Benchy Profiler
OnDevice for Android

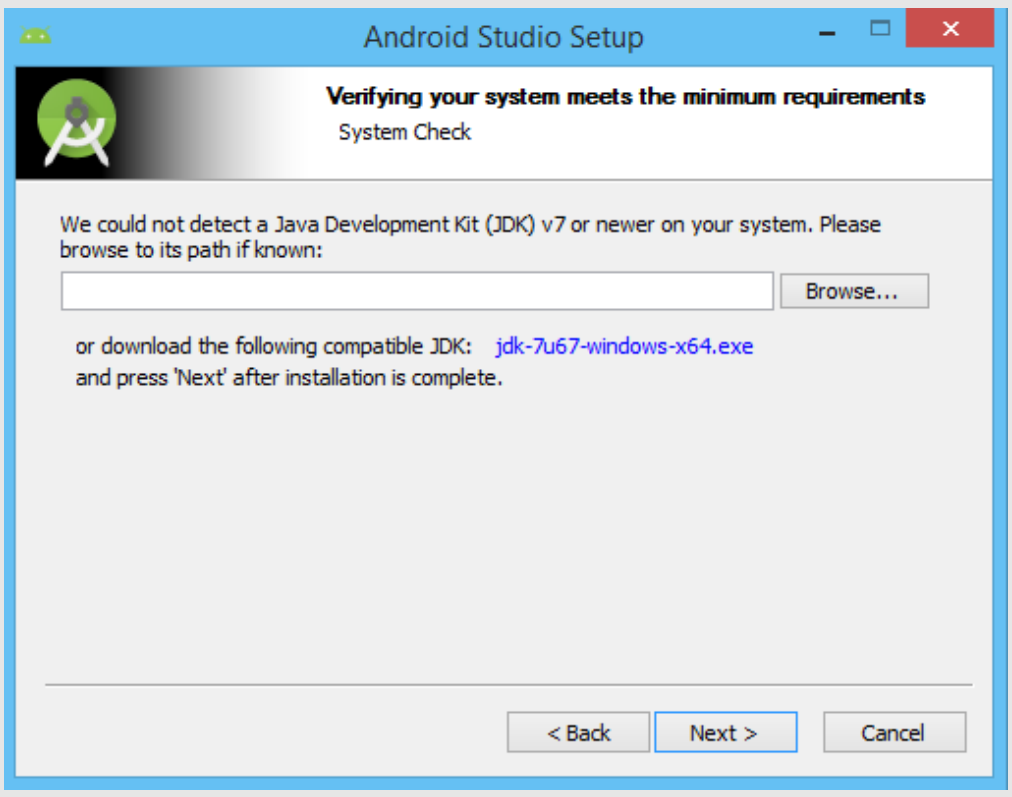
A simple guide to getting up and running with Benchy Profiler's OnDevice for Android Feature

Welcome to the Benchy Profiler OnDevice Walkthrough, if you have any trouble what so ever with the setup of this feature contact me at univerbgamingstudios@gmail.com and I'll be more than happy to walk you through it.

Preperation / Initial Requirements

Please ensure you've got a working Unity setup building Android APK's - without this you're not going to be able to proceed. Next, if you haven't already grabbed Benchy Profiler and loaded it into your scene, please do so from the Asset Store, get the latest: Latest Benchy Profiler

IMPORTANT: I've personally ran into issues getting Android builds up and running on anything other than JDK 6 (jdk-6u45-windows-x64.exe)



You will at the very minimum require the Android Studio / SDK setup on your local machine as below

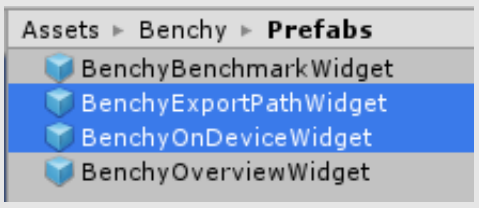
Loading OnDevice into the scene

It's very important to understand that in order to control the OnDevice session that you need to include some prefabs into your scene. In order to do so navigate to the **Benchy\Prefabs** folder in your hierarchy and drag the following highlight prefabs into your scene.

Next click on each of the prefabs now in scene and ensure that the **BenchyOnDeviceWidget** has it's default layout set to lower right and that the **BenchyExportPathWidget** has it's default layout set to upper left.

The OnDevice widget will provide you with a gui of start / stop and save controls while the Export Path widget provides you with the location where the output is saved on your Android device.

IMPORTANT: Ensure that when you compile your APK that you allow permissions to external SD card or you will not be able to browse to the save location without jailbreaking the device first.



Drag these two prefabs into your scene root

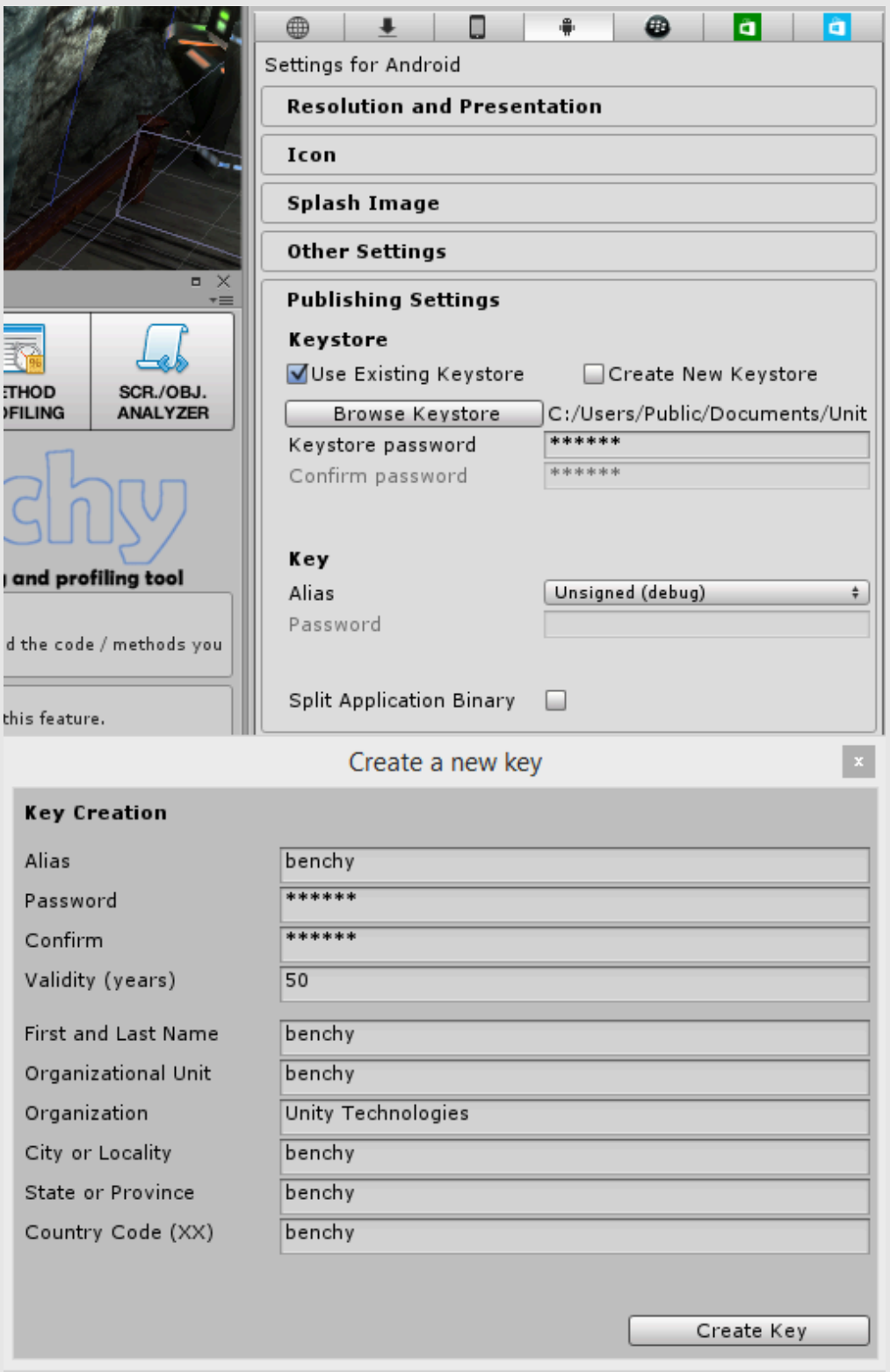
Creating the required Keystore correctly

The biggest thing that differentiates the standard Windows / Mac unity build process is the need to sign your Android games from a valid keystone on your machine. Benchy Profiler OnDevice for Android requires that you perform the following setup once, follow this to the letter:

1.) Navigate to the menu Edit / Project Settings / Player and locate the **Publishing Settings** under the Android tab.
2.) Click on **Create New Keystore**
3.) Type **benchy** in lowercase for the password fields (both)
4.) Click on **Browse Keystore**
5.) Save the keystone as **benchy.keystore**
6.) If you look at the **Publishing Settings** area you will see a part of it titled **Key** with the word **Alias** below it. Click on that drop down and select **Create a New Key**
7.) Type **benchy** in lowercase for all the fields not yet populated (Alias, Password, Confirn, First and Last Name and so forth)
8.) When finished click on **Create Key**
9.) If this is the first time you've done this you'll be asked to select your Android SDK root folder. Take note of this folder because you'll need it later for Benchy Profiler. If you don't have and SDK folder, ensure you've started up Android Studio and that the Android SDK component has been downloaded. The common installation area for windows is C:\Users*YourUserName*\AppData\Local\Android\sdk\android-sdk*
10.) Now that the key has been created, select **benchy** from the **Alias** drop down
11.) Type in the password **benchy** lowercase right below this drop down
12.) Locate the **Other Settings** tab just above the one your currently on
13.) Change the **Install Location** setting to **Prefer external**
14.) Change the **Write Access** setting to **External (SDCard)**

Changing the locations above allow you to access saved profiling data without the need to jailbreak your device.

* It's worth pointing out that you may pick up JDK path errors too, if this is the case ensure that the JDK path, example C:\Program Files\Java\jdk1.7.0_71\bin is included in your PATH environment variable



Make sure you complete the fields with the word benchy in lowercase.

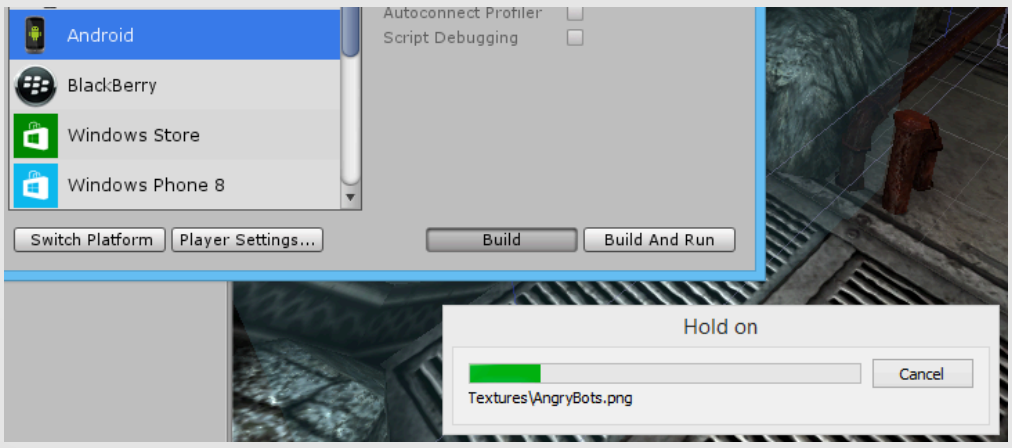
Building, Signing and Preparing your Android with OnDevice

Build your Android game as normal and when completed navigate to the **Benchy** Menu. From here run the **Prepare OnDevice binaries...** option

If this is your first time running OnDevice you will be asked to locate your **benchy.keystore** created earlier. You will then be asked for the location of your Android SDK folder. On windows, this is usually installed to C:\Users\YourUserName\AppData\Local\Android\sdk\

Next your will need to select your JDK installation path, this would be similar to C:\Program Files\Java\jdk1.7.0_71\bin on windows and /System/Library/Java/JavaVirtualMachines/1.x.x.jdk/Contents/Home/bin on Mac.

Once the above is selected you can sit back and wait for Benchy Profiler to prepare a newly signed apk. You can spit this easily once completed because it's named **_benchy__signed.apk**



The first step of the process is to build your game as you normally would for Android

Deploying and using your OnDevice APK

Next deploy the newly created APK to your device and install as you would normally. Start the application up and take note of the GUI overlay widgets present in the scene. The first thing you'll notice is the lower right of the screen contains the control buttons. Click the **Record** button and you will see a message stating that recording is in progress.

Benchy Profiler is busy profiling all your methods live without the need for the Unity editor - that's pretty awesome!

When you are ready press the **Pause** button. You have successfully stopped recording! Now press the **Timed Recording** button. You will notice that there is a timer counting down and this is a great way to get a consistent 10 second snap shot of your game. Wait for it to finish.

It's time to export your results. Press the **Export / Save** button after which a message will display saying it has completed. The location of the saved date is displayed by the **Export Path** widget located top left of the screen. Using your file browser of choice copy that folder off of your Android device and to your PC.

Fire up Benchy Profiler within Unity and load up the results as you would usually and dive right in. All your results are right there and have successfully executed your first OnDevice session.

Thank you!

Thank you for supporting my utility and allowing me to continue development on it into the future.