



UNIVERSIDAD DE LOS ANDES
MISO-4208 Pruebas Automáticas

Profesor
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TALLER 1 Progressive Web Apps (PWA)

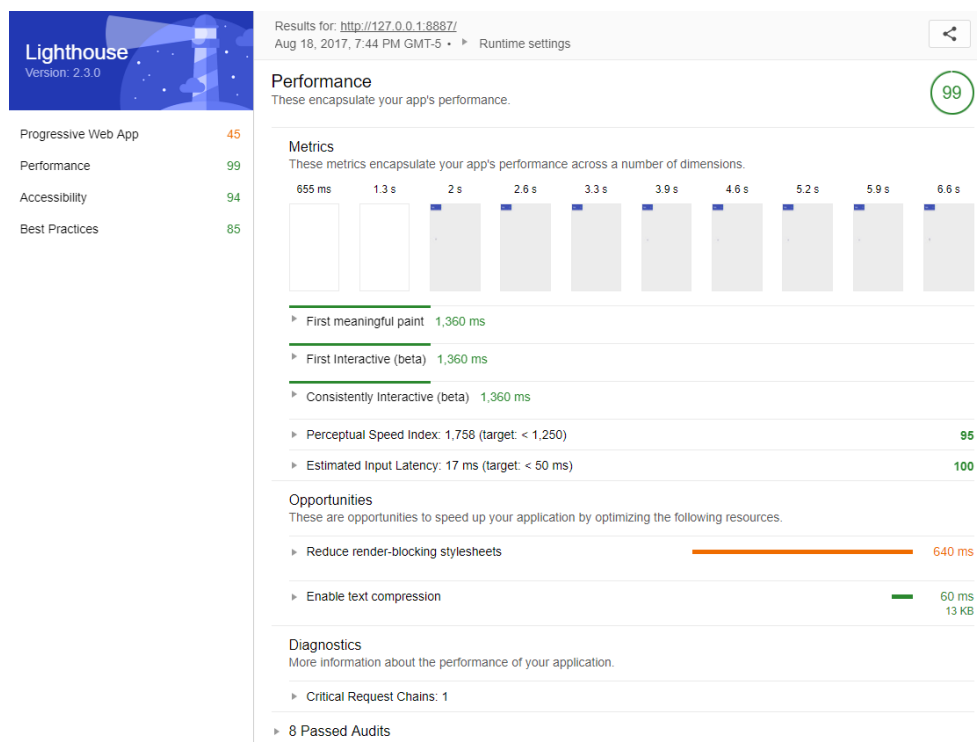
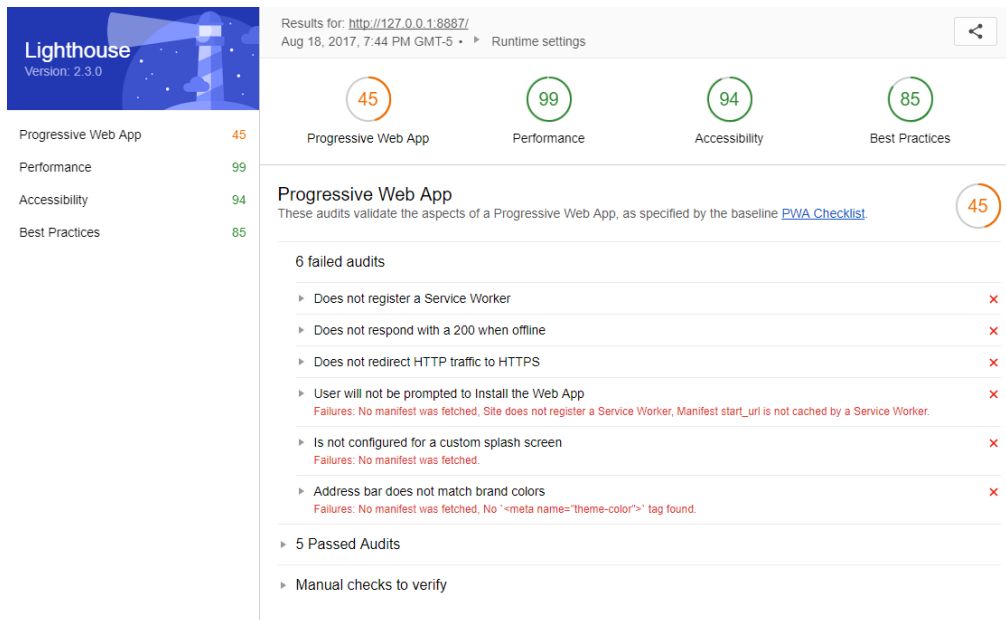
Presentado Por:

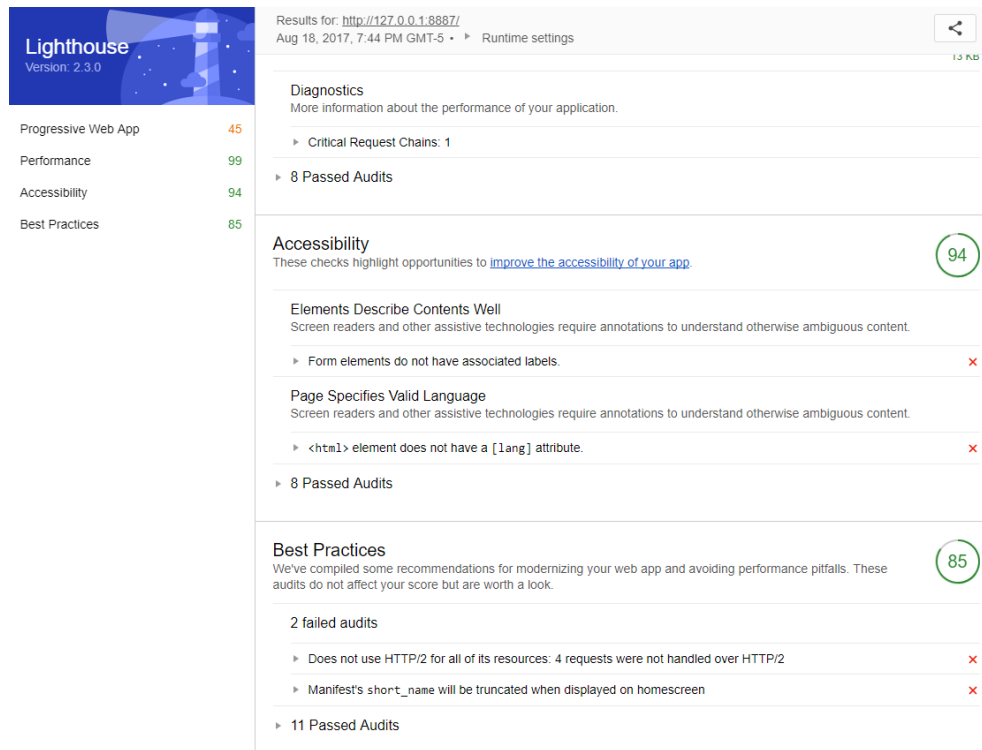
Juan Carlos Arias Ramírez, 200327727

Parte 1

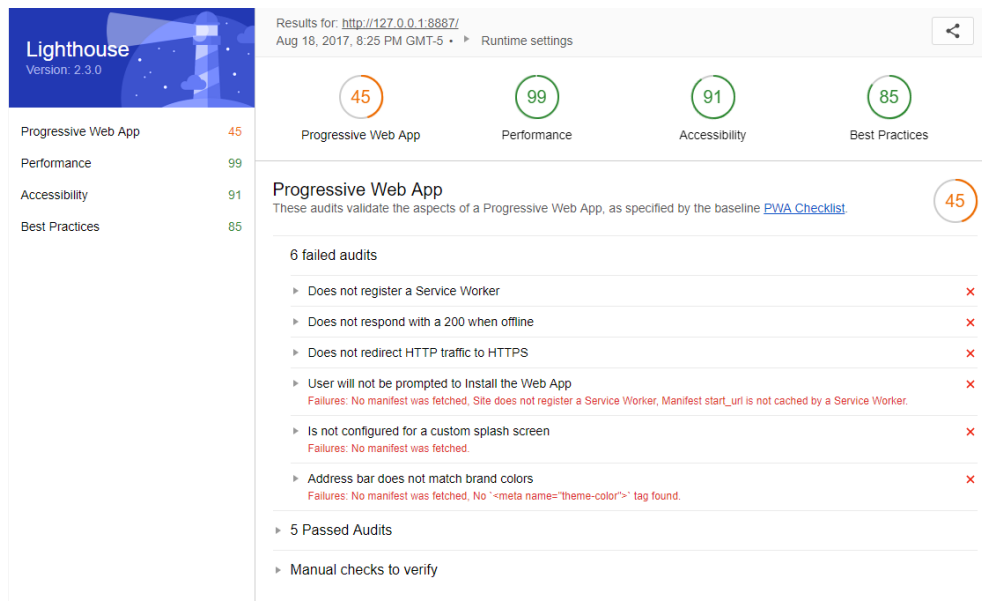
Se completó todo el laboratorio del enlace definido en la guía del taller y a medida de que se avanzaba en el mismo se iban ejecutando las pruebas de Lighthouse para revisar el avance en las métricas progresivas.

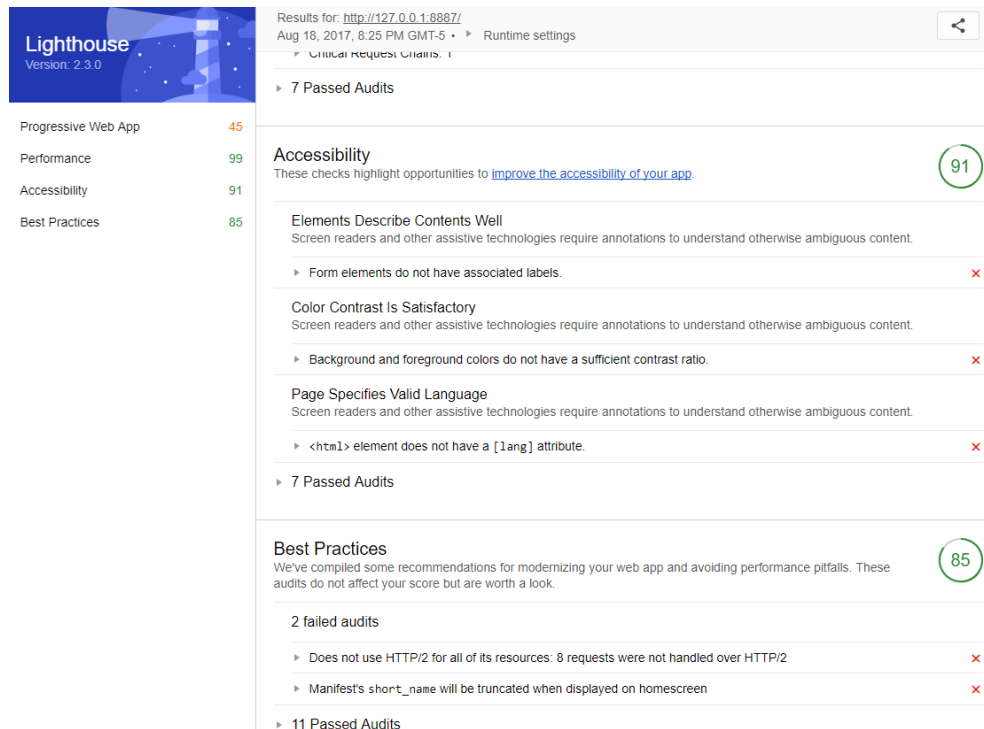
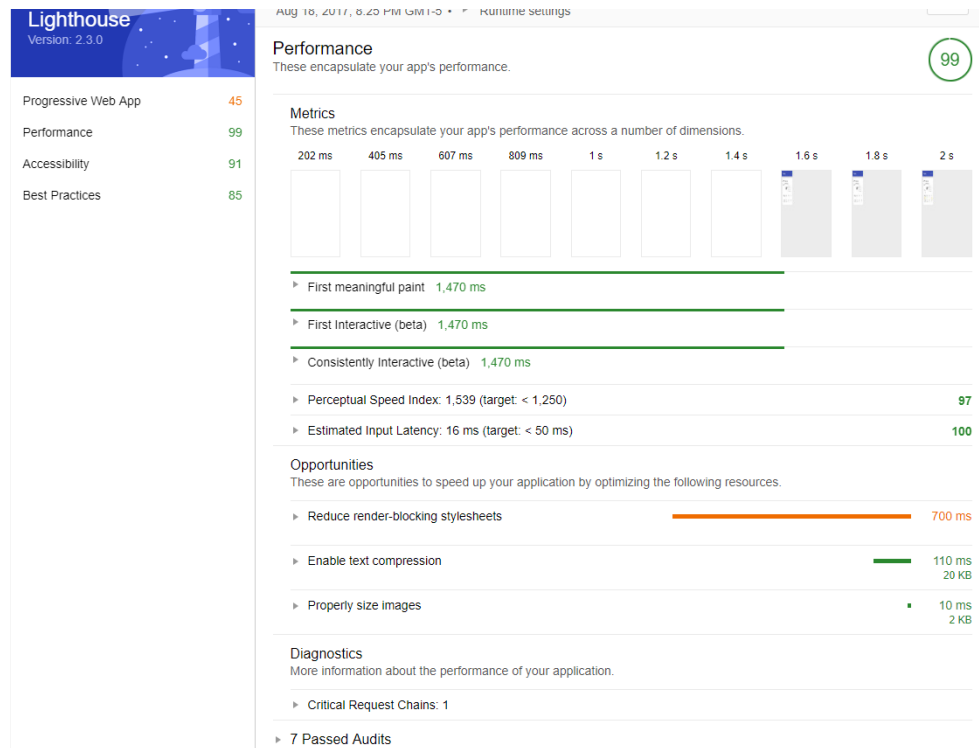
Getting set up



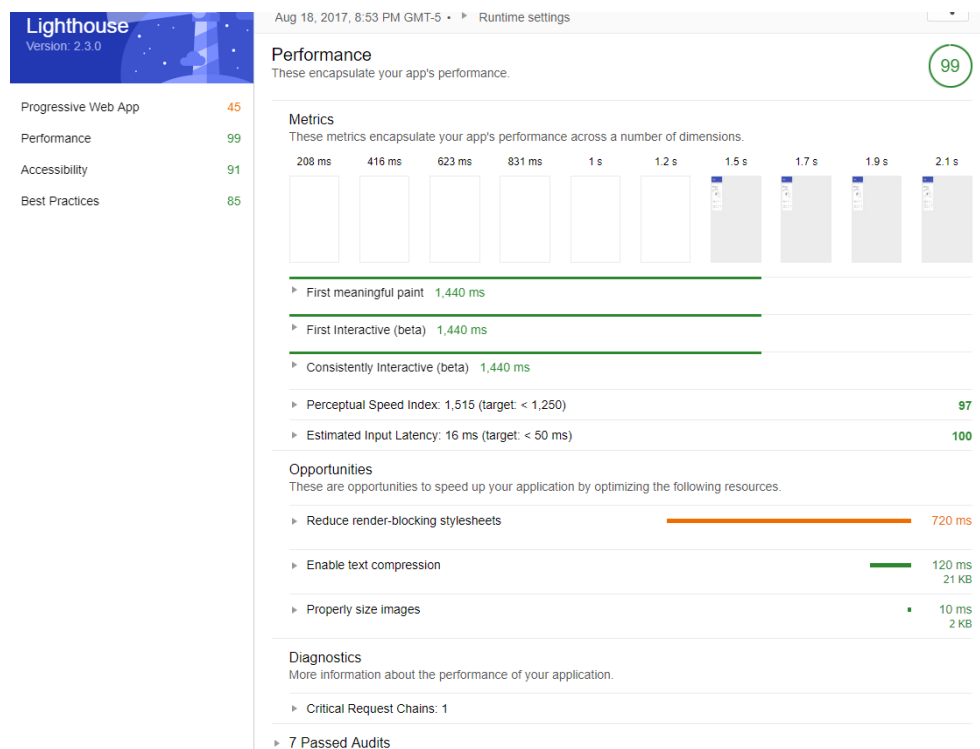
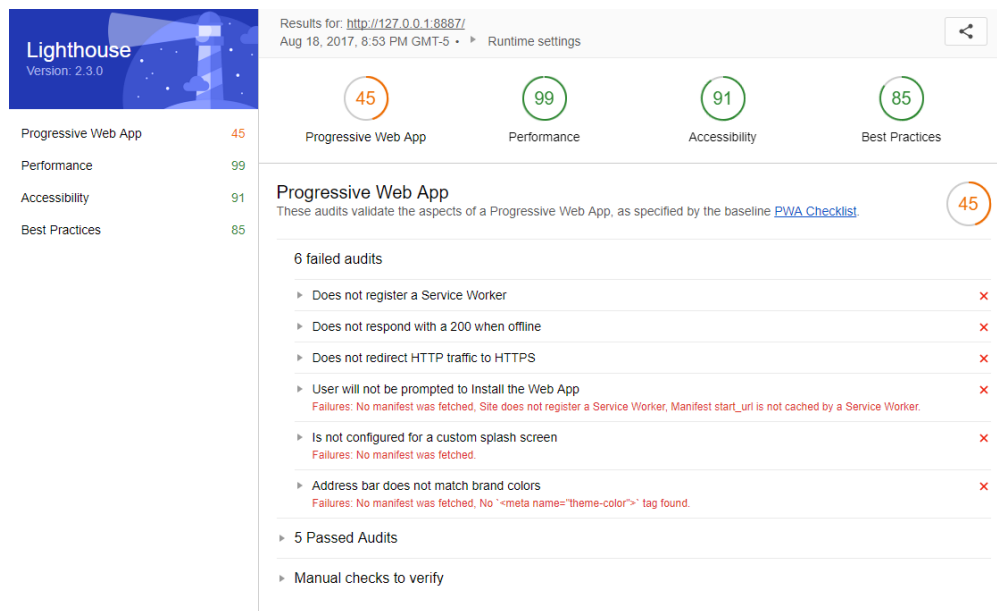


Implement your App Shell





Start with a fast first load



Progressive Web App	45
Performance	99
Accessibility	91
Best Practices	85

Accessibility

These checks highlight opportunities to [improve the accessibility of your app](#).

91

Elements Describe Contents Well

Screen readers and other assistive technologies require annotations to understand otherwise ambiguous content.

- Form elements do not have associated labels.

×

Color Contrast Is Satisfactory

Screen readers and other assistive technologies require annotations to understand otherwise ambiguous content.

- Background and foreground colors do not have a sufficient contrast ratio.

×

Page Specifies Valid Language

Screen readers and other assistive technologies require annotations to understand otherwise ambiguous content.

- <html> element does not have a [lang] attribute.

×

7 Passed Audits

Best Practices

We've compiled some recommendations for modernizing your web app and avoiding performance pitfalls. These audits do not affect your score but are worth a look.

85

2 failed audits

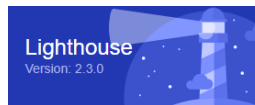
- Does not use HTTP/2 for all of its resources: 8 requests were not handled over HTTP/2
- Manifest's short_name will be truncated when displayed on homescreen

×

×

11 Passed Audits

Use service workers to pre-cache the App Shell



Progressive Web App	64
Performance	99
Accessibility	91
Best Practices	85

Results for: <http://127.0.0.1:8887/>
Aug 18, 2017, 9:17 PM GMT-5 • Runtime settings



64

Progressive Web App

99

Performance

91

Accessibility

85

Best Practices

Progressive Web App

These audits validate the aspects of a Progressive Web App, as specified by the baseline [PWA Checklist](#).

64

4 failed audits

- Does not redirect HTTP traffic to HTTPS
- User will not be prompted to Install the Web App
Failures: No manifest was fetched, Manifest start_url is not cached by a Service Worker.
- Is not configured for a custom splash screen
Failures: No manifest was fetched.
- Address bar does not match brand colors
Failures: No manifest was fetched, No <meta name="theme-color"> tag found.

×

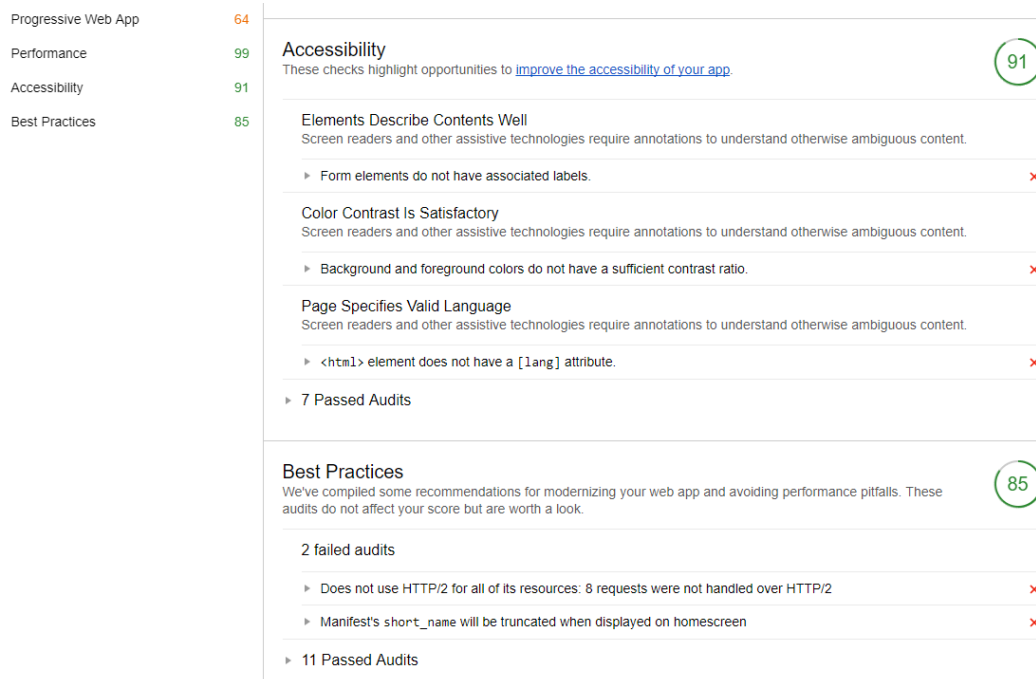
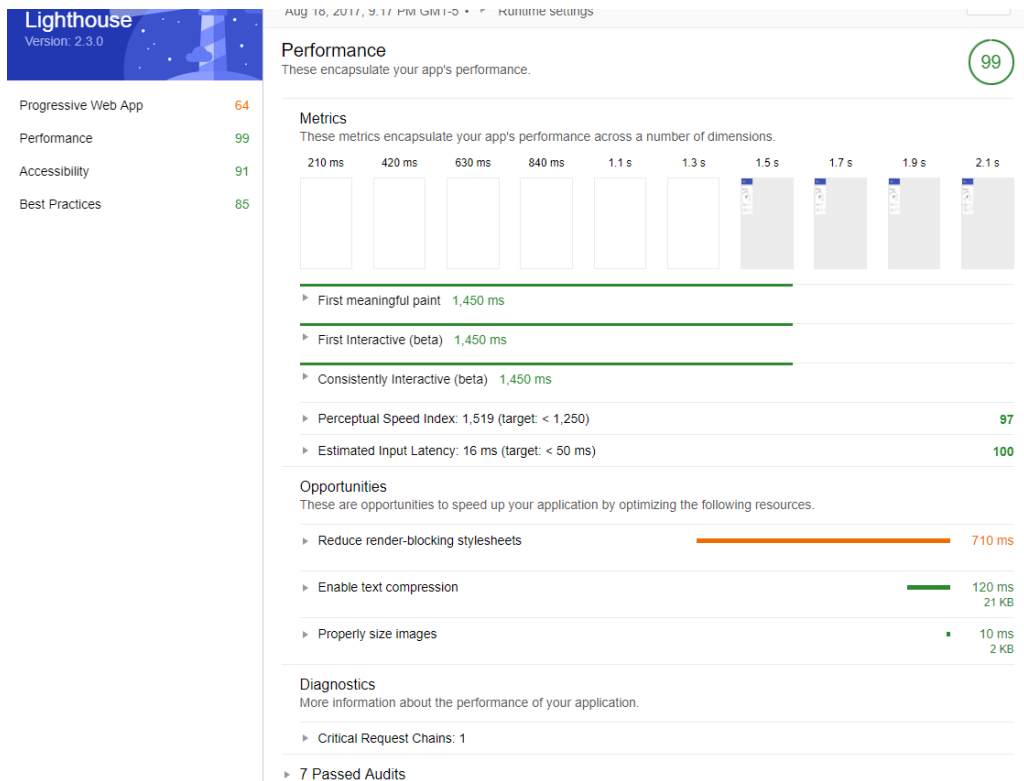
×

×

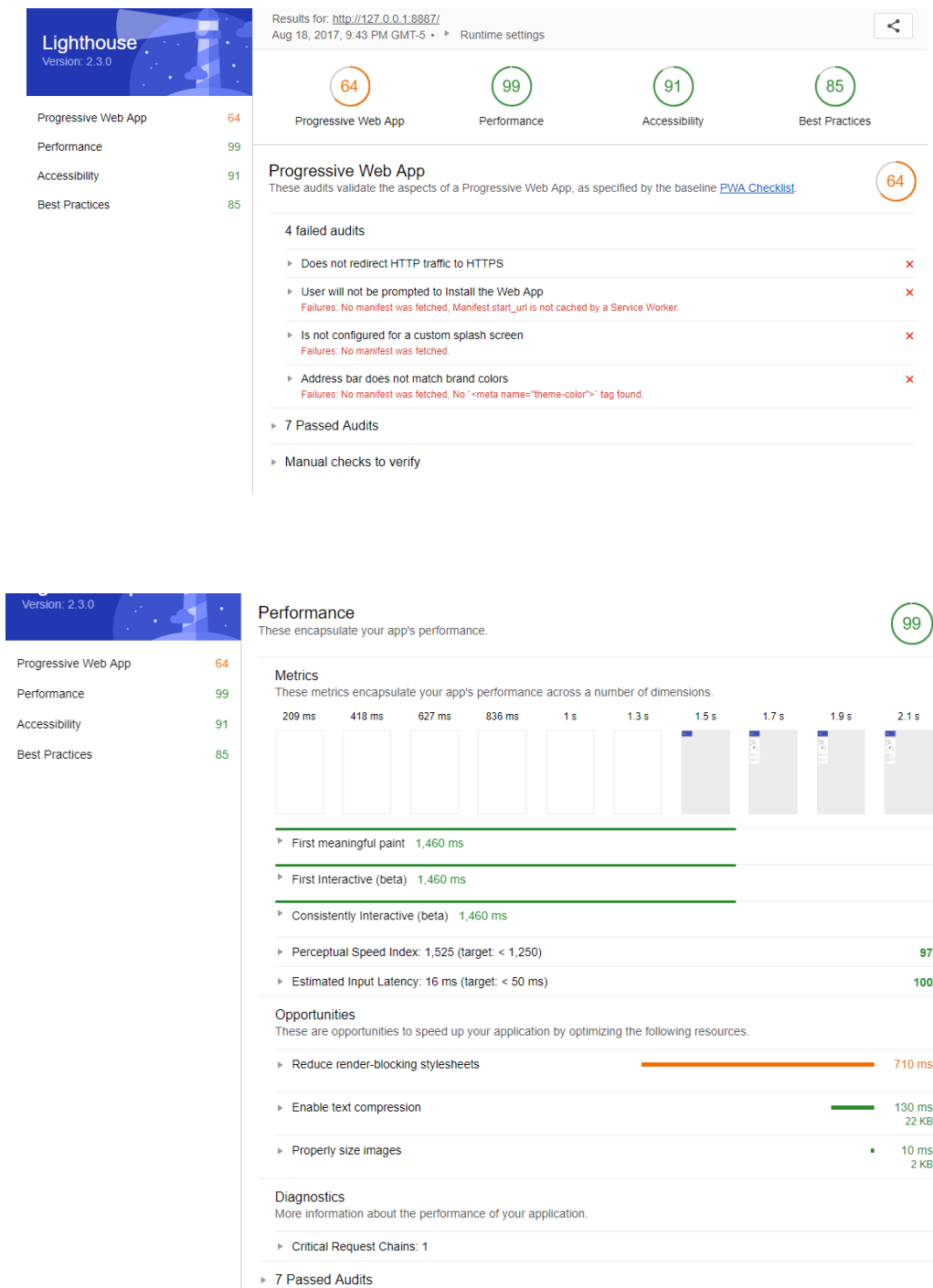
×

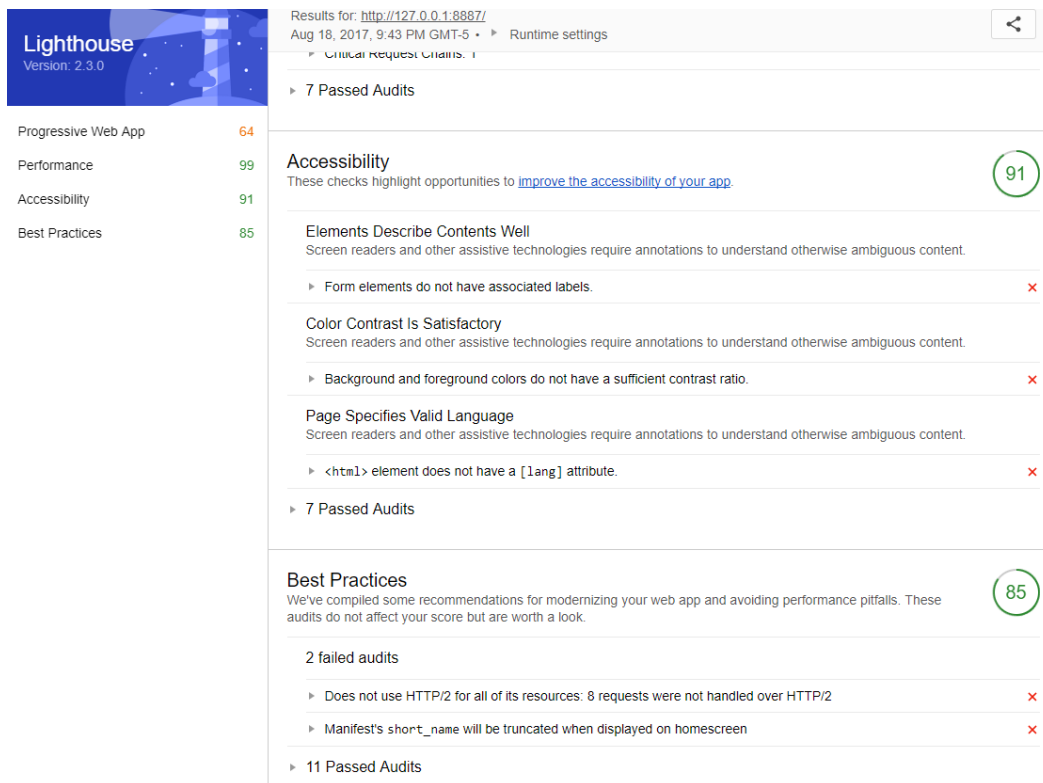
7 Passed Audits

Manual checks to verify

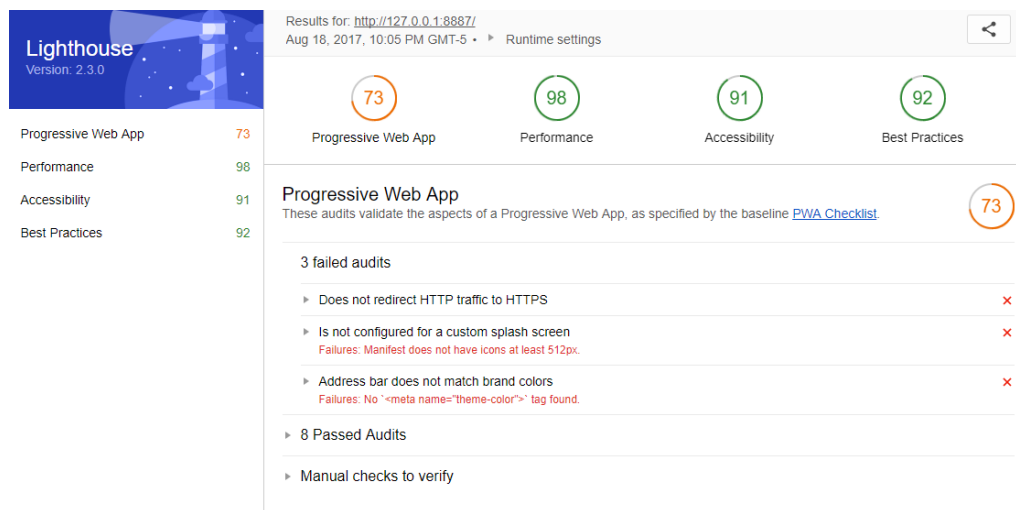


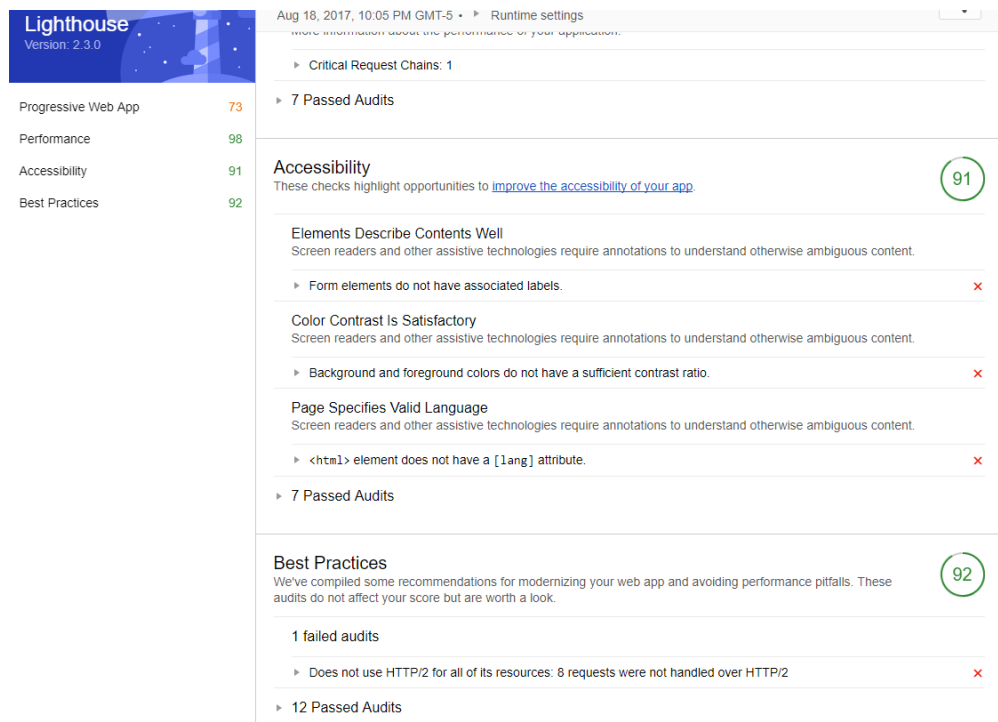
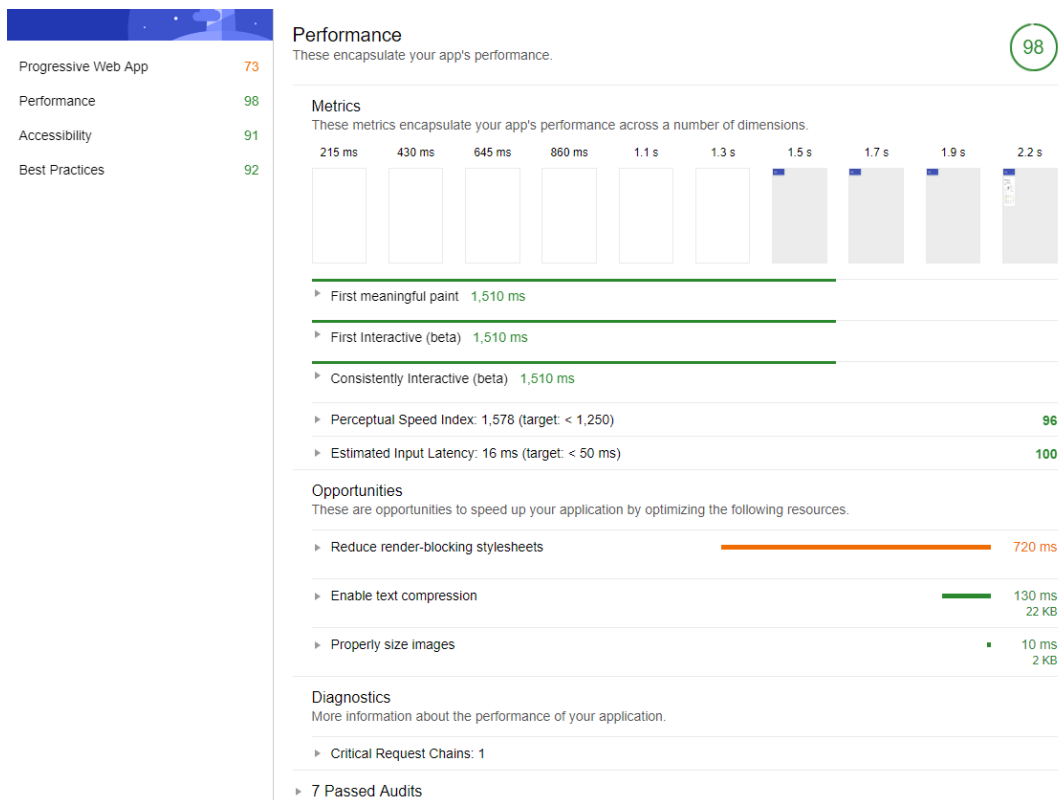
Use service workers to cache the forecast data





Support native integration

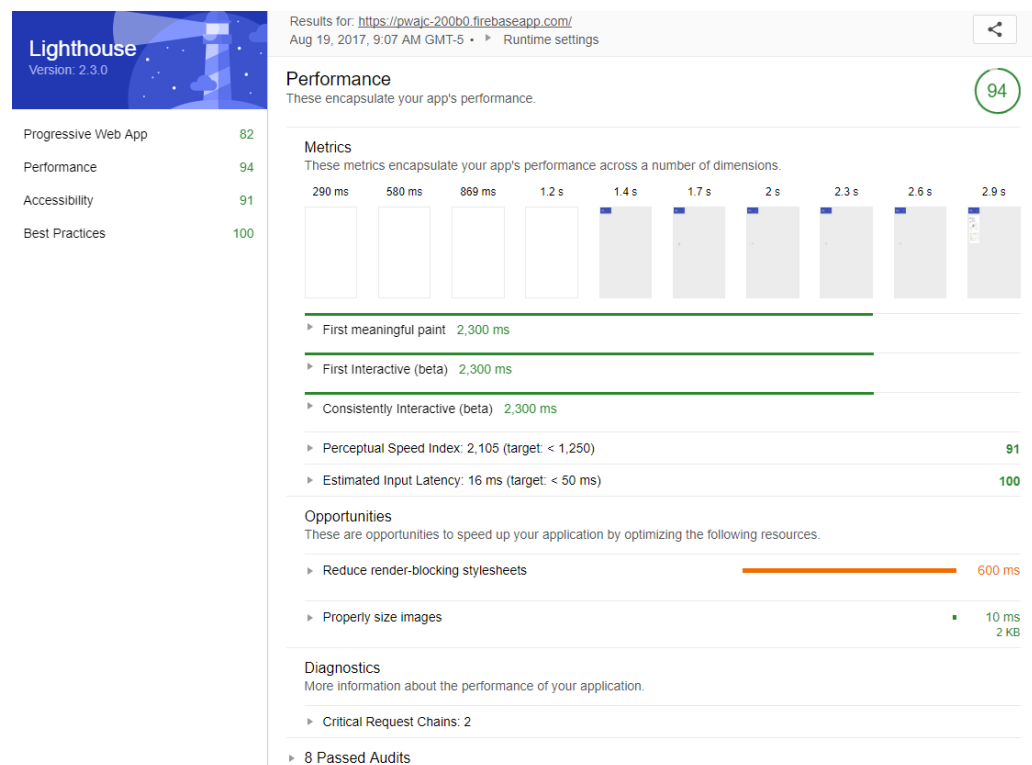
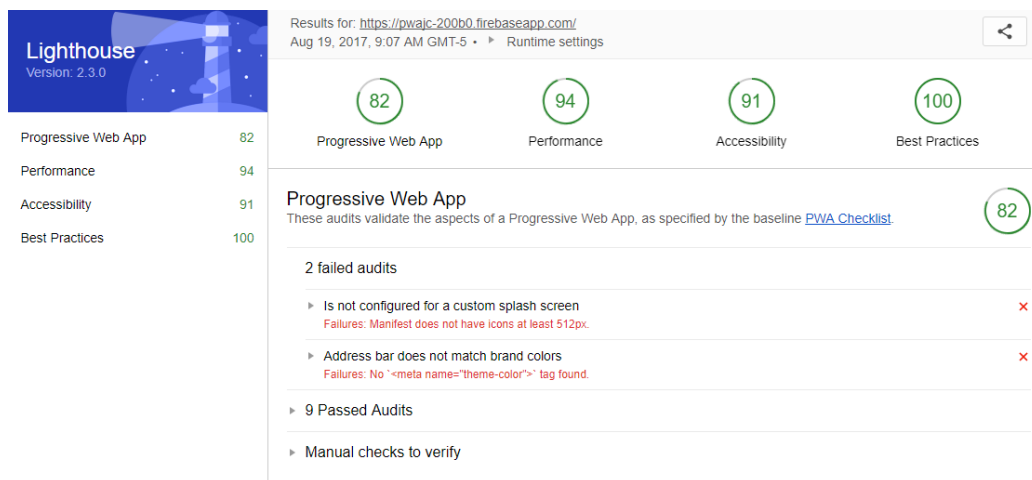





Deploy to a secure host and celebrate

Se hizo el deploy a Firebase y la app quedo en el siguiente enlace:

<https://pwajc-200b0.firebaseio.com/>





Lighthouse
Version: 2.3.0

Progressive Web App 82

Performance 94

Accessibility 91

Best Practices 100

Results for: <https://pwaic-200b0.firebaseio.com/>
 Aug 19, 2017, 9:07 AM GMT-5 • ▶ Runtime settings

Diagnostics
More information about the performance of your application.

▶ Critical Request Chains: 2

▶ 8 Passed Audits

Accessibility 91

These checks highlight opportunities to [improve the accessibility of your app](#).

Elements Describe Contents Well
Screen readers and other assistive technologies require annotations to understand otherwise ambiguous content.

▶ Form elements do not have associated labels. ✖

Color Contrast Is Satisfactory
Screen readers and other assistive technologies require annotations to understand otherwise ambiguous content.

▶ Background and foreground colors do not have a sufficient contrast ratio. ✖

Page Specifies Valid Language
Screen readers and other assistive technologies require annotations to understand otherwise ambiguous content.

▶ <html> element does not have a [lang] attribute. ✖

▶ 7 Passed Audits

Best Practices 100

We've compiled some recommendations for modernizing your web app and avoiding performance pitfalls. These audits do not affect your score but are worth a look.

0 failed audits

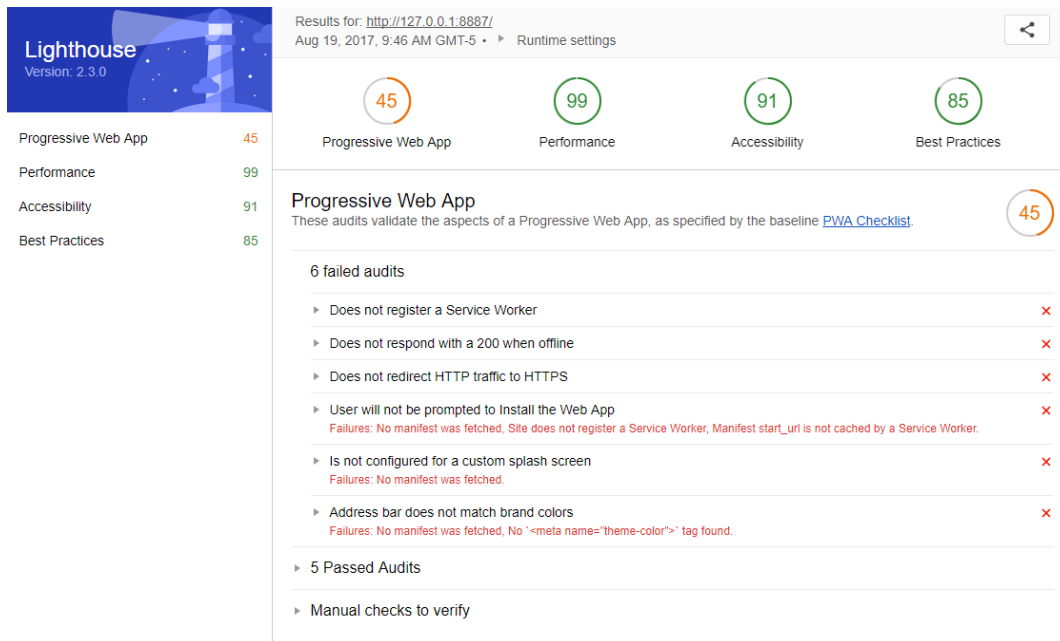
▶ 13 Passed Audits

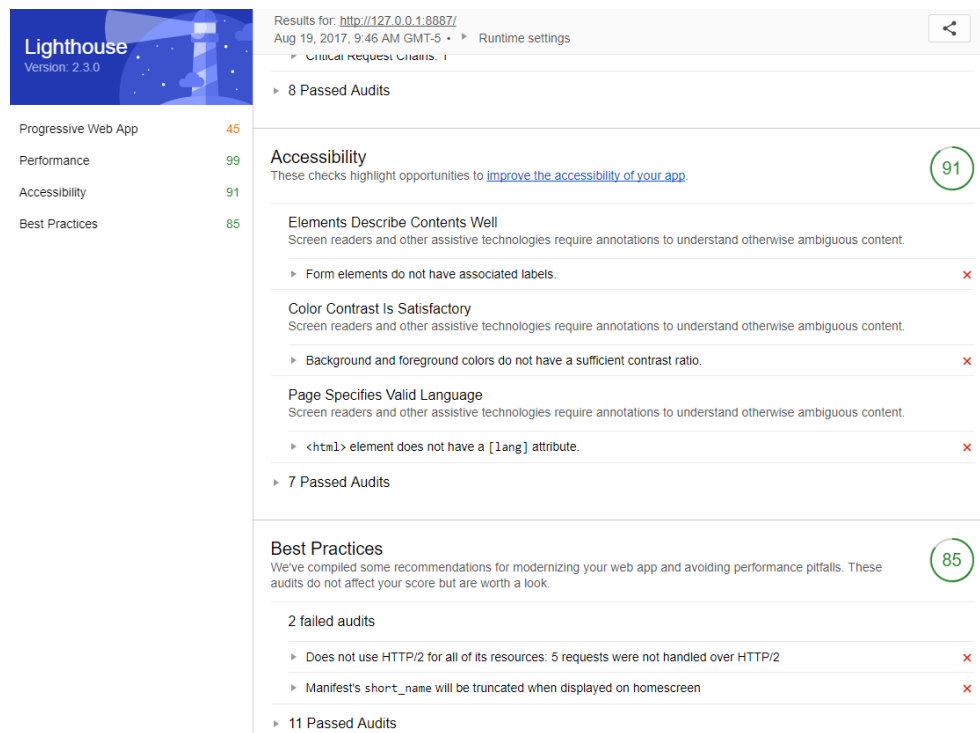
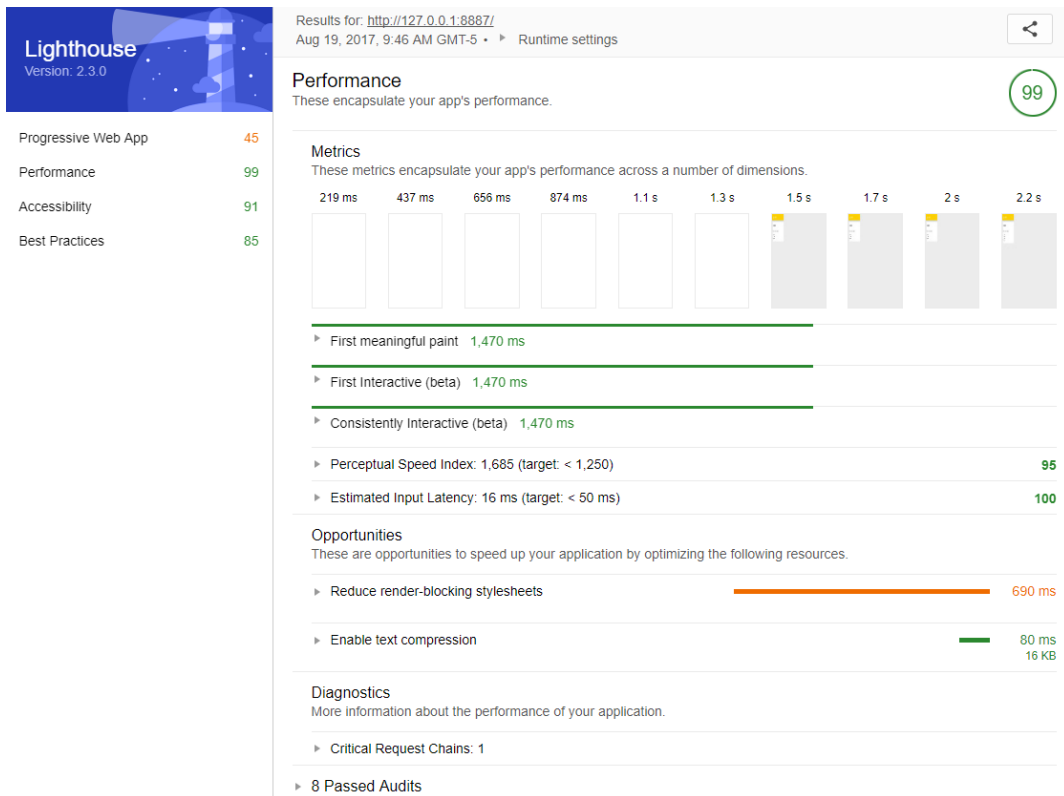
Parte 2

Se completó todo el laboratorio del enlace definido en la guía del taller y a medida de que se avanzaba en el mismo se iban ejecutando las pruebas de Lighthouse para revisar el avance en las métricas progresivas.

Antes de implementar las funcionalidades

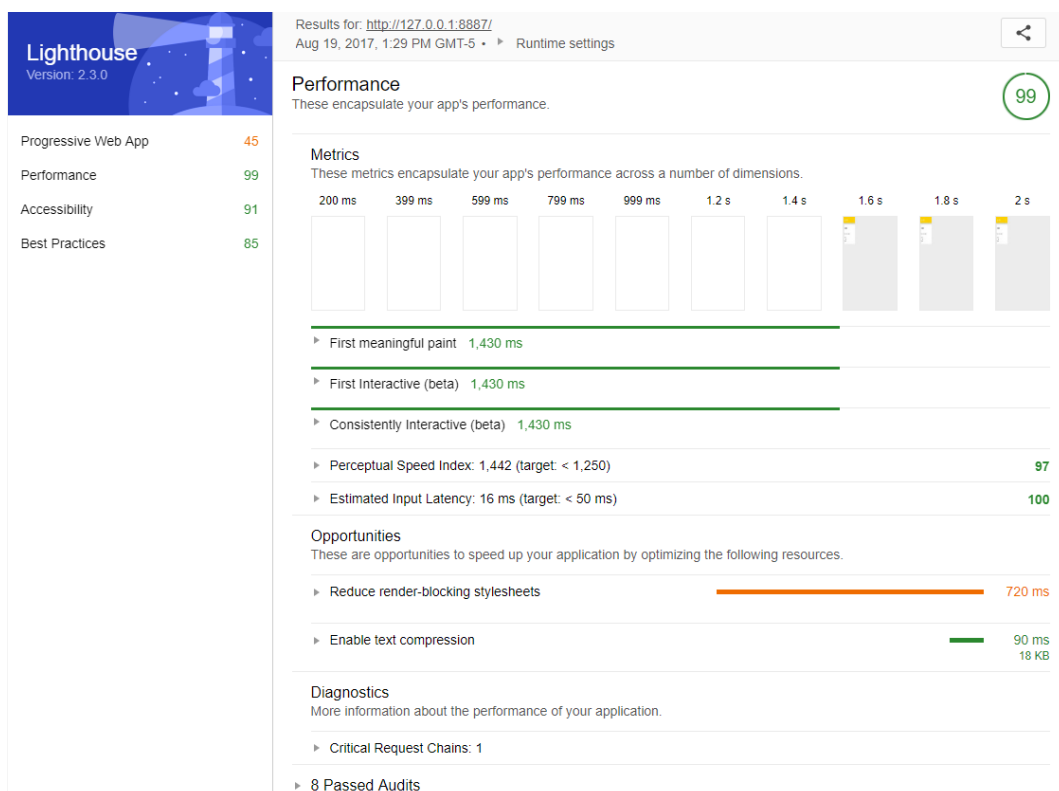
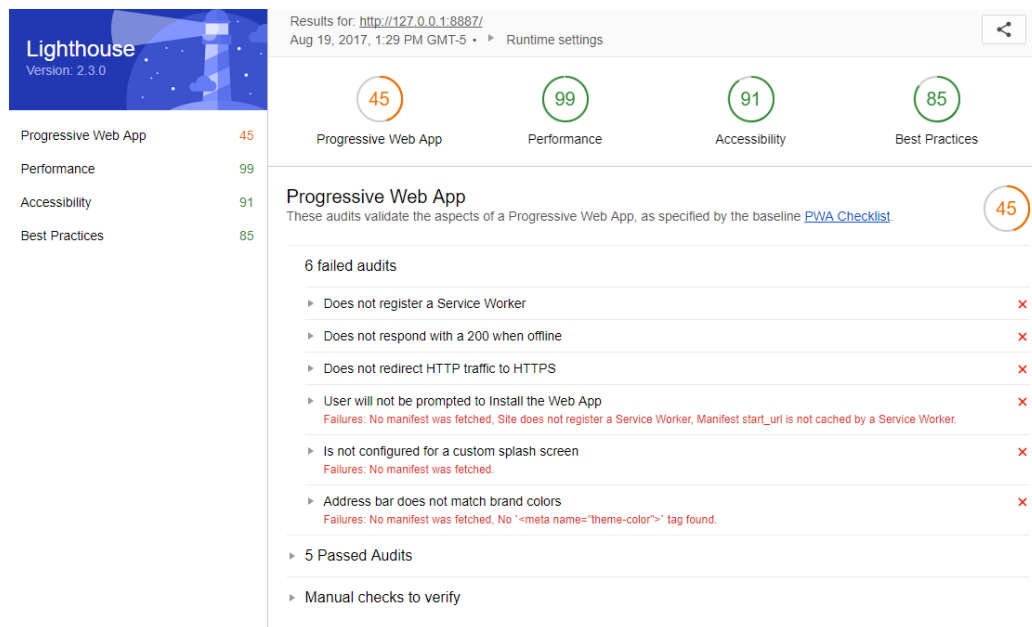
Antes de comenzar se generó el reporte Lighthouse para conocer el estado actual de la app.

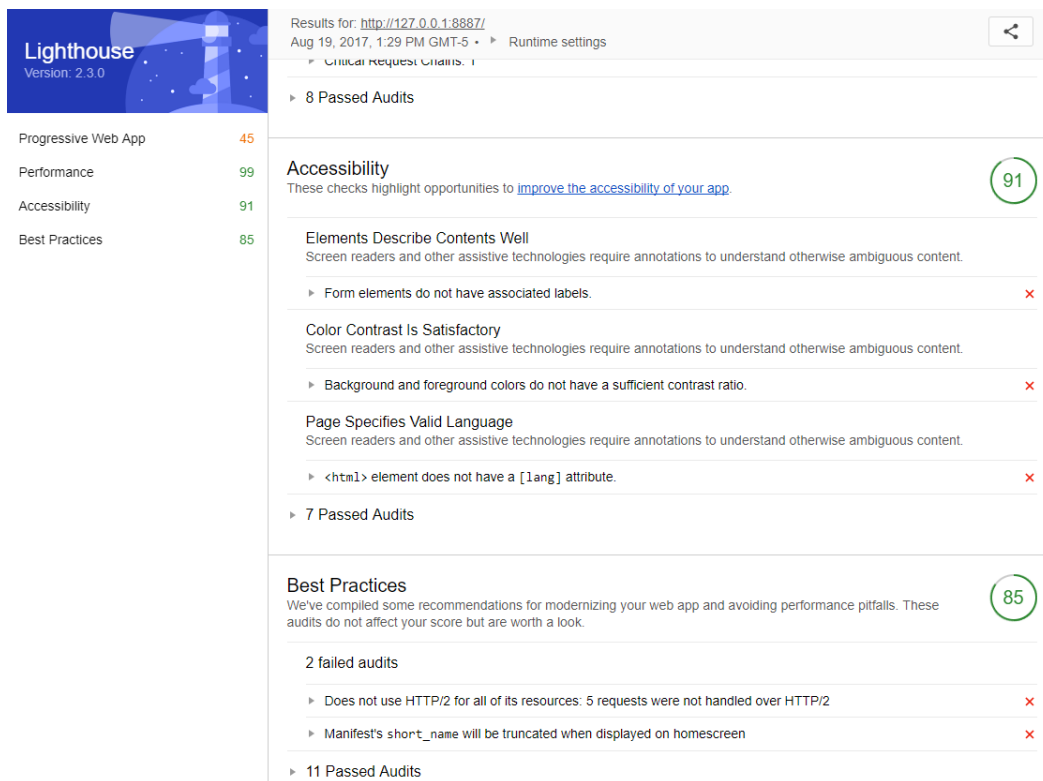




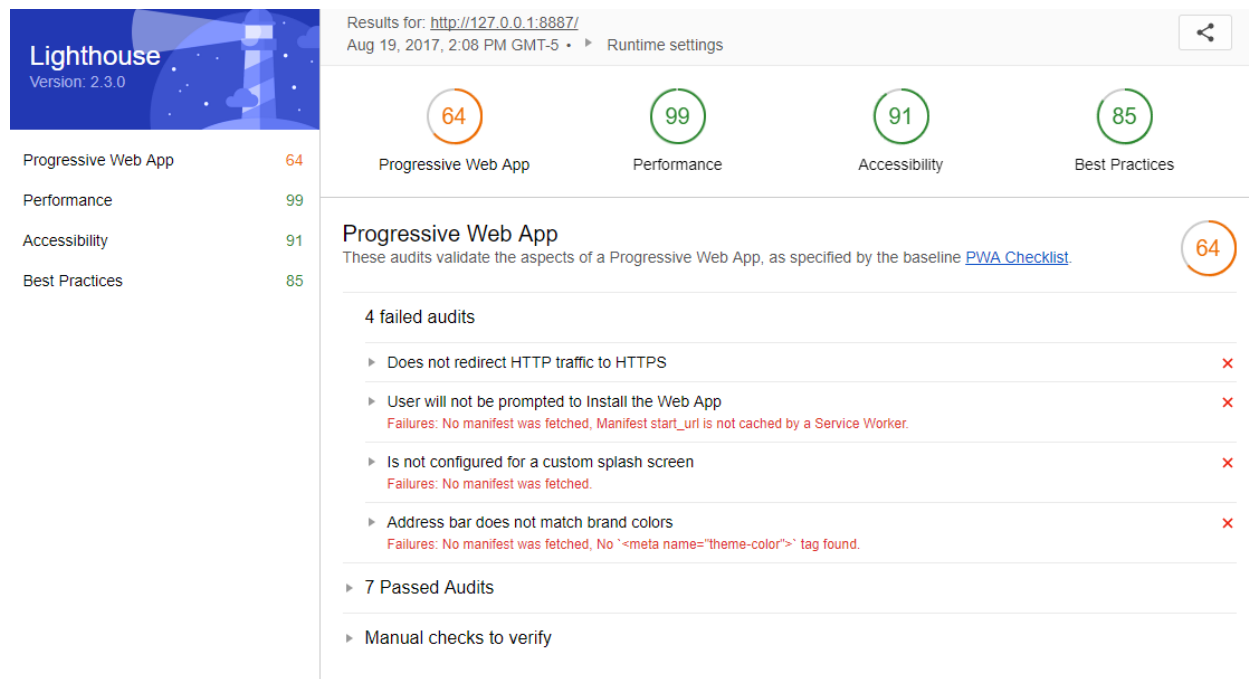
Después de implementar las funcionalidades

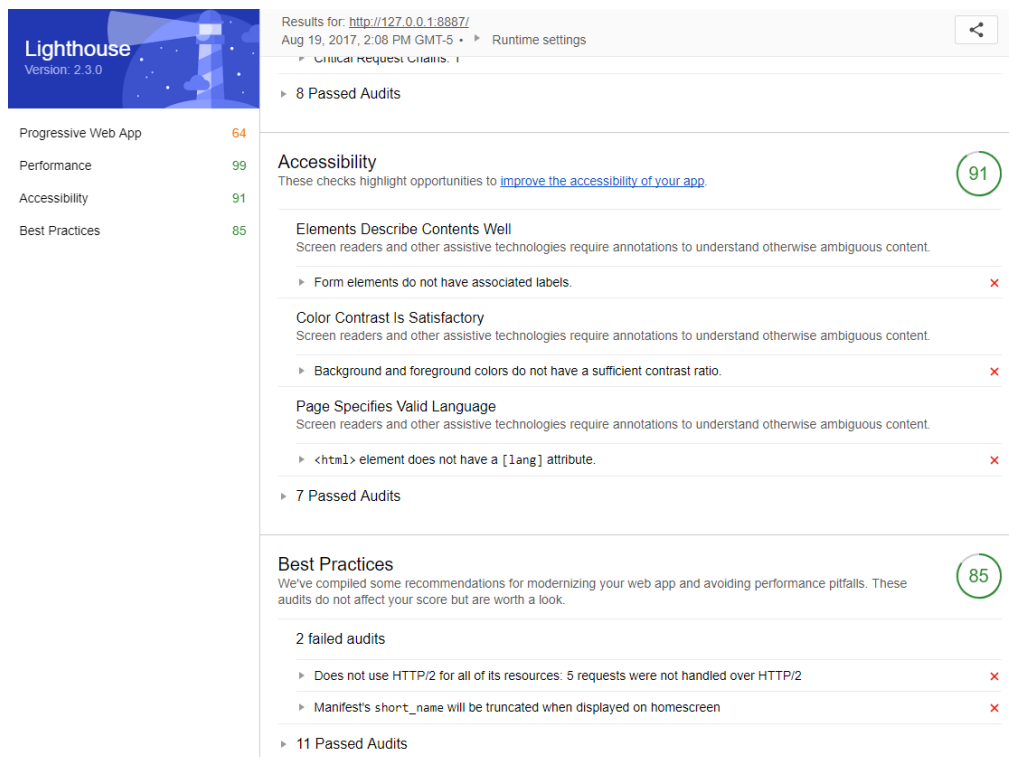
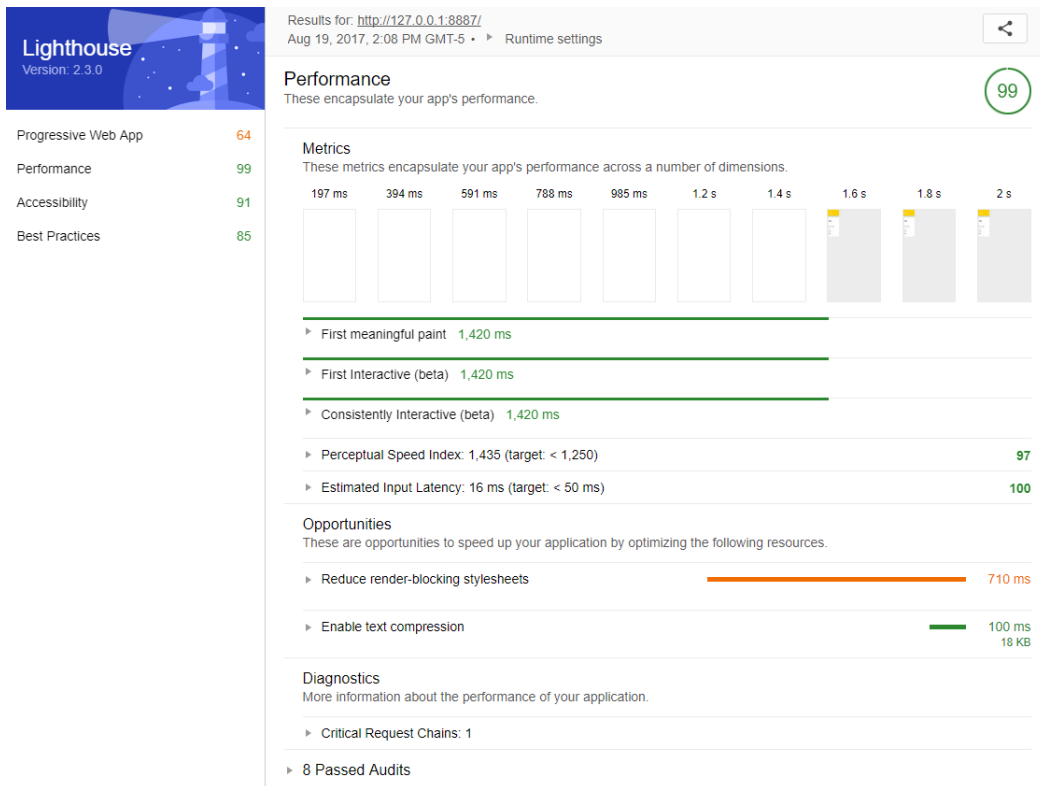
Funcionalidades F1 y F2



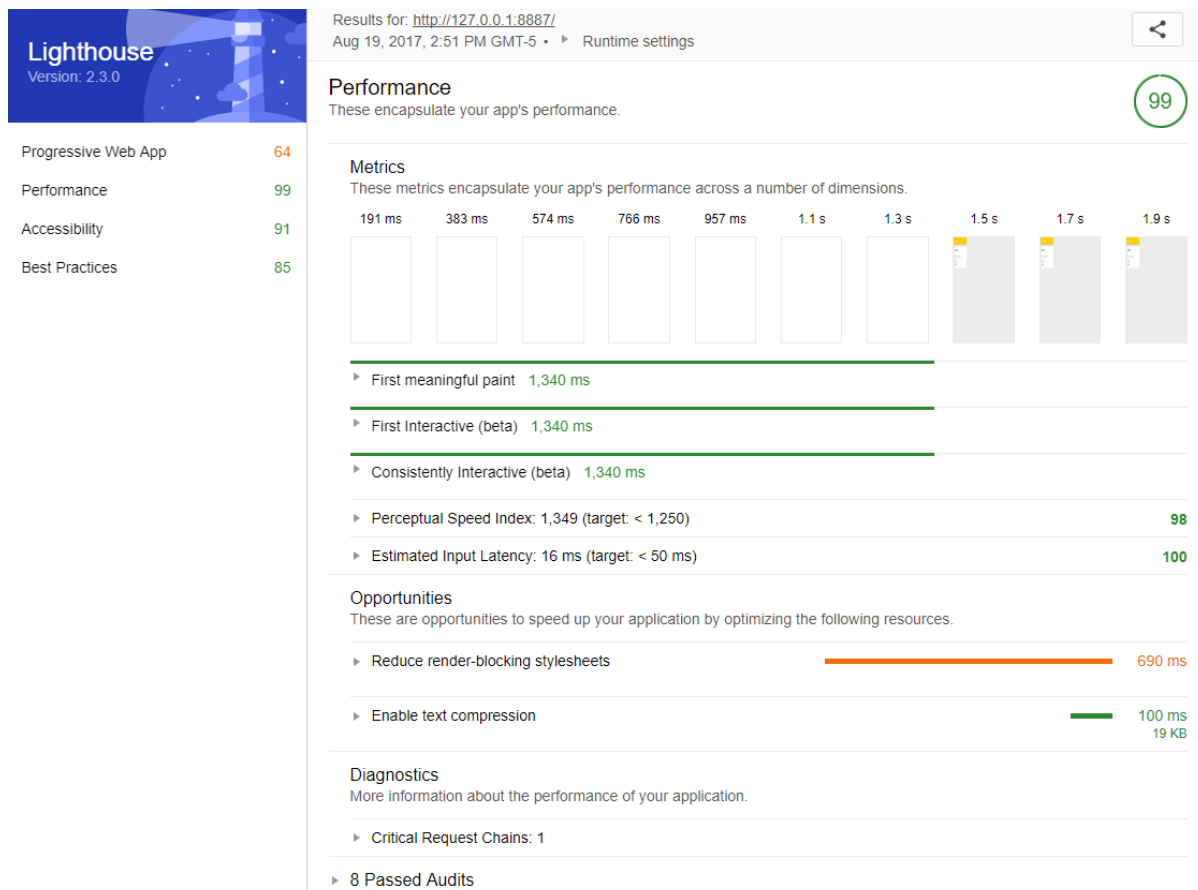
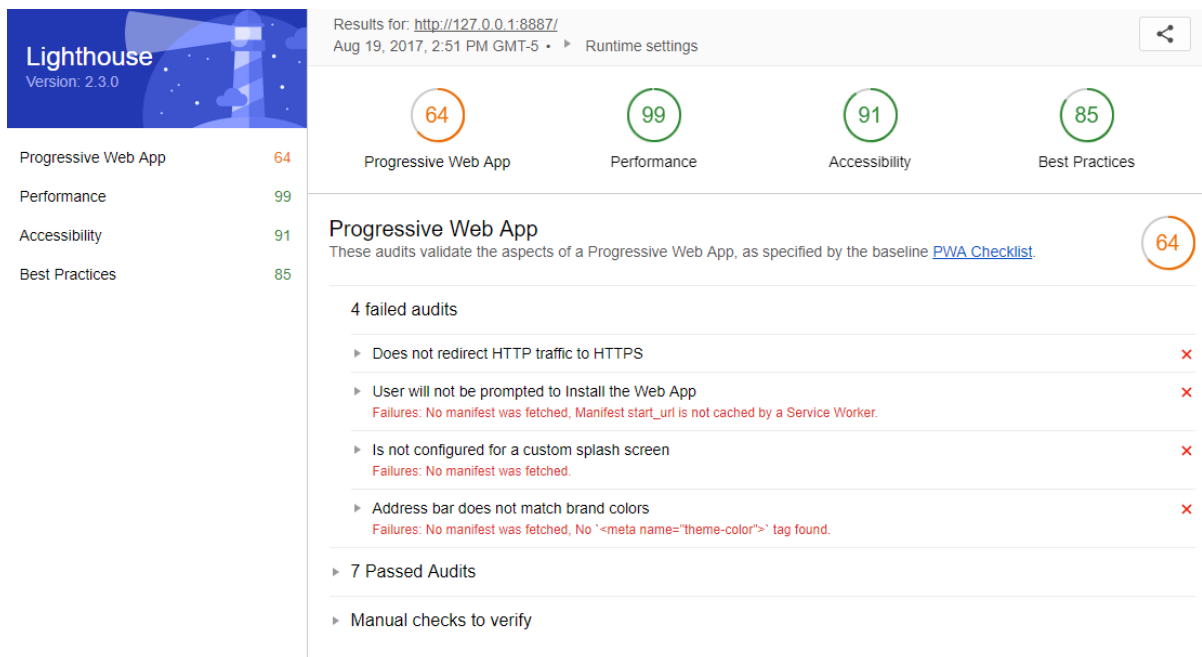


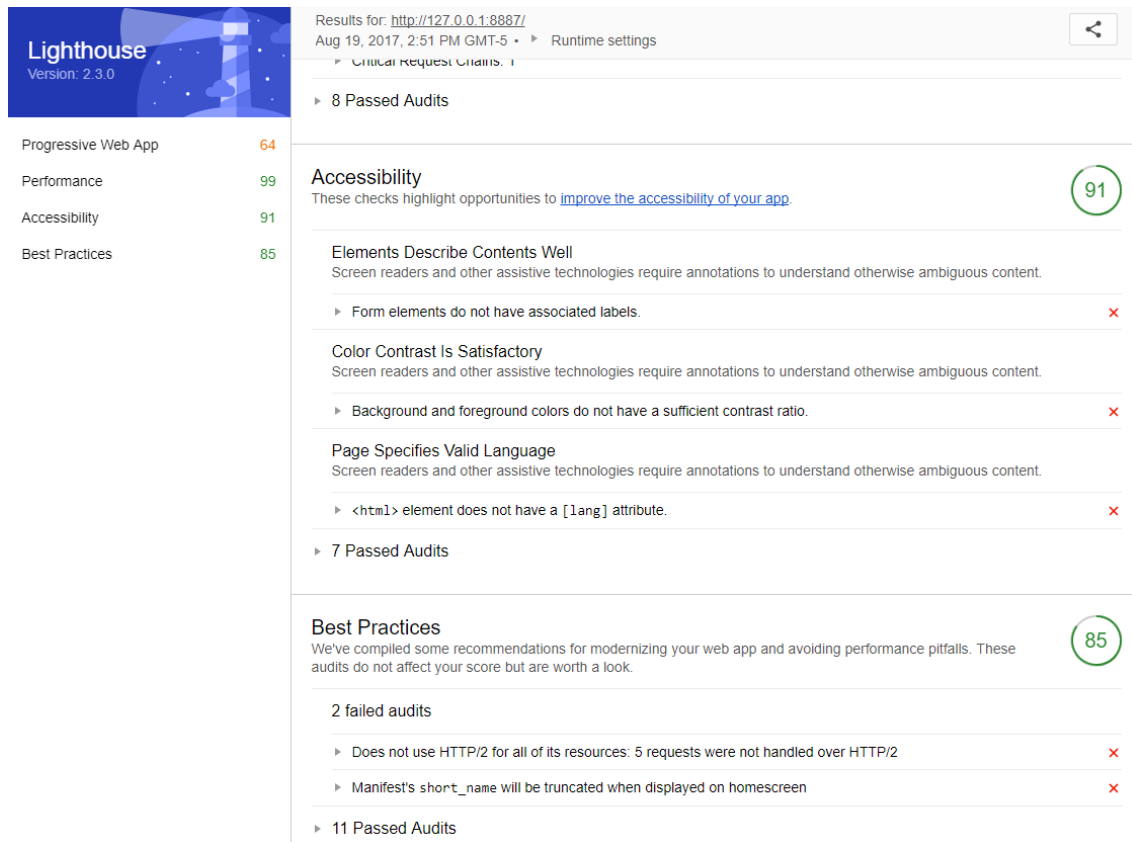
Funcionalidad F3



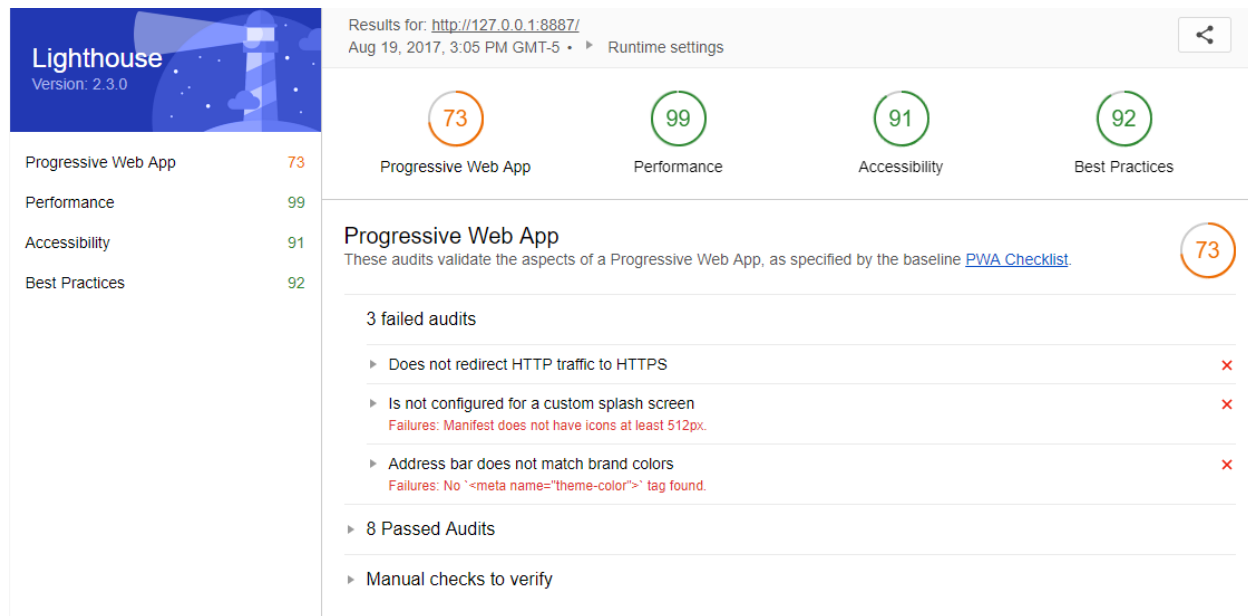


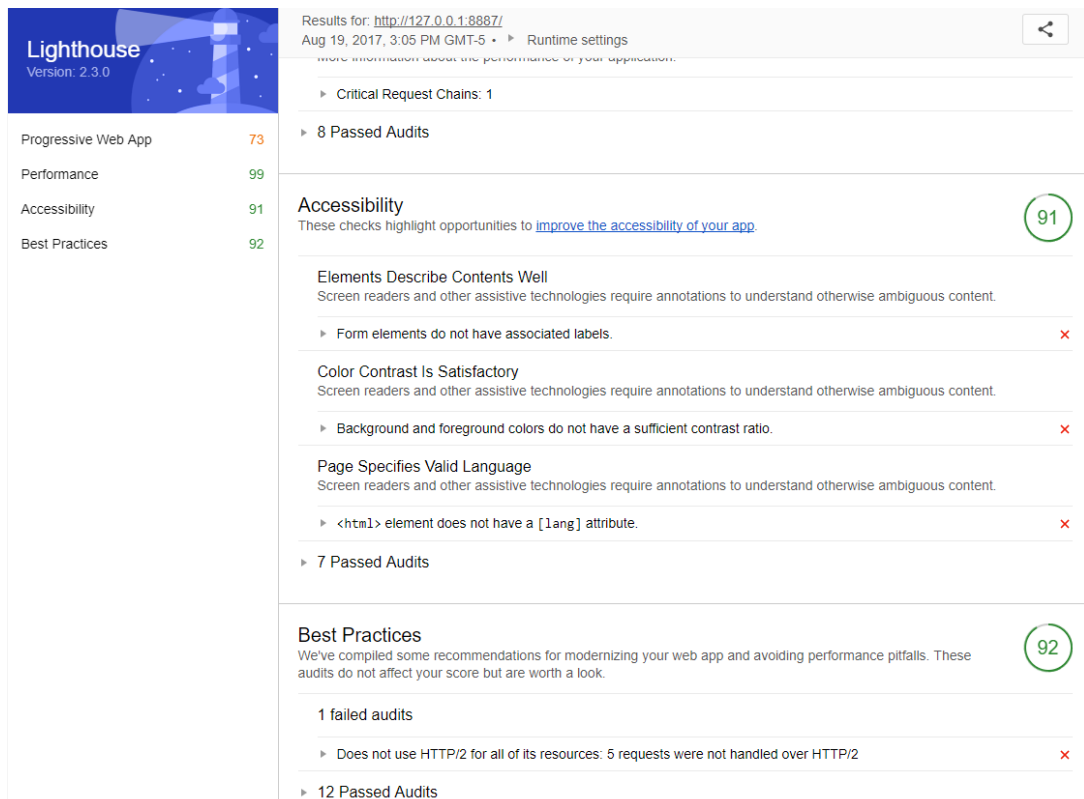
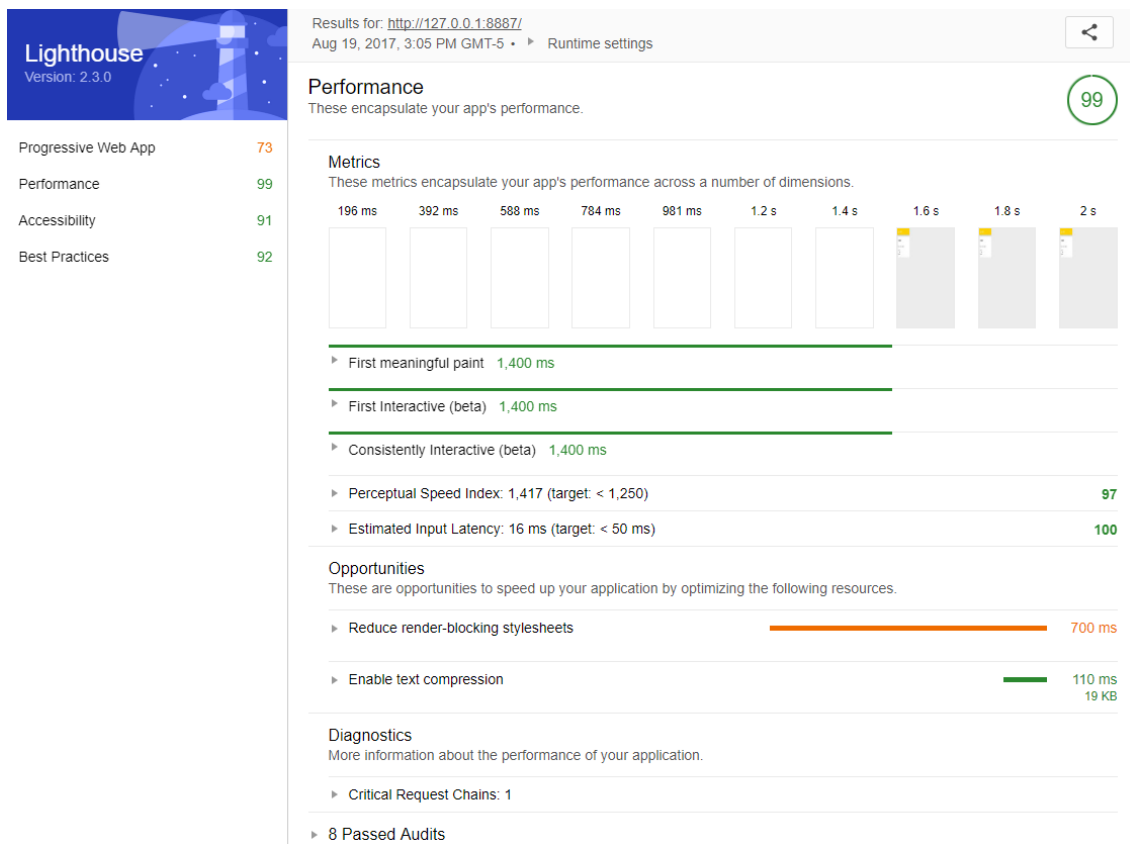
Funcionalidad F4





Funcionalidad F5





Hasta este momento se siguieron los mismos pasos de la parte 1 pero aplicados a esta app, ahora se implementan las funcionalidades de IndexedDB y de Workbox (sw-precache).

Implementación de IndexedDB

The screenshot shows the Chrome DevTools Application tab. The left sidebar is expanded to 'Storage' > 'IndexedDB'. Under 'ParisMetro - http://127.0.0.1:8887', the 'TimeTables' database is selected. The main pane shows a table with two rows:

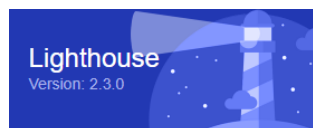
#	Key (Key path: "key")	Value
0	1	▼ Array(1) ▶ 0: {key: "metros/1/bastille/A", 1: key: 1 length: 1
1	"metros/1/bastille/A"	▼ Object created: "2017-07-18T17:08:42+02:00" key: "metros/1/bastille/A" label: "Bastille, Direction La Dé ▶ schedules: (3) [{-}, {-}, {-}]

The screenshot shows the Chrome DevTools Console with the following log entries:

```

Service Worker Registered app.js:298
[ServiceWorker] Install service-worker.js:21
[ServiceWorker] Caching app shell service-worker.js:24
Saving new data to IndexedDB: [object Object] app.js:209
Success - Saving new data to IndexedDB: [object IDBDatabase] app.js:211
[ServiceWorker] Activate service-worker.js:32
[Service Worker] Fetch http://127.0.0.1:8887/ service-worker.js:61
[Service Worker] Fetch http://127.0.0.1:8887/styles/inline.css service-worker.js:61
[Service Worker] Fetch https://api-ratp.pierre-grimaud.fr/v3/schedules/metros/1/nation/A service-worker.js:61
Saving new data to IndexedDB: [object Object],[object Object] app.js:209
Success - Saving new data to IndexedDB: [object IDBDatabase] app.js:211

```



Progressive Web App	73
Performance	98
Accessibility	91
Best Practices	92

Results for: <http://127.0.0.1:8887/>
Aug 20, 2017, 11:54 AM GMT-5 • Runtime settings

73	98	91	92
Progressive Web App	Performance	Accessibility	Best Practices

Progressive Web App

These audits validate the aspects of a Progressive Web App, as specified by the baseline [PWA Checklist](#).

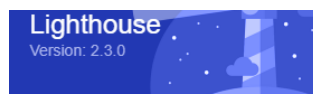
73

3 failed audits

- Does not redirect HTTP traffic to HTTPS ✗
- Is not configured for a custom splash screen ✗
Failures: Manifest does not have icons at least 512px.
- Address bar does not match brand colors ✗
Failures: No `

8 Passed Audits

Manual checks to verify



Progressive Web App	73
Performance	98
Accessibility	91
Best Practices	92

Aug 20, 2017, 11:54 AM GMT-5 • Runtime settings

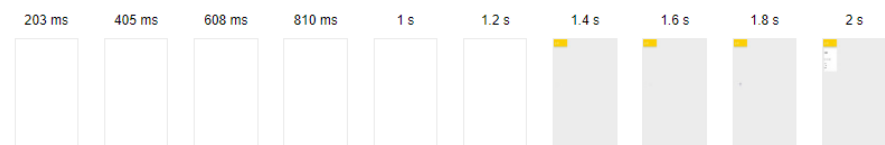
Performance

These encapsulate your app's performance.

98

Metrics

These metrics encapsulate your app's performance across a number of dimensions.



- First meaningful paint 1,380 ms
- First Interactive (beta) 1,380 ms
- Consistently Interactive (beta) 1,380 ms
- Perceptual Speed Index: 1,812 (target: < 1,250) 94
- Estimated Input Latency: 16 ms (target: < 50 ms) 100

Opportunities

These are opportunities to speed up your application by optimizing the following resources.

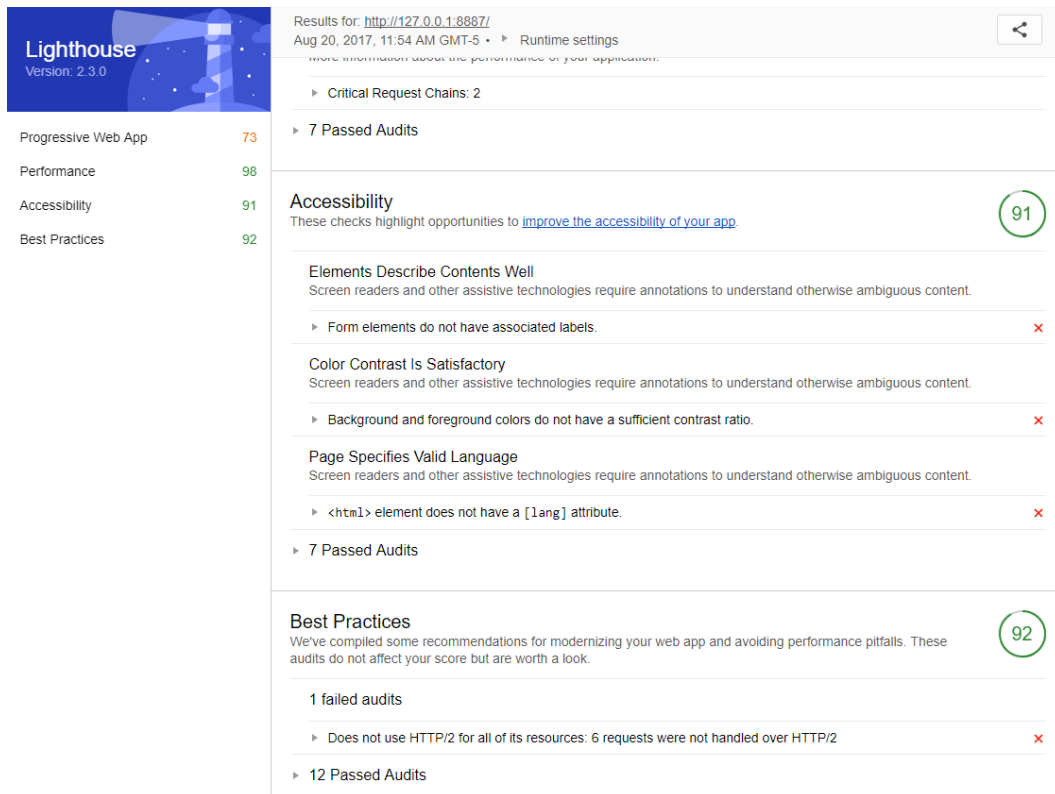
- Reduce render-blocking stylesheets 700 ms
- Reduce render-blocking scripts 670 ms
- Enable text compression 150 ms
26 KB

Diagnostics

More information about the performance of your application.

- Critical Request Chains: 2

7 Passed Audits



Implementación de WorkBox

Nota: Workbox is the successor to sw-precache and sw-toolbox. It is a collection of libraries and tools used for generating a service worker, precaching, routing, and runtime-caching. Workbox also includes modules for easily integrating background sync and Google analytics into your service worker.

<https://developers.google.com/web/ilt/pwa/lab-workbox>

Application

- Manifest
- Service Workers
- Clear storage

Storage

- Local Storage
- Session Storage
- IndexedDB
- Web SQL
- Cookies

Cache

- Cache Storage
 - workbox-precaching-revisioned-v1-http://localhost:8002/
 - Application Cache

Frames

- top

#	Request	Response
0	http://localhost:8002/images/ic_add_white_24px.svg	OK
1	http://localhost:8002/images/ic_refresh_white_24px.svg	OK
2	http://localhost:8002/images/icons/icon-128x128.png	OK
3	http://localhost:8002/images/icons/icon-144x144.png	OK
4	http://localhost:8002/images/icons/icon-152x152.png	OK
5	http://localhost:8002/images/icons/icon-192x192.png	OK
6	http://localhost:8002/images/icons/icon-256x256.png	OK
7	http://localhost:8002/images/icons/icon-32x32.png	OK
8	http://localhost:8002/index.html	OK
9	http://localhost:8002/manifest.json	OK
10	http://localhost:8002/scripts/app.js	OK
11	http://localhost:8002/scripts/idb.js	OK
12	http://localhost:8002/styles/inline.css	OK

Console

What's New

top

Filter

Default levels

1 item hidden by filters

Saving new data to IndexedDB: [object Object] [app.js:209](#)

Success - Saving new data to IndexedDB: [object IDBDatabase] [app.js:211](#)

Service Worker registration successful with scope: <http://localhost:8002/> <localhost/:113>

Application

- Manifest
- Service Workers
- Clear storage

Storage

- Local Storage
- Session Storage
- IndexedDB
- Web SQL
- Cookies

Cache

- Cache Storage
 - workbox-precaching-revisioned-v1-http://localhost:8002/
 - parismetro - http://localhost:8002
 - Application Cache

Frames

- top

#	Request	Response
0	https://api-ratp.pierre-grimaud.fr/v3/schedules/metros/1/bastille/A	OK



Progressive Web App	73
Performance	98
Accessibility	91
Best Practices	92

Results for: <http://127.0.0.1:8887/>
Aug 20, 2017, 3:42 PM GMT-5 • Runtime settings



73

Progressive Web App

98

Performance

91

Accessibility

92

Best Practices

Progressive Web App

These audits validate the aspects of a Progressive Web App, as specified by the baseline [PWA Checklist](#).

73

3 failed audits

- Does not redirect HTTP traffic to HTTPS ✗
- Is not configured for a custom splash screen ✗
Failures: Manifest does not have icons at least 512px.
- Address bar does not match brand colors ✗
Failures: No "<meta name='theme-color'>" tag found.

8 Passed Audits

Manual checks to verify



Progressive Web App	73
Performance	98
Accessibility	91
Best Practices	92

Aug 20, 2017, 3:42 PM GMT-5 • Runtime settings



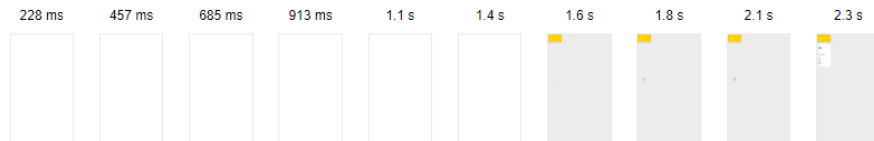
Performance

These encapsulate your app's performance.

98

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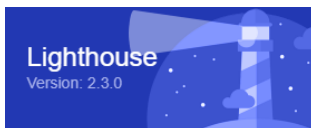
- Reduce render-blocking stylesheets 690 ms
- Reduce render-blocking scripts 670 ms
- Enable text compression 280 ms
26 KB

Diagnostics

More information about the performance of your application.

- Critical Request Chains: 2

7 Passed Audits



Progressive Web App	73
Performance	98
Accessibility	91
Best Practices	92

Results for: <http://127.0.0.1:8887/>

Aug 20, 2017, 3:42 PM GMT-5 • ▶ Runtime settings



[More information about the performance of your application.](#)

▶ Critical Request Chains: 2

▶ 7 Passed Audits

Accessibility

These checks highlight opportunities to [improve the accessibility of your app](#).

91

Elements Describe Contents Well

Screen readers and other assistive technologies require annotations to understand otherwise ambiguous content.

▶ Form elements do not have associated labels.

✗

Color Contrast Is Satisfactory

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▶ Background and foreground colors do not have a sufficient contrast ratio.

✗

Page Specifies Valid Language

Screen readers and other assistive technologies require annotations to understand otherwise ambiguous content.

▶ `<html>` element does not have a `[lang]` attribute.

✗

▶ 7 Passed Audits

Best Practices

We've compiled some recommendations for modernizing your web app and avoiding performance pitfalls. These audits do not affect your score but are worth a look.

92

1 failed audits

▶ Does not use HTTP/2 for all of its resources: 6 requests were not handled over HTTP/2

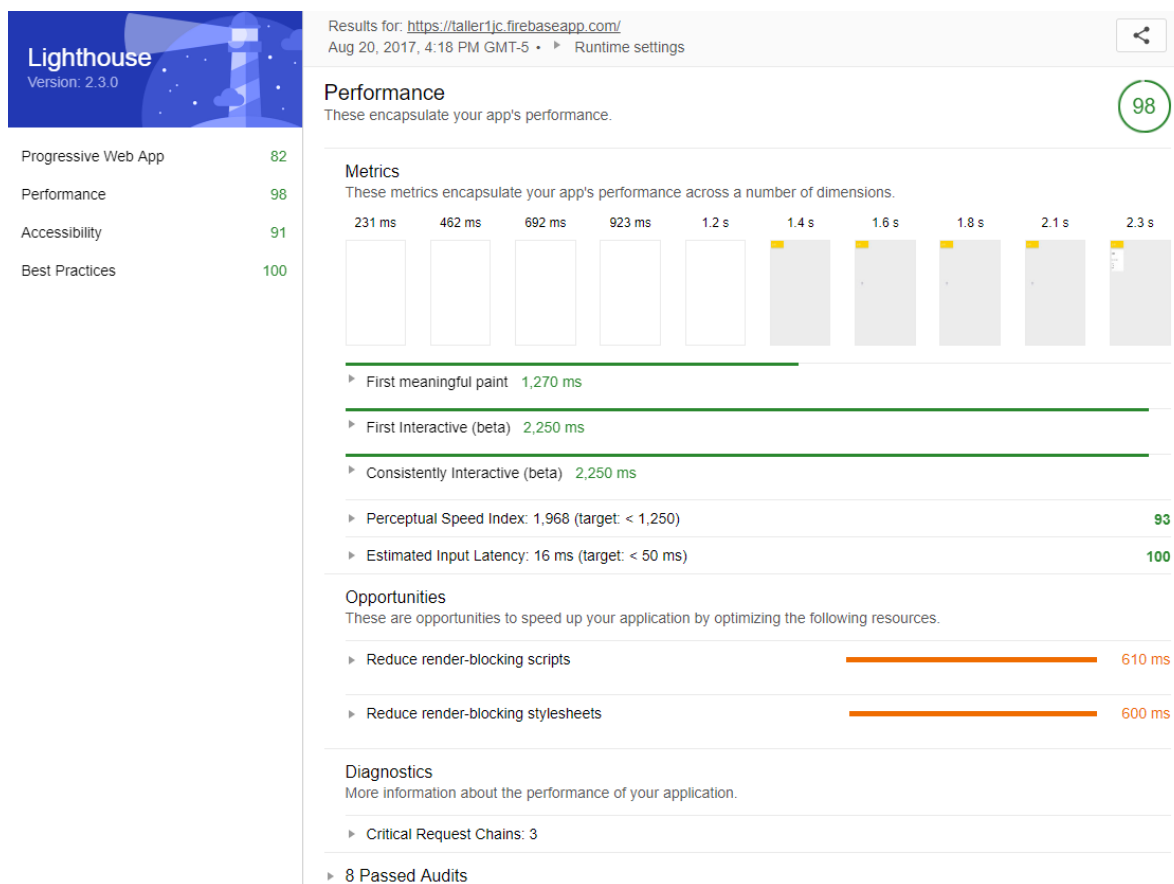
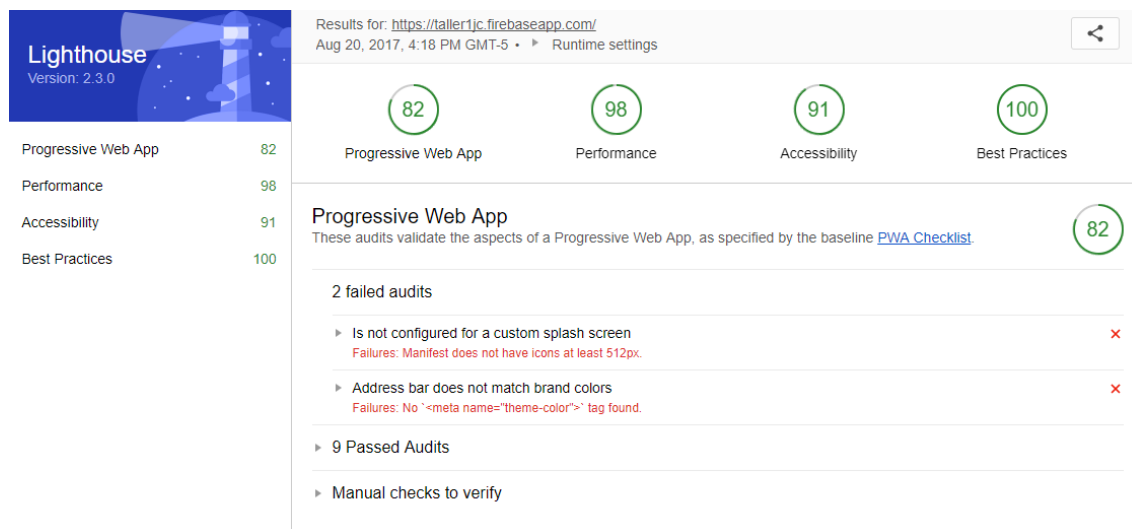
✗


▶ 12 Passed Audits

Funcionalidad F6

Se hizo el deploy a Firebase y la app quedo en el siguiente enlace:

<https://taller1jc.firebaseio.com/>





Results for: <https://taller1jc.firebaseio.com/>
 Aug 20, 2017, 4:18 PM GMT-5 • ▶ Runtime settings

Progressive Web App	82
Performance	98
Accessibility	91
Best Practices	100

Diagnostics
 More information about the performance of your application.

▶ Critical Request Chains: 3

▶ 8 Passed Audits

Accessibility 91

These checks highlight opportunities to [improve the accessibility of your app](#).

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Color Contrast Is Satisfactory
 Screen readers and other assistive technologies require annotations to understand otherwise ambiguous content.

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Page Specifies Valid Language
 Screen readers and other assistive technologies require annotations to understand otherwise ambiguous content.

▶ <html> element does not have a [lang] attribute. ✗

▶ 7 Passed Audits

Best Practices 100

We've compiled some recommendations for modernizing your web app and avoiding performance pitfalls. These audits do not affect your score but are worth a look.

0 failed audits

▶ 13 Passed Audits

Enlaces en Github

Los siguientes son los enlaces de donde se pueden descargar las dos partes de este taller:

<https://github.com/jarias915/miso4208Taller1/blob/master/Taller1Parte1.zip>

<https://github.com/jarias915/miso4208Taller1/blob/master/Taller1Parte2.zip>