FRC官方编程环境搭建指南

Next Innovation Lang zh-CN

FRC官方库与VSCode安装指南

1. 进入 FRC编程手册 官网。

FIRST Robotics Competition Control System

2. 进入 WPILib Installation Guide (路径: ZERO TO ROBOT/Step 2: Installing Software/WPILib Installation Guide)

WPILib Installation Guide

3. 参照**页面内容**直接从Github下载对应自己系统版本的**最新完整压缩包(建议做 法**)。

wpilibsuite/allwpilib/releases

○ 右键管理员模式运行installer,点击**Start**开始安装。

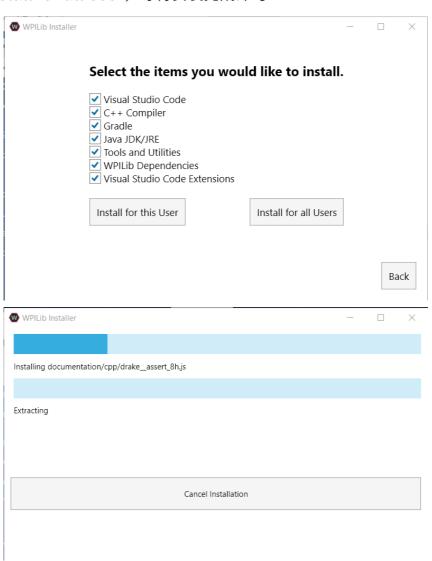


o 点击 Download VS Code for Single Install

WPILib Installer		_		\times
For licensing reasons, VS Code cannot be included in the WPILib Installer. WPILib installs it's own copy of VS Code every year, not shared between years or a system install. If you have already installed VS Code for the current year, the Next button will be enabled and you can skip this step, otherwise choose from the following options. VS Code will be installed on this system using the installer selected here in later steps.				
1. Download VS Code for Single Install: Use this if you don't plan on sharing the VS Code installer between systems. This will be the fastest download. 2. Skip installing VS Code. This will display a warning if a compatibible VS Code installation isn't detected. 3. Use Downloaded Offline Installer: Use this to select a installer zip file previously downloaded from this tool.				
4. Download VS Code for Offline Install: Use this to download VS Code installers for all platforms, which can be shared between systems for offline use.				
Download VS Code for Single Install	Skip installing VS Code			
Use Downloaded Offline Installer	Download VS Code for Offline Install			

Back

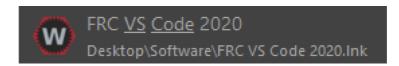
。 选择Install for all User,等待安装完成即可





注意: 你也可以选择单独下载VSCode,并在拓展市场里下载"WPILIB"插件以配置环境(不建议)

- 4. 压缩包解压完毕后管理员模式下运行安装器, 选择All User, 从安装器内直接下载VSCode,参照默认设置完整安装(建议做法)。
- 5. 从桌面新快捷方式进入VSCode



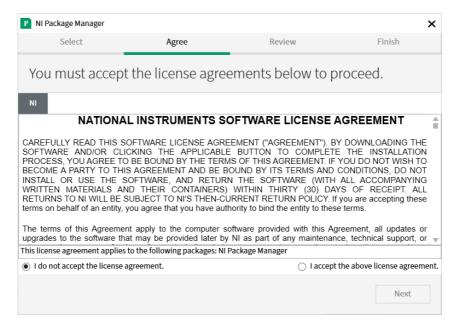
2. FRC其他重要程序的安装

1. **FRC Game Tools** (路径: ZERO TO ROBOT/Step 2: Installing Software/Installing the FRC Game Tools)

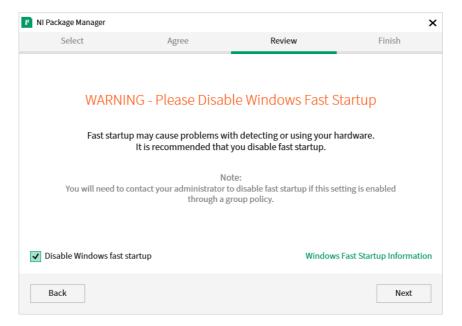
包含: LabVIEW Update, FRC Driver Station, FRC Utilities(比如roboRIO Imaging Tool)

FRC Game Tools

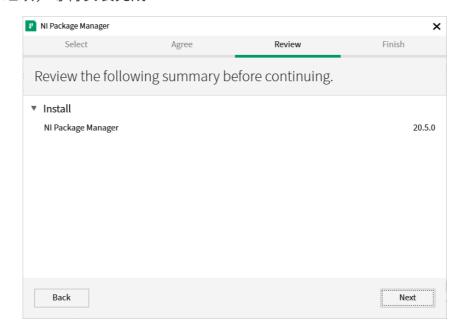
 \circ 选择 I accept the above license agreement,并继续

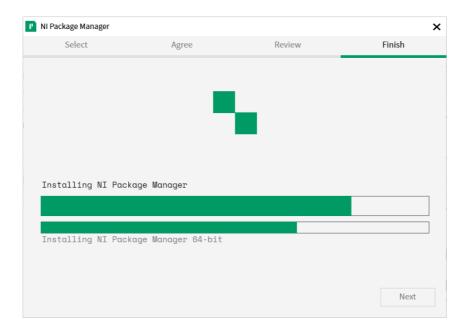


。 选择取消掉Windows的快速启动,并继续



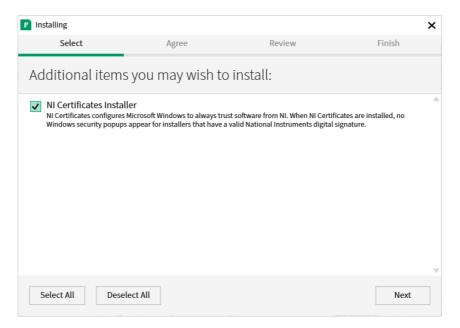
。 选择继续,等待安装完成

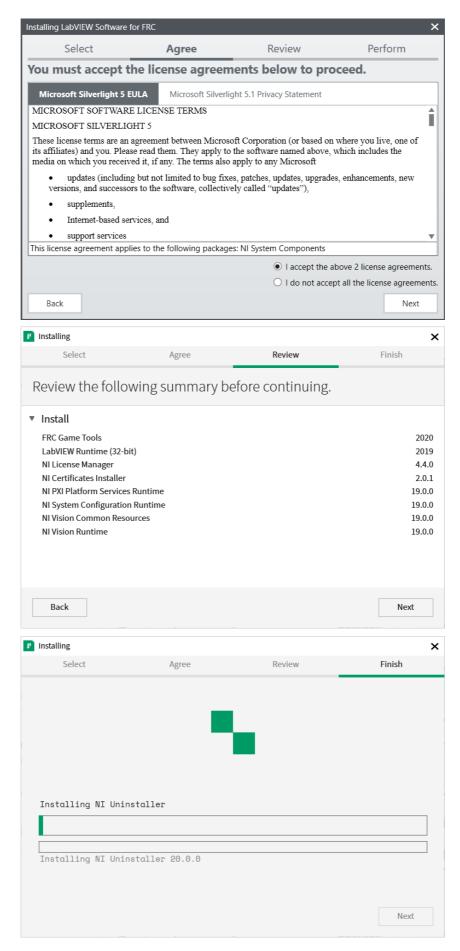


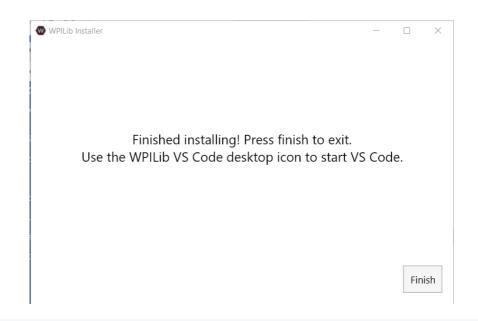


注意: 在这一步安装的过程中可能会出现报错,并自动会跳到之前的安装界面,在这种情况下可以直接按照之前的选项继续安装下去,不用关掉软件重新启动,这种情况一般是由于服务器连接不稳定造成的。

○ 如果看到这个页面,请继续选择安装,接下来的步骤与之前一致







注意: 使用离线版安装器可以避免服务器连接不良导致的安装失败,离线版本的安装器可以在同链接下载。

2. FRC Radio Configuration (路径: Step 3: Preparing Your Robot/Programming your Radio)

用于: 设置无线路由器

FRC Radio Configuration 20.0.0

3. **第三方库**(路径: VS Code Overview/3rd Party Libraries)

用于:配置使用Spark Max 和 Talon FX等电调或NavX等传感器。

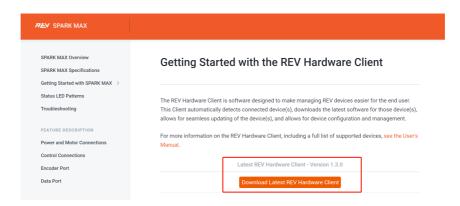
CTRE Phoenix Framework

。 选择对应的系统版本下载安装即可

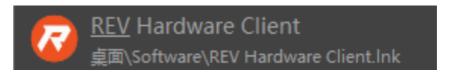


REV Lib

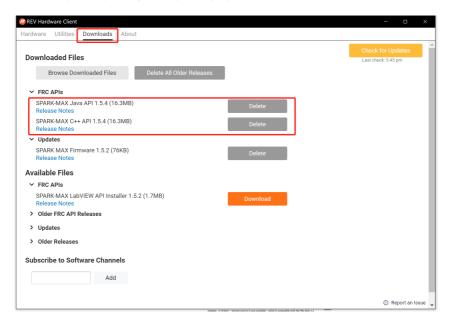
。 直接下载客户端安装即可



○ 安装后打开REV Hardware Client

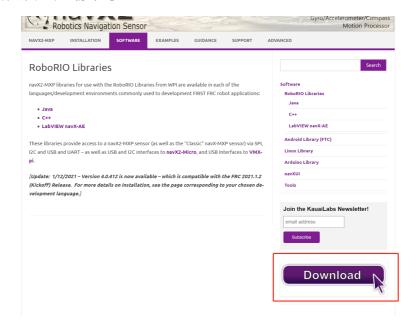


○ 在Downloads界面下选择API下载即可



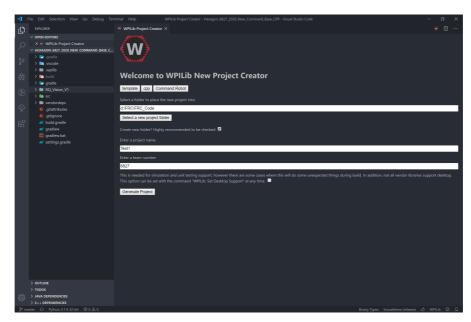
Kauai Labs

○ 直接下载安装客户端即可



3. 检验环境

- 1. 进入安装好 WPILib插件 的VSCode。
- 2. 从右上角 W状图标 处启动插件。
- 3. 选择 "新建一个项目" (Create a new project)。
- 4. 参照以下设置创建一个New Command Base架构的程序模板。



5. Build程序模板(一般会在第一次进入模板后自动执行),显示"Build Successful"之后即可继续编程,若出现"Build Failed"或未出现成功字样,则是环境搭建出现问题,请参照之前步骤寻找原因。

