# Backup, Encrypt and Restore Android

# Backup your Android

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Android includes a built-in way to back up and restore the contents of your phone or tablet. All you need is a computer and a device running Android 4.0 (Ice Cream Sandwich) or newer.

## **Installing the Android SDK**

We'll need to use the adb (Android Debug Bridge) command to perform a backup or restore. This command is included with Google's Android SDK, which you can download for free.

First, you'll need to install Oracle's Java Development Kit, which the Android SDK requires. Download and install the 32-bit version – the Android SDK wants the 32-bit version, even if you're using a 64-bit version of Windows.

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Linux x64	77.67 MB	👱 jdk-7u5-linux-x64.tar.gz
Mac OS X x64	97.26 MB	jdk-7u5-macosx-x64.dmg
Solaris x86	137.39 MB	👱 jdk-7u5-solaris-i586.tar.Z
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Solaris SPARC	140.27 MB	jdk-7u5-solaris-sparc.tar.Z
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Next, <u>download and install the Android SDK from Google</u>. If the SDK informs you that it can't find Java, you may have installed the 64-bit version of the JDK – ensure you install the 32-bit version.

After the SDK is installed, open the Android SDK Manager from your Start menu (search for "SDK Manager").

Enable the *Android SDK Platform-tools* checkbox and click the Install button to install the platform tools package, which contains adb. If you see an error, you may need to run the SDK Manager as Administrator. (Right-click the SDK Manager shortcut in your Start menu and select Run as Administrator.)

Android SDK Manager				X
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SDK Path: C:\Users\Chris\AppData\Local\Android\android	l-sdk			
Packages				
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#### **Device Setup**

You'll need to enable USB Debugging on your Android device – you can do this from the Developer Options screen in Android's settings.

USB debugging connected Developer options	ÓŇ
Desktop backup password	
Desktop full backups aren't currently protected	
Stay awake	
Screen will never sleep while charging	
Protect USB storage	
Apps must request permission to read USB storage	
DEBUGGING	
USB debugging	7
Debug mode when USB is connected	

You can now connect your Android smartphone or tablet to your computer using a USB cable. You'll need drivers for your device installed on your computer to communicate with it – you can often find these drivers on your device manufacturer's website. Installing the Google USB Driver from the Android SDK Manager window (look for it under Extras) may also work.

## **Testing ADB**

Note the path where you installed the Android SDK. It's displayed at the top of the Android SDK Manager window, next to SDK Path.

DK Path: C:\Users\Chris\AppData\Local\Android\android-s	sdk			
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🏺 Name	API	Rev.	Status	-
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🥅 🛃 Google Analytics SDK		2	🖊 Not installed	
📄 🛃 Google Cloud Messaging for Android Library		3	🖊 Not installed	
📄 🛃 Google Play services		1	1 🛛 🖊 Not installed	
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You'll find the adb.exe file in the platform-tools folder. With the default installation settings, the location is: C:\Users\NAME\AppData\Local\Android-sdk\platform-tools

Navigate to this folder, hold Shift and right-click inside it, and select *Open command window here*.

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To test whether adb can communicate with your device, run the following command:

adb devices



You should see a device in the list – if you see no devices, adb can't communicate with your device because its driver isn't installed properly.



### **Backing Up Your Device**

You can now use the adb backup command to back up your device. To back up everything, run the following command:

adb backup -apk -shared -all -f C:\Users\NAME\backup.ab

This backs up all your installed apps (APK files) and shared storage (SD card) data to the C:\Users\NAME\backup.ab file on your computer. Replace NAME in the command with your Windows username or provide another location for the backup file.



After running this command, you'll have to agree to the backup on your device. You should enter a password here to encrypt the backup.



Depending on how much data there is to back up, the process may take some time.

# **Restore your Android**

To restore your backup in the future, run the following command:

adb restore C:\Users\NAME\backup.ab

You'll be asked if you want to do a full restore – this will replace the data and apps on the device with the ones from your backup. If you encrypted the backup with a password, you'll have to enter the password to restore it.

Full restore			
A full restore of all data from a connected desktop computer	has been requested. Do y	ou want to allow this to happen?	
If you did not request the restore yourself, do not allow the o	peration to proceed. This	will replace any data currently on the device!	
in the restore data is encrypted, please enter the password be	now.		
Do not restore		Restore my data	

This is a useful feature, but the complexity of using the Android SDK to create and restore backups is a bit much for the average user. Hopefully this feature will be given a convenient button in Android's interface in the future.