

Samsung
TECH INSTITUTE



Módulo 5.

Entorno Desarrollo Android

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Resumen

IDE Fatal Errors

← 1 of 1 → Exception in plugin **Android Support**. 5 minutes ago. Occurred once since the last clear. Unread. [Disable plugin...](#)

Comments Details

Error message:

```
null
```

Please fill in any details that may be important: steps to reproduce, what were you doing when problem occurred, etc.:

Close Clear Report to Google

Módulo 5. Entorno Desarrollo Android

Instalación Entorno de Trabajo

Android SDK manager

Android virtual device (AVD) manager

Ejecución en dispositivo

INSTALACIÓN ENTORNO DE TRABAJO

Instalación Entorno de Trabajo

- Esta sección muestra como instalar el kit de desarrollo software Android (SDK) y todo el software relacionado que necesitaremos para el desarrollo.
- A la finalización podremos ejecutar una aplicación básica en un emulador y en un dispositivo.
- El punto inicial donde encontrar información actualizada y las herramientas necesarias es el sitio de Desarrolladores de Android:

<http://developer.android.com>.

Android Studio Bundle



Design **Develop** Distribute

Developer Console

Training API Guides Reference **Tools** Google Services Samples Preview

Android Studio

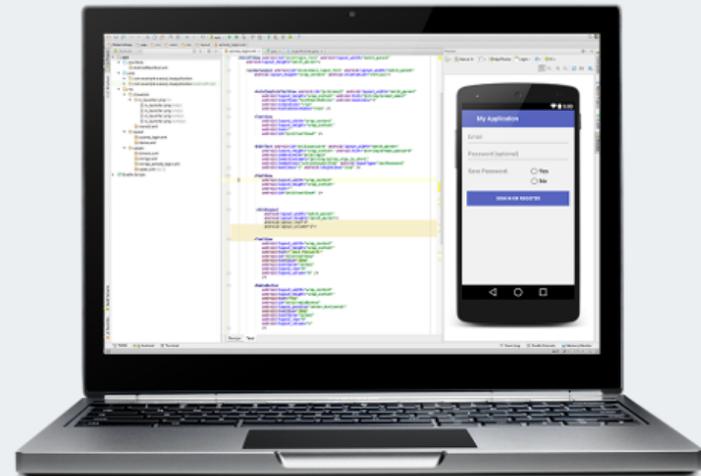
The Official IDE for Android

Android Studio provides the fastest tools for building apps on every type of Android device.

World-class code editing, debugging, performance tooling, a flexible build system, and an instant build/deploy system all allow you to focus on building unique and high quality apps.

DOWNLOAD ANDROID STUDIO 2.0
FOR MAC (279 MB)

> [Read the docs](#) > [See the release notes](#)

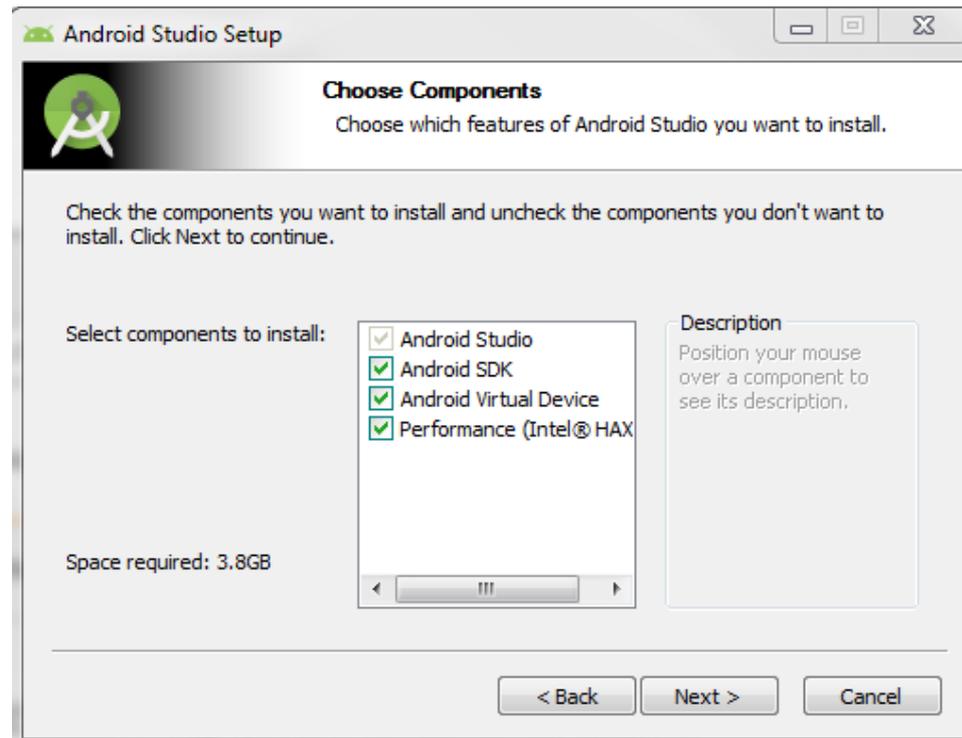


<http://developer.android.com/intl/es/sdk/index.html>

Android Studio Bundle

- Una vez descargada el bundle del Android Studio, ejecutamos el instalador, que contiene:

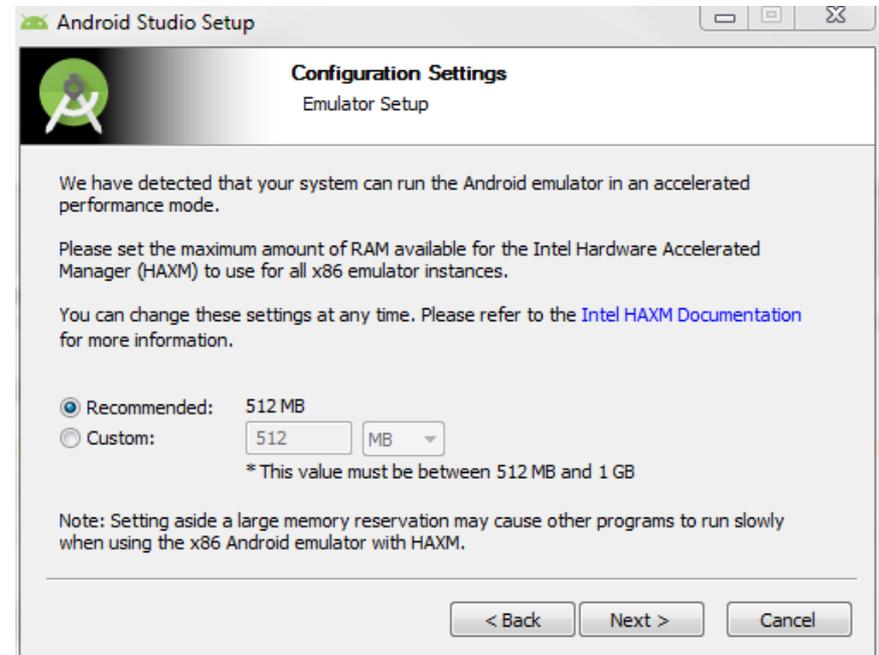
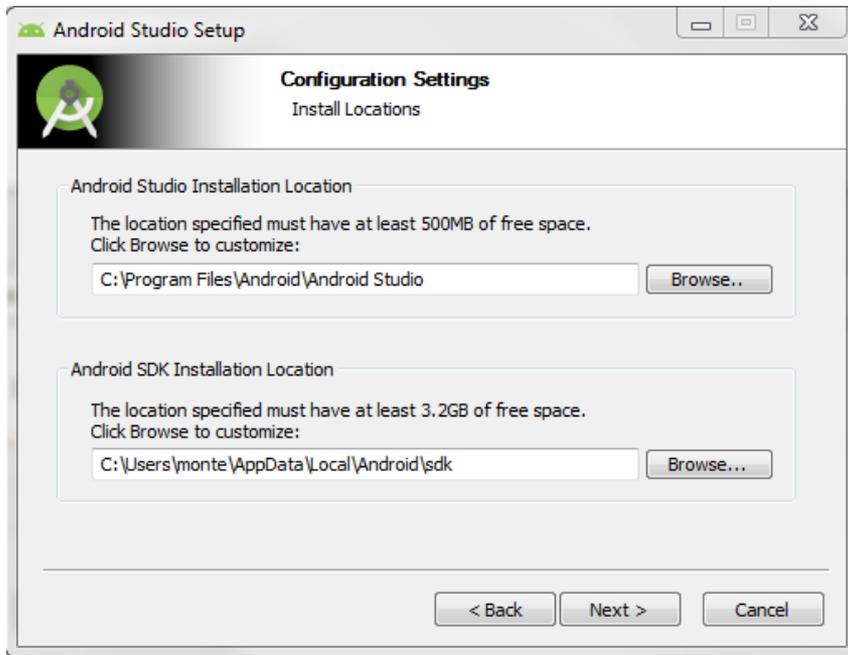
- Android Studio
- Android SDK
- Android Virtual Device
- Performance



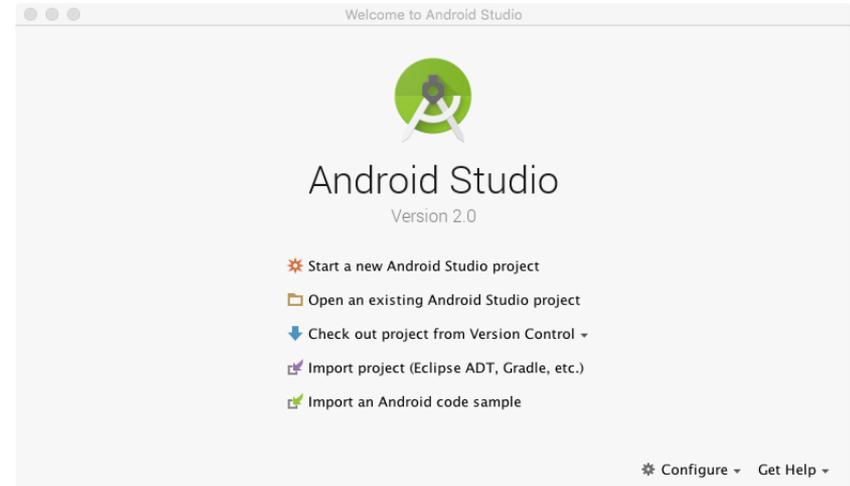
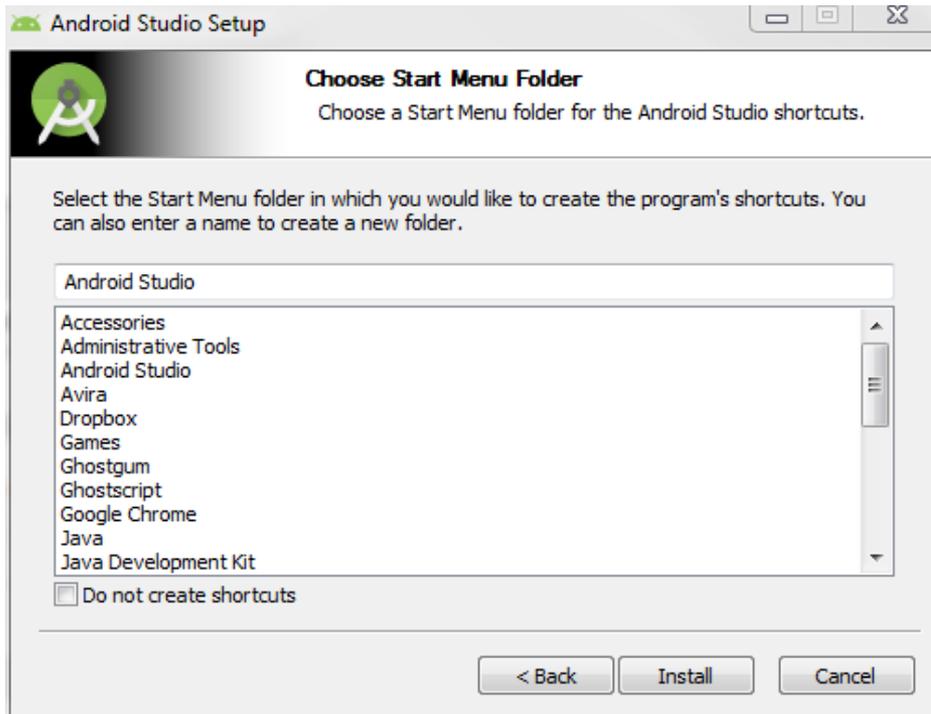
Android Studio Bundle

- **Android Studio:** El entorno visual de trabajo para crear las aplicaciones Android.
- **Android SDK:** Colección de API, herramientas y utilidades que permiten depurar y compilar las aplicaciones.
- **Android Virtual Device:** Máquina Virtual preconfigurada y optimizada para probar aplicaciones en el emulador.
- **Performance:** Hypervisor que acelera la emulación de Android en el ordenador.

Android Studio Bundle



Android Studio Bundle

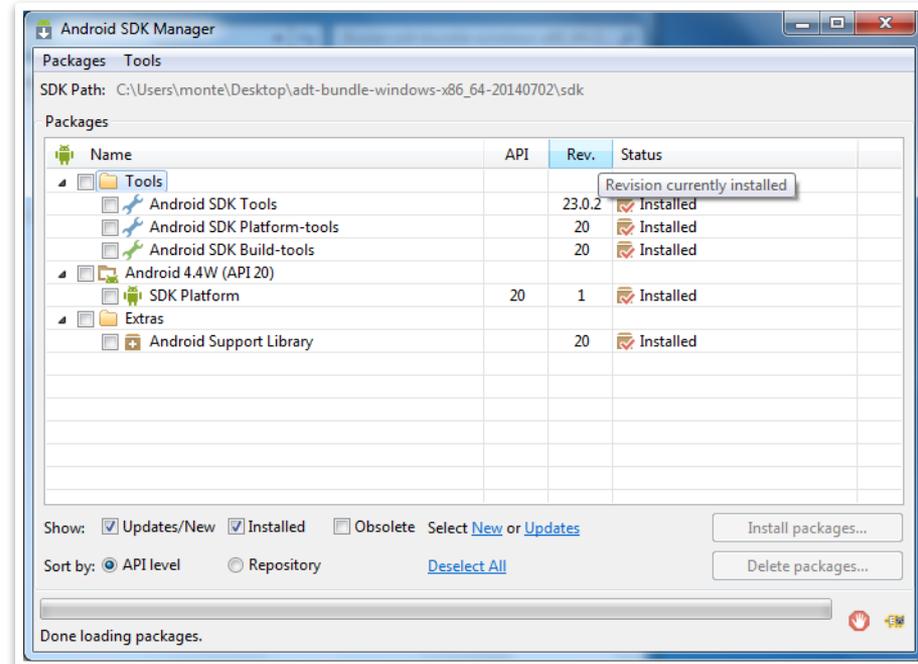


Nombre	Fecha de modificación	Tamaño	Clase
add-ons	22/3/2015 0:26	--	Carpeta
build-tools	hoy 20:58	--	Carpeta
extras	25/3/2015 23:37	--	Carpeta
platform-tools	hoy 20:59	--	Carpeta
platforms	30/3/2015 15:43	--	Carpeta
sources	22/3/2015 0:02	--	Carpeta
system-images	30/3/2015 14:58	--	Carpeta
temp	30/3/2015 15:44	--	Carpeta
tools	25/3/2015 22:08	--	Carpeta
android	22/3/2015 0:04	3 KB	Archiv...le Unix
ant	22/3/2015 0:04	--	Carpeta
apps	1/4/2015 16:41	--	Carpeta
ddms	22/3/2015 0:04	3 KB	Archiv...le Unix
draw9patch	22/3/2015 0:04	2 KB	Archiv...le Unix
emulator	22/3/2015 0:04	59 KB	Archiv...le Unix
emulator64-arm	22/3/2015 0:04	4,1 MB	Archiv...le Unix
emulator64-mips	22/3/2015 0:04	4 MB	Archiv...le Unix
emulator64-x86	22/3/2015 0:04	4,3 MB	Archiv...le Unix
hierarchyviewer	22/3/2015 0:04	3 KB	Archiv...le Unix
jobb	22/3/2015 0:04	2 KB	Archiv...le Unix
lib	22/3/2015 0:04	--	Carpeta
lint	22/3/2015 0:04	2 KB	Archiv...le Unix

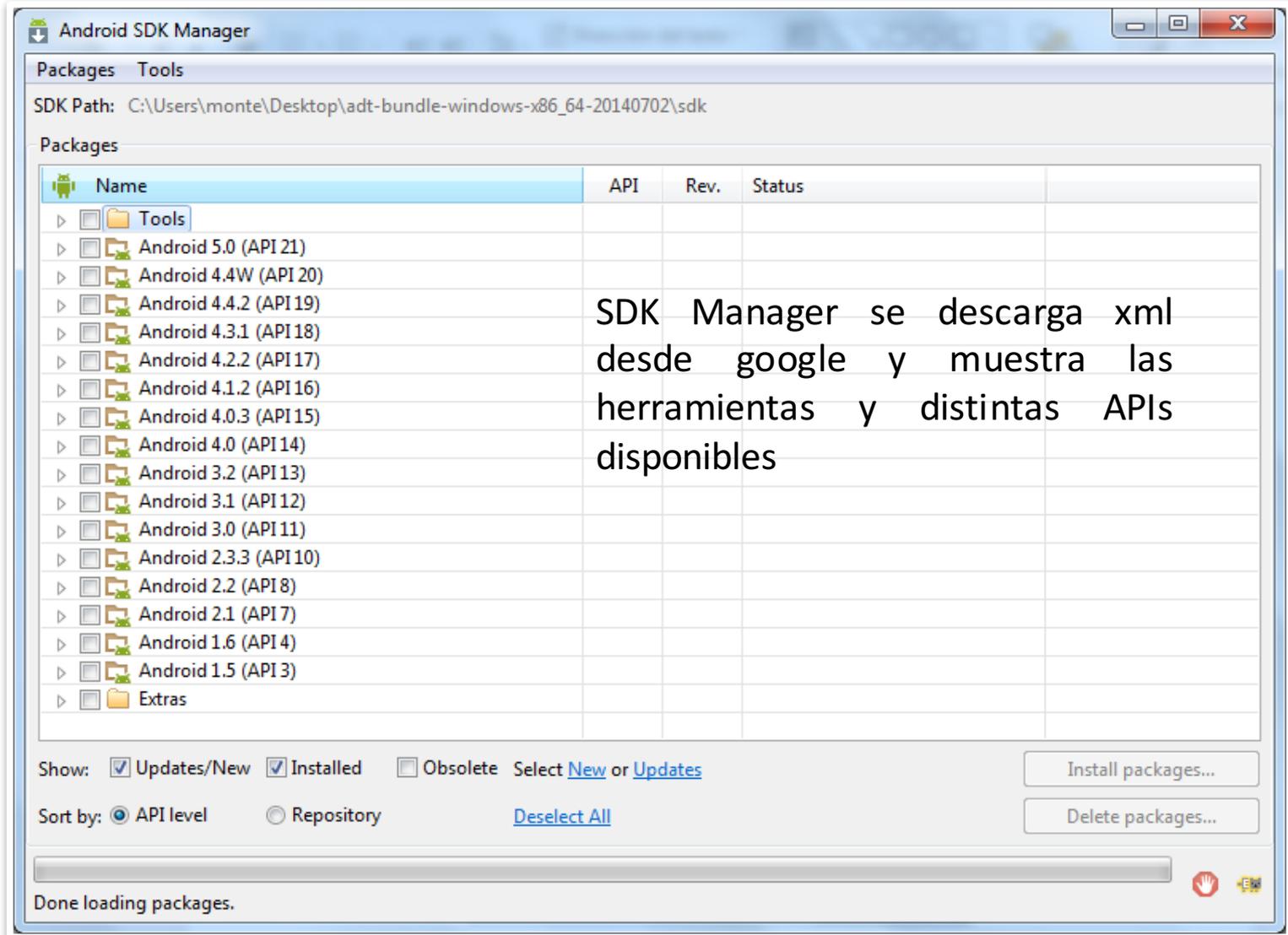
ANDROID SDK MANAGER

Android SDK Manager

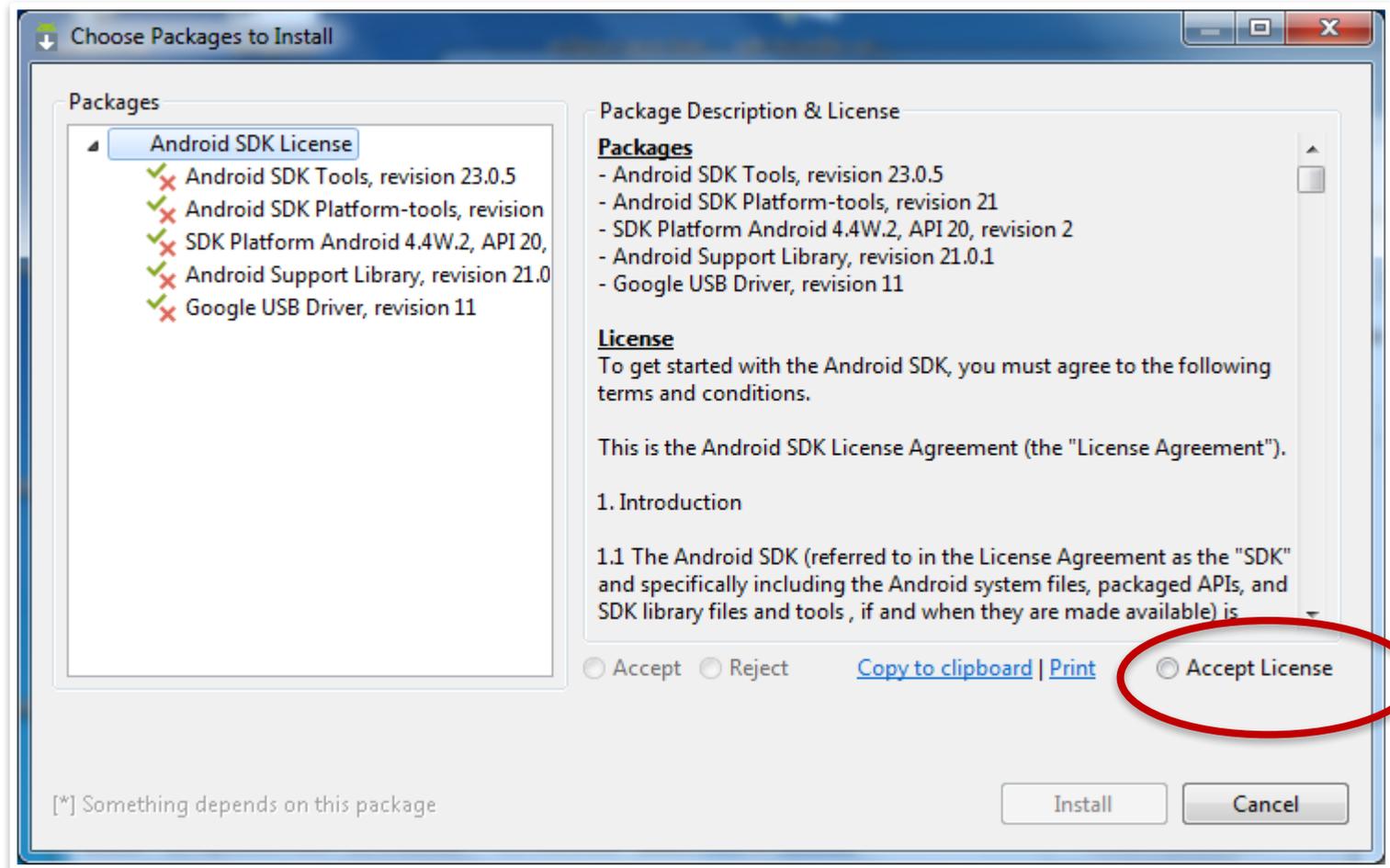
- Antes de comenzar a crear un proyecto es necesario instalar una o más plataformas de destino (targets).
- Por defecto tendrá alguna instalada y las herramientas mínimas y necesarias para comenzar a programar.
- Dos opciones
 1. Ejecutable android
 2. Dentro Android Studio



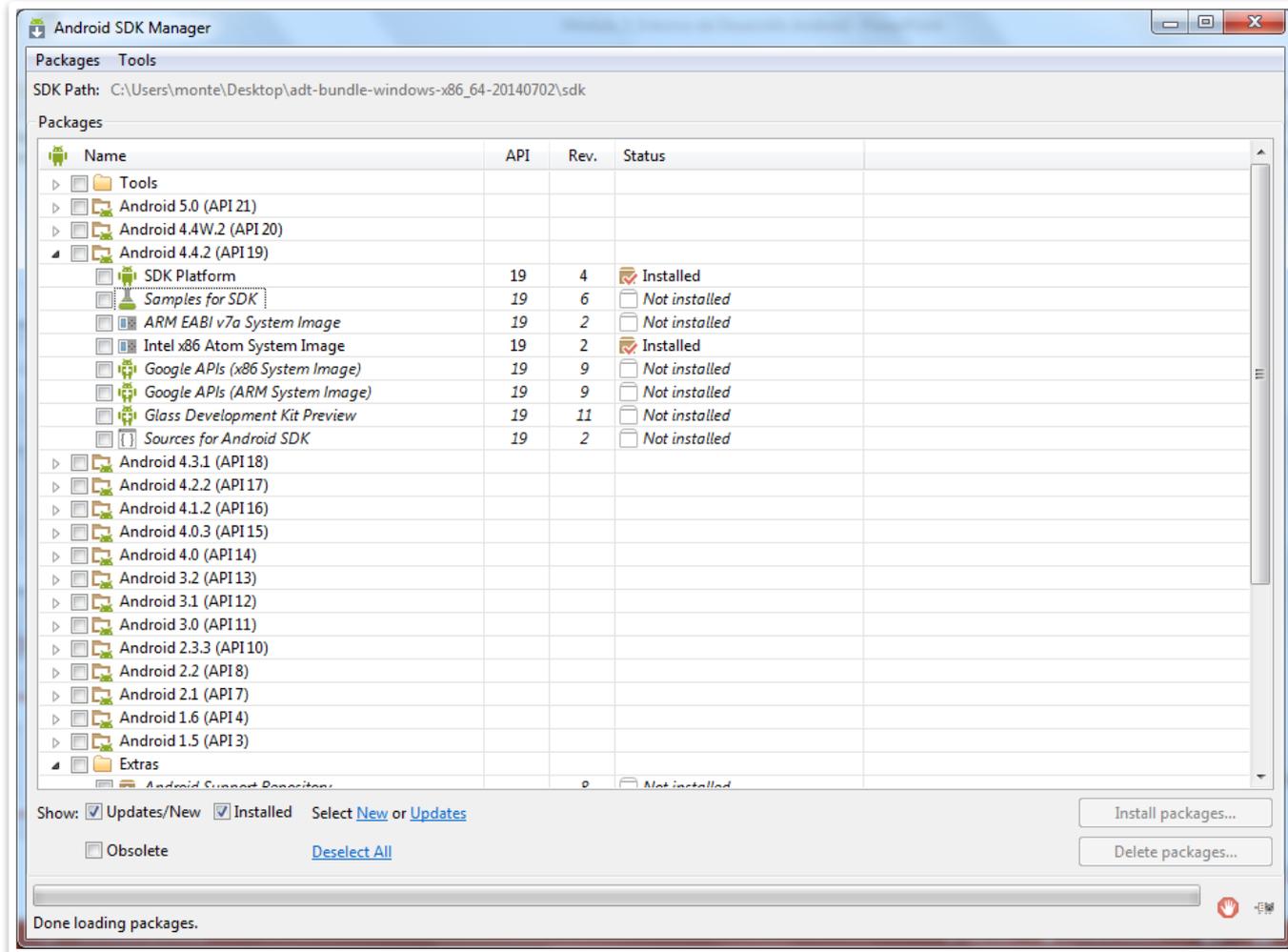
Android SDK Manager



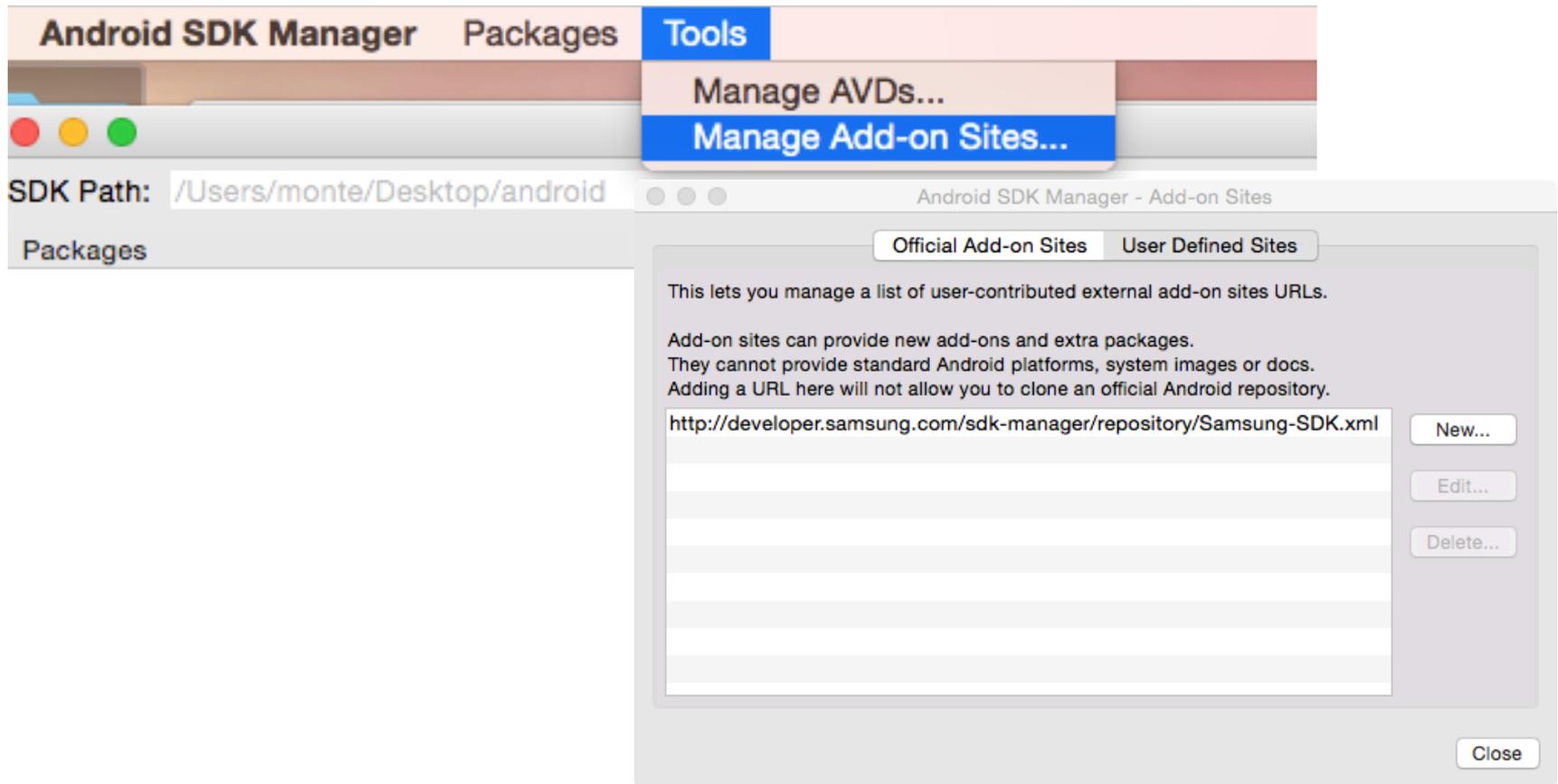
Actualizar SDK



Android SDK Manager



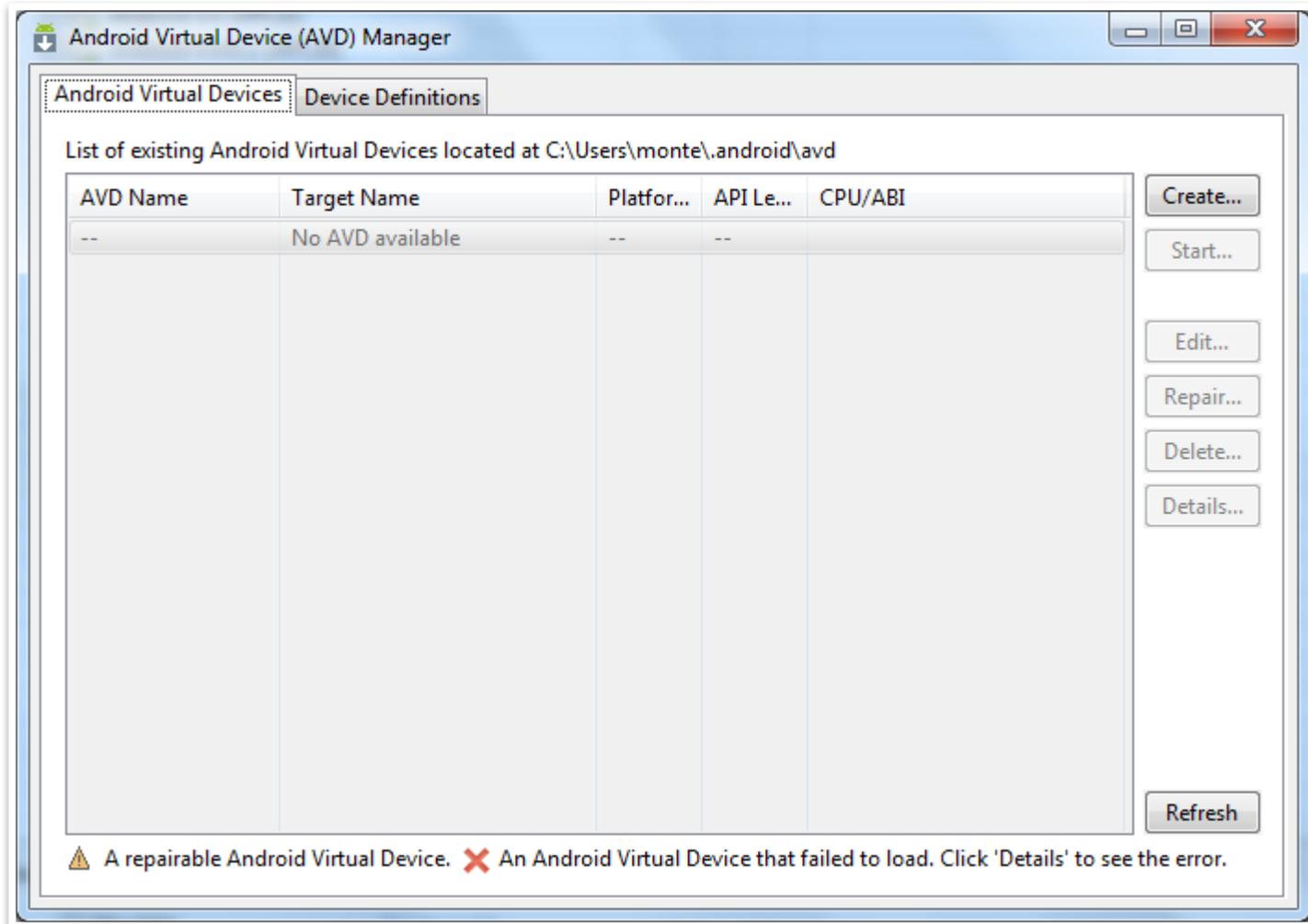
SDK Manager Samsung SDK



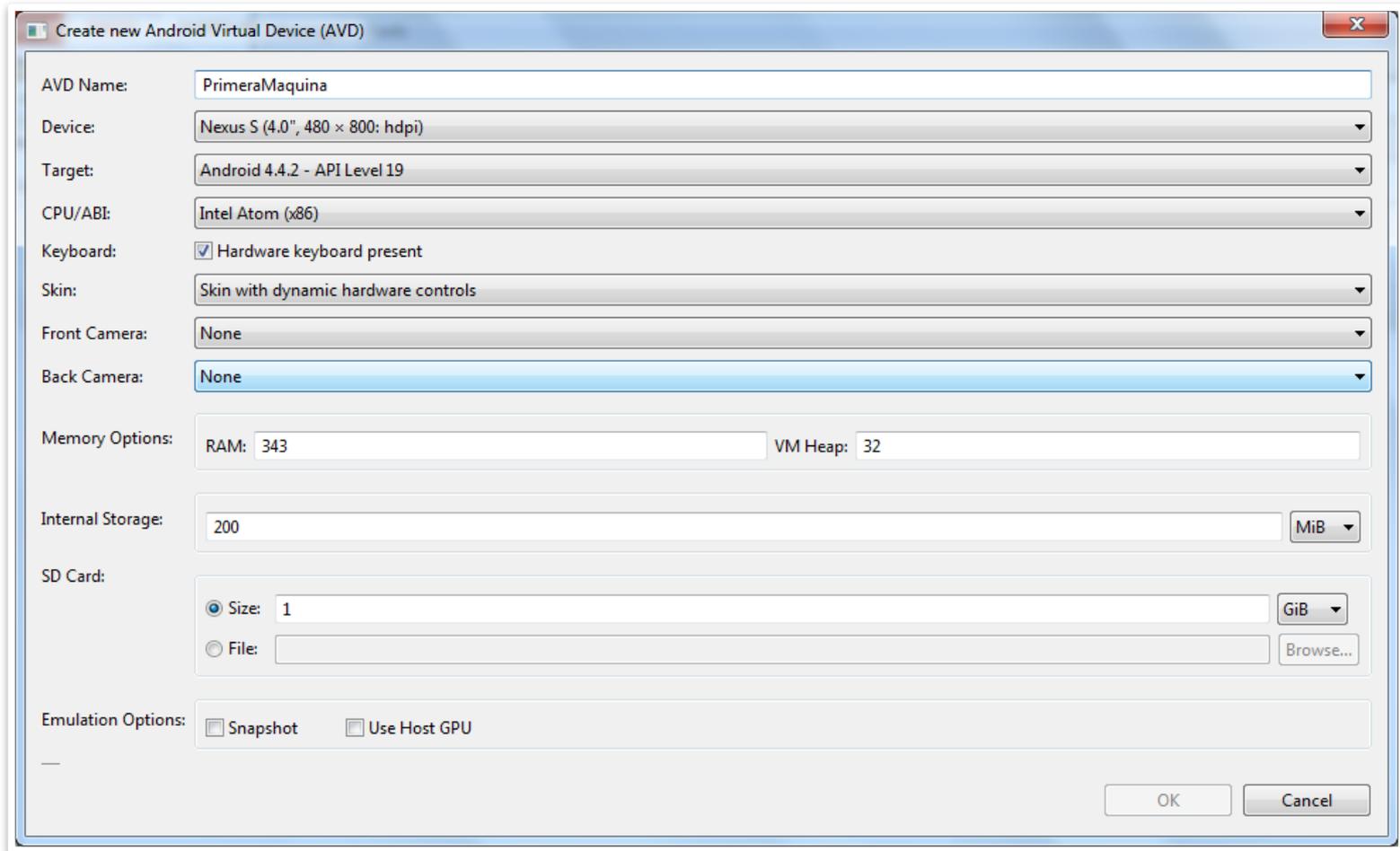
<http://developer.samsung.com/sdk-manager/repository/Samsung-SDK.xml>

ANDROID VIRTUAL DEVICE (AVD) MANAGER

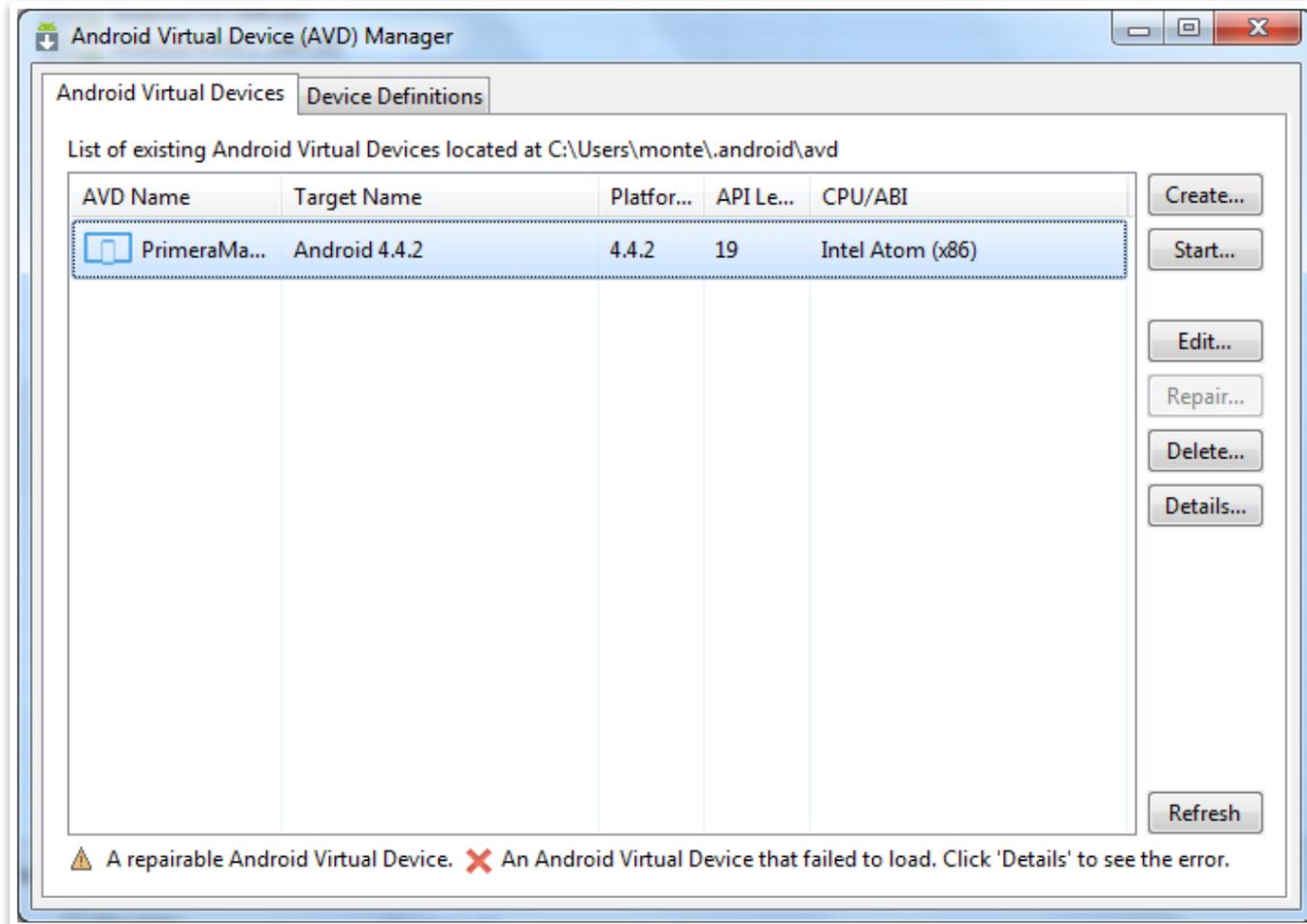
Android Virtual Device Manager



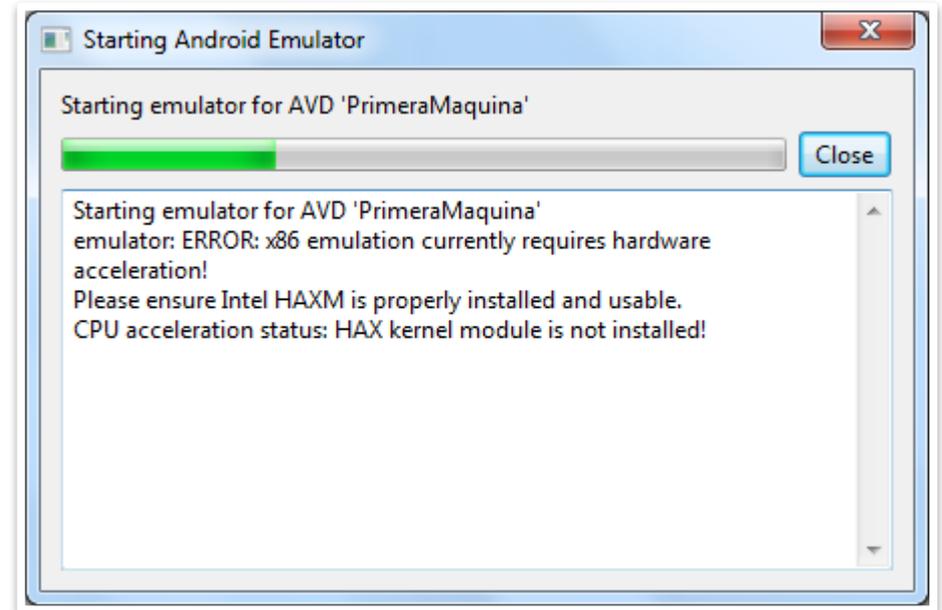
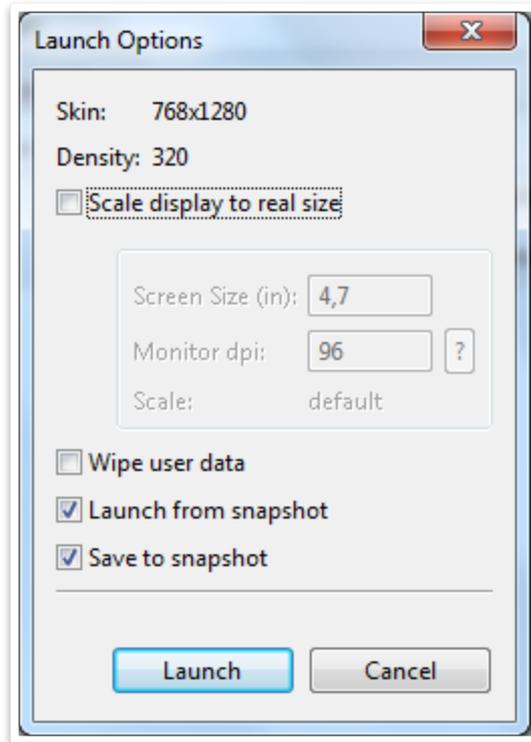
Creando primer emulador Android



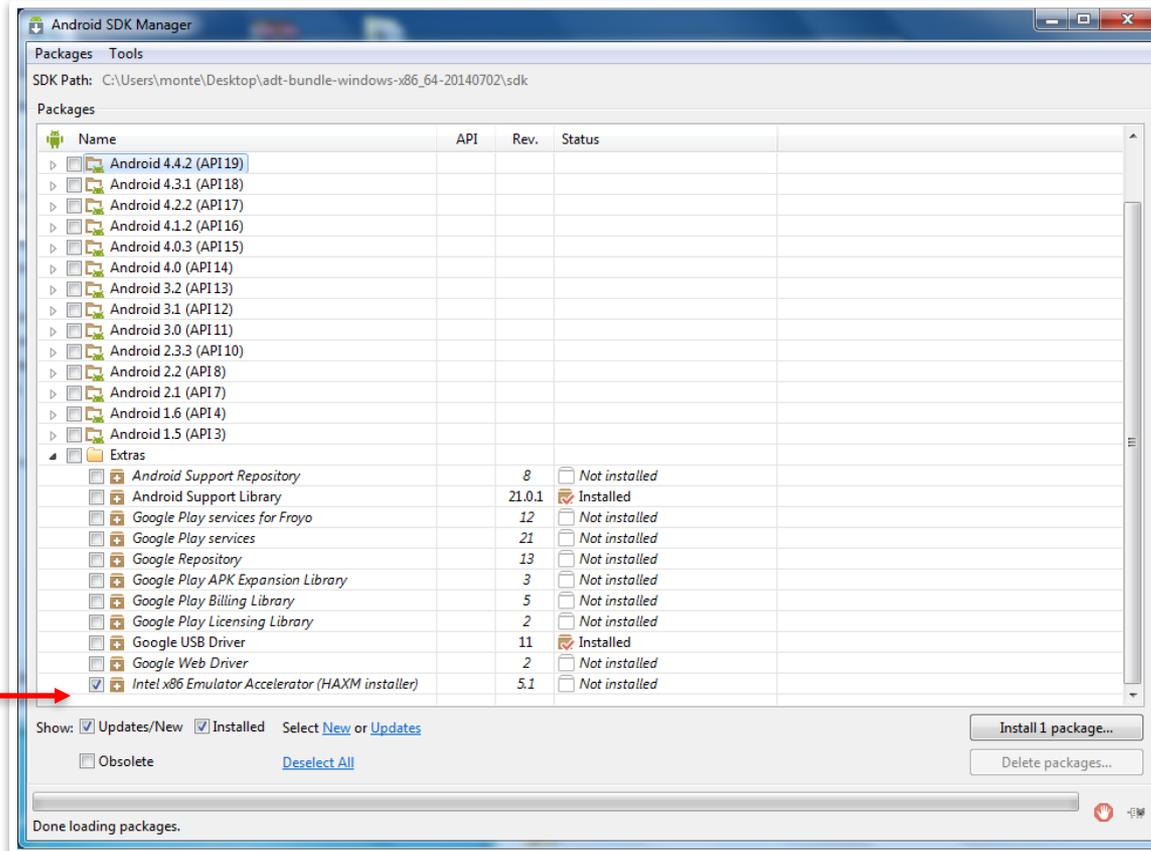
Creando primer emulador Android



Ejecutando primer emulador Android



Añadiendo Intel HAXM



{SDK_FOLDER}\extras\intel\Hardware_Accelerated_Execution_Manager\intelhaxm.exe

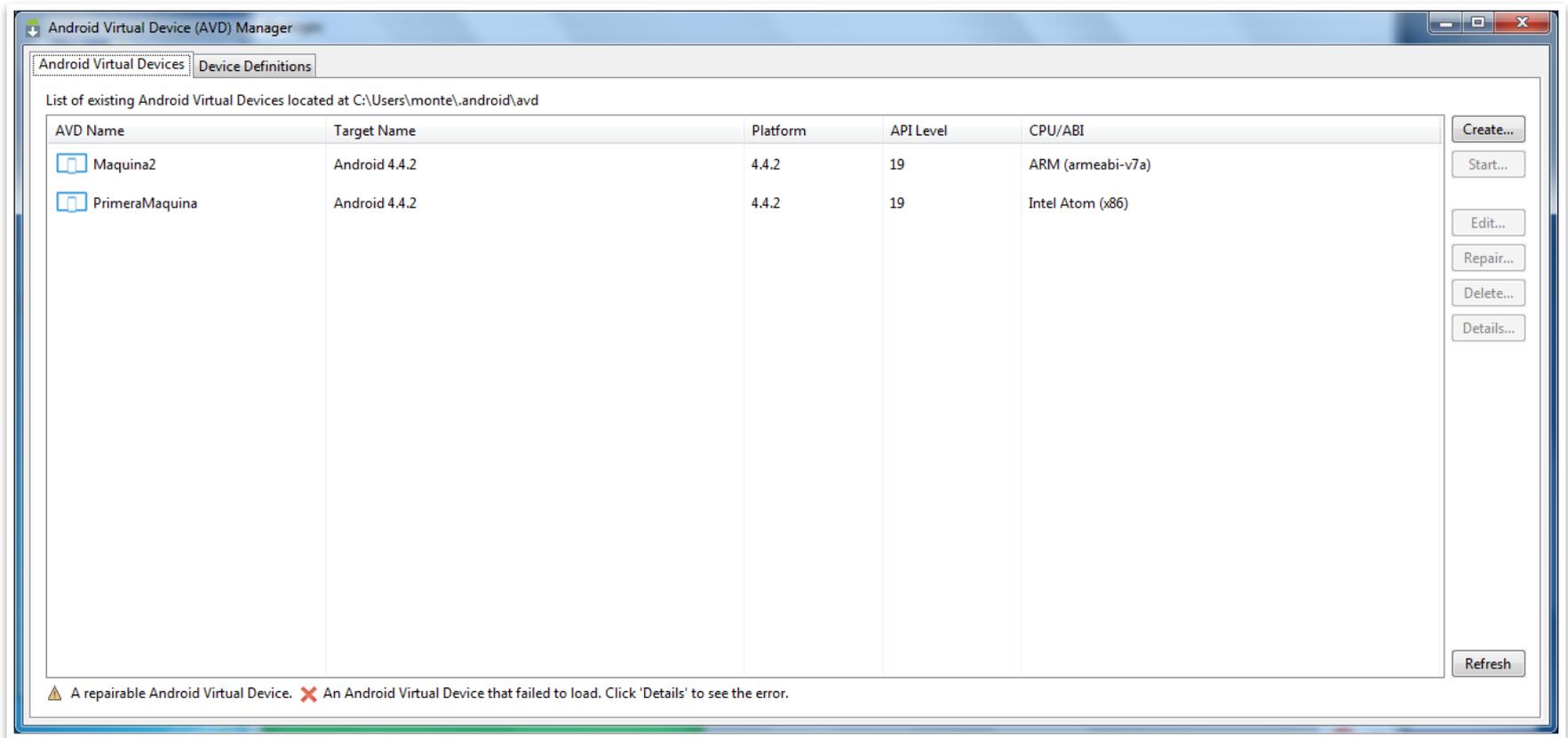
Configurando Intel HAXM



Emulador Funcionado

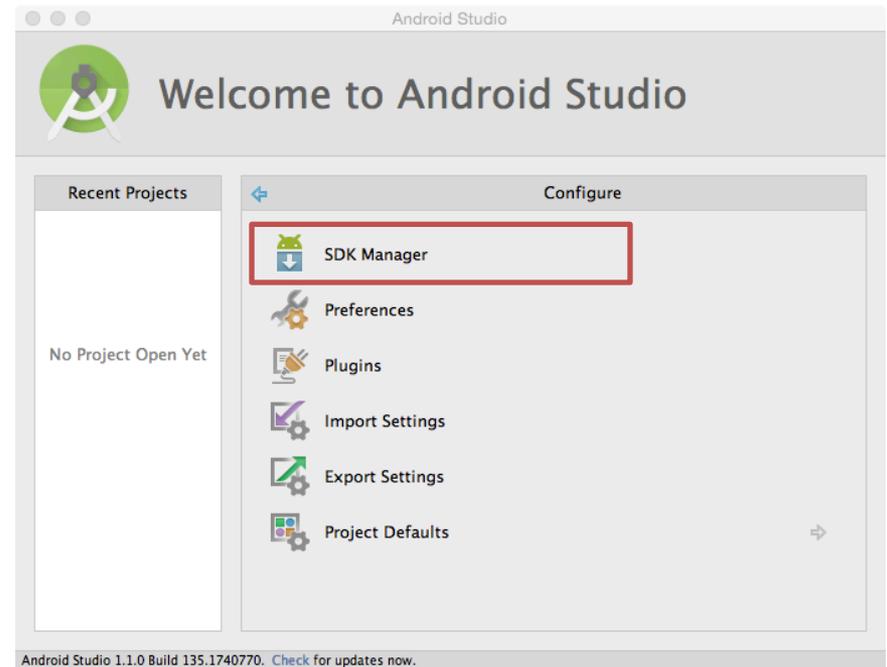
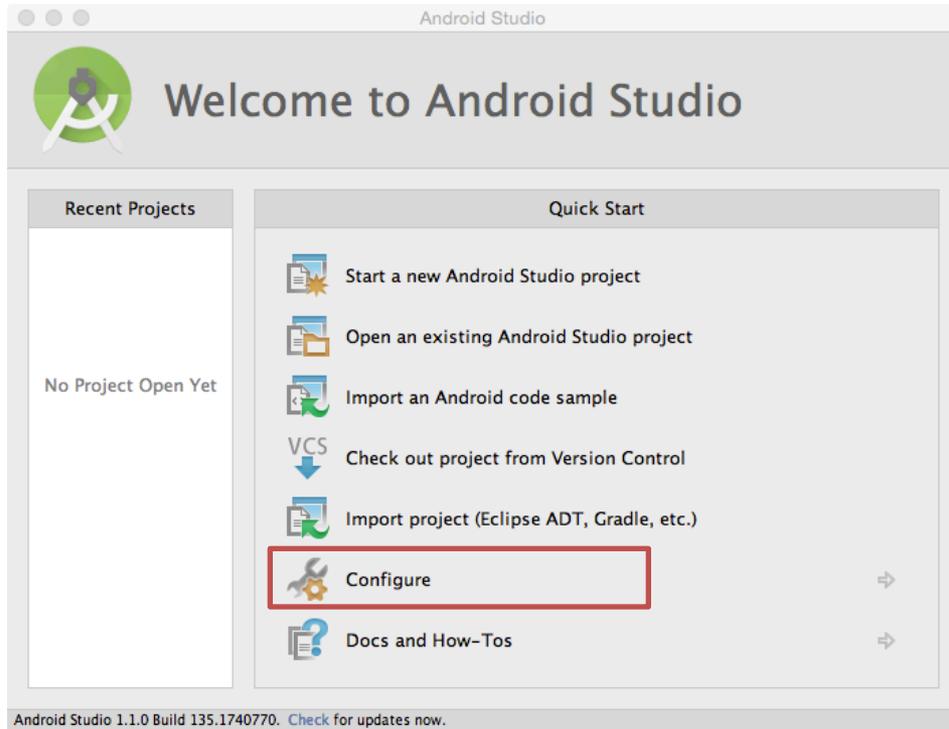


Gestionando Dispositivos Virtuales

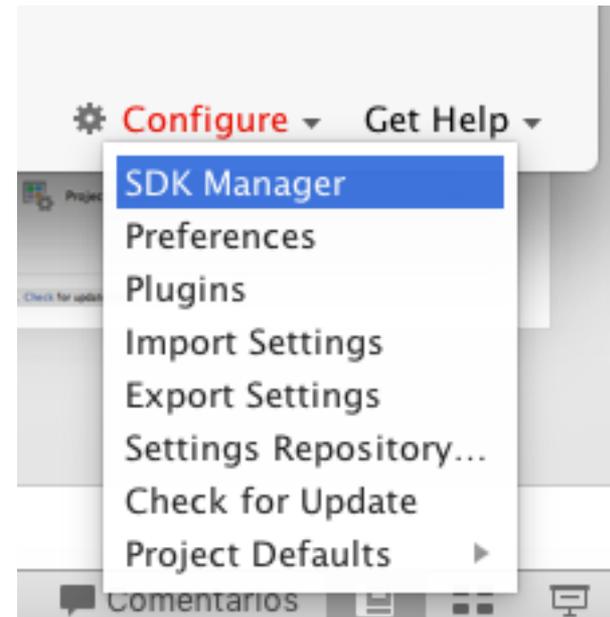
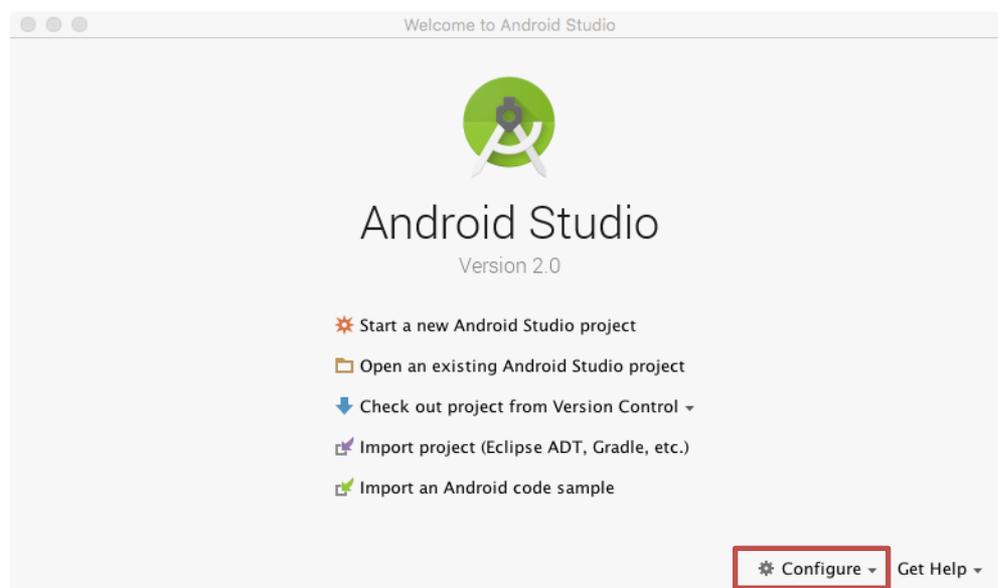


ANDROID EN ANDROID STUDIO

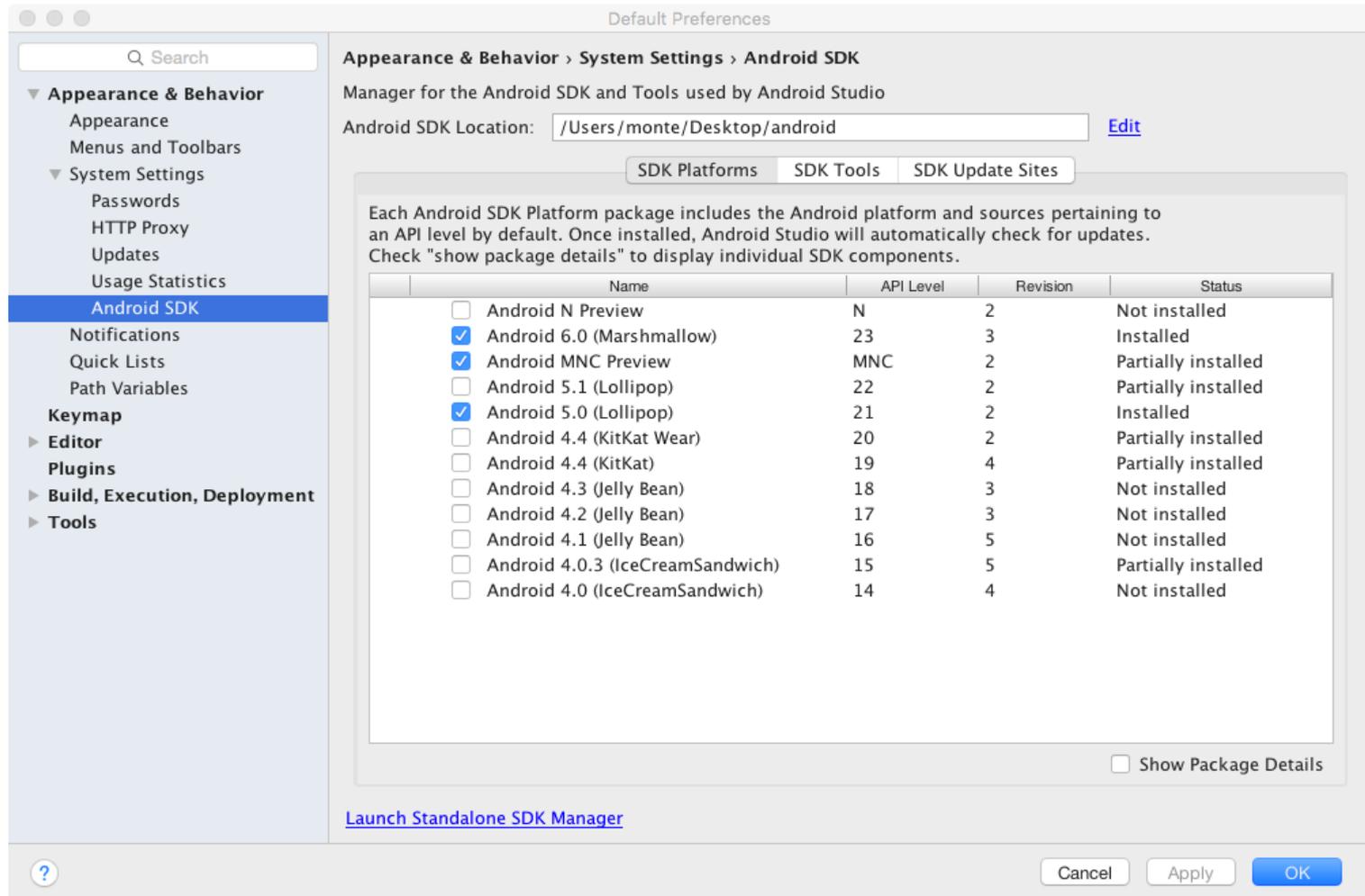
SDK Manager en Android Studio 1.5



SDK Manager en Android Studio 2



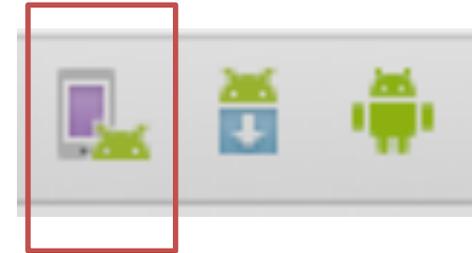
SDK Manager en Android Studio



Herramientas en Android Studio

The screenshot displays the Android Studio interface. At the top, the toolbar contains various icons for file operations, navigation, and development. Below the toolbar, the breadcrumb navigation shows the current file path: `MyApplication > app > src > main > res > layout > activity_main.xml`. The **Tools** menu is open, showing options such as `Tasks & Contexts`, `Save File as Template...`, `Generate JavaDoc...`, `New Scratch File...`, `IDE Scripting Console`, `Create Command-line Launcher...`, `Groovy Console...`, **Android**, `Sync Project with Gradle Files`, `Android Device Monitor`, `AVD Manager`, `SDK Manager`, **Enable ADB Integration**, `Theme Editor`, and `Google App Indexing Test`. A red arrow points to the `Enable ADB Integration` option. In the bottom right corner, a red error message box states: `Error running app: Instant Run requires 'Tools | Android | Enable ADB integration' to be enabled.` The status bar at the bottom shows the current project name `app` and the error message: `app: Instant Run requires 'Tools | Android | Enable ADB integration' to be enabled. (moments ago)`.

Herramientas en Android Studio



Android Virtual Device Manager

Android Virtual Device Manager

Your Virtual Devices
Android Studio

Virtual machine acceleration driver is out-of-date. [Reinstall Haxm](#)

Type	Name	Resolution	API	Target	CPU/ABI	Size on Disk	Actions
	AndroidM	320 × 480: mdpi	23	Android 6.0	x86	1 GB	
	MaquinaPrueba	480 × 800: hdpi	19	Android 4.4	arm	566 MB	
	Nexus 4 API 19	768 × 1280: xhdpi	19	Android 4.4	arm	566 MB	
	Nexus One API 15	480 × 800: hdpi	19	Android 4.4	arm	566 MB	
	PrimeraMaquinaStudio	480 × 800: hdpi	19	Android 4.4	x86	3 GB	

+ Create Virtual Device...

Crear Dispositivo Virtual

Selecciona aspecto del dispositivo a emular:

1. Modelos reales
2. Modelos genéricos

Virtual Device Configuration

Select Hardware
Choose a device definition

Category	Name	Size	Resolution	Density
TV	Nexus S	4,0"	480x800	hdpi
Wear	Nexus One	3,7"	480x800	hdpi
Phone	Nexus 6P	5,7"	1440x2560	560dpi
Tablet	Nexus 6	5,96"	1440x2560	560dpi
	Nexus 5X	5,2"	1080x1920	420dpi
	Nexus 5	4,95"	1080x1920	xxhdpi
	Nexus 4	4,7"	768x1280	xhdpi
	Nexus 4	4,7"	768x1280	xhdpi
	Galaxy Nexus	4,65"	720x1280	xhdpi
	5.4" FWVGA	5,4"	480x854	mdpi
	5.1" WVGA	5,1"	480x800	mdpi
	4.7" WXGA	4,7"	720x1280	xhdpi
	4.65" 720p (Galaxy Nexus)	4,65"	720x1280	xhdpi

1080px
5,2"
1920px

Size: normal
Ratio: notlong
Density: 420dpi

New Hardware Profile Import Hardware Profiles

Clone Device...

Cancel Previous Next Finish

Crear Dispositivo Virtual

Virtual Device Configuration

System Image
Select a system image

Recommended x86 Images Other Images

Release Name	API Level	ABI	Target
Marshmallow	23	x86	Android 6.0 (with Google APIs)
Marshmallow	23	x86_64	Android 6.0 (with Google APIs)
Lollipop	22	x86_64	Android 5.1 (with Google APIs)
Lollipop Download	22	x86	Android 5.1 (with Google APIs)

Marshmallow



API Level
23

Android
6.0

Google Inc.

System Image
x86

Recommendation
Virtual machine acceleration driver is out-of-date.
[Reinstall Haxm](#)

These images are recommended because they run the fastest and include support for Google APIs

Questions on API level?
See the [API level distribution chart](#)

Cancel Previous **Next** Finish

Selecciona la imagen a ejecutar dentro de la Máquina Virtual

5

Más información configuración

Virtual Device Configuration

Android Virtual Device (AVD)

Nexus 5X API 23

5,2" 1080x1920 420dpi [Change...](#)

Android 6.0 x86 [Change...](#)

Scale: Auto

Orientation: Portrait Landscape

Emulated Performance Graphics: Auto

Device Frame Enable Device Frame

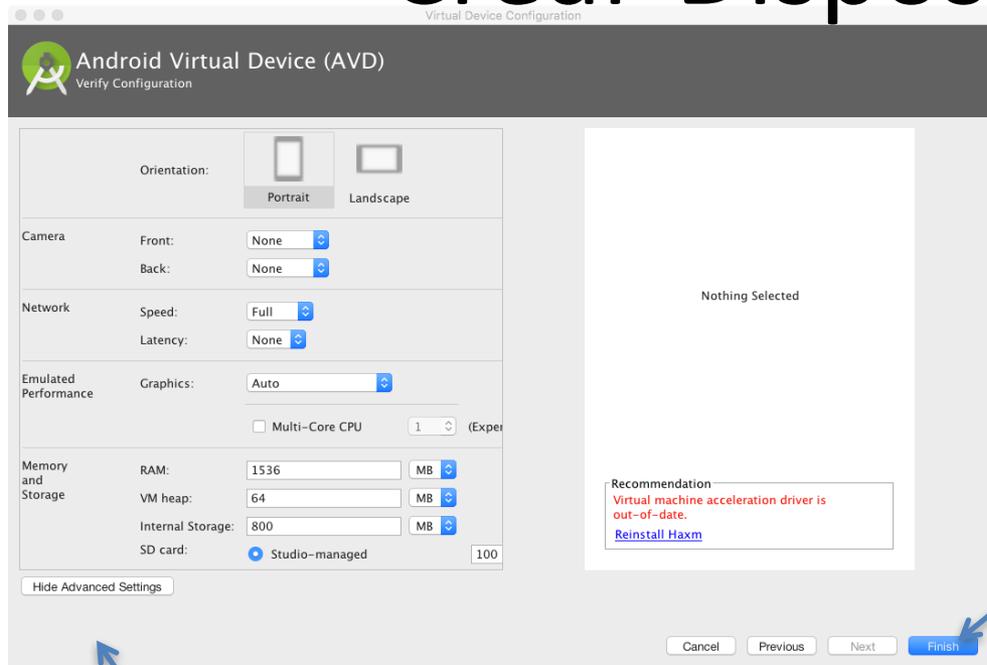
[Show Advanced Settings](#)

Nothing Selected

Recommendation
Virtual machine acceleration driver is out-of-date.
[Reinstall Haxm](#)

Cancel Previous Next **Finish**

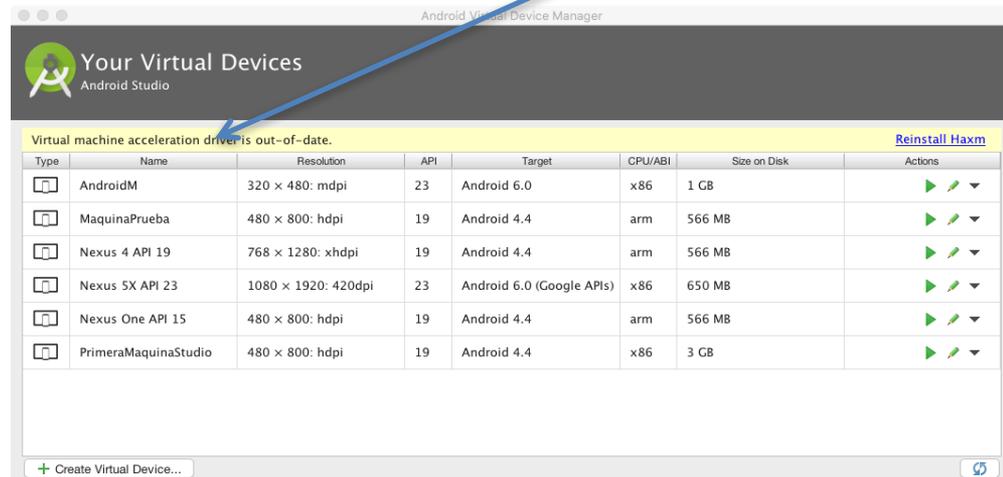
Crear Dispositivo Virtual



6

Dispositivo Virtual Creado

Más información configuración



Herramientas en Android Studio

Android Virtual Device (AVD)
Verify Configuration

AVD Name: Nexus 5 API 19

Nexus 5: 4,95" 1080x1920 xxhdpi

KitKat: Android 4.4.2 armeabi-v7a

Startup size and orientation

Scale: Auto

Orientation: Portrait Landscape

Emulated Performance

- Use Host GPU
- Store a snapshot for faster startup

You can either use Host GPU or Snapshots

Show Advanced Settings

Scale: 3,7" 480x800

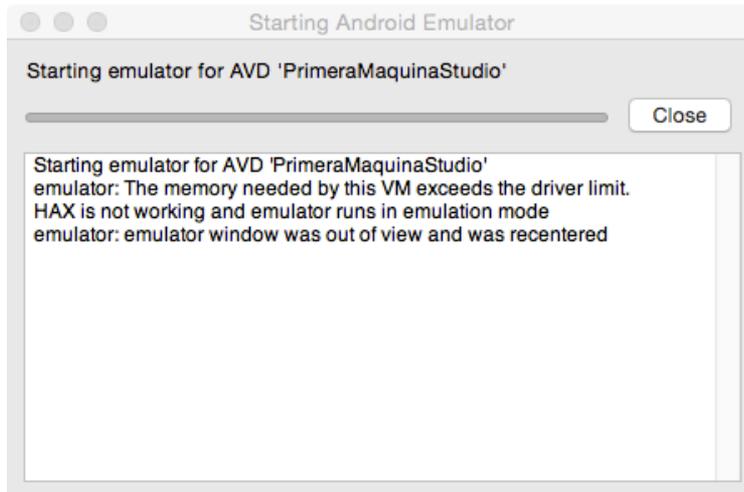
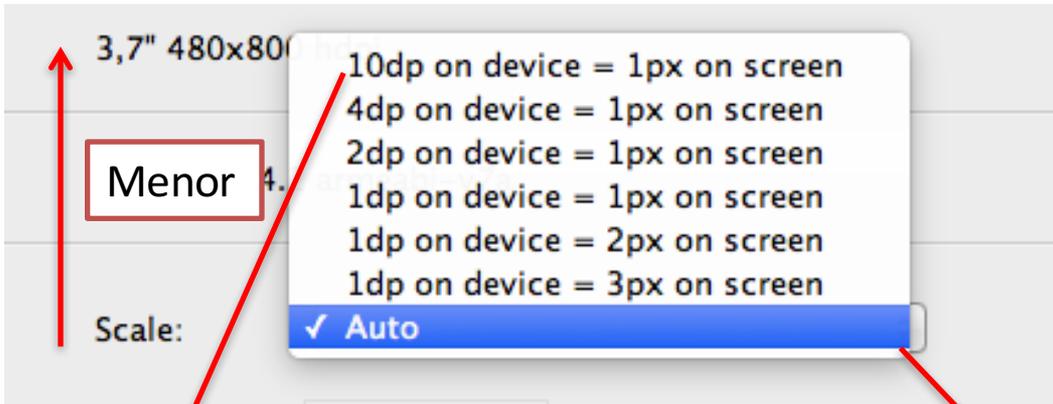
Android 4.4.2

10dp on device = 1px on screen
4dp on device = 1px on screen
2dp on device = 1px on screen
1dp on device = 1px on screen
1dp on device = 2px on screen
1dp on device = 3px on screen

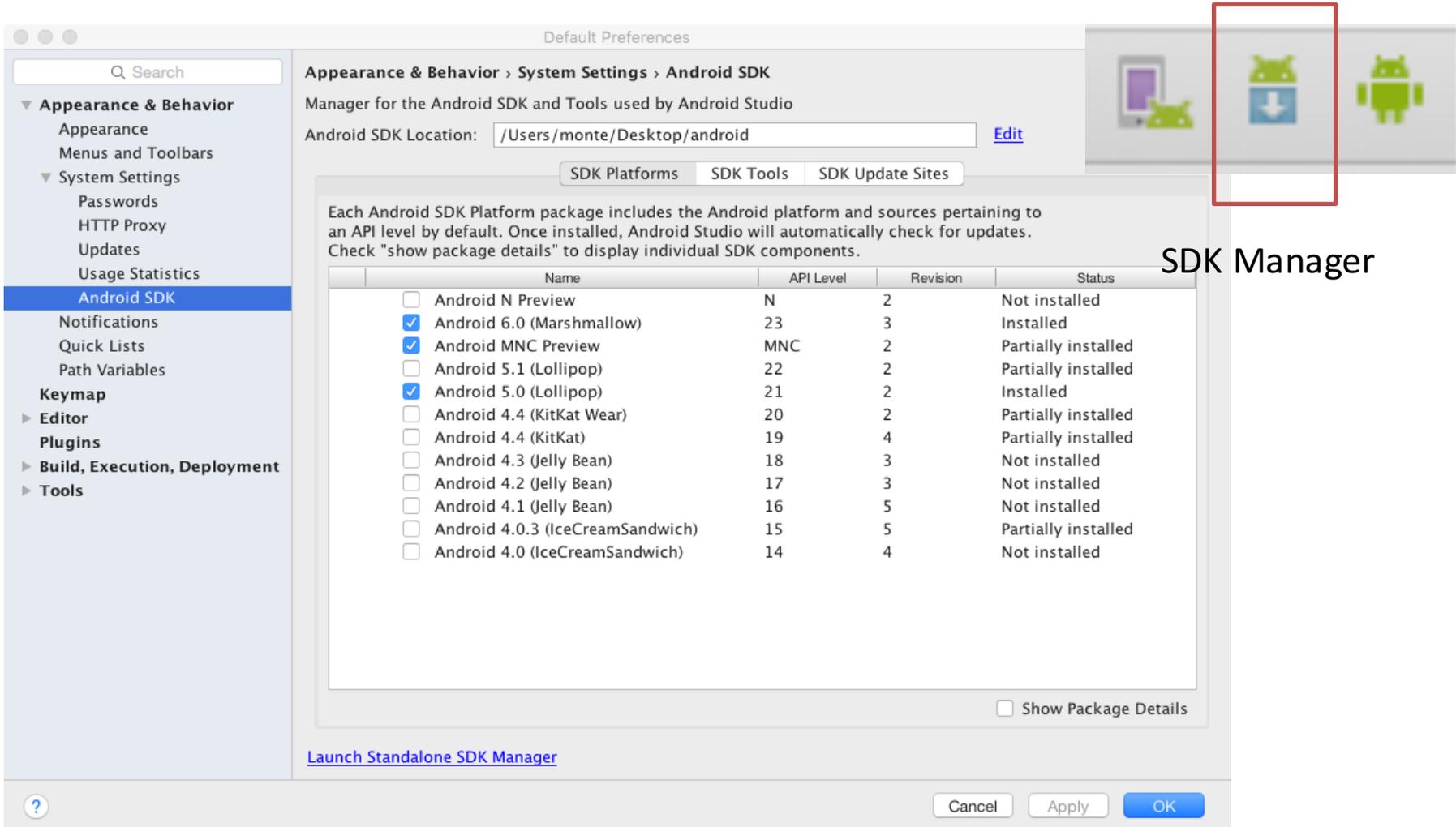
✓ Auto

Cancel Previous Next Finish

Herramientas en Android Studio



Herramientas en Android Studio



Default Preferences

Appearance & Behavior > System Settings > Android SDK

Manager for the Android SDK and Tools used by Android Studio

Android SDK Location: [Edit](#)

SDK Platforms | SDK Tools | SDK Update Sites

Each Android SDK Platform package includes the Android platform and sources pertaining to an API level by default. Once installed, Android Studio will automatically check for updates. Check "show package details" to display individual SDK components.

	Name	API Level	Revision	Status
<input type="checkbox"/>	Android N Preview	N	2	Not installed
<input checked="" type="checkbox"/>	Android 6.0 (Marshmallow)	23	3	Installed
<input checked="" type="checkbox"/>	Android MNC Preview	MNC	2	Partially installed
<input type="checkbox"/>	Android 5.1 (Lollipop)	22	2	Partially installed
<input checked="" type="checkbox"/>	Android 5.0 (Lollipop)	21	2	Installed
<input type="checkbox"/>	Android 4.4 (KitKat Wear)	20	2	Partially installed
<input type="checkbox"/>	Android 4.4 (KitKat)	19	4	Partially installed
<input type="checkbox"/>	Android 4.3 (Jelly Bean)	18	3	Not installed
<input type="checkbox"/>	Android 4.2 (Jelly Bean)	17	3	Not installed
<input type="checkbox"/>	Android 4.1 (Jelly Bean)	16	5	Not installed
<input type="checkbox"/>	Android 4.0.3 (IceCreamSandwich)	15	5	Partially installed
<input type="checkbox"/>	Android 4.0 (IceCreamSandwich)	14	4	Not installed

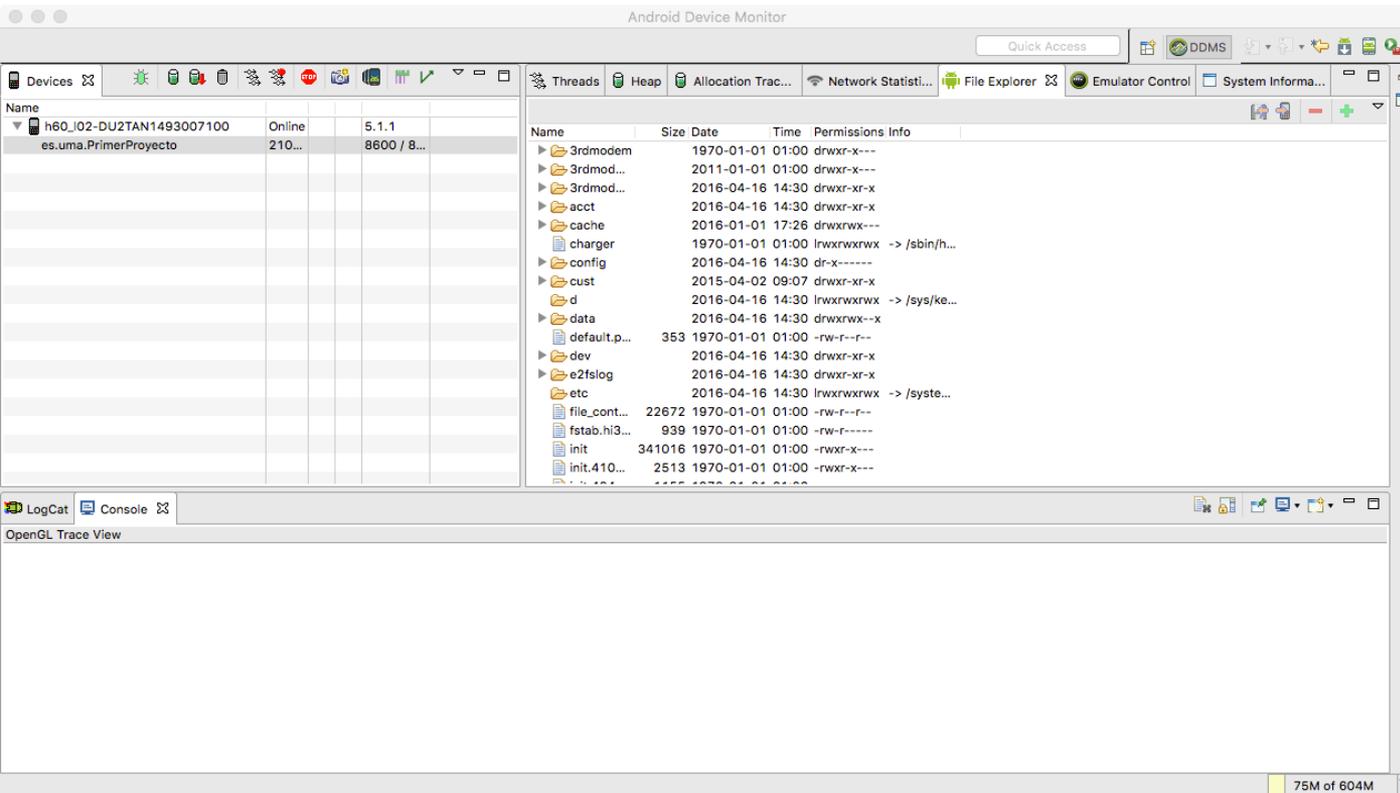
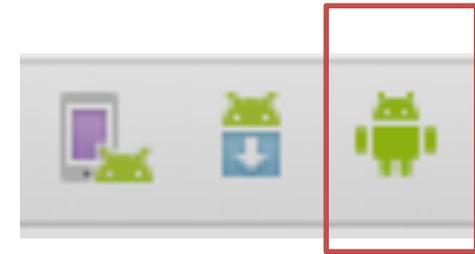
Show Package Details

[Launch Standalone SDK Manager](#)

Cancel Apply **OK**

SDK Manager

Herramientas en Android Studio



Android Device Monitor
(antiguo DDMS)

Android Device Monitor

antiguo Dalvik Debug Monitor Server (DDMS)

- El Kit de desarrollo proporciona un Monitor de depuración que permite, entre otras características,
 - controlar la ejecución de las hebras,
 - información sobre el uso de la memoria,
 - visualizar los registros de informativos (logcat),
 - procesos,
 - emular llamadas entrantes.

Android Device Monitor

Logcat

The screenshot displays the Android Studio interface with the Android Device Monitor window open. The LogCat window is highlighted with a red border and shows a list of log messages. The messages are as follows:

Level	Time	PID	TID	Application	Tag	Text
I	04-18 11:51:52.025	8454	18591		System	age:null
I	04-18 11:51:52.025	8454	18591		System.out	core_booster, getBoosterConfig = false
I	04-18 11:51:52.025	8454	18591		System.out	[CDS]rx timeout:30000
I	04-18 11:51:52.025	8454	18591		System.out	[socket][21676] connection photoshare6.hicloud.com/118.194.56.131:4 ↵ 43;LocalPort=57761(30000)
I	04-18 11:51:52.025	8454	18591		System.out	[CDS]connect[photoshare6.hicloud.com/118.194.56.131:443] tm:30
I	04-18 11:51:52.380	8454	24331		System.out	[CDS]close[33643]
I	04-18 11:51:52.385	8454	24331		System.out	close [socket][0.0.0.0:33643]
I	04-18 11:51:52.430	8454	18591		System.out	[socket][192.168.123.168:57761] connected
I	04-18 11:51:52.435	8454	18591		System	core_booster, getBoosterConfig = false

The LogCat window also includes a search bar with the text "Search for messages. Accepts Java regexes. Prefix with pid;, app;, tag; or text; to limit scope." and a dropdown menu set to "verbose". The bottom right corner of the LogCat window shows "143M of 604M".

Android Device Monitor

Sistemas Fichero

The screenshot displays the Android Device Monitor application. The main window is titled "Android Device Monitor" and features a toolbar with icons for "Quick Access", "DDMS", "Threads", "Heap", "Allocation Trac...", "Network Statist...", "File Explorer", "Emulator Control", and "System Informa...".

The left sidebar shows a list of devices. The selected device is "h60_I02-DU2TAN1493007100", which is "Online" and running "5.1.1". Below the device name, the file system path "es.uma.PrimerProyecto" is visible.

The main pane displays the "File Explorer" view for the selected device. It shows a list of files and directories with columns for "Name", "Size", "Date", "Time", "Permissions", and "Info".

Name	Size	Date	Time	Permissions	Info
3rdmodem		1970-01-01	01:00	drwxr-x--	
3rdmod...		2011-01-01	01:00	drwxr-x--	
3rdmod...		2016-04-16	14:30	drwxr-xr-x	
acct		2016-04-16	14:30	drwxr-xr-x	
cache		2016-01-01	17:26	drwxrwx---	
charger		1970-01-01	01:00	lrwxrwxrwx	-> /sbin/h...
config		2016-04-16	14:30	dr-x-----	
cust		2015-04-02	09:07	drwxr-xr-x	
d		2016-04-16	14:30	lrwxrwxrwx	-> /sys/ke...
data		2016-04-16	14:30	drwxrwx--x	
default.p...	353	1970-01-01	01:00	-rw-r--r--	
dev		2016-04-16	14:30	drwxr-xr-x	
e2fslog		2016-04-16	14:30	drwxr-xr-x	
etc		2016-04-16	14:30	lrwxrwxrwx	-> /system...
file_cont...	22672	1970-01-01	01:00	-rw-r--r--	
fstab.hi3...	939	1970-01-01	01:00	-rw-r-----	
init	341016	1970-01-01	01:00	-rwxr-x--	
init.410...	2513	1970-01-01	01:00	-rwxr-x--	

The bottom pane shows the "LogCat" and "Console" tabs, with the "OpenGL Trace View" currently active.

75M of 604M

Android Device Monitor

Información Sistema

Android Device Monitor

Quick Access

DDMS

Devices

Name	Online	5.1.1
h60_l02-DU2TAN1493007100	Online	8600 / 8...
es.uma.PrimerProyecto	210...	

Threads

Heap

Allocation Trac...

Network Statisti...

File Explorer

Emulator Control

System Informa...

CPU load

Update from Device

8454/com.huawei.android.ds (user)

8454/com.huawei.android.ds (kernel)

4199/system_server (user)

853/kcmd (kernel)

5489/sdcard (kernel)

1939/mmcqd/0 (kernel)

24190/logcat (user)

24190/logcat (kernel)

4008/adbd (user)

4008/adbd (kernel)

4476/com.android.systemui (user)

4476/com.android.systemui (kernel)

2082/mmcqd/1 (kernel)

20248/kworker/u16-0 (kernel)

2308/dhd_dpc (kernel)

2307/dhd_watchdog_th (kernel)

3946/joinfoservice (kernel)

1796/cfinteractive (kernel)

8/rcu_preempt (kernel)

2309/dhd_rxf (kernel)

3629/powerlogd (user)

20661/kworker/1:1 (kernel)

5114/com.huawei.android.powermonitor

3643/netd (kernel)

852/kswapd0 (kernel)

24287/kworker/5:0 (kernel)

idle

LogCat

Console

OpenGL Trace View

135M of 623M

Android Device Monitor

Emulación funciones

The image displays the DDMS (Dalvik Debug Monitor Service) interface within Eclipse, used for monitoring and controlling Android devices. The interface is divided into several sections:

- Devices:** A table listing various virtual devices. The 'PrimeraMaquina' device is selected, showing its online status and associated PIDs and TIDs.
- Telephony Status:** A panel for managing telephony settings. It includes dropdown menus for 'Voice' (set to 'home') and 'Data' (set to 'home'), along with 'Speed' (Full) and 'Latency' (None) options.
- Telephony Actions:** A section for handling incoming calls. The 'Incoming number' field is set to '952132898'. Below this, there are radio buttons for 'Voice' (selected) and 'SMS', and a 'Message:' input field.
- Location Controls:** A section for managing location settings, with options for 'Manual', 'GPX', and 'KML'. The 'Decimal' option is selected.
- LogCat:** A window for viewing system logs. It shows a search bar and a table of log messages. The messages include system events like 'AlarmClock' and 'MediaFocus'.

Overlaid on the right side of the DDMS interface is a screenshot of an Android emulator. The emulator screen shows an incoming call notification with the number '952132898' and the text 'INCOMING CALL'. The emulator interface includes a 'Basic Controls' panel with volume and power buttons, a 'Hardware Buttons' panel with home, menu, back, and search buttons, and a 'DPAD not enabled in AVD' warning. A large white telephone handset icon is visible in the bottom right corner of the emulator screen.

Práctica 5.1

Instalación SDK, Creación y
Ejecución de un
Dispositivo Virtual

Práctica 5.2

Conexión Dispositivo Virtual

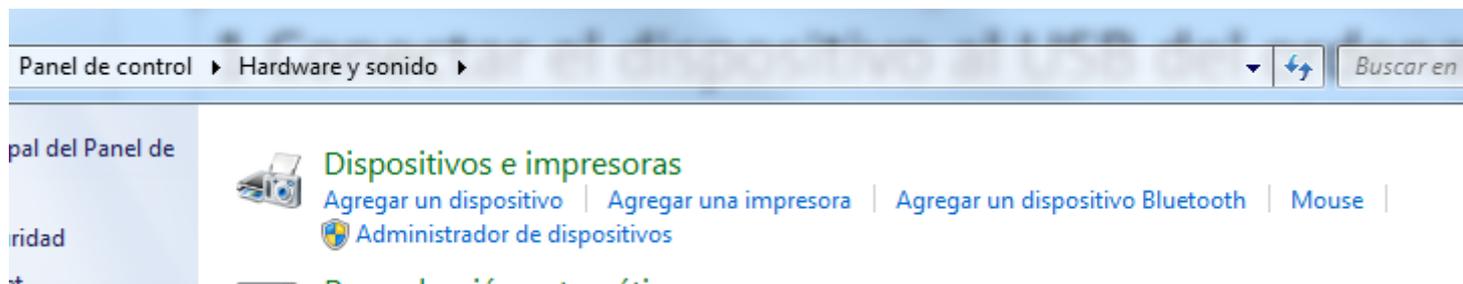
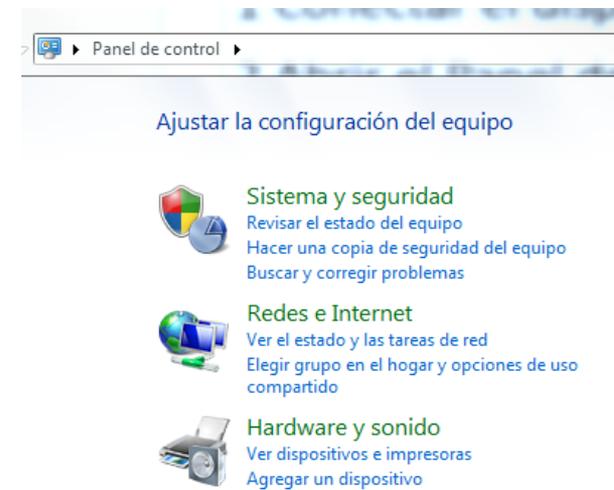
EJECUCIÓN EN DISPOSITIVO

Ejecutando en dispositivos

- Si queremos conectar un dispositivo Android para ejecutar las aplicaciones, es necesario instalar el driver USB apropiado.
- Google proporciona en el SDK los drivers para los Nexus (Google USB Driver).
- Demás dispositivos es necesario descargar driver (OEM Drivers) de la página web del fabricante.

Pasos instalar driver

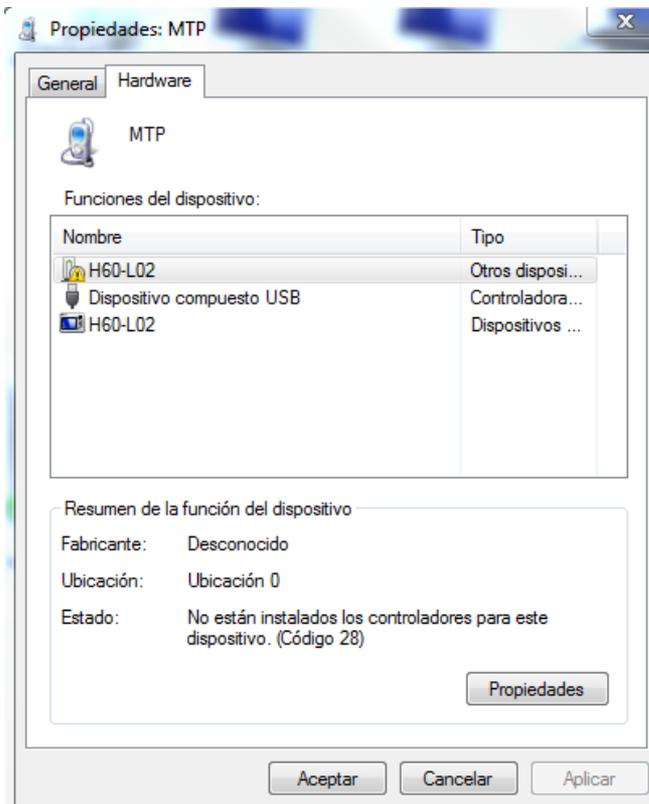
0. Móvil Modo USB Debugging
1. Conectar el dispositivo al USB del ordenador
2. Abrir el Panel de Control
3. Seleccionar Hardware
4. Dispositivos e impresoras



Pasos instalar driver

5 Localizar Dispositivo

6 Propiedades Hardware



Dispositivos (10)



Bluetooth Travel Mouse



H60-L02

Dispositivos (10)

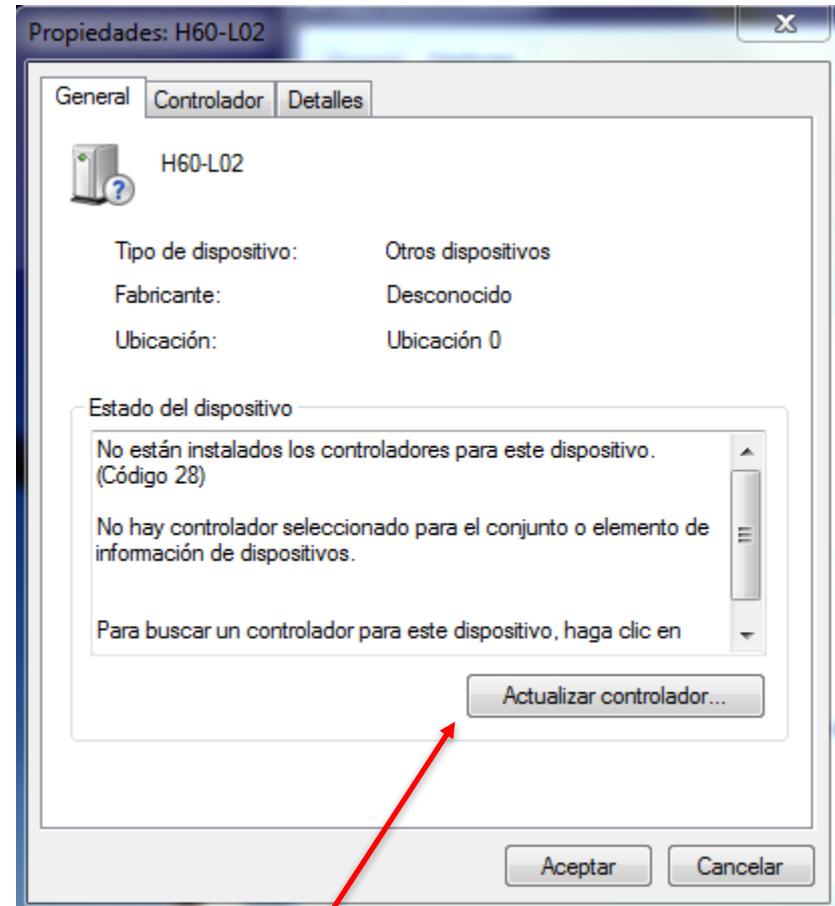
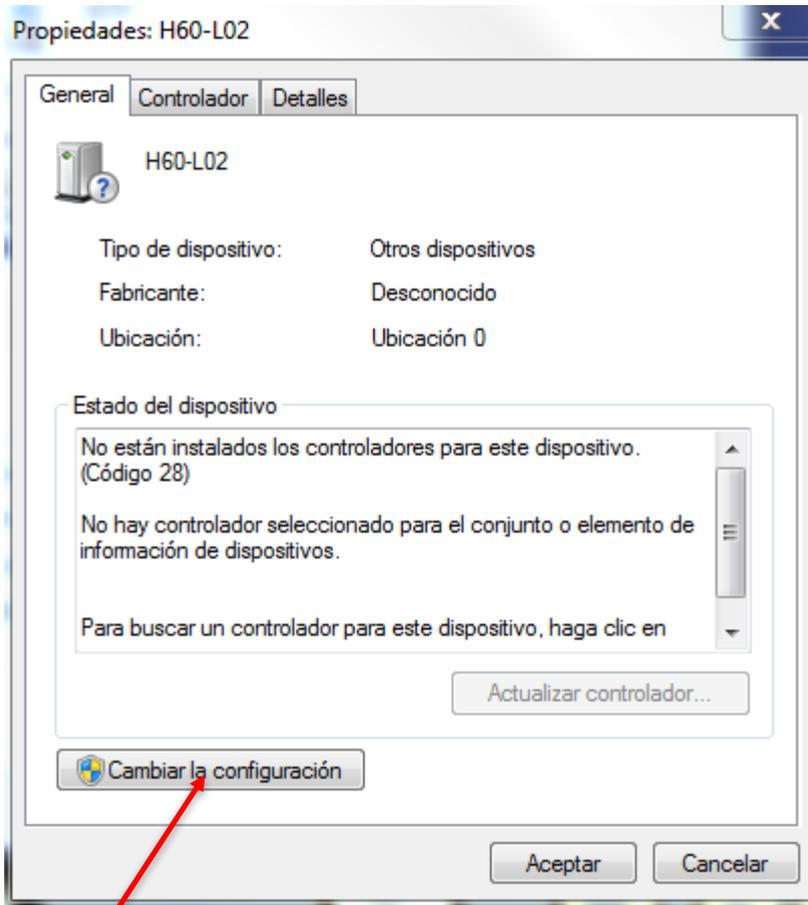


Bluetooth Travel Mouse

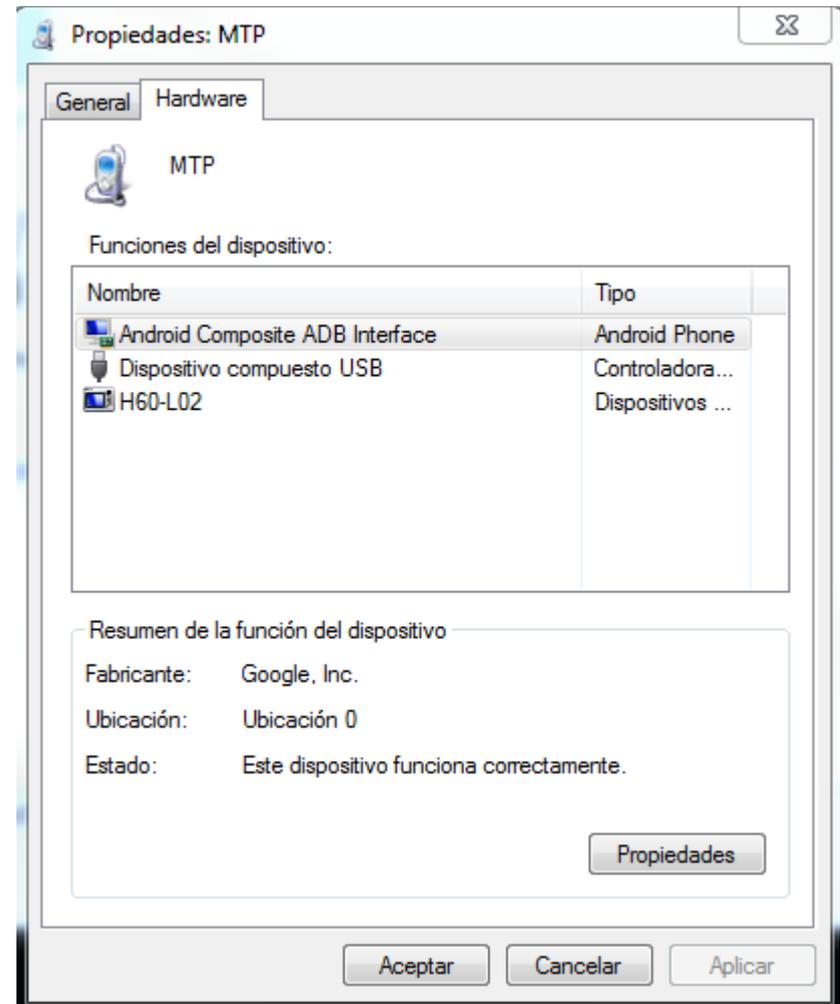
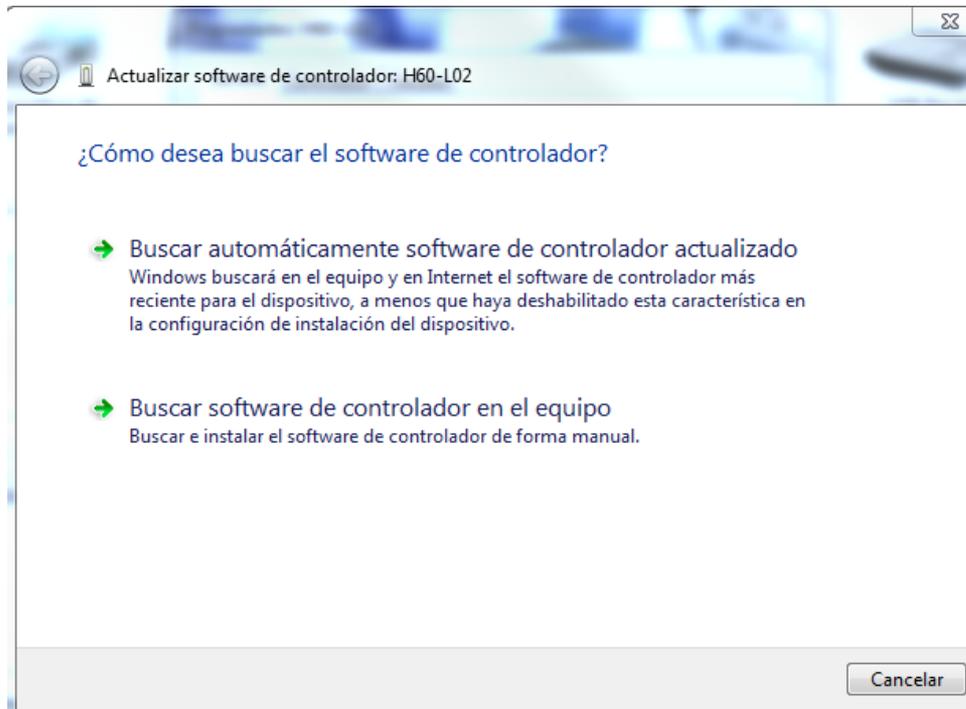


MTD

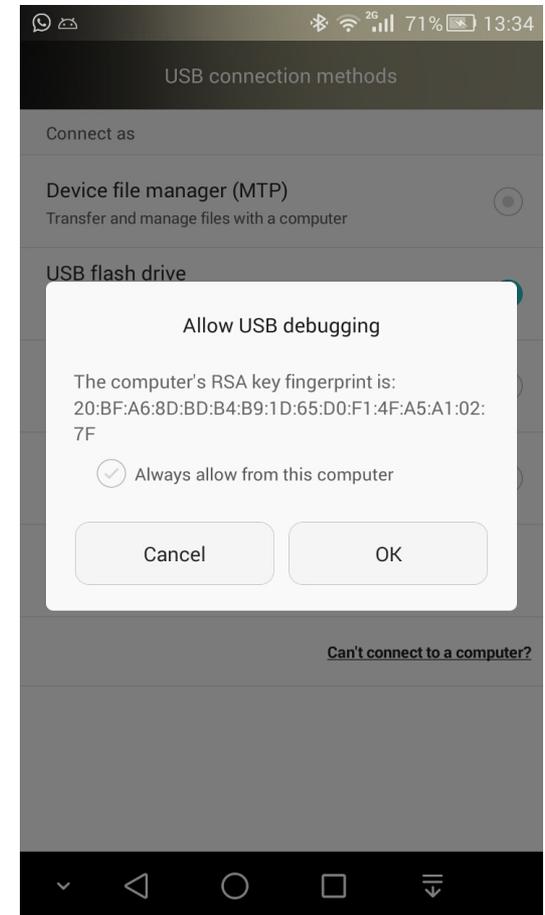
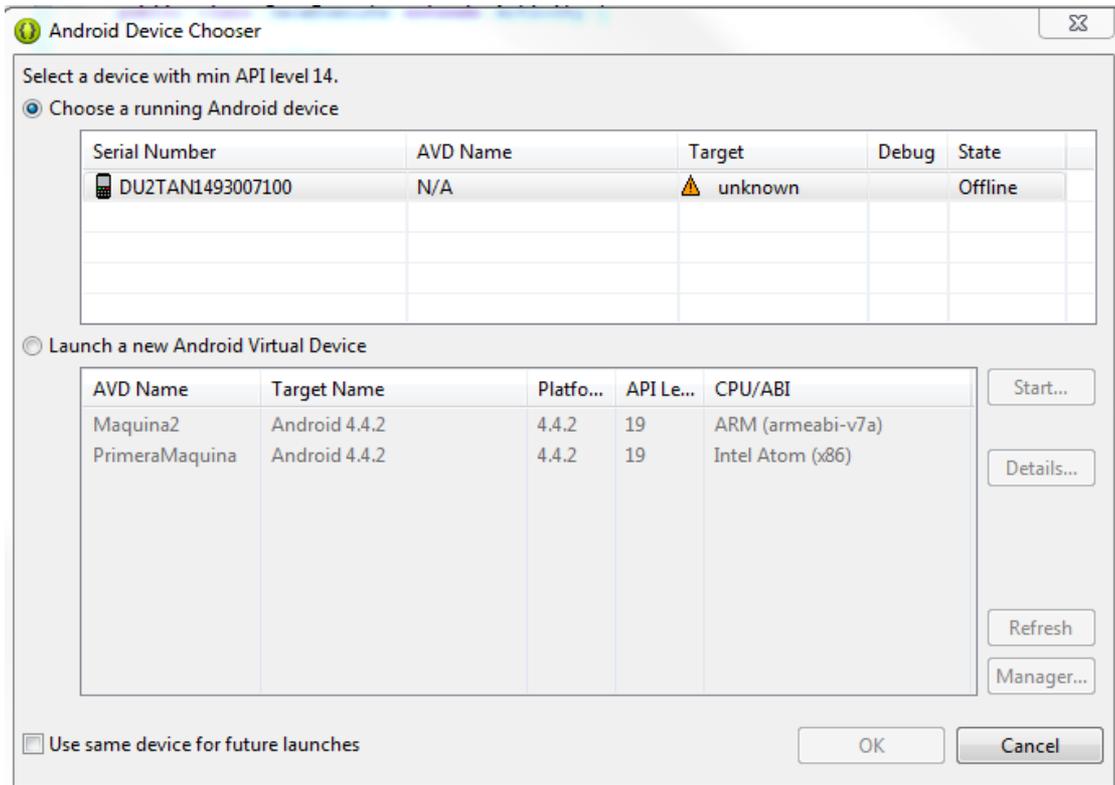
Pasos instalar driver



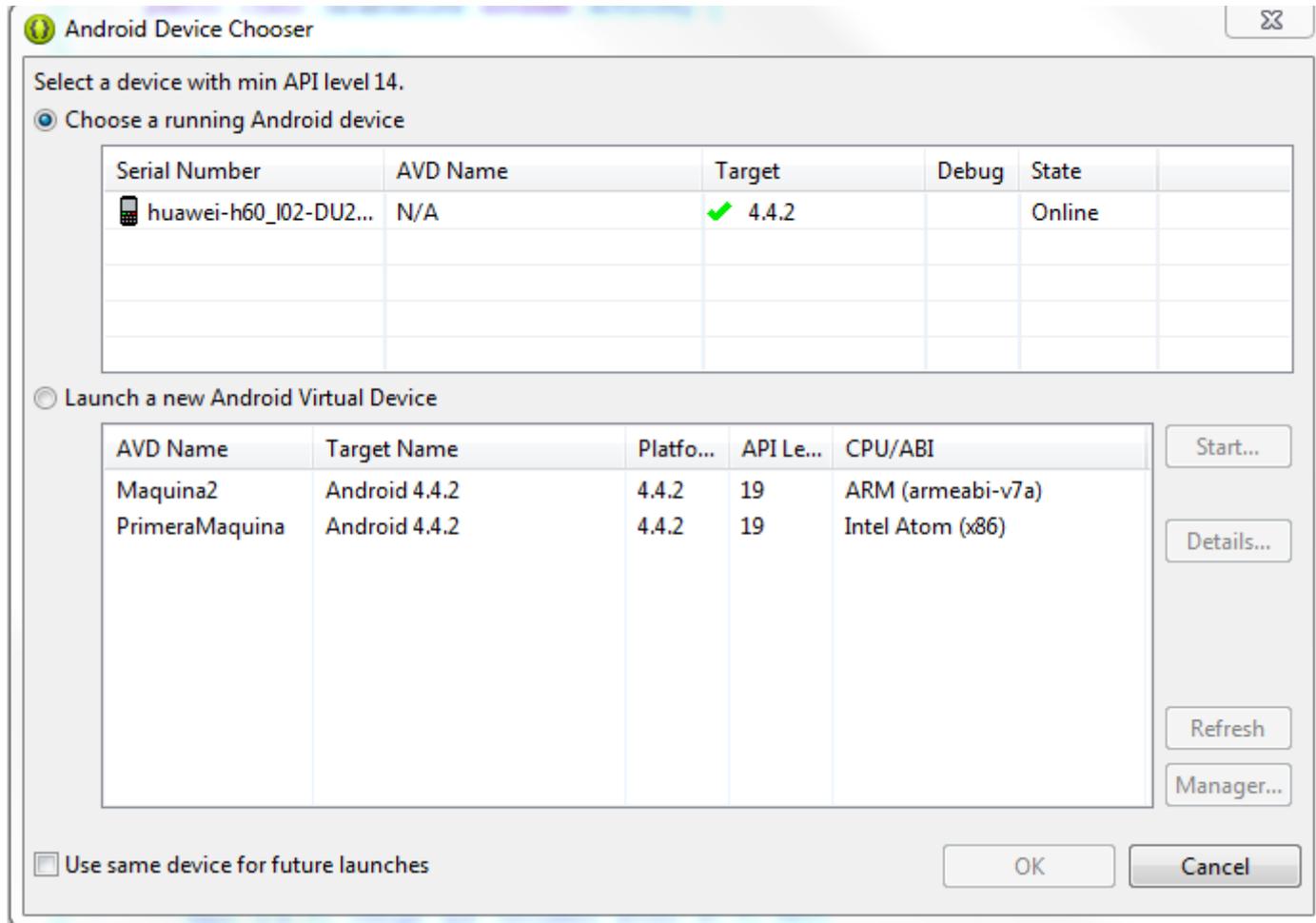
Pasos instalar driver



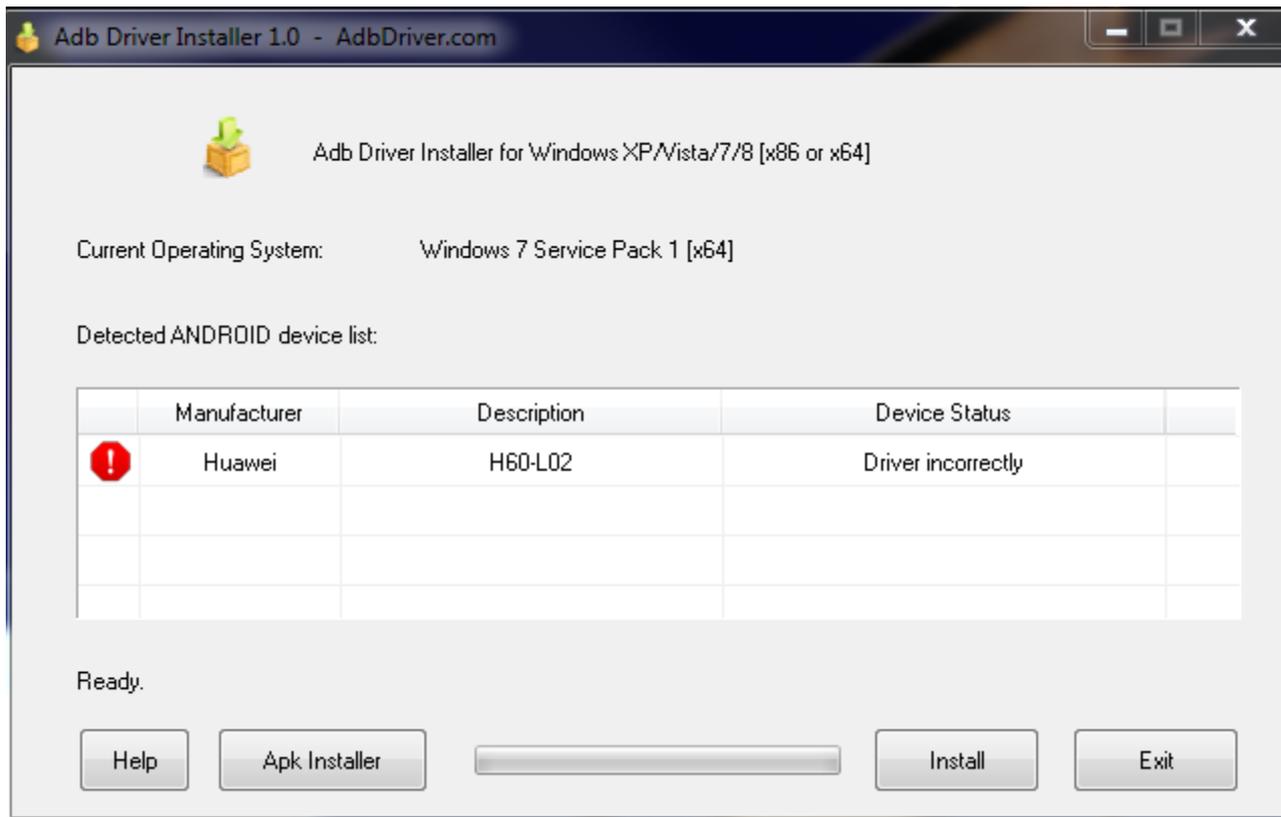
Pasos instalar driver



Pasos instalar driver



Adb Driver Installer



ANDROID HERRAMIENTAS VISUALES

UI Automator Viewer

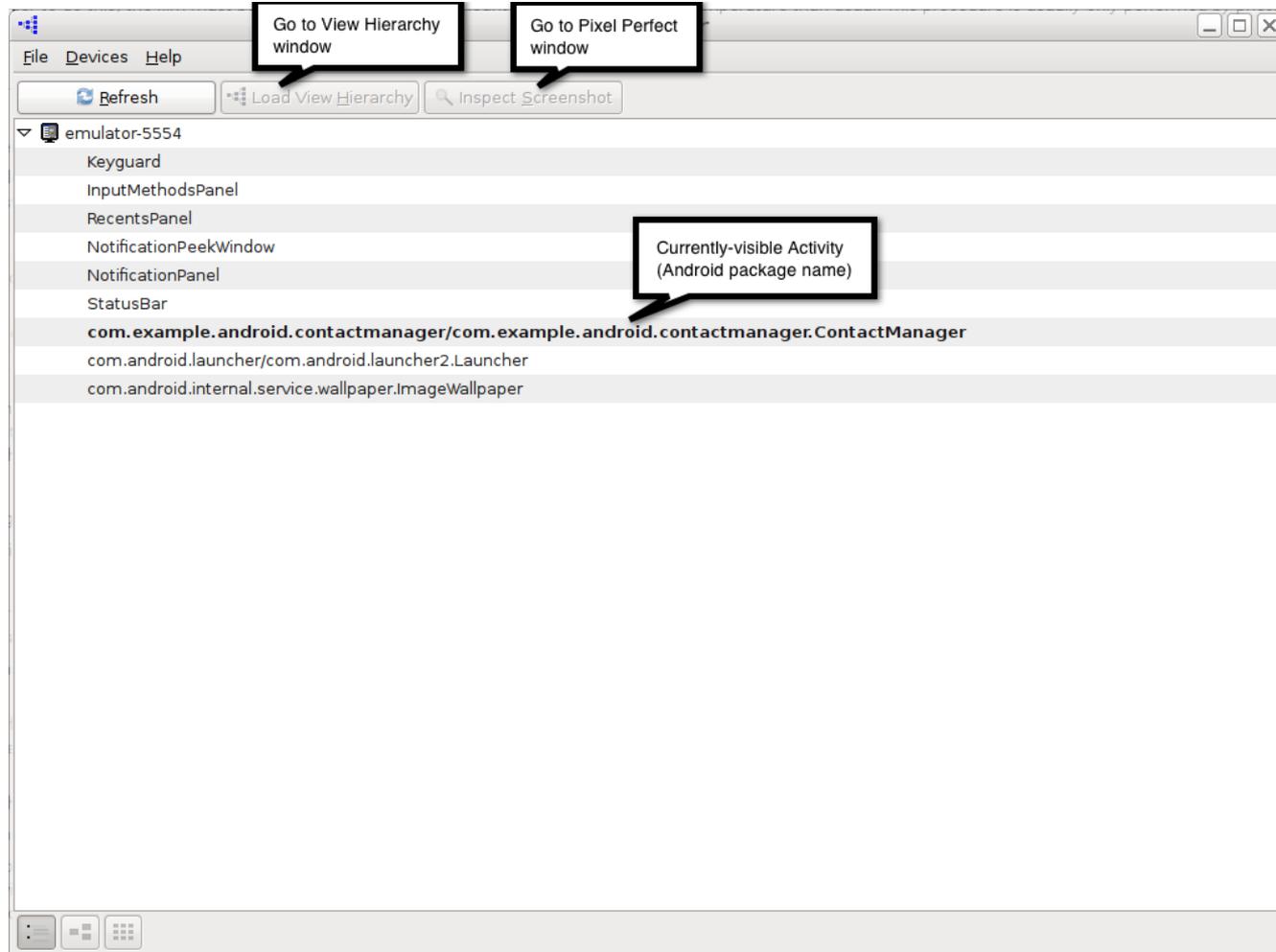
The image shows the UI Automator Viewer application. On the left, a mobile app interface is displayed. The app has a blue header with navigation tabs: INICIO, YO, AMIGOS, and ENTRENAR. Below the header, there is a profile card for 'Jose Antonio M...' with a 'Buscar amigos' button and an 'Actualizar' button. A red dashed box highlights a 'Kilómetro' widget showing '9,1' for 'Esta semana' and '12,6' for 'La semana pasada'. Below this, there is an 'Actividades' section showing '17 registradas' and an 'Información importante' section with a progress indicator and the text '¿Estás progresando? ¡Aprende más sobre tus 17 actividades!'.

On the right, the UI hierarchy is shown as a tree structure. The root is a FrameLayout [0,0][1080,1776]. It contains a LinearLayout [0,0][1080,1776], which contains another FrameLayout [0,75][1080,1776]. This FrameLayout contains a View [0,75][1080,1776], which contains a FrameLayout [0,75][1080,243]. This FrameLayout contains a View [0,75][1080,243], which contains a FrameLayout [48,75][120,243]. This FrameLayout contains a LinearLayoutCompat [960,75][1080,243], which contains an ImageView [960,87][1080,231]. The root FrameLayout also contains a FrameLayout [0,243][1080,1776], which contains a LinearLayout [0,243][1080,1776]. This LinearLayout contains a HorizontalScrollView [0,243][1080,372], which contains a LinearLayout [0,243][1080,372].

Below the hierarchy, the 'Node Detail' section shows the following properties for the selected node (index 0):

index	0
text	
resource-id	
class	android.view.View
package	com.fitnesskeeper.runkeeper.pro
content-desc	
checkable	false
checked	false
clickable	false
enabled	true
focusable	false
focused	false
scrollable	false
long-clickable	false
password	false
selected	false
bounds	[0,663][1080,1047]

Hierarchy Viewer



Herramientas Líneas de Comando

ANDROID SDK AVANZADO

Configurar S.Op. Línea comando

- Configurar la variable PATH para que pueda ser ejecutada fácilmente por todos los elementos del sistema.
 - Windows 7 es necesario cambiar la variable de entorno PATH del usuario o del sistema según se desee.
1. Seleccione Equipo en el menú Inicio.
 2. Seleccione Propiedades del sistema en el menú contextual.
 3. Haga clic en Configuración avanzada del sistema → Opciones avanzadas.
 4. Haga clic en Variables de entorno, en Variables del sistema, busque PATH y haga clic en él.
 5. Añadir detrás la ruta donde está Android por ejemplo
c:\Users\usuario\desktop

Emulador cmd

- Podemos ejecutar el emulador mediante el entorno de trabajo de Eclipse o mediante la línea de comandos como herramienta del SDK.

emulator -avd <avd_name> [-<option> [<value>]] ... [-<qemu args>]

- La ejecución de las siguientes sentencias ejecutara la AVD creada.

emulator -avd primeraMaquina

emulator @primeraMaquina

Android Debug Bridge (adb)

- El SDK nos ofrece un conjunto de herramientas muy útiles para el desarrollo de aplicaciones Android. Además del Emulador y el DDMS mostrado anteriormente, podemos hacer uso de Android Debug Bridge (adb).
- adb es una herramienta ejecutada en línea de comando que posibilita comunicarse con una instancia del emulador o un dispositivo Android.
- El ejecutable esta en la carpeta <sdk>/platform-tools/, por lo que debemos incluirla también en la variable PATH.
- El patrón de uso del comando es:

adb [-d|-e|-s <NumeroSerie>] <comando>

<http://developer.android.com/intl/es/tools/help/adb.html>

Android Debug Bridge (adb)

- El primer comando a ejecutar será:

adb devices

- La salida nos muestra que dispositivos están conectados y disponibles para interactuar. La respuesta es una lista de dispositivos con el par de información de cada dispositivo (número de serie, estado).
- En el caso que exista más de un dispositivo conectado deberemos incluir su número de serie con la opción -s.

adb -s <NumeroSerie> <comando>

Android Debug Bridge (adb)

Comandos más usuales de adb:

- ***install*** **<path to apk>** Instala una aplicación (.apk) en el dispositivo.

adb install PrimerProyecto.apk

- ***pull*** **<remoto>** **<local>** Copia un archivo o directorio desde el emulador o dispositivo.
- ***push*** **<local>** **<remoto>** Copia un archivo o directorio al emulador o dispositivo.

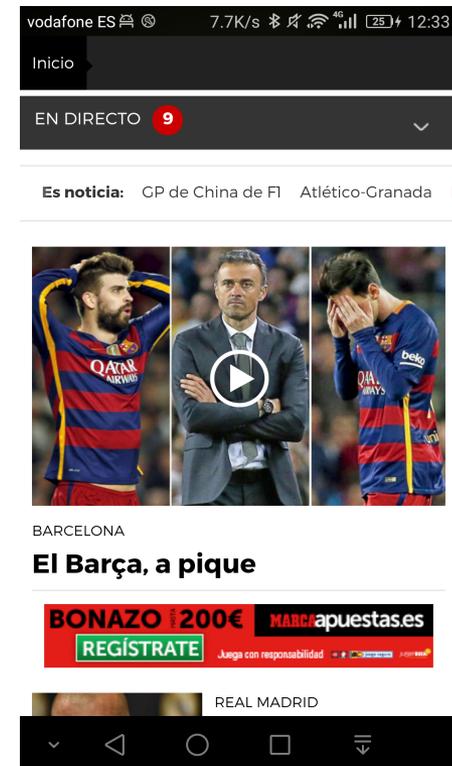
adb push openssl /sdcard/openssl

- **shell** Establece una consola remota en el dispositivo o emulador. Nos permite ejecutar tanto comandos que están ubicados en /system/bin/ como aplicaciones.

Android Debug Bridge (adb)

- `adb shell am start http://www.marca.es`

```
monte -- -bash -- 80x24
[pdi-120-181:~ monte$ adb shell am start http://www.marca.es
Starting: Intent { act=android.intent.action.VIEW dat=http://xxxxx.xxxxx.xx }
pdi-120-181:~ monte$
```



<http://developer.android.com/intl/es/tools/help/shell.html>

Práctica 5.3

Adb línea comandos

Samsung
TECH INSTITUTE



Módulo 5.

Entorno de Desarrollo Android

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