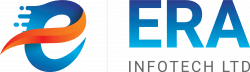
**“REAL-TIME DATA STREAMING FROM RDBMS TO NON-RDBMS”**

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By



* Required tools and technology:
* Apache Kafka.
* Zookeeper.
* Debezium Connector (Source).
* Oracle Database Archive Log mode enable.
* Ojdbc
* Java/others language for consumer API dev.
* ELK Stack.
* Configuration:
* **Zookeeper Cluster Setup: (with 3 zK nodes):**

Download Apache Zookeeper 3.8 tar file and create 3 different folder. Copy and paste this tar file into three different folders and extract tar file.

Ex- folder-1: zkNode-1(server-1), folder-2: zkNode-2(server-2), folder-3: zkNode-3(server-3).

Go to in path (../zkNode-1/apache-zookeeper-3.8.0-bin/conf) and create a configuration file named zoo.cfg and Do some configuration for all nodes. The configuration Code is given below –

* For zkNode-1: (zk server-1)

tickTime=2000

initLimit=10

syncLimit=5

dataDir=/tmp/zookeeper-node-1

clientPort=2181

maxClientCnxns=60

4lw.commands.whitelist=\*

server.1=10.11.200.109:2788:3788

server.2=10.11.200.109:2888:3888

server.3=10.11.200.109:2988:3988

* For zkNode-2: (zk server-2)

tickTime=2000

initLimit=10

syncLimit=5

dataDir=/tmp/zookeeper-node-2

clientPort=2182

maxClientCnxns=60

4lw.commands.whitelist=\*

server.1=10.11.200.109:2788:3788

server.2=10.11.200.109:2888:3888

server.3=10.11.200.109:2988:3988

* For zkNode-3: (zk server-3)

tickTime=2000

initLimit=10

syncLimit=5

dataDir=/tmp/zookeeper-node-3

clientPort=2183

maxClientCnxns=60

4lw.commands.whitelist=\*

server.1=10.11.200.109:2788:3788

server.2=10.11.200.109:2888:3888

server.3=10.11.200.109:2988:3988

* **Zookeeper Cluster Setup: (with 3 zK nodes):** Create temporary log data file and define those file using specific id. After shut down these file will be deleted so if you want, you can store this log data in different location.

mkdir /tmp/zookeeper-node-1

mkdir /tmp/zookeeper-node-2

mkdir /tmp/zookeeper-node-3

echo 1 >> /tmp/zookeeper-node-1/myid

echo 2 >> /tmp/zookeeper-node-2/myid

echo 3 >> /tmp/zookeeper-node-3/myid

cat /tmp/zookeeper-node-1/myid

cat /tmp/zookeeper-node-2/myid

cat /tmp/zookeeper-node-3/myid

* **Start Zookeeper Clusters:**
* Start in foreground: bin/zkServer.sh start-foreground
* Start in Background: bin/zkServer.sh start
* Stop in Background: bin/zkServer.sh stop
* **Check Zookeeper Cluster Status:**
* fardaus@era-ai:~$ echo stat | nc 10.11.200.109 2181

Zookeeper version: 3.8.0-5a02a05eddb59aee6ac762f7ea82e92a68eb9c0f, built on 2022-02-25 08:49 UTC

Clients:

/10.11.200.109:54454[0](queued=0,recved=1,sent=0)

Latency min/avg/max: 0/0.0/0

Received: 1

Sent: 0

Connections: 1

Outstanding: 0

Zxid: 0x0

Mode: follower

Node count: 5

* fardaus@era-ai:~$ echo stat | nc 10.11.200.109 2182

Zookeeper version: 3.8.0-5a02a05eddb59aee6ac762f7ea82e92a68eb9c0f, built on 2022-02-25 08:49 UTC

Clients:

/10.11.200.109:43658[0](queued=0,recved=1,sent=0)

Latency min/avg/max: 0/0.0/0

Received: 1

Sent: 0

Connections: 1

Outstanding: 0

Zxid: 0x100000000

Mode: leader

Node count: 5

Proposal sizes last/min/max: -1/-1/-1

* fardaus@era-ai:~$ echo stat | nc 10.11.200.109 2183

Zookeeper version: 3.8.0-5a02a05eddb59aee6ac762f7ea82e92a68eb9c0f, built on 2022-02-25 08:49 UTC

Clients:

/10.11.200.109:53444[0](queued=0,recved=1,sent=0)

Latency min/avg/max: 0/0.0/0

Received: 1

Sent: 0

Connections: 1

Outstanding: 0

Zxid: 0x100000000

Mode: follower

Node count: 5

* **Kafka Cluster Setup: (with 3 Kafka nodes):**
* System Prerequisites:

1. Java 8 or Higher.
2. RAM size minimum 1GB.

Download [kafka\_2.13-3.3.2.tgz](https://downloads.apache.org/kafka/3.3.2/kafka_2.13-3.3.2.tgz) file and create 3 different folder. Copy and paste this tar file into three different folders and extract tar file.

Ex- folder-1: kafkaNode-1(server-1), folder-2: kafkaNode-2(server-2), folder-3: kafkaNode-3(server-3).

Go to in path (../kafkaNode-1/kafka\_2.13-3.3.1/config/) and edit a configuration file named server.properties and Do some configuration for all nodes. The configuration Code is given below –

* For kafkaNode-1: (kafka server-1)

########### Server Basics ################

broker.id=1

########### Socket Server Settings #########

listeners=PLAINTEXT://10.11.200.109:9092

########### Log Basics ###################

log.dirs=/tmp/kafka-logs-node-1

########### Zookeeper ###################

zookeeper.connect=10.11.200.109:2181,10.11.200.109:2182,10.11.200.109:2183

* For kafkaNode-2: (kafka server-2)

########### Server Basics ################

broker.id=2

########### Socket Server Settings #########

listeners=PLAINTEXT://10.11.200.109:9093

########### Log Basics ###################

log.dirs=/tmp/kafka-logs-node-2

########### Zookeeper ###################

zookeeper.connect=10.11.200.109:2181,10.11.200.109:2182,10.11.200.109:2183

* For kafkaNode-3: (kafka server-3)

########### Server Basics ################

broker.id=3

########### Socket Server Settings #########

listeners=PLAINTEXT://10.11.200.109:9094

########### Log Basics ###################

log.dirs=/tmp/kafka-logs-node-3

########### Zookeeper ###################

zookeeper.connect=10.11.200.109:2181,10.11.200.109:2182,10.11.200.109:2183

* **Start Zookeeper Clusters:**