



"All I did was Google 'Antitrust'."

Lorin B Olsen
Technology Consultant
Lobostrategies.com

De-Google Your Life



“Nothing that is vast enters into the life of man by chance.”

- Sophocles (via Chorus in Antigone)

**Lessons From History /
Literature**



Is Google Spying On You? Do You Care?

- **Search Information**
- **Documents**
 - Emails (GMail)
 - Photos (Google Photos)
 - Personal & Professional Documents (Google Drive)
- **PII Data**
 - Facial characteristics
 - Fingerprints
 - Passwords
 - 2FA
 - Encryption Keys

Data Collection

- **Location**

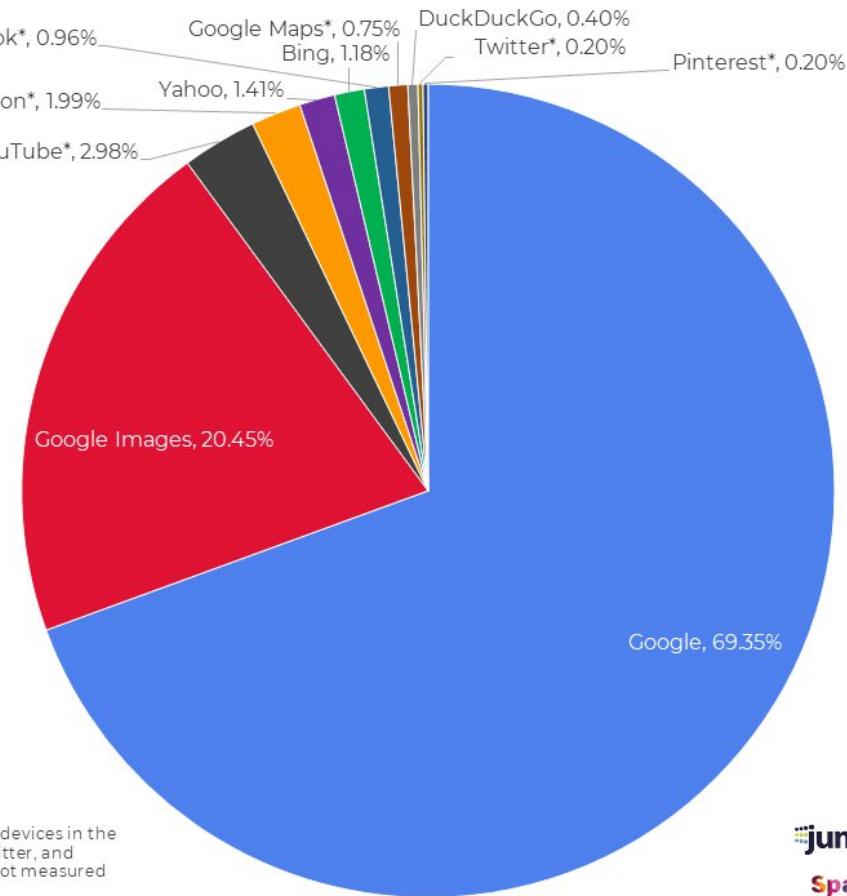
- IP Addresses
- Physical Locations
- Travel History

Data Collection (continued)

Search Engine Market Share Q2 2019

94%

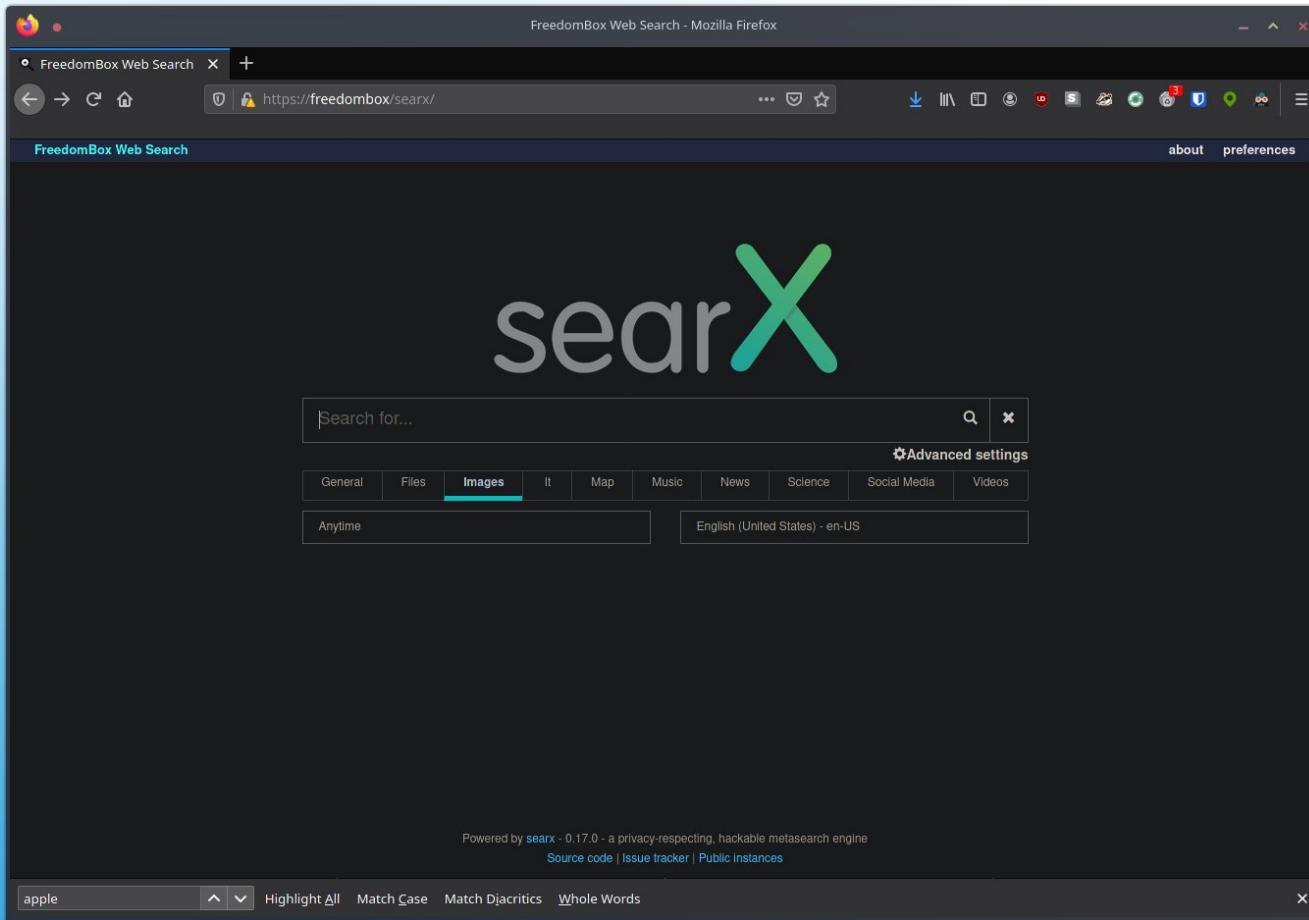
of all searches happen
on a **Google** property



* Data from 230B+ browser-based searches on millions of mobile and desktop devices in the United States. Search share on Google Maps, Facebook, Amazon, YouTube, Twitter, and Pinterest are likely underrepresented due to heavy mobile app use (which is not measured by Jumpshot's browser-based panel)

jumpshot
SparkToro

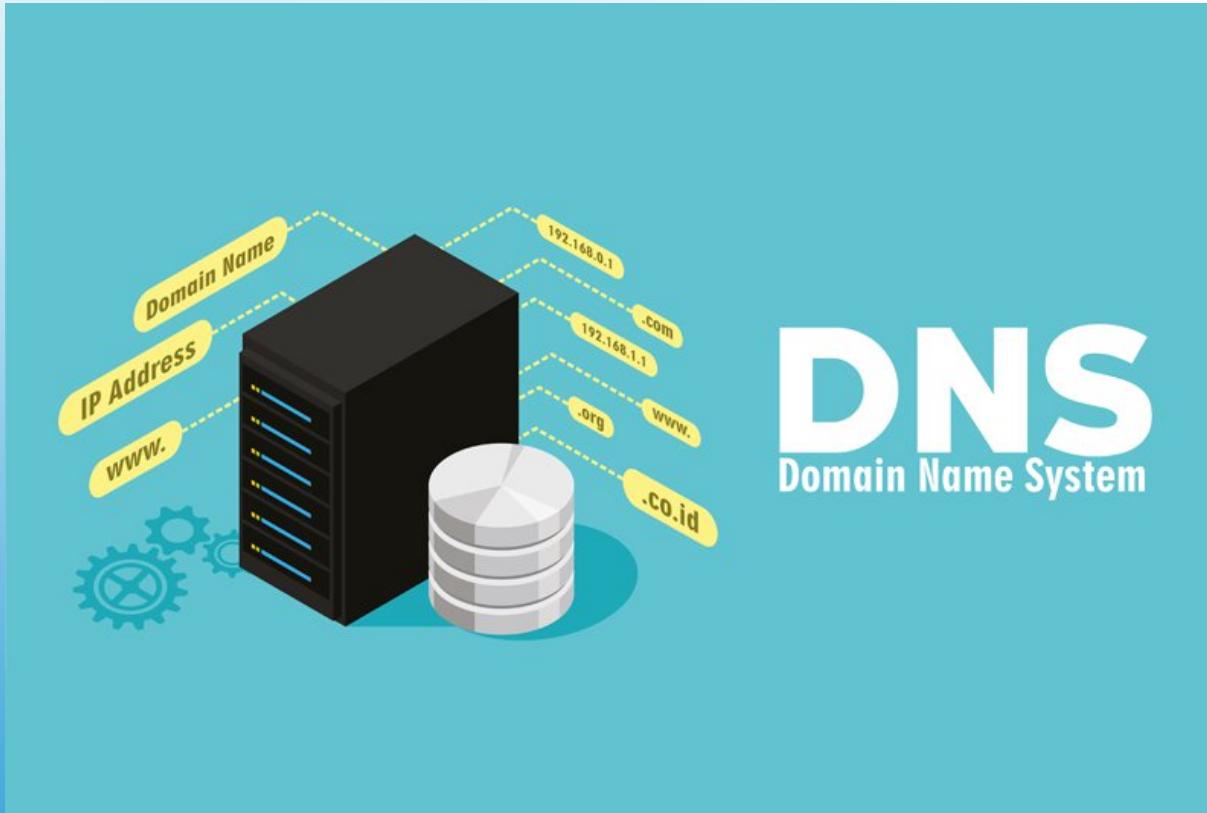
#1: Change Your Search Engine



Trusting Your Search Provider



#2: Change Your Browser

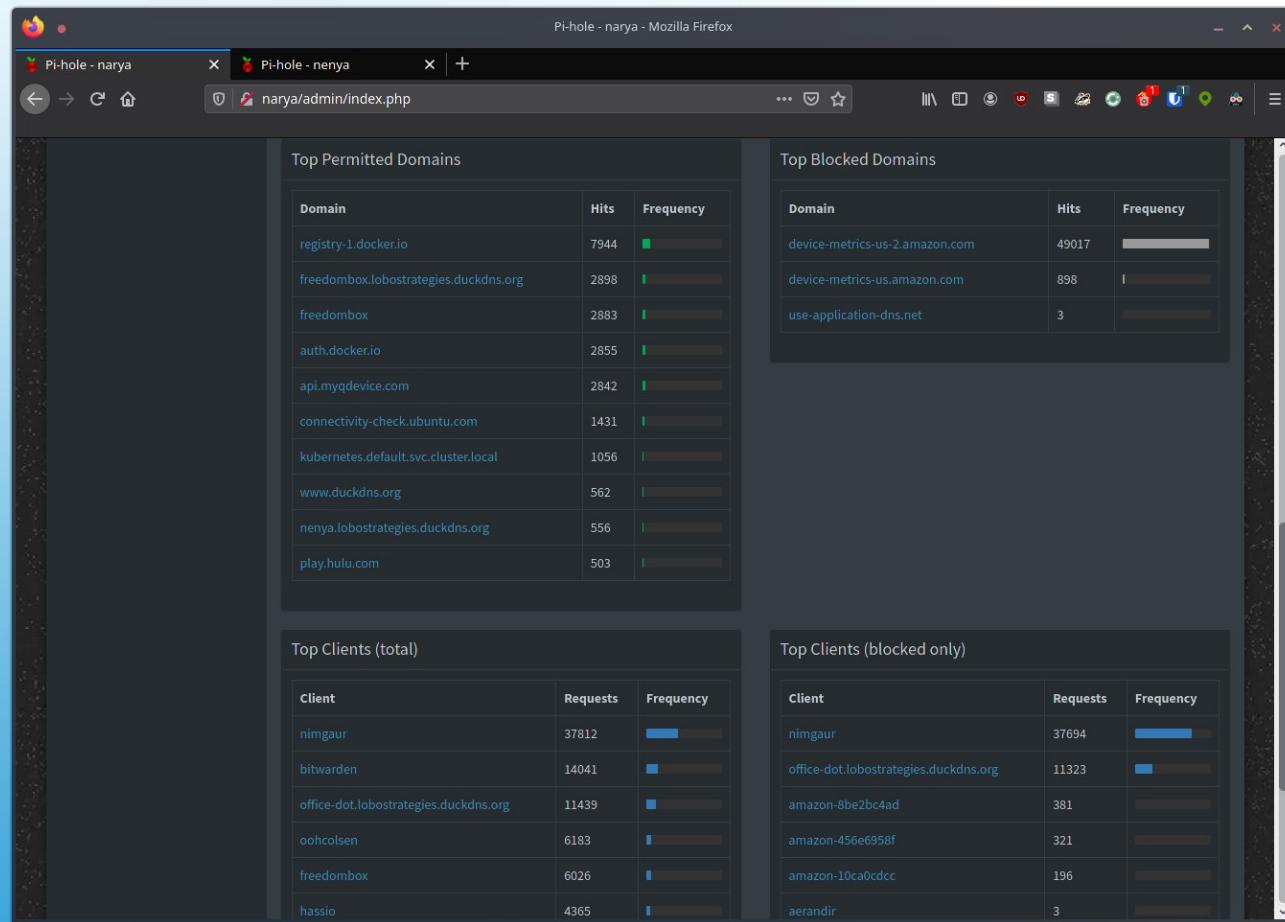


DNS
Domain Name System

#3: Change Your DNS



When I Added A ‘Googled’ Phone



Stop Using Surveillance Apps & Block Domains



#4: Change Your Email



#5: Change Your Cloud Storage



#6: “Fix” Your Mobile Phone

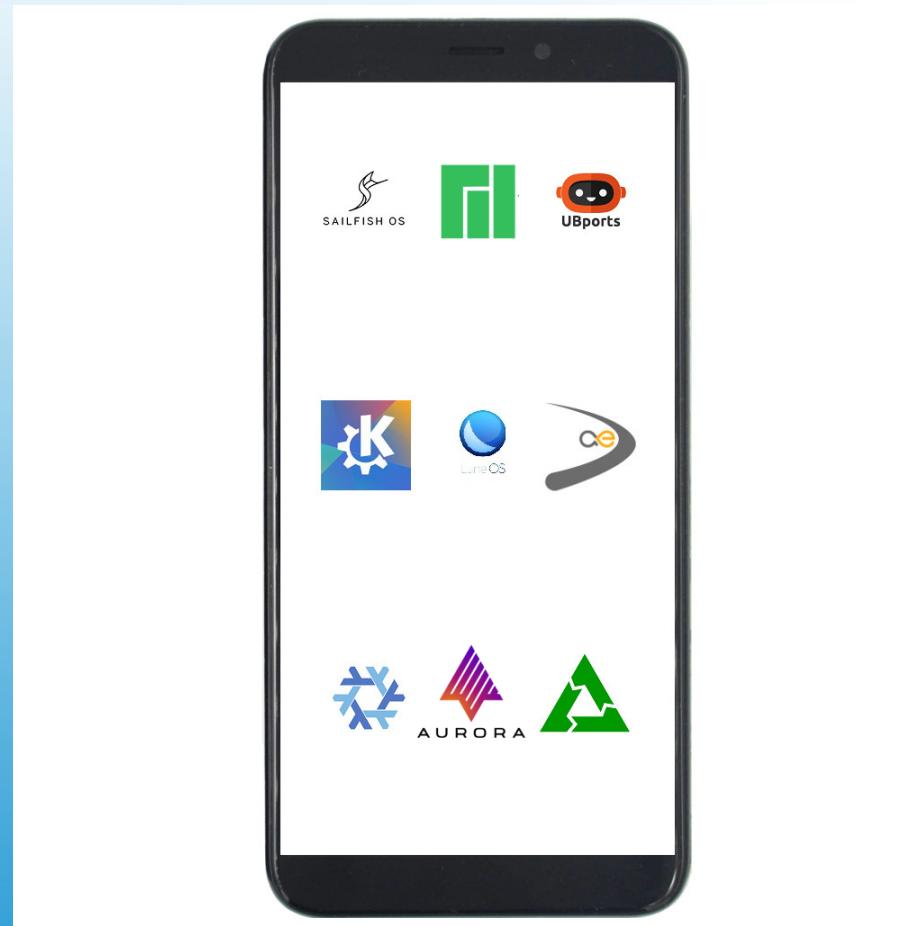


6.1 Use An iPhone

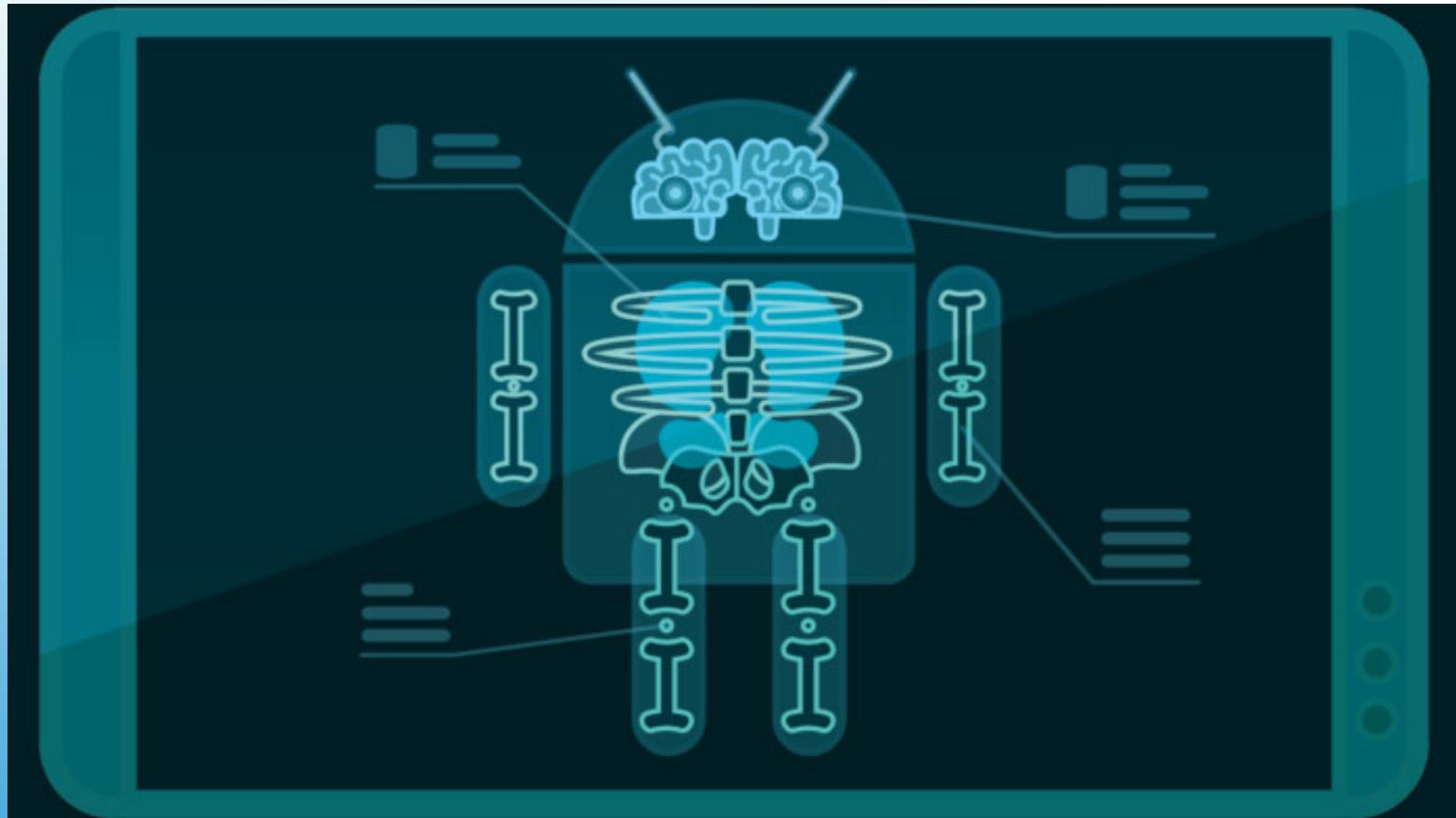
- iPhone does not allow you to have privacy due to its blackbox nature, and is simply a false marketing assurance by Apple to you. Recently, an unpatchable hardware flaw was discovered in Apple's T1 and T2 "security" chips, rendering Apple devices critically vulnerable.
- 17/9/2020: Apple gave the FBI access to the iCloud account of a protester accused of setting police cars on fire.
- Apple recently dropped plan for encrypting iCloud backups after FBI complained. They also collect and sell data quite a lot. Siri still records conversations 9 months after Apple promised not to do it. Apple Mail app is vulnerable, yet Apple stays in denial.
- Apple sells certificates to third-party developers that allow them to track users, The San Bernardino shooter publicity stunt was completely fraudulent, and Louis Rossmann dismantled Apple's PR stunt "repair program".
- Android's open source nature is starting to pay off in the long run. Apple 0-day exploits are far cheaper to do than Android.

[Smartphone Hardening non-root Guide 2.0](https://old.reddit.com/r/privatelife/comments/i5xhum/smartphone_hardening_nonroot_guide_20_for_normal/)
https://old.reddit.com/r/privatelife/comments/i5xhum/smartphone_hardening_nonroot_guide_20_for_normal/

6.1 Use An iPhone (NOT)



#6.2: Use A Linux Phone



#6.3: Use A Custom Android ROM



#6.3.1: LineageOS ROM

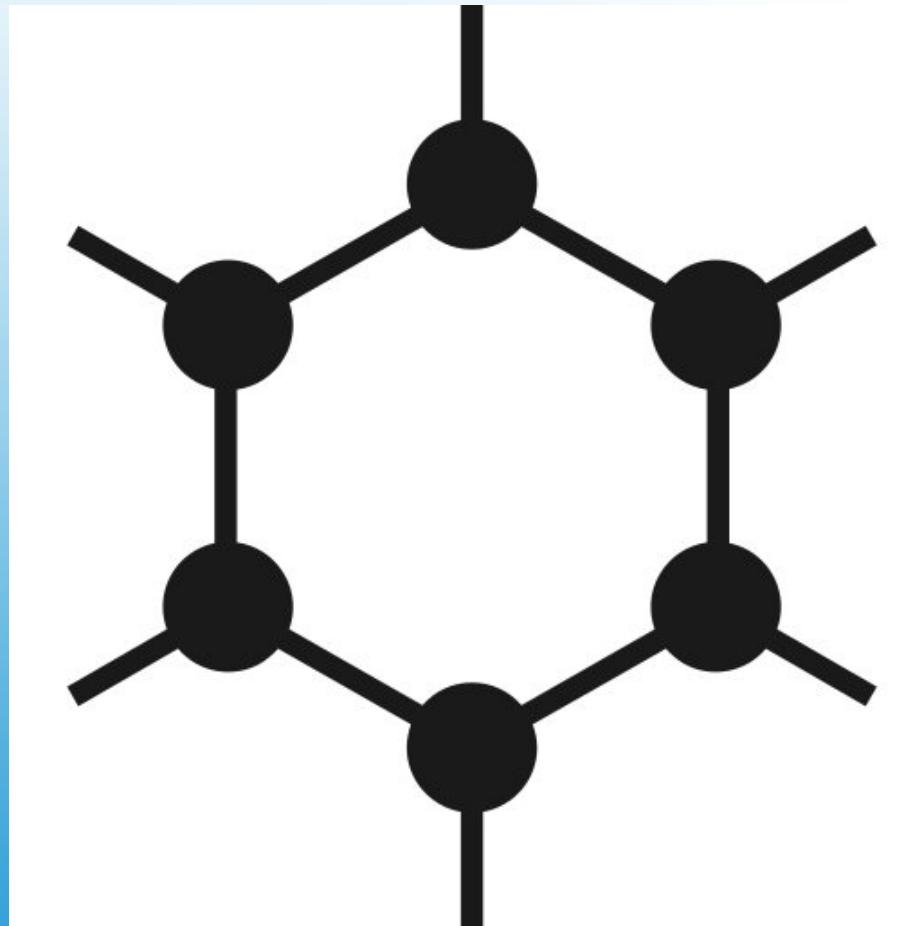


CALYXOS

#6.3.2: CalyxOS ROM



#6.3.3: *lel* ROM



#6.3.4: GrapheneOS



What About The Rest Of Us?



#6.4: Degooogle Existing Phones

1. Unlink Google Account
2. Reset phone
3. Setup: Configure network
4. Setup: Skip Google login
5. Setup: Turn off location
6. Setup: Turn off scanning
7. Setup: Turn off telemetry
8. Setup: Default login authentication (PIN)
9. Setup: Require PIN at startup
10. Setup: De-select Samsung apps
11. Setup: Install mandatory apps (e.g., Google apps)
12. setup: Skip Samsung login
13. Setup: Deny Carrier data collection

Steps to De-google

14. Post-install (Device-specific): Change screen timeout
15. Post-install (Device-specific): Disable Always On Display
16. Post-install (Device-specific): Disable Notification
17. Post-install (Device-specific): Change wallpaper configuration
18. Post-install: Enable Developer Options
19. Post-install: Enable USB Debugging
20. Post-install: FDroid
21. Post-install: Privacy-respecting browser

Steps to De-google (continued)

22. Replace Launcher Application

23. Replace Camera Application

23. Replace Contacts Application

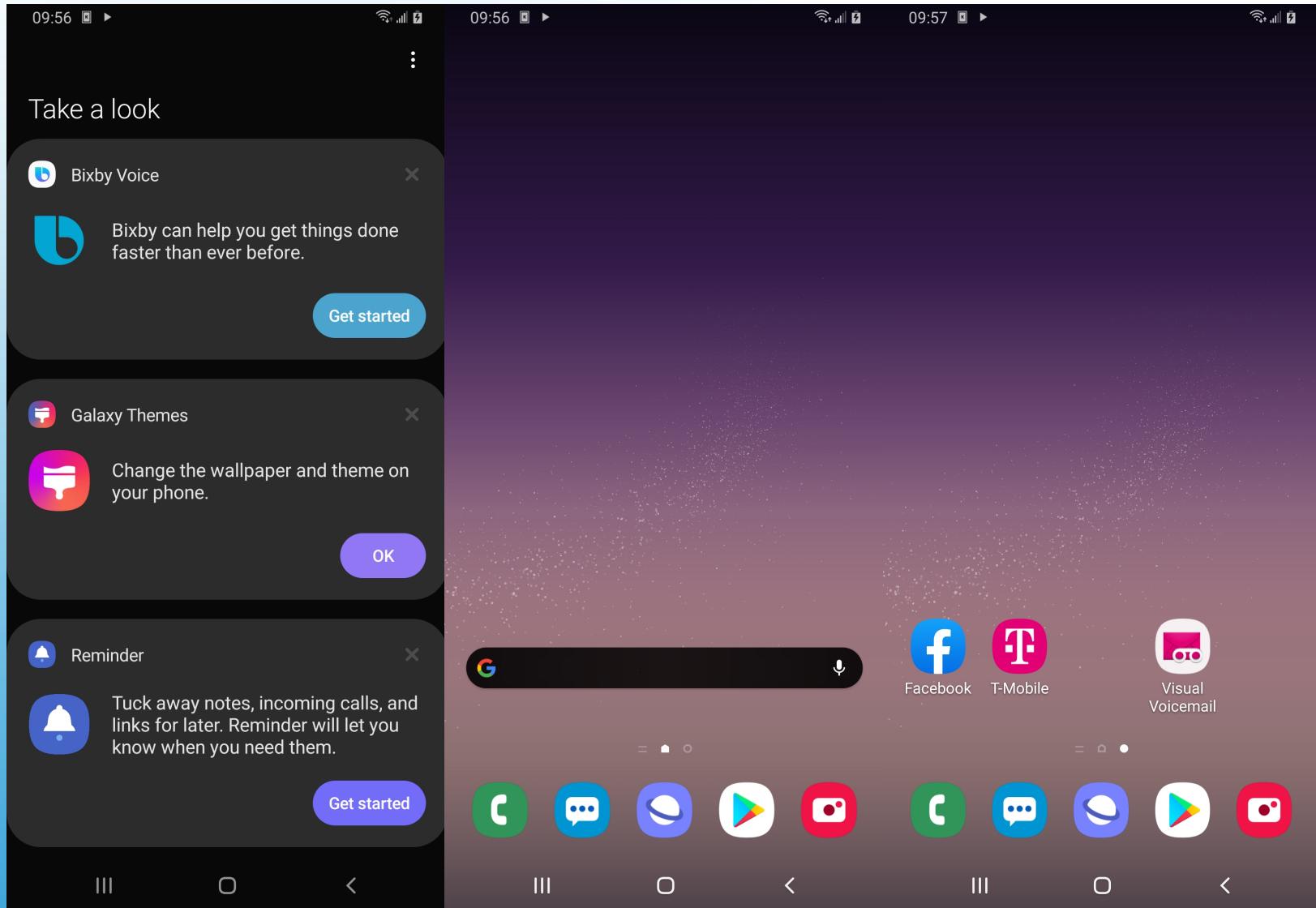
24. Replace Gallery Application

25. Replace Messages Application

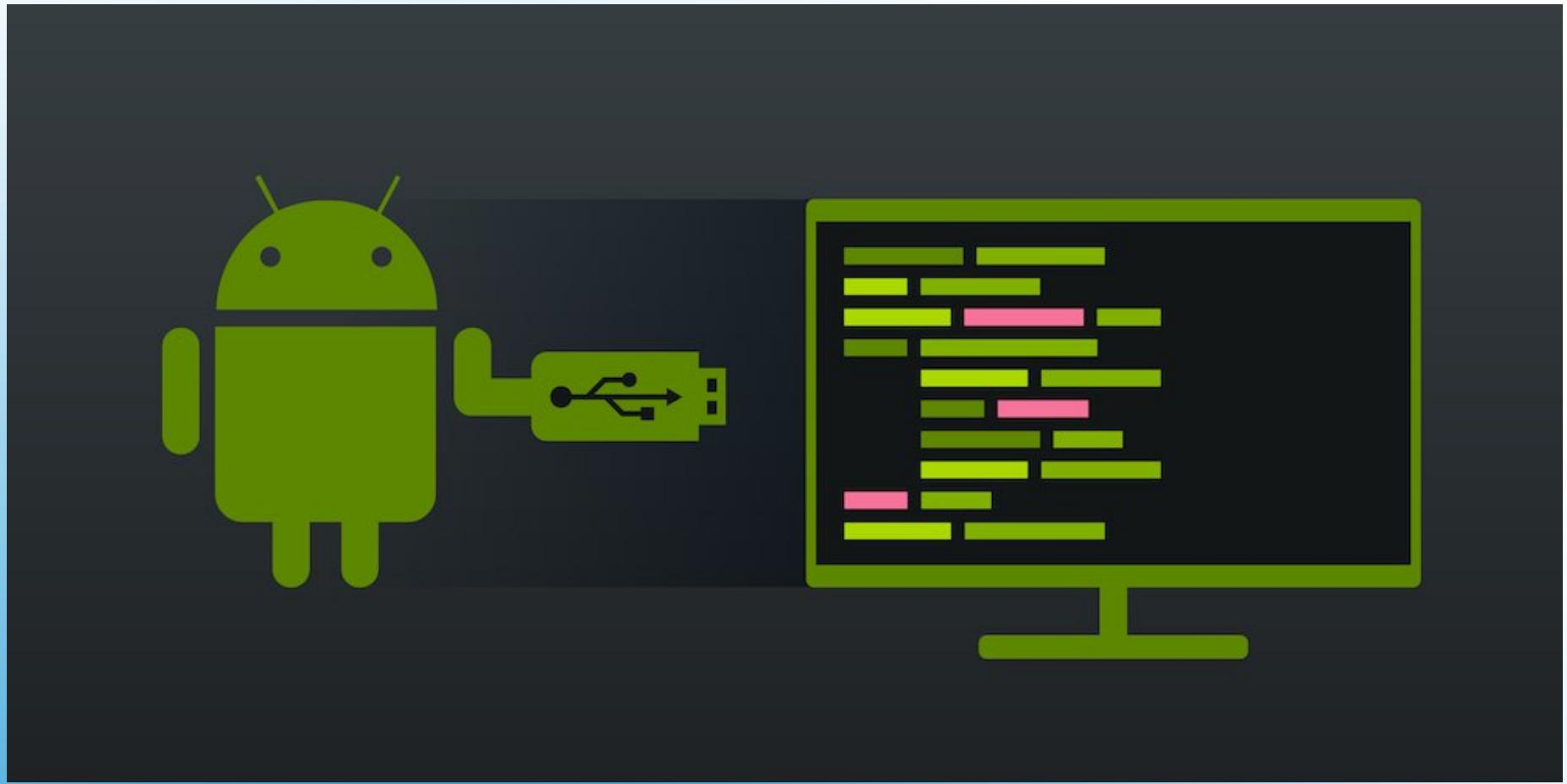
26. Replace Phone Dialer Application

27. Replace Keyboard Application

Steps to De-google (continued)



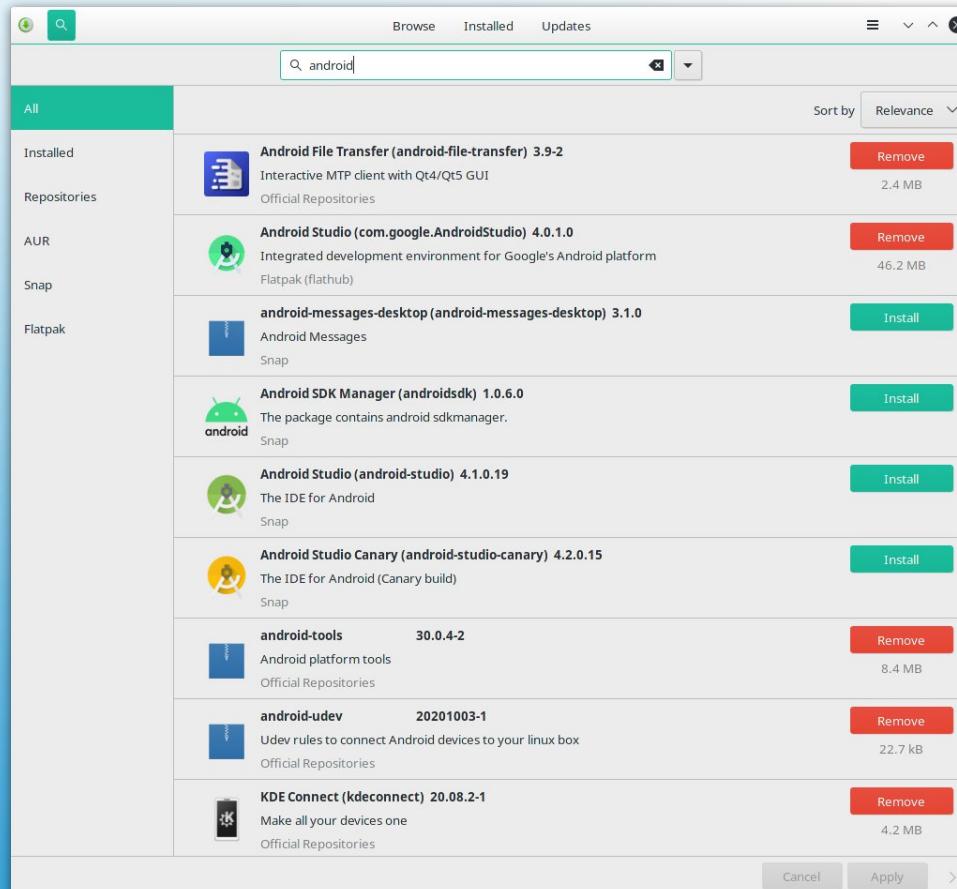
Demo: Before De-gooling



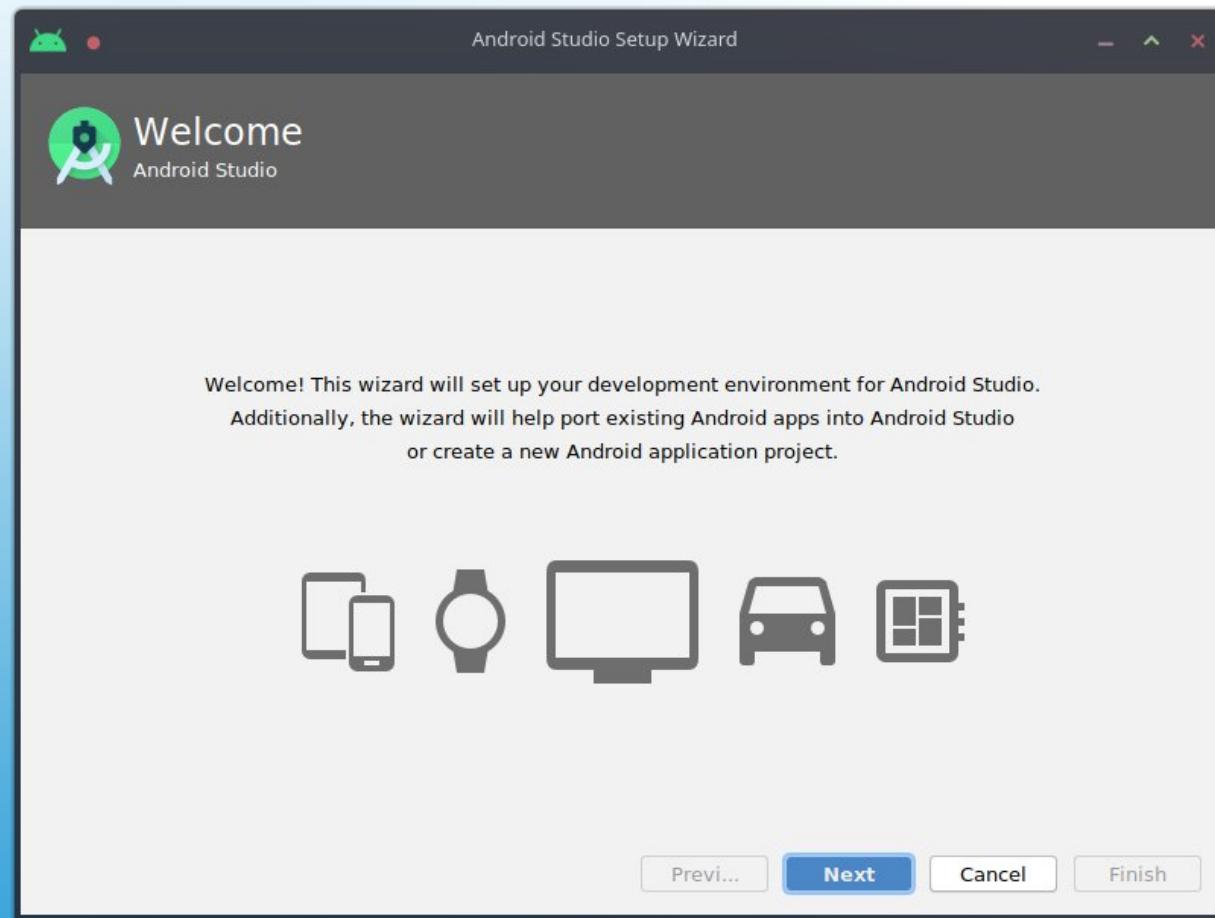
Use Android Debug Bridge

- Install USB Device Drivers.
- Install Android SDK / Platform Tools.
- Install Applications.

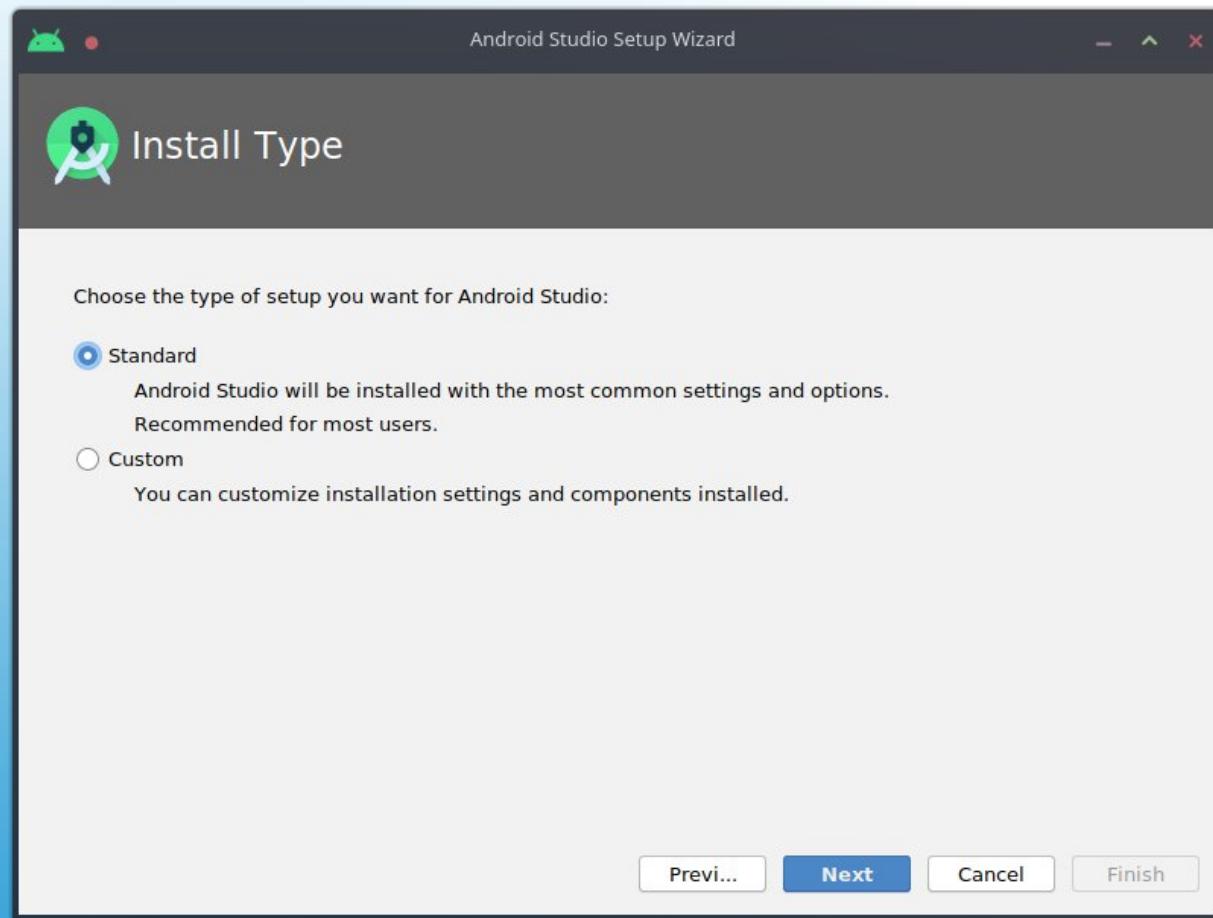
ADB Setup (Computer)



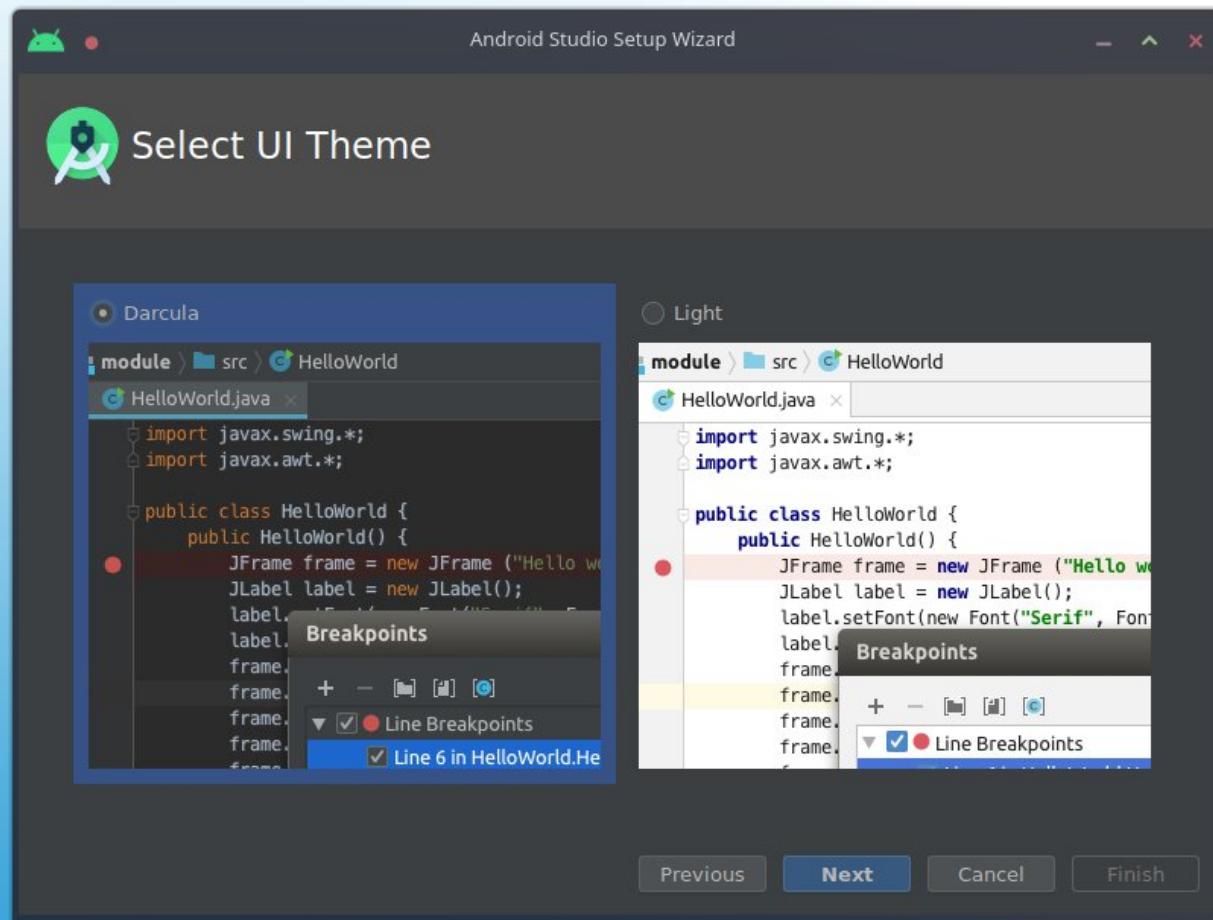
Key Computer Software



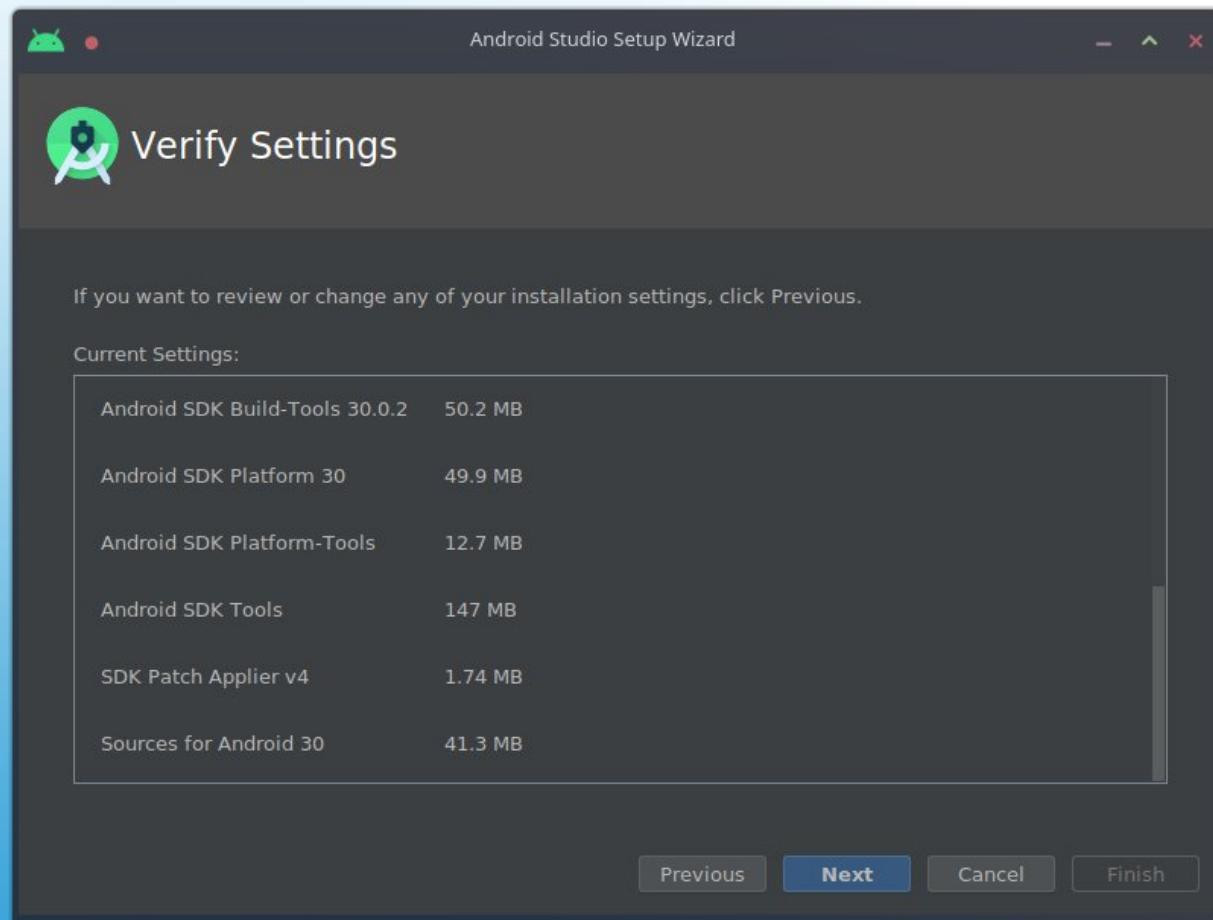
Android Studio



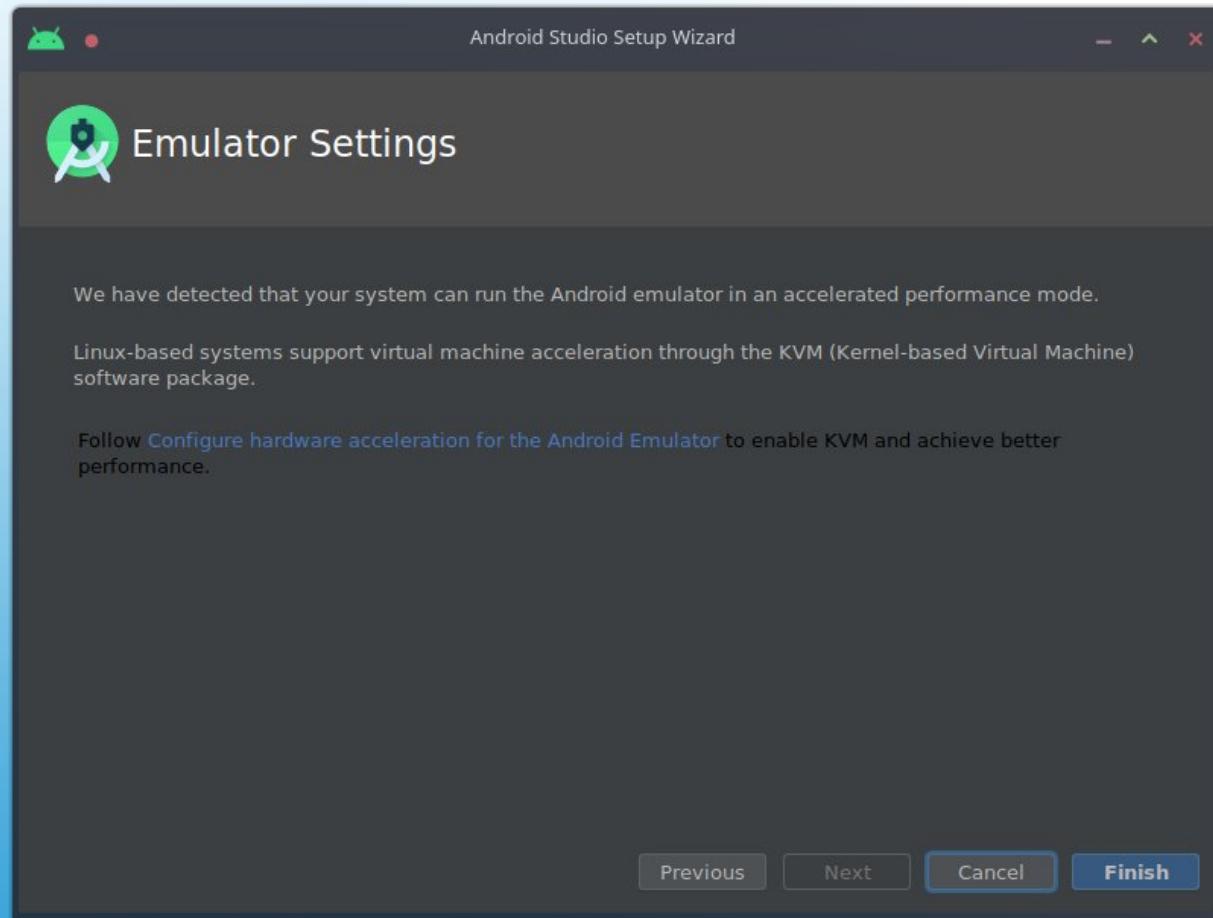
Android Studio



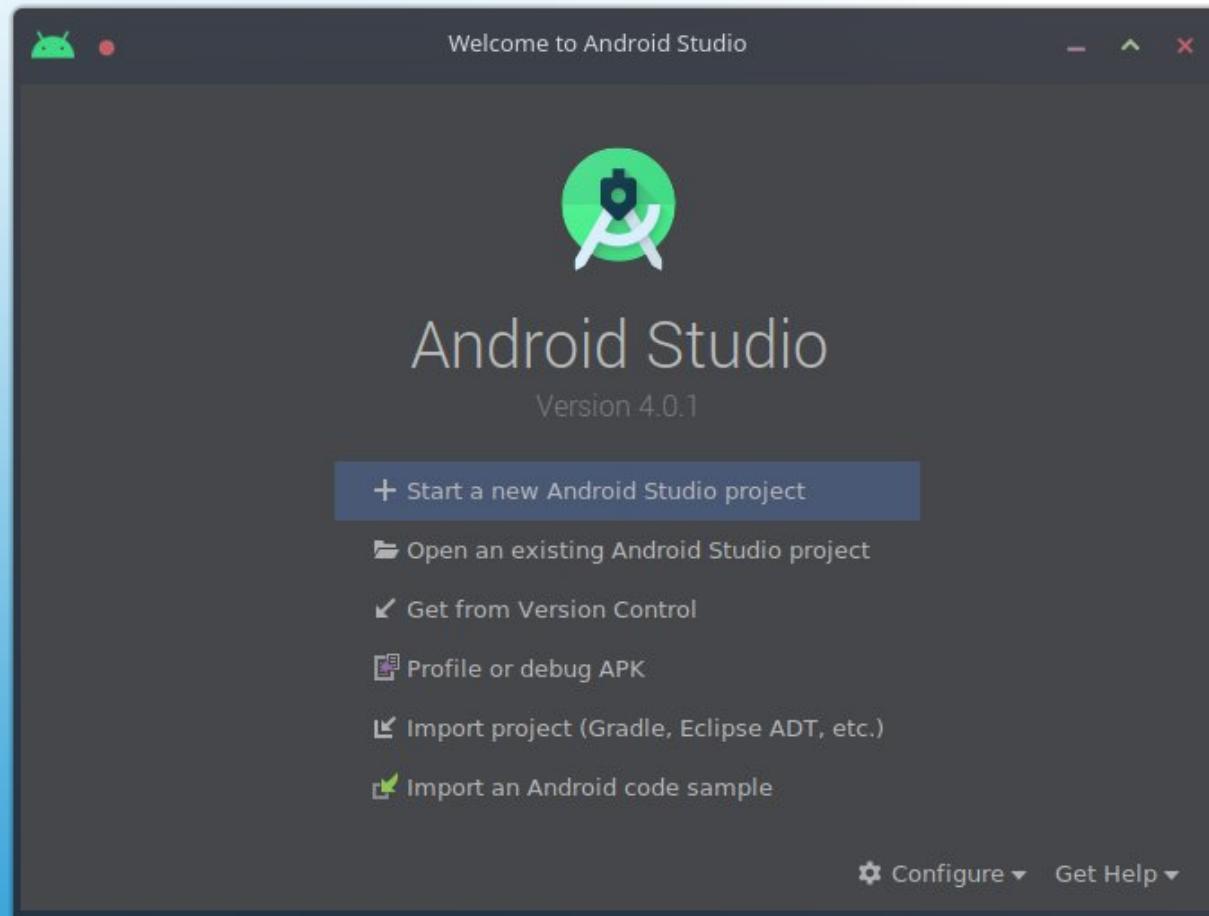
Android Studio



Android Studio



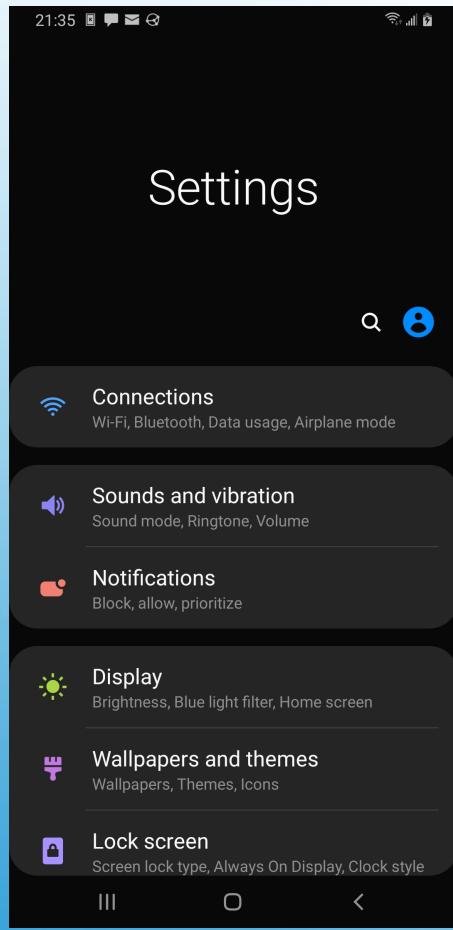
Android Studio

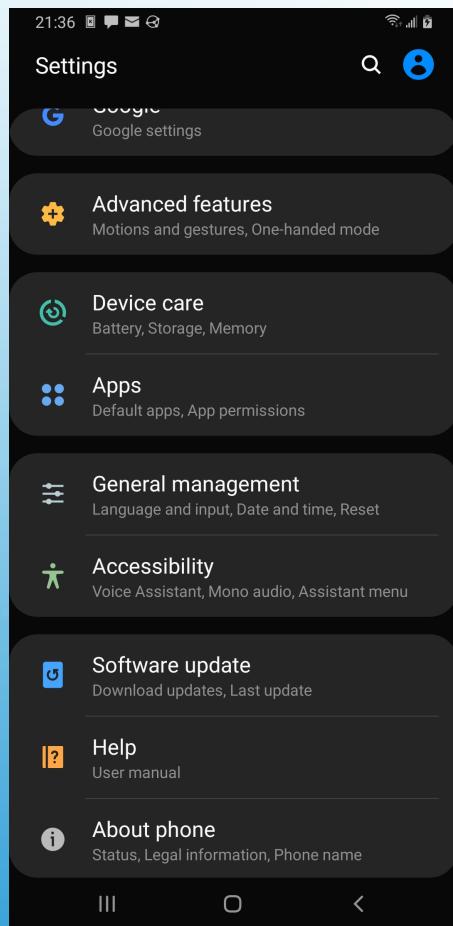


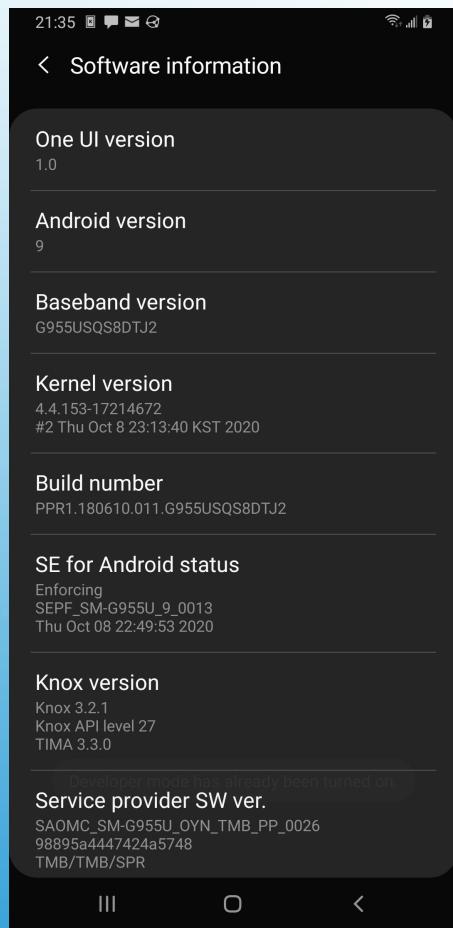
Android Studio

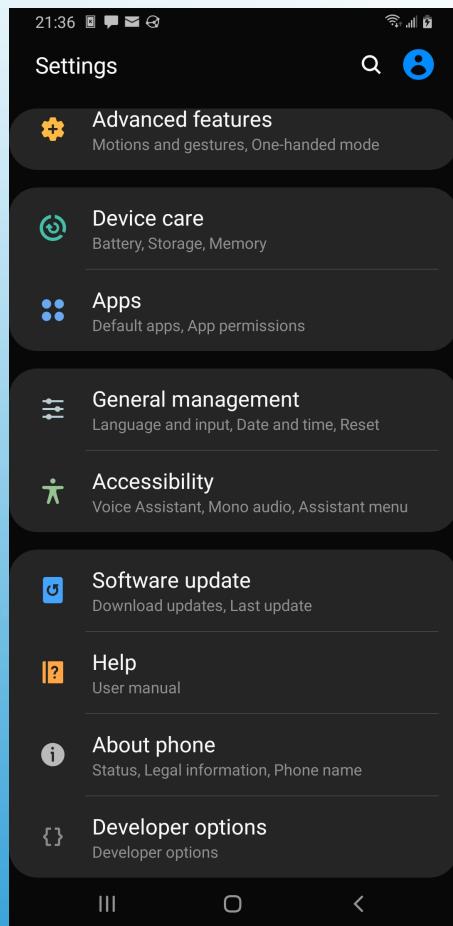
- Enable Developer Options.
- Enable USB Debugging.
- Connect Phone to Computer via USB.

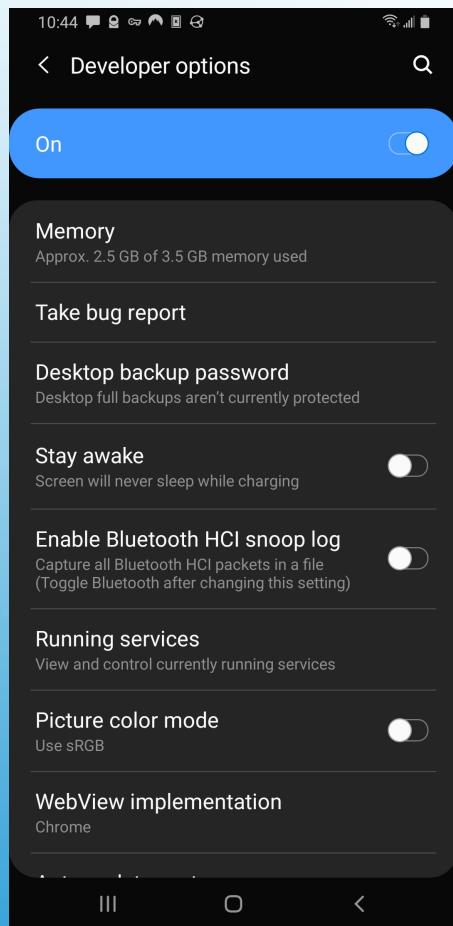
ADB Setup (Phone)

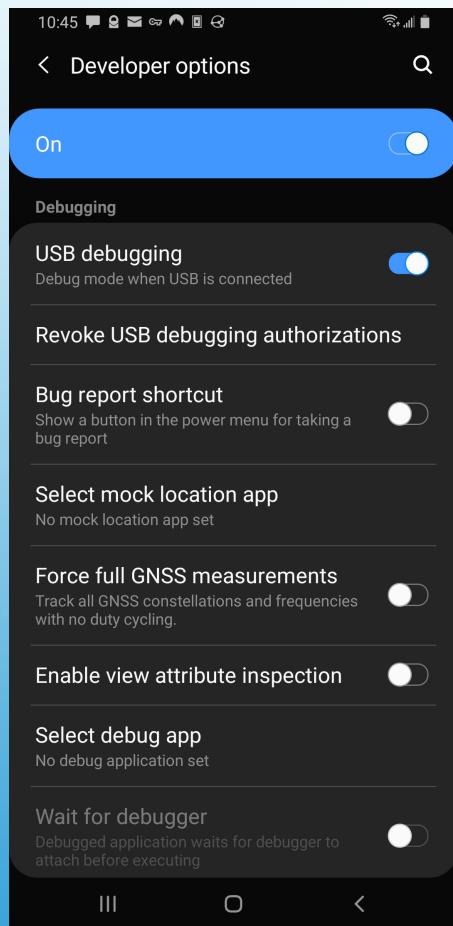












- ***pm list packages | grep <OEM/Carrier/App Name>*** - Shows you a list of all apps with the given keyword in name, e.g. google will show you apps like com.google.android.apps.photos, com.google.android.gms etc.
- ***pm uninstall -k --user 0 <package name>*** - Uninstalls the given app
- ***pm disable-user --user 0 <package name>*** - Disables the given app
- ***cmd package install-existing <package name>*** - Re-installs a system app if you accidentally uninstalled it (apps that you downloaded yourself cannot be reinstalled by this method)
- ***pm default-state <package name>*** - Please try this re-installation method if the one above doesn't work
- ***pm enable <package name>*** - Enables the given app

Important ADB Commands

28. Degoole: universal_android_debloat.sh

29. Degoole: Samsung_S8_Debloat.sh

Steps to De-google (continued)



Demo: De-googling





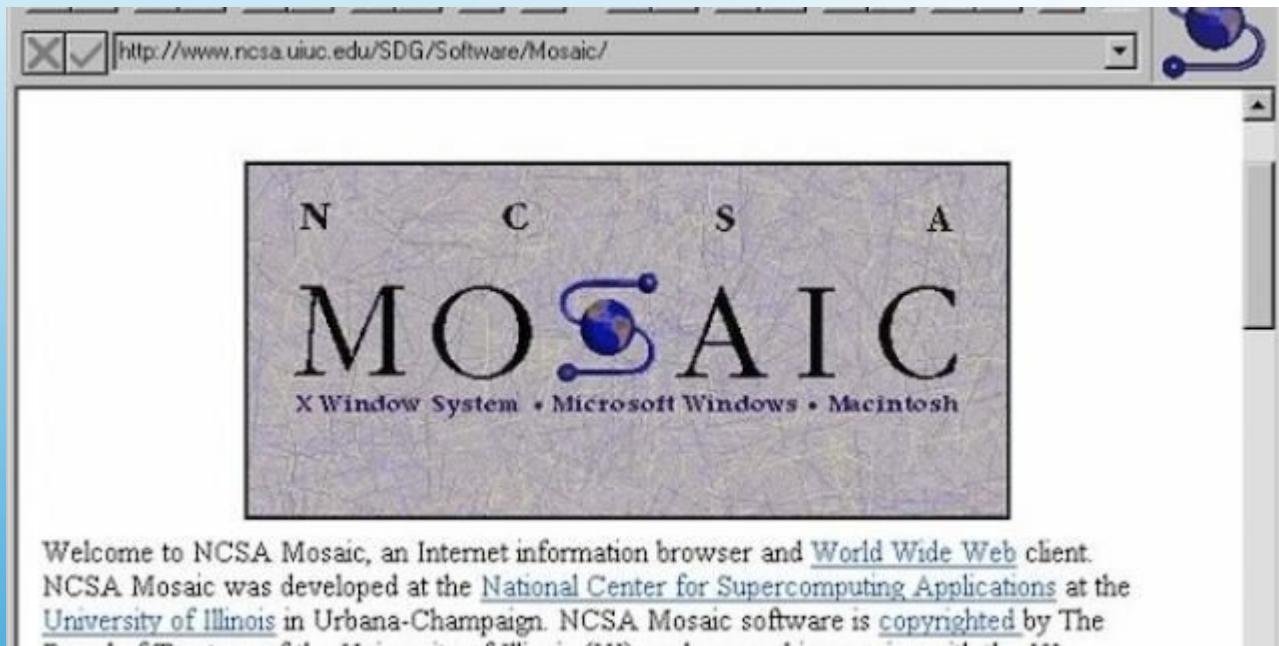
"All I did was Google 'Antitrust'."

Lorin B Olsen
Technology Consultant
Lobostrategies.com

**De-Google Your Life...
And Your Browser, Too**

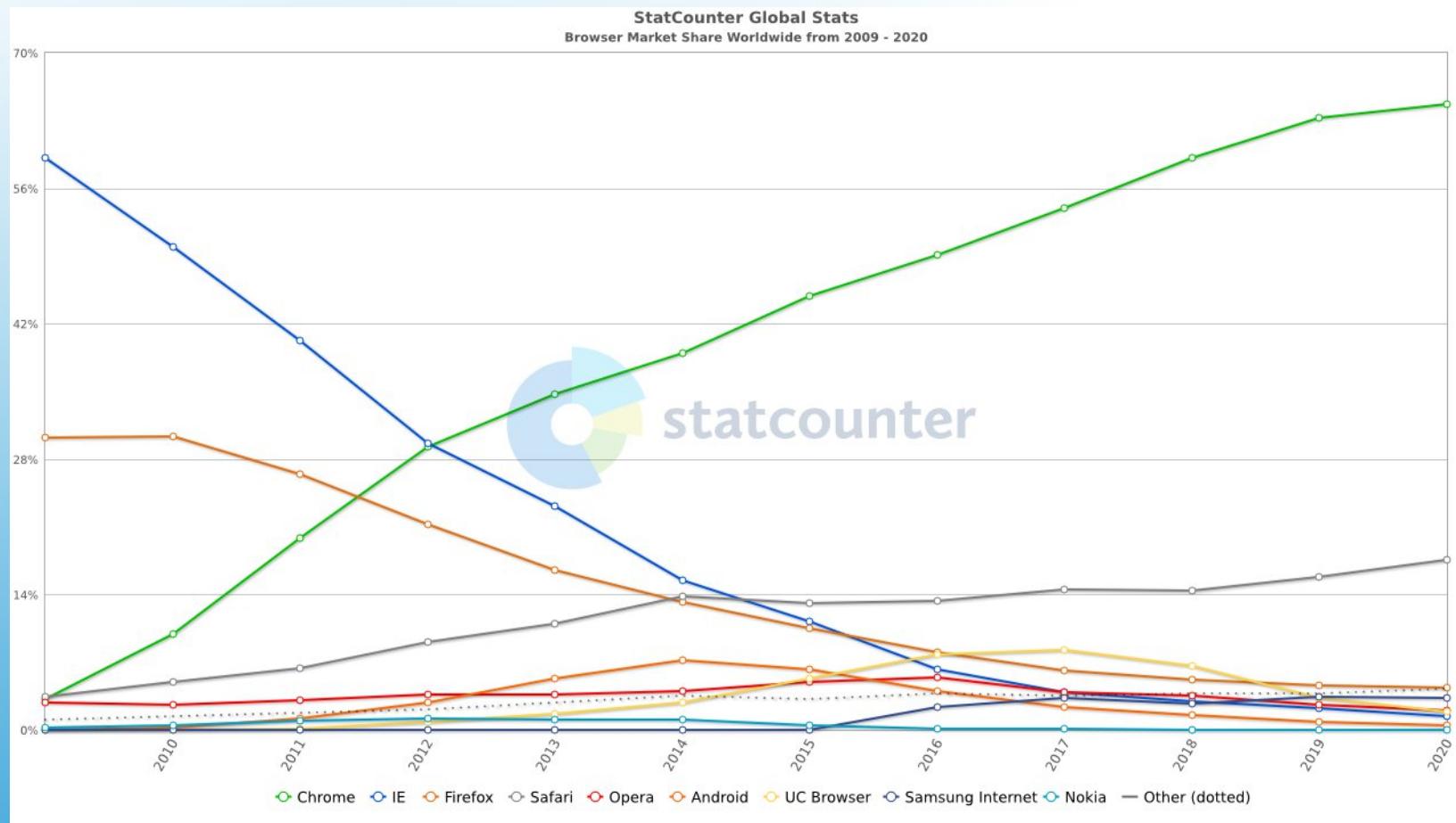


Use Browser As Your Navigator



Welcome to NCSA Mosaic, an Internet information browser and World Wide Web client.
NCSA Mosaic was developed at the National Center for Supercomputing Applications at the
University of Illinois in Urbana-Champaign. NCSA Mosaic software is copyrighted by The
University of Illinois and its Software Development Group.

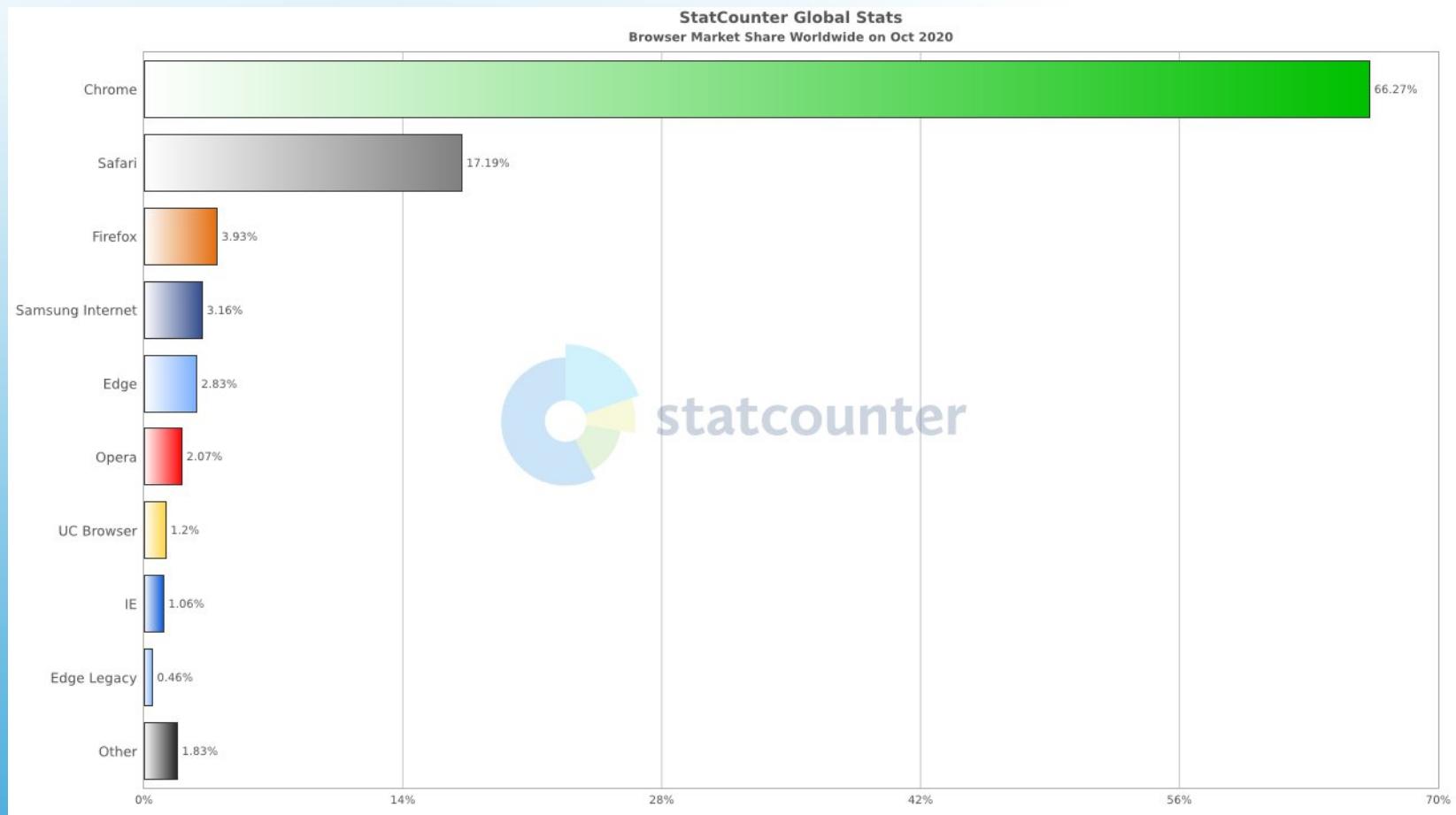
**Not The First Browser...
But The First “Real” Browser**



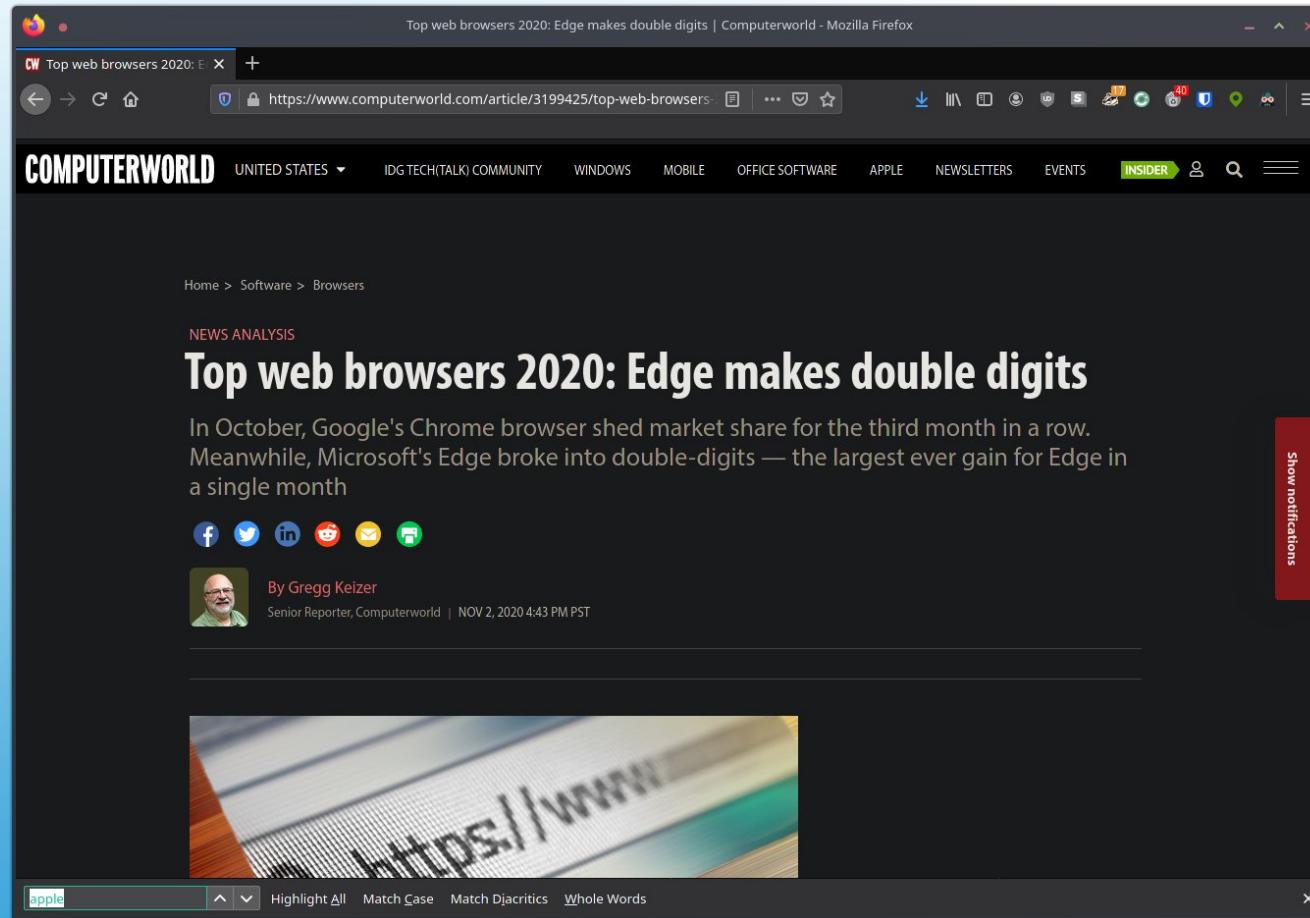
Browser Share This Decade



Worldwide Browser Share Today



Relative Browser Share Today



But Chrome Is Shrinking, Right?

Browser Engines



Rendering The Web in 2020

- Cookies
- Trackers
- Cryptominers
- Fingerprinting

Tracking Methods: All Browsers

YouTube x

https://www.youtube.com/

Your browser is not supported anymore. For the best experience please update your browser.

SIGN IN

UPDATE

Home

Trending

Subscriptions

Library

History

Search

HOUSE RELAX 2:17:56

Dua Lipa, Coldplay, Martin Garrix & Kygo, The Chainsmokers Style...
Miracle Music
11M views • 6 months ago

RELAX WITH MOZART 6:04:16

6 Hours Mozart for Studying, Concentration, Relaxation
HALIDONMUSIC
12M views • 2 years ago

LOONEY TUNES 5:19:51

Looney Tunes | Newly Remastered Restored Cartoon...
8thManDVD.com™ Cartoon...
4.7M views • 5 months ago

Greatest Soft Rock Love Songs Of The 70s 80s 90s - Air Supply...
Music Experience
28K views • Streamed 4 days ago

A very happy wolf 1:08

A very happy wolf
Sarah and the Wolves
21M views • 4 years ago

Lofi hip hop mix - Beats to Relax/Study to [2018] 2:00:01

Lofi hip hop mix - Beats to Relax/Study to [2018]
ChilledCow
41M views • 2 years ago

Chayanne 2:00:30

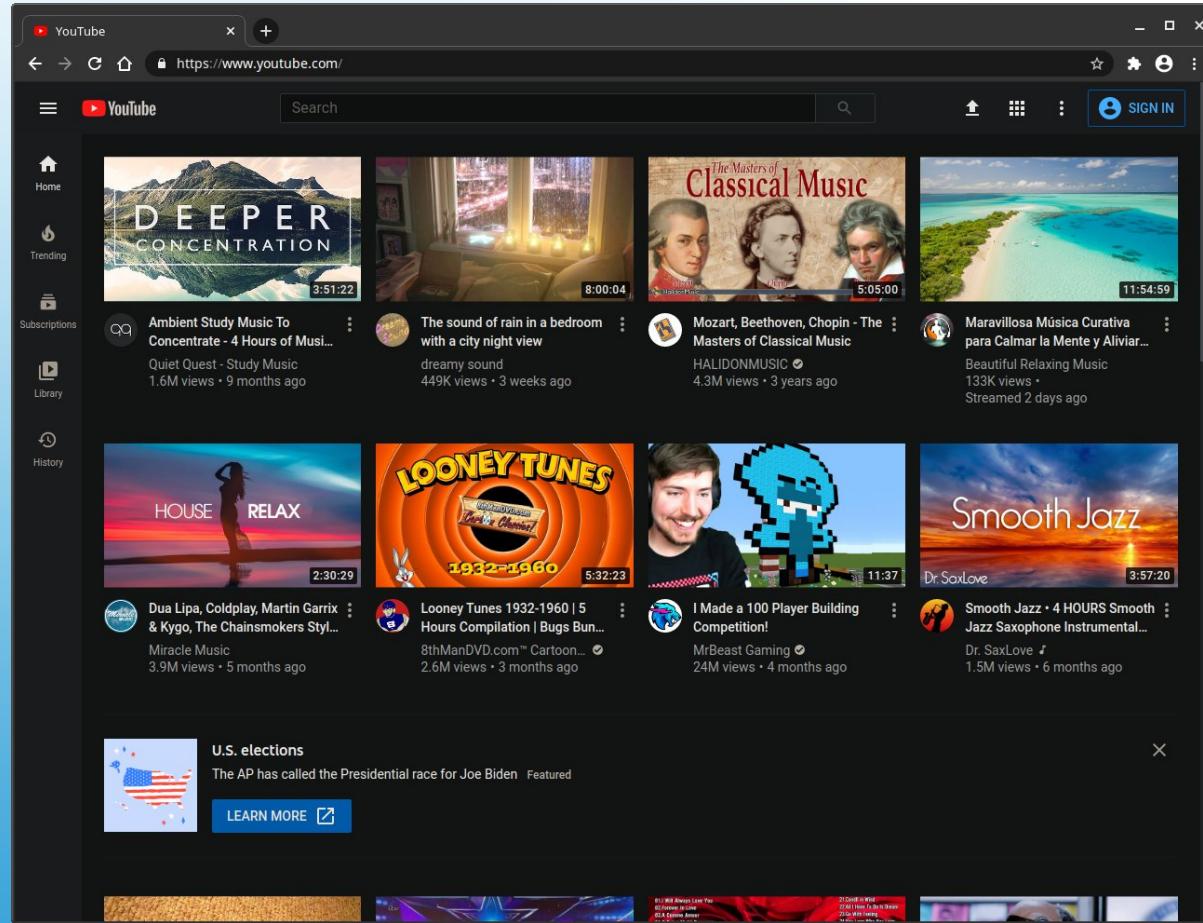
CHAYANNE 30 Grandes Éxitos Enganchados - Sus Mejores...
Canciones memorables
4.4M views • 3 years ago

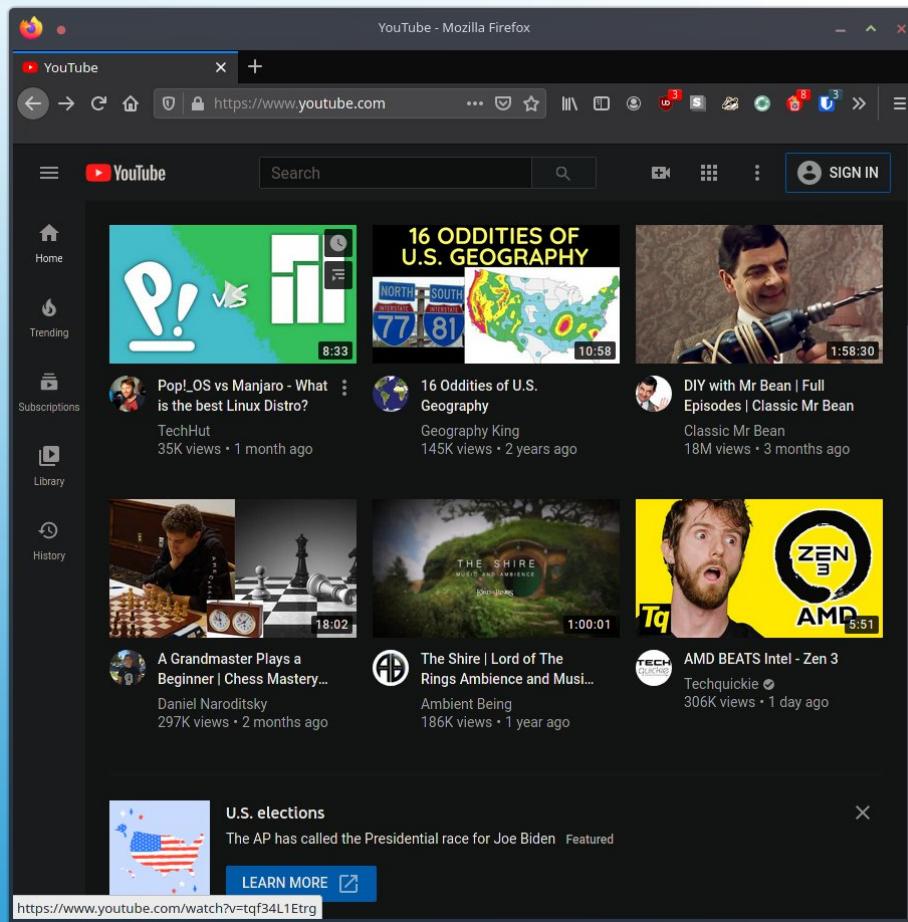
GOOD MORNING MUSIC 528Hz 7:00:01

GOOD MORNING MUSIC 528Hz
Nature Healing Society
1.7M views • 1 year ago

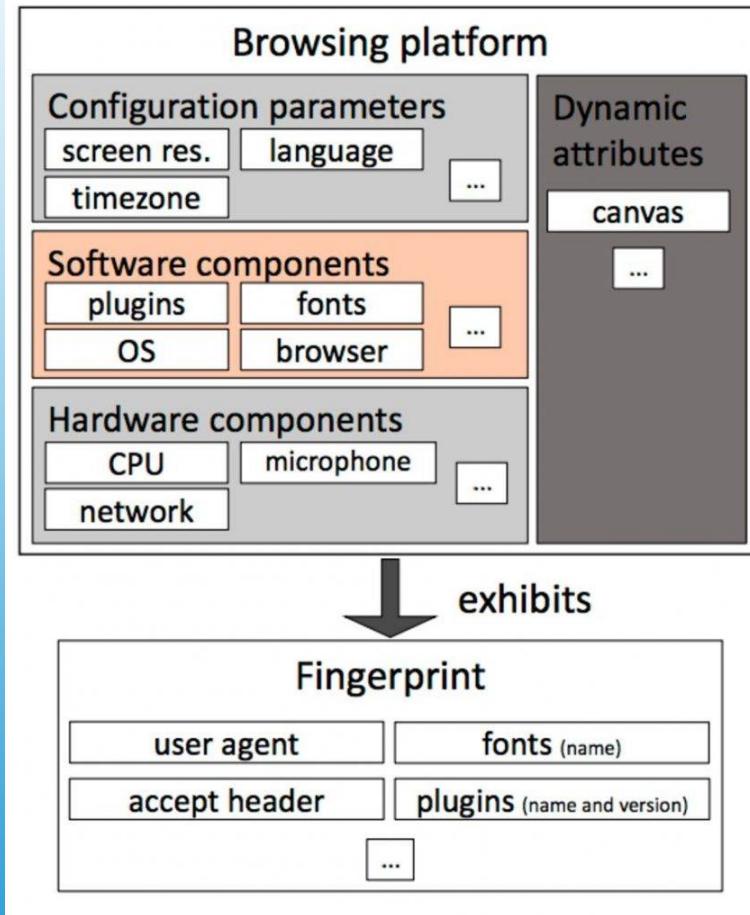
U.S. elections
The AP has called the Presidential race for Joe Biden Featured

LEARN MORE

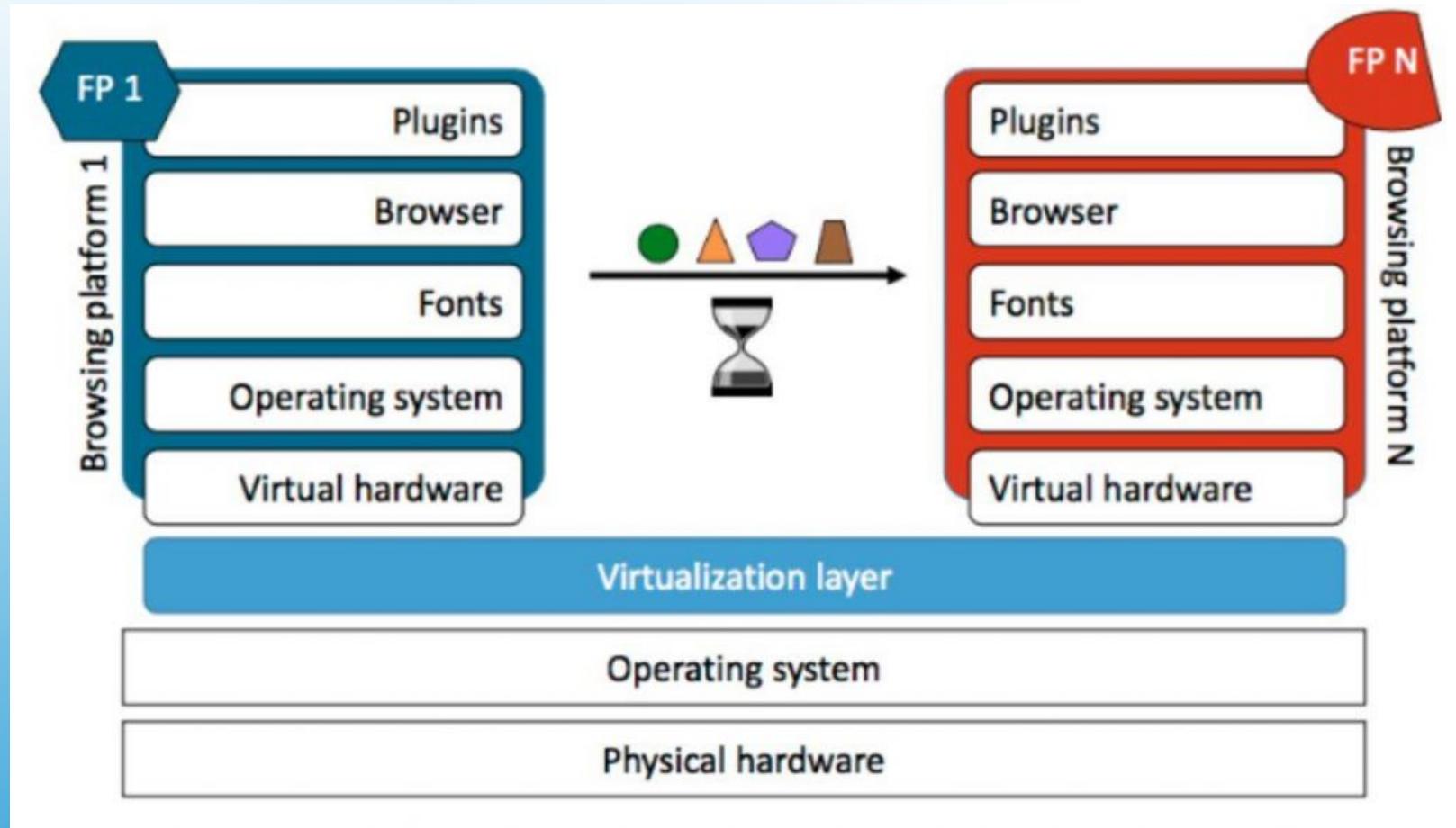




<https://www.youtube.com/watch?v=tqf34L1Etrg>



Browser Fingerprinting



Blink Browser Fingerprinting

PANOPTICCLICK^{3.0}

Is your browser safe against tracking?

How well are you protected against non-consensual Web tracking? After analyzing your browser and add-ons, the answer is ...

Yes! You have **strong protection against Web tracking**, though your software isn't checking for Do Not Track policies.

Help us defend the Web against tracking:



Test	Result
Is your browser blocking tracking ads?	✓ yes
Is your browser blocking invisible trackers?	✓ yes
Does your blocker stop trackers that are included in the so-called "acceptable ads" whitelist?	✓ yes
Does your browser unblock 3rd parties that promise to honor Do Not Track ?	✗ no
Does your browser protect from fingerprinting ?	✗ your browser has a unique fingerprint

[Show full results for fingerprinting](#)

Note: because tracking techniques are complex, subtle, and constantly evolving, Panopticlick does not measure all forms of tracking and protection.

[RE-TEST YOUR BROWSER](#)

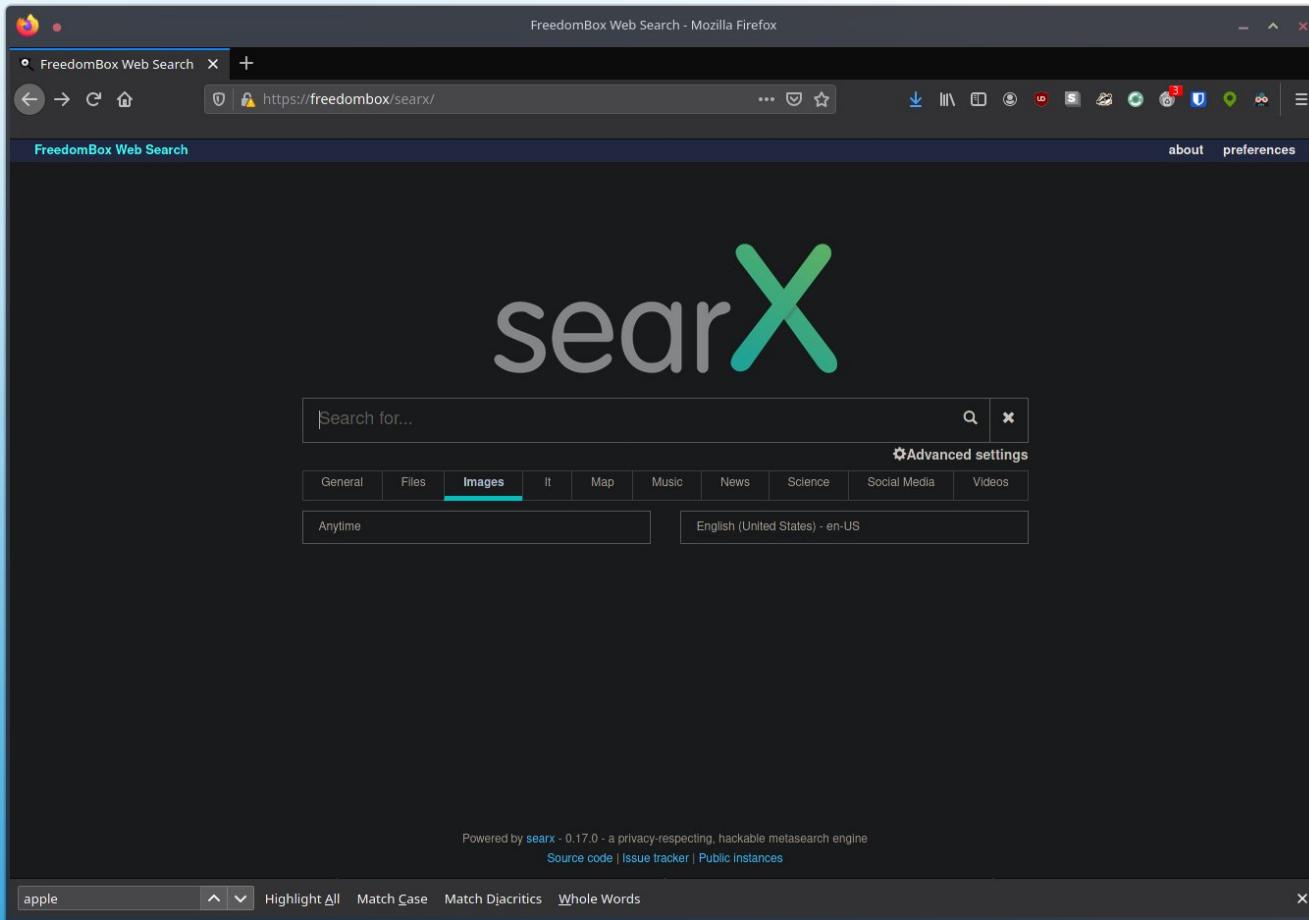
Browser Fingerprinting EFF Panopticlick

- Default search in Chrome is Google, naturally.
- Default search in Firefox is Google.
- Default search in Safari (on iOS) is Google.

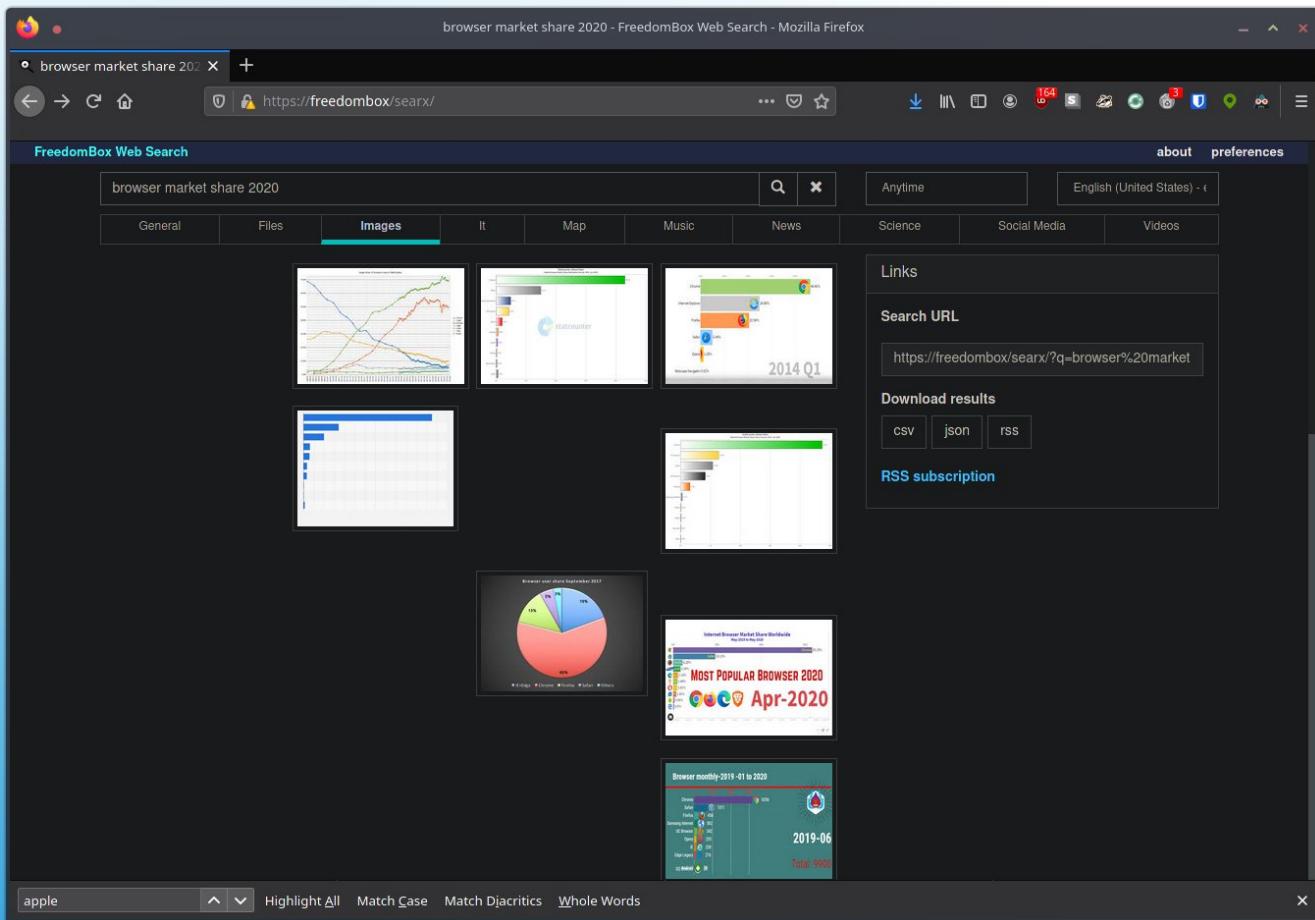
Google Makes Search Deals

- DuckDuckGo
- Qwant
- Startpage
- SearX

Use Privacy-respecting Search



Better: Use A Self-hosted Search



SearX Results

- Safari is the most private browser.
- Firefox is a privacy-oriented browser.
- Chrome is not a private browser.
- No one should use the default (out-of-the-box) installation for their browser.

Out-of-the-box Experience

- Firefox is the most configurable / extensible browser.
- Chrome is designed to track usage. Chromium does not have the Google data collection. But it does collect some data and it is difficult to extend.
- Safari rendering engine (Webkit) is open source. Safari is not.

Extend / Modify Default Browser

- Disable telemetry.
- Change search engine.
- Use “Strict” content blocking.
- Do not enable ‘Do Not Track’ option.

Basic Firefox Changes

- media.peerconnection.enabled (WebRTC) = false
- privacy.resistFingerprinting = true
- privacy.trackingprotection.fingerprinting.enabled = true
- privacy.trackingprotection.cryptomining.enabled = true
- privacy.firstparty.isolate = true
- privacy.trackingprotection.enabled = true
- geo.enabled = false
- media.navigator.enabled = false
- network.cookie.cookieBehavior = 1*
- network.cookie.lifetimePolicy = 2
- network.dns.disablePrefetch = true
- network.prefetch-next = false
- webgl.disabled = true
- dom.event.clipboardevents.enabled = false
- media.eme.enabled = false

Firefox about:config Changes

- **Necessary add-ons**
 - uBlock Origin (advanced mode)
 - HTTPS Everywhere*
 - Decentraleyes
- **Unnecessary add-ons**
 - Cookie AutoDelete
 - Privacy Badger
 - uMatrix
 - NoScript

Firefox Add-ons

- Don't Use Chrome – Use Chromium
- Don't Use Unmodified Chromium
- Use ungoogled-chromium
 - Remove all remaining background requests to any web services while building and running the browser.
 - Remove all code specific to Google web services.
 - Remove all uses of pre-made binaries from the source code, and replace them with user-provided alternatives when possible.
 - Disable features that inhibit control and transparency, and add or modify features that promote them (these changes will almost always require manual activation or enabling).

Basic Chromium Changes

- Extensions must be added by hand
 - Get URL from Chrome Web Store.
 - Extract CRX file using <https://crxextractor.com/>.
- Necessary add-ons
 - uBlock Origin (advanced mode)
 - Decentraleyes
 - Canvas Fingerprint Defender

Chromium Add-ons

