Reset Stuck Job – ETL Job Management

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May 4, 2021

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# Overview

This is a developer’s guide to clear / reset stuck job from the tables related to ETL Job Control process. Following these steps would enable a clean reset.

## Reset stuck job

### Find the stuck job

1. Execute following query to find details of non-completed jobs. Result set could indicate jobs that are currently running or jobs that are stuck.

select s.job\_id,s.job\_run\_id,s.job\_status,r.run\_start\_dt,r.run\_end\_dt, (sysdate-r.run\_start\_dt)\*24\*60 run\_time\_min

from etl\_job\_status s

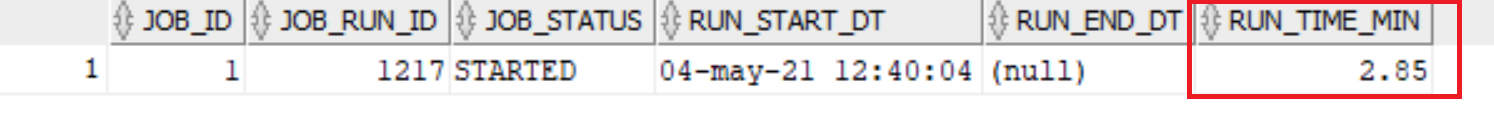
inner join etl\_job\_config c on (s.job\_id=c.job\_id)

inner join etl\_job\_run r on (s.job\_run\_id=r.run\_id)

where c.job\_enabled='Y'

and (s.job\_runnable='N' and s.job\_status!='COMPLETED')

Below screenshot shows JOB\_IDs of jobs not completed.



If the job run time in minutes (RUN\_TIME\_MIN column value) is outside regular job run time, then it indicates a stuck job which can be determined by following next step.

1. Execute query below to determine if a stuck job has been reported. If the query returns data, then JOB\_ID in returned data is stuck and should be reset.

select l.\*

from ETL\_JOB\_LOG l

inner join (select job\_id, max(run\_id) max\_run\_id

from ETL\_JOB\_RUN

group by job\_id) r on (l.run\_id=r.max\_run\_id)

where log\_desc = 'JOB STUCK - RESET MAY BE REQUIRED'

Below screenshot shows job with JOB\_ID=3 is stuck.



### Clear / Reset stuck job

Execute the following query to reset the stuck job from 1.1.1 (b)

**BEGIN**

**ETL\_JOB.RESET\_ETL\_JOB (?);**

**END;**

Replace “?” below with JOB\_ID from 1.1.1 (b)

This should clear the stuck job and update the necessary table records. The next job cycle should commence and complete successfully.

# Issues faced when reset procedure not followed

Here are some of the issues faced when the stuck job was not reset using the procedure above in 1.1 but updated manually. The example below explains root cause analysis of Job Management cron failure faced during AWS migration effort.

ETL Job Mgmt cron script (etl\_job\_control.bash) errored out at the step where the code determines and loads all runnable and stuck jobs into ETL\_JOB\_LIST table (etl\_job.set\_etl\_jobs procedure)

${DB\_MAXDAT\_CLIENT} -S ${DB\_MAXDAT\_USER}/${DB\_MAXDAT\_PASSWORD}@//${DB\_MAXDAT\_HOSTNAME}:${DB\_MAXDAT\_PORT}/${DB\_MAXDAT\_NAME} @${ETL\_JOBCONTROL\_SQL\_PATH}/set\_etl\_jobs.sql > ${JOB\_CONFIG\_RESULTS\_FILE}

Below is the error message as reported in (set\_etl\_jobs\_results\_20210411\_005501\_894.dat) file.

BEGIN

\*

ERROR at line 1:

ORA-00001: unique constraint (PA\_IEB.ETL\_JOB\_LIST\_PK) violated

ORA-06512: at "PA\_IEB.ETL\_JOB", line 806

ORA-06512: at "PA\_IEB.ETL\_JOB", line 722

ORA-06512: at line 2

This error is caused after a stuck job has been reset by running the below script.

update ETL\_JOB\_STATUS

set JOB\_RUNNABLE=’Y’

where JOB\_ID=3;

commit;

ETL\_JOB.SET\_ETL\_JOBS procedure determines all runnable jobs from JOB\_RUNNABLE=’Y’ records in etl\_job\_status table in addition to other criteria, and inserts them into etl\_job\_list table. Since above job (job\_id=3) meets this criteria, it is inserted into etl\_job\_list table.

Next the procedure determines stuck jobs from job\_status=’STARTED’ in etl\_job\_status table and non-existence of log\_desc = 'JOB STUCK - RESET MAY BE REQUIRED' in etl\_job\_log table for that day in addition to other criteria. Since above job (job\_id=3) also meets this criteria, procedure carried out insert of this job already present, into etl\_job\_list table. But since table has unique key constraint defined on JOB\_ID column, insert operation failed leading to failure of main script.

**NOTE – Please make sure to follow the steps in Section 1.1 to reset the stuck jobs and NOT update manually.**

# Reference to ETL Job Control Process Documents

The complete Developer’s Guide, Control Flow Visio and Control Design to ETL Job Management process can be found in

svn://svn-staging.maximus.com/dev1d/maxdat/BPM/ETL\_Job\_Control/doc/ETL\_JOB\_CONTROL\_Developers\_Guide.docx

svn://svn-staging.maximus.com/dev1d/maxdat/BPM/ETL\_Job\_Control/doc/ETL\_JOB\_CONTROL\_FLOW\_VISIO\_1.2.vsdx

svn://svn-staging.maximus.com/dev1d/maxdat/BPM/ETL\_Job\_Control/doc/ETL\_JOB\_CONTROL\_Design\_1.3.docx