Blitzz : MySQL to YugabyteSQL

Releases

Refer DownloadReplicantRelease

General Hardware and Software Prerequisites

Refer Prerequisites

Refer MySQLCDCPrerequistes

Connection Configuration

Refer MySQLSrcConnectionConfiguration for details. Refer conf/conn/mysql.yaml as an example inside the release directory.

Refer CockroachDstConnectionConfiguration for details. Refer conf/conn/cockroach.yaml as an example inside the release directory.

1. Specify the external-io-dir used by Cockroach cluster as a value of the **conn-url** config under the stage section with **LOCAL_FS** as the value of **type** config.

Extractor Configuration

Refer ExtractorConfiguration. Refer conf/src/mysql.yaml as an example inside the release directory.

1. Supplying **split-key** in per-table-config section is not supported for MySQL source
2. It is strongly recommended to supply a **row-identifier-key** in per-table-config section for a table which does not have a PK/UK defined.
3. For CDC, replication, you must create the heartbeat table on the source database with the following DDL e.g.

   ```
   CREATE  TABLE tpch.blitzz_io_cdc_hartbeat(timestamp BIGINT);
   ```

   Grant INSERT, UPDATE, DELETE privileges for this table to the user provided to replicant

Applier Configuration

Refer ApplierConfiguration for details.Refer conf/dst/cockroach.yaml as an example inside the release directory.

Verification Configuration

Refer VerificationConfiguration. Refer conf/verification/verification.yaml as an example inside the release directory.

Notification Configuration

Refer NotificationConfiguration. Refer conf/notification/notification.yaml as an example inside the release directory.

Filter Configuration

Refer DBFilterConfiguration. Refer filter/mysql_filter.yaml as an example inside the release directory.

Mapper Configuration

Refer MapperConfiguration. Refer mapper/mysql_to_cockroach.yaml as an example inside the release directory.

Statistics Configuration

Refer StatisticsConfiguration for details. Refer conf/statistics/statistics.yaml as an example inside the release directory.

General Configuration

Refer GeneralConfig

Metadata Configuration

Refer MetadataConfiguration. Refer conf/metadata/cockroach.yaml as an example inside release directory.

Distribution Configuration

Refer DistributionConfiguration. Refer conf/distribution/distribution.yaml as an example inside release directory.

Replication Modes

Refer ReplicationModes

Write Modes

Refer WriteModes

Setting up Replicant

Refer SettingUpReplicant for details.

Replicant in Full Mode with Basic Configurations

Make sure that all configurations have been correctly setup.

To run replicant in full mode (with a single node for blitzz replicant) with basic configurations explained above, use the following command :

```
./bin/replicant full conf/conn/mysql.yaml conf/conn/cockroach.yaml --extractor conf/src/mysql.yaml --applier conf/dst/cockroach.yaml  --filter filter/mysql_filter.yaml --map mapper/mysql_to_cockroach.yaml  --id replJob --replace --overwrite
```

Replicant in Full Mode with Advanced Configurations

To run replicant in full mode (with a single node for blitzz replicant) with **advanced** configurations (metadata and notification), use the following command :

```
./bin/replicant full conf/conn/mysql.yaml conf/conn/cockroach.yaml --extractor conf/src/mysql.yaml --applier conf/dst/cockroach.yaml  --notify conf/notification/notification.yaml --statistics conf/statistics/statistics.yaml --metadata conf/metadata/cockroach.yaml --filter filter/mysql_filter.yaml --map mapper/mysql_to_cockroach.yaml  --id replJob --replace --overwrite
```

Resuming Replicant

Replicant can be stopped with CTRL C signal. If replicant is stopped for any reason it can be restarted and made to resume replication exactly from the point where it left, by replacing the --overwrite argument by --resume in the replicant command.

```
./bin/replicant full conf/conn/mysql.yaml conf/conn/cockroach.yaml --extractor conf/src/mysql.yaml --applier conf/dst/cockroach.yaml  --filter filter/mysql_filter.yaml --map mapper/mysql_to_cockroach.yaml  --id replJob --replace --resume
```

Replicant in Snapshot Mode

If you need to run only a one time data copy of source MySQL to destination Cockroach, you can replace the full mode with snapshot mode in the command :

```
./bin/replicant snapshot conf/conn/mysql.yaml conf/conn/cockroach.yaml --extractor conf/src/mysql.yaml --applier conf/dst/cockroach.yaml  --filter filter/mysql_filter.yaml --map mapper/mysql_to_cockroach.yaml  --id replJob --replace --overwrite
```

Terminate Full Mode Replicant post Snapshot

If you need to run replication in full mode but would like replicant to stop after snapshot is finished to do your data validations etc. or any other operations and then resume replicant in realtime mode, use the option --terminate-post-snapshot

```
./bin/replicant full conf/conn/mysql.yaml conf/conn/cockroach.yaml --extractor
conf/src/mysql.yaml --applier conf/dst/cockroach.yaml  --filter
filter/mysql_filter.yaml --map mapper/mysql_to_cockroach.yaml  --id replJob
--replace --overwrite --terminate-post-snapshot
```

This replication can be resumed after it is stopped (post snapshot) using below command :

```
./bin/replicant full conf/conn/mysql.yaml conf/conn/cockroach.yaml --extractor
conf/src/mysql.yaml --applier conf/dst/cockroach.yaml  --filter
filter/mysql_filter.yaml --map mapper/mysql_to_cockroach.yaml  --id replJob
--replace --resume
```

Dynamic table Addition/Removal/Re-initialization

Refer DynamicTableAddition. Refer conf/reinit/mysql_reinit.yaml as an example of the reinit yaml file

Distributed Replication

Refer DistributedReplication**.** Make sure replication slots in the source connection config file are unique across all distribution nodes.

Limitations

1. Replication of BLOB and all spatial data type columns is supported in snapshot mode at present. Also, in order to replicate BLOBs (and spatial data types) correctly, bulk-load option should be set to NONE in the applier config file.
2. DDL replication is not available in this release
3. Real-time verification support is not available in this release