

# Guide for setup and configure Apache Kafka

## Introduction.

This guide has been created for windows users so the configuration can change depending of the O.S you are using.

## Prerequisites.

Java 8. (*Preferably*).

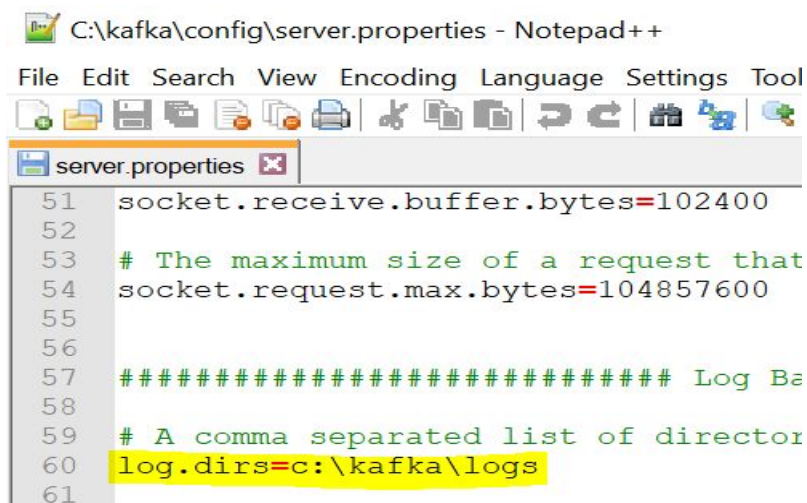
## Download Apache Kafka.

Download the last version of Apache Kafka from the official website.

<https://kafka.apache.org/downloads>

- **Modify Kafka file 'server.properties'.**  
C:\kafka\config\server.properties

Open the file



```
C:\kafka\config\server.properties - Notepad++
File Edit Search View Encoding Language Settings Tool
server.properties
51 socket.receive.buffer.bytes=102400
52
53 # The maximum size of a request that
54 socket.request.max.bytes=104857600
55
56
57 ##### Log Base
58
59 # A comma separated list of director
60 log.dirs=c:\kafka\logs
61
```







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## Download Zookeeper.

<https://www.apache.org/dyn/closer.cgi/zookeeper/>

Then navigate to the next 'URL' and install 'stable' version preferably.

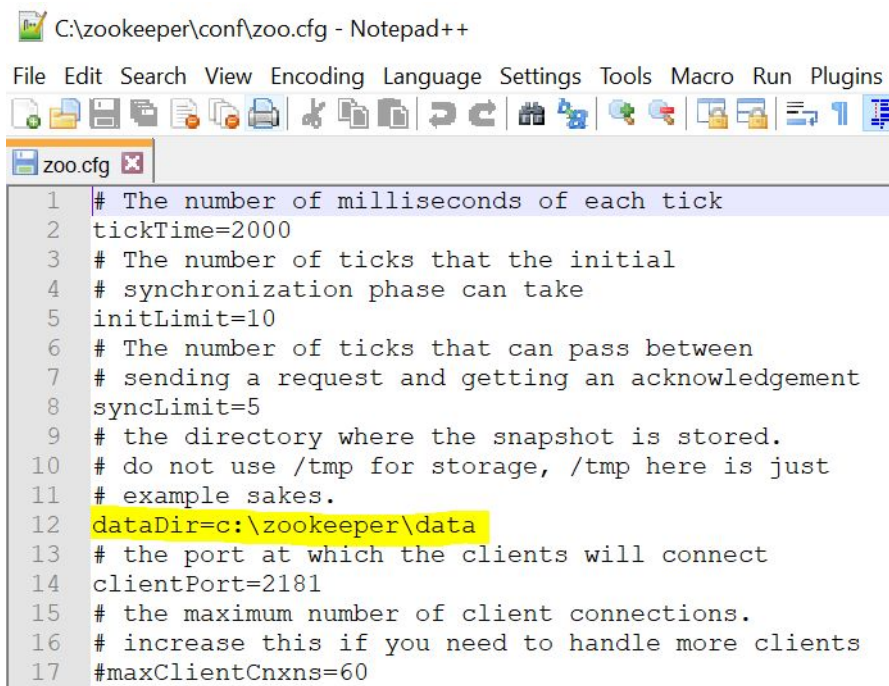
<https://www-us.apache.org/dist/zookeeper/>

<u>Name</u>	<u>Last modified</u>	<u>Size</u>
 <a href="#">Parent Directory</a>		-
 <a href="#">current/</a>	2019-04-01 14:46	-
 <a href="#">stable/</a>	2019-04-01 14:46	-
 <a href="#">zookeeper-3.4.14/</a>	2019-04-01 14:46	-
 <a href="#">zookeeper-3.5.4-beta/</a>	2018-10-25 08:35	-
 <a href="#">KEYS</a>	2019-02-06 13:18	54K

- **Modify Zookeeper file.**

C:\zookeeper\conf\zoo.cfg

Open the file zoo.cfg preferably in Notepad++ previously installed in your local machine and modify the *dataDir* as shown in the example below.



The screenshot shows the Notepad++ application window titled "C:\zookeeper\conf\zoo.cfg - Notepad++". The menu bar includes File, Edit, Search, View, Encoding, Language, Settings, Tools, Macro, Run, and Plugins. The toolbar contains various icons for file operations and editing. The file "zoo.cfg" is open, and its content is displayed in a monospaced font. The line "dataDir=c:\zookeeper\data" is highlighted in yellow. The text in the file is as follows:

```
1 # The number of milliseconds of each tick
2 tickTime=2000
3 # The number of ticks that the initial
4 # synchronization phase can take
5 initLimit=10
6 # The number of ticks that can pass between
7 # sending a request and getting an acknowledgement
8 syncLimit=5
9 # the directory where the snapshot is stored.
10 # do not use /tmp for storage, /tmp here is just
11 # example sakes.
12 dataDir=c:\zookeeper\data
13 # the port at which the clients will connect
14 clientPort=2181
15 # the maximum number of client connections.
16 # increase this if you need to handle more clients
17 #maxClientCnxns=60
```

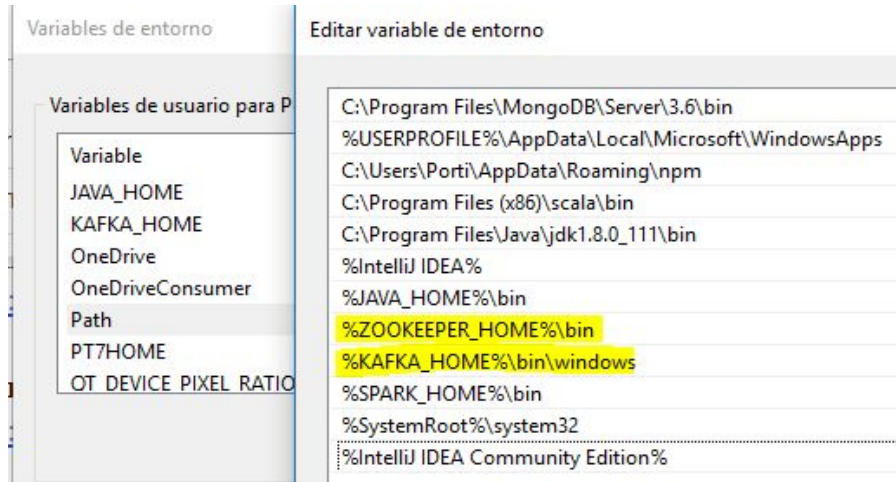
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## Environment variables:

Add the next environment variables with the corresponding directory path where you have been installed and saved zookeeper and kafka files:

- ZOOKEEPER\_HOME
- KAFKA\_HOME

Then add the environment variables to the 'path' as shown in the following image:



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## Start services:

### Zookeeper server

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

or

dir:\zookeeper\bin\zkServer (this succesfully worked for me).

```
C:\zookeeper\bin>zkServer

C:\zookeeper\bin>call "C:\Program Files\Java\jre1.8.0_211"\bin\java "
in\..\build\classes;C:\zookeeper\bin\..\build\lib\*;C:\zookeeper\bin\
eerMain "C:\zookeeper\bin\..\conf\zoo.cfg"
2019-05-06 23:34:31,667 [myid:] - INFO [main:QuorumPeerConfig@136] -
2019-05-06 23:34:31,822 [myid:] - INFO [main:DatadirCleanupManager@7
2019-05-06 23:34:31,823 [myid:] - INFO [main:DatadirCleanupManager@7
2019-05-06 23:34:31,823 [myid:] - INFO [main:DatadirCleanupManager@1
2019-05-06 23:34:31,851 [myid:] - WARN [main:QuorumPeerMain@116] - E
2019-05-06 23:34:32,352 [myid:] - INFO [main:QuorumPeerConfig@136] -
2019-05-06 23:34:32,354 [myid:] - INFO [main:ZooKeeperServerMain@98]
2019-05-06 23:34:32,654 [myid:] - INFO [main:Environment@100] - Serv
```

Once Zookeeper server is running we can proceed to start Kafka server.

### Kafka server.

kafka-server-start.sh config/server.properties

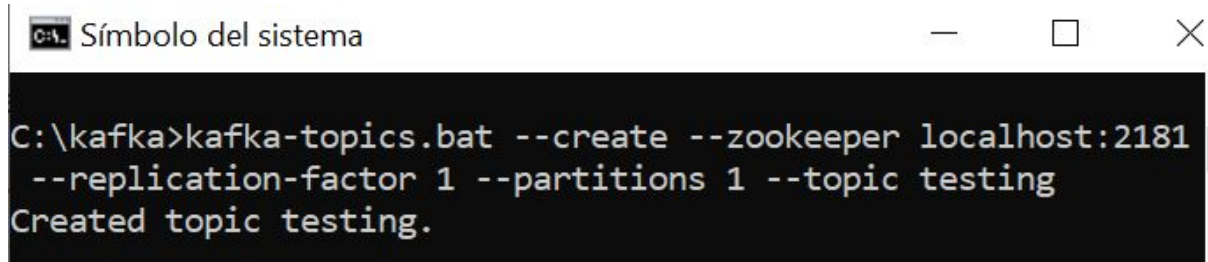
```
C:\kafka>kafka-server-start.bat config/server.properties
[2019-05-07 00:15:46,302] INFO Registered kafka:type=kafka.Log4jCon
n$)
[2019-05-07 00:15:48,851] INFO starting (kafka.server.KafkaServer
[2019-05-07 00:15:48,854] INFO Connecting to zookeeper on localho
[2019-05-07 00:15:48,936] INFO [ZooKeeperClient] Initializing a n
rClient)
[2019-05-07 00:15:48,957] INFO Client environment:zookeeper versi
lt on 06/29/2018 00:39 GMT (org.apache.zookeeper.ZooKeeper)
[2019-05-07 00:15:48,958] INFO Client environment:host.name=DESKT
```

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## Producer and Consumers.

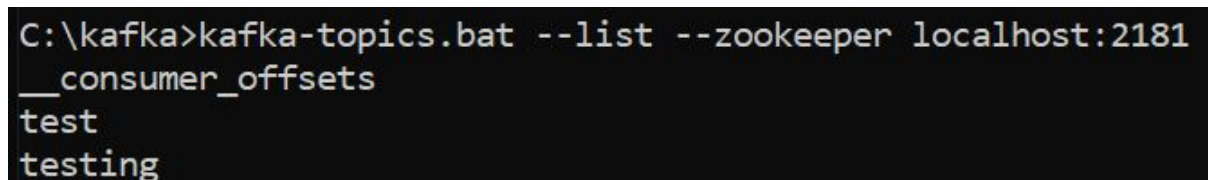
At this point Zookeeper server and Kafka server have been initialized so you can start getting involve creating messages from a '**Producer**' to a '**Consumer**' by the cmd console of your PC as you will see in the next example:

### Create a topic.



```
C:\kafka>kafka-topics.bat --create --zookeeper localhost:2181
--replication-factor 1 --partitions 1 --topic testing
Created topic testing.
```

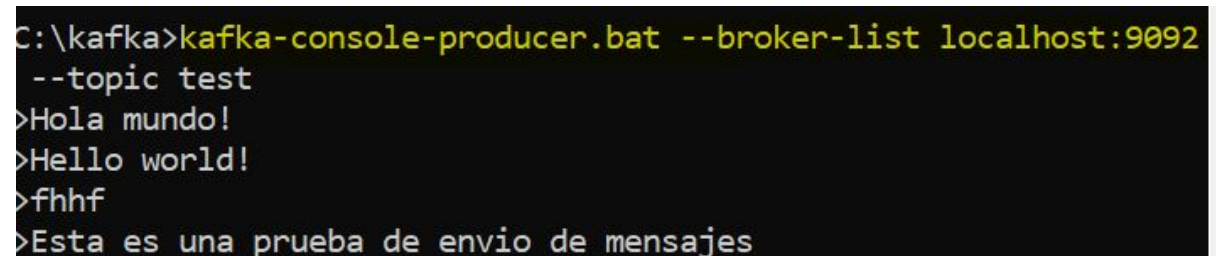
### List of topics created



```
C:\kafka>kafka-topics.bat --list --zookeeper localhost:2181
__consumer_offsets
test
testing
```

### Producer

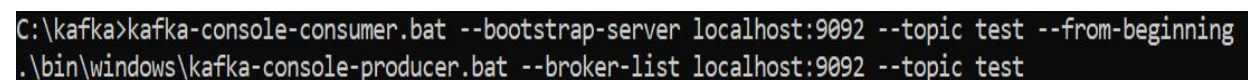
Initialize a Producer sending some messages.



```
C:\kafka>kafka-console-producer.bat --broker-list localhost:9092
--topic test
>Hola mundo!
>Hello world!
>fhhf
>Esta es una prueba de envio de mensajes
```

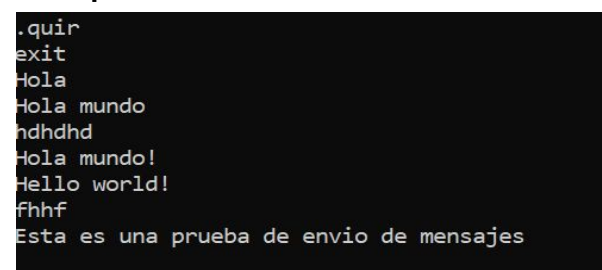
### Consumer

Initialize consumer. This consumer console will receive the messages sent by Producer console.



```
C:\kafka>kafka-console-consumer.bat --bootstrap-server localhost:9092 --topic test --from-beginning
.\bin\windows\kafka-console-producer.bat --broker-list localhost:9092 --topic test
```

### Example:



```
.quir
exit
Hola
Hola mundo
ndhdhd
Hola mundo!
Hello world!
fhhf
Esta es una prueba de envio de mensajes
```

Last update. May 29 2019.

## References.

### Guides.

*Kafka Guide*

<https://kafka.apache.org/quickstart>

*Zookeeper Guide*

<https://zookeeper.apache.org/doc/r3.3.3/zookeeperStarted.html>

### Tutorials and additional resources.

*Tutorial to setup and configure Apache Kafka. (Windows).*

<https://www.youtube.com/watch?v=OJKesEpO6ok&t=558s>

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*(Open Source)*

<https://www.analyticshut.com/apache-kafka-tutorial/>

*(Not Open Source)*

- Apache Kafka Series - Learn Apache Kafka for Beginners

<https://learning.oreilly.com/videos/apache-kafka-series/9781789342604>