1. **INSTALL UNREAL ENGINE FROM SOURCE**

Download Unreal Engine .zip at <https://github.com/Oculus-VR/UnrealEngine>

**MANDATORY: UNZIP/INSTALL TO A "SHALLOW" FOLDER (i.e. C:\UE4\_422\)**

Unzip

Setup.bat

GenerateProjectFiles.bat

Open UE4.sln with VS2017

Build UE4

1. **MAKE SOME CHANGES**
2. Close VS2017
3. Replace the following folder with the one provided: \Engine\Plugins\Runtime\Oculus\OculusAvatar
4. Open UE4.sln, inside VS2017:

Open the following file:

\Engine\Plugins\Online\OnlineSubsystemOculus\Source\Private\OculusIdentityCallbackProxy.cpp

change line 26

from:

**DelegateHandle = Online::GetIdentityInterface()->AddOnLoginCompleteDelegate\_Handle(**

to:

**DelegateHandle = OculusIdentityInterface->AddOnLoginCompleteDelegate\_Handle(**

Save, close file

1. Open the following file:

\Engine\Plugins\Runtime\Oculus\OculusVR\Source\OculusHMD\OculusMobile\_APL.xml

change line 223

**from:**

**com.oculus.svclib.OVREntitlementChecker.doAutomatedCheck(this);**

to:

**<!-- com.oculus.svclib.OVREntitlementChecker.doAutomatedCheck(this); -->**

Save, close file

1. **Build UE4 (again), build UnrealLightmass, Close VS2017. That's it**

Now you can right-click on Proteus.uproject, select Engine Version, then build Proteus.sln in VS or directly in explorer.

**Packaging for Quest: Android / ASTC**

**Debugging:**

* How I work: I package the project, than install it on the device. First time packaging takes 10-20 mins, subsequent packages takes 5 mins
* If you keep the device plugged, you can have an output log by using \CodeWorks\android-sdk-windows\platform-tools\adb.exe
* run it in command line (cmd)
* you can run "adb.exe logcat -s UE4" to have a live output
* you can run "adb.exe logcat -s UE4 > crash.txt" to have everything logged in crash.txt
* run CTRL-BREAK to stop output logging