Building to **the Oculus Quest** from a **Mac**

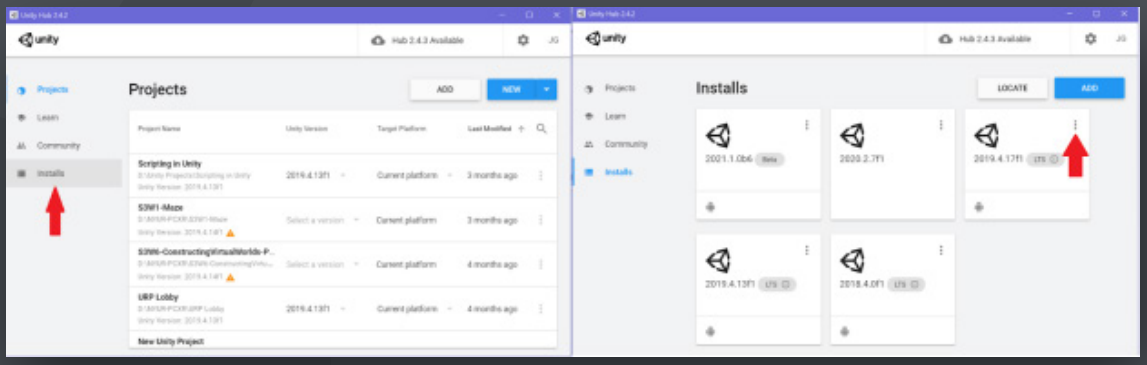
Note: *Building to an Oculus from a Mac is possible but not recommended. When using a Mac, you will not be able to use the Oculus Link feature and will need to build to device every time you want to test an application.*

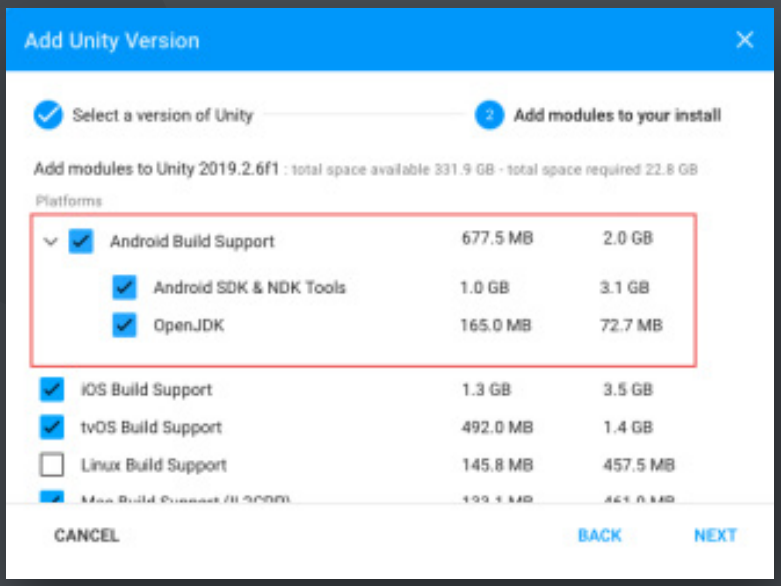
Before you begin:

- Install Unity version 2019.4 or later, all Android Unity modules, and Android Studio on your computer.

To install the Android Unity modules:

- If these were not included in your initial installation, you can find them in Unity Hub.
    - Start Unity Hub, move to the “Installs” tab, select the “...” button for the version of Unity you are using, and click “Add Modules.” After you have arrived at this screen, select the “Android Build Support” module. Note that it is important to expand the “Android Build Support” list to select “Android SDK & NDK Tools” and “OpenJDK.” Continue the process until all necessary modules have been added to your installation.



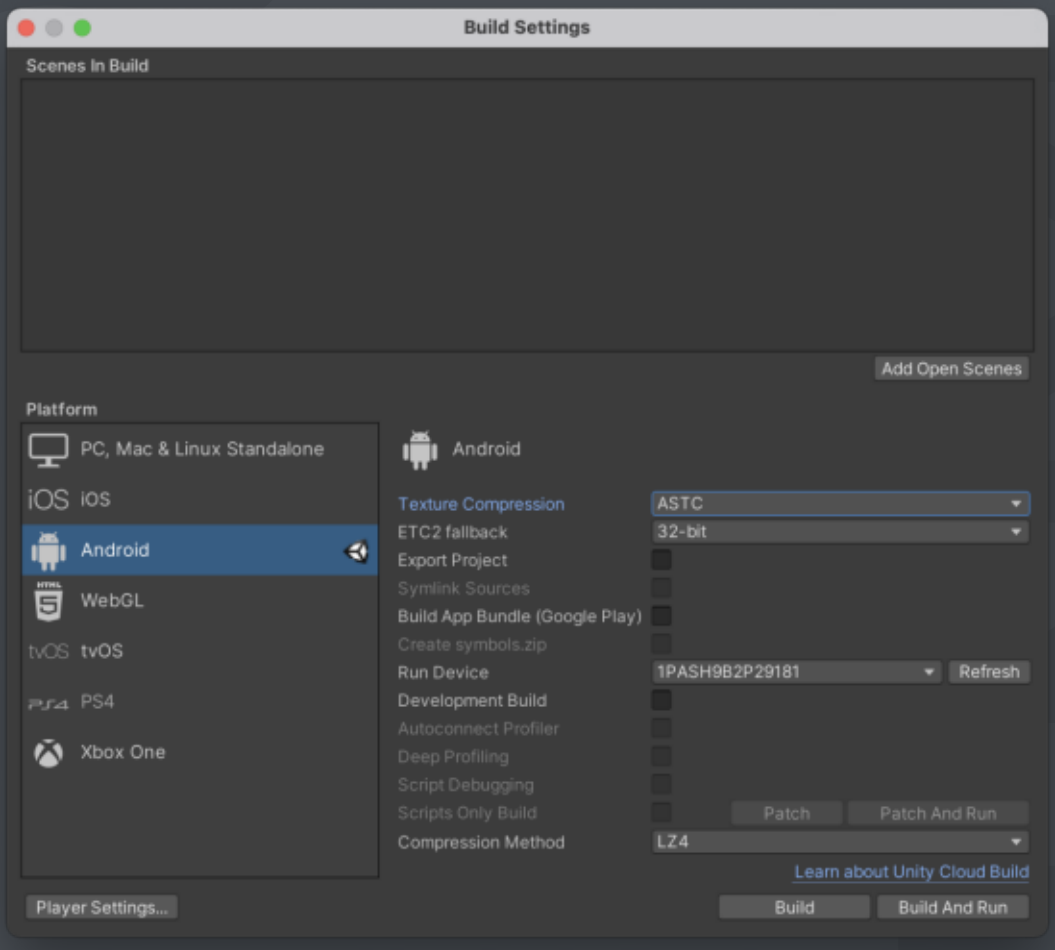


To install Android Studio:

- **Download and install the SDK.**
- You should also have already gone through the process of setting up your Oculus headset using the iOS or Android companion app. You will likely need a Facebook account in order to fully set up your device. For further information, check out the **Getting Started with Oculus support page.**
- After you have set up your VR device, enable Developer Mode.
  - Go to the Devices tab, locate your device, scroll down, and toggle on the "Developer Mode" setting under "Headset Settings." If you do not yet have an Oculus Developer account, the app will prompt you to create one the first time you try to toggle on Developer Mode. Make an account following the instructions on the **Oculus for Developer: Device Setup page.** Sign in using the Facebook account you originally set the device up with. After you have the developer account set up, try toggling on Developer Mode again in the app.
- Connect your VR device to your computer via the provided USB-C cable. Once connected, your VR device may ask, "Allow USB Debugging?" If so, select "Ok" to continue.

In Unity:

- Start a new Unity Project using Unity version 2019.4.x or later or open an existing project. It's best to configure your build settings before starting your Unity project, but you can switch platforms and configure settings later on—it might just take Unity additional time to reconfigure things for you.
- In Unity, navigate to File > Build Settings..., select "Android" as your target platform, and click "Switch Platform" in the lower right-hand corner. After the switch is made, you should see the Unity icon next to Android in your build settings. Then, you will see settings for Android to the right.
- Change "Texture Compression" to "ASTC," and under "Run Device," select your VR headset. It may not outright say "Oculus" but may be a string that looks something like this:

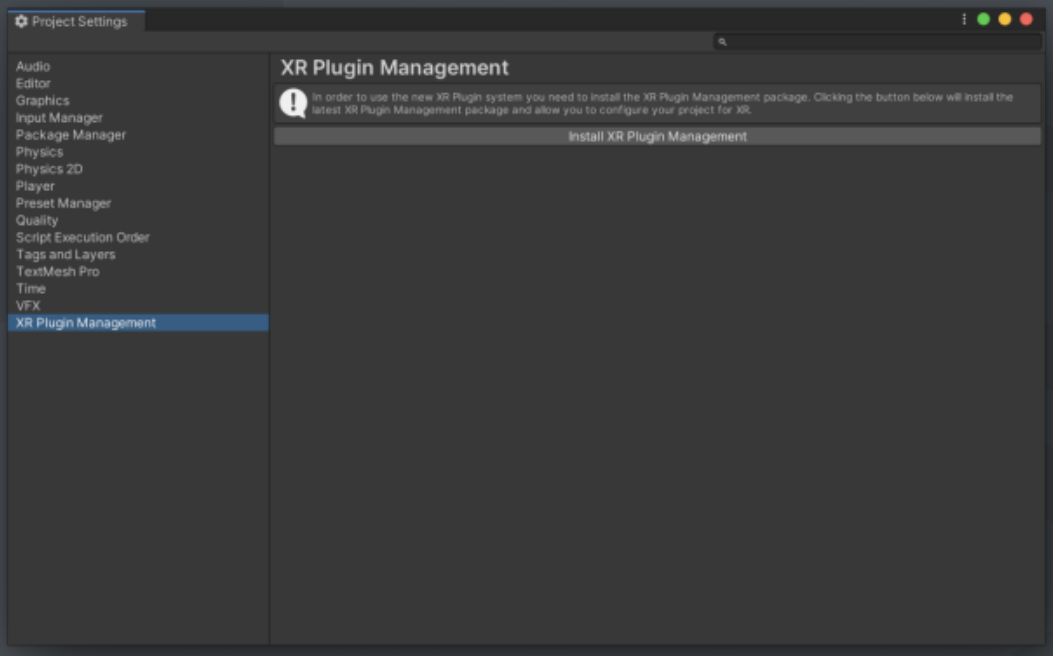


If you do not see your device in this list, make sure your device is plugged in, has been given permission to allow USB debugging from your computer, and is in Developer Mode, and that you have all Android modules properly installed for your current version of Unity.

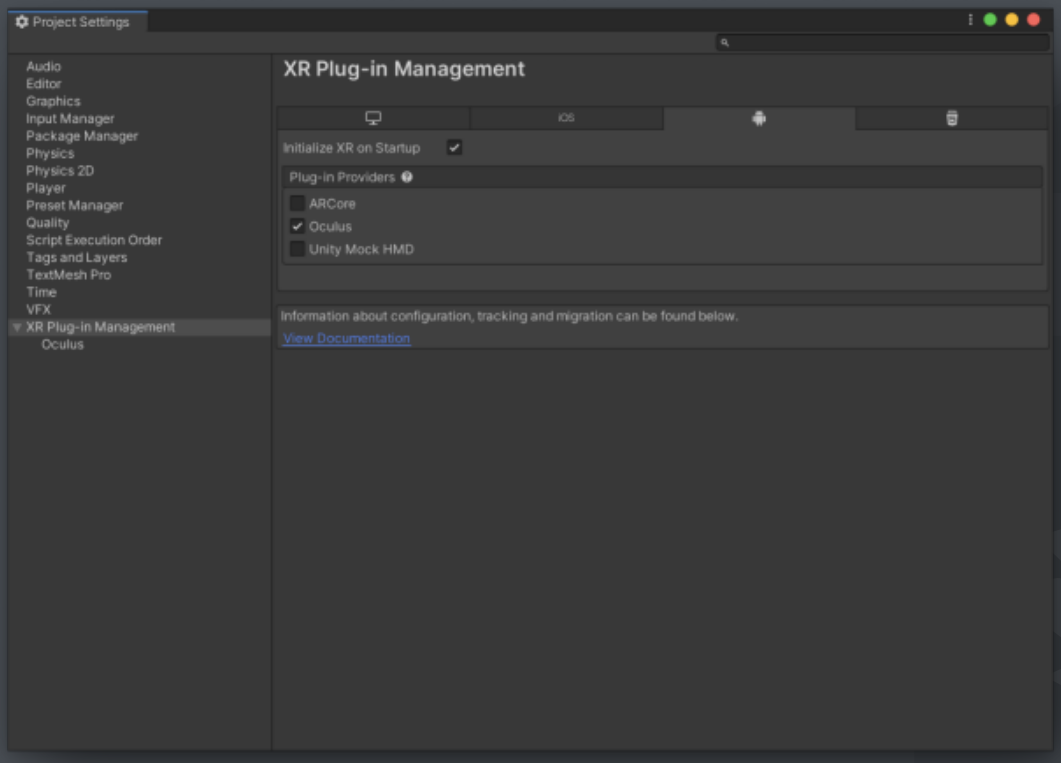
To verify that you have the modules properly installed, navigate to Unity > Preferences... > External Tools > Android. If you do not have all required Android modules installed, you will see warnings here prompting you to install these via Unity Hub.

Add Oculus XR Plugin to Your Project

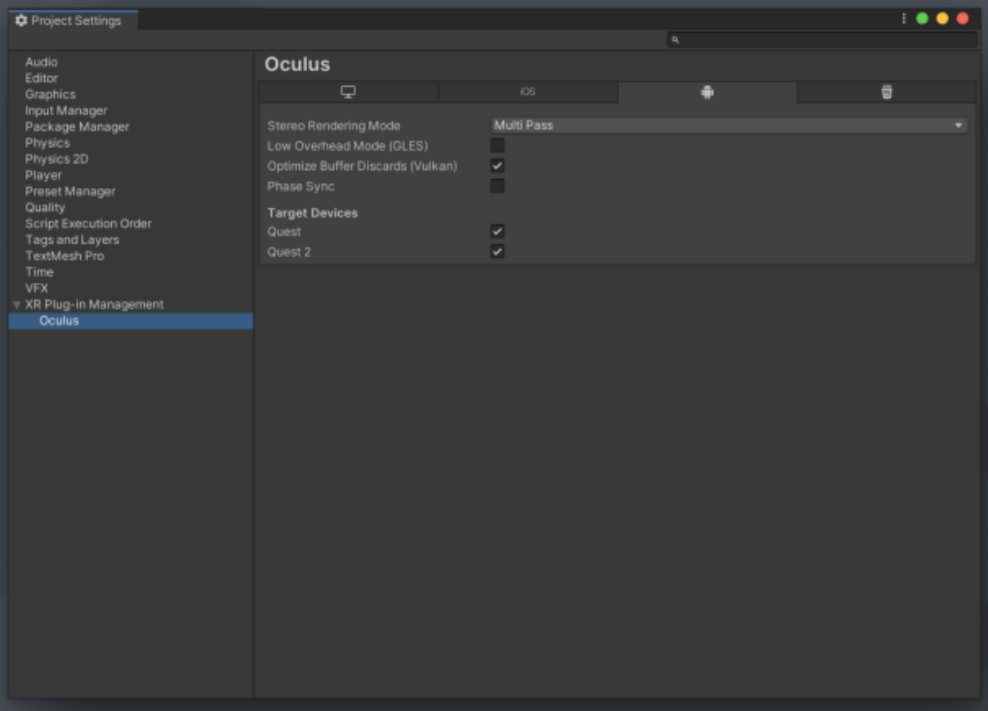
- Navigate to Edit > Project Settings... and click “Install XR Plugin Management” under the “XR Plugin Management” tab to the left.



- Once installed, navigate to the Android tab and check “Oculus” to enable the Oculus XR Plugin.

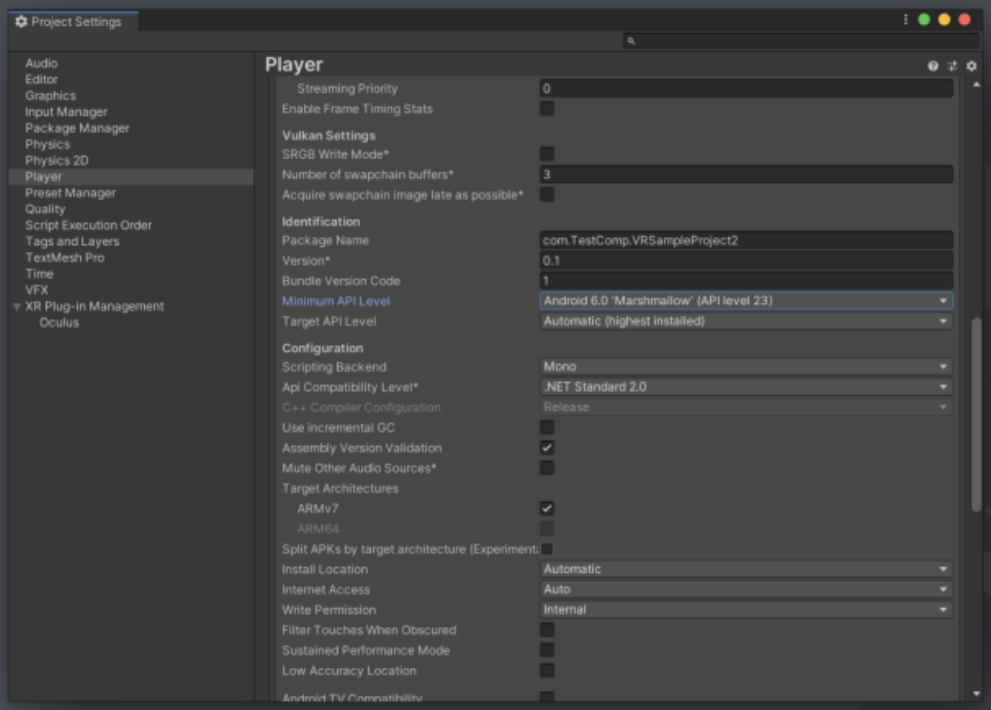


- In the “Oculus” tab to the left, you should be able to modify the default settings.



- If you plan to use its features in your project, you should also install the **Oculus Integration Package** from the Unity Asset Store as it’s not included in the Oculus XR plugin. Upon installation, you may be asked to update some plugins and restart Unity.

- Finally, in Project Settings, navigate to the “Player” settings on the left-hand side of the window, expand “Other Settings” under Android, and be sure that your minimum API Level is set to “Android 6.0 ‘Marshmallow’ (API level 23)” or higher.



Build to Device

- After your settings are properly configured, it's time to build your Unity project. Refer to the course material for all of the VR-specific optimizations you will need to make within your project.

- When you're ready to test your project on your device, navigate to File > Build Settings..., and check to make sure the settings you previously configured here remain the same. If you unplugged your headset from your computer and plugged it back in, there is a chance that you will need to re-select it under "Run Device."

- Add all scenes you wish to test on your device into your Build Settings by dragging them into this window or using the "Add Open Scenes" button.

- Click "Build and Run" in the bottom-right corner of the Build Settings window to build your app and launch it on your device. Your computer will prompt you to save your build to a chosen location on your computer and then will build out and open the app on your headset.

Note: *If you are still running into issues building to your Oculus device after reading this guide, see the* ***official Unity documentation on the Oculus website*** *for a more in-depth overview of this process.*