

Mobile Malware and Threat Research

The Corellium Arm virtualization platform provides cybersecurity threat and research teams with never-before-possible mobile malware and threat research capabilities on virtualized iOS and Android devices. Its high accuracy, Arm-native device models enable static and dynamic mobile app and OS introspection.

It's not an emulator or simulator; it's Arm on Arm virtualization.





IoC Gathering and Threat Hunting

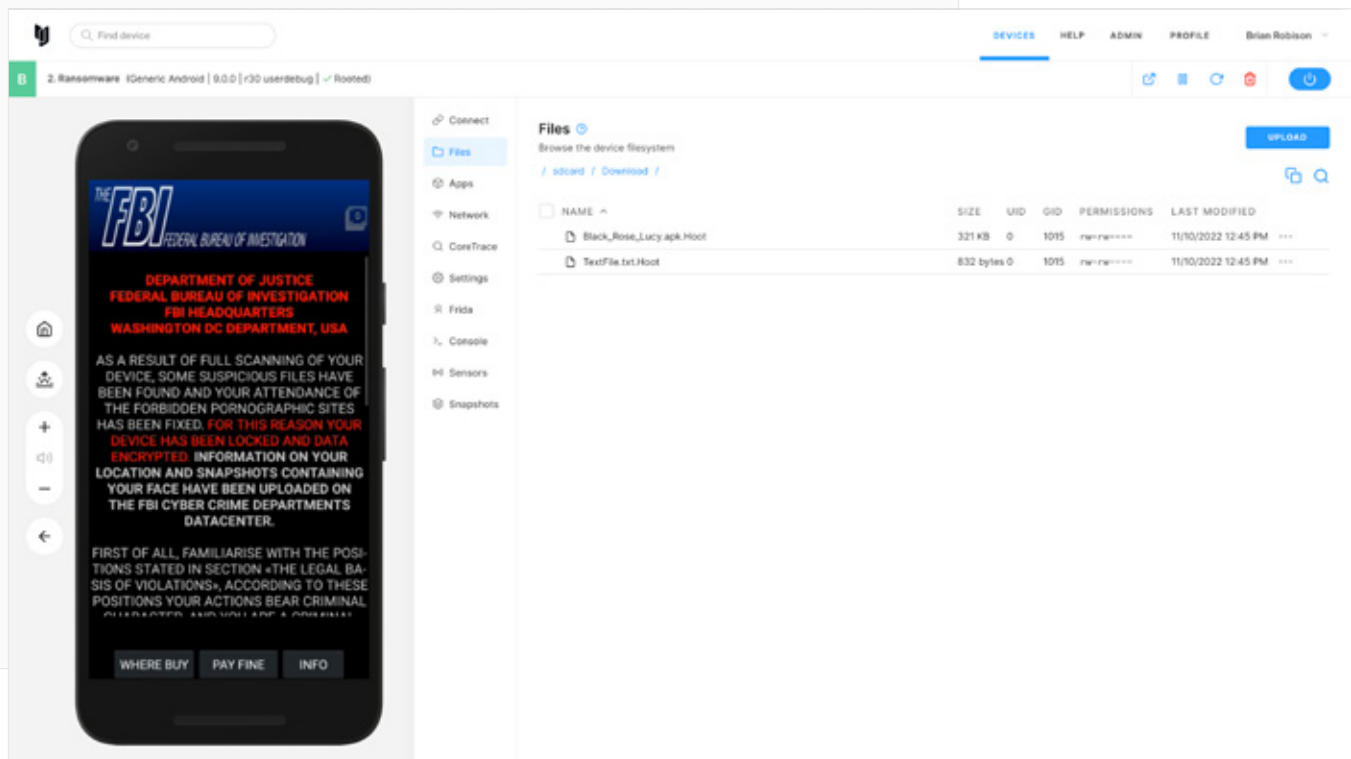
Augment static mobile malware and threat research with advanced dynamic analysis. Detonate mobile malware or actively engage with smishing and phishing scams directly from a virtual iOS or Android device. Easily change the device's physical location (GPS) to examine location-based threats, and use a local proxy with VPN connectivity to gain network connectivity anywhere in the world.



Mobile Malware Detonation and Sandboxing

Safely detonate mobile malware on sandboxed Corellium virtual devices. For mobile threat hunting, use built-in visualization tools for root access, evidence and IoC analysis, filesystem access, SSL/TLS stripped network monitoring, and mobile app debugging. A comprehensive API and USBFlux technology enables integration with leading development and security research tools such as IDA Pro, Frida, and Burp Suite.

- ✔ Detonate mobile malware and have direct access to the root filesystem for IoC gathering (Black Rose Lucy ransomware shown)



Solutions Highlights

- Malware Detonation**
Built-in network monitoring tools let you analyze encrypted C2 and app traffic instantly. CoreTrace gives you access to app syscall tracing during execution.
- Threat Hunting**
Direct root file system access for iOS and Android devices to gather IoC evidence during and after detonation.
- Sandboxing**
Sandbox with network-isolated virtual hardware for safer mobile threat analysis and malware detonation.
- Virtualization Not Emulation**
Arm-native, this is real mobile threats and malware running on virtual devices with the ability to quickly restore device snapshots.
- Spin Up Needed Devices**
Easily spin up near limitless iOS and Android devices, from past models and releases to the very latest.
- Instant Root & Jailbreak**
Root any device configuration — including the latest versions of iOS — even when no public jailbreak is available.
- Procurement**
Eliminate physical device procurement and risks by allocating virtual hardware resources to specific teams, with user and project workspace management tools.
- Collaboration**
Quickly create and deploy virtual devices across users and teams with one-click device snapshot, restore, and cloning functionality, eliminating physical device limitations.
- Control**
Simplify onboarding, role-based access (RBAC), and offboarding through centralized administration.

Industries

- ✓ Anti-Virus/EDR/XDR Vendors
- ✓ Enterprise Threat and Security Research
- ✓ Independent Research/3rd Party Testing
- ✓ Government

Roles

- ✓ Threat Researchers
- ✓ Malware Researchers
- ✓ Threat Hunters/SoC Teams
- ✓ Red & Blue Teams



Technical Capability List

Threat and Malware Research

- Easily spin up near limitless combinations of iOS and Android device, OS, and mobile apps
- Gain device root access, no need to apply additional code or tools
- Conduct research on mobile threats using any iOS version; jailbroken, rooted, or not
- Detonate and monitor mobile malware apps (IPAs and APKs) on sandboxed virtual devices
- Easily intercept C2/malware traffic and strip all SSL/TLS
- Simulate SMS (on iOS) to investigate smishing and phishing attacks
- Browse the device's file system to conduct threat hunting and gather IoCs
- Gain instant access to mobile malware app syscall tracing for dynamic analysis
- Control device sensors, GPS location, and device IDs

Conduct More Research, Faster

- Single web-based platform for both iOS and Android
- Snapshot and restore virtual devices nearly instantly
- Stop hunting the “used” market for specific devices
- No need to ship physical devices to global team members
- Eliminate time wasted with physical device maintenance

Training & Education

- Mobile threat research training
- Mobile malware research training
- Mobile app demonstration platform
- Teach mobile threat and defensive best practices

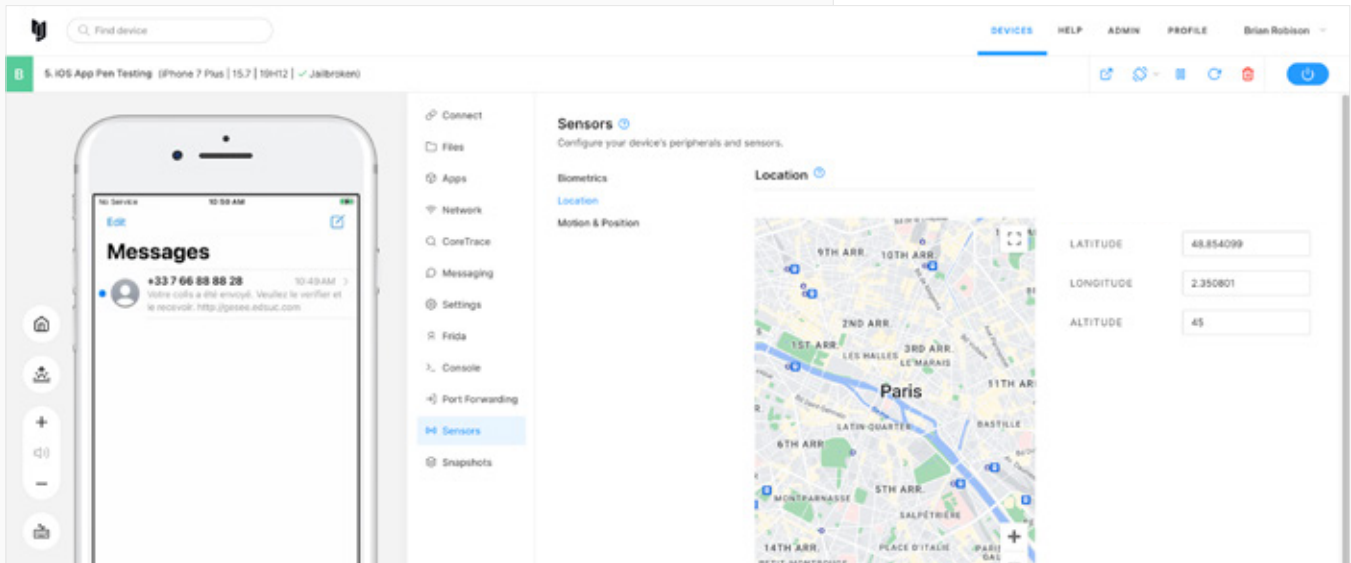
- ✔ Instantly capture unencrypted malware and C2 traffic using built-in Network Monitor (CamScanner adware shown)

The screenshot displays a web-based interface for mobile threat research. On the left, a virtual Android device is shown with a notification for a new version (5.12.5 ASAP) available. The main interface features a sidebar with navigation options like 'Connect', 'Files', 'Apps', 'Network', 'CoreTrace', 'Settings', 'Frida', 'Console', 'Sensors', and 'Snapshots'. The 'Network Monitor' section is active, showing a table of captured HTTP(S) traffic. The table has columns for INDEX, CODE, METHOD, HOST, START, and SIZE. Below the table, there are tabs for 'OVERVIEW', 'REQUEST', and 'RESPONSE', with the 'RESPONSE' tab selected, showing a hex dump and a partial HTML response for a CamScanner update notification.

INDEX	CODE	METHOD	HOST	START	SIZE
17	200	GET	api.intsig.net	Nov 10, 2022 12:47 PM	5.02 KB
18	200	GET	api.intsig.net	Nov 10, 2022 12:47 PM	1.01 KB
19	200	GET	ss-static.intsig.net	Nov 10, 2022 12:47 PM	333 B
20	200	GET	data.camscanner.com	Nov 10, 2022 12:47 PM	120 KB
21	200	GET	data.camscanner.com	Nov 10, 2022 12:47 PM	90.7 KB
22	200	GET	data.camscanner.com	Nov 10, 2022 12:47 PM	66.9 KB
23	200	GET	data.camscanner.com	Nov 10, 2022 12:47 PM	105 KB
24	200	GET	data.camscanner.com	Nov 10, 2022 12:47 PM	156 KB
25	200	GET	data.camscanner.com	Nov 10, 2022 12:47 PM	53.2 KB
26	200	GET	data.camscanner.com	Nov 10, 2022 12:47 PM	99.7 KB
27	200	GET	data.camscanner.com	Nov 10, 2022 12:47 PM	48.5 KB
28	200	GET	data.camscanner.com	Nov 10, 2022 12:47 PM	94.9 KB
29	200	GET	data.camscanner.com	Nov 10, 2022 12:47 PM	124 KB



- ✔ Quickly research location-specific smishing and phishing mobile threats without having to ship a physical device



Corellium Virtual Hardware Platform



VIRTUAL DEVICES

Arm-powered phones and IoT devices with endless OS and model combinations.

HYPERVISOR

Corellium Hypervisor for Arm (CHARM) is a type 1 hypervisor and the only one of its kind.

ARM SERVER

Virtual models run on Arm, just like real devices, combining native fidelity with on-demand availability.

• TOOLING

Simplified connection of IDE, debugging, network and security tools and comprehensive APIs.

• CONTROL

Configure device buttons, sensors, location, environment, battery, device IDs, ports, cameras and mics.

• X-RAY VISION

Powerful OS, app, file, system call, and console access and control.

• INTROSPECTION

Advanced OS, kernel and boot control and tooling.

• NETWORK ANALYSIS

HTTP/S traffic inspection, tracing, and logging.

• REPLICATION

Snapshot, clone, and restore device states.

• TEAMING

Easy project workspace management and team collaboration.

• ROOT ACCESS

Root or jailbreak devices instantly, no need to add code or apply security vulnerabilities.