

## Kafka-Cluster

- `ln -s kafka_2.12-3.0.0 kafka`
- create data folder, under it create zookeeper folder and broker-0,broker-1,broker-2

```
Terminal: Local x + v
aman@shah:~/kafka_2.12-3.0.0$ mkdir data
aman@shah:~/kafka_2.12-3.0.0$ cd data
aman@shah:~/kafka_2.12-3.0.0/data$ mkdir zookeeper
aman@shah:~/kafka_2.12-3.0.0/data$ mkdir broker-0
aman@shah:~/kafka_2.12-3.0.0/data$ mkdir broker-1
aman@shah:~/kafka_2.12-3.0.0/data$ mkdir broker-2
```

- provide dataDir path in zookeeper.properties:  
`dataDir=/home/aman/kafka/data/zookeeper`
- change the following in zookeeper.properties:  
`admin.enableServer=true`  
`admin.serverPort=9090`  
`server.1=localhost:2888:3888`
- start zookeeper and check it whether it is running or not:  
`zookeeper-server-start.sh -daemon zookeeper.properties`

```
aman@shah:~/kafka_2.12-3.0.0$ cd config/
aman@shah:~/kafka_2.12-3.0.0/config$ zookeeper-server-start.sh -daemon zookeeper.properties
aman@shah:~/kafka_2.12-3.0.0/config$ jps
114181 Jps
110948 Main
79215 Application
113118 QuorumPeerMain
```

- run the following command to execute zookeeper-shell.sh and check broker list:  
`zookeeper-shell.sh localhost:2181`  
`ls /brokers/ids`

```
aman@shah:~/kafka_2.12-3.0.0/config$ zookeeper-shell.sh localhost:2181
Connecting to localhost:2181
Welcome to ZooKeeper!
JLine support is disabled

WATCHER::

WatchedEvent state:SyncConnected type:None path:null
ls /brokers/ids
Node does not exist: /brokers/ids
```

- create the following server to create 3 brokers:

```
aman@shah:~/kafka_2.12-3.0.0/config$ mv server.properties server0.properties
aman@shah:~/kafka_2.12-3.0.0/config$ cp server.properties server1.properties
cp: cannot stat 'server.properties': No such file or directory
aman@shah:~/kafka_2.12-3.0.0/config$ cp server0.properties server1.properties
aman@shah:~/kafka_2.12-3.0.0/config$ cp server0.properties server2.properties
```

- apply the following changes to server-0.properties:

```
broker.id=0
listeners=PLAINTEXT://localhost:9092
advertised.listeners=PLAINTEXT://localhost:9092
log.dirs=/home/aman/kafka/data/broker-0
num.partitions=3
zookeeper.connect=localhost:2181
```

- apply the above changes to broker-1 and broker-2

- start the broker-0:

```
kafka-server-start.sh -daemon server-0.properties
```

- check whether it is running or not by visiting server.logs or jps or ls /brokers/ids

```
aman@shah:~/kafka_2.12-3.0.0/config$ kafka-server-start.sh -daemon server-0.properties
aman@shah:~/kafka_2.12-3.0.0/config$ jps
114402 ZooKeeperMainWithTlsSupportForKafka
110948 Main
116052 Jps
115931 Kafka
79215 Application
113118 QuorumPeerMain
```

```
Node does not exist: /brokers/ids
ls /brokers/ids
[0]
```

- similarly start broker-1 and broker-2

```
ls /brokers/ids
[0, 1, 2]
```

```
aman@shah:~/kafka_2.12-3.0.0$ jps
116963 Kafka
114402 ZooKeeperMainWithTlsSupportForKafka
110948 Main
116567 Kafka
115931 Kafka
117151 Jps
79215 Application
113118 QuorumPeerMain
```

- create first topic:  
kafka-topics.sh --create --topic first-topic --bootstrap-server localhost:9092 --replication-factor 3 --partitions 2  
Created topic first-topic.

```
aman@shah:~/kafka_2.12-3.0.0/config$ kafka-topics.sh --create --topic first-topic --bootstrap-server localhost:9092 --replication-factor 3 --partitions 2
Created topic first-topic.
```

- Check the topic created:  
kafka-topics.sh --describe --topic first-topic --bootstrap-server localhost:9092

```
aman@shah:~/kafka_2.12-3.0.0/config$ kafka-topics.sh --describe --topic first-topic --bootstrap-server localhost:9092
Topic: first-topic      TopicId: 0vnU6v-iRF2pPQMwH_CbNg PartitionCount: 2      ReplicationFactor: 3      Configs: segment.bytes=1073741824
Topic: first-topic      Partition: 0      Leader: 0      Replicas: 0,1,2 Isr: 0,1,2
Topic: first-topic      Partition: 1      Leader: 2      Replicas: 2,0,1 Isr: 2,0,1
```

- create producer and pass message:  
kafka-console-producer.sh --broker-list localhost:9092,localhost:9093 --topic first-topic

```
aman@shah:~/kafka_2.12-3.0.0/config$ kafka-console-producer.sh --broker-list localhost:9092,localhost:9093 --topic first-topic
>Hi, this is my message in cluster
>
```

- consume messages:  
kafka-console-consumer.sh --bootstrap-server localhost:9092,localhost:9093,localhost:9094 --topic first-topic --from-beginning --group first-consumer

```
aman@shah:~/kafka_2.12-3.0.0$ kafka-console-consumer.sh --bootstrap-server localhost:9092,localhost:9093,localhost:9094 --topic first-topic --from-beginning --group first-consumer
Hi, this is my message in cluster
hello lets send second message
```

- run-class.sh  
kafka-run-class.sh kafka.admin.ConsumerGroupCommand --bootstrap-server localhost:9092,localhost:9093 --group first-consumer --describe

GROUP	TOPIC	PARTITION	CURRENT-OFFSET	LOG-END-OFFSET	LAG	CONSUMER-ID
		HOST	CLIENT-ID			
first-consumer	first-topic	0	1	1	0	consumer-first-consumer-1-48e6
77f2-b5b6-47e6-a335-1616a6b3459b	/127.0.0.1		consumer-first-consumer-1			
first-consumer	first-topic	1	1	1	0	consumer-first-consumer-1-48e6
77f2-b5b6-47e6-a335-1616a6b3459b	/127.0.0.1		consumer-first-consumer-1			

- check number of messages:  
kafka-run-class.sh kafka.tools.GetOffsetShell --broker-list localhost:9092,localhost:9093 --topic first-topic

```
aman@shah:~/kafka_2.12-3.0.0/config$ kafka-run-class.sh kafka.tools.GetOffsetShell --broker-list localhost:9092,localhost:9093 --topic first-topic
first-topic:0:1
first-topic:1:1
```

- visit <http://localhost:9090/commands/watches>

← → ↻ localhost:9090/commands/watches

JSON Raw Data Headers

Save Copy Collapse All Expand All Filter JSON

```

▼ session_id_to_watched_paths:
  ▼ 72071329629208577:
    0: "/controller"
    1: "/brokers/topics/first-topic"
    2: "/admin/preferred_replica_election"
    3: "/brokers/ids/0"
    4: "/admin/reassign_partitions"
    5: "/brokers/ids/1"
    6: "/brokers/ids/2"
    7: "/brokers/topics/__consumer_offsets"
    8: "/feature"
  ▼ 72071329629208578:
    0: "/controller"
    1: "/feature"
  ▼ 72071329629208579:
    0: "/controller"
    1: "/feature"
  command: "watches"
  error: null

```

■ similarly visit <http://localhost:9090/commands/stats>

← → ↻ localhost:9090/commands/stats

JSON Raw Data Headers

Save Copy Collapse All Expand All Filter JSON

```

▼ version: "3.6.3--6401e4ad2087061bc6b9f80dec2d69f2e3c8660a, built on 04/08/2021 16:35 GMT"
  read_only: false
▼ server_stats:
  packets_sent: 2955
  packets_received: 4093
  fsync_threshold_exceed_count: 0
▼ client_response_stats:
  last_buffer_size: 16
  min_buffer_size: 16
  max_buffer_size: 636
  uptime: 7162226
  server_state: "standalone"
  provider_null: false
  data_dir_size: 67109337
  log_dir_size: 67109337
  last_processed_zxid: 174
  outstanding_requests: 0
  avg_latency: 4.0553

```