

scenario3

Problem-statement :

The client is unable to interact with the cluster using kafka-topics, kafka-console-producer or kafka-console-consumer using the super user bob(password - bob-secret) with some of the kakfa brokers as the bootstrap server. Only one of the kafka broker works as the bootstrap server.

The error message when using kafka2 or kafka3 as the bootstrap-server

```
[2023-07-26 13:20:58,720] ERROR [AdminClient clientId=adminclient-1] Connection to node 3 (kafka3/192.168.112.8:39092) failed authentication due to: Authentication failed: Invalid username or password (org.apache.kafka.clients.NetworkClient)
[2023-07-26 13:20:58,722] WARN [AdminClient clientId=adminclient-1] Metadata update failed due to authentication error (org.apache.kafka.clients.admin.internals.AdminMetadataManager)
org.apache.kafka.common.errors.SaslAuthenticationException: Authentication failed: Invalid username or password
```

```
Error while executing topic command : Authentication failed: Invalid username or password
[2023-07-26 13:20:58,907] ERROR org.apache.kafka.common.errors.SaslAuthenticationException:
Authentication failed: Invalid username or password
```

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 whilei I am listing the topics not working.

Errors :

```
[2023-07-26 13:20:58,720] ERROR [AdminClient clientId=adminclient-1] Connection to node 3 (kafka3/192.168.112.8:39092) failed authentication due to: Authentication failed: Invalid username or password (org.apache.kafka.clients.NetworkClient)
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```

Approach / Method :

TLS AND MTLS (renewal of certificates) &&
Validating the username and passwords on each broker

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

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 :

While I tried to on the up the containers or tried to run the containers of docker-compose file . I have seen the running statuses of broker containers using the 'docker-compose ps -a' command the kafka1 broker is running and kafka2 and kafka3 brokers are down

Then I see the logs of the kafka2 and kafka3 containers I have seen the authentication error

Then I have checked the bob client user.properties and confirmed the username and passwords.

Navigated to the kafka2 and kafka3 server.properties then I have found the wrong passwords [**b0b-secret**]for bob user was configured in jaas configuration of token for the token based authentication

Finally after configured the correct passwd for [**bob-secret**] on kafka2 and kafka3 server.props then I up the containers again . now they are running

without any issues.

Conclusion :

Finally we configured the wrong passwd for bob user in kafka2 and kafka3 brokers by checking the proper username and passwords.