Confluent Certified Developer for Apache Kafka Certification Examination -Notes

Setting Up Environment

We will be using confluent kafka docker images to run the kafka services. Follow

Running Apache Kafka in docker container - First time

- Clone the repository
-
```
# git clone https://github.com/balajich/CCD-Apache-Kafka-Certification-Examination-Notes.git
```
- Change to cloned directory
-
```
# cd CCD-Apache-Kafka-Certification-Examination-Notes
```
- Start the linux virtual machine using Vagrant
-
```
# vagrant up
```
- Take ssh to linux
-
```
# vagrant ssh
```
- Switch to root user in linux machine
-

```
[vagrant@kserver ~]$ sudo su -
```

- Go to vagrant folder
-

```
[root@kserver ~]# cd /vagrant/
```

- Start the kafka server using docker-compose, The below command will start all the dependent services
-

```
[root@kserver vagrant]# docker-compose up -d
```

- You should see output as
-

```
zookeeper is up-to-date
Starting broker ... done
schema-registry is up-to-date
rest-proxy is up-to-date
Starting connect ... done
Starting ksqldb-server ... done
Starting control-center ...
Starting ksql-datagen ...
Starting control-center ... done
```

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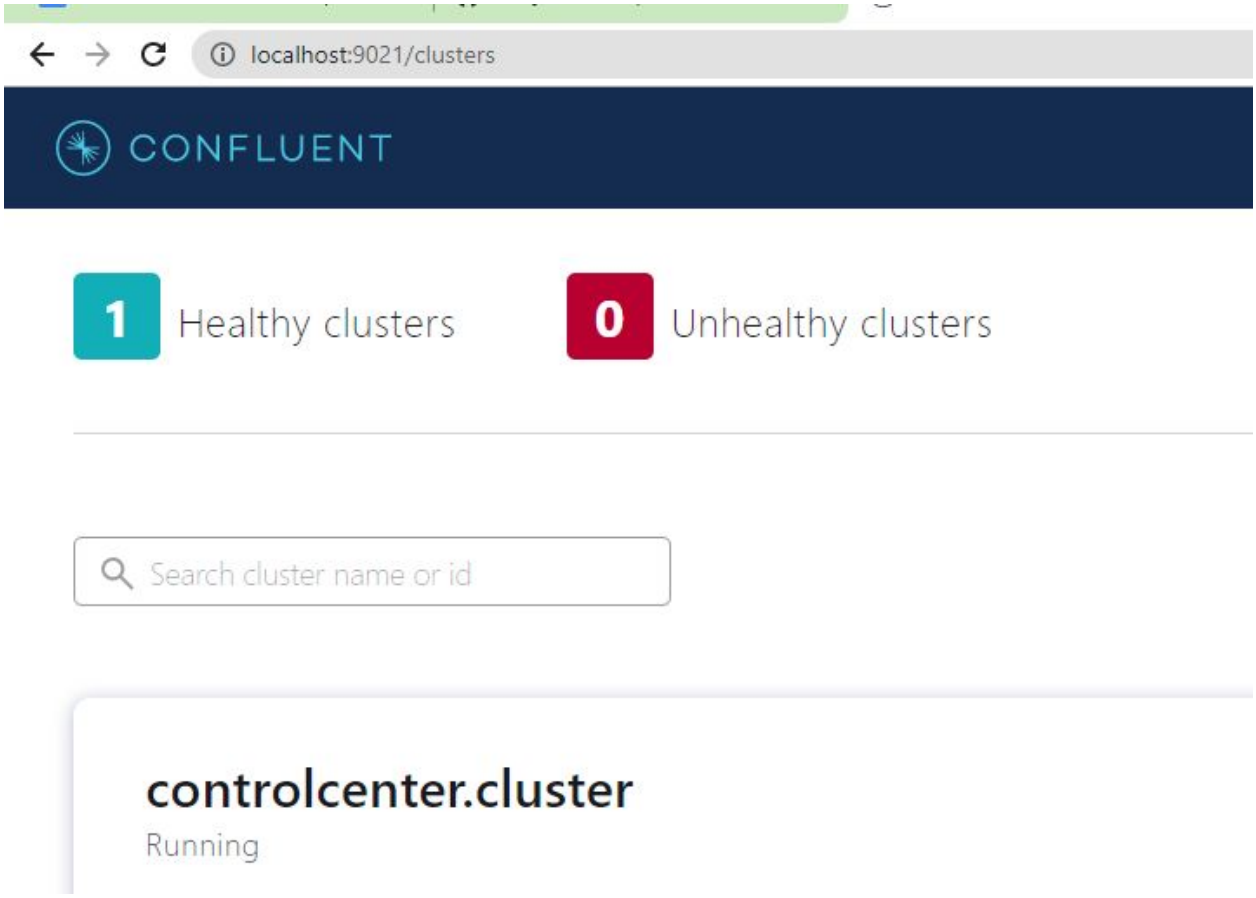
- Access confluent command center UI. VM is configured to do port forward of command center UI port. http://localhost:9021/

- 

Stopping Apache Kafka that is running in docker container

```
[root@kserver vagrant]# docker-compose stop
Stopping ksql-datagen    ... done
Stopping control-center  ... done
Stopping ksqldb-cli      ... done
Stopping ksqldb-server   ... done
Stopping connect         ... done
Stopping rest-proxy      ... done
Stopping schema-registry ... done
Stopping broker          ... done
Stopping zookeeper       ... done
```

Starting the container that was stopped

```
[root@kserver vagrant]# docker-compose start
Starting zookeeper       ... done
Starting broker          ... done
Starting schema-registry ... done
Starting connect         ... done
Starting ksqldb-server   ... done
Starting control-center  ... done
Starting ksqldb-cli      ... done
Starting ksql-datagen    ... done
Starting rest-proxy      ... done
```

Deleting Kafka environment

```
[root@kserver vagrant]# docker-compose down
Stopping control-center ... done
Stopping ksqldb-cli     ... done
Stopping ksqldb-server  ... done
Stopping zookeeper      ... done
Removing ksql-datagen    ... done
Removing control-center  ... done
Removing ksqldb-cli      ... done
Removing ksqldb-server   ... done
Removing connect         ... done
Removing rest-proxy      ... done
Removing schema-registry ... done
Removing broker          ... done
Removing zookeeper       ... done
Removing network vagrant_default
```

Troubleshooting

Checking state of kafka process that are running in docker container

```
[root@kserver vagrant]# docker-compose ps
     Name                   Command               State                    Ports
-------------------------------------------------------------------------------------------------------
broker            /etc/confluent/docker/run        Up      0.0.0.0:9092->9092/tcp,
0.0.0.0:9101->9101/tcp
connect           /etc/confluent/docker/run        Up      0.0.0.0:8083->8083/tcp, 9092/tcp
control-center    /etc/confluent/docker/run        Up      0.0.0.0:9021->9021/tcp
ksql-datagen      bash -c echo Waiting for K ...   Up
ksqldb-cli        /bin/sh                          Up
ksqldb-server     /etc/confluent/docker/run        Up      0.0.0.0:8088->8088/tcp
rest-proxy        /etc/confluent/docker/run        Up      0.0.0.0:8082->8082/tcp
schema-registry   /etc/confluent/docker/run        Up      0.0.0.0:8081->8081/tcp
zookeeper         /etc/confluent/docker/run        Up      0.0.0.0:2181->2181/tcp, 2888/tcp,
3888/tcp
```

Application Design

Development

Deployment/Testing/Monitoring