Confluent Apache Kafka, PostgreSql, Debezium Kurulum

Kurulum

1. sudo su
2. apt install vim
3. vim ~/.bashrc (tüm kullanıcılar için geçerli olacak tanımlamalar
   a. export PS1="\[\033[31m\]\u\[\033[m\]@\[\033[32m\]\h:\[\033[33;1m\]\w\[\033[m\]$ "
   b. alias ll='ls -ltr'
4. source .bashrc
5. vim .bash_profile
   a. export PS1="\[\033[31m\]\u\[\033[m\]@\[\033[32m\]\h:\[\033[33;1m\]\w\[\033[m\]$ "
   b. alias ll='ls -ltr'
   c. export CONFLUENT_HOME=/opt/confluent-7.3.3
   d. export PATH=$PATH:$CONFLUENT_HOME/bin
6. source .bash_profile
7. apt install openjdk-19-jdk -y
8. source .bash_profile
9. Confluent Package Dowload Community Tar (curl or wget)
10. cd /opt/
11. wget https://packages.confluent.io/archive/7.3/confluent-community-7.3.3.tar.gz (opt folderı altına atıyoruz)
12. tar -xvf confluent-community-7.3.3.tar.gz
13. sudo apt install curl
14. cd opt/confluent-7-3-3/kafka
15. vim server.properties'de retention ayarlarını yapıyoruz.
16. Debezium connector to PostgreSql (https://debezium.io/documentation/reference/stable/install.html bağlantı adresini postgre için kopyala)
17. cd opt/confluent-7-3-3/ → mkdir connectors
18. cd connectors
19. wget link
20. tar xvf tar dosyası

21. rm tar dosyası

22. cd opt/confluent-7-3-3/

23. vim etc/kafka/connect-standalone.properties

    a. plugin.path=/usr/share/java,/opt/confluent-7.3.3/connectors

24. PostgreSql kurulumu için https://www.postgresql.org/download/linux/ubuntu/

25. # Create the file repository configuration:
    sudo sh -c 'echo "deb http://apt.postgresql.org/pub/repos/apt $(lsb_release -cs)-pgdg main" >
    /etc/apt/sources.list.d/pgdg.list'

26. `wget --quiet -O - https://www.postgresql.org/media/keys/ACCC4CF8.asc | sudo apt-key add -`

27. `apt-get update`

28. `apt-get -y install postgresql-15`

29. sudo apt install deamon

30. pg_createcluster 15 kafkamain

31. pg_lsclusters

32. systemctl status postgresql@15 -kafkamain

33. apt install postgresql-15-wal2json

34. system ctl deamon-reload

35. vim /etc/postgresql/15/kafkamain/postgresql.conf

    a. listen_addresses = '*'

    b. wal_level = logical

36. vim /etc/postgresql/15/kafkamain/pg_hba.conf

    a. # IPv4 local connections: host all all 0.0.0.0/0 trust

    b. # replication privilege : host replication all 0.0.0.0/0 trust

37. systemctl restart postgresql

38. systemctl restart postgresql@15-kafkamain.service

39. systemctl status postgresql@15 -kafkamain

40. system ctl deamon-reload

41. sudo -u postgres psql

    a. \d

    b. ALTER USER postgres WITH REPLICATION;

    c. ALTER USER postgres with password 'postgres'

42. mkdir /opt/confluent-7.3.3/connectors/debezium-debezium-connector-postgresql-2.0.1/etc

43. vim /opt/confluent-7.3.3/connectors/debezium-debezium-connector-postgresql-2.0.1/etc/dbz-connector.properties

    name=dbz-connector
    connector.class=io.debezium.connector.postgresql.PostgresConnector
    tasks.max=1
    plugin.name=wal2json
    database.hostname=localhost
    database.port=5433
    database.user=postgres
    database.password=postgres
    database.dbname =postgres
    database.server.name=baris
    key.converter=org.apache.kafka.connect.json.JsonConverter
    value.converter=org.apache.kafka.connect.json.JsonConverter

```
key.converter.schemas.enable=false
value.converter.schemas.enable=false
plugin.name=pgoutput
topic.prefix=test
```

44. cd /opt/confluetn-7.3.3/

45. bin/zookeeper-server-start etc/kafka/zookeeper.properties

46. alternatif ; nohup bin/zookeeper-server-start etc/kafka/zookeeper.properties > /dev/null &

47. kafka-server-start etc/kafka/server.properties

48. sudo -u postgres psql

49. create table test(id int primary key, code int);

50. create publication pub_test for table test;

51. cd opt/confluent-7.3.3/

52. connect-standalone /opt/confluent-7.3.3/etc/kafka/connect-standalone.properties /opt/confluent-7.3.3/connectors/debezium-connector-postgresql/etc/dbz-connector.properties

53. inset into test values (1,1);

54. kafka-topics --list --bootstrap-server localhost:9092

55. apt install kafkacat

56. kafkacat -b localhost:9092 -t test.public.test_table -C -o beginning -f 'Key: %k\nValue: %s\n'

57. Confluent JDBC SOURCE AND SINK CONNECTOR google da aratıp ;

    a. https://www.confluent.io/hub/confluentinc/kafka-connect-jdbc?_ga=2.145845492.136572538.1682488550-747357392.1681713537&_gl=1*e0rwg3*_ga*NzQ3MzU3MzkyLjE2ODE3MTM1Mzc.*_ga_D2D3EGKSGD*MTY4MjQ5C sayfasından download yapalım

    b. Bu dosyayı manuel olarak sunucumuza atıp connectors klasörü altında açalım

58. Postgres 5434 port'unda target destination için yeni bir cluster ayağa kaldıralım;

    a. pg_createcluster 15 kafkatest

    b. sudo su postgres

    c. psql -d postgres -h localhost -U postgres -p 5434

    d. Password :

    e. create table test(id int primary key, code int);

59. vim connectors/confluentinc-kafka-connect-jdbc-10.7.0/etc/jdbc-sink.properties

```
name=jdbc-sink
connector.class=io.confluent.connect.jdbc.JdbcSinkConnector
tasks.max=1
topics=test.public.test
connection.url=jdbc:postgresql://localhost:5434/postgres
connection.user=postgres
connection.password=postgres
table.name.format=test
transforms=unwrap
transforms.unwrap.type=io.debezium.transforms.ExtractNewRecordState
transforms.unwrap.drop.tombstones= false
auto.create=true
insert.mode=upsert
delete.enabled=true
pk.fields=id
pk.mode=record_key
```

fields.whitelist=id,code

60. connect-standalone /opt/confluent-7.3.3/etc/kafka/connect-standalone.properties /opt/confluent-7.3.3/connectors/debezium-connector-postgresql/etc/dbz-connector.properties /opt/confluent-7.3.3/connectors/confluentinc-kafka-connect-jdbc-10.7.0/etc/jdbc-sink.properties

61. Schema Registry Start;

    a. /opt/confluent-7.3.3/bin/schema-registry-start /opt/confluent-7.3.3/etc/schema-registry/schema-registry.properties

62. Kapatırken postgresql için;

    a. systemctl stop postgresql

63. Özetlersek ilk önce zookeeper, kafka-server, schema-registry ve connect-standolone yapısını sırayla çalıştırdıktan sonra kaynak tablomuzda update-delete-insert işlemleri yapıp hedef tablomuzdaki değişiklikleri takip edebiliriz.