

- Purpose:**
- This post explains on how to configure and connect to Drill with MapR-SASL authentication.
- Prerequisites :**
- Drill 1.10
 - MapR secure cluster
 - MapR JDBC Driver 1.5.1 Version (Available in https://package.mapr.com/tools/MapR-JDBC/MapR_Drill/MapRDrill_jdbc_v1.5.1.1004/)

Steps:

1. To enable MapR-SASL authentication for a drillbit, Set the authentication system options for MapR-SASL in drill-override.conf file located in \$DRILL_HOME/conf.

Set drill.exec.security.auth.mechanisms parameter to include ‘MAPRSASL’ value

```
drill.exec: {
  cluster-id: "my-drillbits",
  zk.connect: "arjun-156:5181",
  security: {
    user.auth.enabled:true,
    auth.mechanisms:["MAPRSASL"]
  }
}
```

2. Generate MapR service ticket for your user and make it readable only to your user.

```
maprlogin generateticket -type service -user arjun -out /home/arjun/maprticket_arjun -duration 3650:0:0
```

3. Set variable ‘MAPR_TICKETFILE_LOCATION’ to point to service ticket generated.

```
export MAPR_TICKETFILE_LOCATION=/home/arjun/maprticket_arjun
```

4. Now you can connect to Drill using JDBC with MapR specific JDBC jar. Specify JDBC URL as below.

```
"jdbc:drill:drillbit=<drillbit-node>:31010;auth=MAPRSASL"
OR
"jdbc:drill:drillbit=<drillbit-node>:31010;authMech=MAPRSASL"
```

Sample usage with sqlline jar to connect to Drill using MapR -SASL authentication.

```
[arjun@arjun-156 ~]$ export MAPR_TICKETFILE_LOCATION=/home/arjun/maprticket_arjun
[arjun@arjun-156 ~]$
[arjun@arjun-156 ~]$ java -cp "/home/arjun/mapr_drill_jdbc/*" \
    sqlline.Sqlline \
    -u "jdbc:drill:drillbit=arjun-156:31010;auth=MAPRSASL" -d \
    -d com.mapr.drill.jdbc41.Driver --color=true \
    --fastconnect=true \
    --isolation=TRANSACTION_READ_UNCOMMITTED --showWarnings=false
"a little sql for your nosql"
0: jdbc:drill:drillbit=arjun-156:31010> select * From sys.version;
+-----+-----+-----+-----+
| version |          commit_id          |                                     |
+-----+-----+-----+-----+
| 1.10.0   | 86ca0ee5bdfd8136da4bf25838af5f46a25ac5e6 | DRILL-5395: Query on MapR-DB table |
+-----+-----+-----+-----+
1 row selected (0.35 seconds)
0: jdbc:drill:drillbit=arjun-156:31010> !quit
Closing: com.mapr.jdbc.jdbc41.S41Connection

[arjun@arjun-156 ~]$
```

You can follow below instructions to setup MapR-SASL authentication with sqlline script comes with Drill.

1) Download MapR JDBC Driver from link :

http://package.mapr.com/tools/MapR-JDBC/MapR_Drill/MapRDrill_jdbc_v1.5.6.1012/

2) Unzip the file MapRDrillJDBC41-1.5.6.1012.zip and copy DrillJDBC41.jar to location – /opt/mapr/drill/drill-1.10.0/jars

3) To avoid setting export MAPR_TICKETFILE_LOCATION for non mapr user to connect to Sqlline , Please follow below steps. This is not required in Drill 1.11.

a) Define variable ‘DRILLBIT_CONTEXT’ to distinguish between Drillbit and sqlline context.

In distrib-env.sh(/opt/mapr/drill/drill-1.10.0/conf/distrib-env.sh), Set MAPR_TICKETFILE_LOCATION using below snippet.

```
if [ “$DRILLBIT_CONTEXT” = “1” ]; then
export MAPR_TICKETFILE_LOCATION=${MAPR_TICKETFILE_LOCATION:-“/opt/mapr/conf/mapruserticket”}
fi
```

b) Set DRILLBIT_CONTEXT to 1 in bin/drillbit.sh

```
# Environment variable to indicate Drillbit is being setup. Later drill-env.sh
# and distrib-env.sh can consume this to set common environment variable differently
# for Drillbit and Sqlline.
export DRILLBIT_CONTEXT=1
```

<https://github.com/apache/drill/blob/master/distribution/src/resources/drillbit.sh>

c) Remove below entry from drill-env.sh if exists.

```
export MAPR_TICKETFILE_LOCATION=${MAPR_TICKETFILE_LOCATION:-“/opt/mapr/conf/mapruserticket”}
```

5) Restart Drillbit service.

6) Connect to sqlline and verify.

```
sqlline -u “jdbc:drill:schema=dfs;drillbit=<drillbit node>:31010;auth=maprsasl” -q “show schemas;”
```

Note:

- 1) The apache JDBC jar (\$DRILL_HOME/jars/drill-jdbc-1.10.0.jar) that comes with standard Drill 1.10 installation does not support MapR-SASL authentication.
- 2) When using MapR SASL with JDBC or ODBC drivers, there is not a way to specify the target cluster name as part of the connection parameters. MapR SASL reads the first entry in the /opt/mapr/conf/mapr-clusters.conf file and assumes it is the target cluster name. For example, if the mapr-clusters.conf file has an entry for ‘ cluster1 ‘ followed by an entry for ‘ cluster2 ‘ and the user wants to connect to a node in ‘ cluster2 ‘ , then authentication will fail. To work around this, the user must manually switch the order of entries in the mapr-clusters.conf file.

References:

- 1)http://maprdocs.mapr.com/home/Drill/configure_server_auth.html
- 2)http://maprdocs.mapr.com/home/Drill/drill_connectors.html
- 3)http://maprdocs.mapr.com/home/SecurityGuide/GeneratingServiceTicket.html

Related

[How to connect Kerberos enabled Drill with Squirrel In "Drill"](#)

[How to resolve 'java.lang.IllegalArgumentException: Empty nameString not allowed' Error with Drill Kerberos JDBC connection In "Drill"](#)

[Configuring Kerberos Authentication With Drill In "Drill"](#)