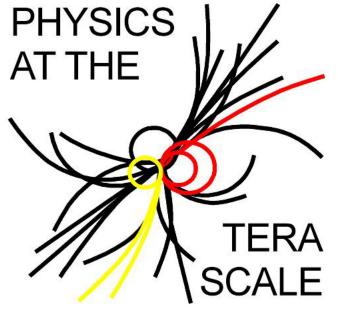


Yves Kemp et al., DESY IT NUC 05.03.2020





Helmholtz Alliance

Scheduler news: Late Materialization

- Limit of jobs on the scheduler
 - Enabled since some month on CMS scheduler to solve the following problem:
 - Users are submitting many (>>1000) jobs at once (single or array jobs).
 - Scheduler is overloaded, and does not work for other users too
 - Users get an error if (currently) more than 5000 jobs are submitted
- We know that this hits some users ... but not enabling would also hit users
- New work-around implemented (or call it feature): Late Materialization
 - Only works with array jobs
 - Submit as many jobs as you want, only a small number show up as "idle" and are presented to the scheduler. If a job goes into the state running, another "hidden" job is promoted to "idle"
 - max_materialize = 100 queue 10000
- zwei anmeldungen fuer tutorial (zuwenig)

DESY. | NAF status | Yves Kemp, 05.03.2020

Singularity news:

- singularity options now active, and added to documentation
- Add to your submit file:

```
+MySingularityImage = "/path/to:image"
+MySingularityArgs = "--my-args"
```

- Thanks to Hartmut for testing!
- The following is done on HTCondor worker node under the hood

```
singularity exec --contain --bind /afs:/afs --bind /nfs:/nfs --bind /pnfs:/pnfs --
bind /cvmfs:/cvmfs --bind /var/lib/condor:/var/lib/condor --pwd
/working/directory/of/job><--your-singularity-args> </path/singularity:image> <your
executable and args>
```

DESY. | NAF status | Yves Kemp, 05.03.2020 Page 3

Other news, observations:

- High load of CMS WGS has been reported. We repeat, that we usually do not kill user processes.
 - Experiment support should contact users to clean up
 - We have an automated cronjob telling users ... once per day, and ignored most of the time
- CMS scheduler overloaded due to automized and high-frequency condor_q requests
 - 5 users were found
- CMS sched ueberlast durch automatisierte 'condor_q' requests
 - 1 user with a special tool doing "condor_q –I " every 20 seconds
 - Other users doing "watch condor_q"
 - Just don't ©
- Power outage in one computing room last Thursday at 8:00am.
 - Lost some batch jobs
 - dCache instances were affected. CMS instance only fixed during Friday
- DUST quota information from outside (AMFORA not working): Asking the experts

DESY. | NAF status | Yves Kemp, 05.03.2020

Migration to EL7

- New WN and new WGS for small groups (virtualized) → EL7:
 - Hardware has arrived partially... Hopefully for next NUC, everything is ready
- WGS
 - CMS user request for two more EL7 nodes. Waiting for "go" from CMS support

DESY. | NAF status | Yves Kemp, 05.03.2020

Upcoming events:

- CMS HTCondor tutorial: Only two four applicants, too little feedback, waiting for more
- Preparing for the "Terascale Intro-Schule am 16.-20.3.", held on the NAF
- 1.4.2020: CMS dCache
- 1.4.2020: Short interruption because of network change of login servers (to be announced separately)
- 18.3.2020: PRC preparation meeting
- 8&9.4.2020: PRC (with IT contribution at least in closed session)

DESY. | NAF status | Yves Kemp, 05.03.2020 Page 6