

# Mobile Application Testing

Testing native mobile applications with Sauce Labs emulators, simulators, and real devices is easy. All you need to do is:

1. Upload the application you want to test for [virtual device](#) or [real device](#) to a location where Sauce Labs can connect to it. If the application you want to test is on localhost or behind a firewall, you'll need to set up a secure [Sauce Connect](#) tunnel.
2. Update your test script with your Sauce Labs credentials and the path to the application you want to test, as shown in the example scripts in [Example Appium Scripts for iOS Mobile Application Tests](#) and [Example Appium Scripts for Android Mobile Application Tests](#).
3. Set the [desired capabilities of your test](#) for the device/operating system you want to test against, and the path to your application. The topics in [Test Configuration and Annotation](#) describe the various options for desired capabilities, or you can use our [Platform Configurator](#) to set up the desired capabilities of your test.

Topics in this section will provide you with an overview of mobile testing with Appium on Sauce, support and requirements for mobile testing, how to set up your mobile tests, and examples of mobile testing scripts in a variety of flavors.

- [Support and Requirements for Mobile App Testing](#)
- [Supported Operating Systems for Mobile Application Testing](#)
- [Live Mobile App Testing on Real Devices with Sauce Labs](#)
  - [Live Testing for Native Mobile Apps on Real Devices](#)
  - [Using Third Party Apps and Accounts for Live Testing on Real Devices](#)
- [Automated Mobile App Testing on Virtual and Real Devices with Sauce Labs](#)
  - [Automated Mobile App Testing with Virtual and Real Devices FAQs](#)
  - [Automated Mobile App Testing on Real Devices with Sauce Labs](#)
    - [Automated Testing on Real Devices](#)
      - [Appium Capabilities for Real Device Testing](#)
      - [Examples of Appium Test Setups for Real Device Testing](#)
    - [App and Project Management for Automated Testing on Real Devices](#)
      - [Uploading Your App to Real Device Storage with the Rest API](#)
      - [Creating a Real Device Project](#)
        - [Creating an ipa File](#)
      - [Versioning Real Device Projects](#)
      - [Accessing Mobile Applications for Real Device Testing](#)
      - [Installing a Remote Application on a Real Device](#)
    - [Account and Team Management for Mobile App Testing on Real Devices](#)
      - [Signing Into a Real Device Testing Account](#)
      - [Switching Between Sauce Labs and TestObject](#)
      - [Adding Users and Teams for Real Device Accounts](#)
    - [Monitoring Real Device Performance for Automated Tests](#)
    - [Real Devices REST API](#)
    - [Sauce Connect Proxy and Real Device Testing](#)
      - [FAQS for Sauce Connect Proxy and Real Device Testing](#)
- [Automated Mobile App Testing on Virtual Devices with Sauce Labs](#)
  - [Uploading and Accessing Mobile Apps for Automated Testing on Virtual Devices](#)
  - [Automated Mobile Application Testing on Virtual Devices](#)
  - [Examples of Appium Desired Capabilities for Mobile Application Tests](#)
  - [Example Appium Scripts for Android Mobile Application Tests](#)
    - [Java Example Script for Android Mobile Application Tests](#)
    - [Node.js Example Script for Android Mobile Application Tests](#)
    - [Python Example Script for Android Mobile Application Tests](#)
    - [Ruby Example Script for Android Mobile Application Tests](#)
  - [Example Appium Scripts for iOS Mobile Application Tests](#)
    - [Java Example Script for iOS Mobile Application Tests](#)
    - [Node.js Example Script for iOS Mobile Application Tests](#)
    - [Python Example Script for iOS Mobile Application Tests](#)
    - [Ruby Example Script for iOS Mobile Application Tests](#)
- [Mobile App Testing with Native Frameworks on Virtual and Real Devices with Sauce Labs](#)
  - [Using Sauce Runner with Native Frameworks for Real Device Testing](#)
    - [Using Espresso for Real Device Testing](#)
    - [Using XCUITest for Real Device Testing](#)
    - [Command Reference for Sauce Runner for Real Devices](#)
    - [Creating a Sauce Runner for Real Devices Configuration File](#)
    - [Examples of Device Specifications for the Real Device Runner](#)
  - [Using Sauce Runner with Native Frameworks for Virtual Device Testing](#)
    - [Installing Sauce Runner for Virtual Devices](#)
    - [Uploading the App and Test Files to Storage Before Execution](#)
    - [Command Reference for Sauce Runner for Virtual Devices](#)
    - [Using Espresso for Virtual Device Testing](#)
      - [Troubleshooting Espresso Testing for Virtual Devices](#)
- [Testing with Virtual USB on Real Devices](#)
  - [Using Early Versions of Sauce Labs Virtual USB](#)
- [Mobile App Testing API](#)
  - [Accessing the Mobile App Testing API](#)
  - [Device Methods - Real Devices](#)

- Job Methods - Real Devices