Server in read-only state, cannot drop or delete data

Last updated by | Juvenal Hernandez Carrillo | Apr 19, 2021 at 4:38 PM PDT

The customer reported issue when trying to rename or delete a table atri202012_test getting below errors:

ERROR: cannot execute ALTER TABLE in a read-only transaction

ERROR: cannot execute DROP TABLE in a read-only transaction

Error cannot execute CREATE TABLE in a read-only transaction

He also confirmed that the server was in read-only mode.

After checking the telemetry, we saw that the coordinator reached out 100% in Storage not allowing write transactions. Usually, the data should go in the worker nodes. The coordinator and worker nodes also hit !00% CPU usage during same timeframe. Also temporary files increased considerably.

Please ask the customer to share details on what was running when usage indicators increased considerably.

The customer said that he ran a script used to process three different month data at same time and write output into Citus. Each month data is processed using this python script which uses multiprocessing with CPU cores 30 (multiprocessing.Pool(processes=30)) and pandas (library) chunk size of 10000.

When the issue happened, all data was stored into coordinator. But customer fixed adding below in code to create distribution key, so new trial save data into workers instead of coordinator. select create_distributed_table('"+table+"','device_id');

For this issue, the cluster recovered by itself unblocking server after approximately 8 hours. After that, the customer dropped data from coordinator.

To drop data from coordinator when server is in Read-only state, try these alternative ways:

1. Connect to the server using regular connection string which connects to the coordinator and run the set session command below:

1.1 Connect to coordinator.

1.2 Set current session to RW using: SET SESSION CHARACTERISTICS AS TRANSACTION READ WRITE;

1.3 Drop some data

2. Scale up storage on Coordinator.

3. Customer will have to shard the Data to worker Nodes to truncate the table

The customer will have to go through Data modeling for this:

citus=> CREATE TABLE test_coord(id int);

CREATE TABLE

citus=> INSERT INTO test_coord SELECT generate_series(1,10000);

INSERT 0 10000

citus=> SELECT create_distributed_table('test_coord','id');

NOTICE: Copying data from local table...

NOTICE: copying the data has completed

DETAIL: The local data in the table is no longer visible, but is still on disk.

HINT: To remove the local data, run: SELECT truncate_local_data_after_distributing_table($$public.test_coord$$)

create_distributed_table

(1 row)

citus=> SELECT truncate_local_data_after_distributing_table($$public.test_coord$$);

truncate_local_data_after_distributing_table

(1 row)

After distributing a table, Citus gives you api to truncate the table.

This document covers how to determine application type and then choose distribution column and migrate the data-model: https://docs.citusdata.com/en/v10.0/develop/app_type.html