# Mobile Application Testing Lab

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## Objective

* Static Analysis with MobSF: Identify insecure storage and sensitive data exposure.
* Dynamic Testing with Frida: Hook runtime functions and bypass authentication.
* IPC Testing with Drozer: Discover exposed components and test inter-process communication.

Tools

MobSF, Frida, Drozer

Target APK: DIVA apk

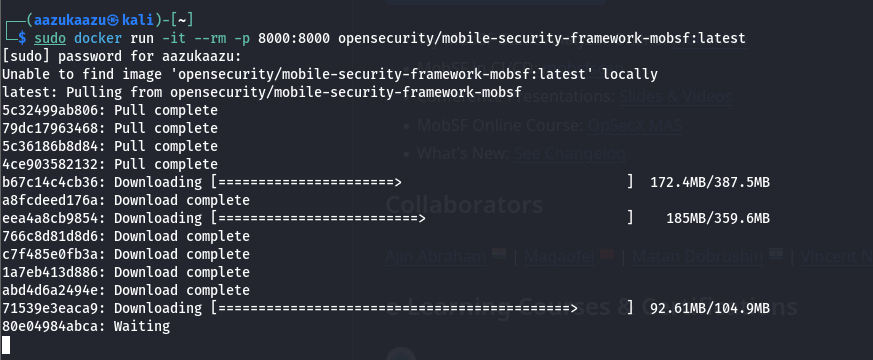
## 1. Static Analysis with MobSF: Identify insecure storage and sensitive data exposure.

### Steps:

1. Get Target apk like DIVA

2. Launch MobSF

*sudo docker run -it --rm -p 8000:8000 opensecurity/mobile-security-framework-mobsf:latest*



Once it's running, open your browser and go to *http://localhost:8000*

2. Upload DIVA.apk via the web interface

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

3. Review the Security Analysis tab

A screenshot of a computer

AI-generated content may be incorrect.

## 2. Dynamic Testing with Frida: Hook runtime functions and bypass authentication.

### Steps

1. Setup Frida

pip install frida-tools

2. On Android Emulator

Install Frida server:

adb push frida-server /data/local/tmp/

adb shell "chmod 755 /data/local/tmp/frida-server"

adb shell "/data/local/tmp/frida-server &"

3. Hook

frida -U -n DivaApplication.apk

4. Inject Script

JavaScript.js:

Java.perform(function () {

var Login = Java.use("com.testapp.LoginActivity");

Login.checkPassword.implementation = function (input) {

return true;

};

});

## 3. IPC Testing with Drozer: Discover exposed components and test inter-process communication

### Steps

1. Install Drozer

*apt install drozer*

2. On Android Emulator

Install Drozer agent APK

Start agent

Connect:

*adb forward tcp:31415 tcp:31415*

*drozer console connect*

3. Scan for IPC issues

run app.activity.info -a com.testapp

run app.broadcast.info -a com.testapp

4. Exploit

run app.activity.start --component com.testapp/.LoginActivity

## Log

|  |  |  |  |
| --- | --- | --- | --- |
| Test ID | Vulnerability | Severity | Target App |
| 1 | Insecure Storage | High | DivaApplication.apk |
| 2 | Auth Bypass (Frida) | Critical | DivaApplication.apk |
| 3 | Exported Receiver | Medium | DivaApplication.apk |