

## Demo 2: Multiple Zookeeper and Kafka Demo

### ➤ To run multiple Zookeeper at same time:-

- Ensure that you have downloaded and extracted the ZooKeeper binary distribution on your Windows machine.
- **Configure ZooKeeper:**
  - Create multiple ZooKeeper configuration files, such as zookeeper 1.properties, zookeeper 2.properties, etc., by copying the default zookeeper.properties file.
  - Modify the dataDir property in each configuration file to specify different data directories for each ZooKeeper instance.
- Modify the clientPort property to specify unique client ports for each instance.
- Optionally, modify other properties like tickTime, initLimit, syncLimit, etc., if desired.
  - **tickTime=2000**
  - **initLimit=5**
  - **syncLimit=2**
  - **Start ZooKeeper:**
- Open multiple command prompt or terminal windows.
- In each window, navigate to the Kafka installation directory.
- Run the following command for each ZooKeeper instance, replacing zookeeper 1.properties, zookeeper 2.properties, etc., with the respective configuration file names:
  - **bin\windows\zookeeper-server-start.bat**  
**config\zookeeper1.properties**
- **Configure Kafka:**
  - Create multiple Kafka server properties files, such as server1.properties, server2.properties, etc., by copying the default server.properties file.
  - Modify the following properties in each configuration file:
    - broker.id: Set a unique ID for each Kafka broker.

- listeners: Specify unique listener configurations (host:port) for each instance.
- **server.1=localhost:2888:3888**
- **server.2=localhost:2889:3889**
- **server.3=localhost:2890:3890**
- log.dirs: Set different data directories for each instance.
- zookeeper.connect: Specify the connection string with multiple ZooKeeper addresses.
- **Start Kafka:**
- In separate command prompt or terminal windows, navigate to the Kafka installation directory.
- Run the following command for each Kafka instance, replacing server1.properties, server2.properties, etc., with the respective configuration file names:
  - **bin\windows\kafka-server-start.bat config\server1.properties**

```

C:\Windows\System32\cmd.exe - .\bin\windows\kafka-server-start.bat .\config\server1.properties
[2021-04-12 07:22:28,904] INFO Socket connection established, initiating session, client: /127.0.0.1:57786, server: localh
localhost
C:\Windows\System32\cmd.exe - .\bin\windows\zookeeper-server-start.bat .\config\zookeeper.properties
[2021-04-12 07:22:28,904] WARN fsync-ing the write ahead log in SyncThread:0 took 1023ms which will adversely effect ope
[2021-04-12 07:22:28,904] INFO File size is 67108800 bytes. See the Zookeeper troubleshooting guide (org.apache.zookeeper.server.persis
[2021-04-12 07:22:28,904] INFO Select C:\Windows\System32\cmd.exe - .\bin\windows\kafka-server-start.bat .\config\server1.properties
[2021-04-12 07:22:28,904] INFO [GroupCoordinator 2]: Starting up. (kafka.coordinator.group.GroupCoordinator)
[2021-04-12 07:22:28,904] INFO [GroupCoordinator 2]: Startup complete. (kafka.coordinator.group.GroupCoordinator)
[2021-04-12 07:22:28,904] INFO [ProducerId Manager 2]: Acquired new producerId block (brokerId:2,blockStartProducerId:10
[2021-04-12 07:22:28,904] INFO [SocketServer brokerId=1] Created data-plane acceptor and processors for endpoint : Liste
[2021-04-12 07:22:28,904] INFO [ExpirationReaper-1-Produce]: Starting (kafka.server.DelayedOperationPurgatory$ExpiredOpe
[2021-04-12 07:22:28,904] INFO [ExpirationReaper-1-Fetch]: Starting (kafka.server.DelayedOperationPurgatory$ExpiredOpe
  
```

- **Create a topic:**
- In a new command prompt or terminal window, navigate to the Kafka installation directory.
- Run the following command to create a topic, replacing <topic-name>, <replication-factor>, and <num-partitions> with your desired values:
  - **bin\windows\kafka-topics.bat --create --topic <topic-name> --replication-factor <replication-factor> --partitions <num-partitions> --bootstrap-server localhost:9092**

```

C:\Windows\System32\cmd.exe
C:\kafka>.bin\windows\kafka-topics.bat --create --topic test-topic-replicated -zookeeper localhost:2181 --replication-f
actor 3 --partitions 3
Created topic test-topic-replicated.
C:\kafka>
  
```

- **Produce and consume messages:**

- In separate command prompt or terminal windows, navigate to the Kafka installation directory.
- To produce messages, run the following command, replacing <topic-name> with the topic you created:

- **bin\windows\kafka-console-producer.bat    --topic  
<topic-name> --bootstrap-server localhost:9092**

```
C:\kafka>.\bin\windows\kafka-console-producer.bat --broker-list localhost:9092 --topic test-topic-replicated  
>Hi
```

- To consume messages, run the following command, replacing <topic-name> with the topic you created:

- **bin\windows\kafka-console-consumer.bat    --topic  
<topic-name> --bootstrap-server localhost:9092**

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