

Install Tooling

Zookeeper and Kafka are written in Java so you'll need JDK. Many sites will tell you to install JRE only. Don't bother. Just install JDK. It comes with JRE. Then set your HOME and PATH variables. But first, 7-zip.

Install 7-zip

www.7-zip.org

7-Zip is a file archiver with a high compression ratio.

Download 7-Zip 19.00 (2019-02-21) for Windows:

Link	Type	Windows	Size
Download	.exe	64-bit x64	1.4 MB
Download	.exe	32-bit x86	1.2 MB

When you install 7-zip, make sure to add it to your right-click menu shortcuts. It'll make your life easier.

Install JDK

It used to be free, and it still is except now you need to create an account with Oracle to be able to download this. Here's the link-

Java SE Downloads

Looking for Oracle OpenJDK builds? Oracle...(if you have oracle account else use the dropbox link to download jdk 8)

<https://www.oracle.com/java/technologies/downloads/#java8-windows>

Oracle Java SE subscribers have more choices

Also available for development, personal use, and to run other licensed Oracle products.

Java 16 Java 11 **Java 8**

Java SE Development Kit 8u301

Java SE subscribers will receive JDK 8 updates until at least December of 2030.

The Oracle JDK 8 license changed in April 2019

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Documentation Download

Linux macOS Solaris **Windows**

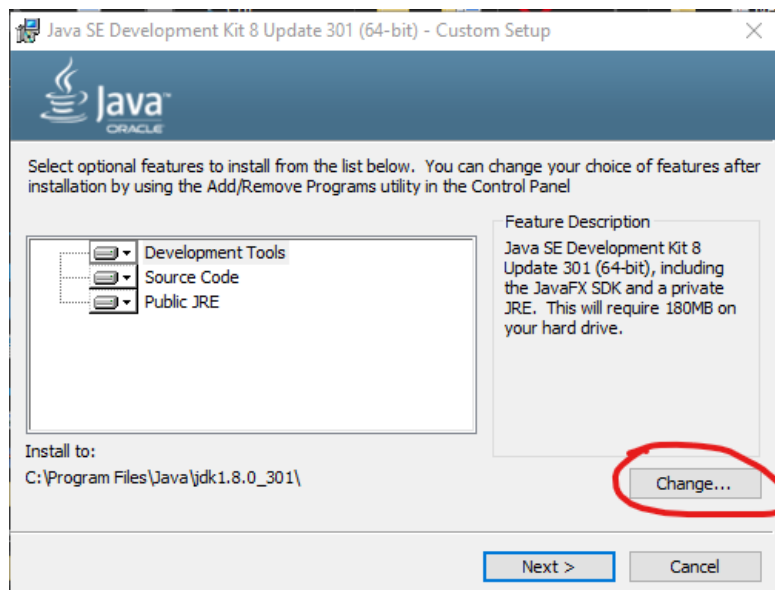
Product/file description	File size	Download
x86 Installer	156.45 MB	jdk-8u301-windows-i586.exe
x64 Installer	169.46 MB	jdk-8u301-windows-x64.exe

<https://www.dropbox.com/s/ko4ke6ebcfxo0a3/jdk-8u301-windows-x64.exe?dl=0>

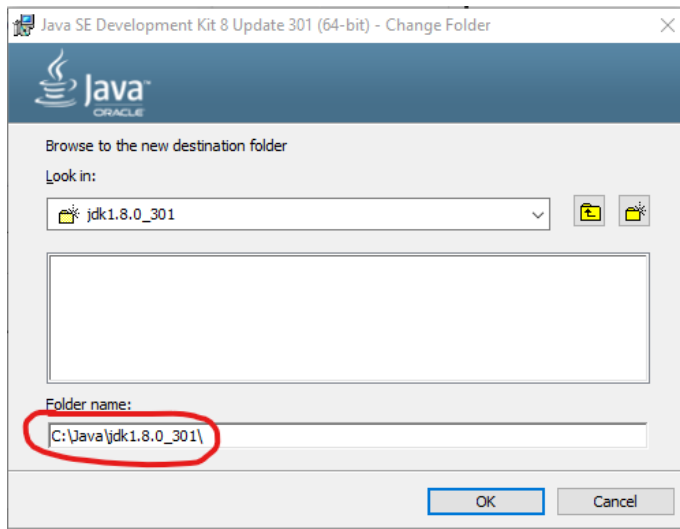
JDK will first install itself and then it'll ask you for the location where you want to install JRE.

The default install location is "C:\Program Files\..."

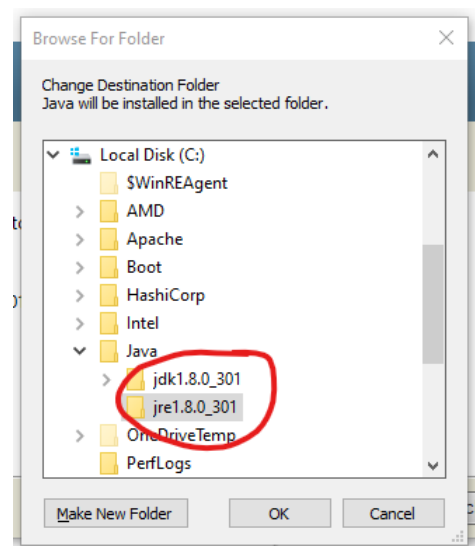
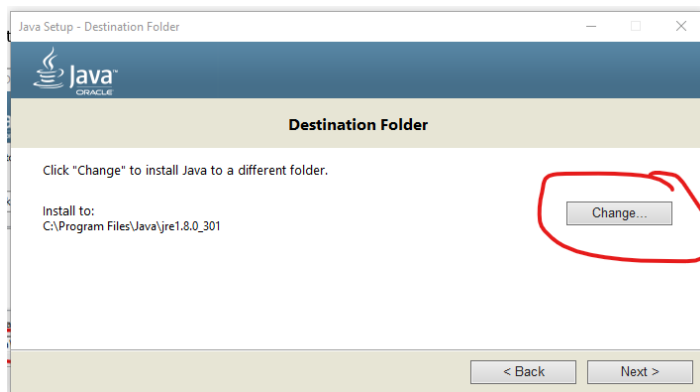
Normally it's fine to put Java in there but best not to for your Kafka installation. Kafka was meant for Linux. I wouldn't push it with Windows directory names containing spaces. I put both my JDK and JRE in a path with no spaces. My install location is C:\Java



Modify the path to look like below



Now create a folder jre1.8.0_301 in c\Java folder and while installing jre browse and select this folder to install in this location



At the end press close to finish installation

Set PATHs

We'll need to set PATHs for all of our installations. So we'll be revisiting this a few times in this article. We'll set two kinds of PATH variables — the User variable and the System variable. In the User variable, we'll add the path to the install location, and in the system variable, we'll set the path to the bin directory.

Type 'Environment' in your Windows search bar. It'll come up with an option to Edit the Systems variable in the Control Panel. Click that and you'll be in System Properties. Click on the button that says Environment Variables... on the lower right.

User Variables

Under User variables which is the top box, click on New and add JAVA_HOME and JRE_HOME. For the value for JAVA_HOME, click on the Browse Directories button and navigate to where you installed JDK. I used C:\Java\jdk1.8.0_301

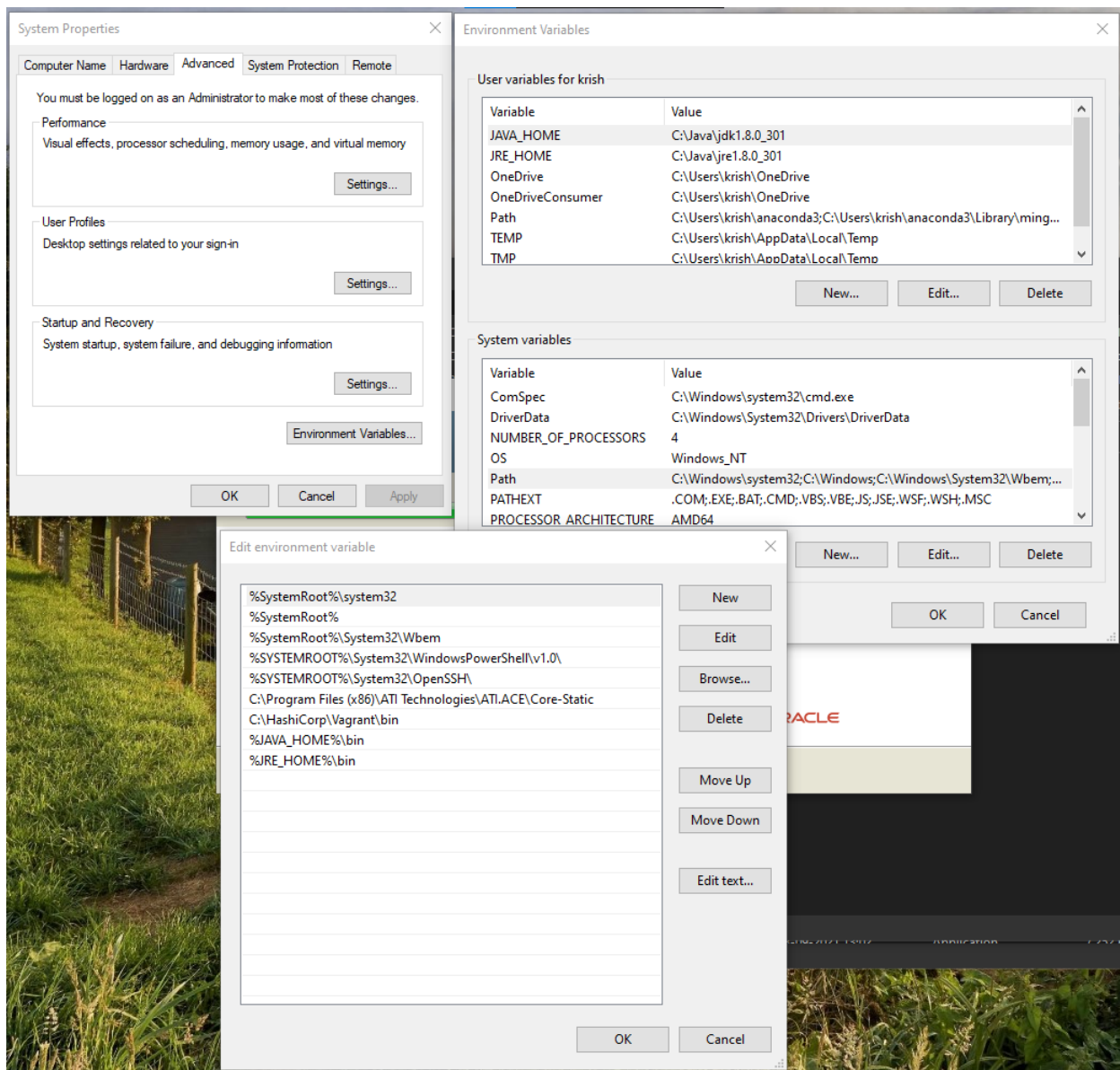
For the value of your JRE_HOME, click on the Browse Directories button and navigate to where you installed JRE. For me, that is C:\Java\jre1.8.0_301

System variables

In the System variable box, double click on the Path and add the following two entries at the end

%JAVA_HOME%\bin

%JRE_HOME%\bin



Test

If you've set it up right, open a command prompt in any directory. (A quick way to do that is to go to any directory with your windows file explorer and then type 'cmd' (without the quotes) in the address bar of the file explorer. It'll open up a prompt at that location.)

Navigate to a directory that's different from your Java installation so you really know if your PATH variables are working.

Type `java -version`

You should see this-

```

Microsoft Windows [Version 10.0.19042.1263]
(c) Microsoft Corporation. All rights reserved.

C:\Users\krish>java -version
java version "1.8.0_301"
Java(TM) SE Runtime Environment (build 1.8.0_301-b09)
Java HotSpot(TM) 64-Bit Server VM (build 25.301-b09, mixed mode)

C:\Users\krish>

```

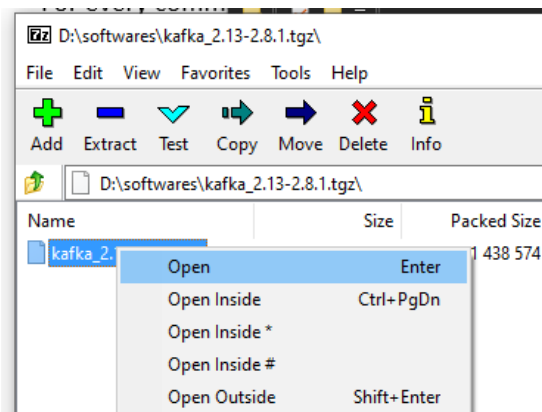
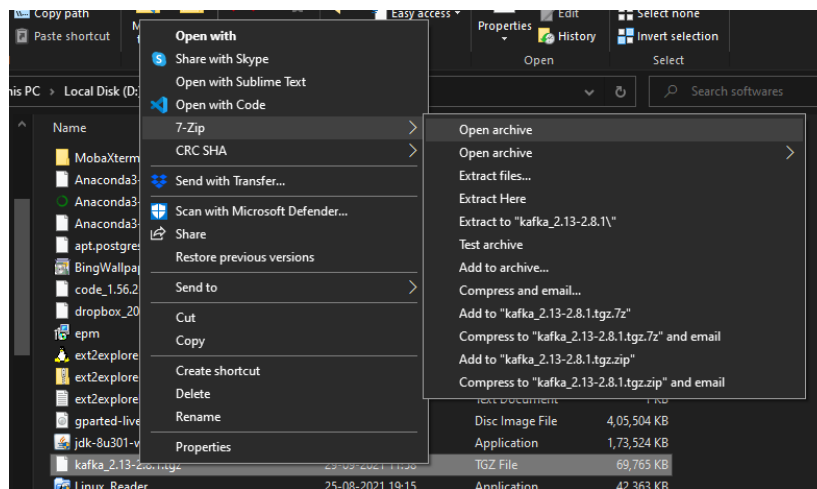
If you get something else like java is not recognized as an internal or external command, then your PATH is not set correctly. To make sure that it's not a problem with the installation itself, you can go to the bin directory of the JDK and type in the above command. If it works from there but not from anywhere else, it means the system can't find it.

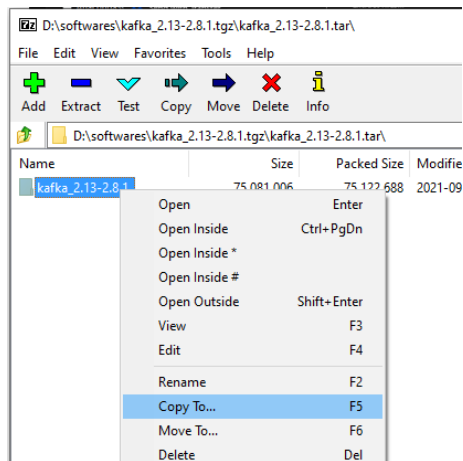
For every command typed in the command prompt, your computer runs through the list in your PATH variables to find a match. That's why errors like this are usually PATH problems.

Download Kafka:

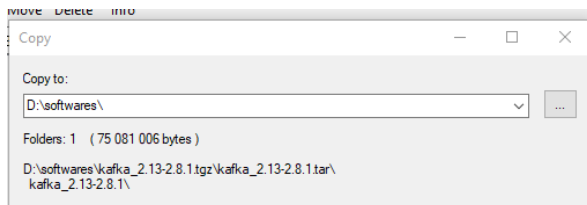
https://archive.apache.org/dist/kafka/2.8.1/kafka_2.13-2.8.1.tgz

extract using 7zip





Choose the directory you want



After copy you will see

Name	Date modified	Type	Size
bin	14-09-2021 18:39	File folder	
config	14-09-2021 18:39	File folder	
libs	14-09-2021 18:39	File folder	
licenses	14-09-2021 18:39	File folder	
logs	29-09-2021 12:11	File folder	
site-docs	14-09-2021 18:39	File folder	
LICENSE	14-09-2021 18:33	File	15 KB
NOTICE	14-09-2021 18:33	File	1 KB

/bin directory represents all the binary files which are helpful to start Kafka server different operating systems. As we are working with the windows machine, there will be a folder named windows under /bin directory, which has all the windows related stuff.

Name	Date modified	Type	Size
connect-distributed	14-09-2021 18:33	Windows Batch File	2 KB
connect-standalone	14-09-2021 18:33	Windows Batch File	2 KB
kafka-acls	14-09-2021 18:33	Windows Batch File	1 KB
kafka-broker-api-versions	14-09-2021 18:33	Windows Batch File	1 KB
kafka-configs	14-09-2021 18:33	Windows Batch File	1 KB
kafka-console-consumer	14-09-2021 18:33	Windows Batch File	1 KB
kafka-console-producer	14-09-2021 18:33	Windows Batch File	1 KB
kafka-consumer-groups	14-09-2021 18:33	Windows Batch File	1 KB
kafka-consumer-perf-test	14-09-2021 18:33	Windows Batch File	1 KB
kafka-delegation-tokens	14-09-2021 18:33	Windows Batch File	1 KB
kafka-delete-records	14-09-2021 18:33	Windows Batch File	1 KB
kafka-dump-log	14-09-2021 18:33	Windows Batch File	1 KB
kafka-leader-election	14-09-2021 18:33	Windows Batch File	1 KB
kafka-log-dirs	14-09-2021 18:33	Windows Batch File	1 KB
kafka-mirror-maker	14-09-2021 18:33	Windows Batch File	1 KB
kafka-preferred-replica-election	14-09-2021 18:33	Windows Batch File	1 KB
kafka-producer-perf-test	14-09-2021 18:33	Windows Batch File	1 KB
kafka-reassign-partitions	14-09-2021 18:33	Windows Batch File	1 KB
kafka-replica-verification	14-09-2021 18:33	Windows Batch File	1 KB
kafka-run-class	14-09-2021 18:33	Windows Batch File	6 KB
kafka-server-start	14-09-2021 18:33	Windows Batch File	2 KB
kafka-server-stop	14-09-2021 18:33	Windows Batch File	1 KB
kafka-streams-application-reset	14-09-2021 18:33	Windows Batch File	1 KB
kafka-topics	14-09-2021 18:33	Windows Batch File	1 KB
zookeeper-server-start	14-09-2021 18:33	Windows Batch File	2 KB
zookeeper-server-stop	14-09-2021 18:33	Windows Batch File	1 KB
zookeeper-shell	14-09-2021 18:33	Windows Batch File	2 KB

/config directory contains all configuration details about Kafka server, zookeeper, and logs. All configurations have their default values if you wanted to change any config details like port you can freely go and change accordingly.

Name	Date modified	Type	Size
kraft	14-09-2021 18:33	File folder	
connect-console-sink.properties	14-09-2021 18:33	PROPERTIES File	1 KB
connect-console-source.properties	14-09-2021 18:33	PROPERTIES File	1 KB
connect-distributed.properties	14-09-2021 18:33	PROPERTIES File	6 KB
connect-file-sink.properties	14-09-2021 18:33	PROPERTIES File	1 KB
connect-file-source.properties	14-09-2021 18:33	PROPERTIES File	1 KB
connect-log4j.properties	14-09-2021 18:33	PROPERTIES File	3 KB
connect-mirror-maker.properties	14-09-2021 18:33	PROPERTIES File	3 KB
connect-standalone.properties	14-09-2021 18:33	PROPERTIES File	3 KB
consumer.properties	14-09-2021 18:33	PROPERTIES File	2 KB
log4j.properties	14-09-2021 18:33	PROPERTIES File	5 KB
producer.properties	14-09-2021 18:33	PROPERTIES File	2 KB
server.properties	14-09-2021 18:33	PROPERTIES File	7 KB
tools-log4j.properties	14-09-2021 18:33	PROPERTIES File	2 KB
trogdor.conf	14-09-2021 18:33	CONF File	2 KB
zookeeper.properties	14-09-2021 18:33	PROPERTIES File	2 KB

You can modify the properties in zookeeper.properties and server.properties files to change the port and data dir locations , for now I left everything to default

/libs directory contain all dependency executables like java, jetty, log4j and etc.

If you are okay with the above default configurations, you are ready to start zookeeper and Kafka server.

Start the Zookeeper:

Go to `Kafka_X.XX-X.X.X\bin\windows\` and run the following command

```
zookeeper-server-start.bat ../../config/zookeeper.properties
```

in another terminal run

```
kafka-server-start.bat ../../config/server.properties
```

Note: Should start the zookeeper prior to Kafka server.

You can see the logs, we have successfully started the Zookeeper and Kafka servers.

Create a Kafka Topic: in new terminal

```
kafka-topics.bat --create --zookeeper localhost:2181 --replication-factor 1 --partitions 1 --topic items-  
topic
```

Created topic "test".

List the Kafka Topics:

```
kafka-topics.bat --list --zookeeper localhost:2181
```

test

Creating Kafka Producer:

```
kafka-console-producer.bat --broker-list localhost:9092 --topic test
```

>hai kc

>hello

Creating Kafka Consumer:

```
kafka-console-consumer.bat --bootstrap-server localhost:9092 --topic test --from-beginning
```

hai kc

hello

If you see these messages on consumer console, you are all done. Then you can play with producer and consumer terminal bypassing some Kafka messages.

