

Starting Apache Hive

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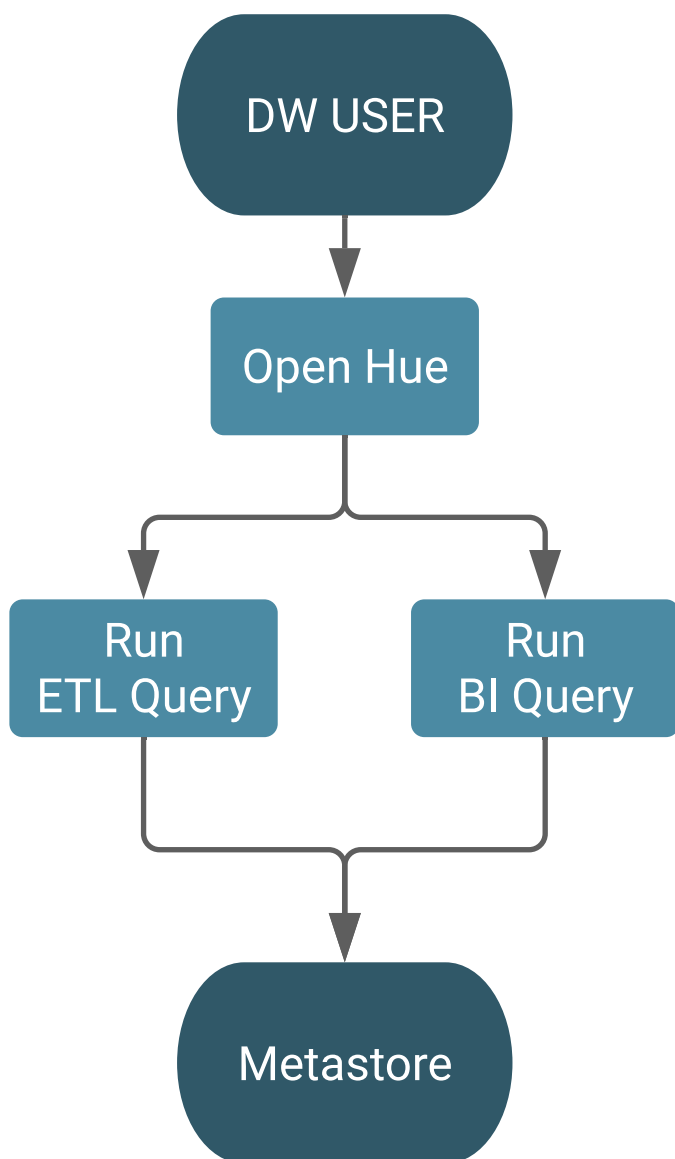
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Running a query in Cloudera Data Warehouse

You simply open Hue and submit your query. You do not need to manually start beeline or any other shell.

About this task

As a DW User, you open Hue from a Virtual Warehouse that you set up for ETL or BI jobs, and run the query. The SQL engine reads from and writes to the same metastore, regardless of the type Virtual Warehouse, as shown in the following diagram.




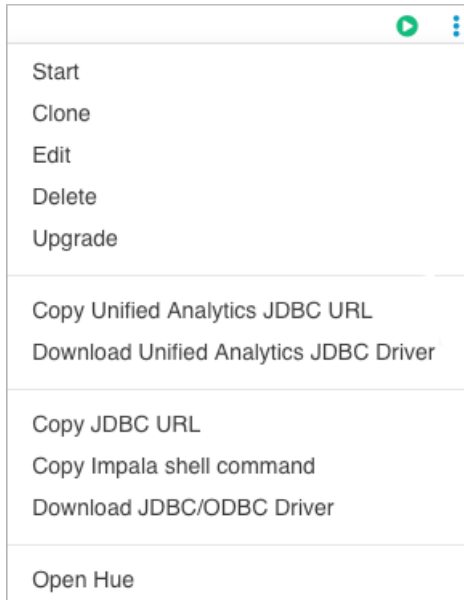
Before you begin

- Required role: DW User
- You obtained permission to run SQL queries from the Env Admin, who added you to a Hadoop SQL policy.

Procedure

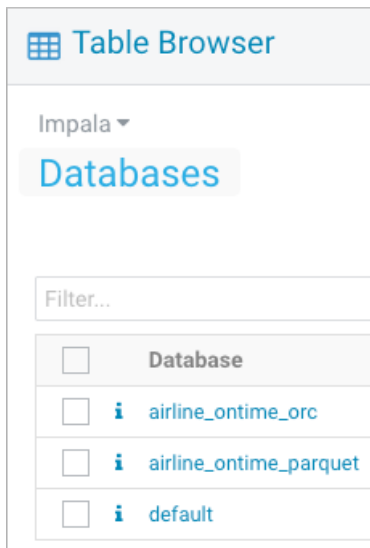
1.

On the **Overview** page under Virtual Warehouses, click options , and select Open Hue.




2. Select a database.

For example, select database `airline_ontime_parquet`.



3. In Hue, enter a query.

```
SELECT dest, origin
FROM flights
GROUP BY dest, origin;
```

4. Click  to run the query.

Converting Hive CLI scripts to Beeline

If you have legacy scripts that run Hive queries from edge nodes using the Hive CLI, you must solve potential incompatibilities with variable substitution in these scripts. CDP supports Beeline instead of Hive CLI. You can use Beeline to run legacy scripts with a few caveats.

About this task

In this task, you resolve incompatibilities in legacy Hive CLI scripts and Beeline:

- Configuration variables
 - Problem: You cannot refer to configuration parameters in scripts using the hiveconf namespace unless allowed.
 - Solution: You include the parameter in the HiveServer allowlist (whitelist).
- Namespace problems
 - Problem: Beeline does not support the system and env namespaces for variables.
 - Solution: You remove these namespace references from scripts using a conversion technique described in this task.

Procedure

1. Create a conversion script named `env_to_hivevar.sh` that removes `env` references in your SQL scripts.

```
#!/usr/bin/env bash

CMD_LINE=" "

#Blank conversion of all env scoped values
for I in `env`; do
  CMD_LINE="$CMD_LINE --hivevar env:${I} "
done
echo ${CMD_LINE}
```

2. On the command line of a node in your cluster, define and export a variable named `HIVEVAR`, for example, and set it to run the conversion script.

```
export HIVEVAR=`./env_to_hivevar.sh`
```

3. Define and export variables to hold a few variables for testing the conversion.

```
export LOC_TIME_ZONE="US/EASTERN"
export MY_TEST_VAR="TODAY"
```

4. On the command line of a cluster node, test the conversion: Execute a command that references `HIVEVAR` to parse a SQL statement, remove the incompatible `env` namespace, and execute the remaining SQL.

```
hive ${HIVEVAR} -e 'select "${env:LOC_TIME_ZONE}";'
```

```
+-----+
|      _c0      |
+-----+
| US/EASTERN    |
+-----+
```

5. Create a text file named `init_var.sql` to simulate a legacy script that sets two configuration parameters, one in the problematic `env` namespace.

```
set mylocal.test.var=hello;
set mylocal.test.env.var=${env:MY_TEST_VAR};
```

6. Include these configuration parameters in the allowlist: In Cloudera Manager, go to Clusters `HIVE_ON_TEZ-1` Configuration , and search for `hive-site`.
7. In `HiveServer2 Advanced Configuration Snippet (Safety Valve)` for `hive-site.xml`, add the property key: `hive.security.authorization.sqlstd.confwhitelist.append`.
8. Provide the property value, or values, to allowlist, for example: `mylocal\.*|junk`.
This action appends `mylocal.test.var` and `mylocal.test.env.var` parameters to the allowlist.
9. Save configuration changes, and restart any components as required.
10. Run a command that references `HIVEVAR` to parse a SQL script, removes the incompatible `env` namespace, and runs the remaining SQL, including the whitelisted configuration parameters identified by `hiveconf`:

```
hive -i init_var.sql ${HIVEVAR} -e 'select "${hiveconf:mylocal.test.var}" , "${hiveconf:mylocal.test.env.var}";'
```

```
+-----+-----+
|  _c0   |  _c1   |
+-----+-----+
| hello  | TODAY  |
+-----+-----+
```

Related Information

[Custom Configuration \(about Cloudera Manager Safety Valve\)](#)

[Example of using the Cloudera Manager Safety Valve](#)