Manual Release Guide for Android

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# Introduction

Sometimes, when we make a release build in app center, we will face issue that the app center will be timed out because the build takes too much time to process.

Therefore, we will need to manually make the build on our side and upload to app center for this case. This is the guide you will need to follow in order to do that.

# Prerequisites

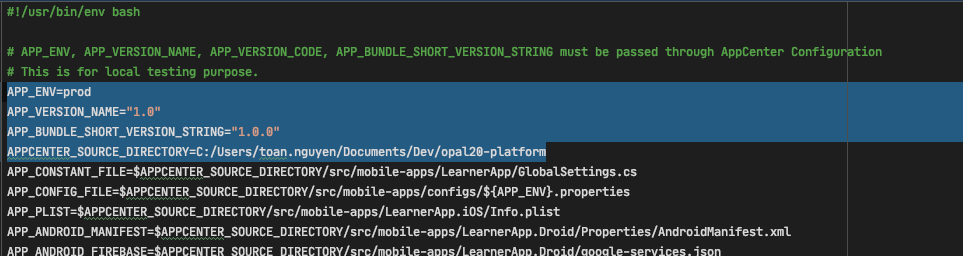
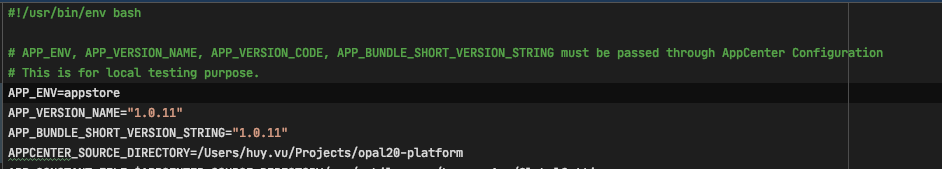
* You must have access to OPAL2.0 App Center.
* You need to install the latest SDK version and use the Latest SDK version to build from there for Android. Otherwise, Google might reject your build (waste of time)

# Step

## Changing the configuration to PROD environment.

The first step you need to do is changing the configuration to backend services and identifiers for Android project for production environment.

Don’t worry, you don’t need to change a tons of configuration, from different places, because we’re already have a script do that (actually, this script is always executed on App Center every release for pointing to AppStore environment):

* Go to /LearnerApp.Droid/appcenter-pre-build.sh
* Open the file and uncomment the first 4 lines as the picture
* 
* Now you need to change the version name you want to change, in this case, we might need to change it to 1.0.11
* For APPCENTER\_SOURCE\_DIRECTORY, change it into your project path in your computer.
* The final result will be like this
* 
* The APP\_BUNDLE\_SHORT\_VERSION\_STRING is not really matter, it’s for iOS.
* Now, run the script.
  + On Mac: Open Terminal, go to the folder and type: “sh appcenter-pre-build.sh”
  + On Windows: Just locate the file and run the file. **NOTE:** Windows may require Administrator permission for being able to run this command.
* **NOTE for Windows**: If you have issue when running the script, try to remove double quotes from “sed -I ‘’” for ALL lines. For example:

From this



To this:



* After that, please take a look at GlobalSettings.cs file and AndroidManifest for a quick check if the script is actually ran.

For the **Version Code**, you will need to go to App Center – OPAL2.0 – Android and look at the latest version, then increase 1 number for the configuration. (the link is below).

<https://appcenter.ms/orgs/orient-software/apps/OPAL-2.0-Android-App-Store/distribute/releases?parent=1>

Then, go to the AndroidManifest.xml from **LearnerApp.Droid/Properties.AndroidManifest.xml** and replace the versionCode in there. Because the script will not replace the versionCode, so you might need to do manually for that step in here.

For example:

A screenshot of a cell phone

Description automatically generatedIn this picture, the build version was 70 and version name was: 1.0.11.

Then the expected version number will be 71 and 1.0.12. NOTE that this is not always true so always confirm with Toan to make sure it’s correct)

Background pattern

Description automatically generated

## Archive the build

After all the configuration was done, it’s time for the build. The app center will require an **AAB** (**DON’T USE APK**) file to be uploaded. And here are the steps we need to do.

Right click on the Android project and choose Archive for Publishing

Graphical user interface

Description automatically generated

After waiting for a while (this could take a lot of time!), a view will be show like this Graphical user interface, text, application

Description automatically generated

Double click on the build you have just generated.

Pick ad-hoc

When asked for Signing Identiy, you can press **Import existing key:**

* Browser the key to: {ProjectPath} /opal20-platform/eng/keystroke/com.opal2.moe.edu.sg/com.opal2.moe.edu.sg.keyInfo
* Password: **123456**

NOTE: Don’t pick the wrong signing key, or you won’t able to upload to Google Play store.

After import the key, the screen should look like this:

A screenshot of a computer screen

Description automatically generated

Click Next

Check your app information. Confirm if everything is correct

**Graphical user interface, application

Description automatically generated**

Then click Publish

It may ask your password again for the keystore: Input the keystore password again.

Graphical user interface, application, website

Description automatically generated

It should look like this when you’re successfully published.

Now you should have the **AAB** file in the location you chose before, it’s time to upload that file to **AppCenter**

## Upload to Google Store Alpha via App Center

A screenshot of a video game

Description automatically generated

* Go to this URL <https://appcenter.ms/orgs/orient-software/apps/OPAL-2.0-Android-App-Store/distribute/distribution-stores/Alpha/releases>
* Navigate to Alpha channel
* Press Publish to Google Play
* Upload the AAB file
* Give some notes
* Some confirmation will be shown => Press publish

A picture containing shape

Description automatically generated

* It may take a while before app center is successfully uploaded the package, it will show something like this during that process:

Graphical user interface, application, website

Description automatically generated

* It should look like this when it’s succeed:

Graphical user interface, application

Description automatically generated

That’s all, the alpha build is uploaded and **waiting to be review by Google.**

If you have permission to Closed Testing in Google Play Console, it might look like this

Graphical user interface, text, application

Description automatically generated