Restore cassandra cluster data when acccidentally drop table

Asked 7 years, 7 months ago Active 1 year, 9 months ago Viewed 4k times

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As you know, Cassandra cluster have replication to prevent data loss even if some node in the cluster down. But in the case that an admin accidentally drop a table with big amount of data, and that command had already executed by all the replica in cluster, is this means you lost that table and cannot restore it? Is there any suggestion to cope with this kind of disaster with short server down time?

cassandra backup restore

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edited Jul 4 2014 at 10:08

asked Jul 1 2014 at 6:20

lncnb91

69 ● 1 ● 7

3 Answers

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From cassandra docs:

> auto_snapshot (Default: true) Enable or disable whether a snapshot is taken of the data before keyspace truncation or dropping of tables. To prevent data loss, using the default setting is strongly advised. If you set to false, you will lose data on truncation or drop.

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answered Jul 1 2014 at 14:57

shutty

3,060 ● 13 ● 26

Thanks for the answer. Isn't it take long time recovery for big amount of data? – lncnb91 Jul 2 2014 at 1:35

1 No actual data is being copied on recovery, so it's pretty fast. But I also recommend to run rather slow `nodetool repair` task after that to be sure that recovered data is fully consistent. – shutty Jul 4 2014 at 7:54

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Step-1: I created one table by using the below command

```
CREATE TABLE Cricket (
    PlayerID uuid,
    LastName varchar,
    FirstName varchar,
    City varchar,
    State varchar,
    PRIMARY KEY (PlayerID));
```

Step-2: Insert 3 records by using below command

```
INSERT INTO Cricket (PlayerID, LastName, FirstName, City, State)
VALUES (now(), 'Pendulkar', 'Sachin', 'Mumbai','Maharastra');
INSERT INTO Cricket (PlayerID, LastName, FirstName, City, State)
VALUES (now(), 'Vholi', 'Virat', 'Delhi','New Delhi');
INSERT INTO Cricket (PlayerID, LastName, FirstName, City, State)
VALUES (now(), 'Sharma', 'Rohit', 'Berhampur','Odisha');
```

Step-3: Accidentally I deleted Cricket table

```
drop table Cricket;
```

Step-4: Need to recover that table by using auto snapshotbackup Note: auto_snapshot (Default: true) Enable or disable whether a snapshot is taken of the data before keyspace truncation or dropping of tables. To prevent data loss, using the default setting is strongly advised.

Step-5: Find the snapshot locations and files

```
cassandra@node1:~/data/students_details$ cd cricket-88128dc0960d11ea947b39646348bb4f
cassandra@node1:~/data/students_details/cricket-88128dc0960d11ea947b39646348bb4f$ ls -lrth
total 0
drwxrwxr-x 2 cassandra cassandra  6 May 14 18:05 backups
drwxrwxr-x 3 cassandra cassandra 43 May 14 18:06 snapshots
Step-6: You will get one .cql file in that snapshot location which having tables DDL.
```

```
cassandra@node1:~/data/students_details/cricket-88128dc0960d11ea947b39646348bb4f/snapshots/dropped-1589479603749-cricket$ ls -lrth
total 44K
-rw-rw-r-- 1 cassandra cassandra   92 May 14 18:06 md-1-big-Summary.db
-rw-rw-r-- 1 cassandra cassandra   61 May 14 18:06 md-1-big-Index.db
-rw-rw-r-- 1 cassandra cassandra   16 May 14 18:06 md-1-big-Filter.db
-rw-rw-r-- 1 cassandra cassandra  179 May 14 18:06 md-1-big-Data.db
-rw-rw-r-- 1 cassandra cassandra   92 May 14 18:06 md-1-big-TOC.txt
-rw-rw-r-- 1 cassandra cassandra 4.7K May 14 18:06 md-1-big-Statistics.db
-rw-rw-r-- 1 cassandra cassandra    9 May 14 18:06 md-1-big-Digest.crc32
-rw-rw-r-- 1 cassandra cassandra   43 May 14 18:06 md-1-big-CompressionInfo.db
-rw-rw-r-- 1 cassandra cassandra  891 May 14 18:06 schema.cql
-rw-rw-r-- 1 cassandra cassandra   31 May 14 18:06 manifest.json
cassandra@node1:~/data/students_details/cricket-88128dc0960d11ea947b39646348bb4f/snapshots/dropped-1589479603749-cricket$

more schema.cql
cassandra@node1:~/data/students_details/cricket-88128dc0960d11ea947b39646348bb4f/snapshots/dropped-1589479603749-cricket$ more
schema.cql
CREATE TABLE IF NOT EXISTS students_details.cricket (
        playerid uuid PRIMARY KEY,
        city text,
        firstname text,
        lastname text,
        state text)
        WITH ID = 88128dc0-960d-11ea-947b-39646348bb4f
        AND bloom_filter_fp_chance = 0.01
        AND dclocal_read_repair_chance = 0.1
        AND crc_check_chance = 1.0
        AND default_time_to_live = 0
        AND gc_grace_seconds = 864000
        AND min_index_interval = 128
```

Step-7: Login to the database and create table using that DDL.

```
    apiadmin@cqlsh:coopersdev> use students_details;
    apiadmin@cqlsh:students_details> CREATE TABLE IF NOT EXISTS students_details.cricket (
                         ...         playerid uuid PRIMARY KEY,
                         ...         city text,
                         ...         firstname text,
                         ...         lastname text,
                         ...         state text)
                         ...         WITH ID = 88128dc0-960d-11ea-947b-39646348bb4f
                         ...         AND bloom_filter_fp_chance = 0.01
                         ...         AND dclocal_read_repair_chance = 0.1
```

```
                        ...         AND crc_check_chance = 1.0
                        ...         AND default_time_to_live = 0
                        ...         AND gc_grace_seconds = 864000
                        ...         AND min_index_interval = 128
                        ...         AND max_index_interval = 2048
                        ...         AND memtable_flush_period_in_ms = 0
                        ...         AND read_repair_chance = 0.0
                        ...         AND speculative_retry = '99PERCENTILE'
                        ...         AND comment = ''
                        ...         AND caching = { 'keys': 'ALL', 'rows_per_partition': 'NONE' }
                        ...         AND compaction = { 'max_threshold': '32', 'min_threshold': '4', 'class':
'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy' }
                        ...         AND compression = { 'chunk_length_in_kb': '64', 'class':
'org.apache.cassandra.io.compress.LZ4Compressor' }
                        ...         AND cdc = false
                        ...         AND extensions = {  };
apiadmin@cqlsh:students_details>
```

Step-8: copy all the files on snapshot folder to existing cricket table folder

```
cassandra@node1:~/data/students_details/cricket-88128dc0960d11ea947b39646348bb4f/snapshots/dropped-1589479603749-cricket$ pwd
/home/cassandra/data/students_details/cricket-88128dc0960d11ea947b39646348bb4f/snapshots/dropped-1589479603749-cricket
cassandra@node1:~/data/students_details/cricket-88128dc0960d11ea947b39646348bb4f/snapshots/dropped-1589479603749-cricket$ cp *
/home/cassandra/data/students_details/cricket-88128dc0960d11ea947b39646348bb4f
cassandra@node1:~/data/students_details/cricket-88128dc0960d11ea947b39646348bb4f/snapshots/dropped-1589479603749-cricket$ cd
/home/cassandra/data/students_details/cricket-88128dc0960d11ea947b39646348bb4f
cassandra@node1:~/data/students_details/cricket-88128dc0960d11ea947b39646348bb4f$ ls -lrth
total 44K
drwxrwxr-x 2 cassandra cassandra    6 May 14 18:05 backups
drwxrwxr-x 3 cassandra cassandra   43 May 14 18:06 snapshots
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-rw-rw-r-- 1 cassandra cassandra   92 May 14 18:11 md-1-big-TOC.txt
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-rw-rw-r-- 1 cassandra cassandra 4.7K May 14 18:11 md-1-big-Statistics.db
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-rw-rw-r-- 1 cassandra cassandra   16 May 14 18:11 md-1-big-Filter.db
-rw-rw-r-- 1 cassandra cassandra    9 May 14 18:11 md-1-big-Digest.crc32
-rw-rw-r-- 1 cassandra cassandra  179 May 14 18:11 md-1-big-Data.db
-rw-rw-r-- 1 cassandra cassandra   43 May 14 18:11 md-1-big-CompressionInfo.db
-rw-rw-r-- 1 cassandra cassandra   31 May 14 18:11 manifest.json
cassandra@node1:~/data/students_details/cricket-88128dc0960d11ea947b39646348bb4f$
```

Step-9: start restore table data using sstableloader by using below command

```
cassandra@node1:~$ sstableloader -d 10.213.61.21 -username cassandra --password cassandra
/home/cassandra/data/students_details/cricket-d3576f60960f11ea947b39646348bb4f/snapshots
    Established connection to initial hosts
    Opening sstables and calculating sections to stream

    Summary statistics:
       Connections per host    : 1
       Total files transferred : 0
       Total bytes transferred : 0.000KiB
       Total duration          : 2920 ms
       Average transfer rate   : 0.000KiB/s
       Peak transfer rate      : 0.000KiB/s
```

Step-10: Table restored successfully.Please verify.

```
 playerid                             | city      | firstname | lastname  | state
--------------------------------------+-----------+-----------+-----------+------------
 d7b12c90-960f-11ea-947b-39646348bb4f | Berhampur |     Rohit |    Sharma |     Odisha
 d7594890-960f-11ea-947b-39646348bb4f |     Delhi |     Virat |     Vholi |  New Delhi
 d7588540-960f-11ea-947b-39646348bb4f |    Mumbai |    Sachin | Pendulkar | Maharastra
```

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answered May 14 2020 at 18:50

Srikant Patra

353 ● 2 ● 4