

# Android Phone Screen Projection to your computer

For CommCare apps on android phones, projecting the phone's screen using a computer can be a useful aid in training. Here are the steps on how to project the screen on Windows and Mac. Linux devices might work with the same process, but it has not been tested for those platforms.

Some trainings can be held using the Bluestacks Emulator as described on [Demo CommCare for Android on your Computer](#), but the emulator has poor support for languages other than English. It also forces the app to be in Landscape mode. While setting up android screen projection is a longer process, it yields much better results as users see exactly the same screen as their own phones would show.

- [Windows](#)
  - [MyMobiler](#)
  - [Wondershare MirrorGo](#)
  - [Vysor](#)
  - [AirDroid](#)
- [Macintosh - BBQScreen](#)

## Older methods

Tools for projecting the phone screen (use any one)

- 1. [Droid@Screen](#) software
- 2. [AndroidScreenCast](#) software
- 3. [Android-Screen-Monitor-\(ASM\)](#)

## Windows

A couple of different options are listed, since individual devices or networks may not work with certain options.

### MyMobiler

Vysor has stopped working on most machines because of a WebGL issue in Chrome. [MyMobiler](#) is an alternative that does the job pretty well.

1. Download the PC version [here](#)
2. Download the Android version [here](#); alternatively search for 'WiFi Keyboard+Screen Capture' by MyMobiler on the Play Store
3. Follow the instructions outlined in [this](#) page, and you should be good to go!

### Wondershare MirrorGo

Another alternate for mirroring you Android phone is [Wondershare MirrorGo](#).

Some of the benefits of Wondershare MirrorGo over other tools are:

1. You only need to download it on your PC, no installation needed for the Android device. Installation is pretty straightforward but if you face any issue, check out [this](#) video for step by step guide.
2. Works offline and easy to use. The app detects the Android device pretty soon (compared to other similar tools) after connecting.
3. It is a freeware that offers some of the useful Vysor Pro features in the package. Some of these features like full screen, screen recording etc. are quite helpful during demos.

NOTE: Wondershare has a time limit of 30 mins per day for mirroring on the free account. I found a lifetime account for Wondershare online. You may use the following details to log in: login email: [giveawayoftheday@wondershare.cn](mailto:giveawayoftheday@wondershare.cn) pass: DB644305174FB5300AE75F609D8D984E

### Vysor

1. Add [Vysor](#) as an app on Chrome. It's a quick process. (You may need to install universal drivers, you can find those here: <http://www.koushikdutta.com/post/universal-adb-driver>)
  2. Connect mobile device with USB debugging on. (To turn on USB debugging, go under Developer Options in Settings. To enable Developer Options, press Build number 7 times - under "About phone" in Settings)
  3. Allow debugging on the popup that comes on the phone.
  4. Vysor should then start showing the phone screen.
  5. Vysor lets the user project the screen and also control the phone from the PC.
- **Note:** Vysor is not compatible with some devices, such as certain Samsung tablets/phones
    - Known to work with Vysor: Samsung Tab 4 8" tablets
  - **VYSOR DEBUGGING TIPS** - If you are having trouble getting your device to connect with Vysor, before giving up, try these things:
    - If you are on an Android 6 device or higher, you will need to switch the connection mode between your device and the computer. You can do this by swiping down from the top of your screen when the device is unlocked and connected to the computer, and then clicking on the notification bar that says "USB for charging", and selecting "File transfers" instead of "Charging".
    - Go to Chrome -> Advanced Settings, and then check Hardware Acceleration

### AirDroid

1. Add [Airdroid](#) as an app on Chrome.
2. Install the Airdroid app on your mobile device from the Google Play store.
3. Open the app on Chrome and your device.
4. Click on the QR code icon on the mobile device and then scan the QR code in Chrome.

5. Click on the Screenshot app on Airdroid in Chrome.
6. When the message pops up on your device asking for permission to share the screen, choose Start Now.

## Macintosh - BBQScreen

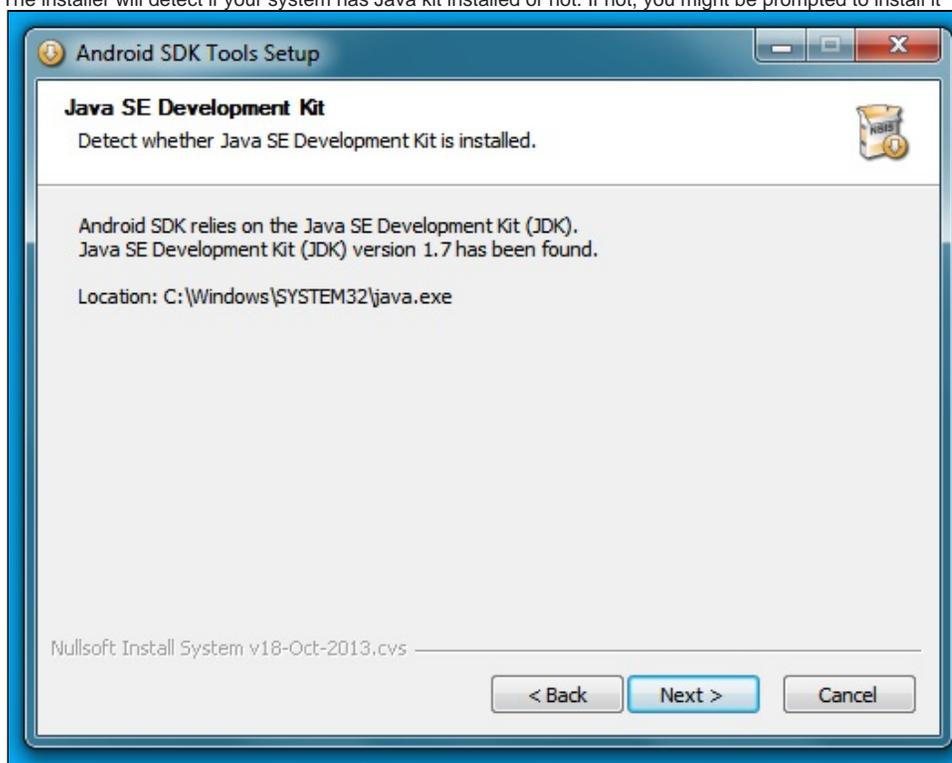
1. Setup the mobile: Download the [BBQScreen](#) app from Google Play. Costs \$4.49
2. Setup Mac: Download the BBQScreen desktop application from the BBQScreen website: <https://screen.bbqandroid.org/> Unless your phone is rooted, once it is connected, you will need to "Start USB Service" and "Connect via USB" for this to work, as well as have debugging enabled on your phone.

## Older methods

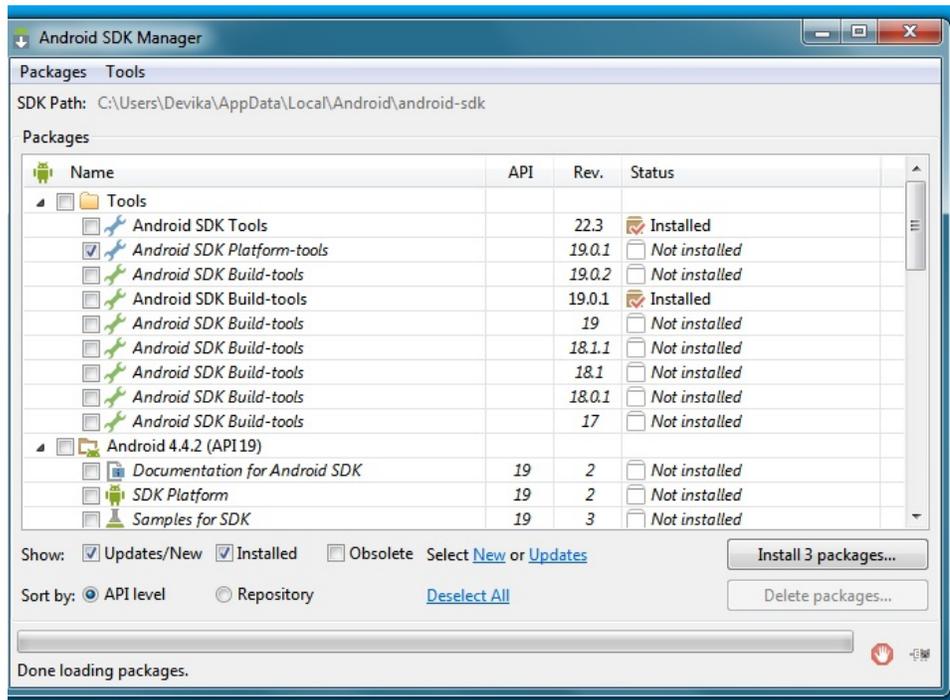
NOTE: This requires downloading a lot, 100 MB+. Do this on a good internet connection.

Steps:

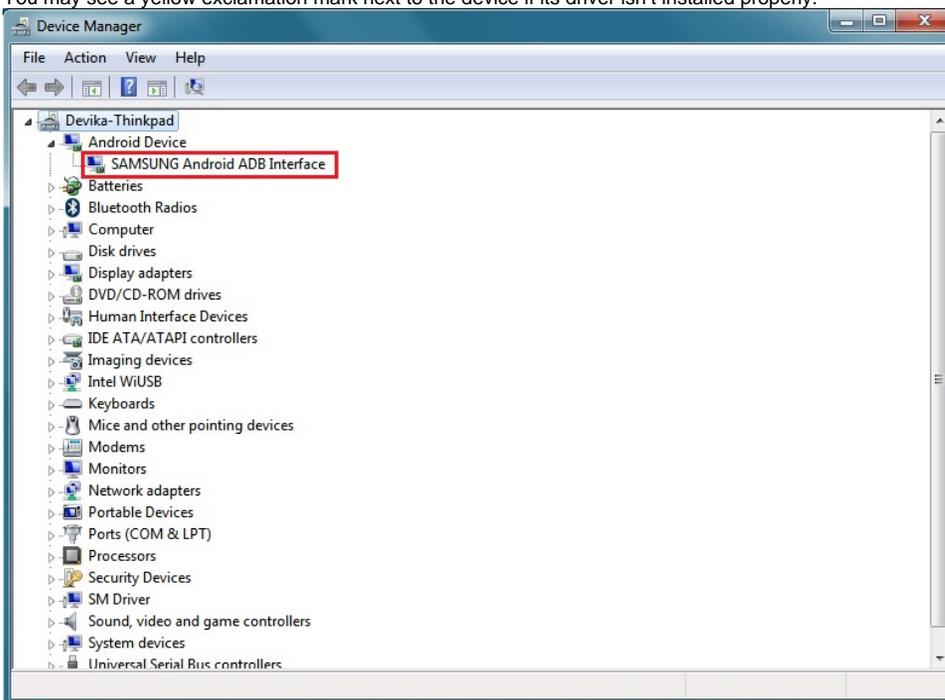
1. **Download SDK Tools from Android developers website.** Link: <http://developer.android.com/sdk/index.html#download> At the bottom of the page, under SDK tools only, download the installer for Windows.  
(File size: Around 135 MB, do not download the large Android Studio files) (SDK Tools are needed to use the [ADB tool](#) that lets you communicate with an emulator or Android device.)
2. Install SDK Tools.
  - a. The installer will detect if your system has Java kit installed or not. If not, you might be prompted to install it



- b.
  - c. Click on Next, check path and install.
  - d. On last screen, check Start SDK Manager. You need to right click and **Run as Administrator**.
3. In Android SDK Manager,
    - a. Check these three packages (all should be checked by default on a fresh install, uncheck everything else): Tools\Android SDK Platform Tools, Extras\Android Support Library and Extras\Google USB Driver.
    - b. If you get an error that it couldn't write to the directory, it's because you need to close and re-open SDK Manager as **Run as Administrator**.



- c.
- d. Accept license and install. The installation should take only a few minutes on a decent internet connection.
4. **On your Android device, go to Settings -> Developer Options -> Check USB Debugging. USB Debugging is a required feature for android screen projection.**
  - a. To enable developer options if its not in settings, go to about, go to the build, and tap the build number 7 times.
5. Connect your device to the computer using a USB cable.
6. Check if the device driver is installed.
  - a. Open the Device Manager (click Start, type Device Manager, and press Enter), locate your device, right-click it and select Properties. You may see a yellow exclamation mark next to the device if its driver isn't installed properly.



- b.
- c. The device manufacturer may provide a downloadable driver package for your device. Or you can use the Google USB driver that we installed in Step 3 (Nexus devices should use this option).
- d. **For some devices, the Google USB driver does not work and you might have to search online for the right driver. For Samsung devices, installation of Samsung Kies automatically installs the correct drivers for your device**  
**E.g. for the Samsung Duos S GT-S7562, you can download Samsung Kies at <http://www.samsung.com/ae/support/model/GT-S7562UWAXSG-downloads>.**
7. After successfully installing the driver, the Device Manager should now indicate the device driver is installed. If not, you can try re-starting everything.

# Tools for projecting the phone screen (use any one)

## 1. Droid@Screen software

1. Droid@Screen is a tool that will show the screen of your phone, once all previous steps have been completed (i.e. drivers installed, usb debugging enabled, etc).
2. Download latest version of Droid@Screen, file size is around than 1.9 MB. <http://droid-at-screen.org/download.html>
3. Open the downloaded file and set ADB path. On the test sytem, the path looked like this: `AppData\Local\Android\android-sdk\platform-tools\adb.exe`.  
You can search for platform-tools folder using the file explorer (accessed when you hit the "... " button) and use that path e.g. `C:\Users\Stella\AppData\Local\Android\android-sdk\platform-tools\adb.exe`
4. Whenever you want to project the device, start Droid@Screen (using the same downloaded file) and plug in your device. Droid@Screen will automatically start showing the screen.
5. Your computer screen can then be projected on a bigger screen using a projector.

## 2. AndroidScreenCast software

**Warning: AndroidScreenCast needs internet connectivity to start because it downloads the latest application from Google code base every time it starts. If you don't have internet connectivity, you will get an error saying 'Unable to Launch Application'. If you want an application that works in offline setting, try the 'Android-Screen-Monitor-(ASM)' application mentioned further below.**

1. If Droid@Screen doesn't work, which can happen in some cases, another tool called AndroidScreenCast can be used. Both tools do the same job.
2. Download AndroidScreenCast (.jnlp file) from: <http://androidscreencast.googlecode.com/svn/trunk/AndroidScreencast/dist/androidscreencast.jnlp>
3. Change Java security settings on your computer (*one time process*)
  - a. Click on Start -> type 'configure java' in the search box.
  - b. 'Configure Java' should show up in results, click on that.
  - c. Click on Security tab -> reduce Security Level to Medium.
  - d. Save the settings by hitting 'OK'.
4. Connect your phone to computer using usb cable (also double check that USB debugging is enabled on the phone, as mentioned in previous steps).
5. **You need to first run the 'adb devices' (needs to be done every time you connect your phone via usb).**
  - a. Open command prompt
  - b. Navigate to the folder containing adb.exe and type 'adb devices' then enter. Typing the full path to adb file also works, you don't need to explicitly navigate to adb folder in that case. eg "C:\Program Files (x86)\Android\android-sdk\platform-tools\adb.exe" devices
  - c. The command lists all the devices attached to your computer. Make sure your phone is listed in the results. It should show some id of your phone as status as 'device'. Below is a sample screen shot.
6. Start AndroidScreenCast by double clicking on the 'androidscreencast.jnlp' file. Ignore any security warnings given by Java. You should see the screen of your phone!
7. You can then connect your laptop to a projector for doing a demo or training or whatever.

## 3. Android-Screen-Monitor-(ASM)

1. Download from: [http://dmzilla.com/files/display-android-on-windows-pc/%5bDMZilla%5d-Android-Screen-Monitor-\(ASM\).jar](http://dmzilla.com/files/display-android-on-windows-pc/%5bDMZilla%5d-Android-Screen-Monitor-(ASM).jar)
2. Follow instructions here (especially Step 5): <http://dmzilla.com/2014/07/21/how-to-display-or-mirror-an-android-device-screen-on-pc-no-root/>