NAF Status Report

Untertitel der Präsentation

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HELMHOLTZ SPITZENFORSCHUNG FÜR GROSSE HERAUSFORDERUNGEN

DESY.

Problems with storage last month

- dCache (well, problems related to dCache, not dCache problems per se)

  - Known problems with SL6 NFS clients, leads to overload of the servers

    - Seems to be the major issue with current ATLAS dCache troubles

  - EL7 clients act better, therefore migration to EL7 should be a priority

- DUST

  - Once Ganesha (=DUST NFS Server) down. Restart. OK

  - Once heavy load (2 Gbyte/s = max) on the systems serving the WGS

Getting rid of SL6

- Container provided by IT:

  - Turns out to be more work than expected, still some background things to clear.

  - Not available in the near future. On the agenda for further future, but will not solve all our SL6 problem now

  - Would not solve the WGS problem anyway

  - Might even delay a real solution, since the pressure for a real migration is away

  - User-started singularity will work of course

- Proposal:

  - Migrate more agressively batch cores to EL7. E.g. ~1000 cores in the next 1-2 weeks
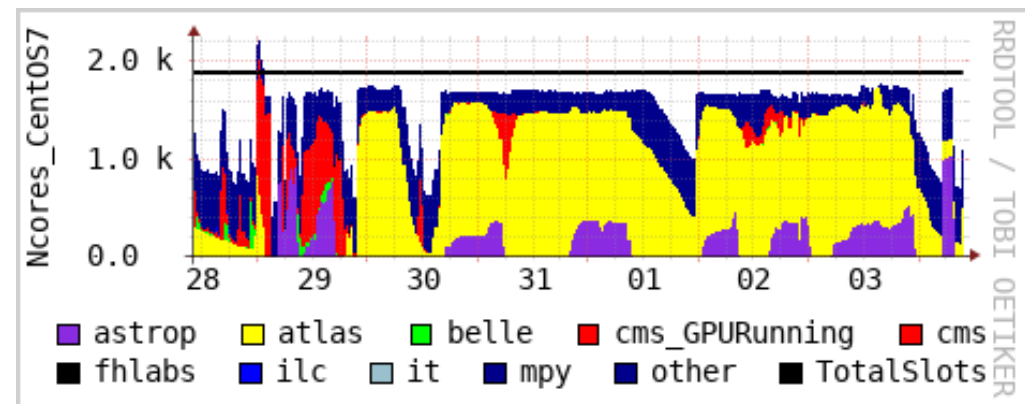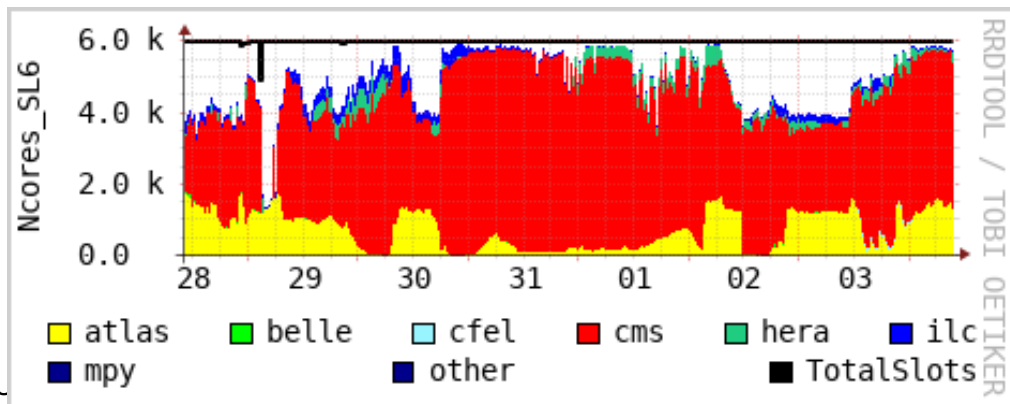
Getting ready for EL7

- On the WGS: Proposal

  - Installing half of the WGS with EL7, keep half with SL6 (or 4:2 or other ratio)

  - EL7 systems would be available under alias e.g. naf-atlas.desy.de

  - SL6 systems would be available under alias e.g. naf-atlas-sl6.desy.de

  - Submitting to HTCondor would be

    - SL6 WNs as default when submitting from naf-atlas-sl6

    - EL7 WNs as default when submitting from naf-atlas (=EL7)

DUST lifecycle policy

- Active, in the sense that the 180 day „hiding period" has started

- So far 285 filesets are unlinked, only 2 filesets were asked to be linked again

- Experiment admins can see the status, via amfora.desy.de, e.g.:

✏️	user.af-cms.afriedel	1.0000	0.4612	200,195	user	AF-CMS	23-MAY-17	UNLINKED	26-NOV-19
✏️	user.af-cms.aggleton	6.0000	5.3744	1,037,799	user	AF-CMS	18-APR-20	LINKED	-

Status of the Scheduler itself

- Stable since last NUC

- Question: Limit #jobs per scheduler (reminder: one dedicated scheduler per (large) VO)

- Answer:

  - We see, that schedulers scale very well for „well behaving" jobs, up to 100k jobs and more

  - Problems are induced by large numbers of „misbehaving" jobs

  - In theory, we could limit the number, though not tested, and e.g. error message unclear

  - Maybe better alternative would be "late materialization" ... Testing with users?

  - Purchase of additional scheduler possible, but costly, scaling bad, ...

Status Jupyter

- One slot per EL7 node reserved for Jupyter (~70, to be increased)

  - So far physical core, will be changed to additional overcommited core

  - Also one slot per GPU machine ... Needs GPU resource

- https://naf-jhub.desy.de/

  - Chose group. E.g.

- Spawning takes ~20-60s (timeout 2 minutes)

- Available resources:

  - All filesystems

  - 2GB RAM, one core, 22h runtime -> needs experience and feedback

- First beta users (so far): Beamline for Schools

- ToDo: Internal enhancements, condor submission, faster startup

Jupyter on NAF Options

Select Primary Group
- ✓ Default
- CMS
- Atlas
- Belle 2
- AF Belle 2

Select GPU node ☐

Extra notebook CLI arguments e.g. --debug

Environment variables (one per line)

YOURNAME=kemp

Spawn

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Notebook:
Python 3

Other:
Text File
Folder
Terminal