

Loading Oculus Quest Apps via CodeWorks

2022-01-08

Search YouTube for “How to sideload an Oculus Quest” to see lots of ways to get the 2022 FIRST VR Experience loaded onto your Quest/Quest2.

This is how we do it (If you find an easier way PLEASE let us know!):

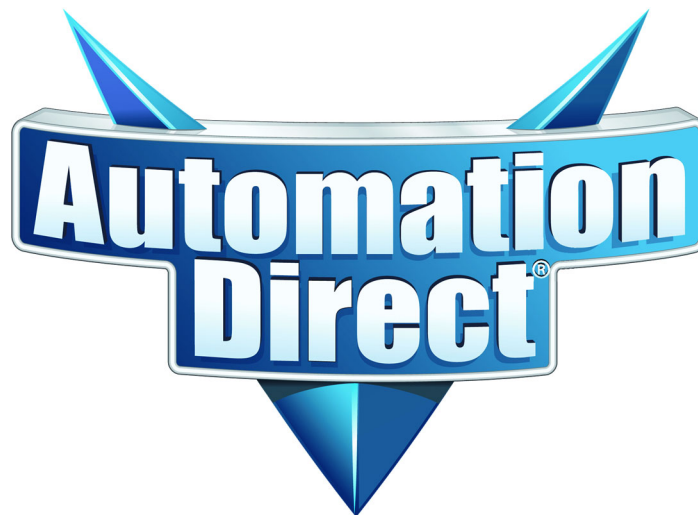
Requirements:

1. PC running Windows 10 (Win7 won't work), Linux or MacOS
2. USB cable – C-to-C? or A to C? Depends on your computer ...

Summary:

1. Create Developer Account..... One time
2. Download and Install OCULUS ADB Drivers One Time
3. Download and install CodeWorks One Time
4. >> RESTART PC << One Time
5. Enable Developer Mode on Oculus Quest
6. Transfer VR Sim to Quest!

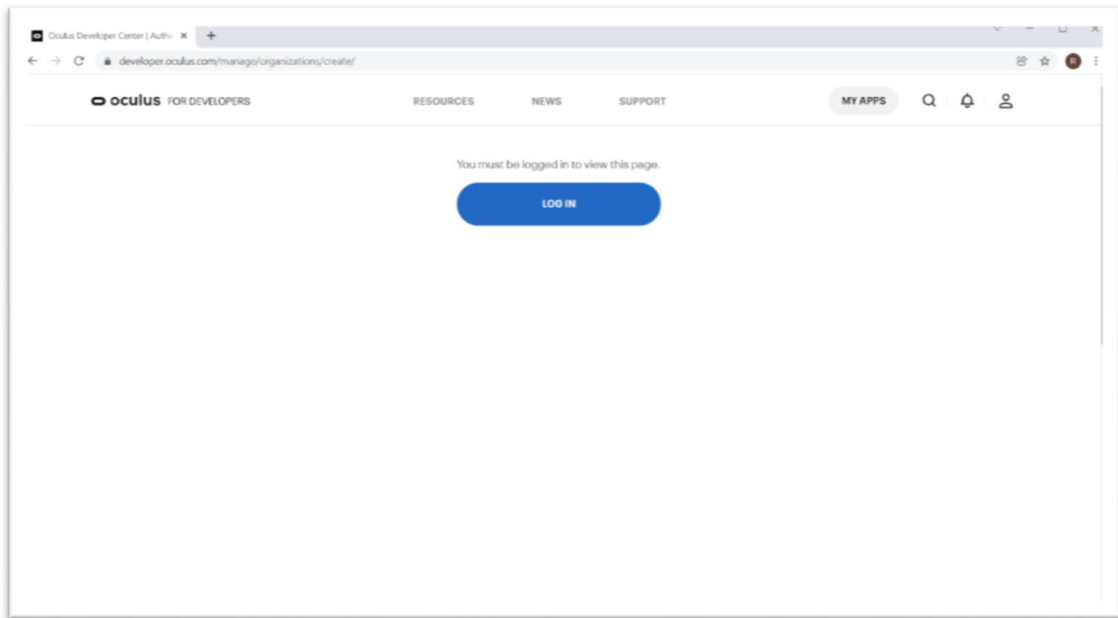
Presented by:



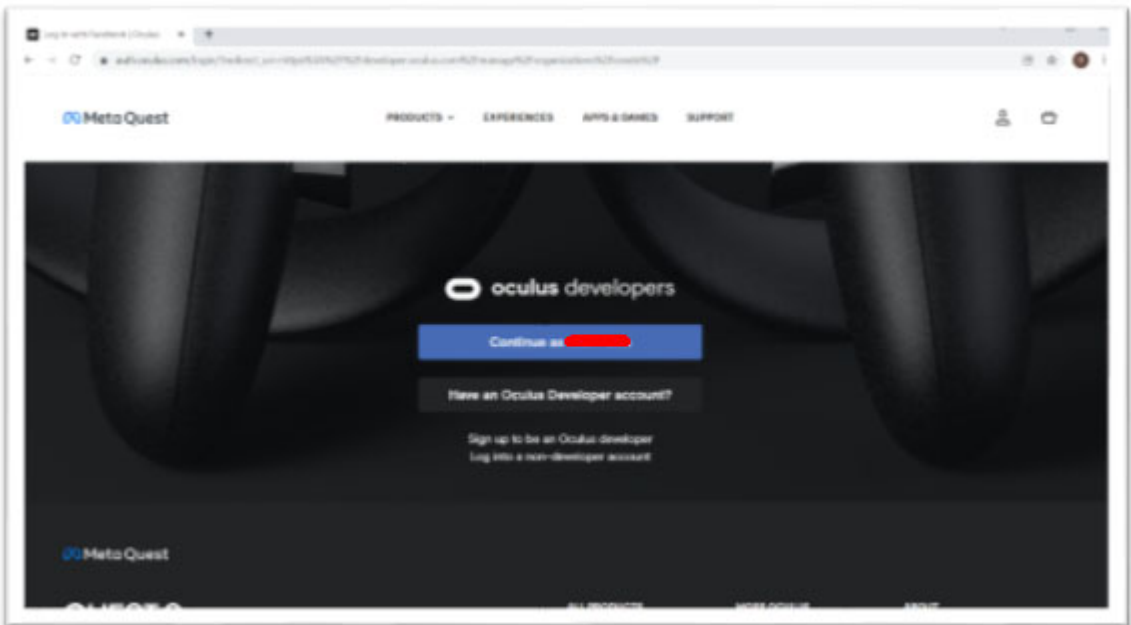
CAUTION: This initial setup is a bit tedious ... be patient ... once you have done it though, you only need to do Step 6 (and maybe Step 5) for every new upload which is quick and easy!

Detailed Walkthrough (Your screens may vary depending on how your system is configured):

1. **Create a developer account** (its free) at this link:
<https://dashboard.oculus.com/organizations/create/>



Login to YOUR Oculus Account (associated with your Oculus Quest):



To get to this screen:

>> Enter any organization name you want. It just needs to be unique.

Oculus Developer Dashboard

developer.oculus.com/manage/organizations/create/

oculus FOR DEVELOPERS

Org Manager

Select Organization

Shortcuts

You have no saved shortcuts

+ Create An Organization

Create New Organization

Recommendation

Since you are an Oculus developer, we'd like to recommend user review analytics which can help you collect user feedback and engage with your audience.

Try it out

Organization Name

What is the name of your organization?
Note: The name you enter here will be displayed publicly in the store.

ADC_VR_2022

Type anything you want here

We are happy to see that you're interested in developing for Oculus. Creating your developer organization for your Oculus account enables you access to features that are essential for the development of VR experiences. Remember that you have agreed to the Oculus Terms of Service and we may take action against violators. Please be a responsible member of the Oculus community.

☒ I understand Required

Submit

Rick Folea

from FACEBOOK

English (US)

© Facebook Technologies, LLC.

Privacy Legal

Agree to terms:

Oculus Developer Dashboard

developer.oculus.com/manage/organizations/create/

oculus FOR DEVELOPERS

Org Manager

Select Organization

Shortcuts

You have no saved shortcuts

+ Create An Organization

Create New Organization

Recommendation

Since you are an Oculus developer, we'd like to recommend user review analytics which can help you collect user feedback and engage with your audience.

Try it out

Organization Name

What is the legal name of your organization?
Note: The name you enter here will be displayed publicly in the store.

ADC_VR_2022

We are happy to see that you're interested in developing for Oculus. Creating your developer organization for your Oculus account enables you access to features that are essential for the development of VR experiences. Remember that you have agreed to the Oculus Terms of Service and we may take action against violators. Please be a responsible member of the Oculus community.

☒ I understand Required

☒ I Agree

Submit

Rick Folea

from FACEBOOK

English (US)

© Facebook Technologies, LLC.

Privacy Legal

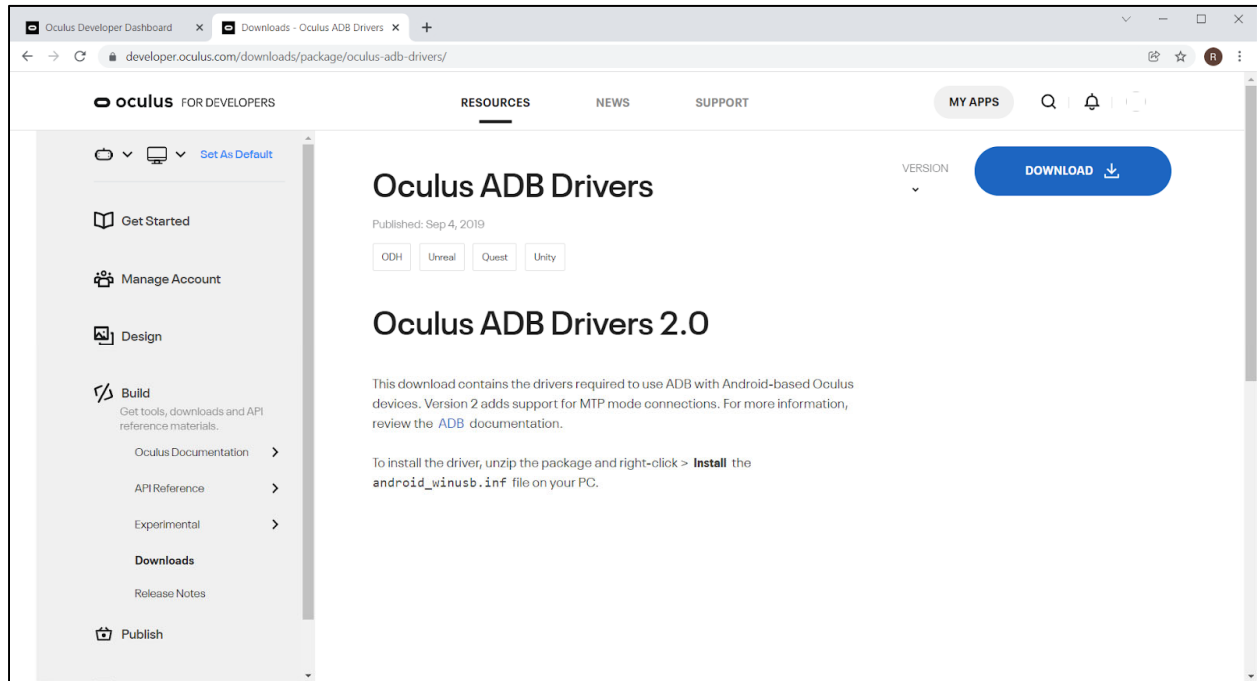
Developer Non-Disclosure Agreement

ELECTRONIC NON-DISCLOSURE AGREEMENT

PLEASE READ THIS ELECTRONIC NON-DISCLOSURE AGREEMENT ("NDA") CAREFULLY. IT CONTAINS IMPORTANT TERMS THAT AFFECT YOU AND YOUR OBLIGATIONS WITH RESPECT TO CONFIDENTIAL INFORMATION OF OCULUS AND ITS AFFILIATES.

BY CLICKING ON THE "I AGREE" BUTTON, YOU REPRESENT THAT (1) YOU HAVE READ AND AGREE TO THE TERMS OF THIS NDA (SUBJECT TO SECTION 13), AND (2) IF YOU ARE ENTERING INTO THIS AGREEMENT ON BEHALF OF A COMPANY, ORGANIZATION, OR OTHER ENTITY, YOU HAVE THE AUTHORITY TO BIND THE COMPANY, ORGANIZATION, OR OTHER ENTITY TO THESE TERMS.

2. **Download the Oculus ADB Drivers** (Windows Only, skip this for Linux or MacOS) to allow PC to transfer files to Oculus Quest. <https://developer.oculus.com/downloads/package/oculus-adb-drivers/>



Click Download, Agree to terms, Download, Unzip and locate: **oculus-go-adb-driver-2.0/usb_driver/android_winusb.inf**

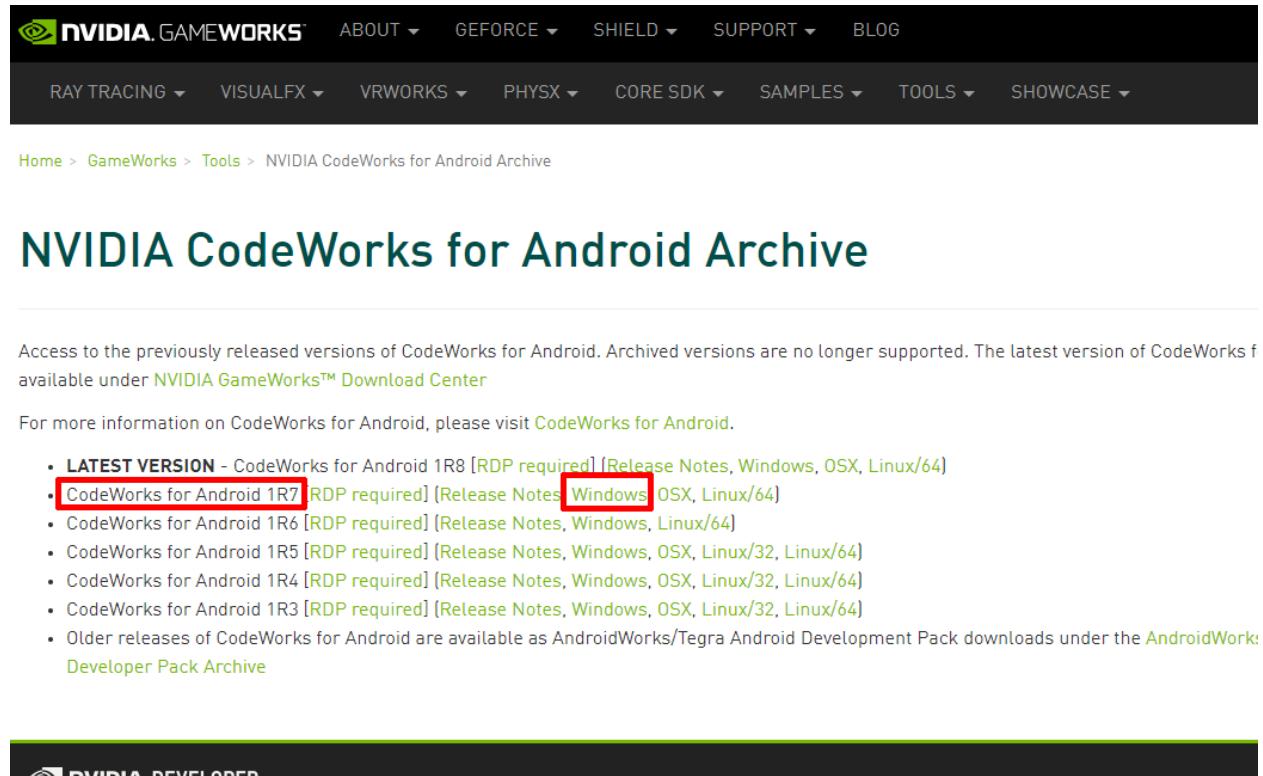
Right Click on Android_winusb.inf and select “INSTALL”

Follow the prompts.

3. Download **Code Works 1R7** (**Don't** download the most recent version)

Location: <https://developer.nvidia.com/codeworks-android-archive>

(You will need to create an account – it's free.)

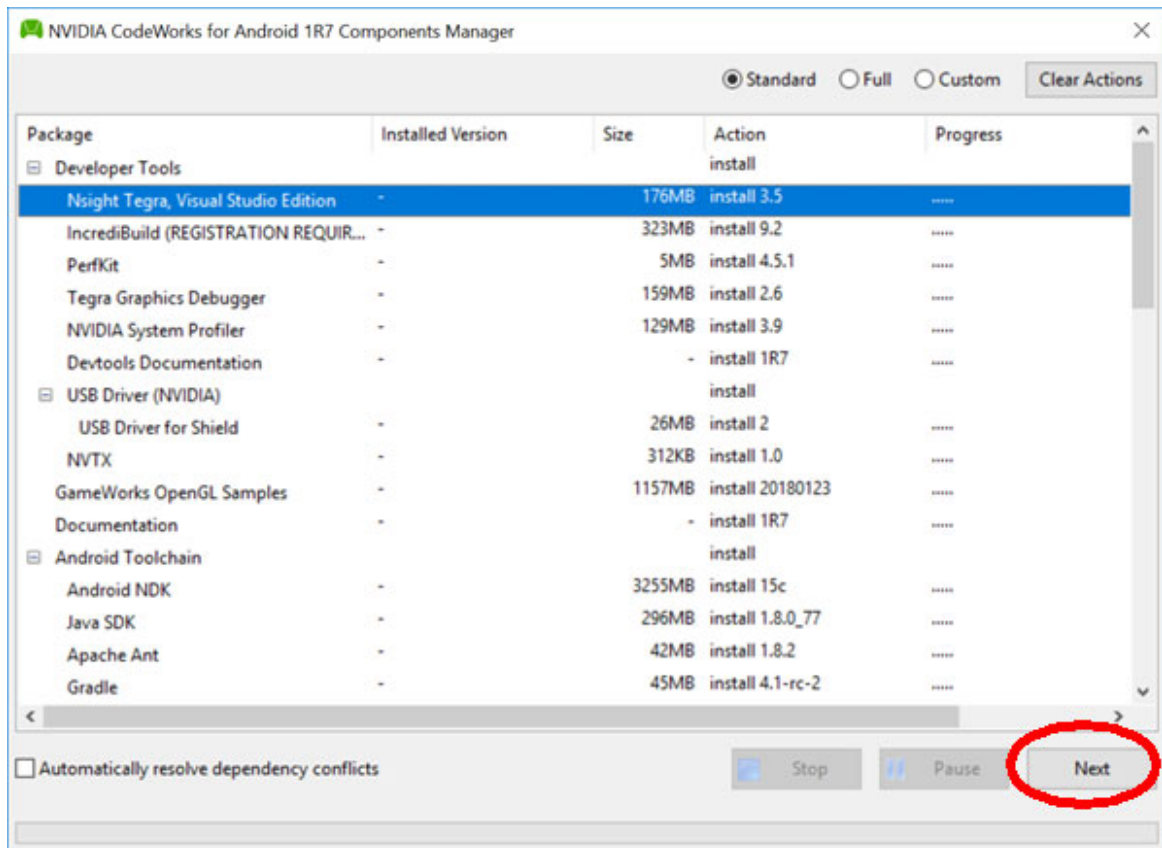


(I'm using Windows so I selected that one – be sure to choose the one YOU need)

Install CodeWorks.

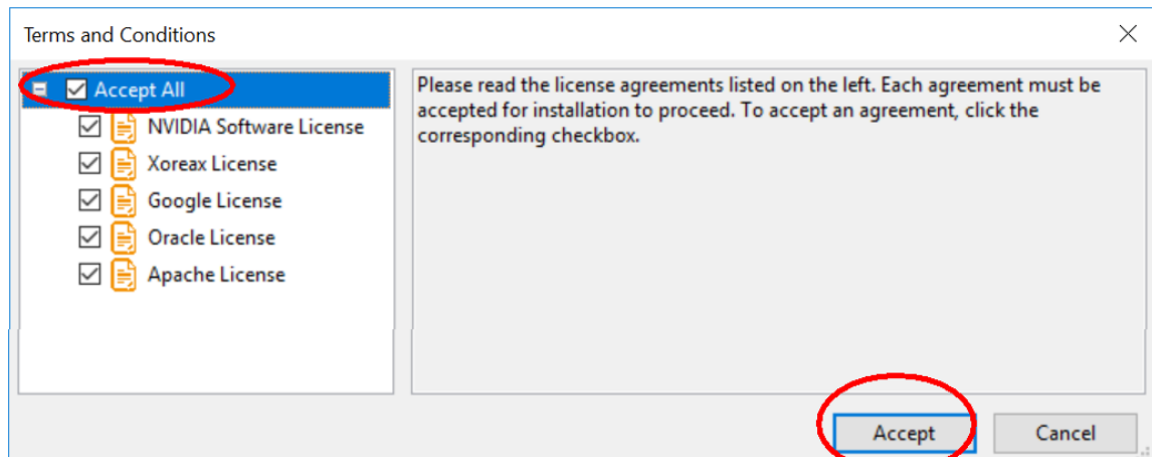
Be patient – it takes a few seconds to get going ...

You will need to register, etc. Keep going until you get to this screen:

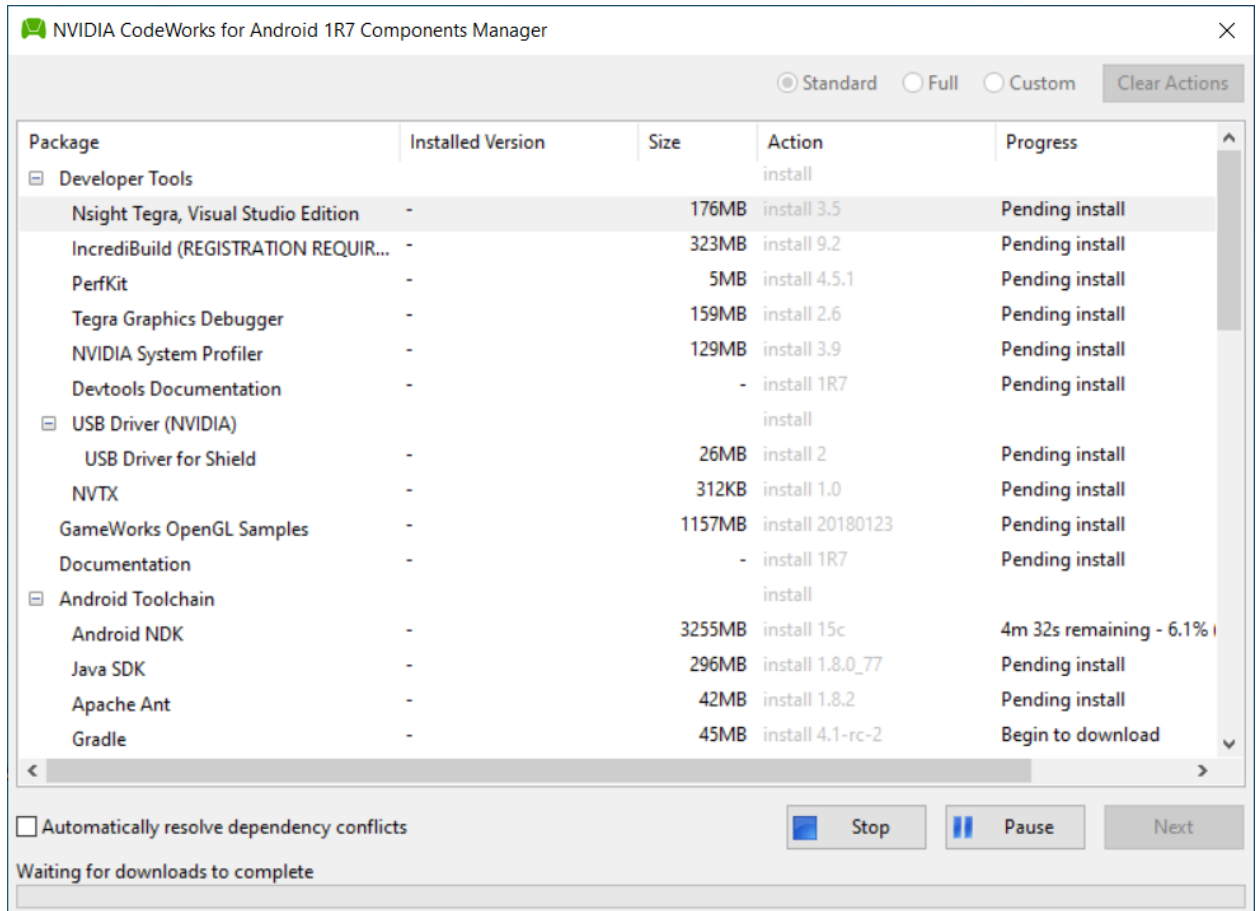


Click on NEXT.

On this screen click on Accept All CHECK BOX, then ACCEPT:

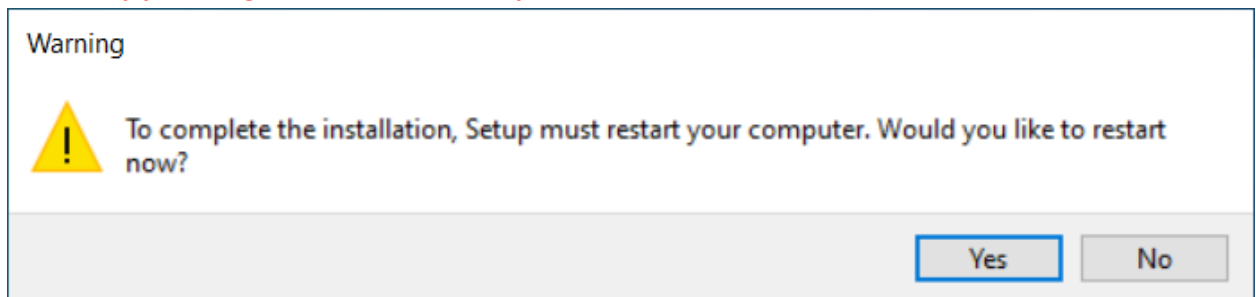


Be patient – **this takes several minutes** ... wait for all of the progress's to finish and the NEXT button to be enabled:



You may see something about Incredibuild License – don't worry about that.

4. **Eventually you will get a notice to restart your PC**



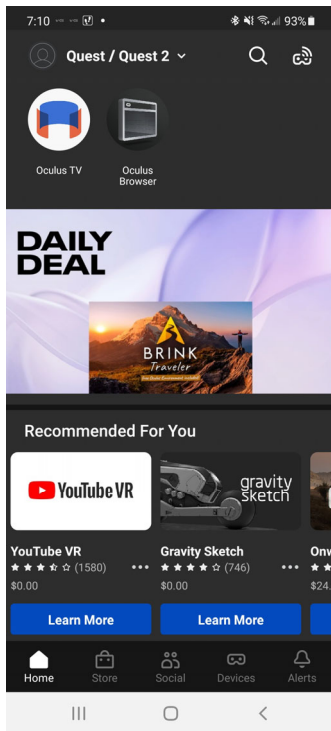
>> IMPORTANT: Restart PC <<

5. **Activate Developer Mode on Oculus Quest:**

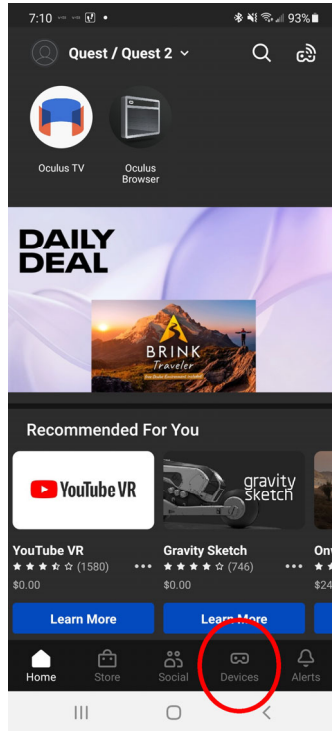
- a. Open Oculus App on mobile device/phone and click on DEVICES
- b. Turn on headset
- b. Select your device and CONNECT (look for green dot)
>> Headset and phone need to be on same network, of course

c.

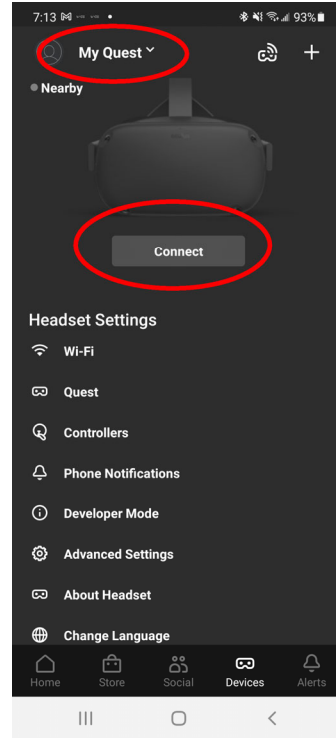
a. Open Oculus App:

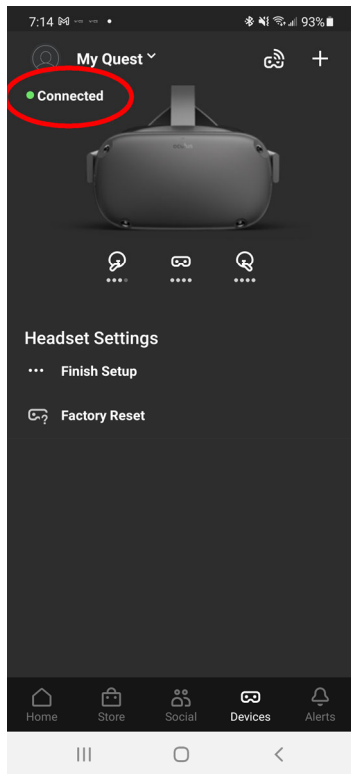


b. Click on Devices:

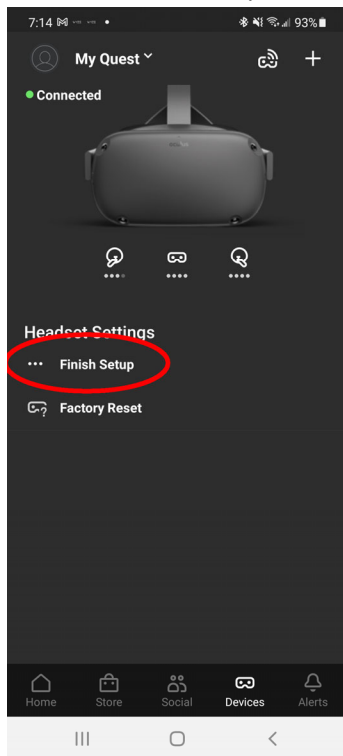


c. Connect:

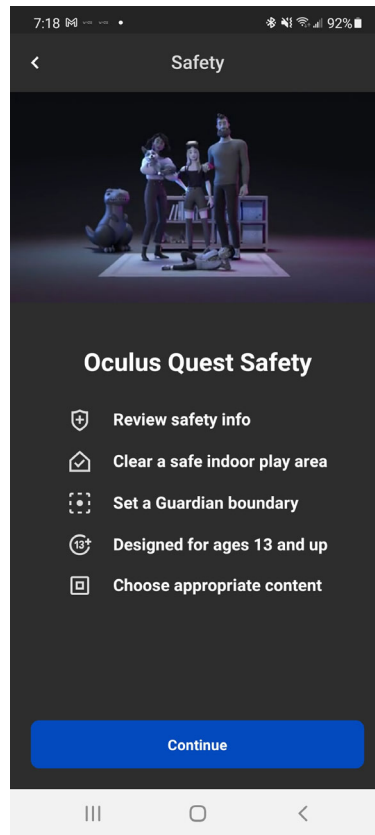
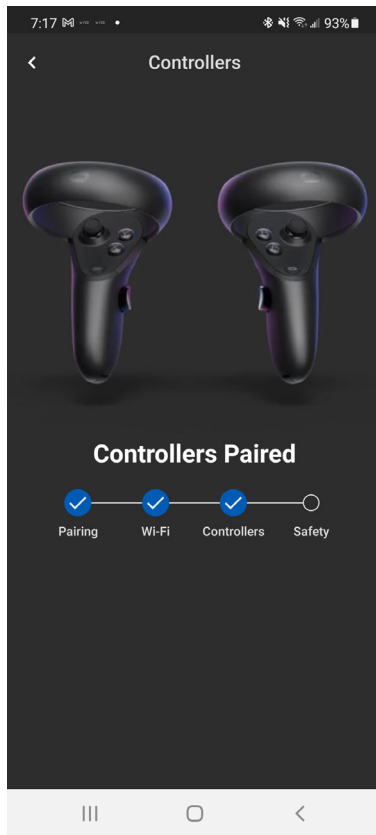




Click on “Finish Setup” to connect to network (if needed):

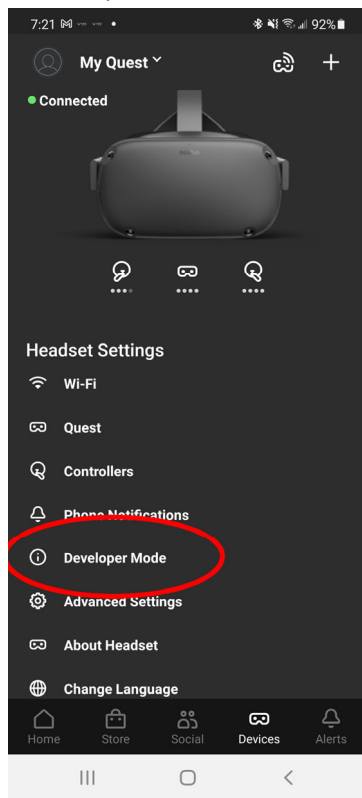


Wait for everything to finish pairing and do the safety stuff:

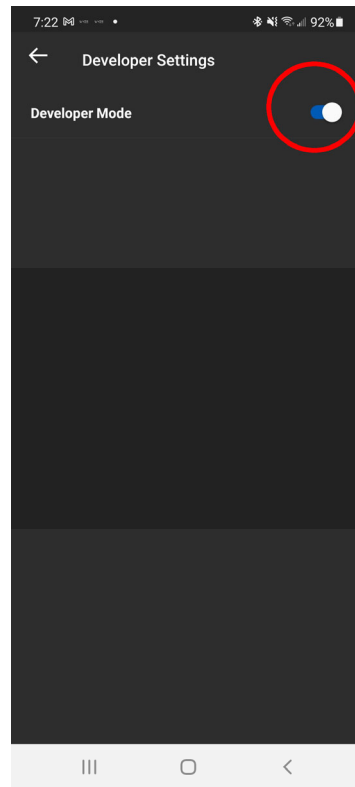


Once setup, when you click on devices you should see this screen where you can select developer mode:

Developer Mode:



Turn Developer Mode on:



Developer mode is what allows you to load apps onto the device.

6. **Download the VR Simulation from the FIRST website, extract it.**

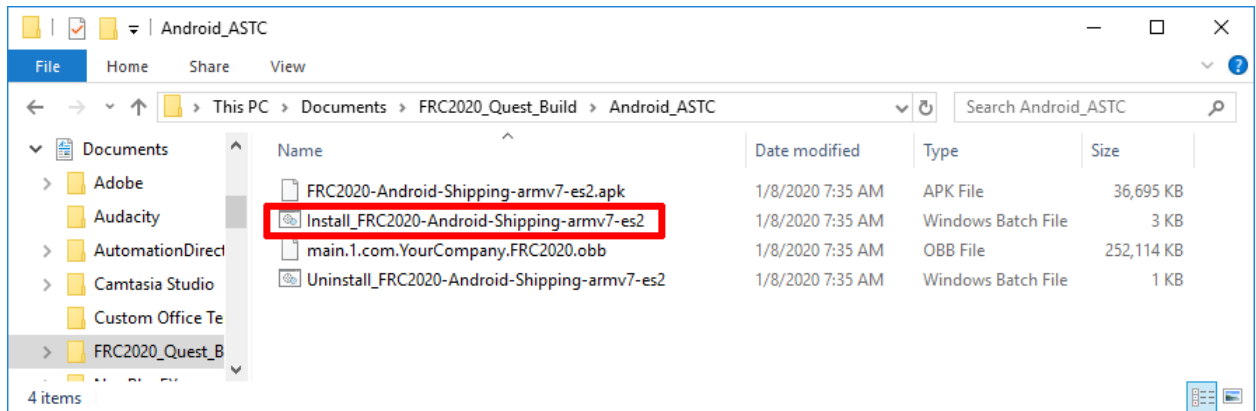
7. **Transfer FRC VR Sim to Quest**

Connect PC to Oculus Quest using USB Cable.

Note1: If your computer doesn't have a USB-C port, then the USB cable that comes with the quest won't work. I use the USB-A to USB-C cable from my cell phone instead.

Note 2: Make sure the Quest Headset is the only android thing connected to the PC via USB. You can only have one external device connected to you PC

Put your headset on to keep it awake and respond to queries and then double click on install file included in the Quest 2020 FRC VR Sim Download (Yes it's awkward to watch the headset and the PC at the same time)



Depending on your setup, you will probably see a notification on the headset asking you to allow USB DEBUGGING or data access.

Click on “Always Allow” checkbox and OK.

A black command prompt screen will pop up and you will see all the progress of the transfer. You can take the headset off while it is loading if you want to.

It will stop here for a few seconds:

```

C:\WINDOWS\system32\cmd.exe
C:\Users\rfolea\Documents\FRC2020_Quest_Build\Android_ASTC>for /F "delims=" %A in ('C:\NVPACK\android-sdk-windows\platform-tools\adb.exe shell "echo $EXTERNAL_STORAGE"') do @set STORAGE=%A

Uninstalling existing application. Failures here can almost always be ignored.

C:\Users\rfolea\Documents\FRC2020_Quest_Build\Android_ASTC>C:\NVPACK\android-sdk-windows\platform-tools\adb.exe uninstall com.YourCompany.FRC2020

Exception occurred while dumping:
java.lang.IllegalArgumentException: Unknown package: com.YourCompany.FRC2020
    at com.android.server.pm.Settings.isOrphaned(Settings.java:4134)
    at com.android.server.pm.PackageManagerService.isOrphaned(PackageManagerService.java:18450)
    at com.android.server.pm.PackageManagerService.deletePackage(PackageManagerService.java:15855)
    at com.android.server.pm.PackageInstallerService.uninstall(PackageInstallerService.java:902)
    at com.android.server.pm.PackageManagerShellCommand.runUninstall(PackageManagerShellCommand.java:792)
    at com.android.server.pm.PackageManagerShellCommand.runCommand(PackageManagerShellCommand.java:118)
    at android.os.ShellCommand.exec(ShellCommand.java:94)
    at com.android.server.pm.PackageManagerService.onShellCommand(PackageManagerService.java:18710)
    at android.os.Binder.shellCommand(Binder.java:468)
    at android.os.Binder.onTransact(Binder.java:367)
    at android.content.pm.IPackageManager$Stub.onTransact(IPackageManager.java:2399)
    at com.android.server.pm.PackageManagerService.onTransact(PackageManagerService.java:3160)
    at android.os.Binder.execTransact(Binder.java:565)

Installing existing application. Failures here indicate a problem with the device (connection or storage permissions) and are fatal.

C:\Users\rfolea\Documents\FRC2020_Quest_Build\Android_ASTC>C:\NVPACK\android-sdk-windows\platform-tools\adb.exe install FRC2020-Android-Shipping-armv7-es2.apk

```

Then continue with a progress indication like this:

```
C:\WINDOWS\system32\cmd.exe

C:\Users\rfolea\Documents\FRC2020_Quest_Build\Android_ASTC>C:\NVPACK\android-sdk-windows\platform-tools\adb.exe install
FRC2020-Android-Shipping-armv7-es2.apk
Success

C:\Users\rfolea\Documents\FRC2020_Quest_Build\Android_ASTC>C:\NVPACK\android-sdk-windows\platform-tools\adb.exe shell r
m -r /sdcard/UE4Game/FRC2020
rm: /sdcard/UE4Game/FRC2020: No such file or directory

C:\Users\rfolea\Documents\FRC2020_Quest_Build\Android_ASTC>C:\NVPACK\android-sdk-windows\platform-tools\adb.exe shell r
m -r /sdcard/UE4Game/UE4CommandLine.txt
rm: /sdcard/UE4Game/UE4CommandLine.txt: No such file or directory

C:\Users\rfolea\Documents\FRC2020_Quest_Build\Android_ASTC>C:\NVPACK\android-sdk-windows\platform-tools\adb.exe shell r
m -r /sdcard/obb/com.YourCompany.FRC2020
rm: /sdcard/obb/com.YourCompany.FRC2020: No such file or directory

C:\Users\rfolea\Documents\FRC2020_Quest_Build\Android_ASTC>C:\NVPACK\android-sdk-windows\platform-tools\adb.exe shell r
m -r /sdcard/Android/obb/com.YourCompany.FRC2020
rm: /sdcard/Android/obb/com.YourCompany.FRC2020: No such file or directory

C:\Users\rfolea\Documents\FRC2020_Quest_Build\Android_ASTC>C:\NVPACK\android-sdk-windows\platform-tools\adb.exe shell r
m -r /sdcard/Download/obb/com.YourCompany.FRC2020
rm: /sdcard/Download/obb/com.YourCompany.FRC2020: No such file or directory

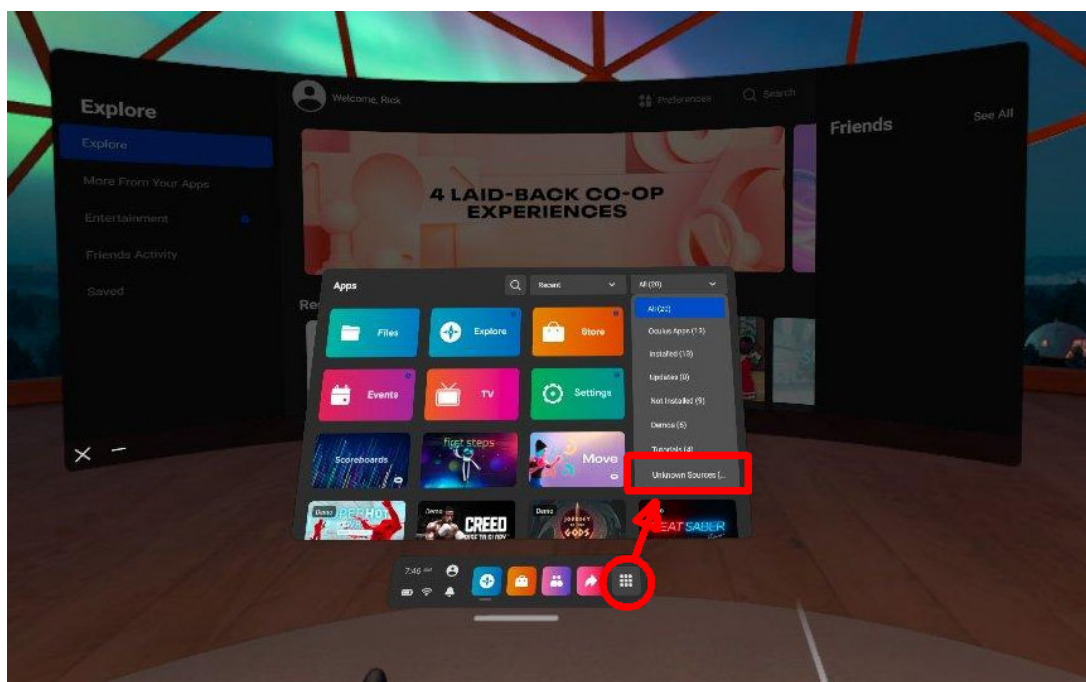
Installing new data. Failures here indicate storage problems (missing SD card or bad permissions) and are fatal.

C:\Users\rfolea\Documents\FRC2020_Quest_Build\Android_ASTC>C:\NVPACK\android-sdk-windows\platform-tools\adb.exe push ma
in.1.com.YourCompany.FRC2020.obb /sdcard/obb/com.YourCompany.FRC2020/main.1.com.YourCompany.FRC2020.obb
[ 47%] /sdcard/obb/com.YourCompany.FRC2020/main.1.com.YourCompany.FRC2020.obb
```

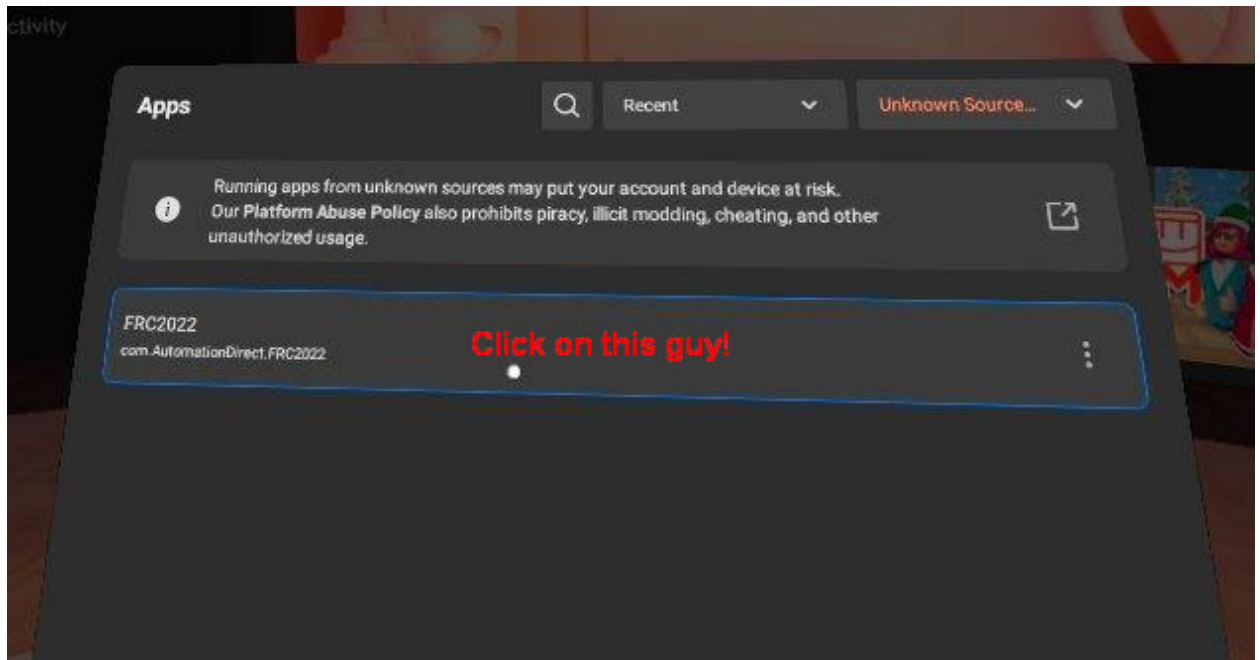
It goes by pretty quickly.

8. PLAY TIME!

Now you just put on your headset and go to your LIBRARY >> UNKNOWN SOURCES

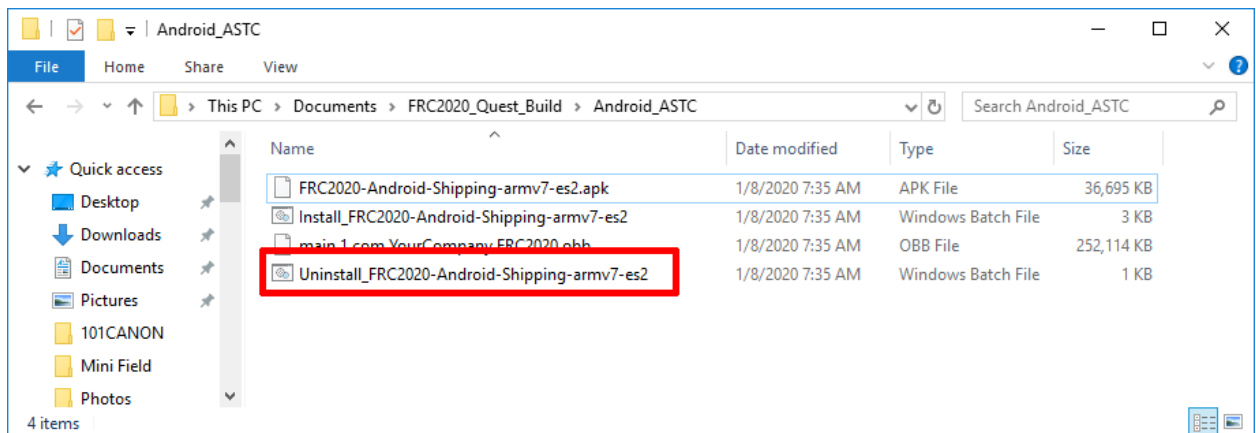


Where you will find the new app:



SUGGESTION: Disable Developer Mode (see Step 5) when you are done. You won't be able to transfer photos, etc between your QUEST and your PC while in developer mode.

9. To **UNINSTALL**, simply run the UNINSTALL routine provided in the download:



Reference: This is an older video (2019) showing you how to do what we just did here:
<https://youtu.be/jlcj4HB9LX8> - is basically a video form of the official Oculus Quest starter guide that walks you through everything we just did here but using 2019 graphics and screen shots.

