

# Scenario2

## Problem-statement :

The client has created a new topic `europa_payments` but is unable to produce/consume from the topic from the host `kfkclient` using the user `kafkaclient1` using the following commands -

```
kafka-console-producer --bootstrap-server kafka1:19092 --producer.config /opt/client/client.properties --topic europa_payments
```

```
kafka-console-consumer --bootstrap-server kafka1:19092 --consumer.config /opt/client/client.properties --from-beginning --topic europa_payments
```

## Observation :

When I run `docker-compose up -d` then I observed that `kafka1`, `kafka2`, `kafka3` and `connector` and `schema registry` was down . And after the solving the kafka brokers and other component down issues I have got the authorization issue like while I am listing the topics not working.

## Errors :

```
[SocketServer listenerType=ZK_BROKER, nodeId=1] Failed authentication with /172.23.0.7 (channelId=172.23.0.8:19093-172.23.0.7:58620-2) (errorMessage=SSL handshake failed caused by Received fatal alert: certificate_unknown) (org.apache.kafka.common.network.Selector)
```

```
[2023-07-26 12:18:20,309] WARN [Producer clientId=console-producer] Error while fetching metadata with correlation id 4 : {europa_payments=TOPIC_AUTHORIZATION_FAILED} (org.apache.kafka.clients.NetworkClient)
[2023-07-26 12:18:20,409] ERROR [Producer clientId=console-producer] Topic authorization failed for topics [europa_payments] (org.apache.kafka.clients.Metadata)
[2023-07-26 12:18:20,411] ERROR Error when sending message to topic europa_payments with key: null, value: 6 bytes with error: (org.apache.kafka.clients.producer.internals.ErrorLoggingCallback)
org.apache.kafka.common.errors.TopicAuthorizationException: Not authorized to access topics: [europa_payments]
```

## Approach / Method :

TLS AND MTLS (renewal of certificates) &&  
Creating role bindings for user kafkaclient1

## Detailed Solution :

### 1. Renewal of certificates :

While I up the docker-compose first I observed the kafka-brokers are down and then I logged the each containers then I have got the ssl certificate errors .then I have checked the certificate validities and passwords and correct paths and matched . I pointed out that error was due to certificate validity they have expired .

Then I have renewed the certificates of all brokers by using commands

```
keytool -keystore kafka.server.keystore.jks -alias localhost -certreq  
-file kafka-broker-new.csr
```

```
openssl x509 -req -CA ~/tasks/cp-sandbox/certs/ca-cert -CAkey  
~/tasks/cp-sandbox/certs/ca-key -in kafka-broker-new.csr -out  
kafka-broker-new-signed-cert.pem -days 365 -CAcreateserial
```

```
keytool -keystore kafka.server.keystore.jks -alias localhost -import -file  
kafka-broker-new-signed-cert.pem
```

Again then I have checked the certificates and then watched the validate the expiry date its good and updated for 365 days.

### 2. Rolebinding for authorization :

When I entered the kfkclient container and tried to list the topics using the client.props using sasl\_plaintext protocol Not shows any topics. Then I have added role binding to the kafkaclient1 user as cluserAdmin then I have got the topics are visibles. Then tries to produce to topic with the kafkaclient1.props then I have got error like not authorized then I assumed that kafkaclient1 has not write operation and and also try to consume but also got the same error. So then I have assumed that user has not right to read and write operations .so

Then I have added the DevoloperRead ana DevoloperWrite roles to user kfkclient1

Commands :

```
[root@kafka1 appuser]# confluent iam rbac role-binding create --principal  
User:kafkaclient1 --role DeveloperWrite --resource Topic:europe_payments  
--kafka-cluster "h0D_KQN9TjeHSs01_ESooQ"
```

```
[root@kafka1 appuser]# confluent iam rbac role-binding create --principal
User:alice --role DeveloperRead --resource Topic:europe_payments
--kafka-cluster "h0D_KQN9TjeHSs01_ESooQ"
```

```
confluent iam rbac role-binding create --principal User:kafkaclient1 --role
DeveloperRead --resource Group:console-consumer --prefix --kafka-cluster
Ug9WZGM5TnubZgyamcTsnQ
```

## Conclusion :

If we have got the error like authorization then we need to check the

- ☐ Ensuring the correct user.props
- ☐ Listing the roles for the user
- ☐ Add the rolebindings to the user to make desirable actions for resources of cluseter