | <u>First Contentful Paint</u> | <u>Speed Index</u> | <u>Largest Contentful Paint</u> | <u>Time to Interactive</u> | <u>Total Blocking Time</u> | <u>Cumulative Layout Shift</u> |
|--------------------|-------------------------------|--------------------|---------------------------------|----------------------------|----------------------------|--------------------------------|
| <b>39</b>          | <b>NO DATA LOGGED</b>         |                    |                                 |                            |                            |                                |
| <b>62</b>          | 4.1                           | 7.2                | 5.5                             | 5.3                        | 80ms                       | .007                           |
| <b>83</b>          | 1.5                           | 1.6                | 1.7                             | 1.6                        | 0                          | .078                           |
| <b>94</b>          | 1.1                           | 1.1                | 1.2                             | 1.3                        | 0                          | .047                           |

Installed and activated Plugin Hummingbird which provides fine-tuned controls over file compression, deferring CSS and JavaScript styles and scripts, minify for CSS and JS, Lazy Load integration, and world-class caching.

I loaded Hummingbird prior to W3 Total Cache but it did not have the performance impact of W3 Total Cache so I deactivated and then reactivated it. However, both plugins provide improvement.

New Performance test

|           |     |     |     |     |      |      |
|-----------|-----|-----|-----|-----|------|------|
| <b>96</b> | 1.0 | 1.2 | 1.0 | 1.1 | 40ms | .044 |
|-----------|-----|-----|-----|-----|------|------|

## REFERENCE

### **The Perfect WordPress Speed Test**

- Written & Fact Checked By: Patrick Scully
- March 6, 2020

[WordPress Speed Test: 12 Steps to a Faster WordPress Website \(possibleweb.com\)](#)

### **Analyze and optimize your website with PageSpeed tools**

<https://developers.google.com/speed?csw=1>

### **PageSpeed Insights**

[PageSpeed Insights \(google.com\)](#)

### **How to Add Expires Headers in WordPress**

[How to Add Expires Headers in WordPress \(Step by Step\) \(wpbeginner.com\)](#)

### **How to Install and Setup W3 Total Cache for Beginners**

[How to Install and Setup W3 Total Cache and MaxCDN for Beginners \(wpbeginner.com\)](#)

### **Smush – Lazy Load Images, Optimize & Compress Images**

[Smush – Lazy Load Images, Optimize & Compress Images – WordPress plugin | WordPress.org](#)

## ABOUT PAGESPEED INSIGHTS PERFORMANCE LAB RESULTS

[First Contentful Paint](#) The First Contentful Paint (FCP) metric measures the time from when the page starts loading to when any part of the page's content is rendered on the screen.

[Largest Contentful Paint](#) user-centric metric for measuring perceived load speed marks the point in the page load timeline when the page's main content has likely loaded.

[Speed Index](#) is one of six metrics tracked in the Performance section of the Lighthouse report. Each metric captures some aspect of page load speed.

[Cumulative Layout Shift](#) measures visual stability because it helps quantify how often users experience unexpected layout shifts.

[Time to Interactive](#) amount of time it takes for the page to become fully interactive.

[Total Blocking Time](#) helps quantify the severity of how non-interactive a page is prior to it becoming reliably interactive.