

FRC Java Startup Guide

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1 Introduction

Follow these steps carefully to setup the java programming environment for FRC robotics. These instructions were developed for windows but should easily translate to Linux.

*Note: Don't confuse the preference menu with the properties menu.

1. To start, follow the instructions found here:

<https://wpilib.screenstepslive.com/s/4485/m/13809/1/599681-installing-eclipse-c-java>

- (a) Download JDK

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

Product / File Description	File Size	Download
Linux x86	133.58 MB	jdk-8u11-linux-i586.rpm
Linux x86	152.55 MB	jdk-8u11-linux-i586.tar.gz
Linux x64	133.89 MB	jdk-8u11-linux-x64.rpm
Linux x64	151.65 MB	jdk-8u11-linux-x64.tar.gz
Mac OS X x64		
Solaris SPARC 64-bit (SVR4 package)		
Solaris SPARC 64-bit	96.14 MB	jdk-8u11-solaris-sparcv9.tar.gz
Solaris x64 (SVR4 package)	135.7 MB	jdk-8u11-solaris-x64.tar.Z
Solaris x64	93.18 MB	jdk-8u11-solaris-x64.tar.gz
Windows x86	151.81 MB	jdk-8u11-windows-i586.exe
Windows x64	155.29 MB	jdk-8u11-windows-x64.exe

- (b) Install Eclipse - Newest is now Neon. Select the "Download Pacakges" option under the large orange button:

<http://www.eclipse.org/downloads/>

Get Eclipse Neon

Install your favorite Eclipse packages.

[DOWNLOAD 64 BIT](#)

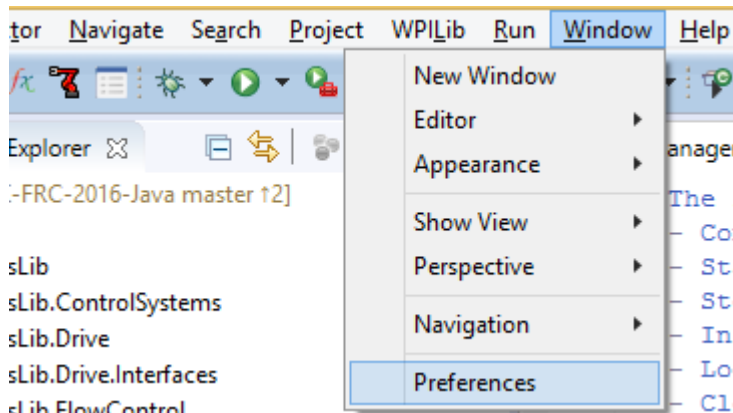
[Download Packages](#)

Extract the contents of the zip file by right-clicking on the .zip file in a windows explorer window and selecting "Extract All..." and taking the default for the location to extract it.

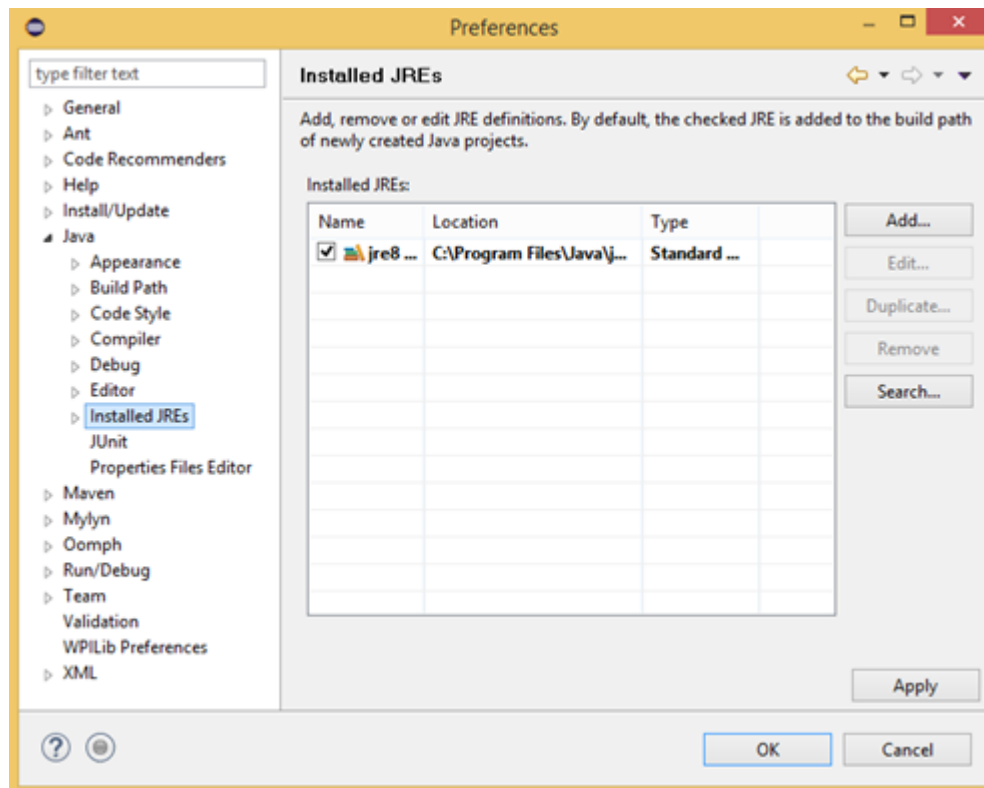
Move the extracted folder to Program Files or some other convenient location from which to easily run it. Within the eclipse folder you'll see the file "eclipse.exe". You can right-click on "eclipse.exe" and select "Pin to start menu" to make it easier to run eclipse without having to find the installation location.

2. Setup JDK

(a) Navigate to Windows → preferences

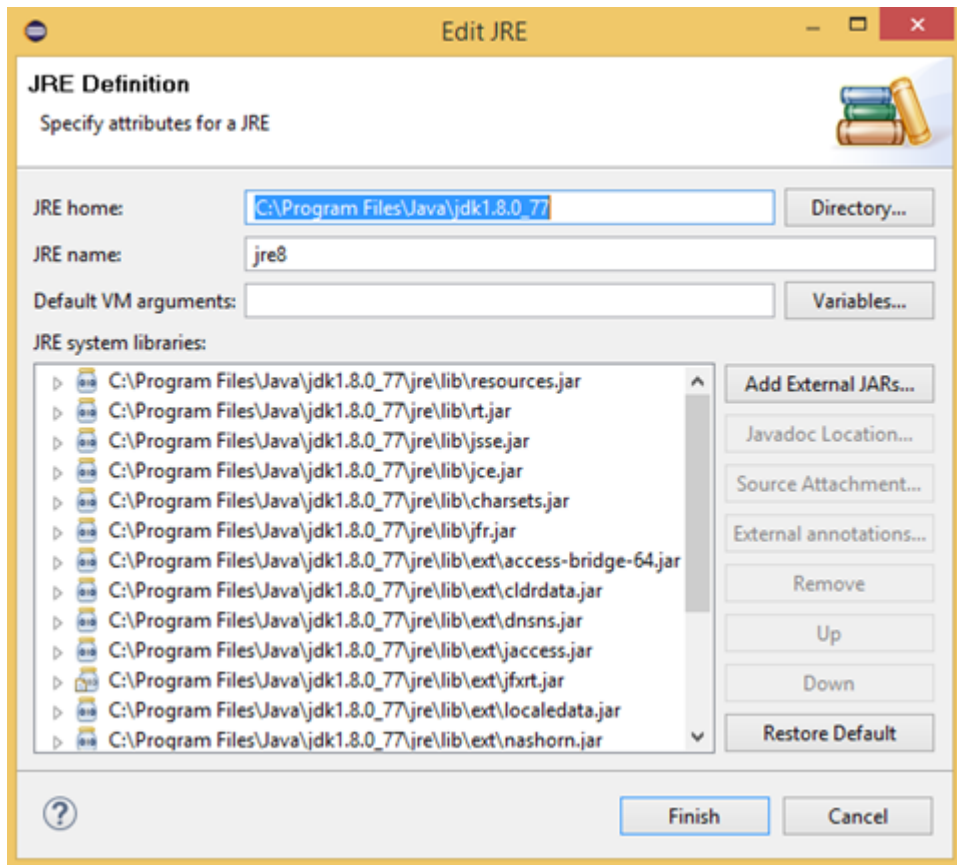


(b) Then Java → Installed JREs

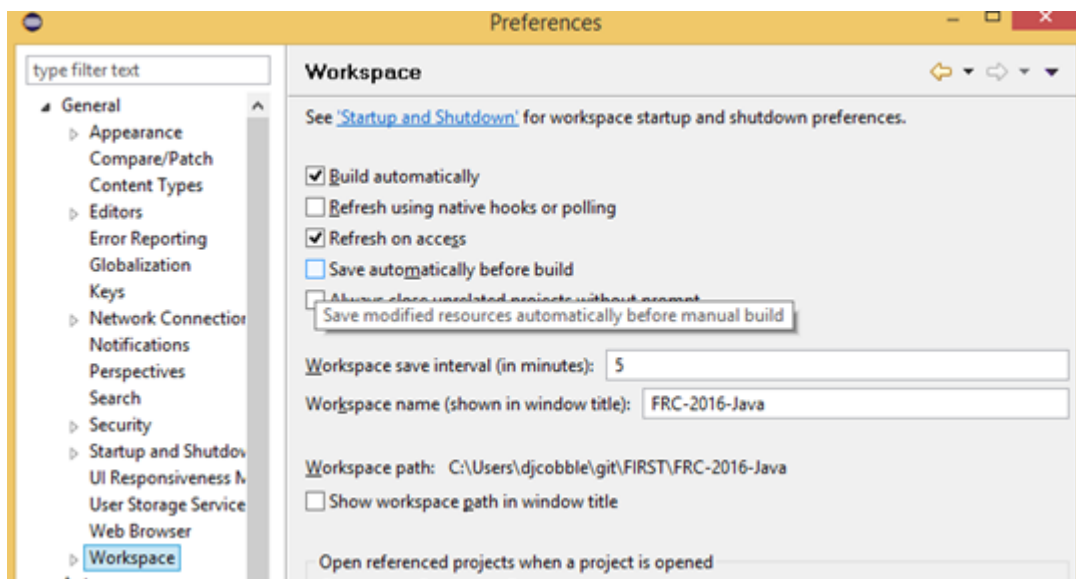


Notice under name that it says jre8 and location will most likely be \Java\JRE8...

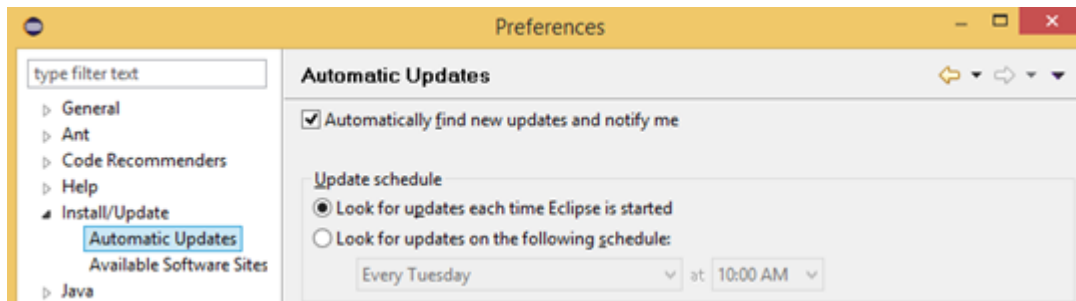
- (c) Double click on the location of jre8, you should see:



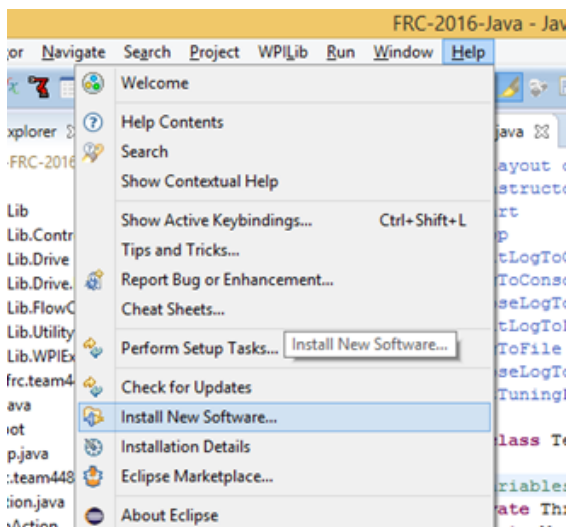
- (d) Go ahead and change the location of JRE home to the path for your JDK. For some reason we have to lie to Java, we want to use the development kit, not the runtime environment. Click Finish.
- (e) Set a few extra preferences, starting with auto save: Window → Preferences → General → Workspace → Check Save automatically before build → OK



- (f) While you're still in the preferences, go to Install/Update: check Automatically find new updates and notify me. Making sure this is run every time Eclipse is started.

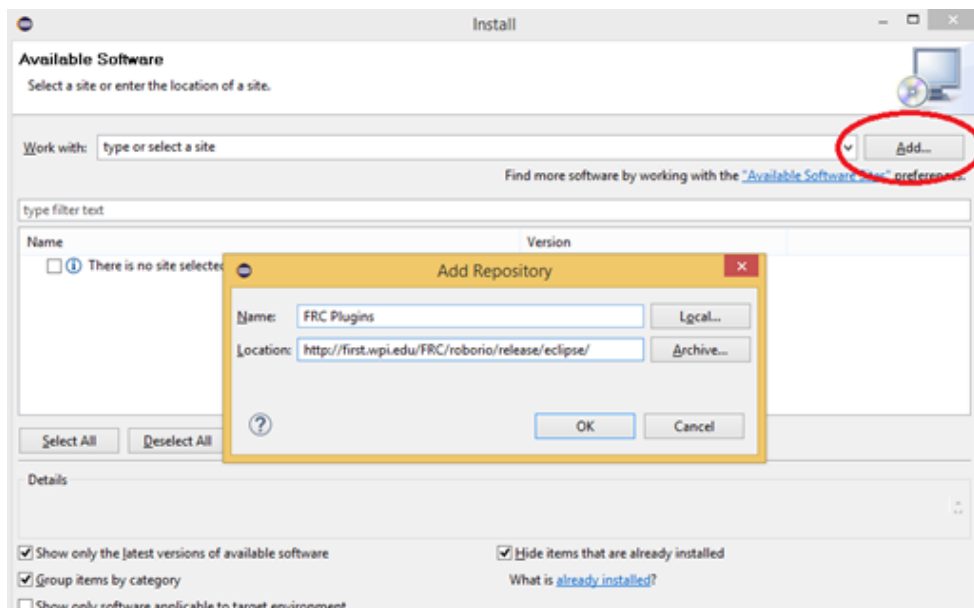


3. Next we will add the WPI library. Navigate to Help→Install New Software:

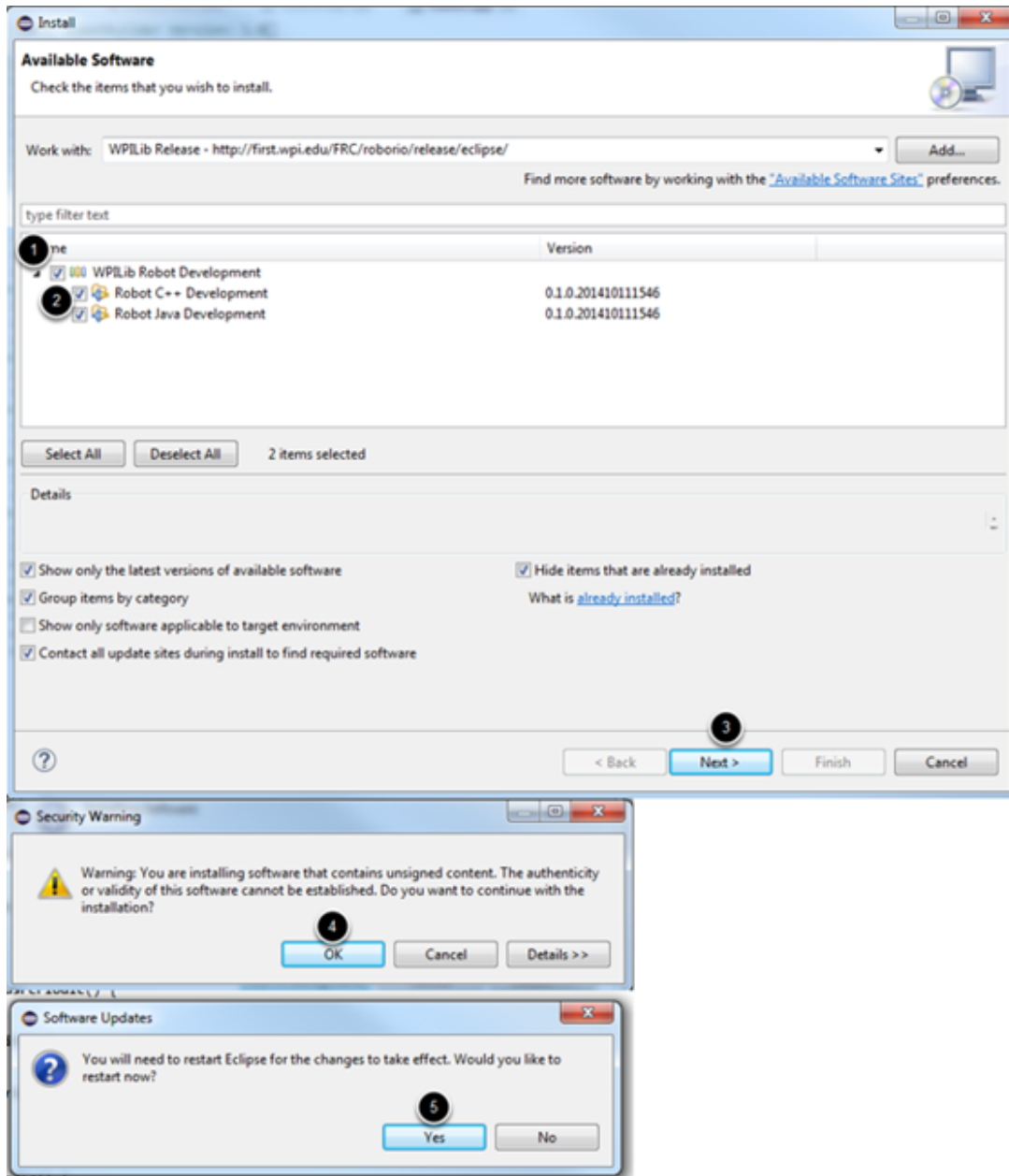


4. Click Add, and enter Name: “FRC Plugins” & enter its Location:

<http://first.wpi.edu/FRC/roborio/release/eclipse/>

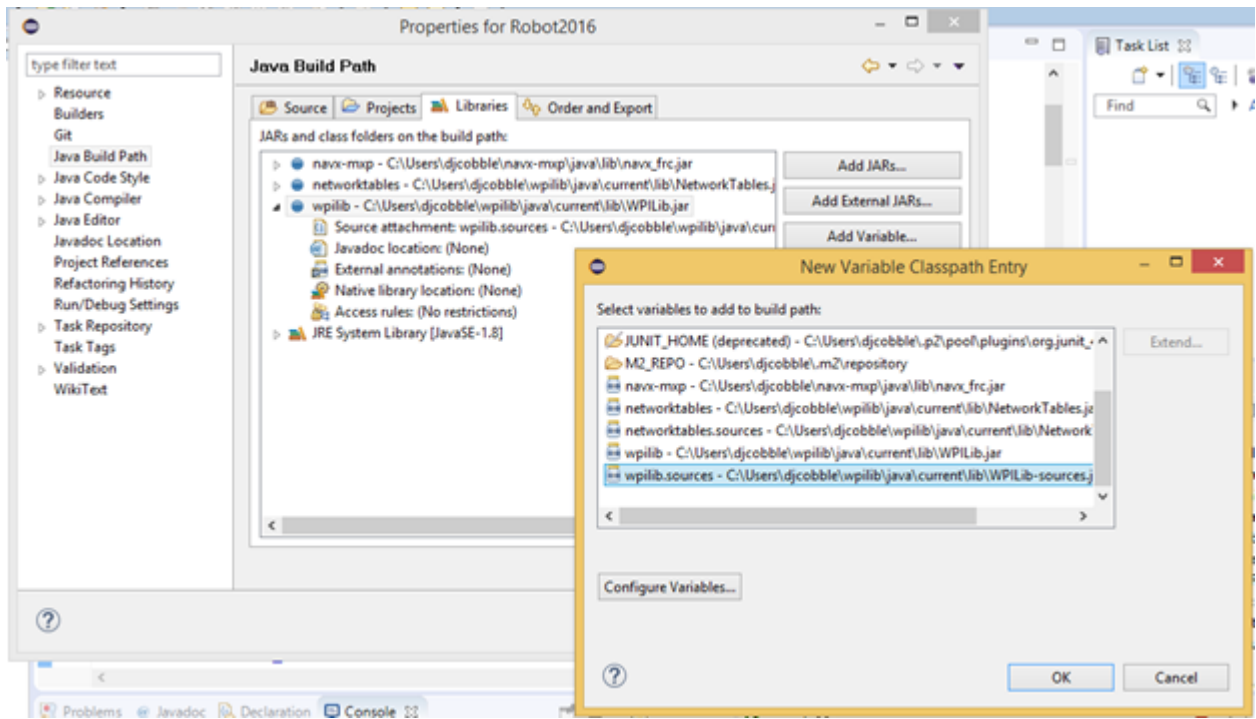


5. Select Robot Java Development, we do not need C++



6. Finish up by checking for updates to the plugins: Help → Check For Updates
7. Once you have downloaded the Navex, you can continue configuring Eclipse.
 - (a) Config settings (follow install instructions)
 - (b) Install dev plugins
8. Download navx library from here: <http://www.pdocs.kauailabs.com/navx-mxp/software/roborio-libraries/java/>
 - (a) Run setup.exe
 - (b) Configure eclipse for navx <http://www.pdocs.kauailabs.com/navx-mxp/software/roborio-libraries/java/>

9. ~~Download a git plugin for eclipse~~
10. Sync to team repo
import → ProjectsFromGit → CloneURL
11. Point to downloaded libraries
 - (a) Right click on Preferences → Java → Build Path → Class Path Variables → edit → Variable → new – Enter <Same Name>– Folder
 - (b) Navex variable to C:\User\ <user>\navex
 - (c) Same for WPILib
12. Add wpilib.sources



2 Extras

ANT errors: <http://stackoverflow.com/questions/15098258/ant-java-home-does-not-point-to-the-jdk-but-it-does>

Set Team Number

Lots of information here: <https://wpilib.screenstepslive.com/s/4485/m/13809>

Helpful information here as well: <https://wpilib.screenstepslive.com/s/4485/m/13809/1/242586-building-and-downloading-a-robot-project-to-the-roborio>