

Running autoMAGIC Jobs

autoMAGIC Workshop Padova

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Job Submission

- Job submission is very easy: `automagic submit all`
- The command will search for the lowest-level jobs first and submit them
- After all lower-level jobs are done, it will start with the next higher level
- This is done in parallel for all different cases
 - Possible because the DB stores information on which job depends on which other jobs (Relationships!)

Tracking Your Running Jobs

- Track which jobs are running with `condor_q`
- More convenient command: `watch -n2 condor_q`
 - I (idle): Job is scheduled but not yet running
 - R (run): Job is running
 - H (hold): Something went wrong and job is being held
 - D (done): Job is finished
- Cancel running jobs with `condor_rm`
- If your jobs went into HOLD: `condor_q -const 'JobStatus == 5' -af HoldReason`

Tmux

- You can enter a tmux session with `tmux`
 - Makes sense for programs that are expected to take a long time
- You can detach from the tmux session with `Ctrl+B` and then `d`
- You can list the active tmux sessions with `tmux ls`
 - Take care you're on the same login server again!
- You can re-enter the tmux session with `tmux attach -t session_number`

Checking Jobs in Your DB

- Query on the corresponding jobs table and e.g. filter for state_id

- The jobs states:
 - 1: created (all jobs in created will be submitted to the cluster)
 - 2: queued (Once the job is queued it will be set to queued)
 - 3: idle (Already submitted to the cluster, but still waiting to be executed)
 - 4: running (Running on a node on the cluster)
 - 5: success (Finished successfully)
 - 6: error (Finished but gave some error)
 - 7: stopped (Probably did not finish due to cluster error. Will be rerun the next time)
 - 8: input file missing (Required input file not available)

Checking Jobs in Your DB

- Check the exit code in the DB to know which MARS error code was raised
- If this information does not suffice, check your error log files!
- If you think the job ended in error to some cluster-related error, you can reset the job_state by e.g.
`UPDATE jobs_star_superstar SET state_id=1 WHERE state_id=6 and id>20`

If Something Went Wrong...

- Sometimes, the cluster or your automagic submission program might crash and will leave jobs in states queued, idle or running
 - These jobs will not be submitted again and have to be put in state created again!
- The solution: **automagic reset clusterfuck**
 - Will reset all jobs in states queued, idle, or running to state created
- **You should not use this command while you have jobs running on the cluster!**