










Types of Device Emulator

Name	Official	Platform	Type	Browser testing	Native Testing	Compatibility
iOS Simulator	Official	iOS	Simulator	Safari (only)	Objective – C	
Android Emulator	Official	Android	Emulator	Android – Browser others	Java	  
Samsung Galaxy Tab Add-on	Official	Android	Add-on	Android – Browser others	Java	  
Windows Phone 7	Official	Windows Phone	Emulator	IE	Silverlight	
BlackBerry Simulators	Official	RIM OS	Emulator	RIM Browsers – others	Java	



Android SDK Emulator



Android SDK Emulator

- Behaves like a real Android device (in most cases) and allows you to test the application without having a real device
- You can configure the version of Android system, the size of SD card, the screen resolution and other relevant settings

- **Limitation**

- Cannot connect via USB port
- Camera and video
- Phone
- Bluetooth
- ...



How to install

- **System Requirements**

- Windows XP (32-bit), Vista (32 – or 64 bit), or Windows 7 (32- or 64-bit)
- Mac OS X 10.5.8 or later (x86 only)
- Linux

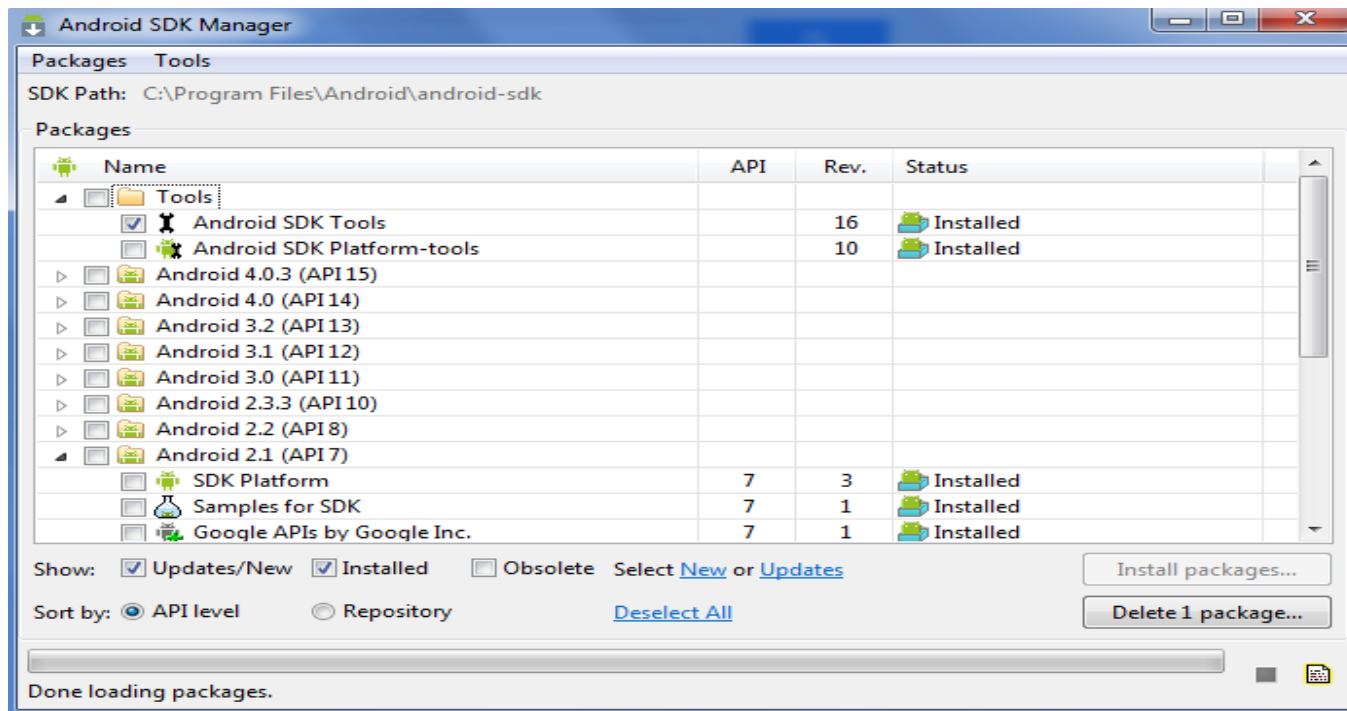
- **Download Android SDK**

- Go to <http://developer.android.com/sdk/index.html> and select a new SDK starter package for your OS (We select the package for Windows here)

Platform	Package	Size	MD5 Checksum
Windows	android-sdk_r16-windows.zip	29562413 bytes	6b926d0c0a871f1a946e65259984701a
	installer_r16-windows.exe (Recommended)	29561554 bytes	3521dda4904886b05980590f83cf3469
Mac OS X (intel)	android-sdk_r16-macosx.zip	26158334 bytes	d1dc2b6f13eed5e3ce5cf26c4e4c47aa
Linux (i386)	android-sdk_r16-linux.tgz	22048174 bytes	3ba457f731d51da3741c29c8830a4583

How to install (cont.)

- Run "installer_r16-windows.exe"
- Choose packages to install (For ex.: Android 2.1). This step maybe takes a long time and should wait...



How to install (cont.)

- **Create new Android Virtual Device (AVD)**

- Go to Windows → Android SDK Tools → AVD Manager → New
- Enter Name, Target
- Enter the SD card size
- Select the Skin
- Snapshot: can select Enabled.

This will make the second start of the virtual device much faster.

- Create AVD

Create new Android Virtual Device (AVD)

Name:

Target:

CPU/ABI:

SD Card:

☒ Size:

☐ File:

Snapshot:

☒ Enabled

Skin:

☒ Built-in:

☐ Resolution:

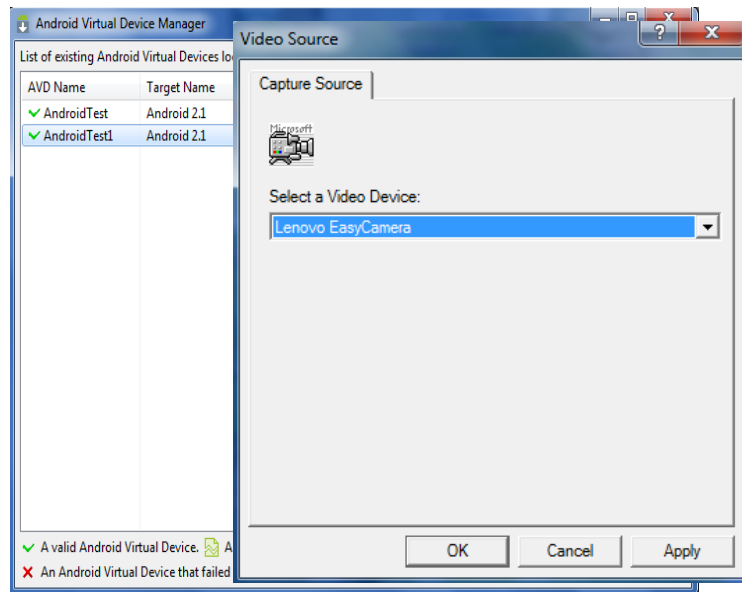
Hardware:

Property	Value	
Abstracted LCD density	240	
Max VM application heap size	24	

☐ Override the existing AVD with the same name

How to install (cont.)

- Start and launch the Virtual Device



How to install software/application on Emulator

- There are 2 ways:
 - Install directly on the Emulator
 - Install from file on machine

Install application directly on Emulator

- Go to android freeware websites, for ex:

<http://www.androidfreeware.net/>

<http://www.freewarelovers.com/android>

<http://www.freeware4android.net/>

- Find and download an application
- Install the application

Installation from an application file on machine

- Copy the android application file (which is .apk file) to the **C:\Program Files\Android\android-sdk\platform-tools**
- Open the command window, change the path to the SDK folder
- Enter the command: **adb install Dolphin_Browser_HD_7.3.0.apk**
(Dolphin_Browser_HD_7.3.0.apk is a browser application to install)
- After finishing, the Application has been installed and its icon will be displayed to the Emulator.

Note:

- You should also set the PATH environment variable to point to the tools directory in the Android SDK directory so that you can use **adb** directly on the command line.
- The Emulator must be running when installing

Install from a file on machine (cont.)

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Owner>cd C:\Program Files\Android\android-sdk\platform-tools

C:\Program Files\Android\android-sdk\platform-tools>adb install Dolphin_Browser_HD_7.3.0.apk
* daemon not running. starting it now on port 5037 *
* daemon started successfully *
error: device offline

C:\Program Files\Android\android-sdk\platform-tools>adb install Dolphin_Browser_HD_7.3.0.apk
84 KB/s (3617923 bytes in 41.843s)
pkg: /data/local/tmp/Dolphin_Browser_HD_7.3.0.apk
Success

C:\Program Files\Android\android-sdk\platform-tools>
```

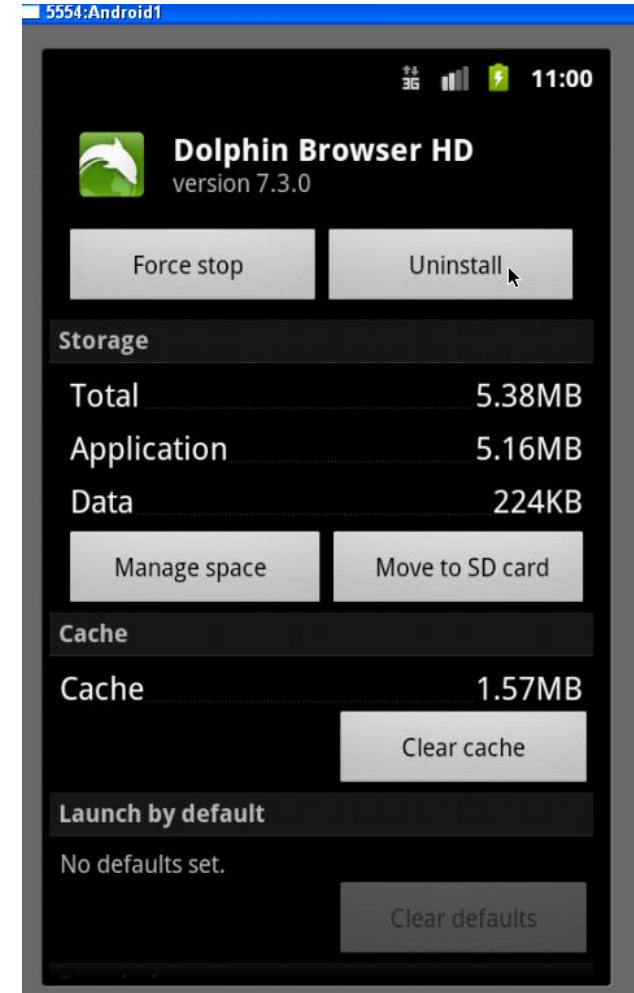


Remove an application from the Emulator

- Directly, go to Manage Application → select the application and Uninstall.
- Indirectly, open the command window, change the path to the SDK folder
- Run the command: **adb shell rm**
data\app\Dolphin_Browser_HD_7.3.0.apk
(Dolphin_Browser_HD_7.3.0.apk is a browser application to install)
- If there is no errors, the application has been removed.

Note: The Emulator must be running when removing

- After finishing, the Application has been installed to the Emulator.



Reference

- <http://www.mobilexweb.com/emulators>
- <http://developer.android.com/sdk>
- <http://en.wikipedia.org/wiki/Emulator>
- <http://www.dbuggr.com/batzz/install-run-android-applications-android-emulator/>