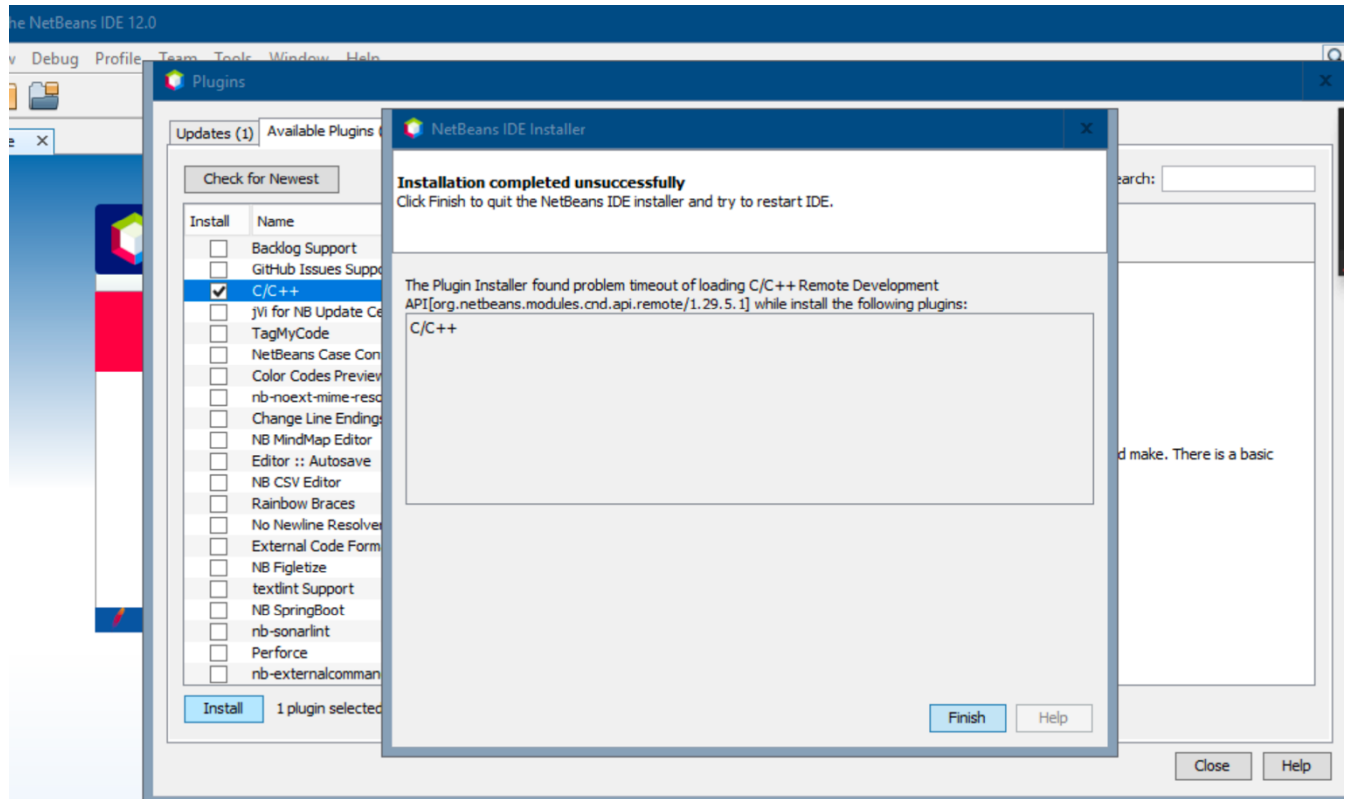# How to fix NetBeans and Java incompatibility[1]

Version 1.0 (Aug 22, 2022)

The following should work for both Mac and Windows.

NetBeans may have incompatibility issues with versions of Java. For example, see
https://stackoverflow.com/questions/63954870/does-apache-netbeans-12-1-support-jdk-15.

An indication of this problem may occur when **installing the C/C++ plugin**. The installation may not work:

Error window while installing the C/C++ into NetBeans 12 for Windows

A possible fix is to install an *older version of Java* and configure NetBeans to use it instead. Alternatively, it is possible that adding only a single file from an older Java version to the current Java installation is needed to make NetBeans work.

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[1] This was originally intended for NetBeans version 12, but may apply to later versions as well.

1. **If the currently installed version of Java is 14 or greater, try adding the 'unpack200' file to it**
   NetBeans will not work if the file '**unpack200**'[2] is not included in the Java installation. If you have a copy of '**unpack200**', try this:

   On **Windows**, Java may be installed in **C:\Program Files\Java\,** so you can install 'unpack200.exe' in **C:\Program Files\Java\(current Java version)\bin**.

   On **Mac**, Java gets installed in **/Library/Java/JavaVirtualMachines/**. You can install 'unpack200' in **/Library/Java/JavaVirtualMachines/(current Java version)/Contents/Home/bin/**[3].

   This should fix the NetBeans and Java incompatibility problem. You don't have to follow the rest of the steps.

   But if you *don't* have a copy of '**unpack200**', you can try installing an *older* version of Java – say version 14 – then extract '**unpack200**' from this version (it should be in one of the directories given above).
   See the next step about installing another (older) Java version.

2. **Install an older version of Java JDK**
   You can find different versions on the Oracle site here:
   https://www.oracle.com/java/technologies/javase-downloads.html

   Select a Java version.
   Make sure to download the right one for your operating system.

   Install this version of Java:
   For Windows, it will install in **C:\Program Files\Java\.**
   For Mac, it will install in **/Library/Java/JavaVirtualMachines/.**

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[2] On Windows, the entire file name will be 'unpack200.exe'. On Mac, it will be just 'unpack200'.
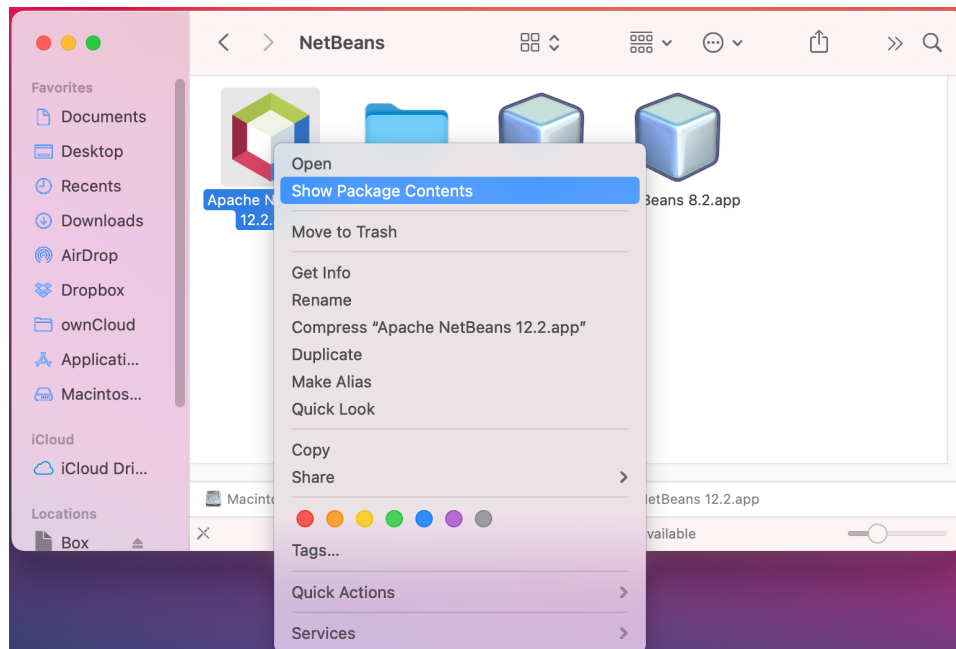[3] If you're not sure how to get to 'system' folders like this, see the note in the Appendix.

3. **Either copy 'unpack200' from one Java version to the other, or configure NetBeans to use the older Java version**

   See Step 1 about copying '**unpack200**' to the currently active Java version on the system.

   Otherwise, you may try pointing NetBeans at this older Java version. To do so:

   - On **Windows**:
     Navigate to the folder **C:\Program Files\NetBeans** *<version #>***\etc**[4], and open the file **netbeans.conf** in a text editor (like **Notepad** or **Notepad++**).
     Find the line
     ```
     #netbeans_jdkhome="\path\to\jdk"
     ```
     and remove the '#' at the beginning.

   - On **Mac**:
     Find the NetBeans icon in the **Applications** folder and *right*-click on it[5]. Then click on '**Show Package Contents**':

     Once the contents of the application are shown, go to the folder
     Contents -> Resources -> NetBeans -> netbeans -> etc. Then open the file **netbeans.conf** in a text editor (like **TextEdit** or **BB Edit**).
     Find the line
     ```
     #netbeans_jdkhome="/path/to/jdk"
     ```
     and remove the '#' at the beginning.

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[4] Where '*<version #>*' is the version of NetBeans installed on your system.
[5] To access the Applications folder: **Go** menu -> **Applications**; or, it may be in the 'Favorites' on the left side of a Finder window.

Now, replace the text in the quotes with the path to the Java JDK that NetBeans should be using[6]. Save the file.

Restart NetBeans and verify that it works. You should be able to create a C/C++ 'Hello World' program at this point.

Appendix

- **To check the Java version**
  Mac: Open a terminal window (**Go** menu -> **Utilities** -> **Terminal**) and type '**javac --version**' and press `<return>`. If an error is returned, try typing only *one* dash before '**version**', i.e. '**javac -version**' and press `<return>`.

- **Mac: How to access directories**
  Two ways:
  a) If you're comfortable with a Linux/Unix-like environment and using commands such as '`ls`', '`cd`', and '`cp`', you can open a Terminal window and navigate to the directory you want. Get to Terminal by going to the Finder, click on the **Go** menu, then **Utilities**, then double-click **Terminal**.

  b) If you would prefer Finder windows, clicking the '**Macintosh HD**' icon on the desktop or in the 'Favorites' on the left side of a Finder window will take you to the 'root' of the system. You can then click through folders (directories) to get to where you want.

     If you don't can't find the '**Macintosh HD**' icon: in Finder, go to the **Finder** menu, then select **Preferences**, then the **General** tab, and check that '**Hard disks**' is checked under '**Show these items on the desktop**'.

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[6] Do this for either Windows or Mac. Remember that, for file paths, Windows uses '\' (backward slash) between directory levels, whereas Mac uses '/' (forward slash).