



Backup/Re-store/Archival SOP

Motadata

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1 Introduction

This document describes the complete process of taking Backup, Restoring Backup as well as Archival of Report and Configuration Database

We divided the process in below parts:

- **BACKUP**
- **RESTORE**
- **ARCHIVAL**
- **ARCHIVAL RESTORATION**

2 BACKUP

2.1 Prerequisites of Report and Config Backup

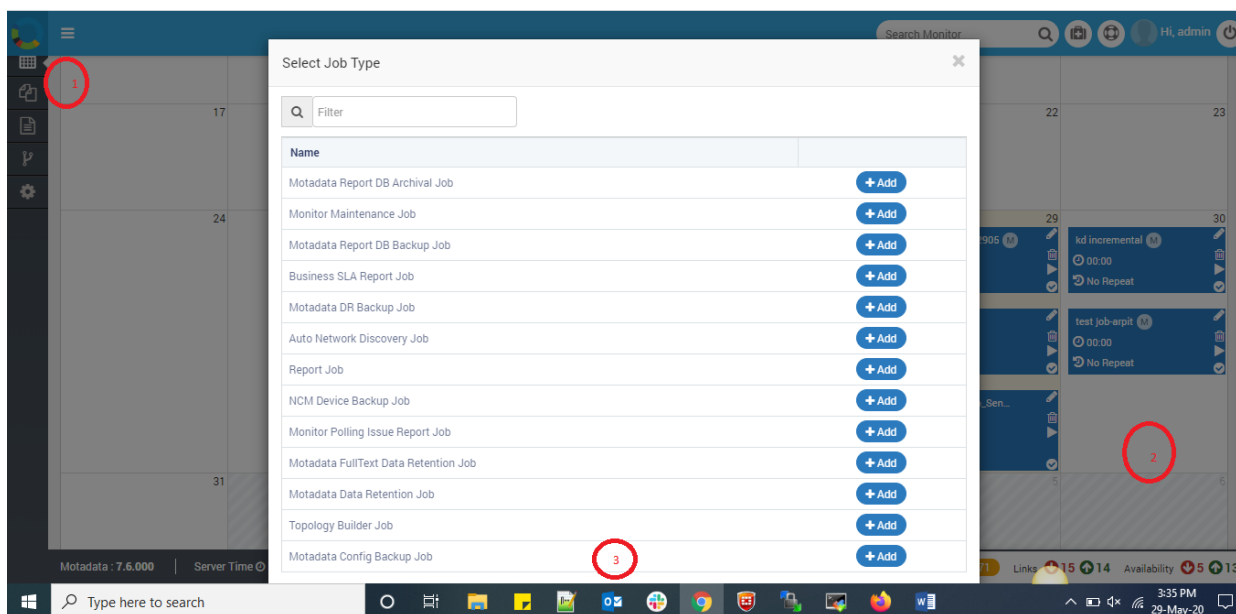
- Motadata should be up and running.
- FTP should be accessible via Motadata.
- Report DB Backup Job Plugin version 1.3 should be installed
- Config Backup Scheduler Job Plugin version 3.4 should be installed
- Go to first level Motadata directory on the server where Click-house is installed. If clickhouse-store.zip and clickhouse-store are already present then delete them.
- Download the new clickhouse-store utility from the deliverables
- Clickhouse-Store.zip should be placed in the first level motadata directory and Unzip it.

2.2 Config DB Backup

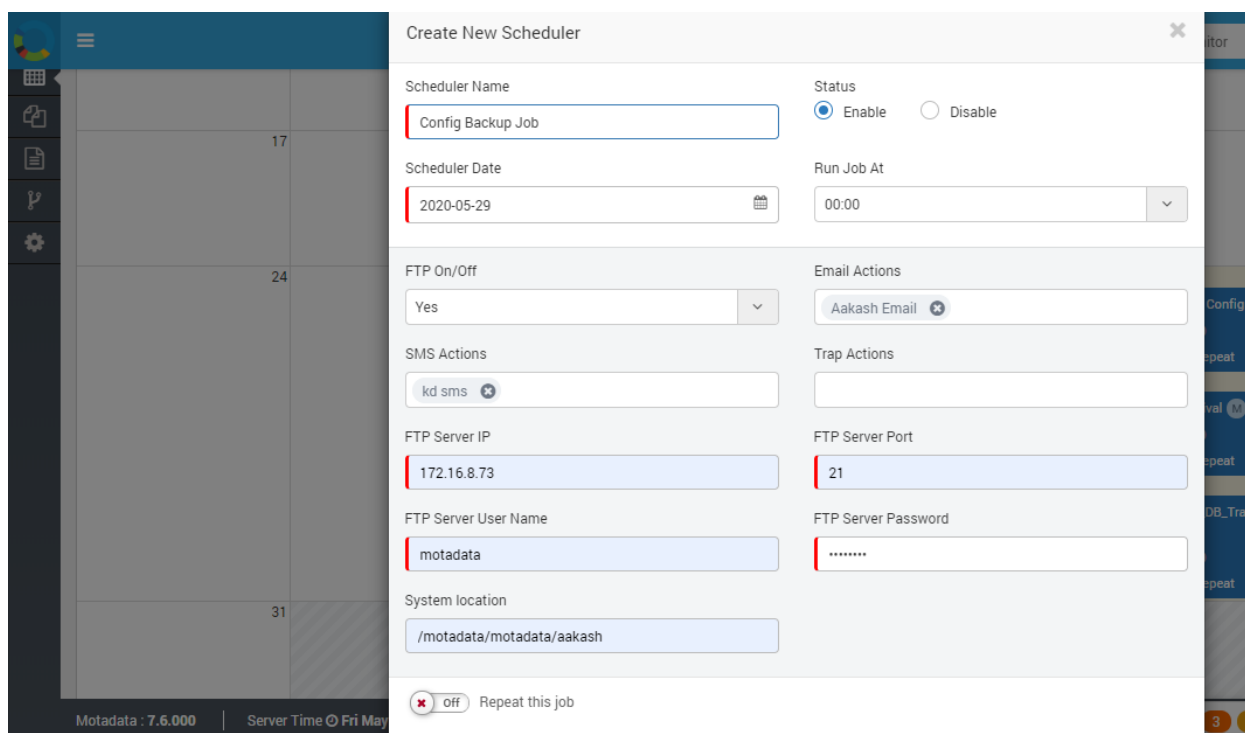
Step 1: Go to Schedulers and select the current or future desired date for backup job

Step 2: In drop-down menu, select 'Motadata Config Backup Job' and click Add.

Step 3: Fill up the fields for Scheduling the backup. Here, take a local backup, leave the FTP fields blank or to take backup on FTP server, fill up all the details.



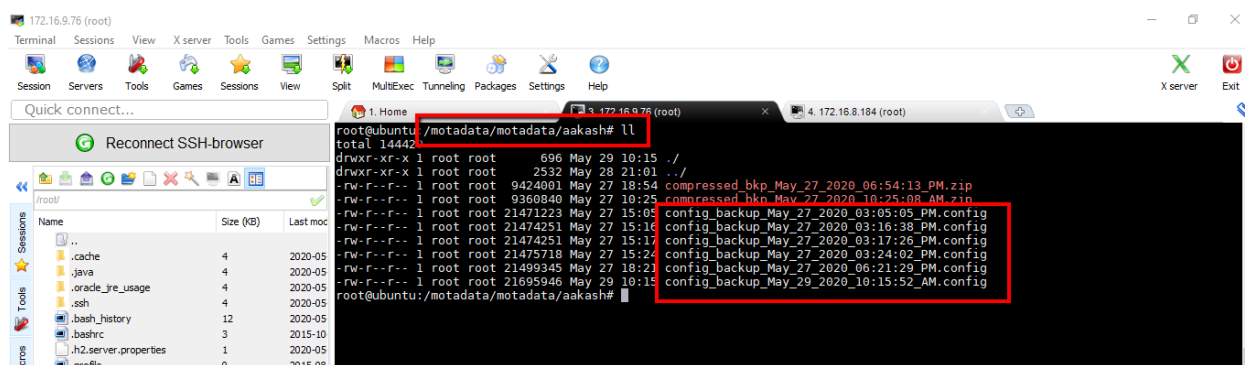
Step 4: Click on Create once done.



In case of Local Backup

Motadata takes the backup in /motadata/motadata/aakash folder.

File name: config_backup_.config (e.g. config_backup_Aug_07_2019_07:03:01_PM.config)

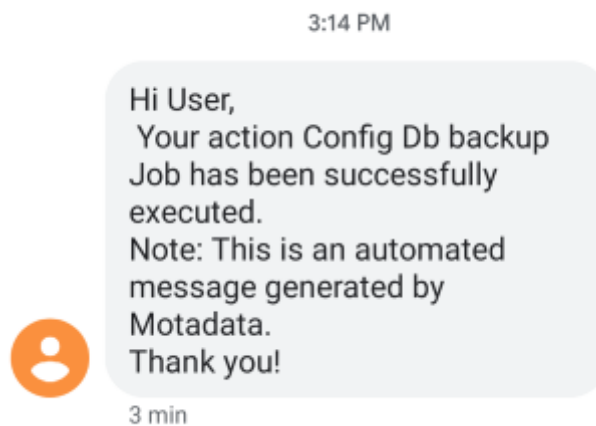
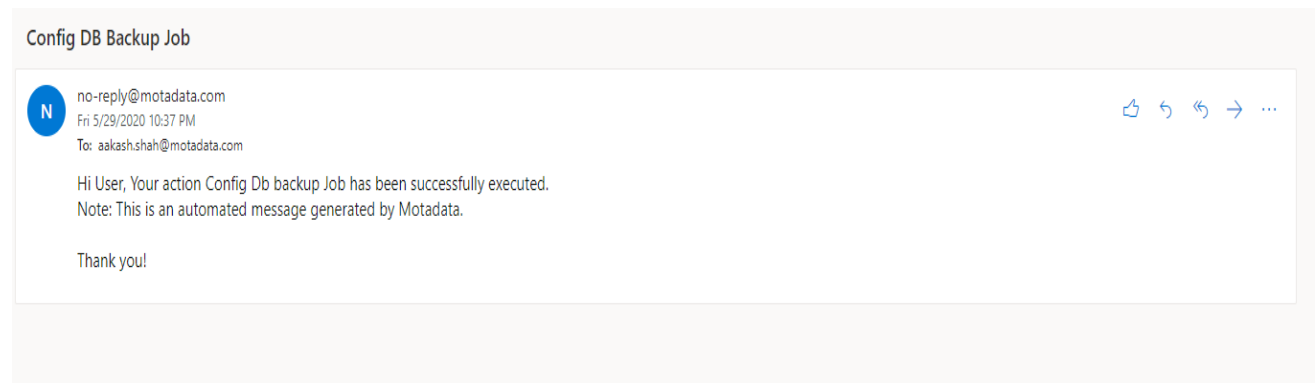
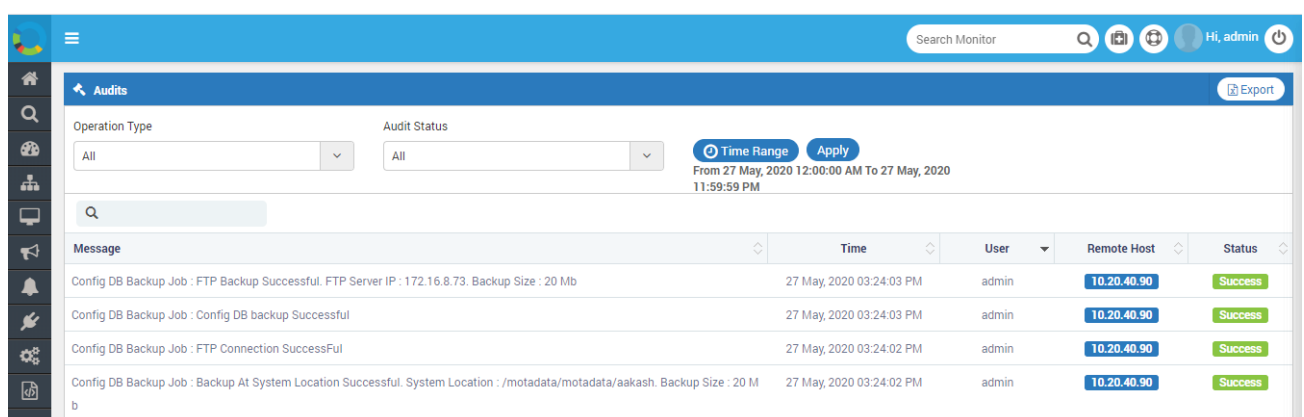


In case of FTP Backup

- Motadata uses the local backup and transfers it to remote server using FTP. This is an automatic process.
- SMS Action: SMS action can also be set, so notification will be sent via SMS

2.2.1 Result

Results can be validated using two ways, Email & SMS Notifications or audit Logs as shown below:

Audits Export

Operation Type: All ▼ Audit Status: All ▼ Time Range Apply
From 27 May, 2020 12:00:00 AM To 27 May, 2020 11:59:59 PM

Message	Time	User	Remote Host	Status
Config DB Backup Job : FTP Backup Successful. FTP Server IP : 172.16.8.73. Backup Size : 20 Mb	27 May, 2020 03:24:03 PM	admin	10.20.40.90	Success
Config DB Backup Job : Config DB backup Successful	27 May, 2020 03:24:03 PM	admin	10.20.40.90	Success
Config DB Backup Job : FTP Connection Successful	27 May, 2020 03:24:02 PM	admin	10.20.40.90	Success
Config DB Backup Job : Backup At System Location Successful. System Location : /motadata/motadata/aakash. Backup Size : 20 Mb	27 May, 2020 03:24:02 PM	admin	10.20.40.90	Success

2.3 Report DB backup

Step 1: Login to Motadata GUI and go to Schedulers.

Step 2: Click on current date or a future date

Step 3: Create a new Motadata Report DB Backup Job

Select Job Type

Q

Filter

Name	
Motadata Report DB Archival Job	+ Add
Monitor Maintenance Job	+ Add
Motadata Report DB Backup Job	+ Add
Business SLA Report Job	+ Add
Motadata DR Backup Job	+ Add
Auto Network Discovery Job	+ Add
Report Job	+ Add
NCM Device Backup Job	+ Add
Monitor Polling Issue Report Job	+ Add
Motadata FullText Data Retention Job	+ Add
Motadata Data Retention Job	+ Add
Topology Builder Job	+ Add
Motadata Config Backup Job	+ Add

Note: In the whole application, there can only be one scheduler configured for incremental and full type of backup each. More than one scheduler of taking full backup is not allowed. Similar is for Incremental Backup as well.

Step 4: Make the necessary configurations as shown below:

Create New Scheduler

Scheduler Name

Report DB Backup Job

Status

☒ Enable
 ☐ Disable

Scheduler Date

2020-05-31

Run Job At

00:00

Email Actions

email action

SMS Actions

sms action

Trap Actions

SNMP_Trap_V3

Backup Type

Full Backup

FTP Yes/No

Yes

FTP Server IP

172.16.8.73

FTP Server Port

21

FTP Server User Name

motadata

FTP Server Password

.....

System location

/root

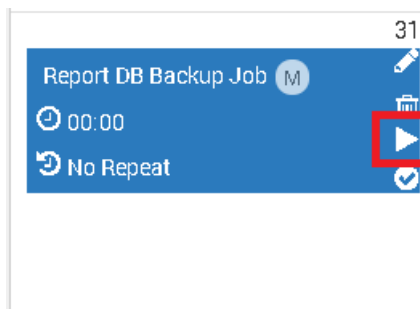
☒ off
 Repeat this job

Create

(FTP Configurations)

- **FTP On/Off:** Configure it ON if user wants to transfer the backup to remote location via FTP protocol. If configure YES, then add the port number, username and password of the FTP server
- **System Location:** Mention the desired path where user wants to store the backup on the server, where report DB is installed.
- **Email Action, SMS Action, and Trap Action:** Configure this action as created in the action module. Email and SMS Actions are mandatory.
- **Backup Type:** This decides the duration for which user wants to take the backup.

Step 5: Once the job is created you can run the job.



Step 6: Once backup is taken it will be stored on configured system location and FTP location.

```
root@ubuntu:/home/motadata# ls
2020-05-28_20:00_localhost_FULL_BACKUP_RPD1.tar  config_backup_May_27_2020_07:17:49_PM.config  config_backup_May_27_2020_09:53:35_PM.config
2020-05-28_20:05_localhost_ARCHIVAL_RPD8.tar    config_backup_May_27_2020_07:20:26_PM.config  config_backup_May_28_2020_10:06:20_AM.config
2020-05-28_20:10_localhost_ARCHIVAL_RPD9.tar    config_backup_May_27_2020_07:22:01_PM.config  config_backup_May_29_2020_03:12:30_PM.config
2020-05-29_11:16_localhost_FULL_BACKUP_RPD2.tar  config_backup_May_27_2020_08:00:39_PM.config  config_backup_May_29_2020_10:15:52_AM.config
2020-05-29_11:24_localhost_FULL_BACKUP_RPD3.tar  config_backup_May_27_2020_09:47:45_PM.config
compressed_bkp_May_27_2020_06:54:13_PM.zip      config_backup_May_27_2020_09:51:19_PM.config
```

2.3.1 Incremental Backup

- a) If backup repeated daily from the day after last backup till previous day is counted and stored.

For example,

Scheduled backup is done on 1st May, 2020

Last successful backup is done on 7th March, 2020

So, the Current duration for backup will be from 8th March' 2020 to 30th April' 2020

- b) If backup repeated monthly from the month after last backup till previous month is counted and stored.

For example,

Scheduled backup is taken on 1st May, 2020

Last successful backup is taken on till January, 2020

So, the Current duration for backup will be from February, 2020 to April, 2020

Note: If the tables are monthly partitioned or mixed partitioned then the backup configured to repeat daily will fail to stop backup of same data every day.

Similarly, if the tables are daily partitioned then the backup configured to repeat monthly will fail to stop backup of same data every month.

2.3.2 Full Backup

- This backup type can only be repeated monthly. Here, the whole backup of the active partitions till latest date and time will be taken. There are no constraints on the duration.

2.3.3 Result

Once the backup job has run, there are various way to check the status of the job and the taken backup. These ways are applicable for both full and incremental backup type. They are:

1. Audit logs

Audit log displays the status of the backup at system location and FTP server both with details.

Audits

Operation Type

All

Audit Status

All

Time Range

Apply

From 29 May, 2020 12:00:00 AM To 29 May, 2020 11:59:59 PM

Message	Time	User	Remote Host	Status
Job Execution Status : Executed Scheduler (Report DB Backup)	29 May, 2020 06:13:01 PM	admin	localhost	Success
Report DB Backup : Backup At System Location Successful. Backup Size : 86.27 MB	29 May, 2020 06:12:54 PM	admin	localhost	Success
Report DB Backup : FTP Backup Successful. Backup Size : 86.27 MB	29 May, 2020 06:12:54 PM	admin	localhost	Success
Job Execution Status : Start Executing Scheduler (Report DB Backup)	29 May, 2020 06:12:47 PM	admin	localhost	Success

2. Backup Restore logs

- On the server where clickhouse is installed, navigate to following path
/motadata/Clickhouse-Store/Report-Backup-Restore-log/
- Here check the Report-Backup-Restore-DEBUG.log showing the starting and ending of the backup job execution as highlighted below:

```

29-May-2020 04:49:15 PM DEBUG [MOTADATA/Report DB Backup Common Util]:SUCCESSFUL CLICKHOUSE CONNECTION
29-May-2020 04:49:15 PM DEBUG [BACKUP Report Db]:received args : 0 0
29-May-2020 04:49:15 PM DEBUG [BACKUP Report Db]:received args : 1 QgNOTNnK7nb1CKbsZgarZK1eLqNY1dqcsn540tCFMLxGKWAduS7fz8IzTmxvQ04p/Hlvrt916nB816DU722qbLAGdVOY3/1LTCLP2+KH73KWU23apT8
ty3JRrwxZKqGsbWt+16xt+0yV4Zw6tALAHkFPLSKnOKygl51pWZ1U80vF0N1abA5f1/0BHF7ypRAktSHF1A3q86ssqea3zsy4HHEH0J84LQhdTeV1ys5Pw1RR9JhXqYkMUNzWZ98dH8C3tde371IT0q3H/m30br9w0v7P8F0XXSp+isY0KkEse1
bPonwLm+Xw7z+4d27Lew9LanVXqEUVUWHX2LbQ76yZkd1q52RvKEdsVh10xt12xnbA2EFC1A82vQZP8T9RstnE3XG3R/C8EajwUlmMPT6vbIpcCRsS/527UAAeqKwub908KmZHH+u0uXmegfYeyYoZL+5Xh4w8Xg/glvulpzAS5KXTXMMJevg1eIo54
4PiXwyg1aPduCSHD90hD+H9JxcquxtFFJaJ/1rLmLnP/jM0uSuogQMrtfMj/6XSc7LC1/ZelqNmIBT/34FasrF9J6ZtoucWncLWucBncC1v9WxFTDLx80biRHGT18iar978pgRfdekBn8noLUTP50pdqzn5X679ghw1V90b5qImS5Y2dda12g
mZ8oerG1GBKyro7N+SSzy26FQSVeetfSBT00qgc1w28RLRTByZ1sV30tIRsk9TMwBUVfOTCe0lpX0c8L2MR2yH9J7tzc73z7mwcgv1F3YtC7Z12o3NXX1b2SRWpuP8MeiaCdo0LA40rwrRRR0L6r75LeER10df+qA+Aw12Mw51k/p
aE9YFMnet+N7y2bWwONV50betpLVfW/q2uDVKE/tv1e351Fut/7y8xdy1/n1TR6Np/jVz45BLZSgUwBrt9CclLx5Yfcusr0T8NUUfSV6wJDFCImcTpiYtW5YQ0BtyJ0knto/u8RW4W0SHih7b0N8jh+66f1cjm0I/gtuBBx8Tiyaf/nklo
hr683teXbzfs25s26W10w/AT/FjMqS12GgPrYAv60wPTI1B/vq5Znm97i+egBEjppUtIk4XVPKwJMGwX04GROWH8deXC3Nu491Q1yAlPkomoged8L7aEAYwUQZL1VUJIBvaIkts24ue64ED01Qr714s9S03ByM1scwMhN18/zX733Lz
baX0/4SLTf1HyruB19mTdSnfagqthdUDPBdfxMIRJ91rLP5PCInWCLCyw483nKTPuLuhN7v3Kd+4zVz/y0Jwi2r04P/z0Y2qaTY8s5R9vQpLCElytu+7LL7R25Sh251d+U0H66/bijXGa30vqcpY6E013Diz/0MwDU0TUzVeYapUUAZ1U5j+fI
u101s/b6VwM0Y/VXqzV0HCovzAbHP8=
29-May-2020 04:49:15 PM DEBUG [BACKUP Report Db]:backupMsg QgNOTNnK7nb1CKbsZgarZK1eLqNY1dqcsn540tCFMLxGKWAduS7fz8IzTmxvQ04p/Hlvrt916nB816DU722qbLAGdVOY3/1LTCLP2+KH73KWU23apT8ty3JRrwx
ZKqGsbWt+16xt+0yV4Zw6tALAHkFPLSKnOKygl51pWZ1U80vF0N1abA5f1/0BHF7ypRAktSHF1A3q86ssqea3zsy4HHEH0J84LQhdTeV1ys5Pw1RR9JhXqYkMUNzWZ98dH8C3tde371IT0q3H/m30br9w0v7P8F0XXSp+isY0KkEselePonwFL
Dm+Vwz7z+4d27Lew9LanVXqEUVUWHX2LbQ76yZkd1q52RvKEdsVh10xt12xnbA2EFC1A82vQZP8T9RstnE3XG3R/C8EajwUlmMPT6vbIpcCRsS/527UAAeqKwub908KmZHH+u0uXmegfYeyYoZL+5Xh4w8Xg/glvulpzAS5KXTXMMJevg1eIo54
4PiXwyg1aPduCSHD90hD+H9JxcquxtFFJaJ/1rLmLnP/jM0uSuogQMrtfMj/6XSc7LC1/ZelqNmIBT/34FasrF9J6ZtoucWncLWucBncC1v9WxFTDLx80biRHGT18iar978pgRfdekBn8noLUTP50pdqzn5X679ghw1V90b5qImS5Y2dda12g
mZ8oerG1GBKyro7N+SSzy26FQSVeetfSBT00qgc1w28RLRTByZ1sV30tIRsk9TMwBUVfOTCe0lpX0c8L2MR2yH9J7tzc73z7mwcgv1F3YtC7Z12o3NXX1b2SRWpuP8MeiaCdo0LA40rwrRRR0L6r75LeER10df+qA+Aw12Mw51k/paE9YFMn
et+N7y2bWwONV50betpLVfW/q2uDVKE/tv1e351Fut/7y8xdy1/n1TR6Np/jVz45BLZSgUwBrt9CclLx5Yfcusr0T8NUUfSV6wJDFCImcTpiYtW5YQ0BtyJ0knto/u8RW4W0SHih7b0N8jh+66f1cjm0I/gtuBBx8Tiyaf/nklohr683teX
Bzfs25s26W10w/AT/FjMqS12GgPrYAv60wPTI1B/vq5Znm97i+egBEjppUtIk4XVPKwJMGwX04GROWH8deXC3Nu491Q1yAlPkomoged8L7aEAYwUQZL1VUJIBvaIkts24ue64ED01Qr714s9S03ByM1scwMhN18/zX733LzbaX0/4SL
Tf1HyruB19mTdSnfagqthdUDPBdfxMIRJ91rLP5PCInWCLCyw483nKTPuLuhN7v3Kd+4zVz/y0Jwi2r04P/z0Y2qaTY8s5R9vQpLCElytu+7LL7R25Sh251d+U0H66/bijXGa30vqcpY6E013Diz/0MwDU0TUzVeYapUUAZ1U5j+fIu101s/b6
VwM0Y/VXqzV0HCovzAbHP8=
29-May-2020 04:49:15 PM DEBUG [BACKUP Report Db]:backupMessage {jobName=Report DB Backup Job, mail-server-sender-email=no-reply@motadata.com, source_host=172.16.9.70, ftp-server-ip=172.
16.73, system-location=/root, ftp-server-password=motadata, mail-server-host=smtpt.gmail.com, trap-context={\"16\":{\"security-level\":\"2\",\"privacy-protocol\":\"1\",\"auth-protocol\":\"1\",\"user-na
me\":\"root@motadata.com\",\"port\":\"162\",\"destination\":\"172.16.10.18\",\"private-password\":\"\", \"community\":\"\", \"version\":\"v3\", \"auth-password\":\"motadata\"}}, mail-server-port=405, mail-server-passwor
d=1a75y101w1l16j08t0a=, ftp-server-user=motadata, sas-context={\"http://172.16.0.78\": \"635510539\"}, plugin-id=motadata-report-db-backup-job, recipients=neha.cholera@motadata.com, star
times=2020-05-29 16:49:13, mail-server-security=ssl, ftp-server-port=21, mail-server-user=no-reply@motadata.com}

```

```
29-May-2020 04:49:19 PM DEBUG [BACKUP Report Db]:Last backup file :: /motadata/Clickhouse-Store/CLICKHOUSE-BACKUP/2020-05-29_16:49_localhost_FULL_BACKUP_RPD1.tar
29-May-2020 04:49:19 PM DEBUG [BACKUP Report Db]:connection login over ftp://172.16.8.73 successful
29-May-2020 04:49:19 PM DEBUG [MOTADATA/Report DB Backup Common Util]:Query : INSERT INTO tbl_action_audit (operation_type,done_by,event_date,timestamp,audit_context,audit_status,remote_host) VALUES('Report DB Backup Job','0','2020-05-29','2020-05-29 16:49:19','FTP Failed due to Error While Copying - Please check with FTP Administrator.','Failed','localhost')
29-May-2020 04:49:19 PM DEBUG [BACKUP Report Db]:Trying Backup At System Location
29-May-2020 04:49:19 PM DEBUG [BACKUP Report Db]:Saving Recent Backup to System Location.
29-May-2020 04:49:19 PM DEBUG [BACKUP Report Db]:Backup file name : /motadata/Clickhouse-Store/CLICKHOUSE-BACKUP/2020-05-29_16:49_localhost_FULL_BACKUP_RPD1.tar
29-May-2020 04:49:20 PM DEBUG [BACKUP Report Db]:File Copied Successfully to /root
29-May-2020 04:49:20 PM DEBUG [MOTADATA/Report DB Backup Common Util]:Query : INSERT INTO tbl_action_audit (operation_type,done_by,event_date,timestamp,audit_context,audit_status,remote_host) VALUES('Report DB Backup Job','0','2020-05-29','2020-05-29 16:49:20','Backup At System Location Successful. Backup Size : 85.36 MB','Success','localhost')
29-May-2020 04:49:20 PM DEBUG [BACKUP Report Db]:Query : INSERT INTO tbl_backup_job_detail values ('motadata-report-db-backup-job','Report DB Backup Job',toDateTime('2020-05-29 16:49:16'),toDateTime('2020-05-29 16:49:20'),'85.36 MB','0','/2020-05-29_16:49_localhost_FULL_BACKUP_RPD1.tar','null','success',toDate('2020-05-29'))
29-May-2020 04:49:20 PM DEBUG [BACKUP Report Db]:Restore DB backup rolled back successfully from clickhouse motadata directory
29-May-2020 04:49:20 PM DEBUG [BACKUP Report Db]:Configuration, FTP : true System Location : true
29-May-2020 04:49:20 PM DEBUG [BACKUP Report Db]:Status, FTP : false System Location : true
29-May-2020 04:49:20 PM DEBUG [MOTADATA/Report DB Backup Common Util]:SENDING EMAIL
29-May-2020 04:49:24 PM DEBUG [BACKUP Report Db]:SMS URL ::http://172.16.8.78
29-May-2020 04:49:24 PM DEBUG [BACKUP Report Db]:SMS MSG ::Report DB Backup Job$NEWLINEBackup Type : Full Backup$NEWLINEFile Name:/2020-05-29_16:49_localhost_FULL_BACKUP_RPD1.tar$NEWLINESize : 85.36 MB$NEWLINEStart Time : 2020-05-29 16:49:16$NEWLINEEnd Time : 2020-05-29 16:49:20$NEWLINEFTP Status : failed$NEWLINEBackup At System Location : /root
29-May-2020 04:49:24 PM DEBUG [BACKUP Report Db]:SMS recipients :neha.cholera@motadata.com
29-May-2020 04:49:24 PM DEBUG [MOTADATA/Report DB Backup Common Util]:SMS SMS Sent Successfully
Message : Report DB Backup Job
Backup Type : Full Backup
```

Note: To check if Email and SMS notifications are successfully sent, refer Report-Backup-Restore-NOTIFICATION.log

3. Clickhouse table 'tbl_backup_job_detail'

- This table contains the backup of the last successful backup for incremental type of backup only

```
SELECT *
FROM tbl_backup_job_detail
ORDER BY execution_start_time DESC
```

plugin_name	status	event_date	job_name	execution_start_time	execution_end_time	backup_size	backup_type	backup_file_name	sche
motadata-report-db-backup-job	success	2020-05-29	incremental	2020-05-29 15:35:32	2020-05-29 15:35:33	849.92 KB	1	/2020-05-29_15:35_localhost_INCREMENTAL_BACKUP_RPD1.tar	null

1 rows in set. Elapsed: 0.006 sec.

4. Email Notification in case of successful backup

N no-reply@motadata.com
Fri 5/29/2020 5:12 PM
To: neha.cholera@motadata.com

Hi User,
Please find the status report of the scheduler action executed in Motadata.
Job Name: "Report DB Backup"
Job Type: Full Backup of Report Db
File Name: /2020-05-29_17:12_localhost_FULL_BACKUP_RPD9.tar
Backup Time Range: 2020-05-29 to 2020-05-29
Backup Status: "Successful"

Backup started at: 2020-05-29 17:12:49
Job Completion timestamp: 2020-05-29 17:12:54
FTP IP: 172.16.8.73
Backup File transfer to FTP status: "successful"
Backup File Size: 86.27 MB

System Location: /root
Backup File transfer to System location status: "successful"
Backup File Size: 86.27 MB

Note: This is an automated message generated by Motadata. Please do not reply to this email. For any queries, reach out to your Motadata administrator.

Thank you!

3 RESTORE

3.1 Prerequisites of Report and Config Restore

- If Isof package is not installed we need to manually install it. Download the package from:
<https://motadata2016.s3.amazonaws.com/Motadata/7.6.000/Deliverables/Deliverables.zip>
- <https://motadata2016.s3.ap-south-1.amazonaws.com/Motadata/7.6.200/Deliverables/Deliverables.zip>
- Download using the above link and Unzip it (Deliverable.zip)
- After Extraction, take the respective package from the folder where, packages for both operating system will be available as mentioned:
 1. Ubuntu
 2. RHEL 7.7
- Place the required package at /opt on your server
- Go to /opt and run the below command for Ubuntu:


```
dpkg -i Isof_4.89+dfsg-0.1_amd64.deb
```
- Go to /opt and run the below command for RHEL:


```
rpm -i Isof-4.87-6.el7.x86_64.rpm
```
- Search for Clickhouse-Store.zip and Clickhouse-Store in first level of motadata folder. If it is available, delete the files using the below commands:


```
rm Clickhouse-Store.zip
```

```
rm -r Clickhouse-Store
```
- Download the new utility from deliverables
- 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
- Unzip Clickhouse-Store.zip
- Download the files ConfigDBRestoreScript.sh and motadata-config-db-restore-utility-1.0.jar from deliverables
- Create actions in motadata GUI with prefix CONFIG_RESTORE_EMAIL1/2/3/4 and CONFIG_RESTORE_SMS1/2/3/4 for receiving email and SMS notifications respectively.
- Take a configuration database backup which will be used for restoration.(Skip this if a previous backup file is available)

Step 1: Create a new folder with name 'configdbrestoration' at path **/motadata/motadata** in the motadata server.

Step 2: Place the downloaded files ConfigDBRestoreScript.sh and motadata-config-db-restore-utility-1.0.jar in this folder.

Also place the configuration backup file in this folder that needs to be restored.

3.2 Config DB Restoration

Step 1: Check in 'configdbrestoration' folder for the below three necessary files

- ConfigDBRestoreScript.sh
- Motadata-config-db-restore-utility-1.0.jar
- Backup file in .config format

Step 2: Stop motadata service by running the below command

service motadata stop

Step 3: Go to /motadata/motadata/configdbrestoration folder.

Step 4: Run the below command

./ConfigDBRestoration.sh

The configuration DB will be restored.

Step 4: Restart the motadata service by running the below command

Service motadata start

These complete steps will help to restore configuration database for motadata server.

3.2.1 Result

Backup can be successfully validated using the Logs as below:

```
27-May-2020 07:26:39 PM INFO [Restore Config Util]:File picked for backup : /motadata/motadata/configdbrestoration/config_backup_May_27_2020_07:22:01_PM.config
27-May-2020 07:26:39 PM INFO [Restore Config Util]:Starting H2 Server
27-May-2020 07:26:40 PM INFO [Restore Config Util]:Fetching DB Records
27-May-2020 07:26:41 PM INFO [Restore Config Util]:Fetching H2 Connection
27-May-2020 07:26:41 PM INFO [Restore Config Util]:TraceOrgNotificationRecipients(emailRecipients=nirav.more@motadata.com,, urlWiseSms={http://172.16.8.78-9724314321})
27-May-2020 07:26:41 PM INFO [Restore Config Util]:Backup Existing Data
27-May-2020 07:26:42 PM INFO [Restore Config Util]:Fetching table names to restore
27-May-2020 07:26:55 PM INFO [Restore Config Util]:Truncate and reload tables
27-May-2020 07:26:55 PM INFO [Restore Config Util]:TraceOrgNotificationRecipients(emailRecipients=nirav.more@motadata.com,, urlWiseSms={http://172.16.8.78-9724314321})
27-May-2020 07:26:59 PM INFO [Restore Config Util]:SMS SMS Sent Successfully
Message : Config DB Restoration job completed successfully
Recipients : 9724314321
27-May-2020 07:26:59 PM INFO [Restore Config Util]:SMS SMS Action Response ::[Status=1, response-code=200, page-size=1184, url-content=<!DOCTYPE html><html><head><meta charset=utf-8><me
27-May-2020 07:26:59 PM INFO [Restore Config Util]:DB Restoration completed successfully
```

3.3 Report DB Restore

Step 1: Make sure the CLICKHOUSE-RESTORE folder is available in motadata/Clickhouse-Store. If not, create a new folder named as 'CLICKHOUSE-RESTORE'

Step 2: Copy the desired backup file into CLICKHOUSE-RESTORE. Please check that the below files should be present in the Clickhouse-Store

Also put these files in Clickhouse-Store and give permission to the below 3 files using the below command:

For example: `chmod 775 ReportDBBackupRestoration.sh`

- `ReportDBBackupRestoration.sh`
- `TraceOrgReportDBRestoreConfigUtility-1.0`
- `motadata-conf.yml`

The `motadata-conf.yml` file will have below details:

For example

```
- host: '172.16.8.73'
- user: 'root'
- password: 'motadata'
```

Note: Here, host refers to config db host.

Step 3: Mail / sms will get triggered if its prefix is `RPD_BKP_EMAIL1/2/3/4` or `RPD_BKP_SMS1/2/3/4`

Step 4: For restoration, just take ssh of the desired server and run the below script after navigating to the Clickhouse-Store in which the file is present:

`motadata/Clickhouse-Store# ./ReportDBBackupRestoration.sh`

3.4 Result

```
Last login: Fri May 29 17:05:06 2020 from 10.20.40.90
root@ubuntu:~# cd /motadata/Clickhouse-Store
root@ubuntu:/motadata/Clickhouse-Store# ls
CLICKHOUSE-ARCHIVAL  log                                     ReportDbRestore
CLICKHOUSE-BACKUP    motadata-conf.yml                    TraceOrgReportDBArchivalPlugin.jar
ClickhouseBackup.sh  Report-Backup-Restore-log            TraceOrgReportDBBackupPlugin.jar
CLICKHOUSE-RESTORE   ReportDbArchival.sh                  TraceOrgReportDBRestoreConfigUtility-1.0.jar
ClickhouseRestore.sh ReportDBBackupRestoration.sh
root@ubuntu:/motadata/Clickhouse-Store# chmod 775 ReportDBBackupRestoration.sh
root@ubuntu:/motadata/Clickhouse-Store# ./ReportDBBackupRestoration.sh
root@ubuntu:/motadata/Clickhouse-Store# SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder".
SLF4J: Defaulting to no-operation (NOP) logger implementation
SLF4J: See http://www.slf4j.org/codes.html#StaticLoggerBinder for further details.
Looking for backup in : /motadata/Clickhouse-Store/CLICKHOUSE-RESTORE
Total 1 backup files found
Backup started for file : /motadata/Clickhouse-Store/CLICKHOUSE-RESTORE/2020-05-29_15:35_localhost_INCREMENTAL_BACKU
P_RPD1.tar At Mon Jun 01 20:56:08 IST 2020
New owner of /motadata/clickhouse/data/default/tbl_action_audit/detached/202005_1_84_22 is clickhouse
log4j:WARN No appenders could be found for logger (org.apache.http.client.protocol.RequestAddCookies).
log4j:WARN Please initialize the log4j system properly.
New owner of /motadata/clickhouse/data/default/tbl_action_audit/detached/202005_85_85_0 is clickhouse
New owner of /motadata/clickhouse/data/default/tbl_action_audit/detached/202005_86_86_0 is clickhouse
New owner of /motadata/clickhouse/data/default/tbl_action_audit/detached/20200411_20200411_1510_1510_0 is clickhou
se
New owner of /motadata/clickhouse/data/default/tbl_action_audit/detached/20200411_20200411_1512_1512_0 is clickhou
se
New owner of /motadata/clickhouse/data/default/tbl_log_api_sorted_error_log/detached/20200420_20200420_1_6_1 is cl
ickhouse
New owner of /motadata/clickhouse/data/default/tbl_log_api_sorted_service_log/detached/20200428_20200428_3_3_0 is
clickhouse
New owner of /motadata/clickhouse/data/default/tbl_log_api_sorted_service_log/detached/20200428_20200428_4_4_0 is
clickhouse
Backup completed for file : /motadata/Clickhouse-Store/CLICKHOUSE-RESTORE/2020-05-29_15:35_localhost_INCREMENTAL_BAC
KUP_RPD1.tar At Mon Jun 01 20:56:10 IST 2020
Motadata configurations : {password=motadata, host=172.16.9.70, user=root}
Process id : 38359
Connection : jdbc:h2:tcp://172.16.9.70/configdb;DATABASE_TO_UPPER=false;IGNORECASE=TRUE;MODE=PostgreSQL;AUTO_RECONNECT=TRUE;MV_STORE=FALSE;MVCC=FALSE
DEBUG: JavaMail version 1.5.2
```

4 REPORT DB ARCHIVAL

The document helps user to restore the Report DB Backup.

4.1 Prerequisites

1. Search for Clickhouse-Store.zip and Clickhouse-Store in first level of motadata folder. If it is available, delete the files using the below commands

```
rm Clickhouse-Store.zip
```

```
rm -r Clickhouse-Store
```

2. Download the new utility from the deliverables
3. Upload the zip file in first level motadata folder.

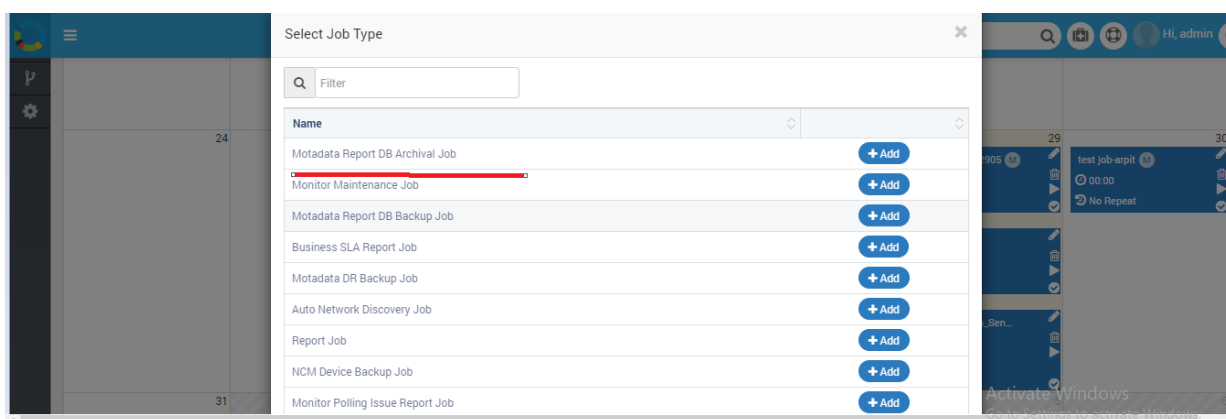
- In standalone server, upload the utility in master server.
- In distributed mode server, upload the utility in data node server. No need to upload file in master server
- 4. Unzip Clickhouse-Store.zip
- 5. Motadata Report DB Archival Job plugin should be present
- 6. Edit Feature will not work here, so new job needs to be created every time.
- 7. Report DB Archival Job Plugin.

4.2 Report DB Archival

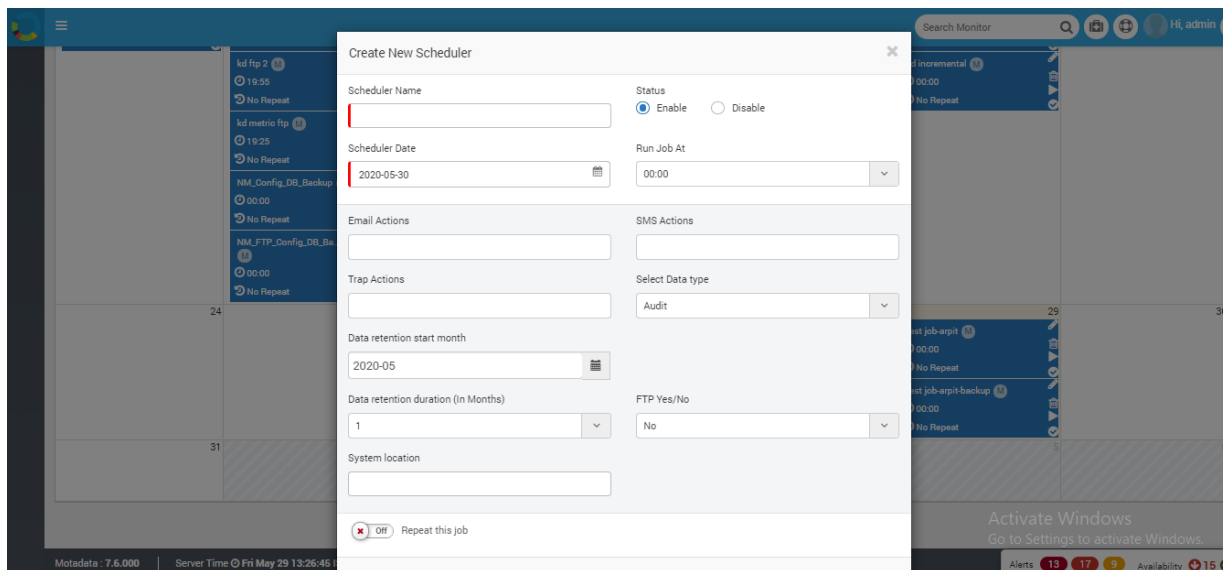
Step 1: Login to Motadata GUI and go to Schedulers.

Step 2: Click on the desired current date or a future date

Step 3: Select Motadata Report DB Archival Job.

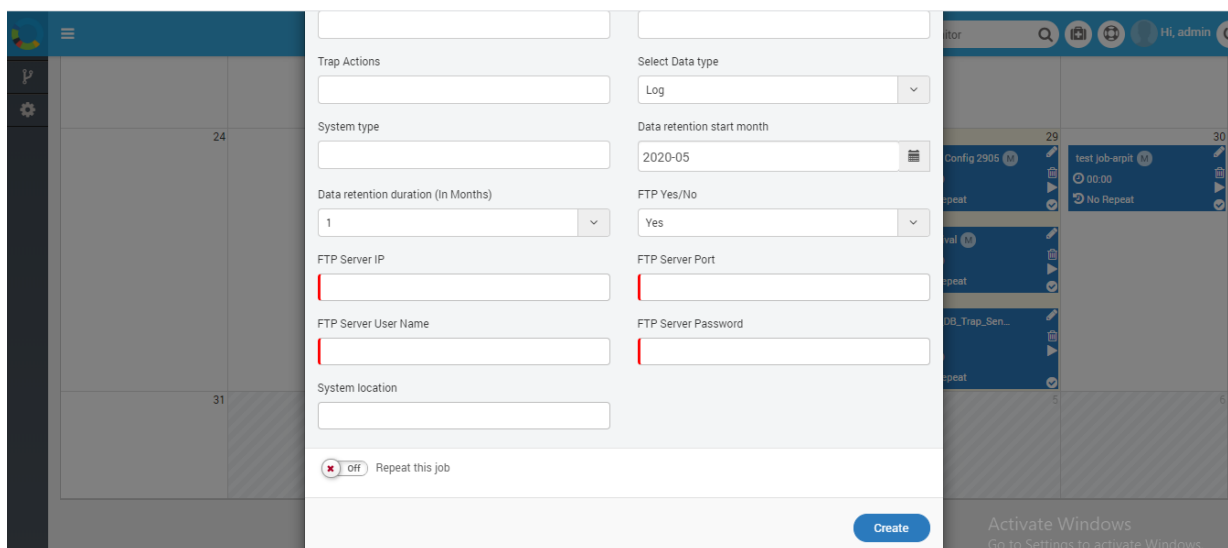


Step 4: Click on Add which will open the screen with the below shown fields:



Step 5: For taking the backup locally select FTP = No.

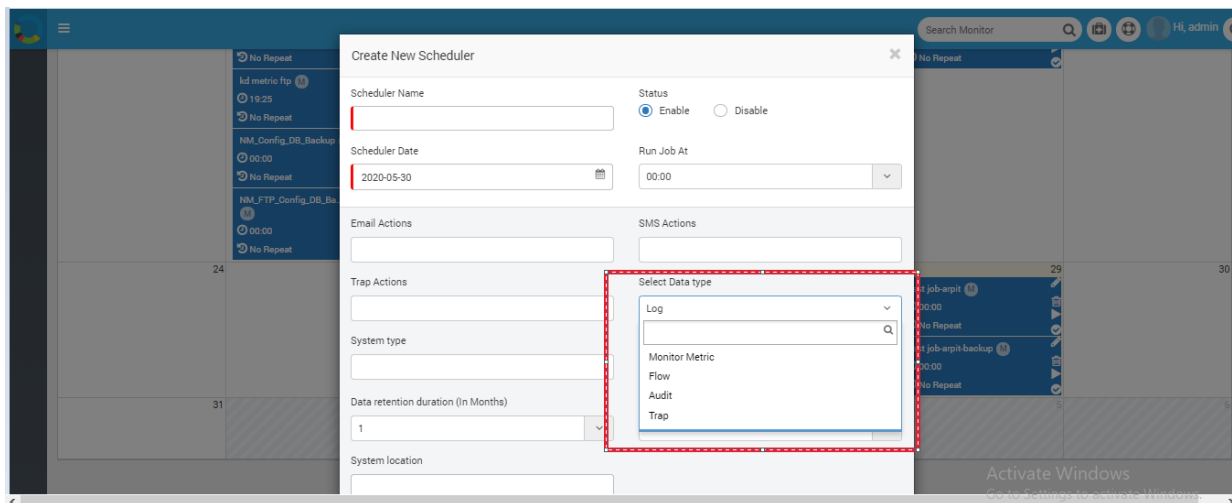
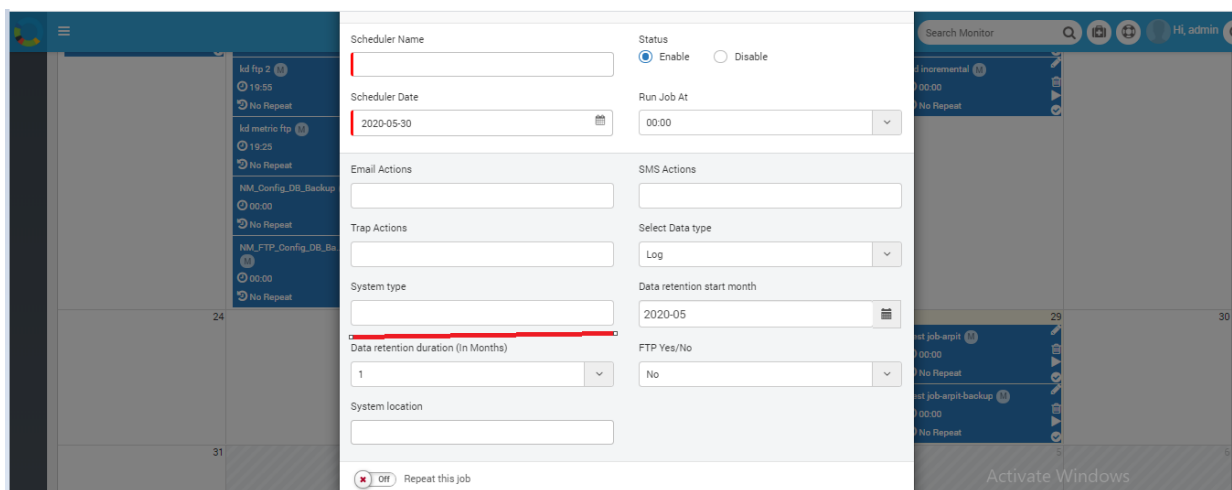
Step 6: To take backup on FTP server, fill all the details as shown below:



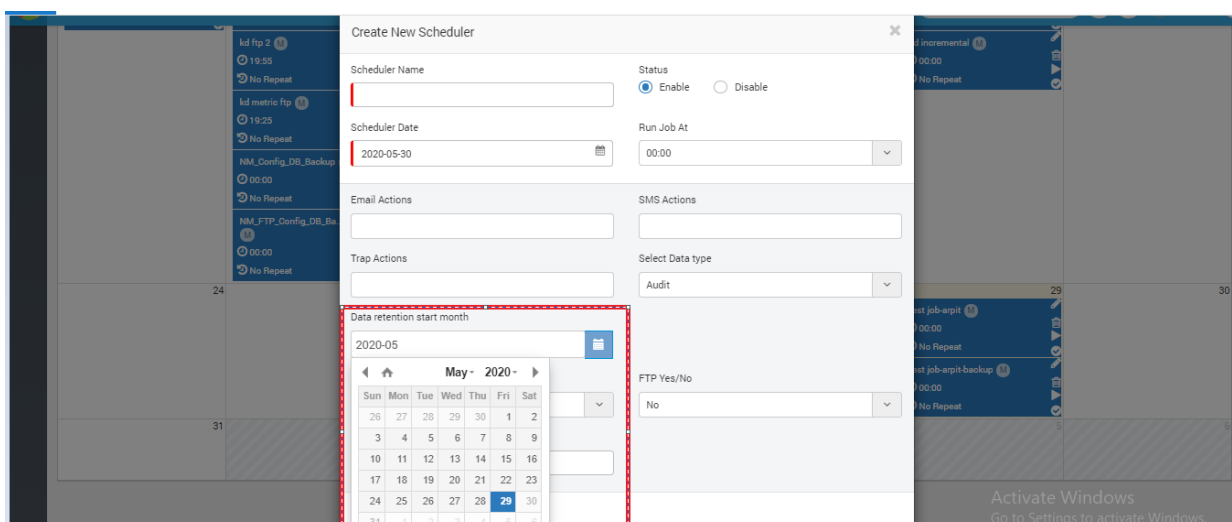
- There are 2 data types which are type wise where we need to select the system type.

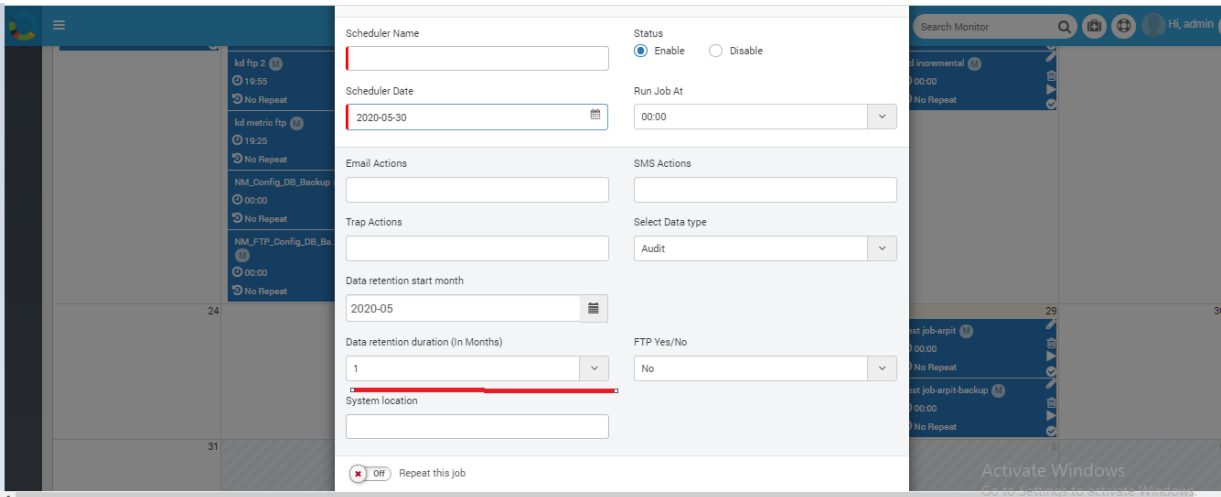
1. Log (Type Wise)
2. Flow (Type Wise)

- Here, Monitor Metric, Audit and Trap does not have Specific system types

Step 7: Select System Retention start month from the date from which you want to take archival.



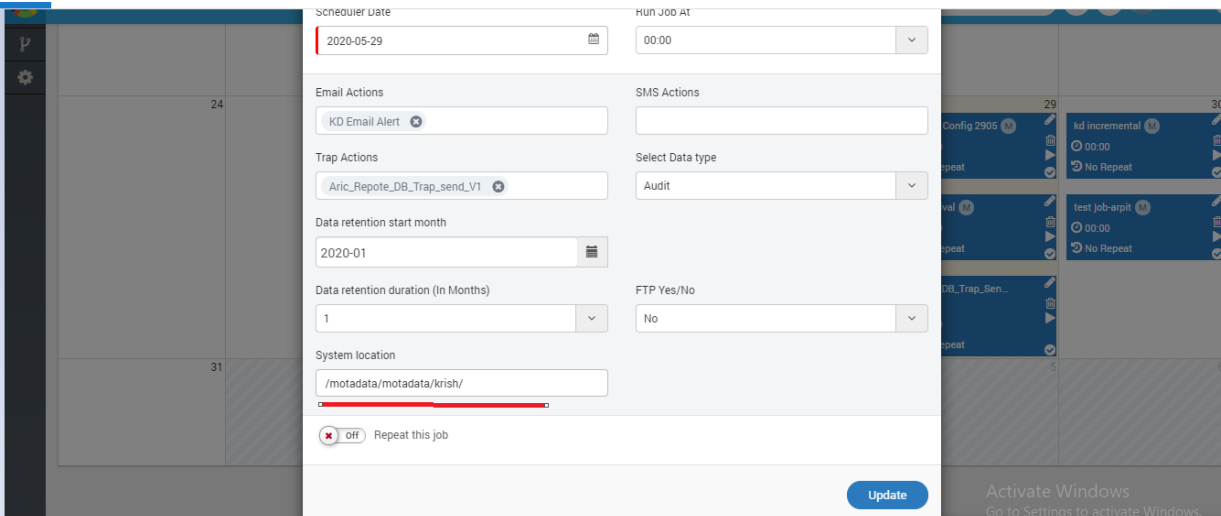


Step 8: Select retention duration: It will deduct the month from the current date.
For example,

If start date is 1st of Jan 2020 and retention is 1

Then, it will take archival from Jan to (Current date -1 Month)

Step 9: Give the system location where archival file is to be saved



Step 10: Run the job for immediate archival otherwise, the job will run at its scheduled time.

- It will be saved in the below location in case of local:

```
root@ubuntu:/motadata/clickhouse-Store# cd CLICKHOUSE-RESTORE/
root@ubuntu:/motadata/clickhouse-Store/CLICKHOUSE-RESTORE# ls
2020-05-29_15:35_localhost_INCREMENTAL_BACKUP_RPD1.tar RESTORE
root@ubuntu:/motadata/clickhouse-Store/CLICKHOUSE-RESTORE#
```

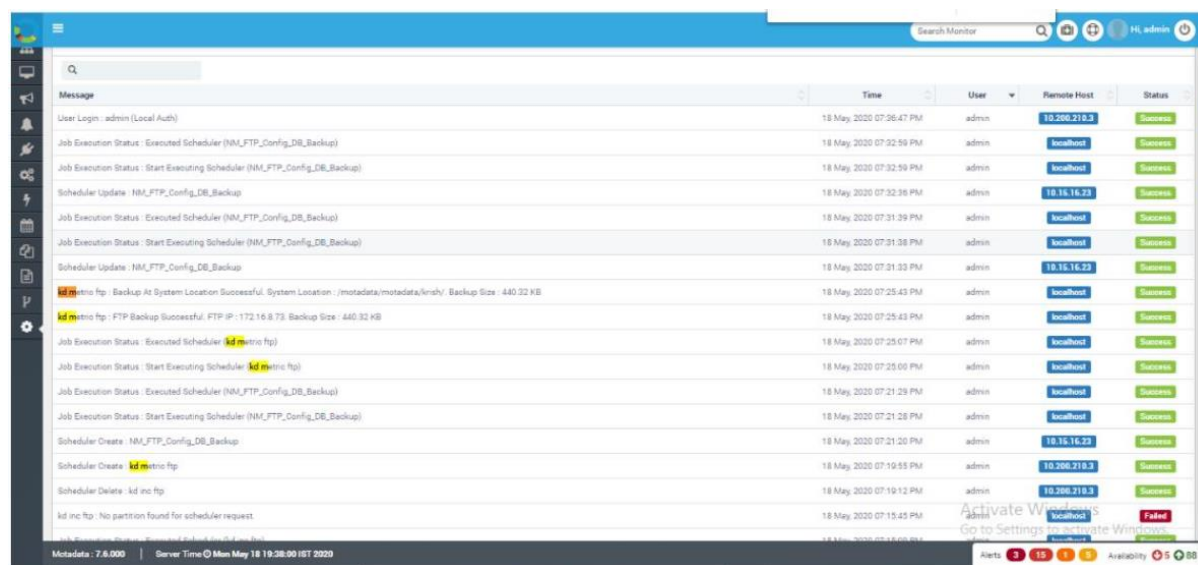
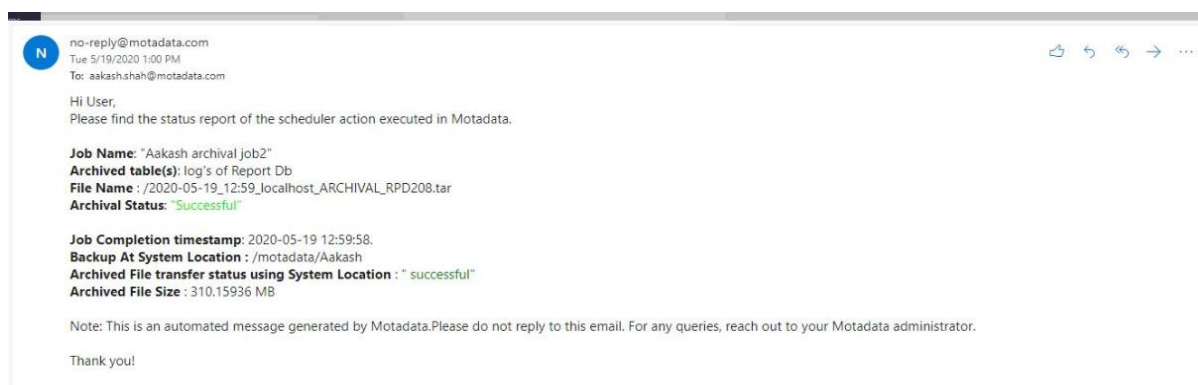

- IF FTP is was selected, it will get saved in the **home/motadata** directory of the FTP server by default:

```
oot@ubuntu:/home/motadata# ls
2020-05-28_20:00_localhost_FULL_BACKUP_RPD1.tar  config_backup_May_27_2020_07:22:01_PM.config
2020-05-28_20:05_localhost_ARCHIVAL_RPD8.tar    config_backup_May_27_2020_08:00:39_PM.config
2020-05-28_20:10_localhost_ARCHIVAL_RPD9.tar    config_backup_May_27_2020_09:47:45_PM.config
2020-05-28_11:16_localhost_FULL_BACKUP_RPD2.tar  config_backup_May_27_2020_09:51:10_PM.config
2020-05-29_11:24_localhost_FULL_BACKUP_RPD3.tar  config_backup_May_27_2020_09:53:35_PM.config
ompressed_bkp_May_27_2020_06:54:13_PM.zip        config_backup_May_28_2020_10:06:20_AM.config
onfig_backup_May_27_2020_07:17:49_PM.config      config_backup_May_29_2020_03:12:30_PM.config
onfig_backup_May_27_2020_07:20:26_PM.config      config_backup_May_29_2020_10:15:52_AM.config
oot@ubuntu:/home/motadata#
```

- Email and SMS actions can be set to receive notification



4.3 Result

After successful archival, mail notification and logs will be seen as below:



5 ARCHIVAL RESTORATION

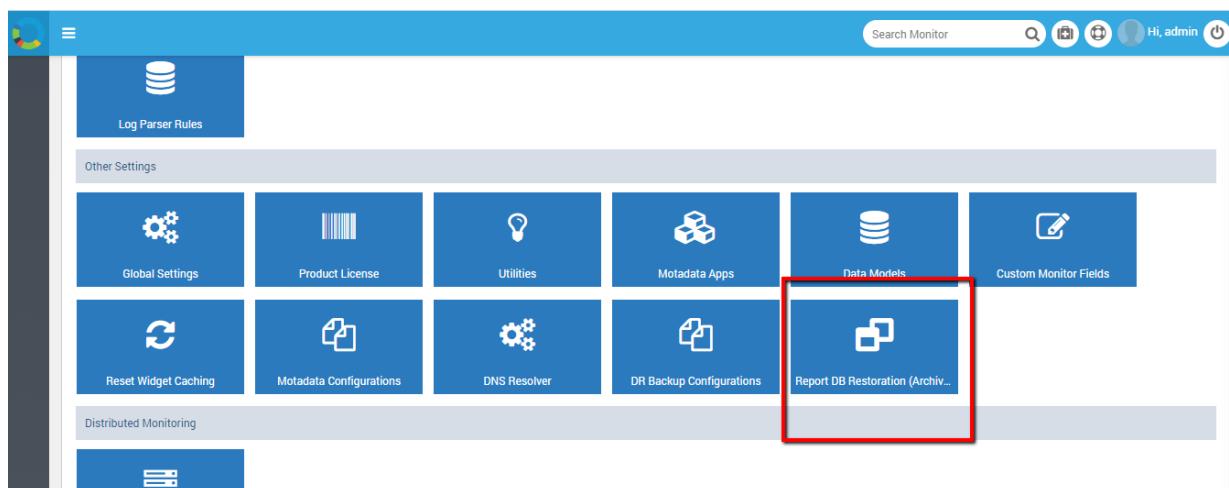
5.1 Pre-requisite

- [ReportDBArchivalRestoration.sh](#)  [restore-report-db-archival-1.0.jar](#)  must be there in Click-house Store Folder.
- Give Permission to both files by using below commands respectively:
`chmod 777 ReportDBArchivalRestoration.sh`
`chmod 777 restore-report-db-archival-1.0.jar`
- Archival Job must be running for which, the data restoration has to be done.

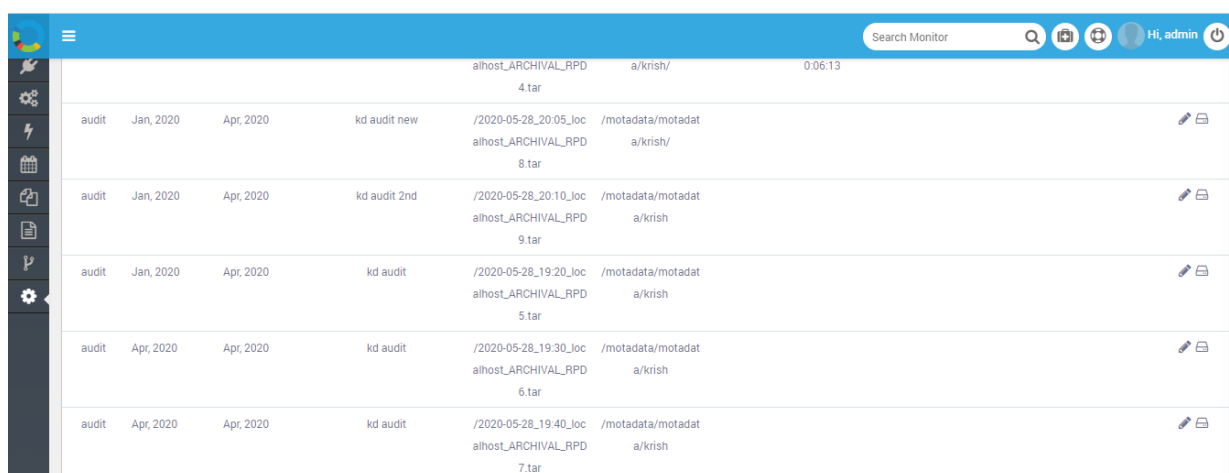
5.2 Steps for the Restoration

Step 1: Login in to Motadata

Step 2: Go to **Admin > Other Settings > Report DB Restoration** as shown below:



- It will show the list of restored logs



The screenshot shows the 'Report DB Restoration (Archiv...)' page. It displays a table with the following columns: audit, Jan, 2020, Apr, 2020, kd audit new, /2020-05-28_20:05_loc, /motadata/motadat, and a/krish/. The table contains 6 rows of data.

audit	Jan, 2020	Apr, 2020	kd audit new	/2020-05-28_20:05_loc	/motadata/motadat	a/krish/
audit	Jan, 2020	Apr, 2020	kd audit new	/2020-05-28_20:05_loc	/motadata/motadat	a/krish/
audit	Jan, 2020	Apr, 2020	kd audit 2nd	/2020-05-28_20:10_loc	/motadata/motadat	a/krish
audit	Jan, 2020	Apr, 2020	kd audit	/2020-05-28_19:20_loc	/motadata/motadat	a/krish
audit	Apr, 2020	Apr, 2020	kd audit	/2020-05-28_19:30_loc	/motadata/motadat	a/krish
audit	Apr, 2020	Apr, 2020	kd audit	/2020-05-28_19:40_loc	/motadata/motadat	a/krish

- Click on the Restore button as shown below

≡

Search Monitor

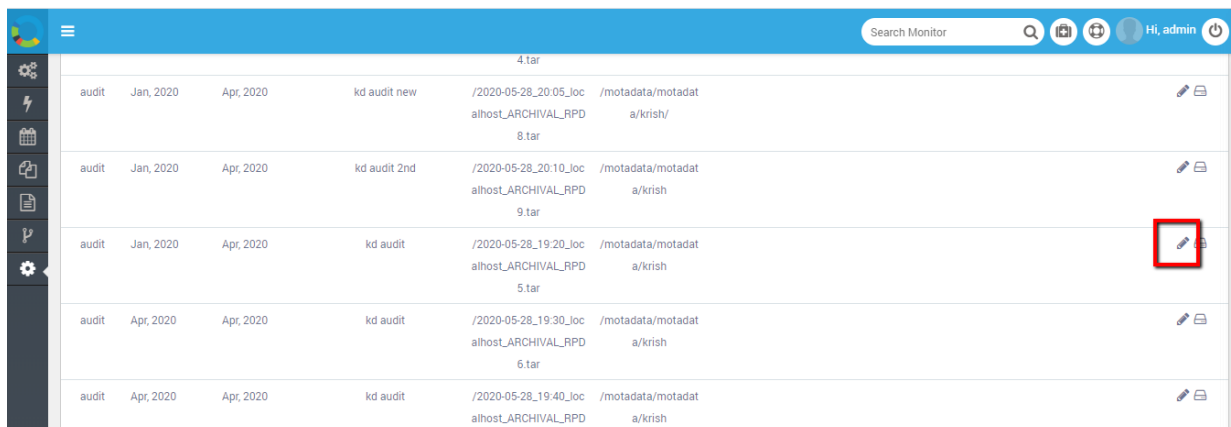
Hi, admin






					alhost_ARCHIVAL_RPD	a/krish/	0:06:13		
					4.1tar				
audit	Jan, 2020	Apr, 2020	kd audit new	/2020-05-28_20:05_loc	/motadata/motadat				
					alhost_ARCHIVAL_RPD	a/krish/			
					8.1tar				
audit	Jan, 2020	Apr, 2020	kd audit 2nd	/2020-05-28_20:10_loc	/motadata/motadat				
					alhost_ARCHIVAL_RPD	a/krish			
					9.1tar				
audit	Jan, 2020	Apr, 2020	kd audit	/2020-05-28_19:20_loc	/motadata/motadat				
					alhost_ARCHIVAL_RPD	a/krish			
					5.1tar				
audit	Apr, 2020	Apr, 2020	kd audit	/2020-05-28_19:30_loc	/motadata/motadat				
					alhost_ARCHIVAL_RPD	a/krish			
					6.1tar				
audit	Apr, 2020	Apr, 2020	kd audit	/2020-05-28_19:40_loc	/motadata/motadat				
					alhost_ARCHIVAL_RPD	a/krish			
					7.1tar				

- Once the file is restored, there will be two scenarios, Either the data will be restored or will fail

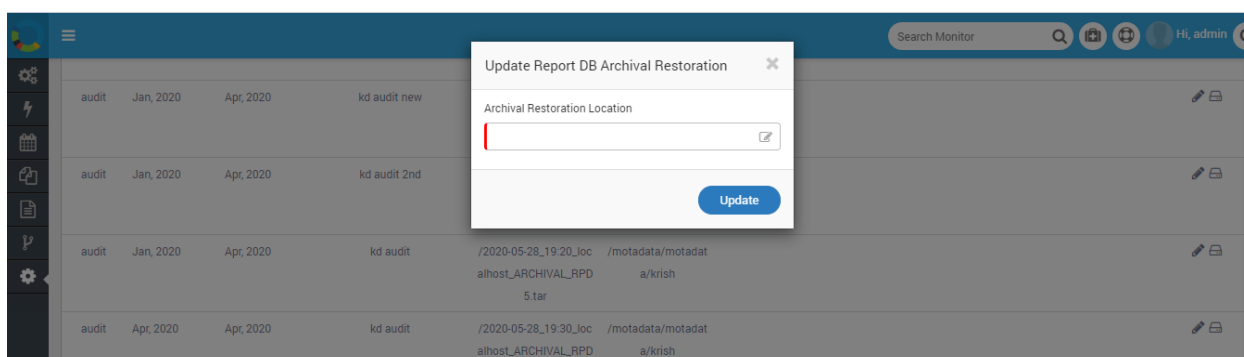
(Reasons for failure can be multiple scenarios like file not available or Data Discrepancy as shown in below)

- If the back-up is stored at FTP location, a back-up of it should be taken at specified location and that location needs to be updated as shown below:



4.tar						
audit	Jan, 2020	Apr, 2020	kd audit new	/2020-05-28_20:05_loc alhost_ARCHIVAL_RPD 8.tar	/motadata/motadat a/krish/	
audit	Jan, 2020	Apr, 2020	kd audit 2nd	/2020-05-28_20:10_loc alhost_ARCHIVAL_RPD 9.tar	/motadata/motadat a/krish	
audit	Jan, 2020	Apr, 2020	kd audit	/2020-05-28_19:20_loc alhost_ARCHIVAL_RPD 5.tar	/motadata/motadat a/krish	
audit	Apr, 2020	Apr, 2020	kd audit	/2020-05-28_19:30_loc alhost_ARCHIVAL_RPD 6.tar	/motadata/motadat a/krish	
audit	Apr, 2020	Apr, 2020	kd audit	/2020-05-28_19:40_loc alhost_ARCHIVAL_RPD	/motadata/motadat a/krish	

- Now, update the location where the copied back-up is stored as shown below:



Update Report DB Archival Restoration

Archival Restoration Location

Update

- Now, update the new location and do a restore.
- Once you restore the data, then data will append in the respected table.
- Restoration related log are stored in Click-house store Folder in Report-Backup-Restore-log.

Keep in touch

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About Motadata

Mindarray Systems Pvt. Ltd. a global IT product company, offers state of the art affordable yet powerful product suite - Motadata consisting of Network Management & Monitoring, Log & Flow Management, and IT Service Management Platforms. The platform empowers both IT administrators and CXOs to analyze, track & resolve IT operational issues by effectively monitoring various systems and devices from multiple vendors through a unified and centralized dashboard.

Motadata is industry's first IT ops solution that truly correlates the metric, flow and log events and turns them into actionable insights. Our global customers from Telecom, Government and Enterprise domain, rely on Motadata for proactively monitor their network infrastructure.

For more information, visit www.motadata.com.

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