

-----kafka cluster setting-----

Step 1 -->Creating a User for Kafka

```
sudo useradd kafka -m
```

```
sudo passwd kafka
```

```
sudo usermod -aG wheel kafka
```

```
su -l kafka
```

Steps2--->Downloading and Extracting the Kafka Binaries

To start, create a directory in /home/kafka called Downloads to store your downloads:

```
mkdir ~/Downloads
```

Use curl to download the Kafka binaries:

```
curl "https://www.apache.org/dist/kafka/2.1.1/kafka_2.11-2.1.1.tgz" -o ~/Downloads/kafka.tgz
```

Create a directory called kafka and change to this directory. This will be the base directory of the Kafka installation:

```
mkdir ~/kafka && cd ~/kafka
```

Extract the archive you downloaded using the tar command:

```
tar -xvzf ~/Downloads/kafka.tgz --strip 1
```

Step 3----> Configuring the Kafka Server

```
vi ~/kafka/config/server.properties
```

(Add this line at the last in a file)

```
delete.topic.enable = true
```

Step 4 — Creating Sygstemd Unit Files and Starting the Kafka Server

```
sudo vi /etc/systemd/system/zookeeper.service
```

-----zookeeper-----

[Unit]

Requires=network.target remote-fs.target

After=network.target remote-fs.target

[Service]

Type=simple

User=kafka

ExecStart=/home/kafka/kafka/bin/zookeeper-server-start.sh
/home/kafka/kafka/config/zookeeper.properties

ExecStop=/home/kafka/kafka/bin/zookeeper-server-stop.sh

Restart=on-abnormal

[Install]

WantedBy=multi-user.target

#####

sudo vi /etc/systemd/system/kafka.service

-----kafka-----

[Unit]

Requires=zookeeper.service

After=zookeeper.service

[Service]

Type=simple

User=kafka

```
ExecStart=/bin/sh -c '/home/kafka/kafka/bin/kafka-server-start.sh  
/home/kafka/kafka/config/server.properties > /home/kafka/kafka/kafka.log 2>&1'
```

```
ExecStop=/home/kafka/kafka/bin/kafka-server-stop.sh
```

```
Restart=on-abnormal
```

```
[Install]
```

```
WantedBy=multi-user.target
```

```
#####
```

Step5-->Adjust /etc/hosts file

```
192.168.1.101 server1
```

```
192.168.1.102 server2
```

Step 6-->Create firewall rules

```
----- ZooKeeper firewall rule-----
```

```
sudo vi /etc/firewalld/services/zooKeeper.xml
```

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<service>
```

```
<short>ZooKeeper</short>
```

```
<description>Firewall rule for ZooKeeper ports</description>
```

```
<port protocol="tcp" port="2888"/>
```

```
<port protocol="tcp" port="3888"/>
```

```
<port protocol="tcp" port="2181"/>
```

```
</service>
```

-----Kafka firewall rule-----

```
sudo vi /etc/firewalld/services/kafka.xml
```

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<service>
```

```
<short>Kafka</short>
```

```
<description>Firewall rule for Kafka port</description>
```

```
<port protocol="tcp" port="9092"/>
```

```
</service>
```

Activate the new rules

```
sudo service firewalld restart
```

```
sudo firewall-cmd --permanent --add-service=zooKeeper
```

```
sudo firewall-cmd --permanent --add-service=kafka
```

```
sudo service firewalld restart
```

```
sudo firewall-cmd --list-services
```

Step7-->Create directories

```
mkdir -p /home/kafka/zookeeper/data
```

```
mkdir -p /home/kafka/kafka/kafka-logs
```

Step8-->ZooKeeper configuration

```
vi kafka/config/zookeeper.properties
```

dataDir=/home/kafka/zookeeper/data

server.1=kafka1:2888:3888

server.2=kafka2:2888:3888

initLimit=5

syncLimit=2

echo "1" > /home/kafka/zookeeper/data/myid

(Repeat for another node)

Step9-->Apache Kafka configuration

vi kafka/config/server.properties

broker.id=1(change for each node in cluster)

log.dirs=/home/kafka/kafka/kafka-logs

listeners=PLAINTEXT://server1:9092

advertised.listeners=PLAINTEXT://server1:9092

zookeeper.connect=server1:2181,server2:2181(add other node in case of more than 2)

delete.topic.enable=true

(Repeat for another node)

Step10--> Start Apache Kafka

//systemctl start zookeeper

systemctl start kafka

Note:->Above 1 to 10 ste must be executed on each node

Step11-->Create a new topic

```
bin/kafka-topics.sh --create --zookeeper server1:2181,server2:2181 --replication-factor 1 --partitions 6 --topic topic1 --config cleanup.policy=delete --config delete.retention.ms=60000
```

We can also get a list of all existing topics

```
bin/kafka-topics.sh --list --zookeeper server1:2181
```

And we can get a detailed description of our topic.

```
bin/kafka-topics.sh --describe --zookeeper server1:2181 --topic topic1
```

Step12-->Test the cluster

We can start the producer on one of our servers. The command opens a prompt and anything we enter here will be sent to the topic.

```
bin/kafka-console-producer.sh --broker-list server1:9092 --topic topic1
```

Now we can start a consumer on one of our servers.

```
bin/kafka-console-consumer.sh --bootstrap-server server1:9092 --topic topic1
```