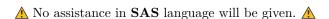
Tools installation for seasonal adjustment

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Context

For seasonal adjustment we recommend using JDemetra+ algorithms

• JDemetra+ Graphical User Interface (X13-Arima and Tramo-Seats)



Thus, it is helpful to install the following tools:

Preliminary

On the computers without administrator rights (professional computer, for example), it is recommended to create a folder **Software** under C:\Users\...\Software or directly under C:\Users\Software where all software will be installed.

▲ Warning: when we specify an **absolute** path for a software (JDemetra+, Java, ...) in a program, a shortcut, a variable, ..., it must be modified each time any root repository is moved.

1 Installation of JDemetra+

JDemetra+ is a collection of Java programs used for time series analysis and more specifically for seasonal adjustment. JDemetra+ is delivered in the form of an GUI (Graphical User Interface) but there is also a cruncher (executable).

1.1 Version of JDemetra+ and dependencies

JDemetra+ is downloadable from the github link of the application: https://github.com/jdemetra/jdemetra-app/releases.

The last release (v2.2.4) dates from January 31, 2023. It is the last **stable** version of JDemetra+. **This** version should be downloaded and must be used in production.

There is one more version of JDemetra+ which are only at a **test** stage:

• v3.2.1: the new JDemetra+ version with new features and a new GUI

JDemetra+ v2.2.4 require Java version ≥ 8 while v3.2.1 requires Java version ≥ 17 :

JDemetra+ version	Java version
v2.2.4	<u>≥</u> 8
v3.2.1	≥ 17

In the following procedure, the installation processes of this 2 versions are the same. You just have to repeat them for each version you want to install.

1.2 Installation process

There are two possibilities for installing:

- Download and execute the .exe file which requires administrator rights
- Download and unzip the compressed folder .zip that allows to get a portable version of the software

▲ Warning: for the second option, you need to **download** the compressed folder jdemetra+-2.2.4-bin.zip (for the version 2.2.4 for example) and **not** the folder Source code (zip).

The Software is in the folder \nbdemetra\bin\, these are the file nbdemetra.exe (version 32-bit) and nbdemetra64.exe (version 64-bit).

i Advice: If you want to use several versions of JDemetra+ (v2.2.4, v3.2.1, ...), you can rename the unzipped folder in \nbdemetra-2.2.4\ and \nbdemetra-3.2.1\.

i Remark: You can create shortcuts to the executable files if you want to launch them from another folder (Desktop, project folder...).

1.3 Installation of the cruncher

The cruncher (**JWSACruncher**) is a tool to update a workspace of JDemetra+ from the console, without opening JDemetra+ Graphical User Interface. The update of a workspace can then be done from another Software (**R** or **SAS** for example).

To use the cruncher, you have to:

• Download and unzip the file from the latest stable version v2.2.4 here https://github.com/jdemetra/jwsacruncher/releases

If you want to install and use a portable Java version (See section Java installation), you have to modify some parameters to use the cruncher:

- In the unzipped folder, **open** (for example with Notepad++) the file jwsacruncher.bat present in the subfolder \bin\ (that is under jdemetra-cli-2.2.4\bin\ in the version 2.2.3 of the cruncher)
- Modify the value of the variable JAVACMD at the line 71 (currently JAVACMD=java) by the address towards the file java.exe of the portable version. Then, if JPortable is installed under C:\Users\ Software, the new line is if "%JAVACMD%"=="" set JAVACMD="C:\\Users\\Software\\Java64\\bin\\java" (for Java 8).

2 Installation of Java

i On Insee computers, Java is already installed in version 8. Then, there is no need to install a portable version to use JDemetra+ in version 2.2.4.

2.1 Java 8

To install Java 8, use the link https://portableapps.com/apps/utilities/java_portable. If you use the version 64-bit of JDemetra+, you should install the version jPortable 64-bit (at the bottom of the page).

2.2 Java 17

i Remark

The version 3.2.1 of JDemetra+ contains a JDemetra+ version 3.2.1 contains a jdk 17 (java 17 version) packaged in .zip. So to use the interface, it is not necessary to install Java 17.