



PWA: do código à loja

Trilha - Web / Front-end

Outubro 2019

Quem sou eu?



@Front-end developer

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Great Place to Work



AGENDA



- O que é?
- Pesquisas
- Pré-requisitos
- Funcionalidades
- Criando um PWA
- Show cases
- App na loja
- Criando o APP
- Vale a pena?





O que é o PWA?



Pilares



Progressive Web Apps são experiências do usuário que têm o alcance da web, e devem ter:

1

Confiabilidade



2

Rapidez



3

Engajamento



Esse **novo nível de qualidade** permite que os Progressive Web Apps ganhem um lugar na tela inicial do usuário.

Confiabilidade



Carregamento **instantâneo**, mesmo **offline** ou com **rede ruim**;



Rapidez



Responde **rapidamente** a interação do usuário, sempre dando **feedback** rápido;



Engajamento

Se parece com um aplicativo **nativo**, trazendo uma **melhor experiência** ao usuário;





O que dizem as pesquisas?





APR
2019

INTERNET USE: DEVICE PERSPECTIVE

BASED ON ACTIVE INTERNET USER DATA, AND ACTIVE USE OF INTERNET-POWERED MOBILE SERVICES

TOTAL NUMBER
OF ACTIVE
INTERNET USERS



4.437
BILLION

we
are
social

INTERNET USERS AS
A PERCENTAGE OF
TOTAL POPULATION



58%



TOTAL NUMBER
OF ACTIVE MOBILE
INTERNET USERS



4.031
BILLION



MOBILE INTERNET USERS
AS A PERCENTAGE
OF TOTAL POPULATION



52%

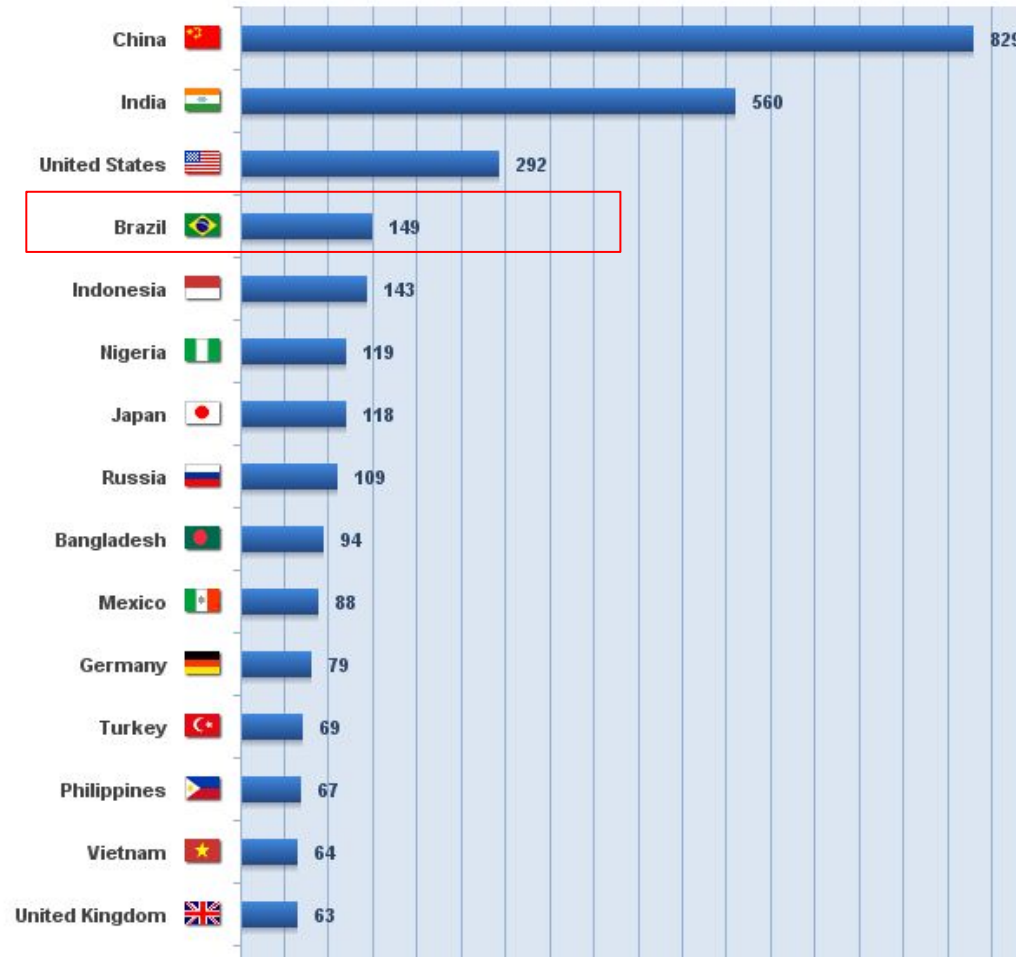
9

SOURCES: ITU; WORLD BANK; CIA WORLD FACTBOOK; LOCAL GOVERNMENT BODIES AND REGULATORY AUTHORITIES; MIDEASTMEDIA.ORG; REPORTS IN REPUTABLE MEDIA; SOCIAL MEDIA PLATFORM USER NUMBERS. **MOBILE SHARE DATA:** EXTRAPOLATED FROM GLOBALWEBINDEX (Q4 2018) AND DATA PUBLISHED BY THE WORLD'S LARGEST SOCIAL MEDIA PLATFORMS VIA EARNINGS RELEASES AND SELF-SERVE ADVERTISING TOOLS.

 **Hootsuite™** **we
are
social**



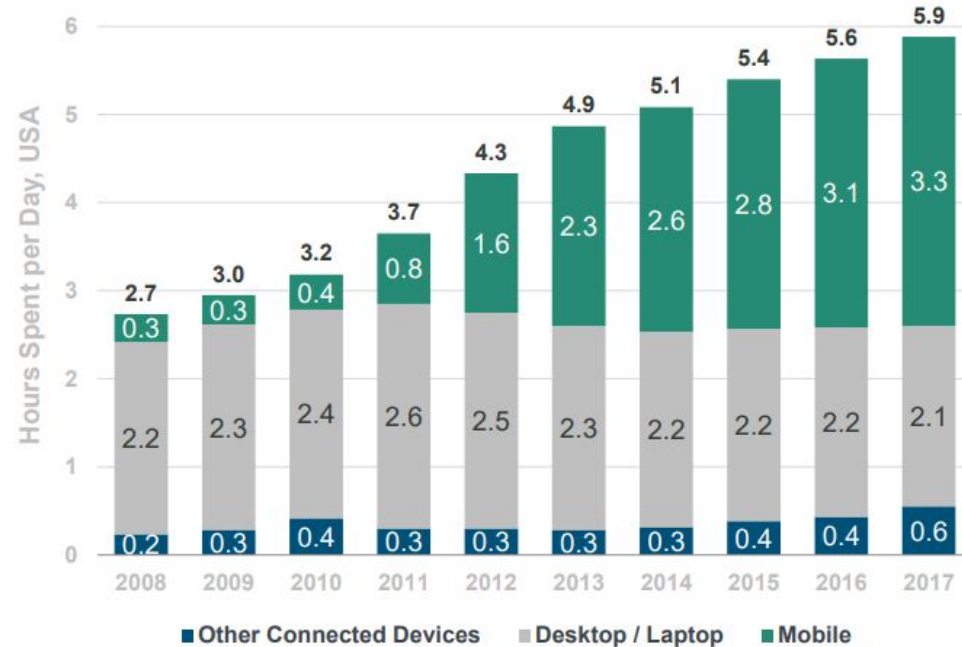
TOP 20 INTERNET COUNTRIES - 2019 With the Highest Number of Internet Users





Digital Media Usage @ +4% Growth... 5.9 Hours per Day (Not Deduped)

Daily Hours Spent with Digital Media per Adult User





> Economia > Nova economia

| Internet

Brasil é o 79º colocado em ranking mundial de velocidade de conexão à Internet

Mesmo apresentando um aumento de 51% em relação ao ano passado, Brasil ficou em posição intermediária no relatório da Akamai

Da redação [08/06/2017] [14:57]

Global Rank	Country/Region	Q1 2017 Avg. Mbps	QoQ Change	YoY Change
10	United States	18.7	8.8%	22%
20	Canada	16.2	9.1%	13%
57	Uruguay	9.5	14%	34%
60	Chile	9.3	8.1%	27%
76	Mexico	7.5	4.5%	6.9%
79	Brazil	6.8	6.7%	51%
90	Argentina	6.3	2.0%	17%
91	Peru	6.2	12%	20%
92	Ecuador	6.2	-2.9%	16%
94	Panama	5.9	4.0%	32%
99	Colombia	5.5	2.3%	19%
112	Costa Rica	4.1	5.5%	6.7%
132	Bolivia	2.7	2.2%	9.8%
144	Venezuela	1.8	-5.7%	-4.2%
148	Paraguay	1.4	-3.6%	-36%

Figure 18: Average Connection Speed (IPv4) by Americas Country

Pesquisas



<input type="checkbox"/>	Categoria do dispositivo ?	Aquisição
		Usuários ? ↓
		63.800 Porcentagem do total: 100,00% (63.800)
<input type="checkbox"/>	1. mobile	55.317 (86,95%)
<input type="checkbox"/>	2. desktop	7.975 (12,53%)
<input type="checkbox"/>	3. tablet	330 (0,52%)

<input type="checkbox"/>	Informações sobre dispositivo móvel ?	Modelo de dispositivo móvel ? ✕
<input type="checkbox"/>	1. Apple iPhone	iPhone
<input type="checkbox"/>	2. Samsung SM-G570M Galaxy J5 Prime	SM-G570M
<input type="checkbox"/>	3. Samsung SM-G532MT Galaxy J2 Prime	SM-G532MT
<input type="checkbox"/>	4. Samsung SM-J500M Galaxy J5	SM-J500M
<input type="checkbox"/>	5. Samsung SM-G610M Galaxy J7 Prime	SM-G610M
<input type="checkbox"/>	6. Motorola Moto G6 Play	Moto G6 Play
<input type="checkbox"/>	7. Samsung SM-J410G Galaxy J4 Core	SM-J410G
<input type="checkbox"/>	8. LG LG-M250 K10 2017	LG-M250
<input type="checkbox"/>	9. Motorola Moto G7 Play	Moto G7 Play
<input type="checkbox"/>	10. Samsung SM-J415G Galaxy J4+	SM-J415G

Pesquisas



<input type="checkbox"/> Navegador	Usuários	Usuários	Contribuição para o total: <input type="checkbox"/> Usuários
	63.800 Porcentagem do total: 100,00% (63.800)	63.800 Porcentagem do total: 100,00% (63.800)	
<input type="checkbox"/> 1. Chrome	38.384	60,92%	
<input type="checkbox"/> 2. Android Webview	13.634	21,64%	
<input type="checkbox"/> 3. Samsung Internet	6.659	10,57%	
<input type="checkbox"/> 4. Safari	2.392	3,80%	
<input type="checkbox"/> 5. Firefox	740	1,17%	
<input type="checkbox"/> 6. Safari (in-app)	624	0,99%	
<input type="checkbox"/> 7. Edge	171	0,27%	
<input type="checkbox"/> 8. Internet Explorer	169	0,27%	
<input type="checkbox"/> 9. Opera	108	0,17%	
<input type="checkbox"/> 10. Mozilla Compatible Agent	55	0,09%	



Os idosos estão conectados?

Pesquisa

O estudo aponta que pessoas com mais de 60 anos de idade:



Hábitos:

32% dos entrevistados usam a Internet para desenvolver novas habilidades.

49% para assistir filmes ou ouvir música.

59% usam para ficar em contato com pessoas queridas.

Pesquisa realizada equipe de Trust & Safety do Google



O que os idosos usam na Internet?

Pesquisa



66%
Ler notícias



58%
Fazer
compras
on-line



55%
Usar
Internet
banking



55%
Manter
contato com
pessoas
queridas



54%
Lazer
(Música,
vídeo e etc...)



44%
Procurar
informações
médicas/de
saúde



43%
Procurar
receitas
culinárias



Pré-requisitos



HTTPS



<http://vanilla-pwa.herokuapp.com>

https://kimuradev.github.io/vanilla_pwa_pages/

Mobile friendly



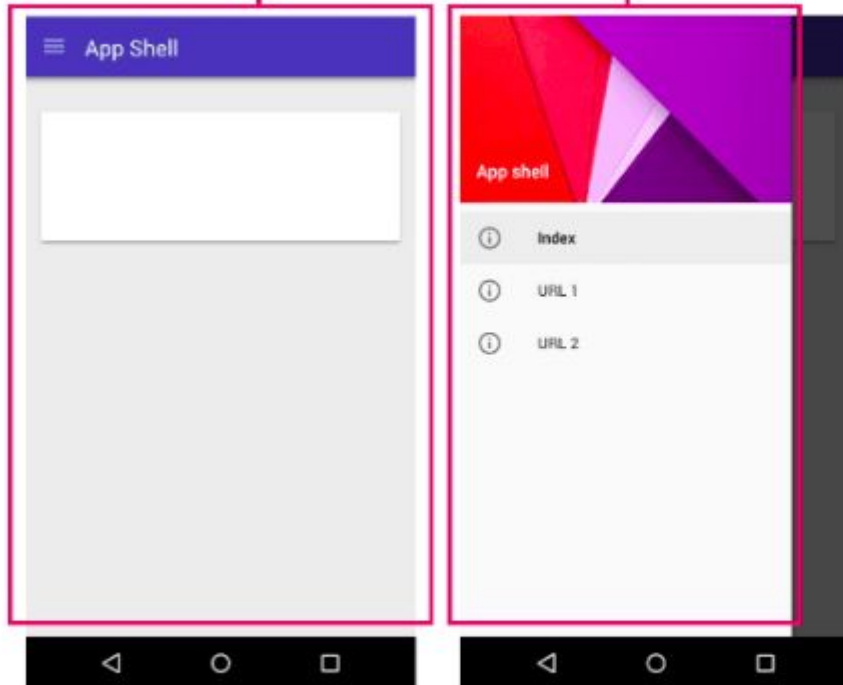
The screenshot shows the Lighthouse mobile-friendly test results for the URL <http://vanilla-pwa.herokuapp.com/>. The test results indicate that the page is mobile friendly, with the message "Page is mobile friendly" and "This page is easy to use on a mobile device". A green checkmark icon is displayed next to the message. The test was performed on September 13, 2019, at 3:29 PM. Below the main message, there are additional resources: "Open site-wide mobile usability report", "Learn more about mobile-friendly pages", and "Post comments or questions to our discussion group". The rendered page is shown on the right, displaying a blue screen with the text "Vanilla PWA". The interface includes a "Test results" header, a "No loading issues" status, and tabs for "Rendered page", "HTML", and "SCREENSHOT".

<https://search.google.com/test/mobile-friendly>

App Shell



application shell



Cached shell loads **instantly** on repeat visits.

content



Dynamic content then populates the view

HTML, CSS, JS mínimos necessários para renderizar a aplicação.

<https://developers.google.com/web/fundamentals/architecture/app-shell>

Page speed



The screenshot shows the Google PageSpeed Insights interface. At the top, the URL `http://vanilla-pwa.herokuapp.com/` is entered in the search bar, with an **ANALYZE** button to its right. Below the search bar, there are tabs for **MOBILE** and **DESKTOP**. The main content area features a large green circle with the number **100** inside, indicating a perfect performance score. Below the score, the URL `http://vanilla-pwa.herokuapp.com/` is repeated, followed by a legend for score ranges: 0-49 (red), 50-89 (orange), and 90-100 (green). A dropdown menu is visible next to the legend. The **Field Data** and **Origin Summary** sections both state that the Chrome User Experience Report does not have sufficient real-world speed data for this page or origin. The **Lab Data** section is expanded, showing a table of performance metrics:

Metric	Value
First Contentful Paint	0.8 s
Speed Index	0.8 s
Time to Interactive	0.8 s
First Meaningful Paint	0.8 s
First CPU Idle	0.8 s
Max Potential First Input Delay	20 ms

Below the table, there are ten blue bars representing individual page load attempts, each labeled `Vanilla PWA`. To the right of the Lab Data section is a blue vertical card with the text **Vanilla PWA**. At the bottom, the **Opportunities** section is partially visible, with the text: "These suggestions can help your page load faster. They don't directly affect the Performance score."

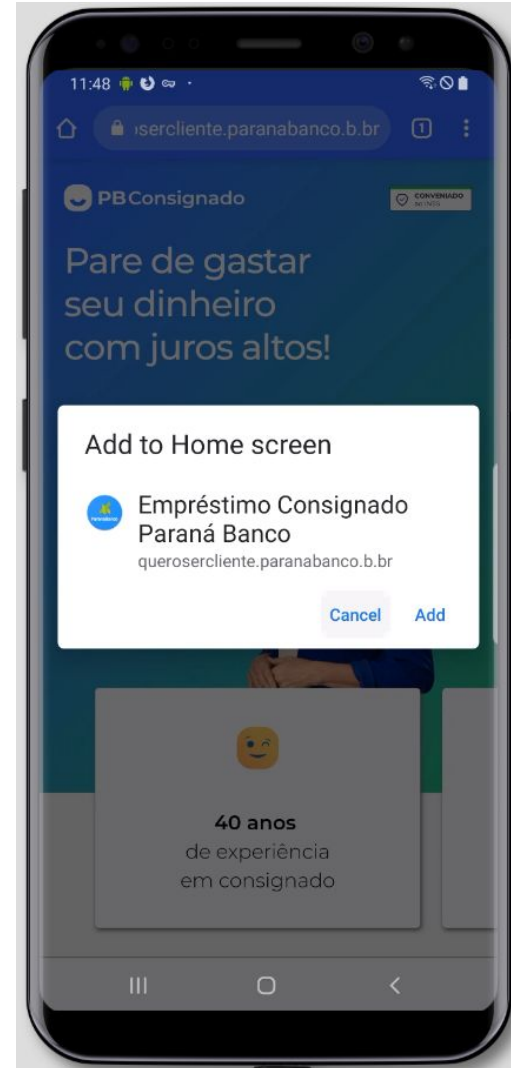
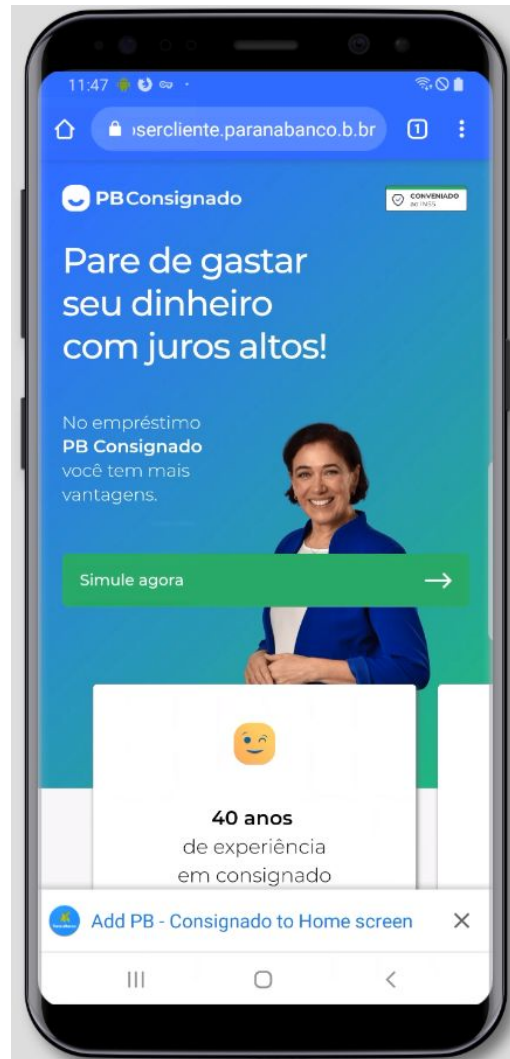
<https://developers.google.com/speed/pagespeed/insights/>



Funcionalidades de um PWA



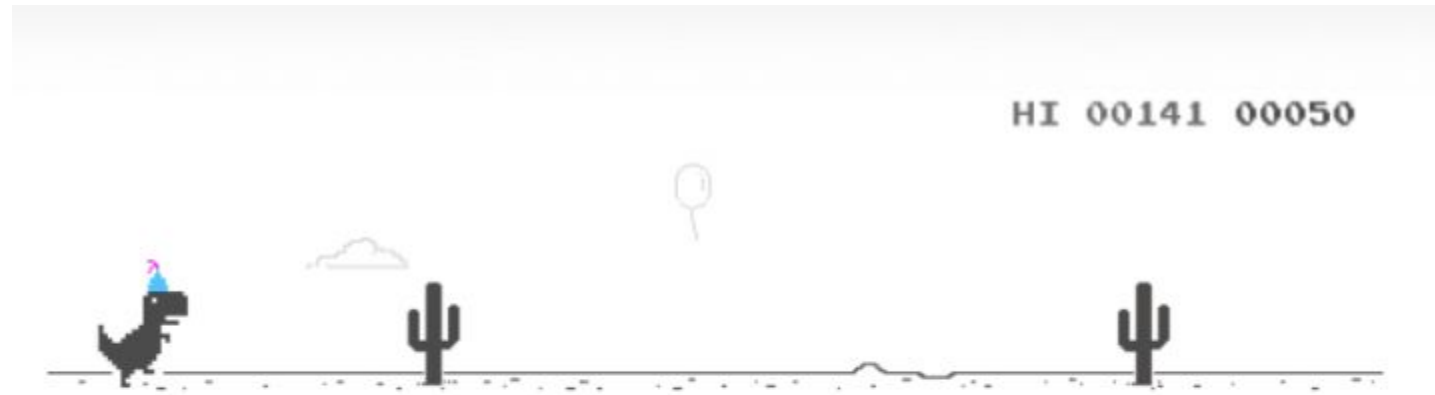
Home Screen icon



Push Notification



Offline navigation



No internet

Try:

- Checking the network cables, modem, and router
- Reconnecting to Wi-Fi
- [Running Windows Network Diagnostics](#)



ERR_INTERNET_DISCONNECTED

O que mais?



What Web Can Do Today


Can I rely on the Web Platform features to build my app?
An overview of the device integration HTML5 APIs

FEATURES

TRAININGS

SERVICES

✓ Feature available in your current browser ✗ Feature not available in your current browser

Camera & Microphone	Native Behaviors	Seamless Experience
<ul style="list-style-type: none">AUDIO & VIDEO CAPTURE ✓ADVANCED CAMERA CONTROLS ✓RECORDING MEDIA ✓REAL-TIME COMMUNICATION ✓	<ul style="list-style-type: none">LOCAL NOTIFICATIONS ✓PUSH MESSAGES ✓HOME SCREEN INSTALLATION ✓FOREGROUND DETECTION ✓PERMISSIONS ✓	<ul style="list-style-type: none">OFFLINE MODE ✓BACKGROUND SYNC ✓INTER-APP COMMUNICATION ✗PAYMENTS ✓CREDENTIALS ✓
<h3>Advertisement</h3> <p>Developers: may your days be productive and happy. Try Clubhouse. It's Free.</p>  <p>ads via Carbon</p>	<h3>Operating System</h3> <ul style="list-style-type: none">OFFLINE STORAGE ✓FILE ACCESS ✓CONTACTS ✗SMS ✗STORAGE QUOTAS ✓TASK SCHEDULING ✗	<h3>Location & Position</h3> <ul style="list-style-type: none">GEOLOCATION ✓GEOFENCING ✗DEVICE POSITION ✓DEVICE MOTION ✓PROXIMITY SENSORS ✗
<h3>Surroundings</h3> <ul style="list-style-type: none">BLUETOOTH ✓USB ✓NFC ✗AMBIENT LIGHT ✗	<h3>Input</h3> <ul style="list-style-type: none">TOUCH GESTURES ✓SPEECH RECOGNITION ✓CLIPBOARD (COPY & PASTE) ✓POINTING DEVICE ADAPTATION ✓	<h3>Screen & Output</h3> <ul style="list-style-type: none">VIRTUAL & AUGMENTED REALITY ✗FULLSCREEN ✓SCREEN ORIENTATION & LOCK ✓WAKE LOCK ✗PRESENTATION FEATURES ✓
<h3>Device Features</h3> <ul style="list-style-type: none">NETWORK TYPE & SPEED ✓ONLINE STATE ✓VIBRATION ✓BATTERY STATUS ✓DEVICE MEMORY ✓		



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Privacy Policy

<https://whatwebcando.today/>



Criando um PWA



Light house



Progressive Web App

These checks validate the aspects of a Progressive Web App. [Learn more](#)

Fast and reliable: 1/3, Installable: 1/3, PWA Optimized: 3/6

- Fast and reliable**
 - 1 Page load is fast enough on mobile networks ✓
 - 2 Current page does not respond with a 200 when offline ▲
 - 3 start_url does not respond with a 200 when offline ▲
No usable web app manifest found on page.
- Installable**
 - 4 Uses HTTPS ✓
 - 5 Does not register a service worker that controls page and start_url ▲
 - 6 Web app manifest does not meet the installability requirements ▲
Failures: No manifest was fetched.
- PWA Optimized**
 - 7 Does not redirect HTTP traffic to HTTPS ▲
 - 8 Is not configured for a custom splash screen ▲
Failures: No manifest was fetched.
 - 9 Does not set an address-bar theme color ▲
Failures: No manifest was fetched, No ` - 10 Content is sized correctly for the viewport ✓
 - 11 Has a `<meta name="viewport">` tag with width or initial-scale ✓

Service worker



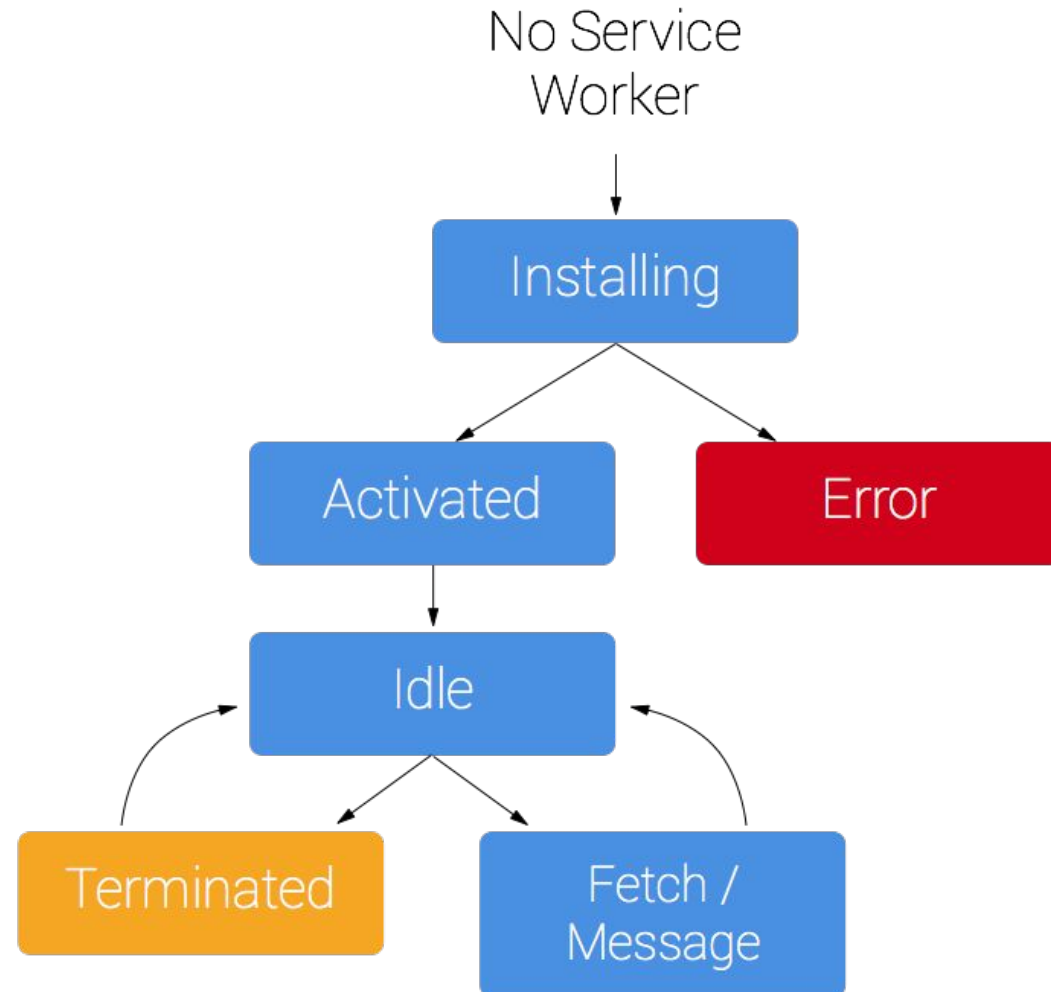
O service worker é um **script** que roda em **background** e realiza algumas tarefas que **não necessitam** da interação do usuário.

```
1 var cacheName = 'vanilla-pwa';
2 var filesToCache = ['/', '/index.html', '/css/style.css', '/js/main.js'];
3
4 /* Start the service worker and cache all of the app's content */
5 self.addEventListener('install', function(e) {
6   e.waitUntil(
7     caches.open(cacheName).then(function(cache) {
8       return cache.addAll(filesToCache);
9     })
10  );
11 });
12
13 /* Serve cached content when offline */
14 self.addEventListener('fetch', function(e) {
15   e.respondWith(
16     caches.match(e.request).then(function(response) {
17       return response || fetch(e.request);
18     })
19   );
20 });
```

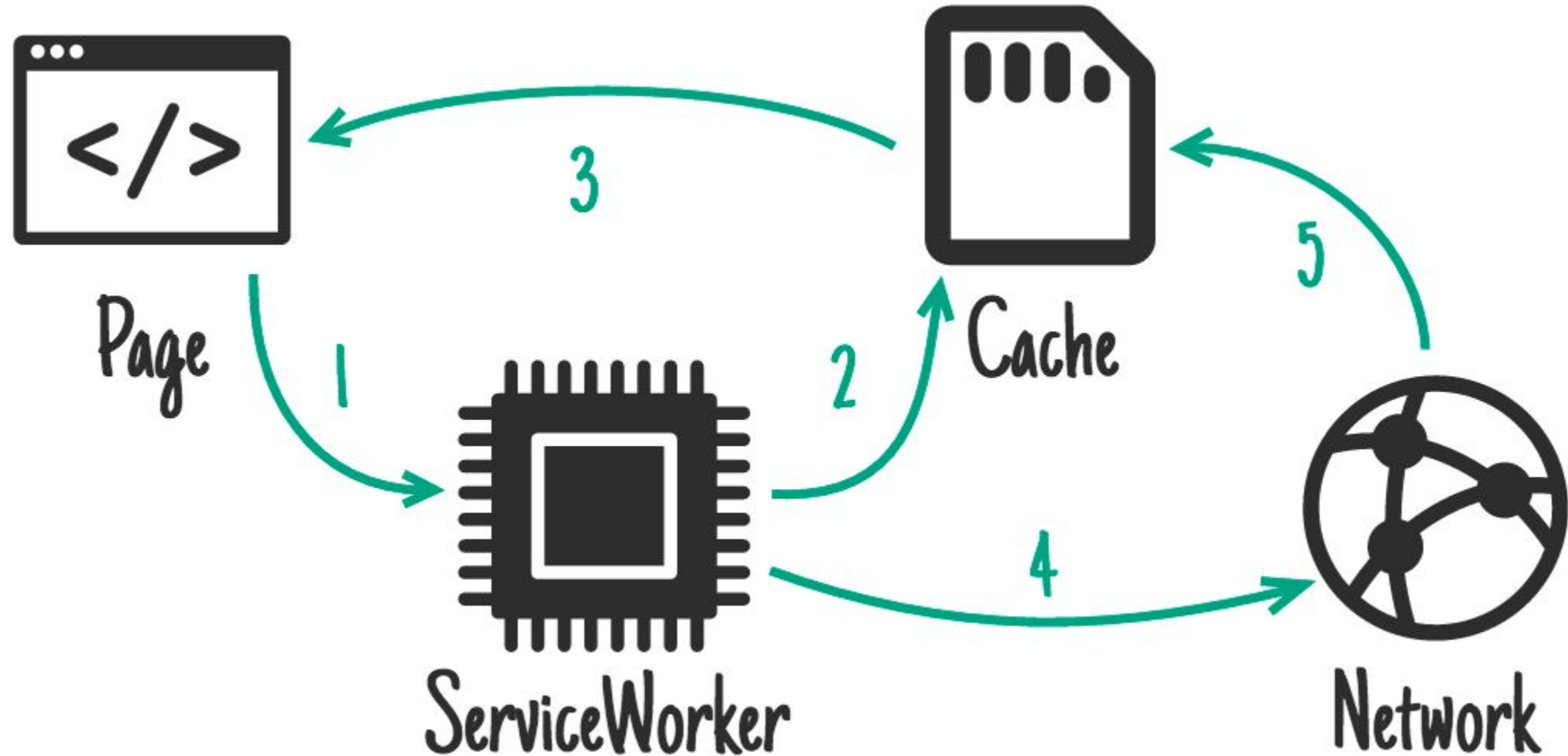
sw.js hosted with ❤ by GitHub

[view raw](#)

Service worker lifecycle



Service worker lifecycle



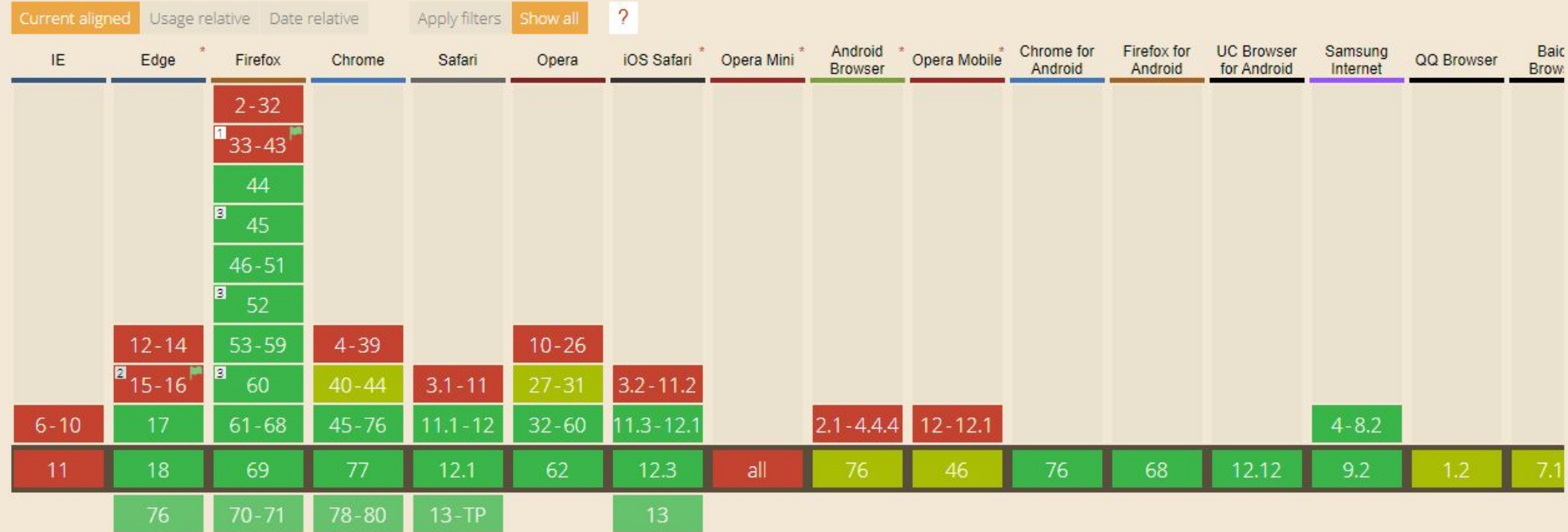
Service worker lifecycle



Service Workers 📄 - WD

Usage % of all users
 Global 92.09% + 0.39% = 92.48%

Method that enables applications to take advantage of persistent background processing, including hooks to enable bootstrapping of web applications while offline.



Audit



127.0.0.1:5500/index.html

Progressive Web App

Fast and reliable: 2/3, Installable: 1/3, PWA Optimized: 3/6

Fast and reliable

- 1 Page load is fast enough on mobile networks ✓
- 2 Current page responds with a 200 when offline ✓
- 3 start_url does not respond with a 200 when offline ▲
No usable web app manifest found on page.

Installable

- 4 Uses HTTPS ✓
- 5 Does not register a service worker that controls page and start_url ▲
This page is controlled by a service worker, however no start_url was found because no manifest was fetched.
- 6 Web app manifest does not meet the installability requirements ▲
Failures: No manifest was fetched.

PWA Optimized

- 7 Does not redirect HTTP traffic to HTTPS ▲
- 8 Is not configured for a custom splash screen ▲
Failures: No manifest was fetched.
- 9 Does not set an address-bar theme color ▲
Failures: No manifest was fetched, No <meta name="theme-color"> tag found.
- 10 Content is sized correctly for the viewport ✓

Manifest JSON

Arquivo de configuração no formato **JSON**, responsável por definir as **características e comportamentos** do PWA.



```
1 {
2   "name": "Vanilla PWA",
3   "short_name": "PWA",
4   "lang": "pt-BR",
5   "start_url": "/index.html",
6   "display": "standalone",
7   "background_color": "white",
8   "theme_color": "white"
9 }
```

manifest.json hosted with ❤️ by GitHub

[view raw](#)

```
<link rel="manifest" href="/manifest.json">
```

Web App Manifest



Web App Manifest 📄 - WD

Usage % of all users
Global 62.44% + 20.92% = 83.35%

The web app manifest provides information about an application (such as name, author, icon, and description) in a JSON file, which browsers can use to give richer offline experiences.



Audit



127.0.0.1:5500/index.html

Progressive Web App

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Fast and reliable: 3/3, Installable: 2/3, PWA Optimized: 3/6

- Fast and reliable**
 - 1 Page load is fast enough on mobile networks ✓
 - 2 Current page responds with a 200 when offline ✓
 - 3 start_url responds with a 200 when offline ✓
- Installable**
 - 4 Uses HTTPS ✓
 - 5 Registers a service worker that controls page and start_url ✓
 - 6 Web app manifest does not meet the installability requirements
Failures: Manifest does not have a PNG icon of at least 192px.
- PWA Optimized**
 - 7 Does not redirect HTTP traffic to HTTPS ▲
 - 8 Is not configured for a custom splash screen
Failures: Manifest does not have a PNG icon of at least 512px.
 - 9 Does not set an address-bar theme color
Failures: No ` - 10 Content is sized correctly for the viewport ✓
 - 11 Has a `<meta name="viewport">` tag with width or initial-scale ✓
 - 12 Contains some content when JavaScript is not available ✓

Ícones

Ícones que serão usados na sua "home screen", na abertura do seu site, splash screen, etc.



```
"icons": [  
  {  
    "src": "/images/icons-192.png",  
    "type": "image/png",  
    "sizes": "192x192"  
  },  
  {  
    "src": "/images/icons-512.png",  
    "type": "image/png",  
    "sizes": "512x512"  
  }  
]
```



Success: include a 192x192 pixel icon and a 512x512 pixel icon. Chrome will automatically scale the icon for the device. If you'd prefer to scale your own icons and adjust them for pixel-perfection, provide icons in increments of 48dp.

Testando manifest



The screenshot displays the Chrome DevTools interface for a Progressive Web App (PWA). The main content area shows a blue background with the text "Vanilla PWA". The right-hand sidebar is open to the "App Manifest" section, which is currently selected in the "Application" panel. The "App Manifest" section shows the following configuration:

- App Manifest:** [manifest.json](#)
- Identity:**
 - Name: Vanilla PWA
 - Short name: PWA
- Presentation:**
 - Start URL: [/index.html](#)
 - Theme color: white
 - Background color: white
 - Orientation: (not specified)
 - Display: standalone
- Icons:**
 - 72x72 image/png
 - 96x96 image/png

The left-hand sidebar of the developer tools shows the following categories and items:

- Application:**
 - Manifest (selected)
 - Service Workers
 - Clear storage
- Storage:**
 - Local Storage
 - Session Storage
 - IndexedDB
 - Web SQL
 - Cookies
- Cache:**
 - Cache Storage
 - Application Cache
- Background Services:**
 - Background Fetch
 - Background Sync
 - Notifications
 - Push Messaging
- Frames:**
 - top

Web App manifest generator



Web App Manifest Generator

The [Web App Manifest](#) is a JSON document that provides application metadata for [Progressive Web Apps](#). Use the form below to generate the JSON file and optionally upload an app icon.

App Name Placeholder	Short Name Placeholder
Theme Color #2196f3	Background Color #2196f3
Display Mode Browser	Orientation Any
Application Scope /	Start URL /

manifest.json

```
{
  "theme_color": "#2196f3",
  "background_color": "#2196f3",
  "display": "browser",
  "scope": "/",
  "start_url": "/"
}
```

COPY

Generate Icons

The Web App Manifest allows for specifying icons of varying sizes. Upload a 512x512 image for the icon and we'll generate the remaining sizes.

↑ ICON

GENERATE .ZIP

<https://app-manifest.firebaseapp.com/>

index.html

Arquivo final com as configurações necessárias para habilitar seu PWA.



```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="utf-8" />
5     <title>Vanilla PWA</title>
6     <link rel="manifest" href="/manifest.json" />
7     <link rel="stylesheet" href="css/style.css" />
8     <link rel="icon" href="favicon.ico" type="image/x-icon" />
9     <link rel="apple-touch-icon" href="images/icon/icon-152x152.png" />
10    <meta name="theme-color" content="white" />
11    <meta
12      name="Description"
13      content="Author: Kimura.L, Example of Vanilla PWA"
14    />
15    <meta name="apple-mobile-web-app-capable" content="yes" />
16    <meta name="apple-mobile-web-app-status-bar-style" content="black" />
17    <meta name="apple-mobile-web-app-title" content="Vanilla PWA" />
18    <meta
19      name="msapplication-TileImage"
20      content="images/icon/icon-144x144.png"
21    />
22    <meta name="msapplication-TileColor" content="#FFFFFF" />
23    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
24  </head>
25  <body>
26    <div class="flex-container">
27      <div class="row">
28        <div class="flex-item">
29          <h1>Vanilla PWA</h1>
30        </div>
31      </div>
32    </div>
33    <script src="js/main.js"></script>
34  </body>
35 </html>
```

Audit



127.0.0.1:5500/index.html

Progressive Web App

These checks validate the aspects of a Progressive Web App

Fast and reliable: 3/3, Installable: 3/3, PWA Optimized: 5/6

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 - 3 start_url responds with a 200 when offline ✓
- Installable**
 - 4 Uses HTTPS ✓
 - 5 Registers a service worker that controls page and start_url ✓
 - 6 Web app manifest meets the installability requirements ✓
- PWA Optimized**
 - 7 Does not redirect HTTP traffic to HTTPS ⚠
 - 8 Configured for a custom splash screen ✓
 - 9 Sets an address-bar theme color ✓
 - 10 Content is sized correctly for the viewport ✓
 - 11 Has a <meta name="viewport"> tag with width or initial-scale ✓
 - 12 Contains some content when JavaScript is not available ✓

Additional items to manually check 3 audits



Show cases



Twitter



Twitter Lite PWA Significantly Increases Engagement and Reduces Data Usage



Twitter is a platform to find out what's happening in the world. It has 328 million monthly active users around the world who consume, create and share information. With over 80% of users on mobile, Twitter wanted their mobile web experience to be faster, more reliable, and more engaging. The Twitter Lite Progressive Web App combines the best of the modern web and native features. It became the default mobile web experience for all users globally in April 2017. Twitter developed Twitter Lite to deliver a more robust experience, with explicit goals for instant loading, user engagement and lower data consumption.



- 65% increase in pages per session
- 75% increase in Tweets sent
- 20% decrease in bounce rate

<https://developers.google.com/web/showcase/>

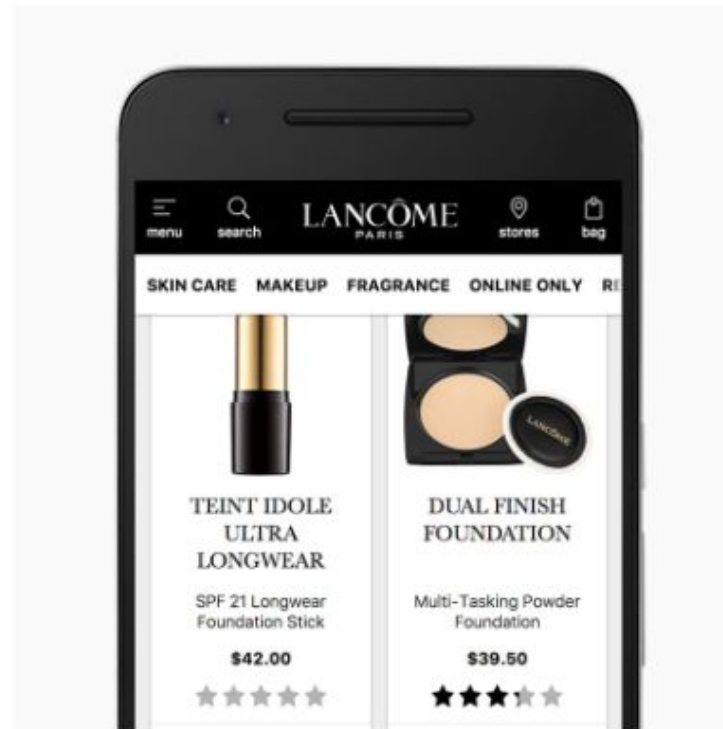
Lancôme



Lancôme rebuilds their mobile website as a PWA, increases conversions 17% ☆☆☆☆☆

To drive both traffic and re-engagement, luxury cosmetics brand Lancôme launched a Progressive Web App (PWA) with Mobify to deliver a fast, app-like experience on the mobile web.

- 17% increase in conversions
- 53% increase in mobile sessions on iOS
- 8% increase in conversion rates on recovered carts via Push Notifications



<https://developers.google.com/web/showcase/>



Performance gains

- 👍 2X better Speed Index
- 👍 14 seconds faster time-to-interactive
- 👍 75% faster loading with prefetch

Business impact

- 👍 2.3X organic traffic
- 👍 58% more conversions (subscriptions)
- 👍 49% more daily active users
- 👍 2X page views per session



<https://developers.google.com/web/showcase/>

AliExpress



AliExpress



TL;DR

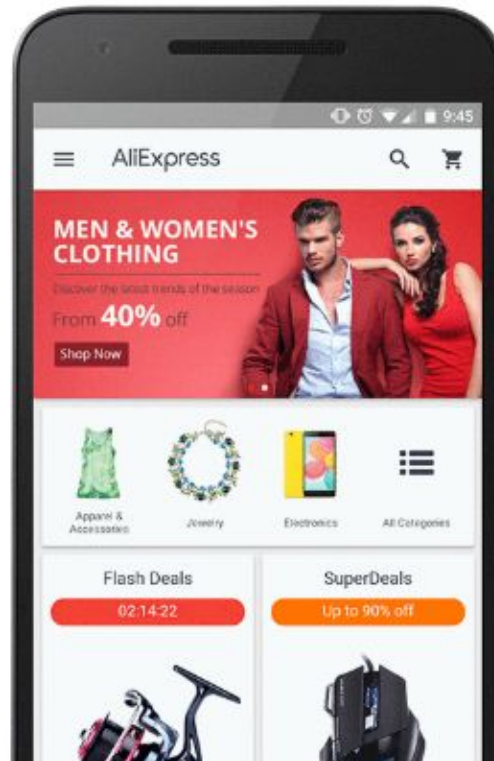
AliExpress increases conversion rate for new users by 104% with new Progressive Web App

Results

- ✓ 104% for new users across all browsers; 82% increase in iOS conversion rate
- ✓ 2X more pages visited per session per user across all browsers
- ✓ 74% increase in time spent per session across all browsers

[DOWNLOAD PDF CASE STUDY](#)

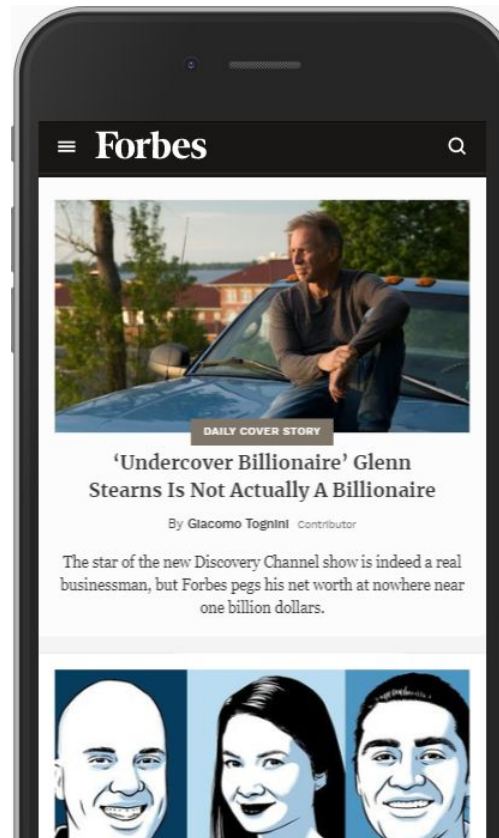
About AliExpress



<https://developers.google.com/web/showcase/>



- 43% increase sessions per user
- 20% AD viewability up
- 3x in scroll depth
- 100% engagement



<https://developers.google.com/web/showcase/>



E a loja?

Trusted Web Activities

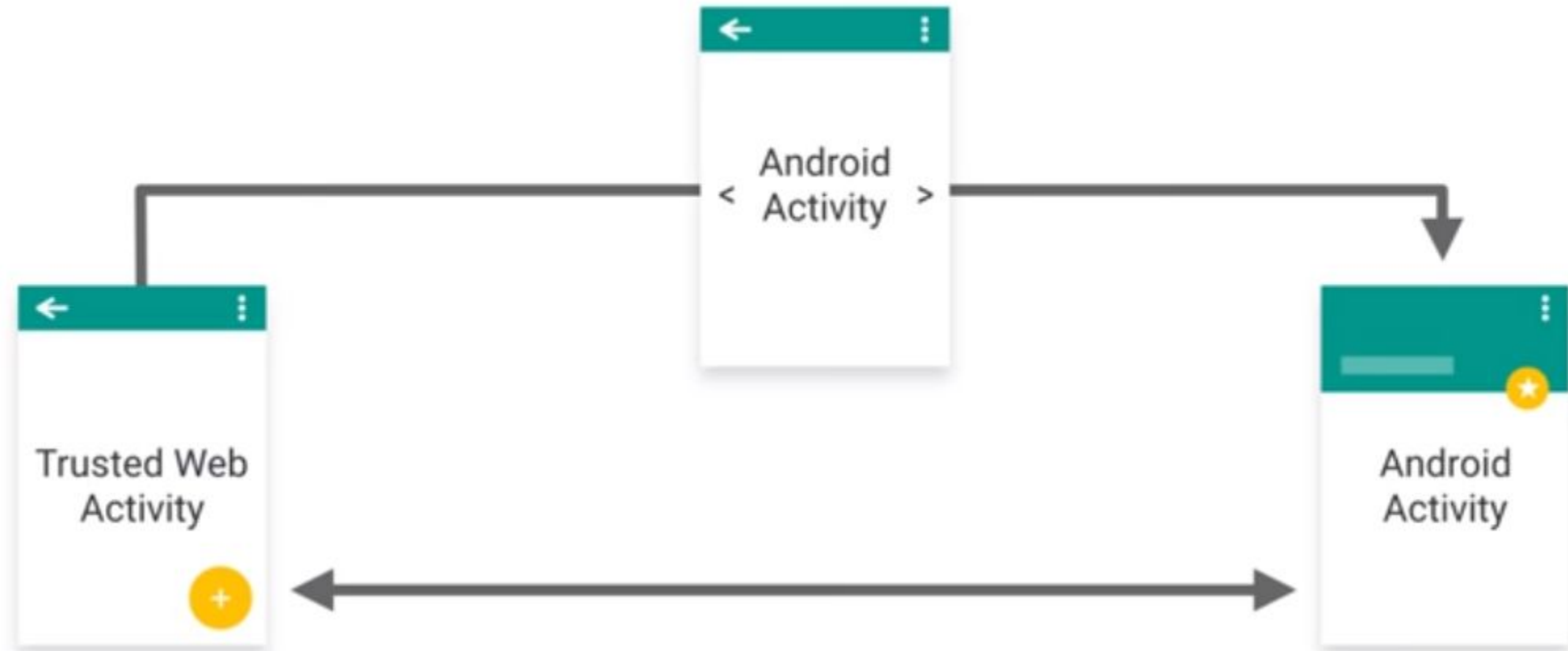


TWA Demo



<https://developers.google.com/web/updates/2019/02/using-twa>

Trusted Web Activities



Trusted Web Activities



TWA x WebView x Custom Tab



WebView



Custom Tabs



TWA x WebView x Custom Tab



Property	Webview	CCT	TWA
Native development effort	High	Low	Low
Mixed Web & Native components	Yes	No	No
Web/Native bridge	Yes	Limited	Limited
Full screen	Yes	No	Yes
Safe browsing	No	Yes	Yes
Data saver	No	Yes	Yes
Form auto-fill	No	Yes	Yes
Complete Chrome APIs	No	Yes	Yes
Native Chrome Performance	No	Yes	Yes

Onde usar as Trusted Web Activities?



Journeys where you don't have APIs ready to use for native, for example some shopping carts & checkout flows



New journeys in your app where your team is doing rapid iteration & testing



Views for supporting documents such as FAQs or contact forms



Digital Asset Links



Hosting site domain



Android Package
name



SHA 256 Fingerprint

<https://developers.google.com/digital-asset-links/v1/getting-started>

```
[{  
  "relation": ["delegate_permission/common.handle_all_urls"],  
  "target" : { "namespace": "android_app", "package_name": "com.example.app",  
               "sha256_cert_fingerprints": ["hash_of_app_certificate] }  
}]
```

Digital Asset Links



DevSite Publishing > Google Digital Asset Links

Search

Language

Home Guides Reference Samples **Tools**

Statement List Generator and Tester

Generate and save a statement file on your site to enable [App Linking](#), or test an existing statement file.

Hosting site domain

vanilla-pwa.herokuapp.com

App package name

com.herokuapp.vanillapwa

App package fingerprint (SHA256)

D6:C8:B9:25:26:B0:14:3D:7D:A2:F7:86:E2:AB:99:EE:E6:8E:ED:58:3C:D9:7D:EF:43:84:A0:DA:F9:AA:B5:10

Generate statement

or

Test statement

✓ Success! Host vanilla-pwa.herokuapp.com grants app deep linking to com.herokuapp.vanillapwa.

<https://developers.google.com/digital-asset-links/tools/generator>

Outros browsers



Since they're based on the Android Intent system, TWAs can be implemented by other browsers.

The Custom Tabs API is already supported by Firefox & Samsung Internet browser.

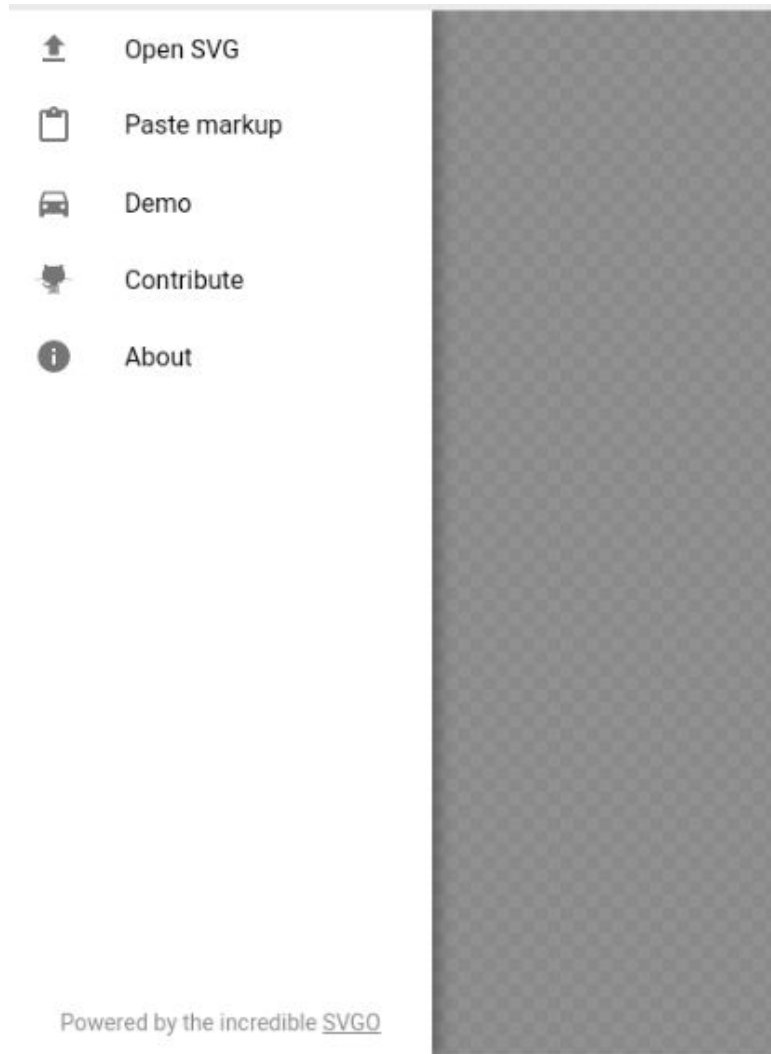
We hope to see TWAs offered by other browsers in the future.



Criando o APP



SVGOMG

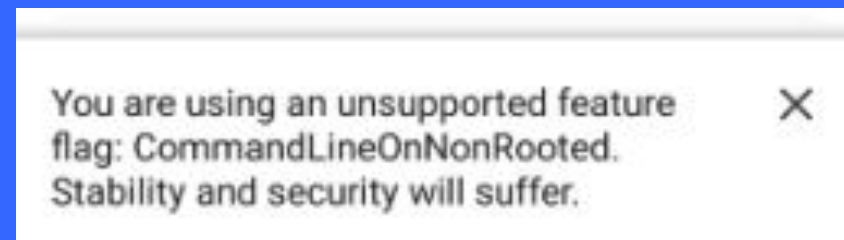
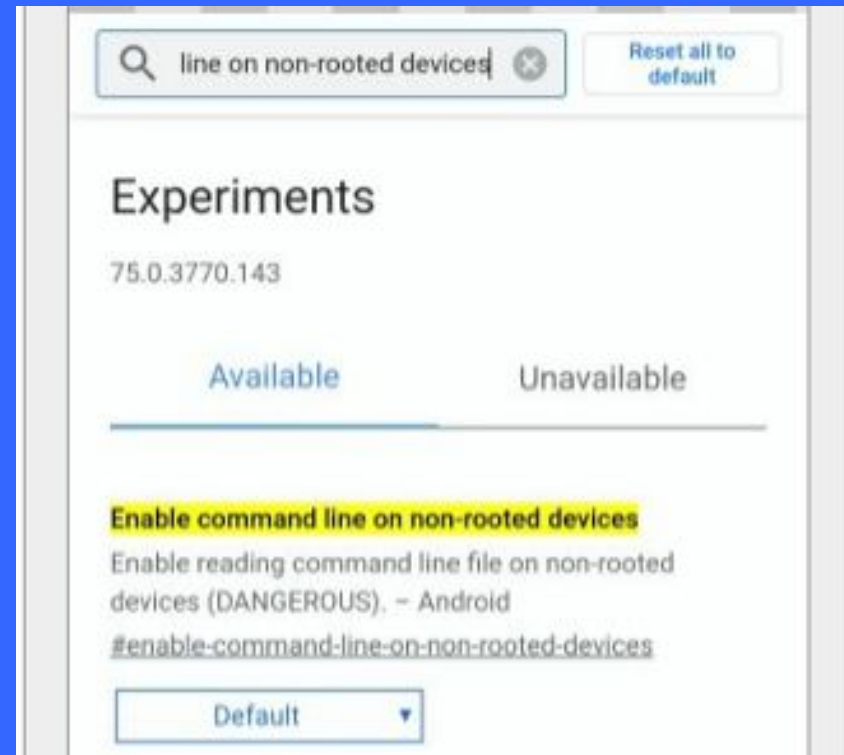


<https://github.com/GoogleChromeLabs/svgomg-twa>

Enable Chrome



1. `chrome://flags`
2. Enable command line on non-rooted devices
3. Enabled
4. `./enable-debug.sh`
<https://vanilla-pwa.herokuapp.com>



Manifest e gradle

O **applicationId** deve corresponder com o **short_name** do **manifest.json** da nossa aplicação web.



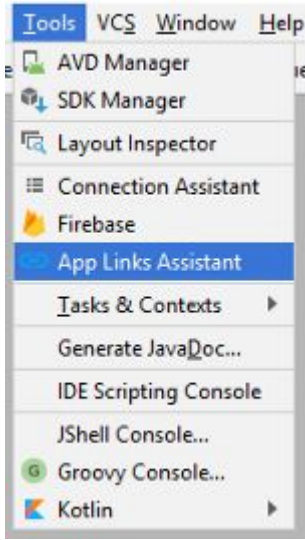
```
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.heroku.vanillapwa">
    ....
</manifest>
```

```
1 def twaManifest = [
2     applicationId: 'com.heroku.vanillapwa',
3     hostname: 'vanilla-pwa.herokuapp.com', // The domain being opened in the TWA.
4     launchUrl: '/', // The start path for the TWA. Must be relative to the domain.
5     name: 'Vanilla PWA', // The name shown on the Android Launcher.
6     themeColor: '#3366ff', // The color used for the status bar.
7     backgroundColor: '#3366ff', // The color used for the splash screen background.
8     enableNotifications: false // Set to true to enable notification delegation
9 ]
```

build.gradle hosted with ❤️ by GitHub

[view raw](#)

Digital Asset Link



`/.well-known/assetlinks.json`

The screenshot shows the 'Associate Website' dialog in Android Studio. The 'Site domain' is set to `https://vanilla-pwa.herokuapp.com` and the 'Application ID' is `com.herokuapp.vanillapwa`. The 'Support sharing credentials between the app and website' checkbox is unchecked. The 'SHA256 Fingerprint of signing' section has 'Select key' selected, with the path `D:/Projetos/keystore.jks` entered. A 'Link and Verify' button is highlighted. Below this, two green checkmarks indicate success: 'Added autoVerify to intent filter elements.' and 'Success! Your app is associated with the selected domain(s)'. A 'Preview' section shows the JSON content of the `assetlinks.json` file. At the bottom, a 'Save file' button is visible, and a status bar message reads: 'Generate Signed Bundle: App bundle(s) generated successfully: // Module 'app': locate or analyze the app bundle. // Locate exported key file. (a minute ago)'. The bottom right corner shows 'Git: master'.

APK

Importante selecionar a opção de **release**, pois o certificado de debug e de release são diferentes, e nesse caso é necessário que o certificado seja o mesmo que você fará o deploy do seu aplicativo na loja, para que essa certificação entre seu aplicativo e seu site funcionem.



New Key Store

Key store path: D:\Projetos\keystore.jks

Password: Confirm:

Key

Alias: keystore

Password: Confirm:

Validity (years): 25

Certificate

First and Last Name: Kimura Dev

Organizational Unit: PWA

Organization: PWA

City or Locality: Curitiba

State or Province: Brazil

Country Code (XX):

OK Cancel

Generate Signed Bundle or APK

Destination Folder: D:\Projetos\svgomg-twa\app

Build Variants:

- debug
- release

Signature Versions: V1 (Jar Signature) V2 (Full APK Signature) [Signature Help](#)

Previous Finish Cancel Help



```
adb logcat | grep -e OriginVerifier -e digital_asset_links
```

If it is failing you'll see `Statement failure matching fingerprint. Verification failed.` message. Therefore is important to review `AndroidManifest.xml` and `build.gradle` files and check if the configurations are matching with the `assetlinks.json`.

Otherwise `Verification succeeded.` message should appear.

You are using an unsupported feature ✕

Running in Chrome

OK





Vale a pena?





Play Store



▲ Nome do app	Instalações ativas ?	Nova nota do Google Play ?	Última atualização	Status
 Paraná Banco – Investimentos br.paranabanco.app	2.851	★ 4,40	02/10/2019	Publicado
 PB Consignado br.b.paranabanco.soucliente	1.234	★ 4,00	29/08/2019	Publicado

Página 1 de 1





OUTRAS INFORMAÇÕES

Atualizada

16 de agosto de 2019

Tamanho

1,1M

Instalações

1.000+

Versão atual

1.1.8

Requer Android

4.1 ou superior

Classificação do conteúdo

Classificação Livre
Saiba mais

Permissões

Ver detalhes

Relatório

Sinalizar como impróprio

Oferecido por

Paraná Banco

Desenvolvedor

Acesse o site

pbconsignado.mobile@paranabanco.com.br





 **Leticia Cardoso Demarch**
★★★★★ 17 de setembro de 2019  
2

Rápido pratico e seguro

Paraná Banco 25 de setembro de 2019
Olá Leticia! Ficamos felizes que tenha gostado! Nosso desafio é continuar neste processo de evolução, seu feedback é fundamental para sabermos que estamos no caminho certo! Muito obrigado! 

 **SEBASTIÃO GERALDO DE FREITAS**
★★★★★ 19 de setembro de 2019  
2

Gostei muito do APP

Paraná Banco 25 de setembro de 2019
Olá Sebastião, que bom que gostou! Estamos focados em melhorar a experiencia de nossos clientes, pode ter certeza que sua avaliação é muito importante! Muito obrigado!




Tamanho de download do app ?

1,03 MB

958 KB a 1,04 MB

para o dispositivo de referência em todas as configurações do dispositivo

É calculado com base no seu lançamento mais recente. Este é um exemplo representativo calculado com base na configuração do dispositivo XXXHDPI ARM64-V8A.





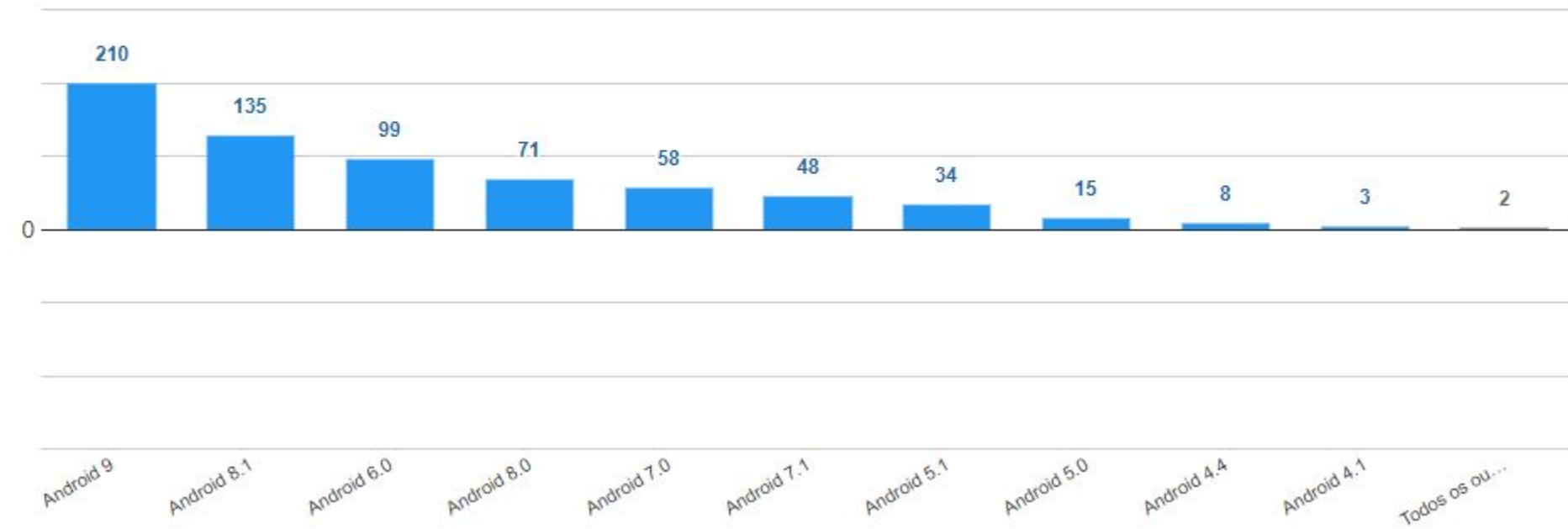
Análise de alteração entre dom, 18 de ago de 2019 e seg, 16 de set de 2019



versões do Android com a maior alteração entre o primeiro intervalo no período selecionado e o último intervalo com dados completos. ?

Incluir versões do Android selecionados ?

Dispositivos ativos



Play Store



STEP	USER COUNT	% TOTAL
1. Home : View	36 K	100%

5.7% de tráfego



6.5% de conversão





Obrigado!

@kimuradev

