

Explaining iOS Devices Weaknesses



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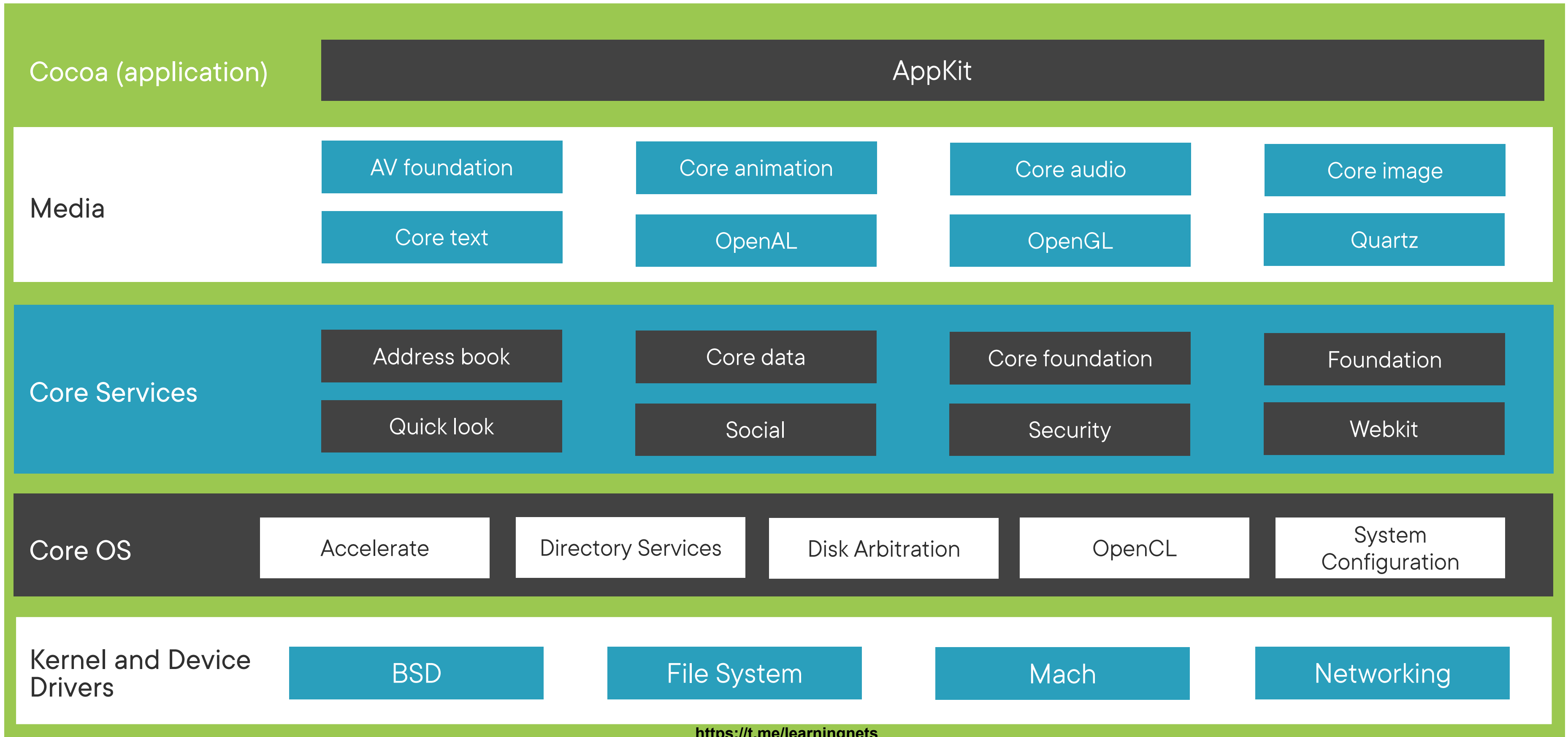
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“With enough time, nothing is unhackable.”

Unknown



Apple's Architecture



Apple's Architecture

Cocoa (application)

Media

Core Services

Core OS

Kernel and Device
Drivers

Apple's Architecture

Cocoa (application)

AppKit

Media

Core Services

Core OS

Kernel and Device
Drivers

Apple's Architecture

Cocoa (application)

AppKit

Media

AV foundation

Core animation

Core audio

Core image

Core text

OpenAL

OpenGL

Quartz

Core Services

Core OS

Kernel and Device Drivers

Apple's Architecture

Cocoa (application)

AppKit

Media

AV foundation

Core animation

Core audio

Core image

Core text

OpenAL

OpenGL

Quartz

Core Services

Address book

Core data

Core foundation

Foundation

Quick look

Social

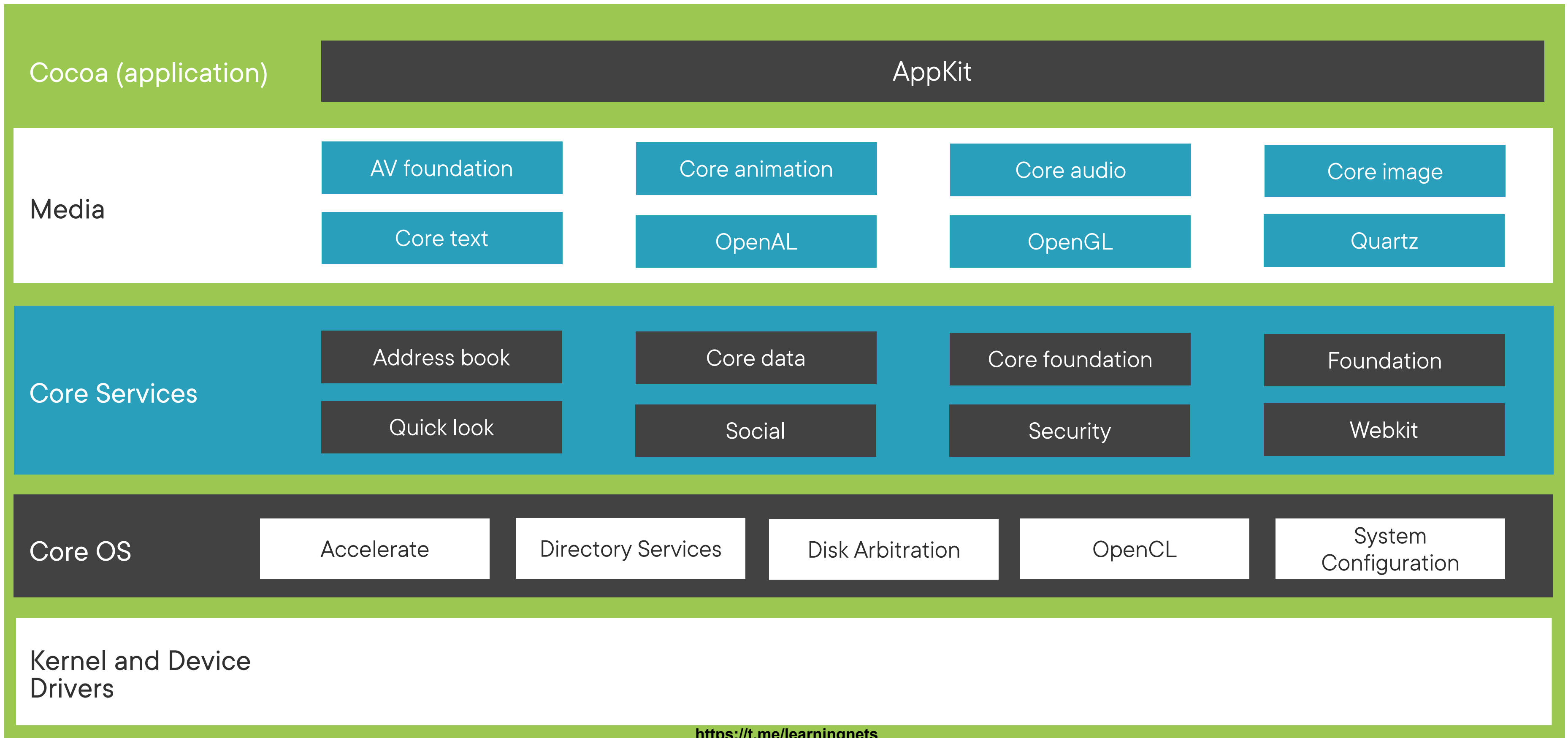
Security

Webkit

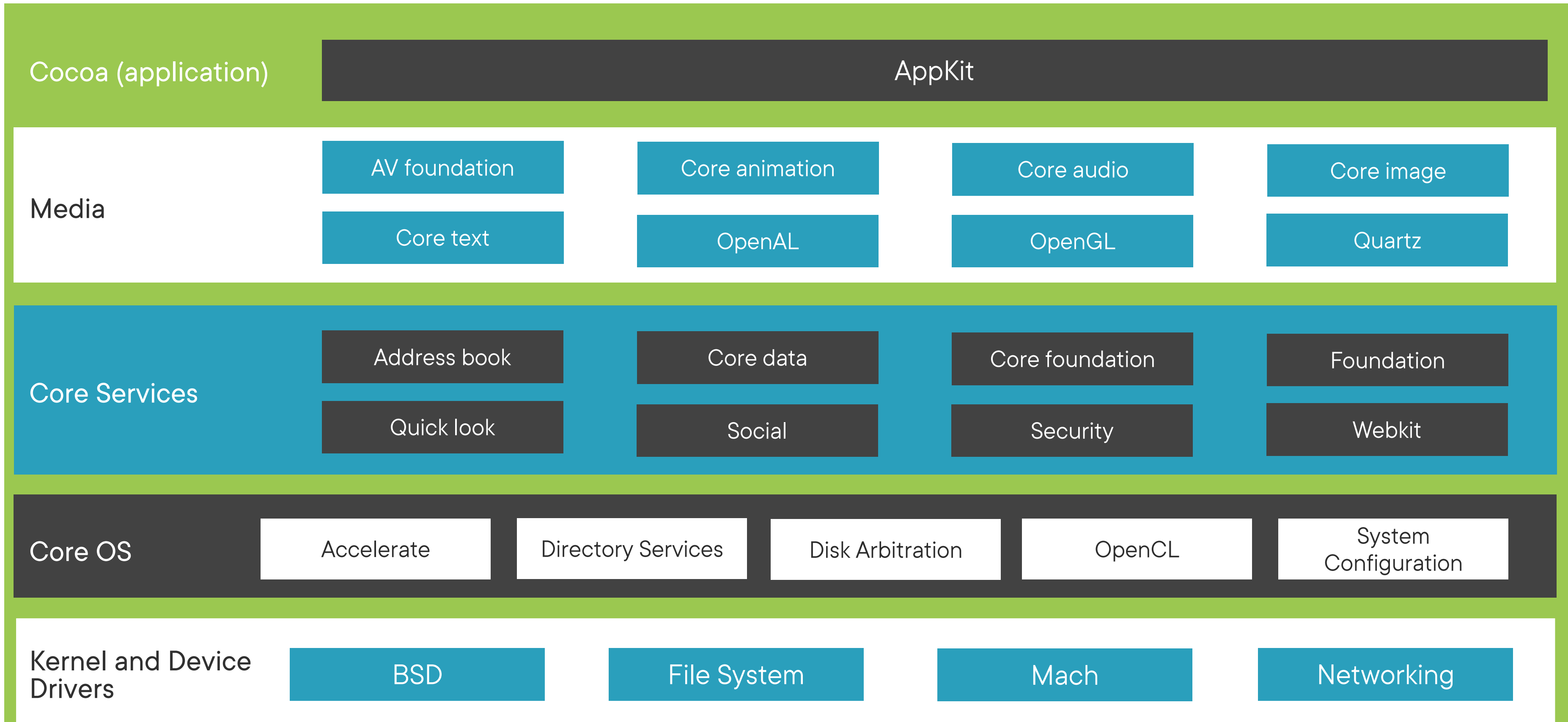
Core OS

Kernel and Device Drivers

Apple's Architecture

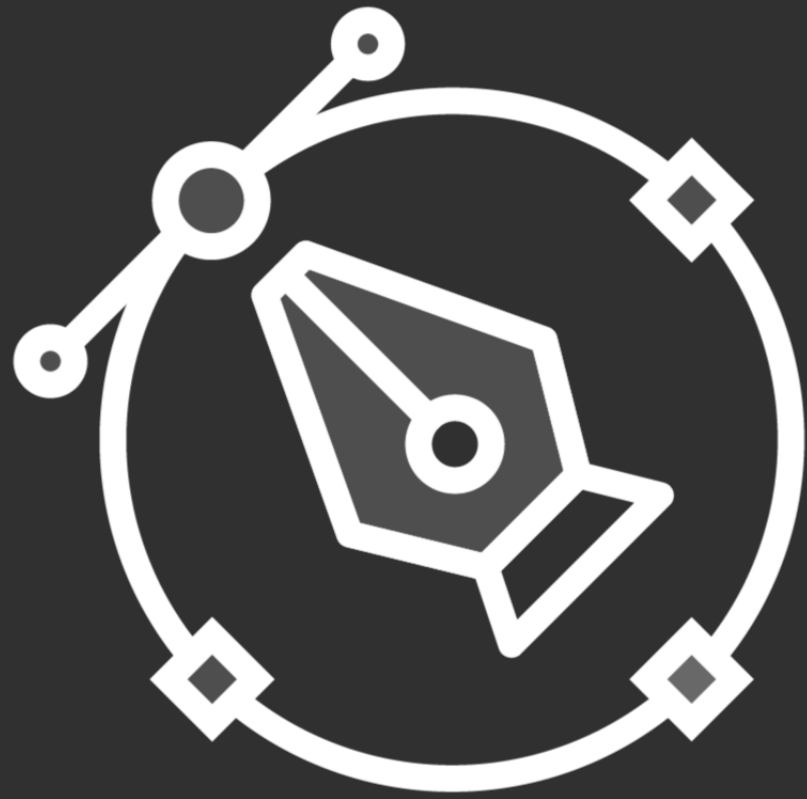


Apple's Architecture



Jailbreaking

Jailbreaking vs. Rooting



Jailbreaking
Bends the rules



Rooting
Bends and breaks the rules

Jailbreaking

**Removes
restrictions**

**Utilizes a custom
kernel**

**Allows for
customization**

**Goes against
Apple's terms and
conditions**

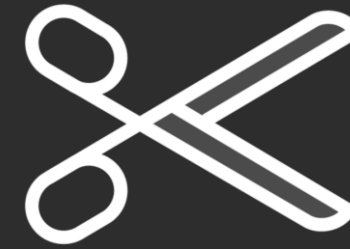
**Enhances
functionality**

Jailbreaking eliminates sandbox restrictions, allowing malicious applications to access restricted resources and data.

Jailbreaking Tools



Cydia



Yuxigon



Hexxa Plus



Sileo



ApricotiOS



Trimgo



Types of Jailbreaking

Jailbreaking Techniques

Untethered jailbreak

Tethered jailbreak

Semi-tethered jailbreak

Semi-untethered jailbreak

Types of Jailbreaking



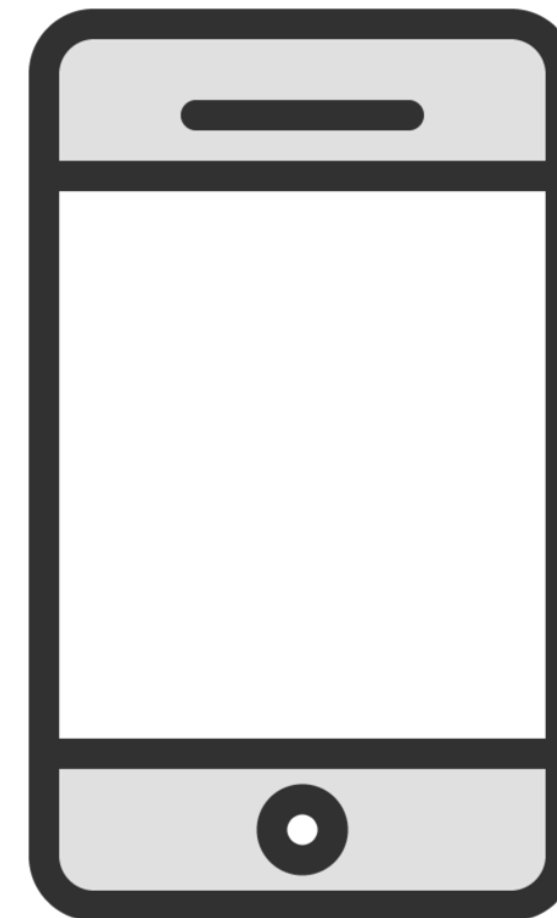
The userland exploit



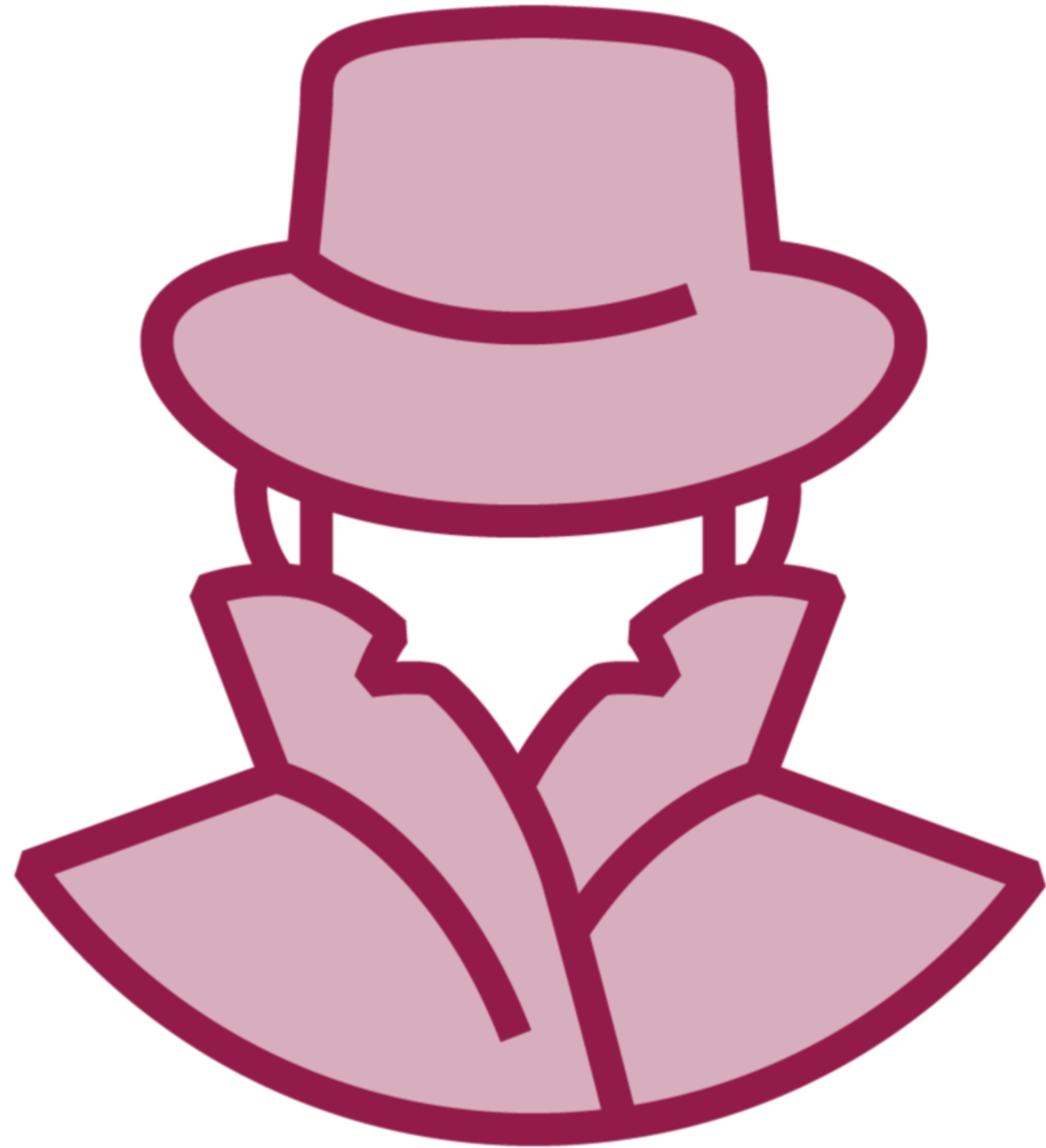
The iBoot exploit



The Boot ROM exploit



Securing Apple's Platform





Passcode lock the device

Avoid sideloading apps

Disable Javascript and add-ons from your web browser

Avoid storing sensitive data on the device

Change the default root password

Configure 'find my phone' to wipe the device if lost or stolen



Update, update, update

Disable iCloud services

Enable 'ask to join networks'

Enable erase data after 10 attempts

Turn off Siri

Turn off voice dial

And more...

Learning Check

Learning Check



Untethered jailbreak



Media layer



Userland



Boot ROM exploits



Tethered jailbreak



Up Next:
Outlining Mobile Device Management (MDM)
