

Hive Troubleshooting

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Unable to alter S3-backed tables

Condition

In CDP Public Cloud on AWS or wherever S3-backed tables are used, an `ALTER TABLE <table-name> RENAME TO <new-table-name>` operation might result in an error stating that the new table location already exists.

Cause

A rename operation on an S3-backed table is not instant. It has to move each file in the table to a new location one at a time. Depending on how many files are in the table directory, this could take more than 5 minutes, which is the default timeout specified.

If the time specified for the connection elapses before the rename completes, Hive tries again and fails because the new directory already exists (from the previous attempt).

Because of this retry behavior, an end-user job or query can result in a misleading error:

```
Caused by: java.sql.SQLException: Error while compiling statement: FAILED: Execution Error, return code 1
from org.apache.hadoop.hive.ql.ddl.DDLTask. Unable to alter table. New location for this table
hive.<dbname>.<tablename> already exists : s3a://<bucket>/warehouse/table
space/managed/hive/<dbname>.db/<tablename>
```


Solution

Procedure

Check the Hive Metastore logs for the time period close to the failed rename and look for the following timeout message:

```
ERROR org.apache.hadoop.hive.metastore.RetryingHMSHandler: [pool-7-thread-31
549]: Error happens in method alter_table_req:
MetaException(message:Timeout when executing method: alter_table_req; 694779
ms exceeds 600000ms)
```

If there is a timeout message, perform the following steps to increase the value of the timeout property for both Hive clients and Hive Metastore:

1. Log in to Cloudera Manager as an administrator.
2. Go to **Clusters Hive Configuration** and search for the 'Hive Metastore Connection Timeout' property.
3. Modify the value to 1 hour and click **Save Changes**.
4. Go to **Clusters Hive Metastore Configuration** and search for 'Hive Metastore Server Advanced Configuration Snippet (Safety Valve) for hive-site.xml'.
5. Click  and add the following property:

```
Name: hive.metastore.client.socket.timeout
Value: 3600
```

6. Click **Save Changes**.
7. Restart the Hive and Hive Metastore roles.