

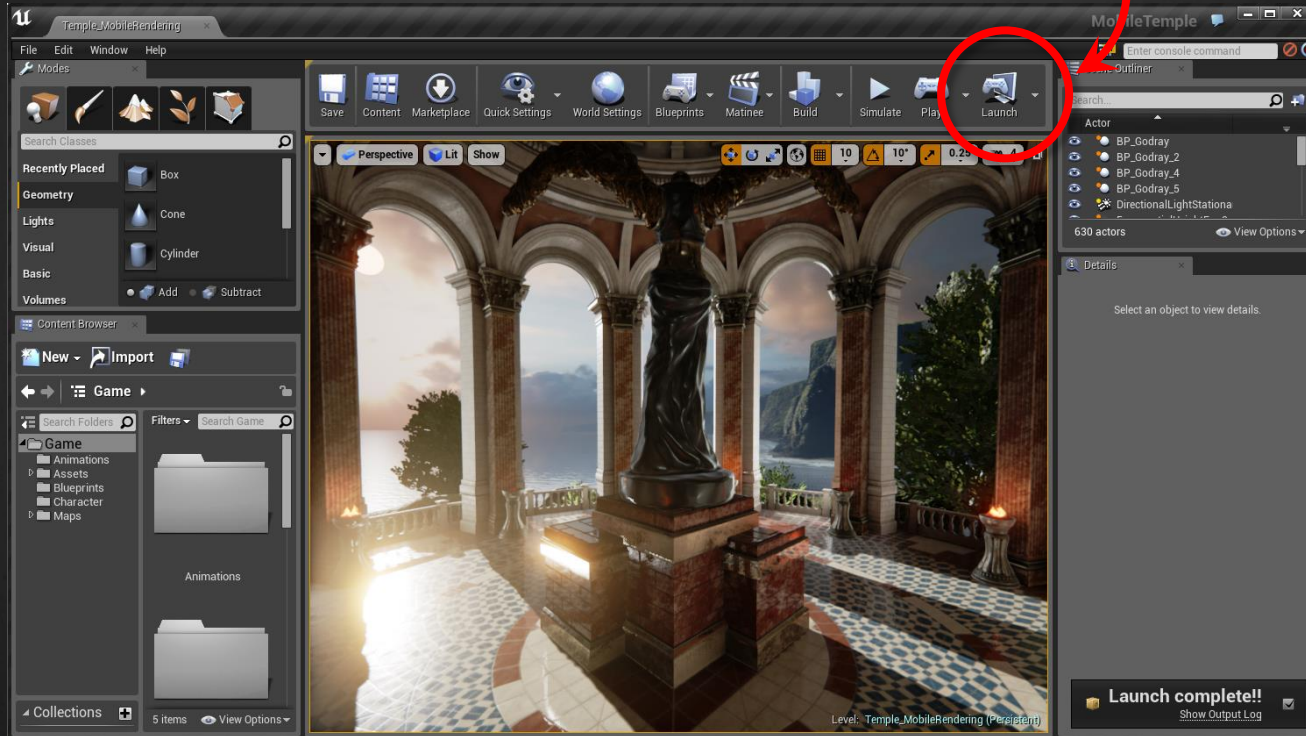


UE4 – Mobile Deployment

Niklas Smedberg

Senior Engine Programmer, Epic Games

Here's how you deploy!

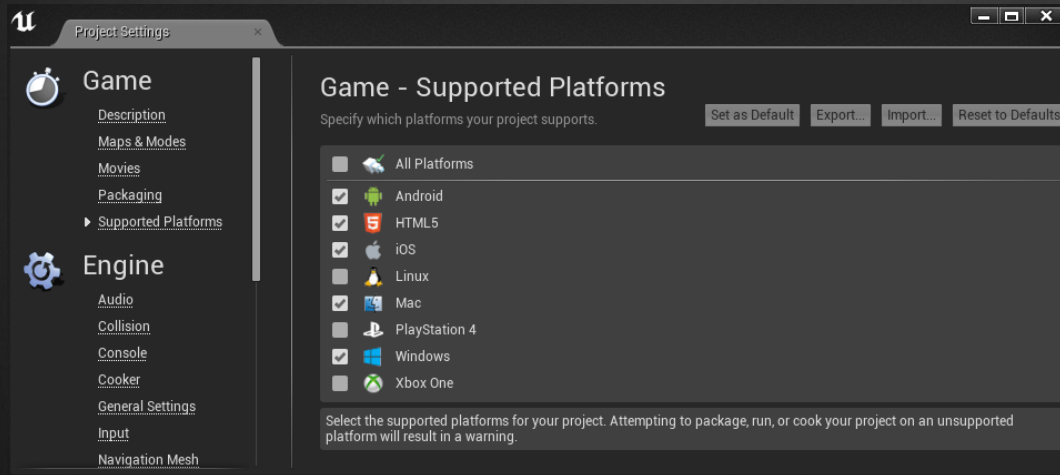


Mobile Deployment Details

- Launch game on device
 - From UE4 Editor
 - From Unreal Frontend
 - From Visual Studio on PC
 - From Xcode on Mac
- Packaged Builds
 - Stand-alone build that can be installed & executed without UE4
- File Server Example
- Driver Tips

Launch from UE4 Editor

- Check the Supported Platforms in your Project Settings
 - Edit -> Project Settings -> Support Platforms
 - Make sure the platform is enabled (e.g. “Android”)



Modes

Search Classes

Recently Placed

- Box

Geometry

- Cone
- Cylinder

Lights

Visual

Basic

Volumes

- Add
- Subtract

Save Content Marketplace Quick Settings World Settings Blueprints Matinee Build Simulate Play Launch



Content Browser

New Import

Game

Search Folders Search Game

Game

- Animations
- Assets
- Blueprints
- Character
- Maps

Animations

Collections

5 items View Options

Enter console command

Scene Outliner

Search...

Devices

- SHIELD_Tablet
- ✓ SHIELD_Tablet (DXT)
- SHIELD_Tablet (ETC1)
- SHIELD_Tablet (ETC2)
- Z3081
- All_iOS_On_Z3081
- Z3081

Launching a game on a different device will change your default 'Launch' device in the toolbar

Device Manager...

Supported Platforms...

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Save Content Marketplace Quick Settings World Settings Blueprints Matinee Build Simulate Play Launch



Enter console command

Scene Outliner

Search...

Actor

- BP_Godray
- BP_Godray_2
- BP_Godray_4
- BP_Godray_5
- DirectionalLightStationa

630 actors View Options

Details

Select an object to view details.

Content Browser

New Import

Game

Search Folders Search Game

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Animations

5 items View Options

Cooking content for launch on SHIELD_Tablet (DXT)...

Cancel

Show Output Log

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630 actors View Options

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Select an object to view details.

Launch complete!! Show Output Log

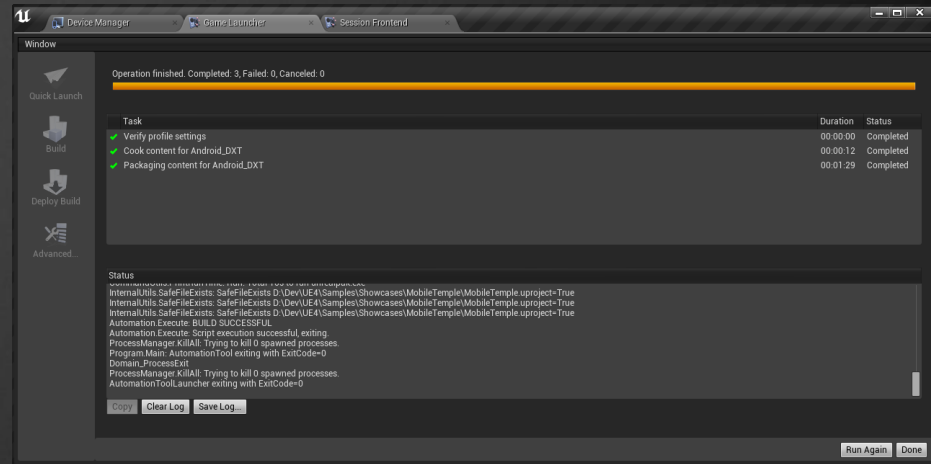
Launch from Unreal Frontend

- Engine\Binaries\Win64\UnrealFrontend.exe
- Can make standalone builds
- E.g. D:\Dev\UE4\Samples>Showcases\MobileTemple\Binaries\Android:

Install_MobileTemple_Development.bat
main.00001.com.epicgames.MobileTemple.obb
MobileTemple-armv7.apk

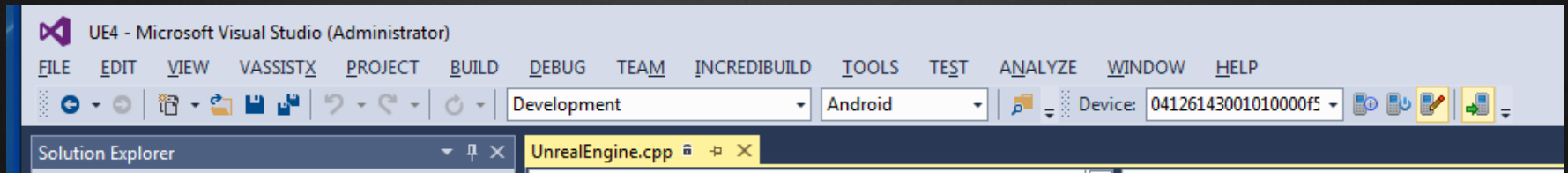
- Documentation:

<https://docs.unrealengine.com/latest/INT/Engine/Deployment/UnrealFrontend/index.html>



Launch Android from Visual Studio

- Make sure NVIDIA TADP is installed
 - [Engine/Extras/Android/tadp-2.Or8-windows.exe](#)
- Execute GenerateProjectFiles.bat to create UE4.sln
- Open UE4.sln in Visual Studio
- Make sure your device is connected in TADP toolbar



Launch Android from Visual Studio

- Compile UE4 (or your game) for “Development Editor”, “Win64”
- Compile UE4 (or your game) for “Development”, “Android”
- Copy program arguments to device
 - Open command-line in `Engine\Build\Android\UE4Game`
 - Modify `UE4CommandLine.txt` (project path and filehostip)
 - Execute `PushCommandLine.bat`
- Start file server on command-line
 - `UE4Editor-Cmd.exe MobileTemple -run=cook -targetplatform=android -cookonthe-fly`
- Hit F5!
- Documentation:
 - <https://docs.unrealengine.com/latest/INT/Platforms/Android/index.html>

Launch iOS from Xcode

- PC with remote Mac:
 - Build from PC with Visual Studio, using remote Mac with Xcode
 - Modify `Engine\Saved\UnrealBuildTool\BuildConfiguration.xml`
 - `UE4_FromPC.xcodeproj` will be created on the remote Mac
 - Open the project in Xcode on the Mac
 - Select the correct configuration, set program arguments and launch
- Mac:
 - Execute `./GenerateProjectFiles.command` to create `UE4.xcodeproj`
 - Open `UE4.xcodeproj` in Xcode
 - Compile, set program arguments and launch
- Documentation:
 - <https://docs.unrealengine.com/latest/INT/Platforms/iOS/GettingStarted/index.html>

Tips: Command-line

- How to create a standalone build from command-line:
 - Copy command-line from Unreal Frontend log
 - Save your commonly used command-lines in a text file 😊
 - Example:
 - > cd Engine\Build\BatchFiles
 - > RunUAT.bat BuildCookRun -nocompileeditor -nop4
-project="Samples\Showcases\MobileTemple\MobileTemple.uproject" -cook
-allmaps -stage -archive -archivedirectory="E:/Builds" -package -Android
-cookflavor=ATC -clientconfig=Test -ue4exe=UE4Editor-Cmd.exe -pak

File Server Example

- Starting file server on PC:

```
UE4Editor-Cmd.exe MobileTemple -run=cook -targetplatform=android_atc -cookonthe-fly
```

- Contents of UE4CommandLine.txt (pushed to Android device):

```
..\..\..\Samples\Showcases\MobileTemple.uproject -filehostip=15.1.102.51 -streaming
```

- UE4Game_RunIOS arguments in Xcode:

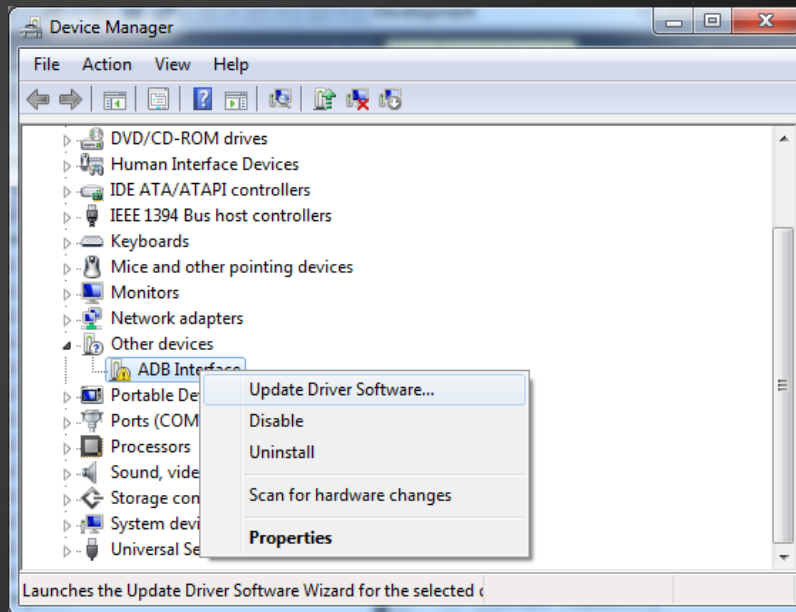
```
Samples/Showcases/MobileTemple/MobileTemple.uproject -filehostip=15.1.102.51
```

iOS Certificates & Provisioning Profiles

- Log in to <https://developer.apple.com>
- Download iOS certificate
 - Install on your PC / Mac by double-clicking the certificate file
 - [IPhonePackager.exe](#) can also install certificates
- Download iOS Provisioning Profile
 - Create a Provisioning Profile
 - Edit the profile to add your iOS device(s) to the profile
 - Download it to your PC / Mac
 - Install it by importing it with IPhonePackager (PC) or Xcode (Mac)
 - PC: [Engine\Binaries\DotNET\IOS\IPhonePackager.exe](#)
 - Mac: Xcode copies it to [~/Library/MobileDevice/Provisioning Profiles](#)

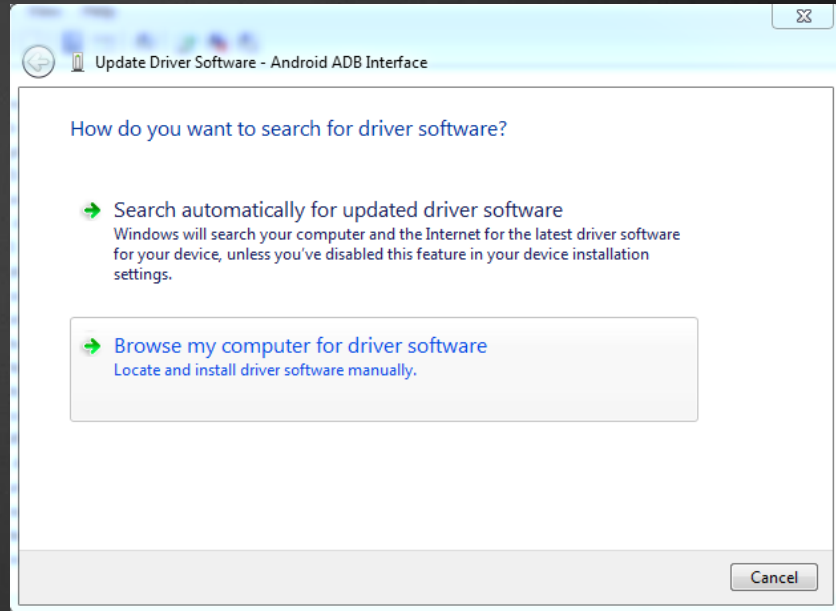
Android ADB Driver

- If the driver doesn't install correctly, try this (Windows 7):
 - Open Device Manager
 - Right-click on your “other device”
 - Select “Update Driver Software...”



Android ADB Driver

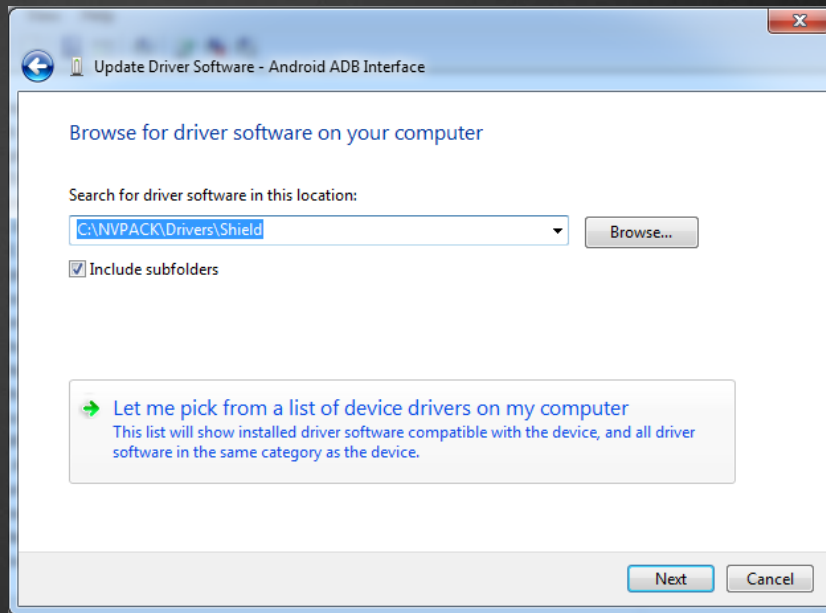
- Select “Browse my computer for driver software”



Android ADB Driver

- Select “Let me pick from a list of device drivers on my computer”
- Don’t choose the top option!

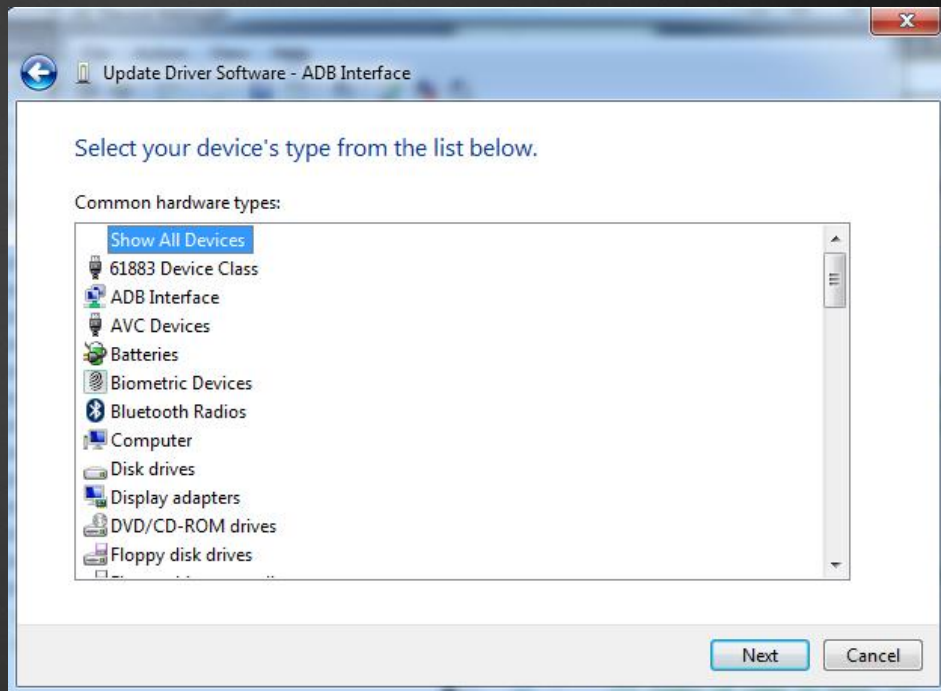
IMPORTANT!!!



Android ADB Driver

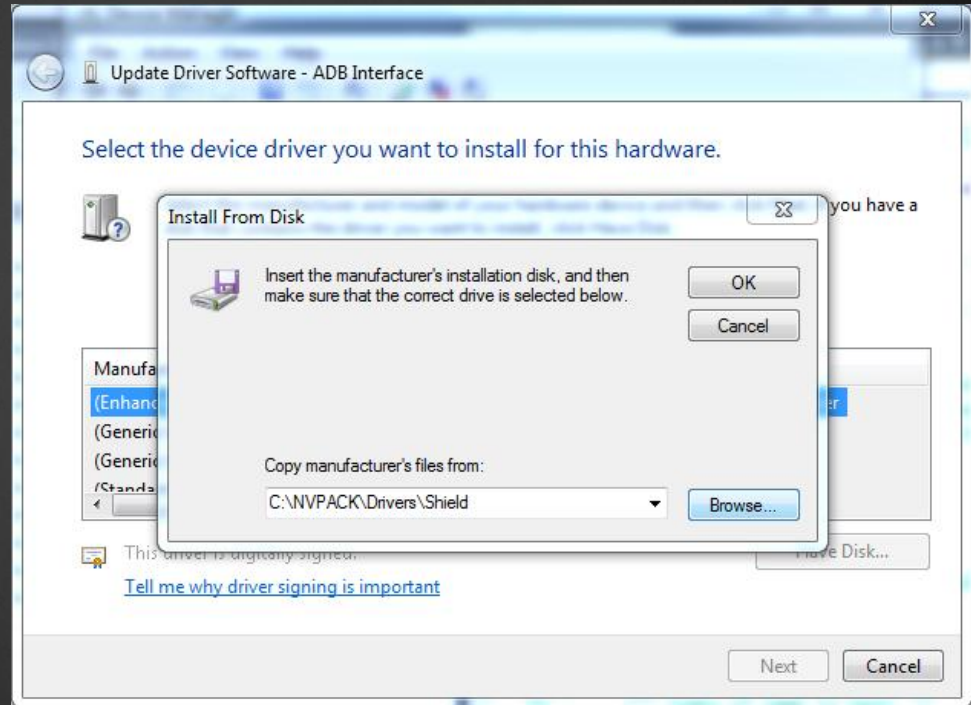
- Select “Show All Devices”
- Don’t select a specific type!
- Click “Next”

IMPORTANT!!!



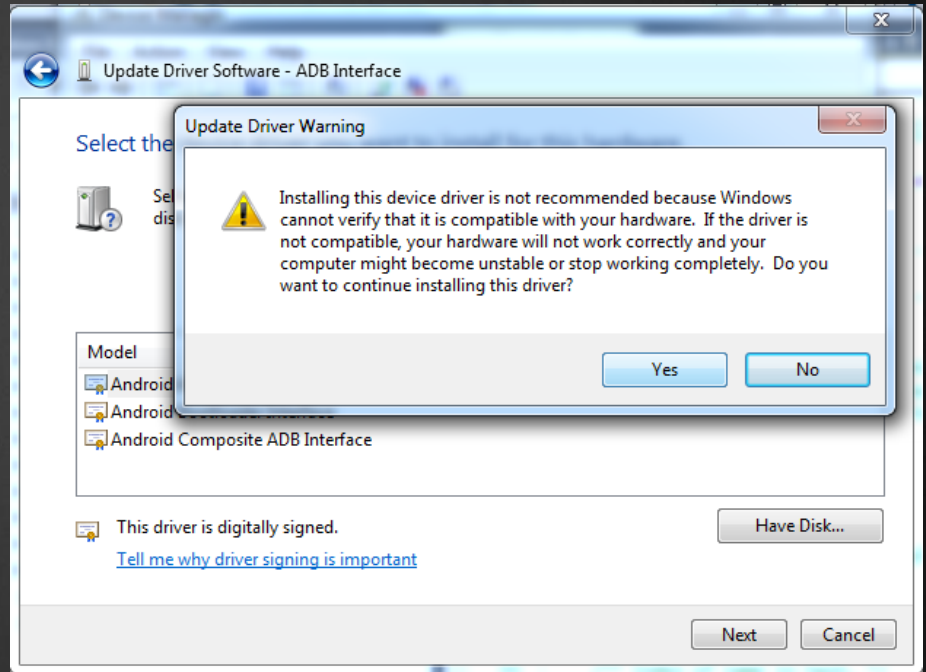
Android ADB Driver

- Click “Have Disk...”
- Browse to driver folder
- Click “Ok”



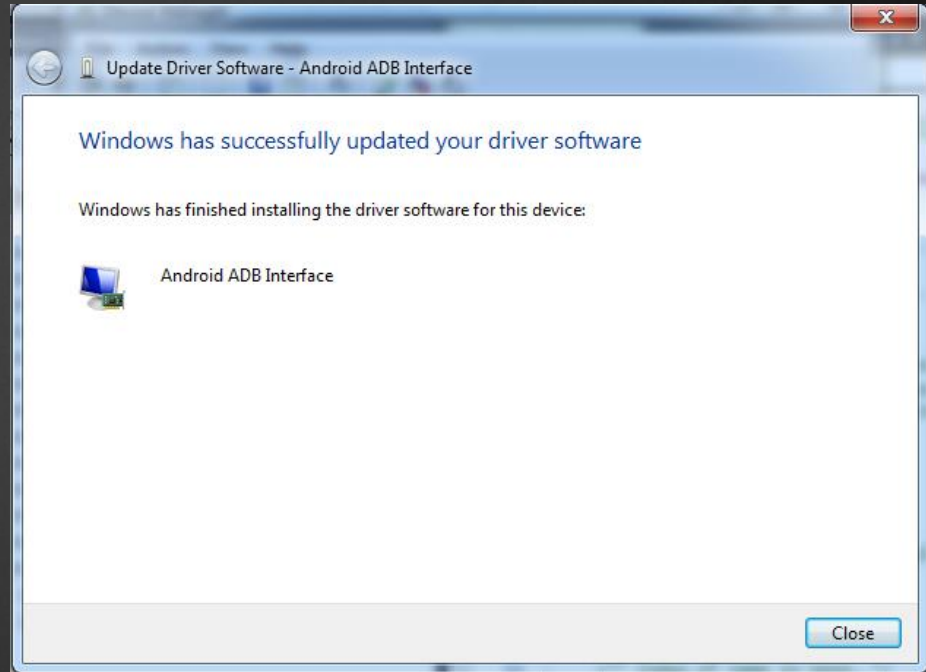
Android ADB Driver

- Select “Android ADB Interface”
- Click “Next”
- Accept if warning shows up



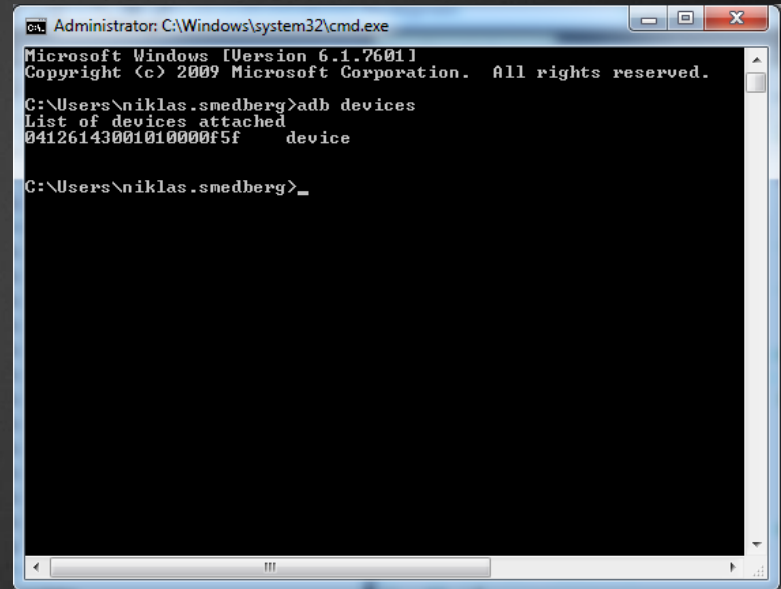
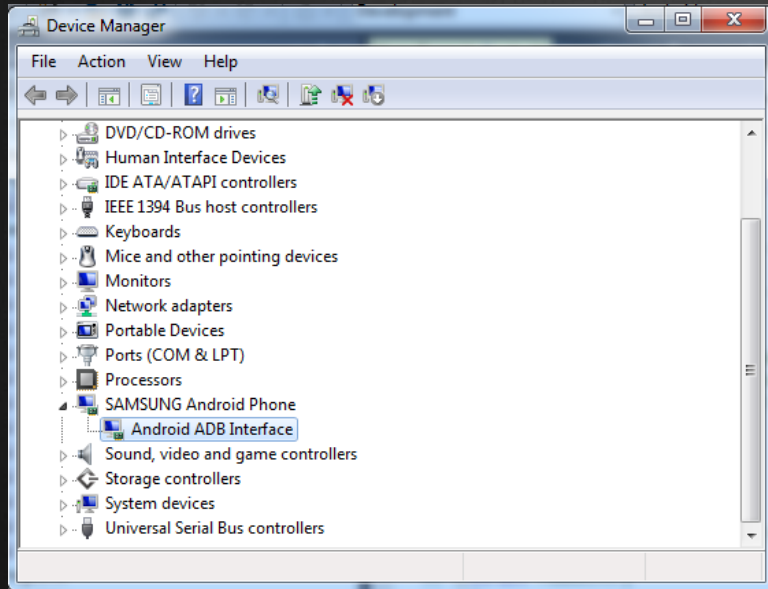
Android ADB Driver

- Installation is complete!
- Click “Close”



Android ADB Driver

- Verify that your device is recognized by Device Manager and ADB



UE4 Mobile Deployment Questions?

Documentation, Tutorials and Help at:

- AnswerHub: <http://answers.unrealengine.com>
- Engine Documentation: <http://docs.unrealengine.com>
- Official Forums: <http://forums.unrealengine.com>
- Community Wiki: <http://wiki.unrealengine.com>
- YouTube Videos: <http://www.youtube.com/user/UnrealDevelopmentKit>
- Community IRC: [#unrealengine](#) on FreeNode

Unreal Engine 4 Roadmap

- imgtfy.com/?q=Unreal+engine+Trello+