

## Device Testing Using Appium - Robot Framework (Linux)

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**OS:** Ubuntu

### **Prerequisite:**

- ✓ NodeJs
- ✓ Appium Server
- ✓ Appium-Inspector
- ✓ Android Studio, Android Emulator, adb
  - ◆ Install using snap: sudo
    - **sudo apt install snapd** (this is install snapd if you don't have one)
    - **snap install android-studio**
  - ◆ Create android emulator
  - ◆ ADB
- ✓ Python 3.9x or higher
- ✓ PyCharm
- ✓ Robot Framework

### **Appium Server**

Installation: **appium server with npm: npm install -g appium**

Running: **appium --log-level error --port 4750 --command-timeout 120 --session-override**

Ports: you can change port number as you want it

Complete about appium read here: <https://www.npmjs.com/package/appium>

### **Appium-Inspector** (*application inspector*)

Download & Installation:

- ✓ Chek the latest version here : <https://github.com/appium/appium-inspector>
- ✓ Download single file release: v2023.6.1 here:  
<https://github.com/appium/appium-inspector/releases/download/v2023.6.1/Appium-Inspector-linux-2023.6.1.AppImage>

Running: **./Appium-Inspector-linux-2023.6.1**

## **Android Studio & Emulator**

Create Emulator:

- ✓ If you are using “Android Studio Flamingo|2022.2.1”
  - Access “Device Manager”
  - Create device
  - Select hardware
  - Download the operating system if not exist
  - Supply AVD Name
  - Click finish

Running:

- ✓ Go to Android Studio emulator directory (`~/Android/Sdk/emulator/`):
- ✓ Run from terminal: `./emulator -avd Galaxy_Nexus_API_33 -writable-system -noaudio`

## **Python**

Installation : <https://www.python.org/>

## **PyCharm**

Installation : <https://www.jetbrains.com/products/compare/?product=pycharm&product=pycharm-ce>

## **Robot Framework**

Installation:

- ✓ Create python virtualenv: `python3 -m venv ~/venvs/automation`
- ✓ Activate virtualenv: `source ~/venvs/automation/bin/activate`
- ✓ Open the project settings in PyCharm and install the dependencies (File-Settings-Project), click “+” and add python packages below:
  - selenium
  - robotframework-appiumlibrary
  - robotframework-seleniumlibrary

Test Setup:

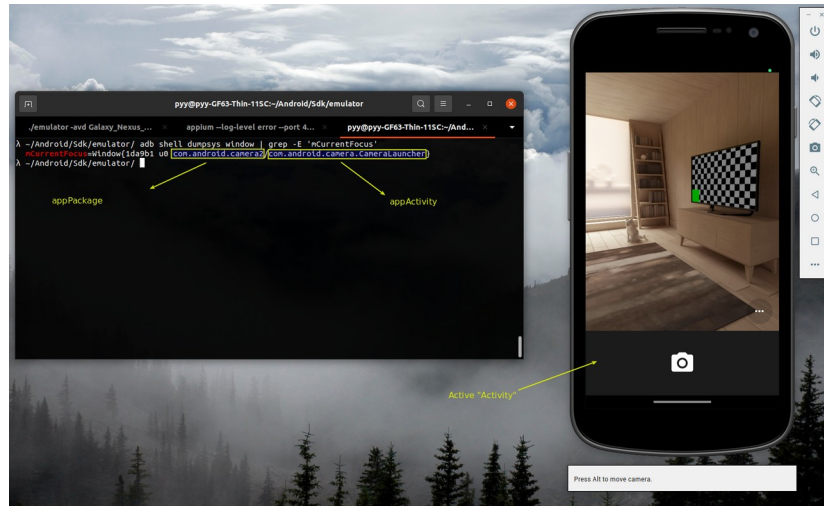
- ✓ Open terminal & run emulator: `./emulator -avd Galaxy_Nexus_API_33 -writable-system -noaudio`
- ✓ Open new tab and select the device / emulator by get the UDID:

## ~/ adb devices

List of devices attached  
emulator-5554 device

On this example “*emulator-5554*” is the UDID

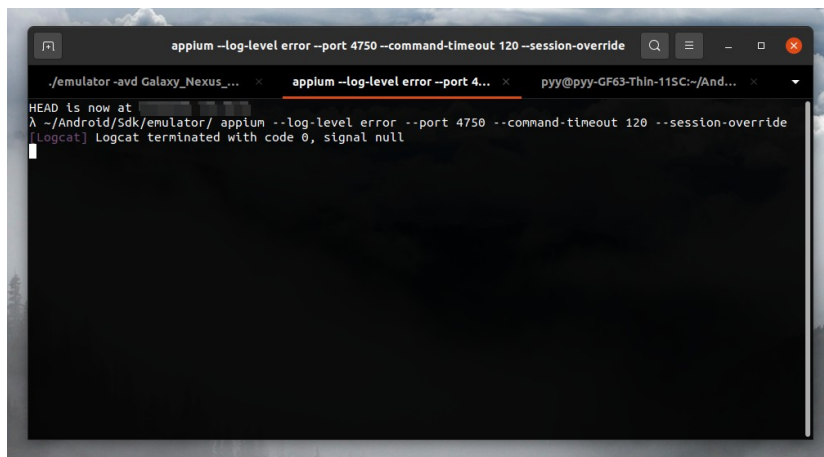
- ✓ Get the application appPackage & appActivity



To get active activity: `adb shell dumpsys window | grep -E 'mCurrentFocus'`

- ✓ Run appium-server:

- `appium --log-level error --port 4750 --command-timeout 120 --session-override`



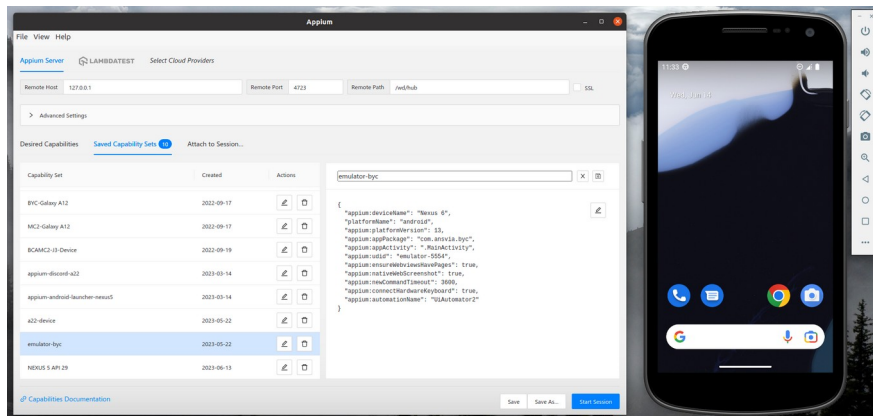
- ✓ Run appium-inspector:

- Create device capabilities:

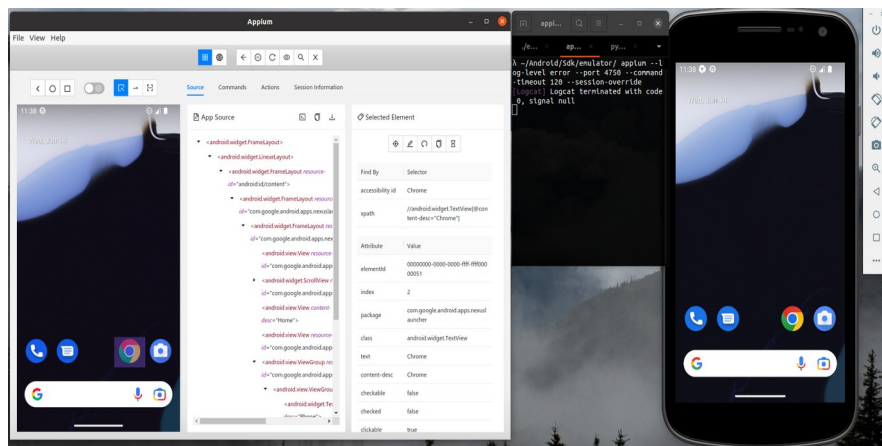
```
{
  "appium:deviceName": "Nexus 6",
  "platformName": "android",
  "appium:platformVersion": 13,
  "appium:appPackage": "com.android.camera2",
  "appium:appActivity": "com.android.camera.CameraLauncher",
  "appium:udid": "emulator-5554",
  "appium:ensureWebviewsHavePages": true,
  "appium:nativeWebScreenshot": true,
  "appium:newCommandTimeout": 3600,
  "appium:connectHardwareKeyboard": true,
  "appium:automationName": "UiAutomator2"
}
```

}

In order to connect the appium-server, appium-inspector must pass the capabilities



Appium-Inspector: Not Connected



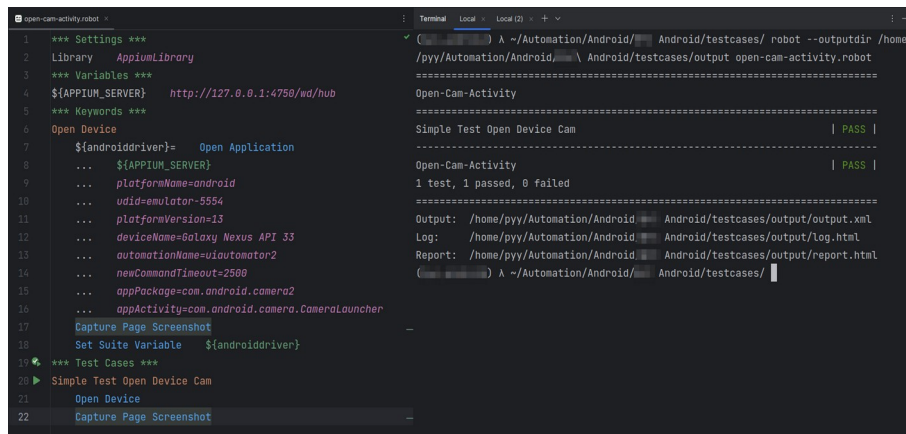
Appium-Inspector: Connected

➤ After “Appium-Inspector” is connected we can do :

- ◆ Inspect app activity elements
- ◆ Do and record actions (click button, input text, etc)

✓ Write Simple Code

➤ Code & Running Result



## ➤ Robot Framework Test Result Log

### Open-Cam-Activity Log

20230615 00:32:44 UTC+08:00  
4 seconds ago

REPORT

#### Test Statistics

All Tests	Total	Pass	Fail	Skip	Elapsed	Pass / Fail / Skip
	1	1	0	0	00:00:04	

No Tags	Total	Pass	Fail	Skip	Elapsed	Pass / Fail / Skip
	1	1	0	0	00:00:04	

Open-Cam-Activity	Total	Pass	Fail	Skip	Elapsed	Pass / Fail / Skip
	1	1	0	0	00:00:04	

#### Test Execution Log

Open-Cam-Activity

Full Name: Open-Cam-Activity  
Source: /home/jyy/automation/Android/TC-Android/testcases/open-cam-activity.robot  
Start / End / Elapsed: 20230615 00:32:44.507 / 20230615 00:32:44.665 / 00:00:04.098  
Status: 1 test total, 1 passed, 0 failed, 0 skipped

00:00:04.098

Simple Test Open Device Cam

Full Name: Open-Cam-Activity.Simple Test Open Device Cam  
Start / End / Elapsed: 20230615 00:32:44.652 / 20230615 00:32:44.665 / 00:00:04.044  
Status: PASS

00:00:04.044

Open Device

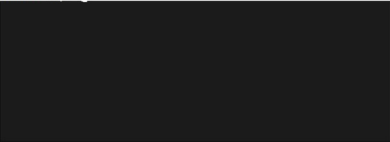
Start / End / Elapsed: 20230615 00:32:40.421 / 20230615 00:32:44.477 / 00:00:03.856  
Keywords: [androiddriver] + newApp Open Application [\${APPLIUM\_SERVER}], platformName=android, uid=emulator-5554, platformVersion=13, deviceName=Galaxy Nexus API 33, automationName=uiAutomator2, newCommandTimeout=2500, appPath=/system/priv-app/com.android.camera2/com.android.camera2.Camera.Camera2Launcher

00:00:03.856

AppiumKey Capture Page Screenshot

Documentation: Takes a screenshot of the current page and embeds it into the log.  
Start / End / Elapsed: 20230615 00:32:44.599 / 20230615 00:32:44.477 / 00:00:00.181  
00:32:44.476 (INFO)

00:00:00.181



Appium...AppImage

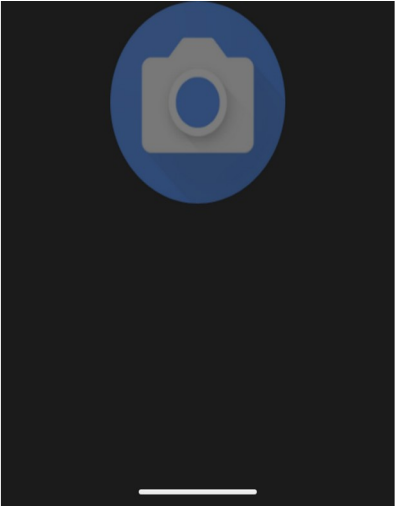
Appium...AppImage

Show all

AppiumKey Capture Page Screenshot

Documentation: Takes a screenshot of the current page and embeds it into the log.  
Start / End / Elapsed: 20230615 00:32:44.478 / 20230615 00:32:44.665 / 00:00:00.187  
00:32:44.664 (INFO)

00:00:00.187



Appium...AppImage

Appium...AppImage

Show all

AppiumKey Capture Page Screenshot

Documentation: Takes a screenshot of the current page and embeds it into the log.  
Start / End / Elapsed: 20230615 00:32:44.478 / 20230615 00:32:44.665 / 00:00:00.187  
00:32:44.664 (INFO)

00:00:00.187



Appium...AppImage

Appium...AppImage

Show all

➤ Robot Framework Test Result Report

Open-Cam-Activity Report

Generated  
20230615 00:32:44 UTC+07:00  
9 minutes 12 seconds ago

Summary Information

Status:  
Start Time:  
End Time:  
Elapsed Time:  
Log File:

All tests passed  
20230615 00:32:40.567  
20230615 00:32:44.665  
00:00:04.098  
[log.html](#)

Test Statistics

Total Statistics	Total	Pass	Fail	Skip	Elapsed	Pass / Fail / Skip
All Tests	1	1	0	0	00:00:04	<div></div>

Statistics by Tag	Total	Pass	Fail	Skip	Elapsed	Pass / Fail / Skip
No Tags						<div></div>

Statistics by Suite	Total	Pass	Fail	Skip	Elapsed	Pass / Fail / Skip
Open-Cam-Activity	1	1	0	0	00:00:04	<div></div>

Test Details

AllTagsSuitesSearch

Tag: -- Select --