

**Цель:**

1. Взять любой демонстрационный DATASET, не обязательно полный набор данных:  
<https://clickhouse.com/docs/en/getting-started/example-datasets>
2. Конвертировать таблицу в реплицируемую, используя макрос replica
3. Добавить 2 реплики
4. отдать результаты запросов как 2 файла  
SELECT  
getMacro('replica'),

\*

```
FROM remote('разделенный запятыми список реплик',system.parts)  
FORMAT JSONEachRow;
```

```
SELECT * FROM system.replicas FORMAT JSONEachRow;
```

5) Добавить/выбрать колонку с типом Date в таблице, добавить TTL на таблицу «хранить последние 7 дней». Предоставить результат запроса «SHOW CREATE TABLE таблица» на проверку.

```

CREATE TABLE trips
(
    `trip_id` UInt32,
    `pickup_datetime` DateTime,
    `dropoff_datetime` DateTime,
    `pickup_longitude` Nullable(Float64),
    `pickup_latitude` Nullable(Float64),
    `dropoff_longitude` Nullable(Float64),
    `dropoff_latitude` Nullable(Float64),
    `passenger_count` UInt8,
    `trip_distance` Float32,
    `fare_amount` Float32,
    `extra` Float32,
    `tip_amount` Float32,
    `tolls_amount` Float32,
    `total_amount` Float32,
    `payment_type` Enum('CSH' = 1, 'CRE' = 2, 'NOC' = 3, 'DIS' = 4, 'UNK' = 5),
    `pickup_ntaname` LowCardinality(String),
    `dropoff_ntaname` LowCardinality(String)
)
ENGINE = MergeTree
PRIMARY KEY (pickup_datetime, dropoff_datetime)

```

Query id: 17f3da58-c4c9-4320-ad16-0d25afa15ee2

Ok.

0 rows in set. Elapsed: 0.027 sec.

```

ch1 :) INSERT INTO trips
SELECT
    trip_id,
    pickup_datetime,
    dropoff_datetime,
    pickup_longitude,
    pickup_latitude,
    dropoff_longitude,
    dropoff_latitude,
    passenger_count,

```

```

INSERT INTO trips SELECT
    trip_id,
    pickup_datetime,
    dropoff_datetime,
    pickup_longitude,
    pickup_latitude,
    dropoff_longitude,
    dropoff_latitude,
    passenger_count,
    trip_distance,
    fare_amount,
    extra,
    tip_amount,
    tolls_amount,
    total_amount,
    payment_type,
    pickup_ntaname,
    dropoff_ntaname

```

```

FROM gcs('https://storage.googleapis.com/clickhouse-public-datasets/nyc-taxi/trips_{0..2}.gz', 'TabSeparatedWithNames')

```

Query id: cd0783ef-81a6-4831-bb14-c15293f6799e

Ok.

0 rows in set. Elapsed: 30.765 sec. Processed 3.00 million rows, 257.94 MB (97.52 thousand rows/s., 8.38 MB/s.)  
Peak memory usage: 380.22 MiB.

```
ch1 :) CREATE TABLE trips_new AS trips ENGINE=ReplicatedMergeTree('/clickhouse/tables/{shard}/trips', '{replica}') PRIMARY KEY (pickup_datetime, dropoff_datetime) ORDER BY (pickup_datetime, dropoff_datetime)

CREATE TABLE trips_new AS trips
ENGINE = ReplicatedMergeTree('/clickhouse/tables/{shard}/trips', '{replica}')
PRIMARY KEY (pickup_datetime, dropoff_datetime)
ORDER BY (pickup_datetime, dropoff_datetime)

Query id: 692384da-522f-4716-aab8-02433308b40d

Ok.

0 rows in set. Elapsed: 0.036 sec.

ch1 :) █
```

```
ch1 :) SELECT DISTINCT partition_id FROM system.parts where table == 'trips'
```

```
SELECT DISTINCT partition_id
FROM system.parts
WHERE `table` = 'trips'
```

Query id: f30dca01-d3c8-4948-a628-a90ae30006ba

```
1.  partition_id
    all
```

1 row in set. Elapsed: 0.059 sec.

ch1 :) █

```
ch1 :) ALTER TABLE trips_new ATTACH PARTITION ID 'all' from trips
```

```
ALTER TABLE trips_new
(ATTACH PARTITION ID 'all' FROM trips)
```

Query id: f5385764-44ce-4781-86a9-c6e75e184018

Ok.

0 rows in set. Elapsed: 0.031 sec.

ch1 :) █

```
ch1 :) select count() from trips_new
```

```
SELECT count()
FROM trips_new
```

Query id: 2f581236-38f0-4125-b55f-595f4324b89a

```
1.  count()
    3000317 -- 3.00 million
```

1 row in set. Elapsed: 0.042 sec

```
trips trips_new
ch1 :) DROP TABLE trips

DROP TABLE trips

Query id: a46110f7-ac83-4724-a48a-a221642b0bae

Ok.

0 rows in set. Elapsed: 0.007 sec.

ch1 :) █
```

```
ch1 :) RENAME TABLE trips_new to trips

RENAME TABLE trips_new TO trips

Query id: 4fd1efe7-eacf-4067-8cc1-a0a128fb5f8a

Ok.

0 rows in set. Elapsed: 0.008 sec.

ch1 :) █
```

```
ch1 :) show tables

SHOW TABLES

Query id: 7e502286-d49f-45e4-9f42-42da5fc61c28

1. 

| name  |
|-------|
| trips |



1 row in set. Elapsed: 0.006 sec.

ch1 :) █
```

```

ch1 :) show create trips

SHOW CREATE TABLE trips

Query id: 42ed04c6-97de-4a3f-a647-4282c1928ede

┌─ statement ─┐
1. | CREATE TABLE cluster_dz.trips
   | (
   |   `trip_id` UInt32,
   |   `pickup_datetime` DateTime,
   |   `dropoff_datetime` DateTime,
   |   `pickup_longitude` Nullable(Float64),
   |   `pickup_latitude` Nullable(Float64),
   |   `dropoff_longitude` Nullable(Float64),
   |   `dropoff_latitude` Nullable(Float64),
   |   `passenger_count` UInt8,
   |   `trip_distance` Float32,
   |   `fare_amount` Float32,
   |   `extra` Float32,
   |   `tip_amount` Float32,
   |   `tolls_amount` Float32,
   |   `total_amount` Float32,
   |   `payment_type` Enum8('CSH' = 1, 'CRE' = 2, 'NOC' = 3, 'DIS' = 4, 'UNK' = 5),
   |   `pickup_ntaname` LowCardinality(String),
   |   `dropoff_ntaname` LowCardinality(String)
   | )
   | ENGINE = ReplicatedMergeTree('/clickhouse/tables/{shard}/trips', '{replica}')
   | PRIMARY KEY (pickup_datetime, dropoff_datetime)
   | ORDER BY (pickup_datetime, dropoff_datetime)
   | SETTINGS index_granularity = 8192 |
└──────────┘

1 row in set. Elapsed: 0.032 sec.

ch1 :) █

```

```

root@chl:/tmp# clickhouse-client -h 192.168.188.132 -q "SELECT getMacro('replica'),* FROM remote('chl1,chl2,chl3',system.parts) FORMAT JSONEachRow;" > /home/admin/dz_190624
root@chl:/tmp# ll /home/admin/
total 2424
drwxr-x--- 4 admin admin 4096 Jul 27 15:10 ./
drwxr-xr-x 3 root root 4096 May 18 02:38 ../
-rw-r----- 1 admin admin 16 Jun 27 21:47 .bash_history
-rw-r----- 1 admin admin 220 Jan 6 2022 .bash_logout
-rw-r----- 1 admin admin 3771 Jan 6 2022 .bashrc
drwx----- 2 admin admin 4096 May 18 02:38 .cache/
-rw-r----- 1 admin admin 38318 Jul 27 11:46 DataSet.csv
-rw-r----- 1 admin admin 1383 Jul 27 10:46 dz04.csv
-rw-r----- 1 root root 2401452 Jul 27 15:10 dz_190624
-rw-r----- 1 admin admin 807 Jan 6 2022 .profile
drwx----- 2 admin admin 4096 May 18 02:38 .ssh/
-rw-r----- 1 admin admin 0 May 17 23:39 .sudo_as_admin_successful
root@chl:/tmp# █

```

[https://github.com/LukiyanK/Clickhouse-study/blob/main/19\\_06\\_24/dz\\_190624](https://github.com/LukiyanK/Clickhouse-study/blob/main/19_06_24/dz_190624)

[https://github.com/LukiyanK/Clickhouse-study/blob/main/19\\_06\\_24/dz\\_190624\\_2](https://github.com/LukiyanK/Clickhouse-study/blob/main/19_06_24/dz_190624_2)