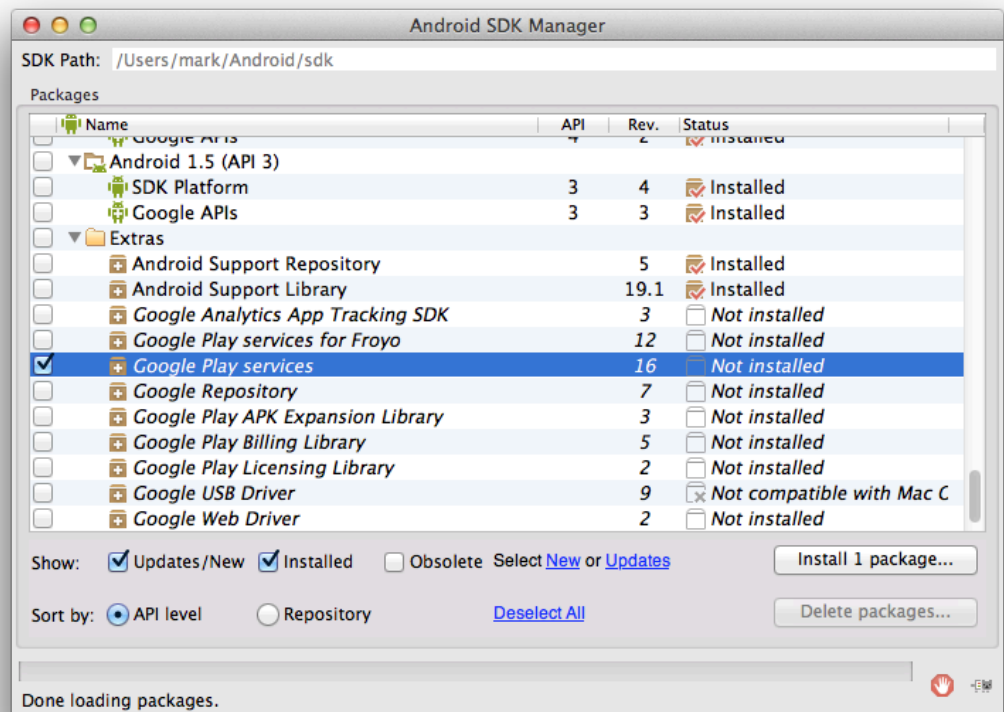# Setting Up Google Maps

Prerequisites

In order to compile the examples provided for this session you will need to make sure you have the Google Play Services APK installed. This is done through the Android SDK Manager. The following screenshot shows which package to include:

Acquiring a Google Maps API Key

Google Maps requires you to acquire a unique API key to use. This process can take a bit of time to walk through. You can find instructions on acquiring this key here:

http://docs.xamarin.com/guides/android/platform_features/maps_and_location/maps/obtaining_a_google_maps_api_key/

An offline version of the document is also provided in the lab instructions – **Obtaining a Google Maps API Key.pdf**.

> **Note**: there are some differences in the Google Developer Console from what is in the above document – in particular, Services is now referred to as APIs and API Access is now Credentials in the sidebar.
>
> It's not hard to navigate, just be aware that the screen shots in the above web page do not exactly match the latest iteration of the Google Developer Console.

Updating Your Android Emulator

Testing an app using Google Maps on an emulator requires that emulator having Google Play Services installed on it. You can install Google Apps on your emulator whether using a typical Android emulator, or Genymotion.

You can tell whether maps are supported by the existence of the Google Maps app on the device – if the Google Maps app is present, then the Google APIs are available, otherwise they are not and will need to be added.

Installing Google Apps on a Genymotion Emulator

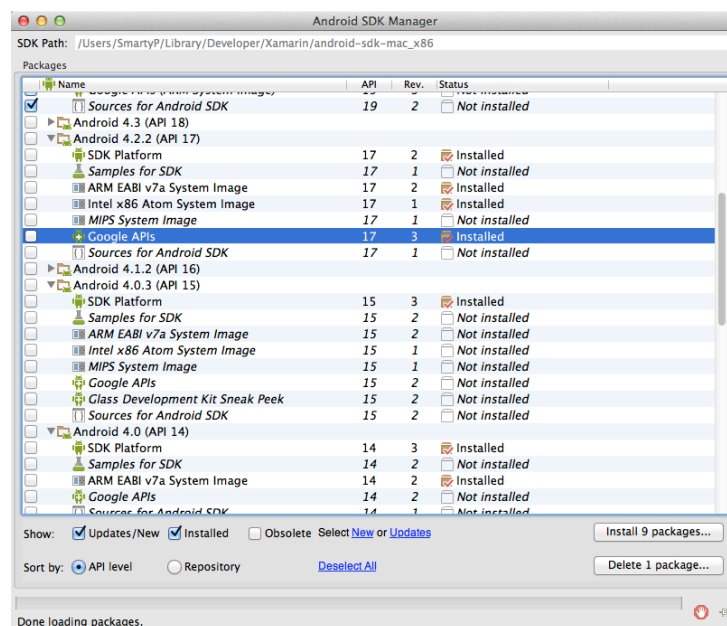For Genymotion 2.0 and above, you can simply install the Universal Google Apps package download file from http://wiki.rootzwiki.com/Google_Apps#Universal_Packages_2

Download the appropriate version file and then drag it onto your running Genymotion emulatoro image. There are explicit instructions on this process available here:

http://blog.zeezonline.com/2013/11/install-google-play-on-genymotion-2-0/
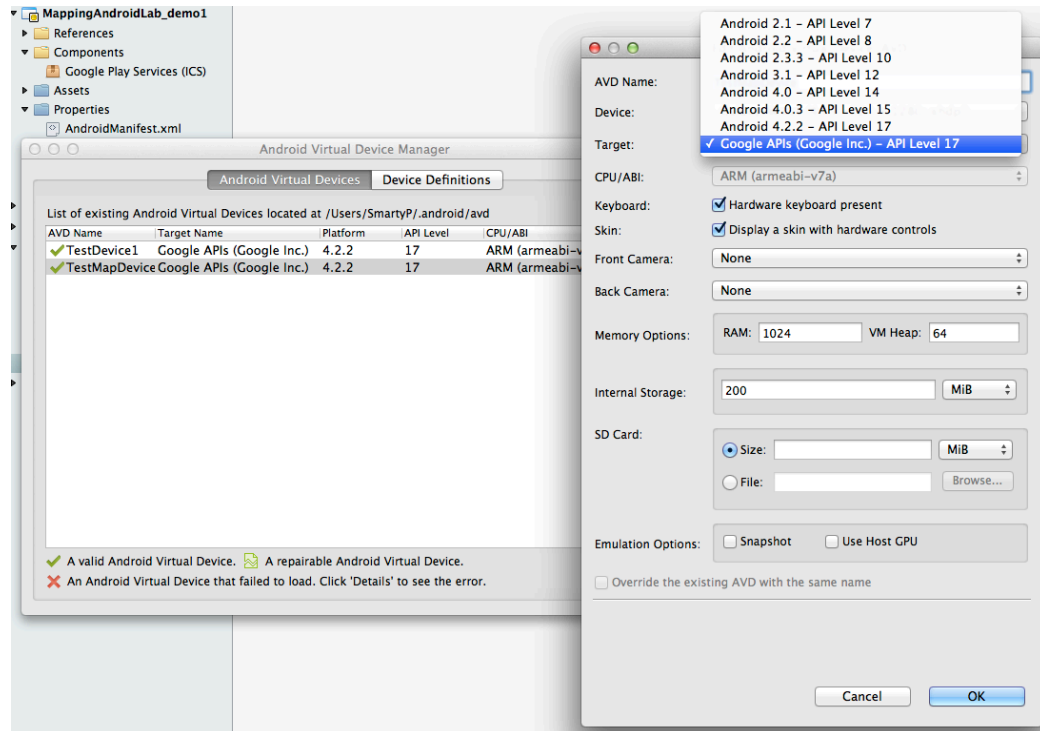
Installing Google Apps on an Android Emulator

Open the Android SDK Manager under the Tools menu in Xamarin Studio. Make sure that you have downloaded the 'Google APIs' package for the same API version as the emulator you wish to use.

Next, create a new emulator image or edit an existing one by going to 'Open Android Emulator Manager' under the Tools menu in Xamarin Studio. You want to make sure to set your emulator's Target to a Google APIs supported target API level – this essentially gives you an emulator with Google Apps already installed:

Now when you deploy to an emulator, choose your emulator with Google APIs loaded, and then these map demos will work in your emulator.