

Getting Started with Kafka Command Line

1. Download Kafka

Download kafka from below site.

<https://kafka.apache.org/downloads> (kafka_2.12-2.6.0.tgz)

2. Kafka Commands

Open a command prompt window and go to the location where 'Kafka' download is present.

To start Kafka, below commands need to be executed, let's see them one by one-

Start Zookeeper

Command -

.\bin\windows\zookeeper-server-start.bat .\config\zookeeper.properties

```
C:\Deepak\Softwares\kafka_2.12-2.6.0>. \bin\windows\zookeeper-server-start.bat .\config\zookeeper.properties
[2020-09-06 19:14:49,865] INFO Created server with tickTime 3000 minSessionTimeout 6000 maxSessionTimeout 60000 datadir \tmp\zookeeper\version-2 snapdir \tmp\zookeeper\
version-2 (org.apache.zookeeper.server.ZooKeeperServer)
[2020-09-06 19:14:50,089] INFO Using org.apache.zookeeper.server.NIOServerCnxnFactory as server connection factory (org.apache.zookeeper.server.ServerCnxnFactory)
[2020-09-06 19:14:50,121] INFO Configuring NIO connection handler with 10s sessionless connection timeout, 1 selector thread(s), 8 worker threads, and 64 kB direct buff
ers. (org.apache.zookeeper.server.NIOServerCnxnFactory)
[2020-09-06 19:14:50,165] INFO binding to port 0.0.0.0/0.0.0.0:2181 (org.apache.zookeeper.server.NIOServerCnxnFactory)
[2020-09-06 19:14:50,288] INFO zookeeper.snapshotSizeFactor = 0.33 (org.apache.zookeeper.server.ZKDatabase)
[2020-09-06 19:14:50,319] INFO Snapshotting: 0x0 to \tmp\zookeeper\version-2\snapshot.0 (org.apache.zookeeper.server.persistence.FileTxnSnapLog)
[2020-09-06 19:14:50,357] INFO Snapshotting: 0x0 to \tmp\zookeeper\version-2\snapshot.0 (org.apache.zookeeper.server.persistence.FileTxnSnapLog)
[2020-09-06 19:14:50,453] INFO Using checkIntervalMs=60000 maxPerMinute=10000 (org.apache.zookeeper.server.ContainerManager)
```

Start Kafka

Command -

.\bin\windows\kafka-server-start.bat .\config\server.properties

```
C:\Deepak\Softwares\kafka_2.12-2.6.0>. \bin\windows\kafka-server-start.bat .\config\server.properties
Picked up _JAVA_OPTIONS: -Xms1G -Xmx2G
[2020-09-06 20:39:30,346] INFO Registered kafka:type=kafka.Log4jController MBean (kafka.utils.Log4jControllerRegistration$)
log4j:ERROR Failed to rename [c:\Deepak\Softwares\kafka_2.12-2.6.0\logs\server.log] to [c:\Deepak\Softwares\kafka_2.12-2.6.0\logs\server.log.2020-09-06-19].
[2020-09-06 20:39:31,324] INFO Setting -D jdk.tls.rejectClientInitiatedRenegotiation=true to disable client-initiated TLS renegotiation (org.apache.zookeeper.common.X50
9Util)
[2020-09-06 20:39:31,427] INFO starting (kafka.server.KafkaServer)
[2020-09-06 20:39:31,428] INFO Connecting to zookeeper on localhost:2181 (kafka.server.KafkaServer)
[2020-09-06 20:39:31,478] INFO [ZooKeeperClient Kafka server] Initializing a new session to localhost:2181. (kafka.zookeeper.ZooKeeperClient)
[2020-09-06 20:39:40,677] INFO Client environment:zookeeper.version=3.5.8-f439ca583e70862c3068a1f2a7d4d060e0ec33315, built on 05/04/2020 15:53 GMT (org.apache.zookeeper.
ZooKeeper)
[2020-09-06 20:39:54,088] INFO [TransactionCoordinator id=0] Starting up. (kafka.coordinator.transaction.TransactionCoordinator)
[2020-09-06 20:39:54,320] INFO [TransactionMarkerChannelManager 0]: Starting (kafka.coordinator.transaction.TransactionMarkerChannelManager)
[2020-09-06 20:39:54,092] INFO [TransactionCoordinator id=0] Startup complete. (kafka.coordinator.transaction.TransactionCoordinator)
[2020-09-06 20:39:54,323] INFO [ExpirationReaper-0-AlterAcls]: Starting (kafka.server.DelayedOperationPurgatory$ExpiredOperationReaper)
log4j:ERROR Failed to rename [c:\Deepak\Softwares\kafka_2.12-2.6.0\logs\state-change.log] to [c:\Deepak\Softwares\kafka_2.12-2.6.0\logs\state-change.log.2020-09-06-19].
[2020-09-06 20:39:54,196] INFO [/config/changes-event-process-thread]: Starting (kafka.common.ZkNodeChangeNotificationListener$ChangeEventProcessThread)
[2020-09-06 20:39:54,230] INFO [SocketServer brokerId=0] Starting socket server acceptors and processors (kafka.network.SocketServer)
[2020-09-06 20:39:54,249] INFO [SocketServer brokerId=0] Started data-plane acceptor and processor(s) for endpoint : ListenerName(PLAINTEXT) (kafka.network.SocketServer)
[2020-09-06 20:39:54,257] INFO [SocketServer brokerId=0] Started socket server acceptors and processors (kafka.network.SocketServer)
[2020-09-06 20:39:54,320] INFO Kafka version: 2.6.0 (org.apache.kafka.common.utils.AppInfoParser)
[2020-09-06 20:39:54,322] INFO Kafka commitId: 62abe01bae039651 (org.apache.kafka.common.utils.AppInfoParser)
[2020-09-06 20:39:54,323] INFO Kafka startTimeMs: 1599404994271 (org.apache.kafka.common.utils.AppInfoParser)
[2020-09-06 20:39:54,329] INFO [KafkaServer id=0] started (kafka.server.KafkaServer)
```

Create Topic with 1 Partition and 1 Replica

Command -

.\\bin\\windows\\kafka-topics.bat --create --zookeeper localhost:2181 --replication-factor 1 --partitions 1 --topic HelloWorldTopic

```
C:\Deepak\Softwares\kafka_2.12-2.6.0>.\\bin\\windows\\kafka-topics.bat --create --zookeeper localhost:2181 --replication-factor 1 --partitions 1 --topic Hello-World-Topic
Picked up _JAVA_OPTIONS: -Xms1G -Xmx2G
Created topic Hello-World-Topic.
C:\Deepak\Softwares\kafka_2.12-2.6.0>
```

Create Producer and send message to Topic

Command –

.\\bin\\windows\\kafka-console-producer.bat --broker-list localhost:9092 --topic HelloWorldTopic --property "parse.key=true" --property "key.separator=:"

```
c:\Deepak\Softwares\kafka_2.12-2.6.0>.\\bin\\windows\\kafka-console-producer.bat --broker-list localhost:9092 --topic HelloWorldTopic --property "parse.key=true" --property "key.separator=:"
Picked up _JAVA_OPTIONS: -Xms1G -Xmx2G
```

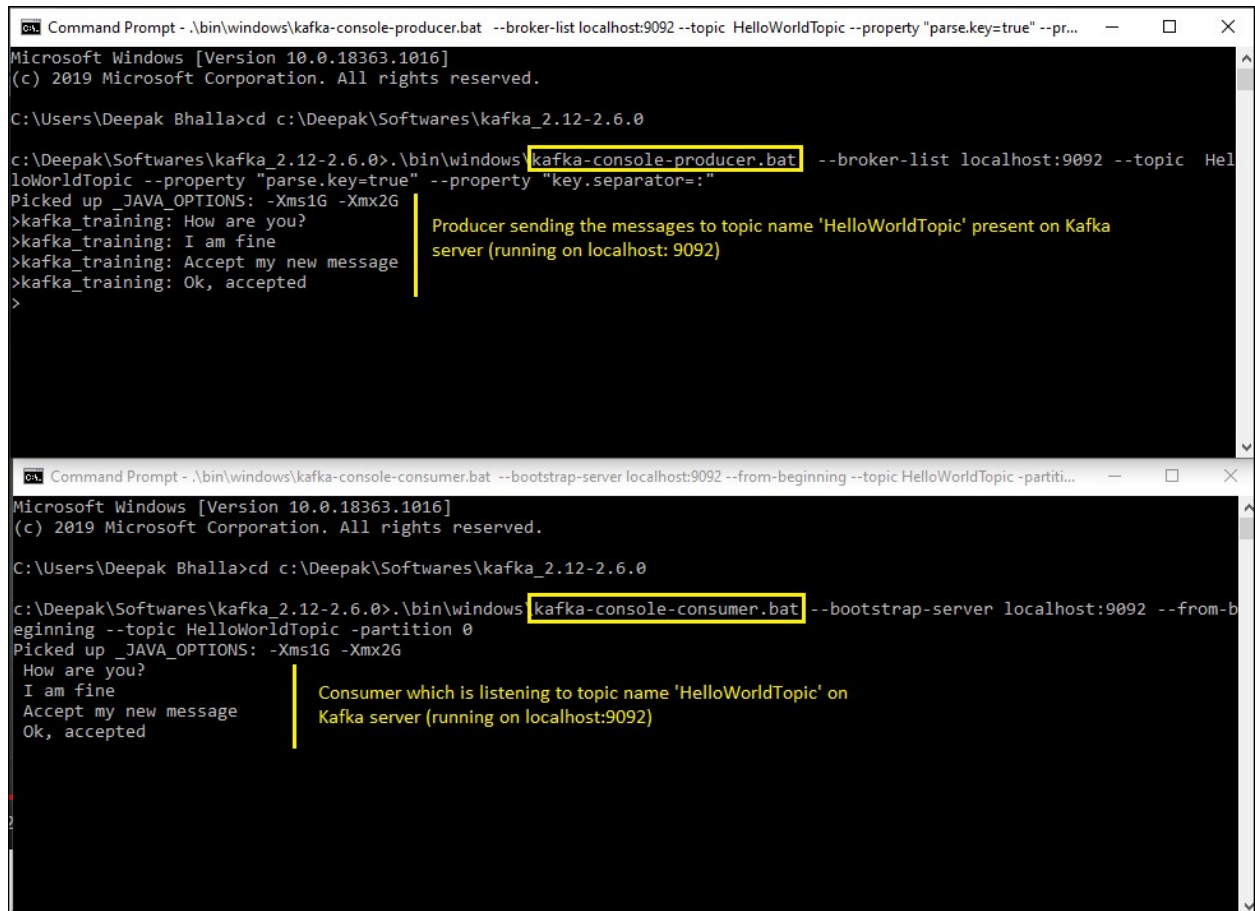
Start Consumer

Command –

.\\bin\\windows\\kafka-console-consumer.bat --bootstrap-server localhost:9092 --from-beginning --topic HelloWorldTopic --partition 0

```
c:\Deepak\Softwares\kafka_2.12-2.6.0>.\\bin\\windows\\kafka-console-consumer.bat --bootstrap-server localhost:9092 --from-beginning --topic HelloWorldTopic --partition 0
Picked up _JAVA_OPTIONS: -Xms1G -Xmx2G
```

3. Sending & Receiving Messages



The image displays two screenshots of Windows Command Prompts, illustrating the setup and execution of Kafka producer and consumer commands.

Top Screenshot: Kafka Console Producer

Command Prompt window title: `Command Prompt - .\bin\windows\kafka-console-producer.bat --broker-list localhost:9092 --topic HelloWorldTopic --property "parse.key=true" --pr...`

Output:

```
Microsoft Windows [Version 10.0.18363.1016]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\Deepak Bhalla>cd c:\Deepak\Softwares\kafka_2.12-2.6.0

c:\Deepak\Softwares\kafka_2.12-2.6.0>.\bin\windows\kafka-console-producer.bat --broker-list localhost:9092 --topic HelloWorldTopic --property "parse.key=true" --property "key.separator=:"
Picked up _JAVA_OPTIONS: -Xms1G -Xmx2G
>kafka_training: How are you?
>kafka_training: I am fine
>kafka_training: Accept my new message
>kafka_training: Ok, accepted
>
```

Annotation: **Producer sending the messages to topic name 'HelloWorldTopic' present on Kafka server (running on localhost: 9092)**

Bottom Screenshot: Kafka Console Consumer

Command Prompt window title: `Command Prompt - .\bin\windows\kafka-console-consumer.bat --bootstrap-server localhost:9092 --from-beginning --topic HelloWorldTopic -partiti...`

Output:

```
Microsoft Windows [Version 10.0.18363.1016]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\Deepak Bhalla>cd c:\Deepak\Softwares\kafka_2.12-2.6.0

c:\Deepak\Softwares\kafka_2.12-2.6.0>.\bin\windows\kafka-console-consumer.bat --bootstrap-server localhost:9092 --from-beginning --topic HelloWorldTopic -partition 0
Picked up _JAVA_OPTIONS: -Xms1G -Xmx2G
How are you?
I am fine
Accept my new message
Ok, accepted
```

Annotation: **Consumer which is listening to topic name 'HelloWorldTopic' on Kafka server (running on localhost:9092)**