

Building VR Projects for Meta (Oculus) Quest 2 with Unreal Engine 5.4.4, Windows, Java 17, & Android Studio Flamingo

This How-To doc accompanies my YouTube video. Watch it first:
<https://www.youtube.com/watch?v=znvDJ9E-SFk>

1. Install Java 17

Java runtime: **OpenJDK 17.0.6 2023-01-17**

See: <https://www.oracle.com/java/technologies/javase/jdk17-archive-downloads.html>

I used the MSI installer, *jdk-17.0.11_windows-x64_bin.msi* from the archive, and it worked great.

(Scroll down for the next steps)

2. Download Android Studio Flamingo

Android Studio Version: **Flamingo 2022.2.1 Patch 2 May 24, 2023**

Get it at: <https://developer.android.com/studio/archive>

Configure Android Studio

SDK Platforms Tab

Uncheck Android API 35

Check Android 12L

SDK Tools Tab

In the lower right of the window, check the box that says "Show Package Details." This will expand all of your options.

Expand Android SDK Build-Tools 35-rc3

- **Uncheck 35.0.0**
- **Check 32.0.0**

Scroll down to

NDK (Side by side)

- **Check 25.1.8937393**

Scroll down to

Android SDK Command Line Tools (latest).

- Check **Android SDK Command-line Tools (latest) Version 13**

Scroll down to CMake and check both

- **3.22.1**
- **3.10.2.4988404**

Then scroll down and check

- **Android SDK Platform-Tools** (The Version column will be **35.0.2**)

Select OK and then Confirm Changes

3. Install Epic Games Launcher to Install Unreal Engine 5.4.4

<https://store.epicgames.com/en-US/download>

After Installing UE 5.4.4 then use the *tiny down arrow* on the button to get to options and install the additional **Android** Target Platform

4. Show Hidden Files in Windows Explorer

Open Windows Explorer and select View, Show Hidden Files. This so you can access the AppData folder in Unreal Engine's Android SDK settings.

This AppData folder should be in your *user account* folder.

It will be a little bit dim as Windows is telling you "This is a hidden folder."

5. UE 5.4.4 Settings for Platforms, Android

Go into Your Project's Project Settings screen and scroll pretty far down on the left-hand side to the **Platforms** section of the screen. Click on the **Android** link.

Minimum SDK Version (26=8.0.0, 27=8.1.0, 28=9, 29=10, 30=11, 31=12): **30**

Internal Name MinSDKVersion

Target SDK Version (26=8.0.0, 27=8.1.0, 28=9, 29=10, 30=11, 31=12): **32**

Internal Name TargetSDKVersion

Also, scroll down and check the box for

- **Package game data inside .apk?**

6. UE 5.4.4 Settings for Platforms, Android SDK

Go into the **Project Settings** and scroll pretty far down on the left-hand side to the **Platforms** section of the screen. Click on the **Android SDK** link. It is the fourth option under Platforms.

Location of Android **SDK** (the directory usually contains 'android-sdk-')

Internal Name: SDKPath

```
C:/Users/006504390/AppData/Local/Android/Sdk
```

Location of Android **NDK** (the directory usually contains 'android-ndk-')

Internal Name: NDKPath

```
C:/Users/006504390/AppData/Local/Android/Sdk/ndk/25.1.8937393
```

Location of **JAVA** (the directory usually contains 'jdk')

To ensure this is the correct path, see the Installing Java 11 section of this document.

Internal Name: JavaPath

```
C:/Program Files/Java/jdk-17
```

SDK API Level (specific version, 'latest', or 'matchndk' - see tooltip)

Internal Name: SDKAPILevel

```
latest
```

NDK API Level (specific version or 'latest' - see tooltip)

Internal Name: NDKAPILevel

```
android-32
```

7. Package Project!

You will get a message that says the SDK is not installed. Let it install.

Create a folder with a name you'll remember. I use "Quest2"

This is where you're project will package to. Check the video for more help with this step.