

## Backup & Restore Steps

### 1.1 Introduction

The document helps you in taking the backup of your report (clickhouse) database. The document is divided in two parts: 'Backup Job' and 'Restore Report DB'. The process works at database level and requires backend privileges for operations.

### 1.2 Prerequisites

1. Search for Clickhouse-Store.zip in first level of motadata folder. If it is available, delete the file.
  - rm Clickhouse-Store.zip
2. Download the new utility from:
  - <https://motadata2016.s3.amazonaws.com/Motadata/7.5.800/Clickhouse%20Store/Clickhouse-Store.zip>
3. Upload the zip file in first level motadata folder.
  - In standalone server, upload the utility in master server.
  - In distributed mode server, upload the utility in data node server. No need to upload file in master server.
4. Check if Clickhouse-Store folder is available in 1<sup>st</sup> level of Motadata. If it is not available, follow step 5. If Clickhouse-Store folder is available, do the following:

```
cd /motadata

unzip Clickhouse-Store.zip -d Clickhouse_temp

cp /motadata/Clickhouse_temp/Clickhouse-Store/ClickhouseBackup.sh
Clickhouse-Store

cp /motadata/Clickhouse_temp/Clickhouse-Store/ClickhouseRestore.sh
Clickhouse-Store

cp /motadata/Clickhouse_temp/Clickhouse-Store/
TraceOrgReportDBBackupPlugin.jar Clickhouse-Store

cp /motadata/Clickhouse_temp/Clickhouse-Store/ReportDbRestore/ Clickhouse-
Store

Continue with step 6.
```

5. Extract the zip file. A directory Clickhouse-Store will be extracted. In that directory, following files should be available:
  - CLICKHOUSE-RESTORE
  - ReportDbRestore
  - ClickhouseBackup.sh
  - ClickhouseRestore.sh
  - TraceOrgReportDBBackupPlugin.jar

6. Change the permission of scripts:

```
chmod 777 /motadata/Clickhouse-Store/ClickhouseBackup.sh
chmod 777 /motadata/Clickhouse-Store/ClickhouseRestore.sh
```

**Note:**

- Restore will process only one full backup zip file.
- Restore will process multiple incremental zip files.

### 1.3 Time Consumption Estimate

Action Type	Data Size	Time (in minutes)
<b>Backup job</b>	50 GB	35 minutes
<b>Restore job</b>	50 GB	10 minutes

\* Note: The time here is an estimated value. Actual results may differ depending on report DB size and system performance.

## 2 Report DB Backup

We provide 2 types of backup: Incremental backup and full backup.

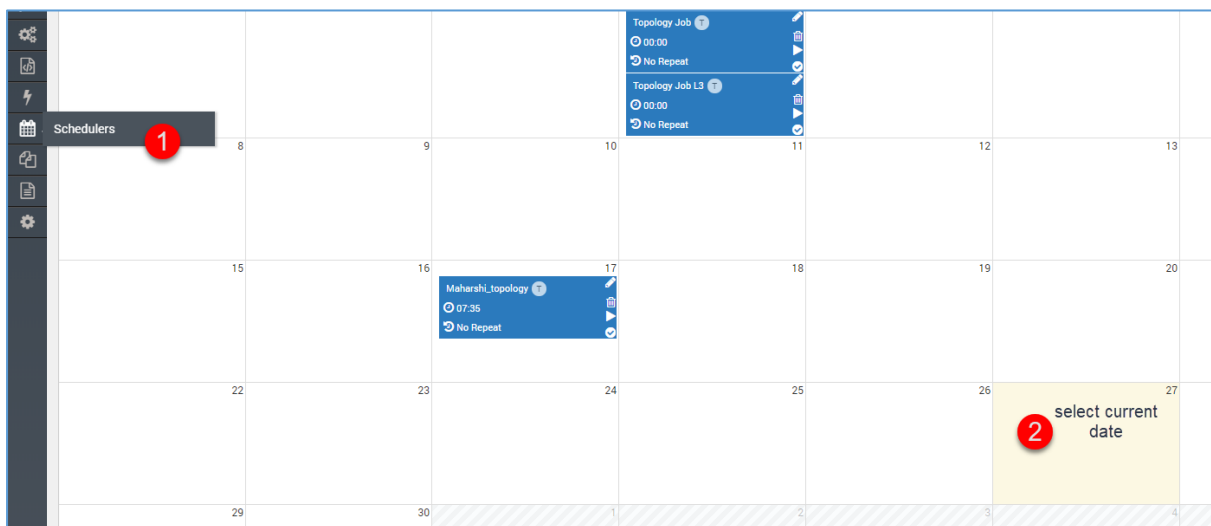
**Incremental backup** is the backup of previous month. To use this, run the scheduler every once a month and system will take backup of previous month in zip file.

**Full backup** means complete backup of database in a zip file.

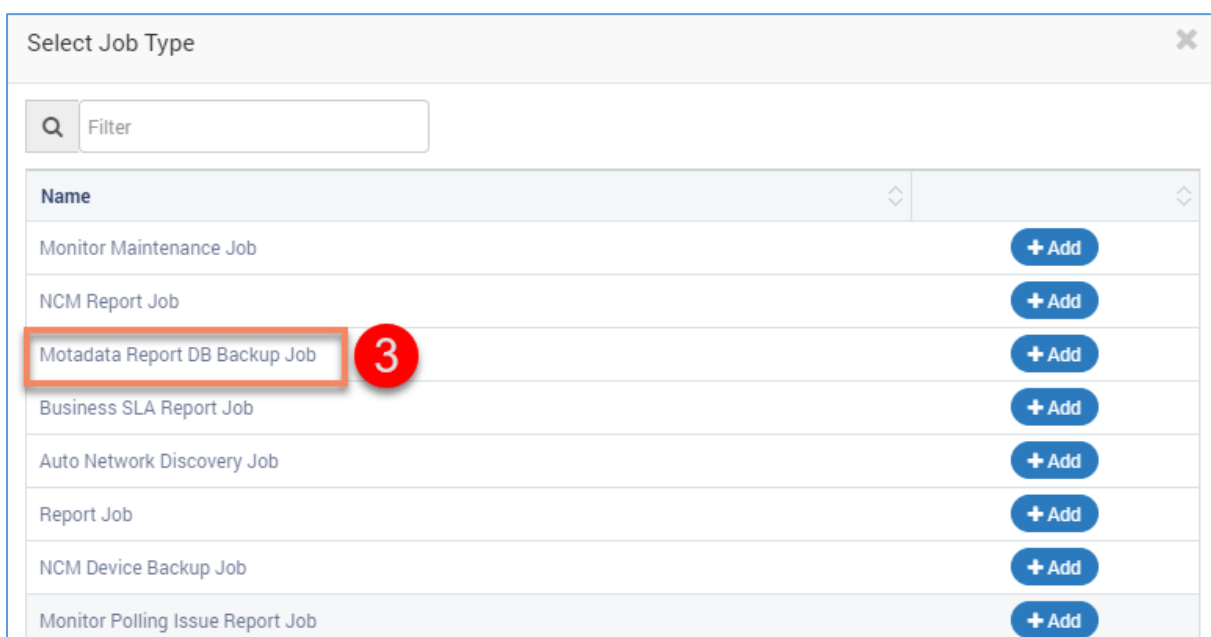
You can check the status of the scheduler job in Motadata health.

### 2.1 Incremental Backup

1. Login into Motadata GUI > Schedulers.
2. Click on the current date or a future date.

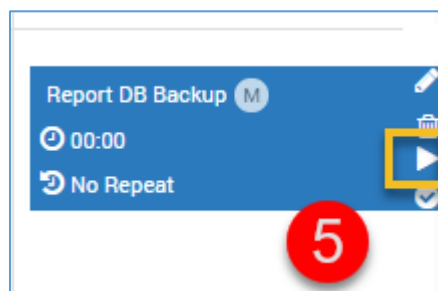


3. Create a new Motadata Report DB Backup Job.



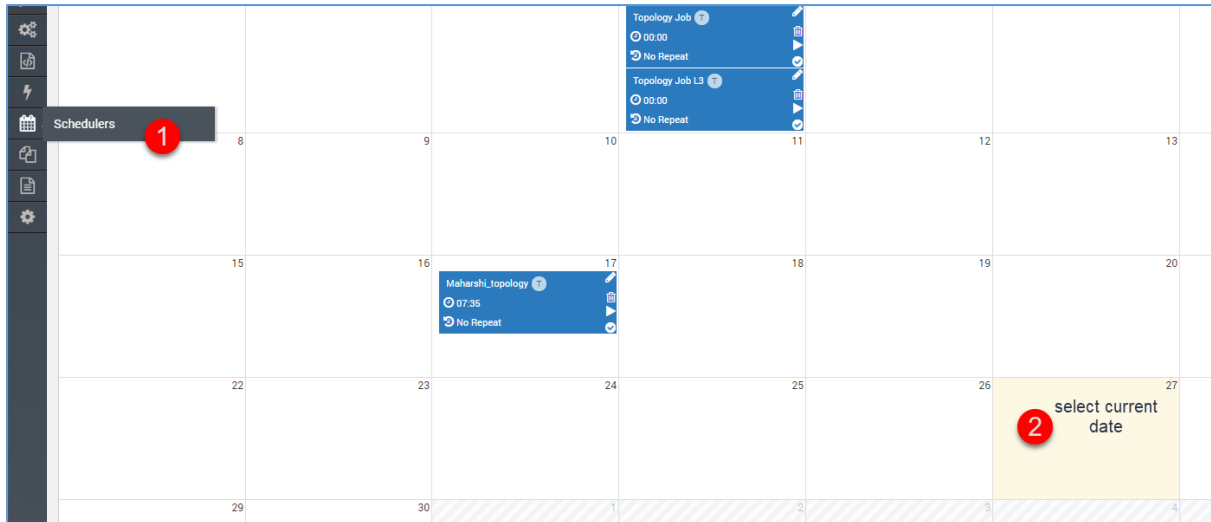
4. Select backup type as 'Incremental backup' and fill rest of the details. While scheduling the job on a repeat mode, you can select only on first 5 days of the month. For details about the backup job fields, refer user guide.

5. Run the job for immediate backup. Else the job will run at its scheduled time.

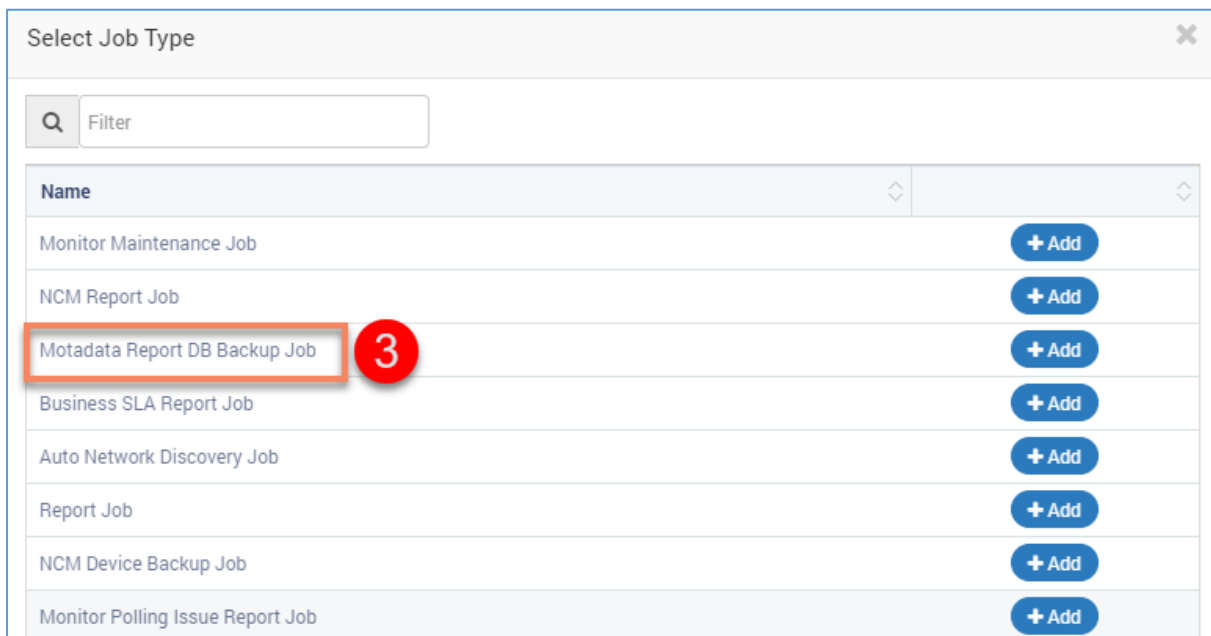


## 2.2 Full Backup

1. Login into Motadata GUI > Schedulers.
2. Click on the current date or a future date.



3. Create a new Motadata Report DB Backup Job.



4. Select backup type as 'full backup' and fill rest of the details. For details about the backup job fields, refer user guide.

Create Scheduler
✕

Scheduler Name

Status

 Enable  Disable

Scheduler Date

Run Job At

Email Actions

Backup Type

Repeat this job

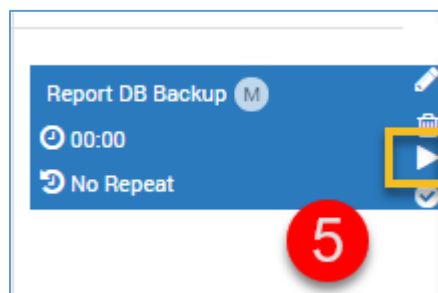
Schedule Time Line

 Daily  Weekly  Monthly

Run Job At

4

5. Run the job for immediate backup. Else the job will run at its scheduled time.



## 3 [Restore Report DB](#)

Stop the motadata service in master server. Use command: `service motadata stop`

### 3.1 [Restore Incremental Report DB](#)

1. Make sure the CLICKHOUSE-RESTORE folder is available in `/motadata/Clickhouse-Store`. If not, create a new folder named as 'CLICKHOUSE-RESTORE'.
2. Copy the desired zip file from CLICKHOUSE-BACKUP to CLICKHOUSE-RESTORE.
3. Run the following command: `sh /motadata/Clickhouse-Store/ClickhouseRestore.sh`

## 3.2 [Restore Full Report DB](#)

Use the restore process only when: either your system is crashed OR you are deploying a new system using backup. In full backup, system wipes out the clickhouse and then restores the tables.

1. Make sure the CLICKHOUSE-RESTORE folder is available in /motadata/Clickhouse-Store. If not, create a new folder named as 'CLICKHOUSE-RESTORE'.
2. Copy the desired zip file from CLICKHOUSE-BACKUP to CLICKHOUSE-RESTORE.
3. Run the following command: `sh /motadata/Clickhouse-Store/ClickhouseRestore.sh`

## 3.3 [Additional Information](#)

- You do not need to turn off the clickhouse services to run the script.
- The shell script will perform high level operation like restarting Motadata etc.
- The scheduler plugin will run an internal plugin for backup. The internal plugin has a 'shell' and a 'jar'.
- The Jar identifies and runs according to the backup type provided, incremental or full backup.
- In case of full backup, it copies the whole backup as a folder in /motadata/Clickhouse-Store/CLICKHOUSE-BACKUP. If CLICKHOUSE-BACKUP directory is not present, system will create it. The backup name includes the date and time of backup.
- In case of incremental backup, it copies the backup of previous month as a folder in /motadata/Clickhouse-Store/CLICKHOUSE-BACKUP. If CLICKHOUSE-BACKUP directory is not present, system will create it. The backup name includes the month and year for which backup is generated.
- Jar converts the whole backup folder 'REPORTDB' in a zip file. After successful conversion, it deletes the original backup folder.
- The jar generates the logs of all levels and stores in /motadata/Clickhouse-Store/Report-Backup-Restore-log directory.