



How Carriers and Manufacturers Make Your Android Phone's Software Worse

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Introduction

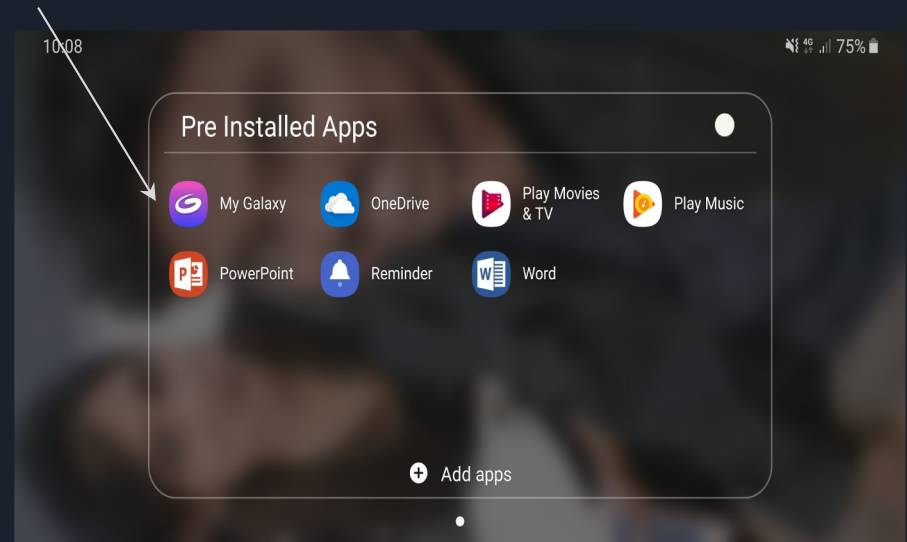
- Android is an open source mobile operating system
- Over 2.5 billion devices run Android
- This huge amount means that some installs are bound to be abused
- Its open source nature means that it can be modified by 3rd parties



Manufacturers' Bloatware

pre-installed software made by Manufacturers

- Taking up a lot of space
- Cannot be deleted easily
- Privacy issue



How to Remove the Bloatware

Disadvantages of rooting:

- Risky
- Void warranty
- More Vulnerable to malware and hacking

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CF-Auto-Root
Copyright (C) 2011-2013 Chainfire

Detecting devices ...
- Recovery: /dev/block/mmcblk0p9
- System: /dev/block/mmcblk0p13
- Cache: /dev/block/mmcblk0p12
- Data: /dev/block/mmcblk0p16

Mounting ...
- System
- Data
- Cache

Rooting (SuperSU).....


Restoring stock recovery ...

Cleaning up ...

Formatting cache ...

Use "Triangle Away" to reset
flash counter if needed !

Rebooting in 10 seconds ...
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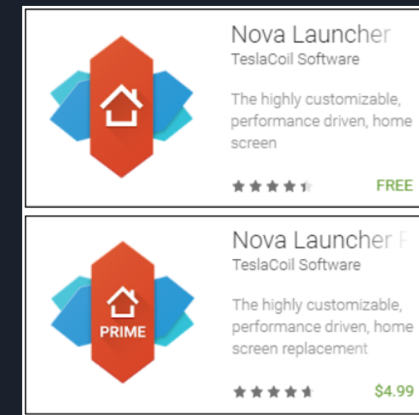


Privacy Issue

- Can't find Bloatwares on google App
- Don't follow Google Play Protect Protocol

Skins that you can not disable

- Manufacturers often change the theme
- It is unable to change back to the default android interface
 - Manufacturers modify the Android's code



Application Blocked and Features Disabled

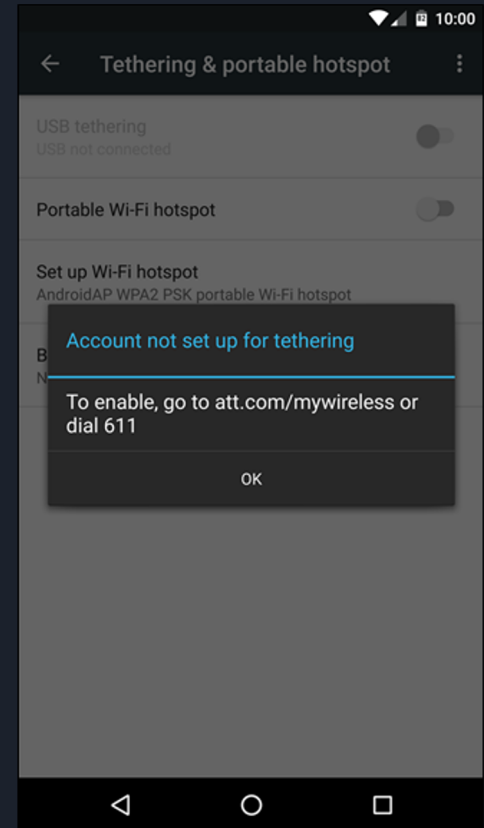
- Operators reserve the ability to block certain apps.
- Users are asked for extra money to unblock certain apps.
- Third-party digital wallet systems can also be blocked.
- Operators avoid customers using competing companies' apps and digital wallet.



<https://www.express.co.uk/life-style/science-technology/1295766/Android-app-delete-warning-Google-play-store-alert-adware>

Data Connection Disabled and How to Solve it

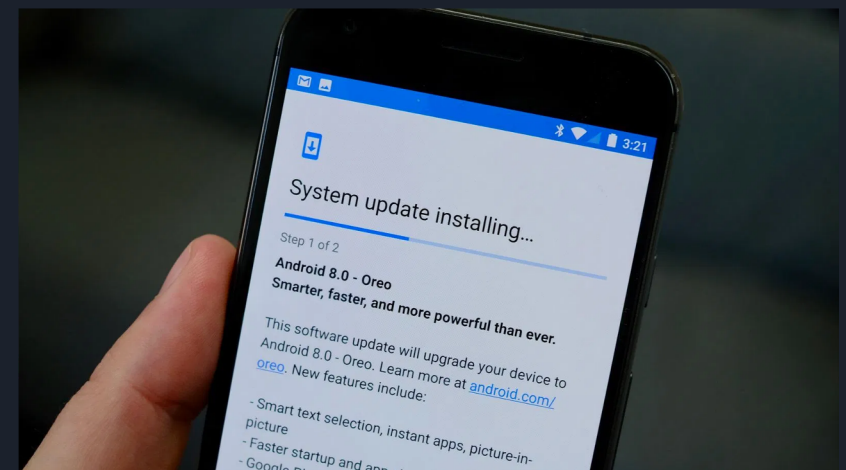
- Some carriers block the data connection and sharing features.
- Fixes:
 - Third-party tethering app like PdaNet+.
 - Re-enable Android's built-in hotspot features.
 - Phone must be rooted.
 - Xposed framework.
 - Magisk.



<https://www.howtogeek.com/263785/how-to-use-androids-built-in-tethering-when-your-carrier-blocks-it/>

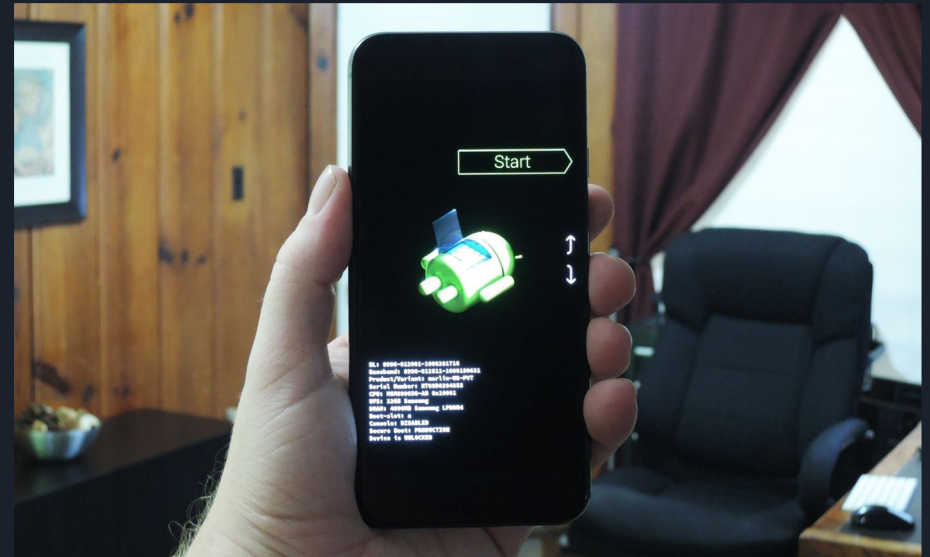
Updates Not Released and Delayed

- Manufacturers need approval from carriers before releasing updates
- Older phones often don't receive updates at all
- Manufacturers have to build custom versions of Android for each model



Locked Bootloaders

- Bootloader only approves certain ROMs.
- Unlocking the Bootloader requires extra efforts.
 - Exploit the vulnerability of the system
 - Might brick the phone
- Why unlocking it?
 - A pure Android OS
 - Continue updating old devices
 - ...



<https://android.gadgethacks.com/how-to/complete-guide-flashing-factory-images-android-using-fastboot-0175277/>



Discussion Questions

- Have you ever rooted your phone? How did it go?
- Which one of the things that we mentioned have you ever experienced? What happened?
- Do you think Apple(iOS) is doing a better job than Android regarding those issues we mentioned?



Reference

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