S3 backup : EDL

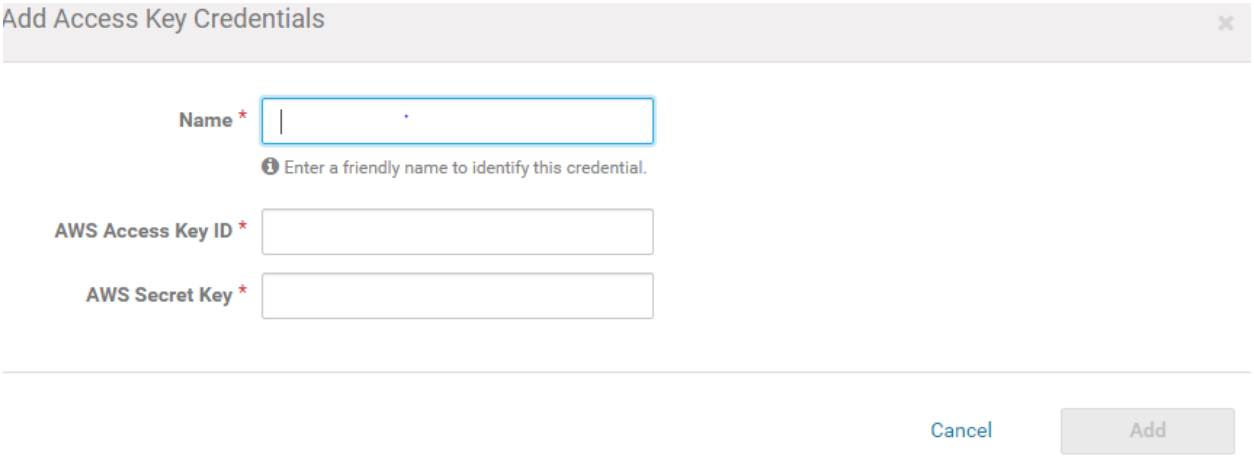
What application team needs to provide to EDL admin:

- AWS Access Key ID &
- AWS Secret Key
- Container name
- Databases and: Table name that needs to be backed up.
- Schedule time : Daily(Time) / weekly (Day & Time)

How to get above mentioned things, Mike can help Application team to get these.

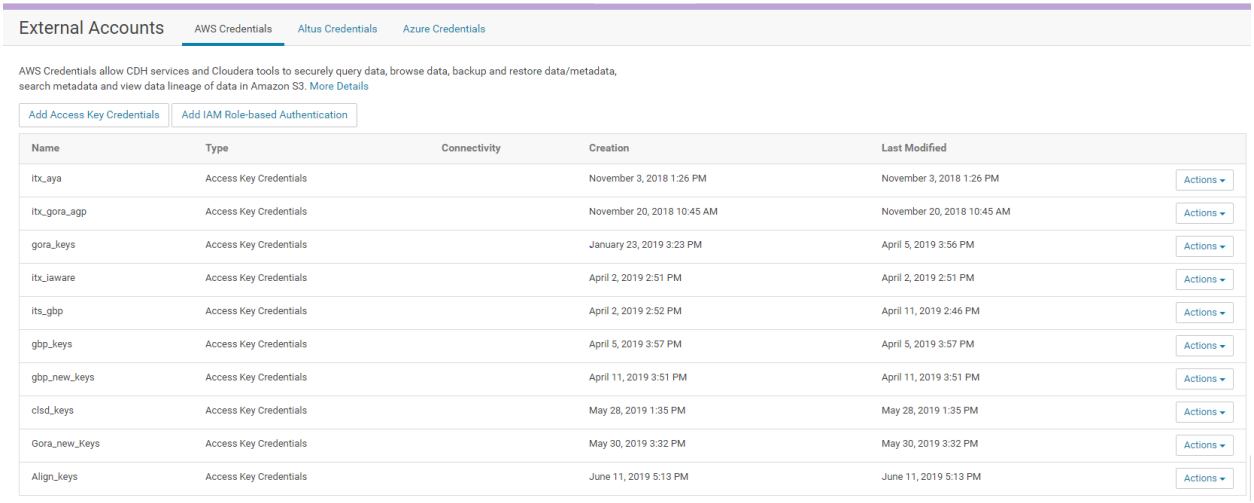
Go to Cloudera Manager in respective environment from where the backup needs to happen.

Cloudera → Administration → External Accounts → Click on Add access key Credentials



Name: Application code_ keys . Example: clsd_keys

Put the key id and secret key and click on ADD. Once added you can see the key in list like below:

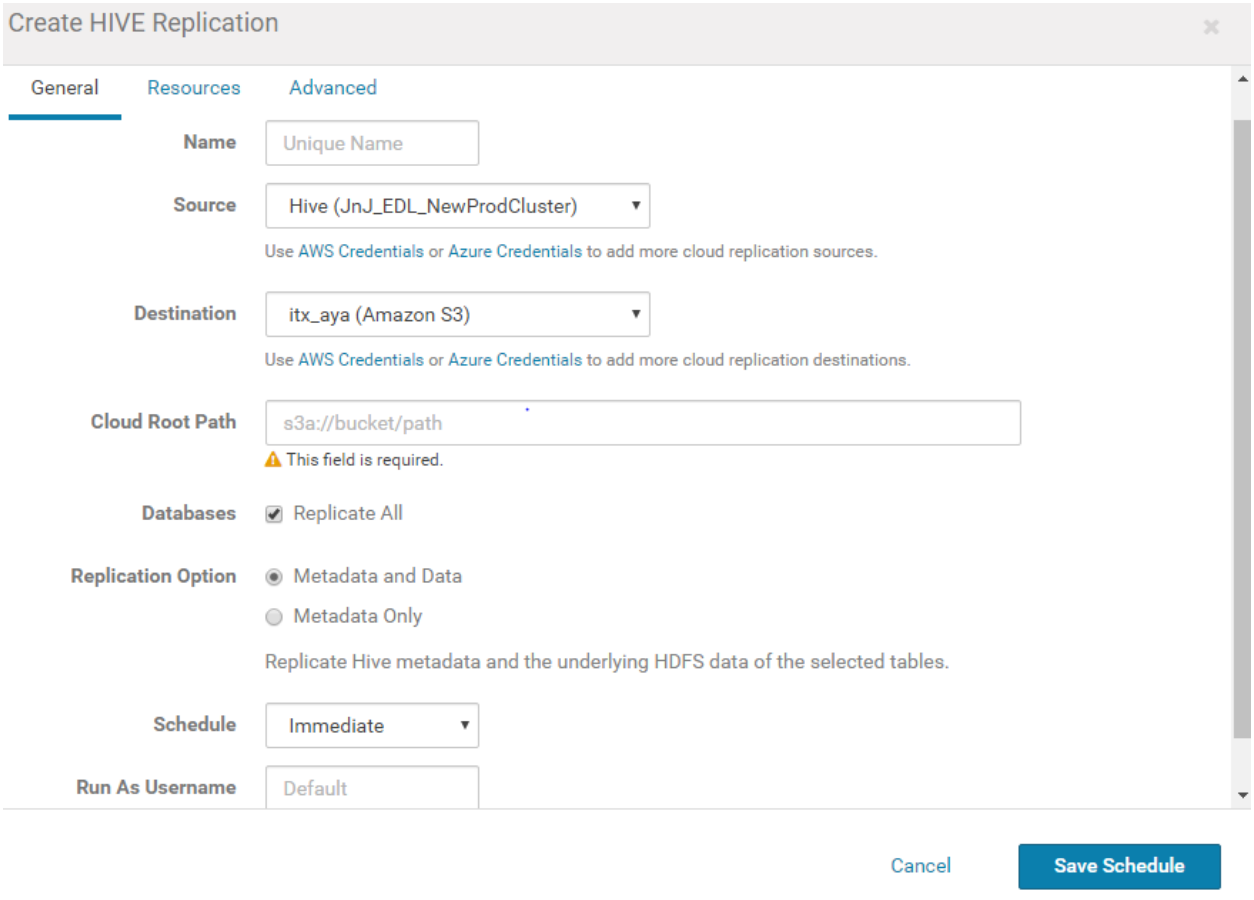


Once the key is visible here that means the key is successfully added To EDL Cluster.

Now We need list of Database and table name that needs to be backed up.

Backup and Disaster Recovery :

Cloudera Manager → Backup → Replication Schedules → Create Schedule → Hive replication



Name: weekly_hive_clsd_bkp or daily_hive_clsd_bkp

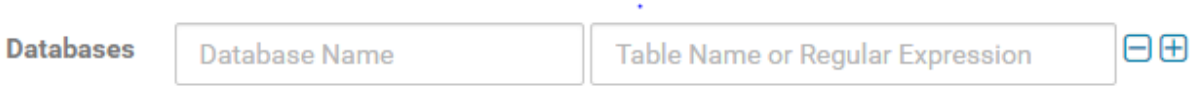
Source: Will remain same ass in Screenshot. EDL cluster (only when backing up not in restore process)

Destination: Will be the key which you added above in External accounts, Where you want the backup to be pushed on S3.

Cloud root path : s3a://its-edl-cls-backup-prd/current_backups/

In the above path : its-edl-cls-backup-prd changes to the s3 bucket name that application team gave. Everything remains the same. Please do not change anything other then container name.

Now untick the Replication all box. Then it will display boxes like below :



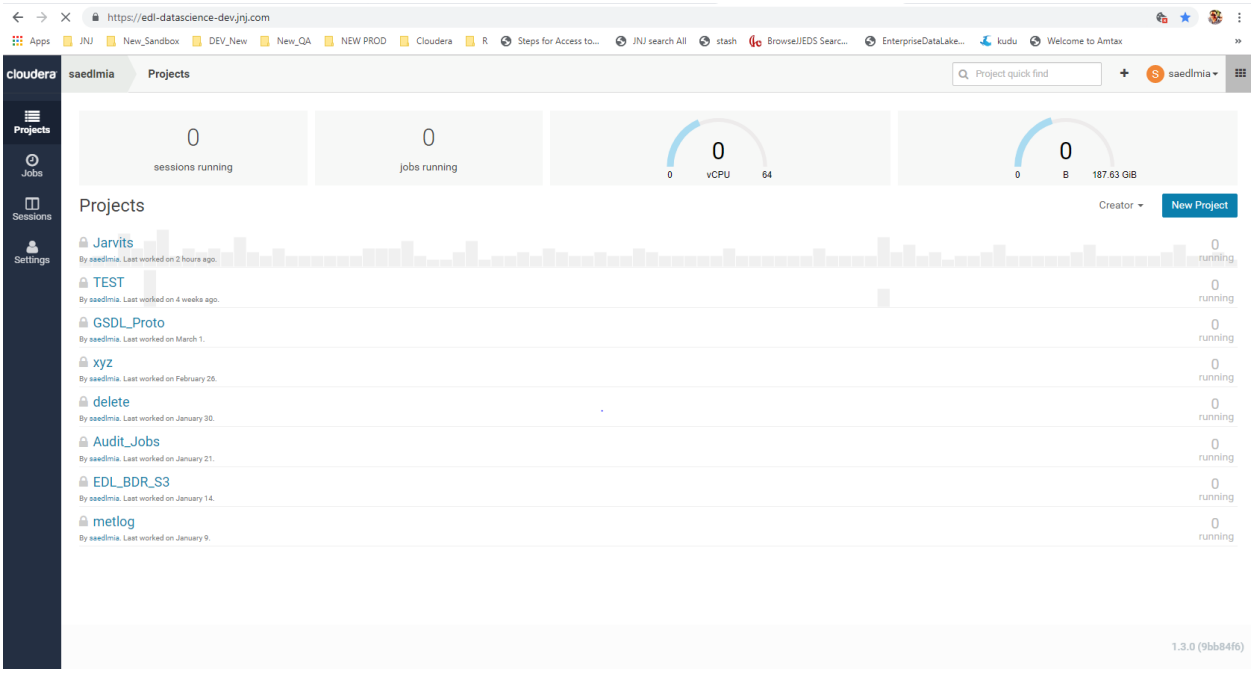
For each table you have to mention database and table name, keep adding it from plus sign on the left.

Run as username: hdfs

No other changes are needed except mentioned above. As soon as you save schedule the job will run to copy files from cluster to S3. You can check it in Running commands on Cloudera manager.

Scheduling the BDR job to run on daily or weekly : CDSW

1: Login to CDSW with SAEDLMIA , if you do not have password please connect Ajai or Sharmila.



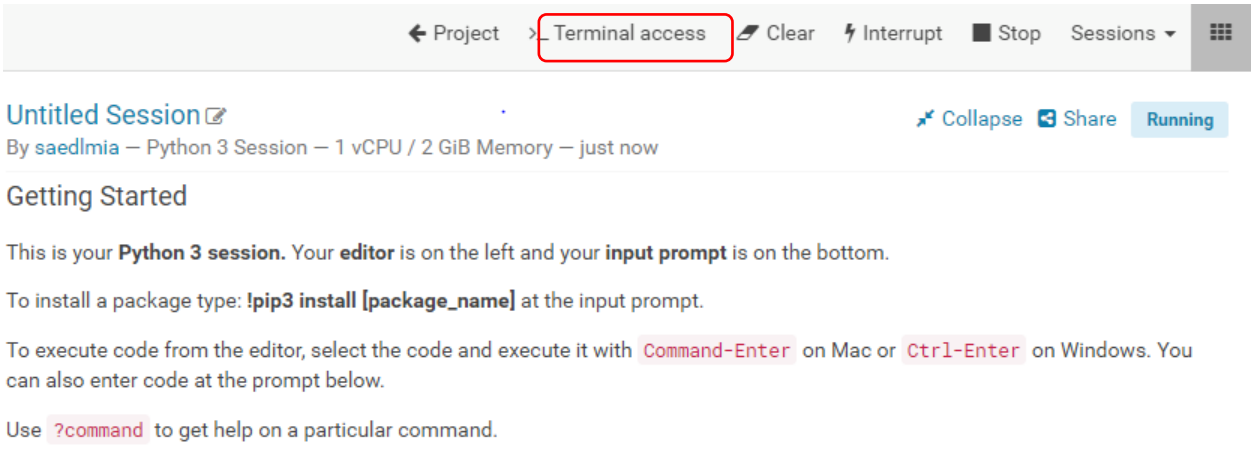
1: Create python script to make new current folders in the S3 container and does not over write the old ones.

Open workbench

Select smallest kernel available and launch session

Once the session is ready

Click on terminal access



Run below commands in terminal :

Ls

And you can see :

cdsw@npjq3i3bf6m2bcxt:~$ ll

total 32

drwxrwx--x 8 cdsw cdsw 4096 Feb 7 20:47 aiops

-rwxrwx--x 1 cdsw cdsw 1367 Jan 2 21:34 analysis.py

drwxrwx--x 2 cdsw cdsw 4096 Apr 11 19:00 junk

-rwxrwx--x 1 cdsw cdsw 378 Jan 2 21:34 README.md

drwxrwx--x 2 cdsw cdsw 4096 Jan 2 21:34 seaborn-data

-rwxrwx--x 1 cdsw cdsw 422 Jan 31 03:04 Untitled1.ipynb

-rwxrwx--x 1 cdsw cdsw 881 Jan 31 03:08 Untitled.ipynb

-rwxrwx--x 1 cdsw cdsw   61 Apr 10 13:16 Untitled.py

cdsw@npjq3i3bf6m2bcxt:~$

cd aiops → cd Backups → cd scripts

dsw@npjq3i3bf6m2bcxt:~/aiops/Backups/scripts$ ll

total 64

-rwxrwx--x 1 cdsw cdsw 767 May 31 17:19 clsd_weekly_prod.py

-rwxrwx--x 1 cdsw cdsw 831 Mar 21 01:20 dumb.py

-rwxrwx--x 1 cdsw cdsw 644 Apr 23 16:35 EDL_dev_test.py

-rwxrwx--x 1 cdsw cdsw 221 Feb 7 20:44 edl.pk

-rwxrwx--x 1 cdsw cdsw 661 Apr 24 20:42 gbp_scheduled.py

-rwxrwx--x 1 cdsw cdsw 767 May 31 16:26 gora_prod.py

-rwxrwx--x 1 cdsw cdsw 835 Apr 3 15:14 iaware_prod.py

Create a copy of any of the files , please do not touch any existing file.

DO NOT MAKE CHANGES TO ANY SCRIPTS. Work only on a copy of a file.

Cp gbp_scheduled.py app_scheduled.py ; app is the application name for which you are creating the backup .

Below is the script : DO not touch anything except what is needed and mentioned :

```
import subprocess
import datetime
import sys
sys.path.insert(0, "/home/cdsw/aiops/Backups/scripts")
import util_repl
mv_cmd = "aws s3 mv s3://S3bucketname/current_backups/ " + \
"s3:// S3bucketname/current_backup_" + datetime.datetime.now().strftime("%Y_%m_%d") + \
" --recursive --sse --profile appcode"
def cmdexec(cmd):
```

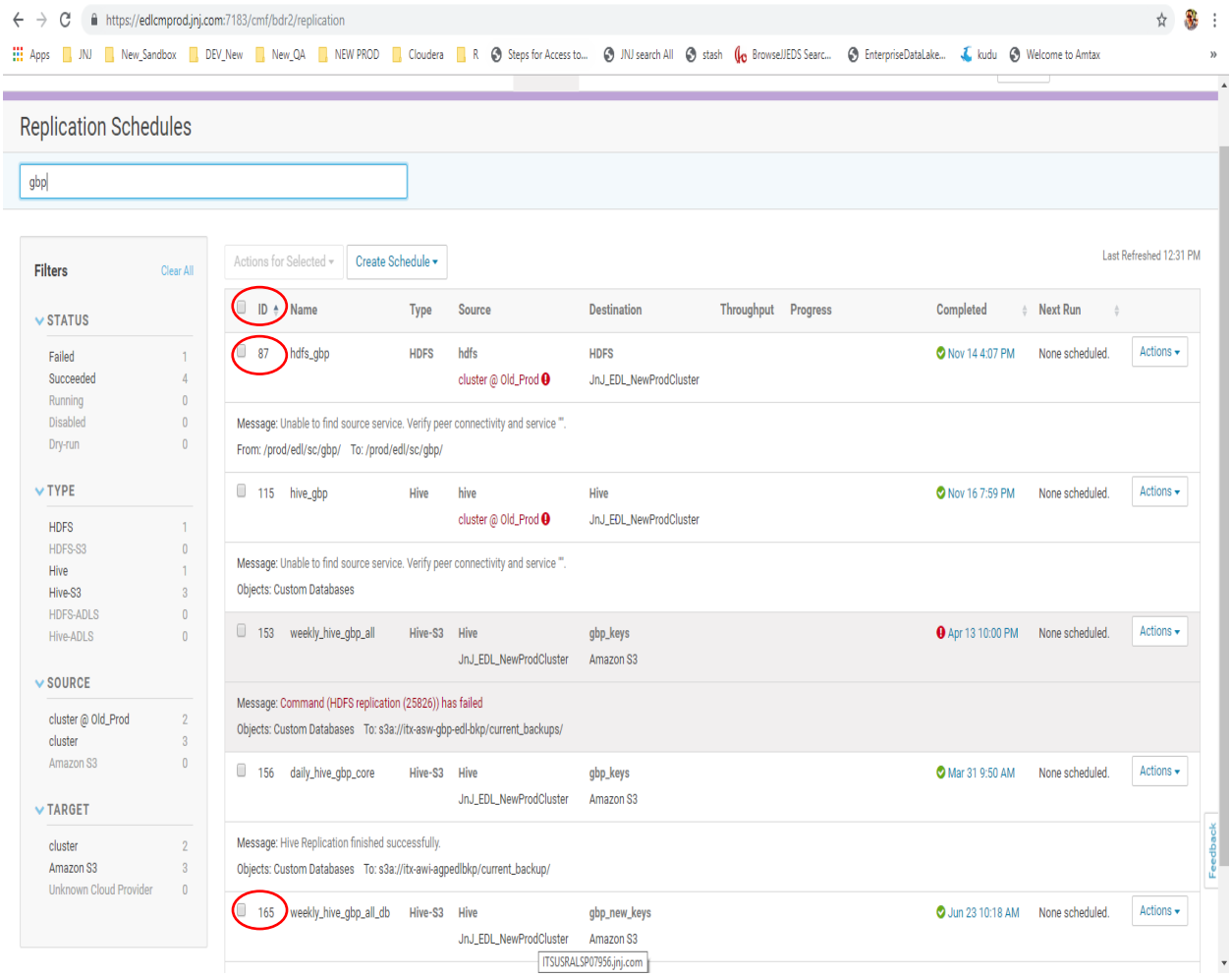
```
    # print cmd
    proc = subprocess.Popen(cmd, stdout=subprocess.PIPE,stderr=subprocess.PIPE, shell=True)
    (out, err) = proc.communicate()
    # out = out.rstrip('\r\n')
    print ("cmdexec\n", out, err)
    return out, err
out, err = cmdexec(mv_cmd)
obj1 = util_repl.SrvrConnect('PROD')
obj1.repl_run('hive', '165')
```

S3bucketname: This will be the S3 container which you put in BDR. Do not change anything in starting and ending of the lines. Only these needs to be changed.

appcode : This is supposed to be your appcode for which you are doing the Backup.

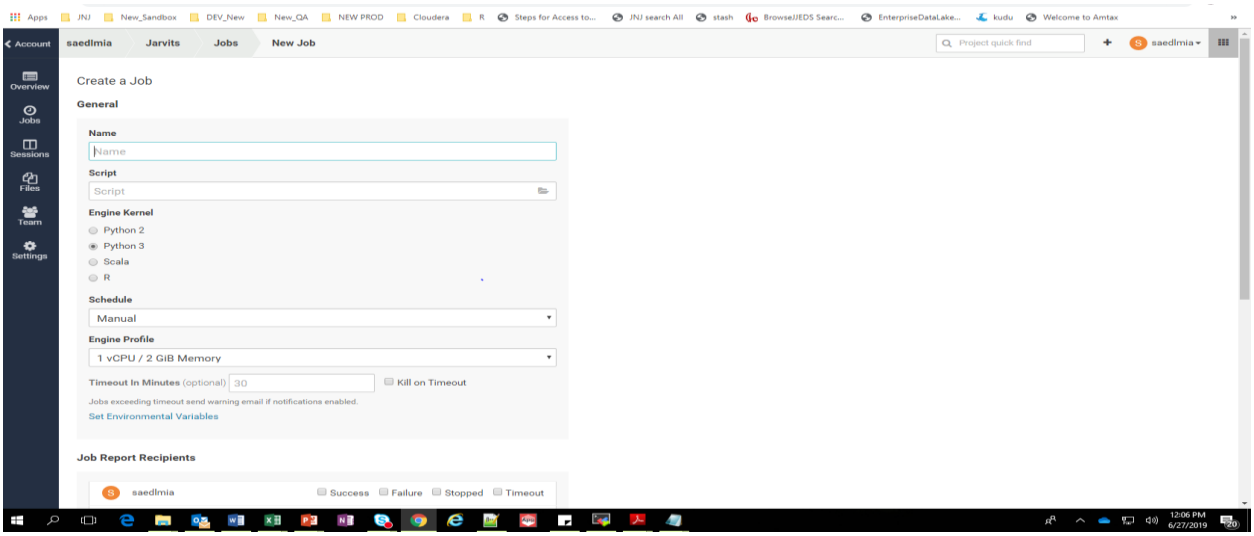
165 number is the replication schedule id ; this is the number you can get from cm when you create a schedule there. See the screenshot below .

Be careful, this number cannot be wrong.



Save the script. And close the terminal and stop the session. Lets schedule this Script.

2: Go inside Jarvits → Jobs → New Jobs

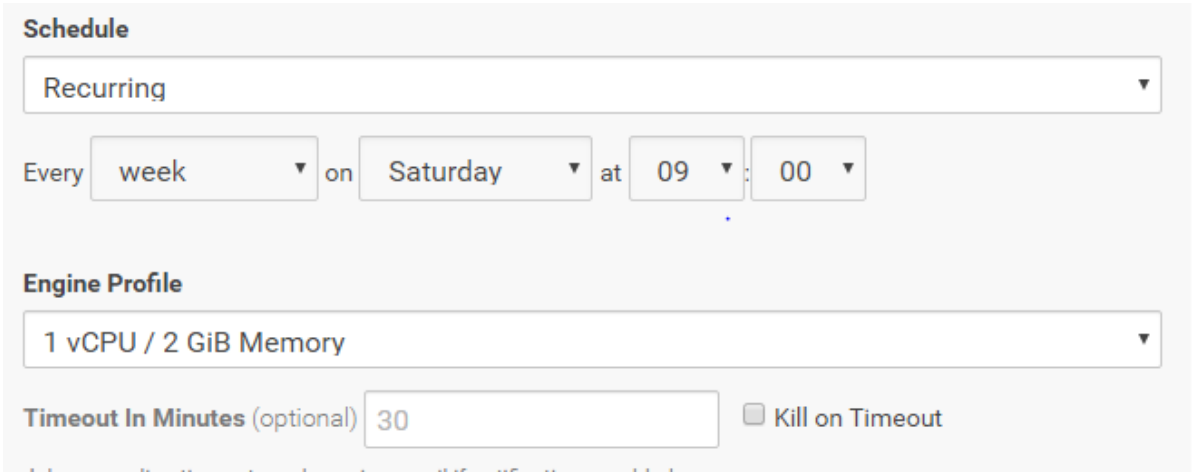


1: Name : Backups_weekly_Gora_Prod or Daily_weekly_Gora_Prod

GORA in above line is app name , please use your app name for which you are doing the backup.

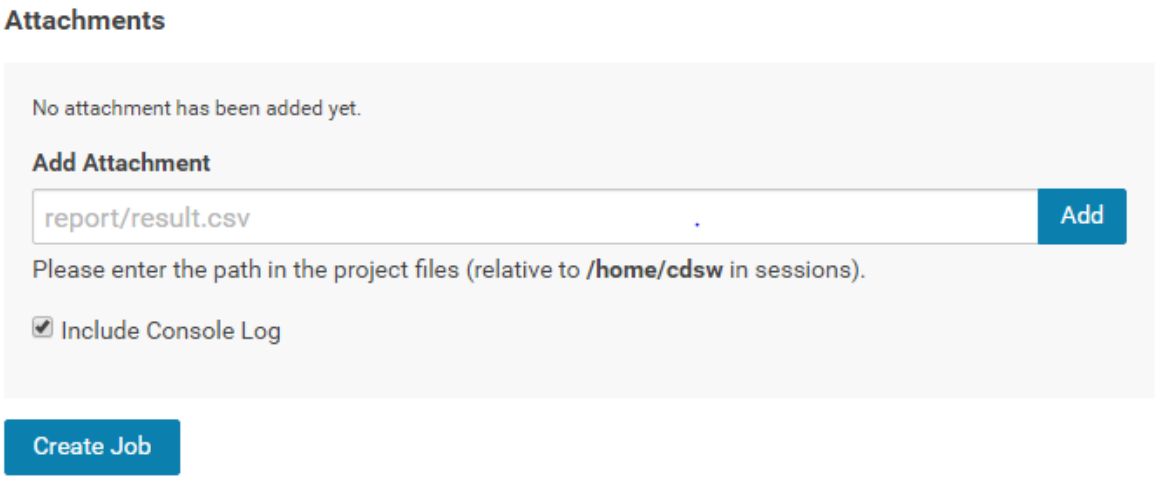
2: Script : aiops/Backups/scripts/gora_prod.py

3: Schedule : recurring and then schedule according to user demand.



4: Add External Email : Add email of user to whom the job run details needs to bee sent.

5: Untick the include console log. As user does not needs to see the console logs.



Create the job this will trigger the job once in cluster and you can see the jobs in run commands in CM.

Once it completes as the user to check.

Go through this , it helps :

https://www.cloudera.com/documentation/enterprise/5-9-x/topics/cm_bdr_howto_hive.html#howto_backup_restore_hive_db

for proving the restoration is working to Application team. Just follow the steps till Cloudera part. No cdsw involved.

Do it in Dev create a table, back it up to a new folder on there S3 and then in BDR change the source to destination and destination to source. Do not run. Drop or rename the table in Dev and then run the opposite of what we do. Do a copy from s3 to EDL. And the table will be back.

Be very careful in any of the steps as this may effect the data of users.