NUC

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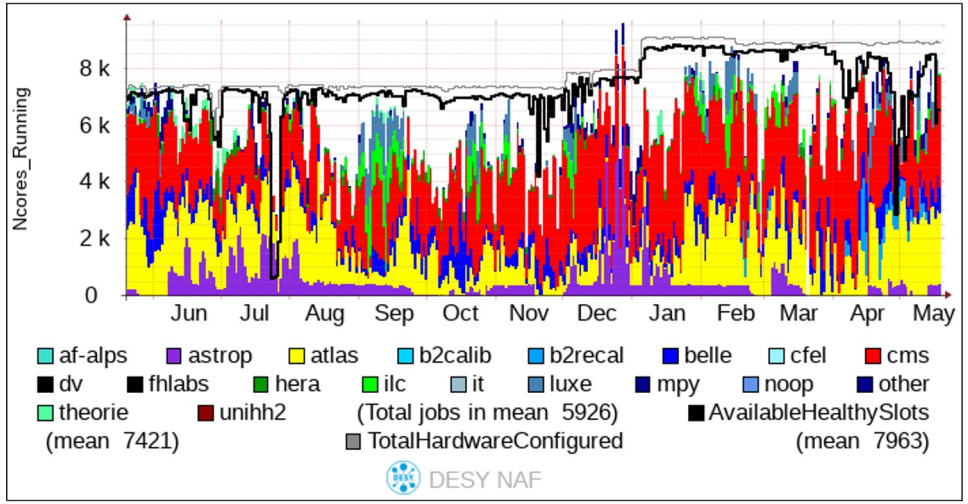
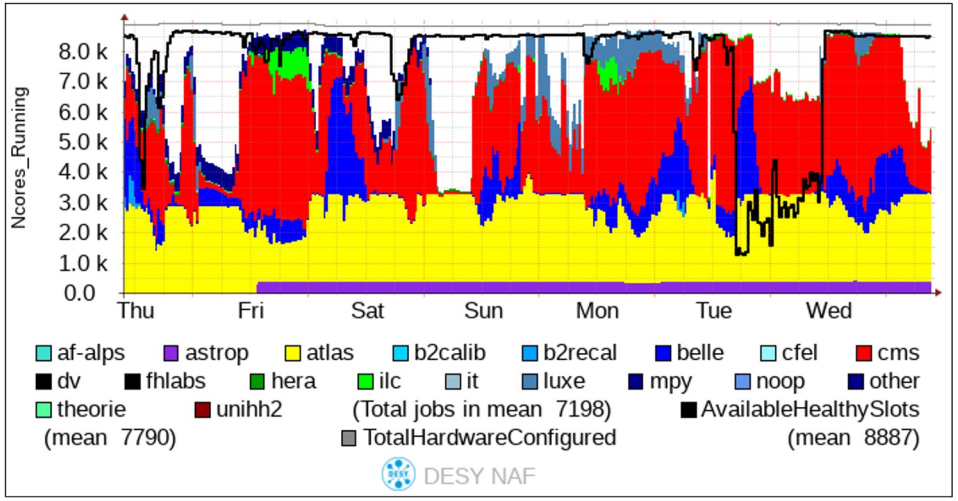
HH

NAF special incidents since last NUC

Instabilities during the last weeks

- Massive drop-outs in workernode-health since mid-march
- Nodes loose NFS connectivity and poll for ‘lost’ NFS server
- Only dCache NFS servers
- Phenomenon is not new, partly caused by stupidity of NFS client implementation (also a batch system is always a powerful tool to torture other services)
- Workernodes go unresponsive NFS-wise (NFS is in kernel layer)
- It’s a ‘known problem’ but in the past only occurred due to massive overload of ‘one-users-jobs’ (4.000 jobstarts of user xy in 3 minutes due to empty pool e.g.)
- Now a single job by one user can ‘disable’ the workernode
- We do horizontal spreading of the jobs which does not help in this case
- Does not seem to be related to any dcache/nfsclient updates (last of those were in autumn)

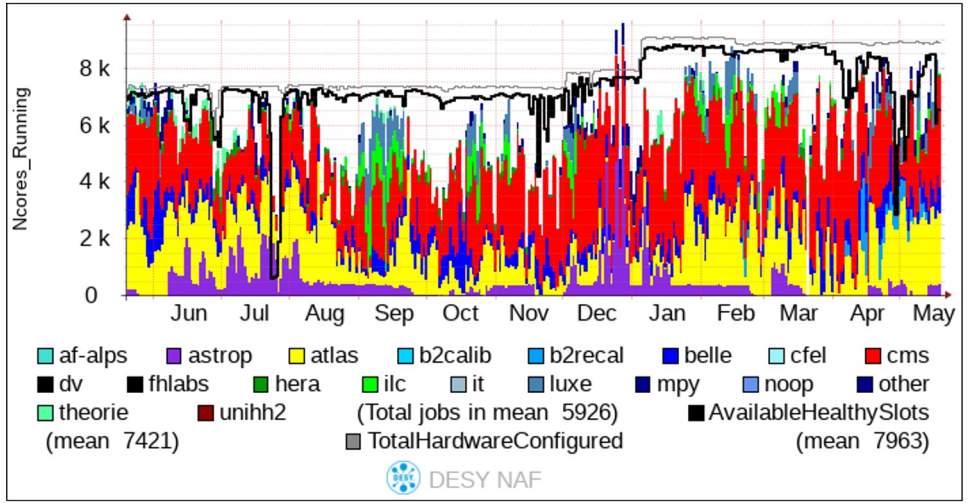


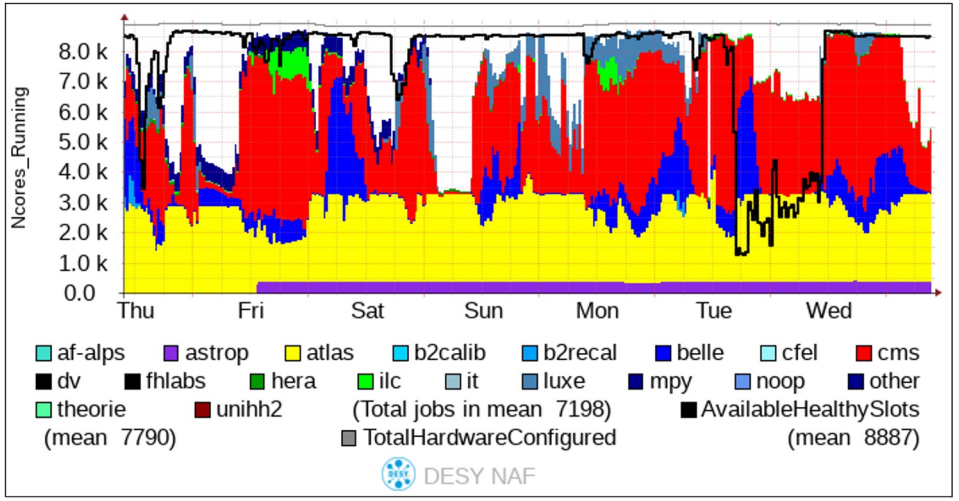


NAF special incidents since last NUC

Measurements taken

- Debugging of client behavior with dcache developer team
- 2 fixes in dcache server code (important but no problem-solver)
- Intervention with a couple of users but difficult to find the culprit as a single job can be enough
- From pool admin view unmanaged, unpredictable traffic
- User limits on the pool side do not make sense, ideas from dCache developers to restrict parallel access in some future





NAF Software

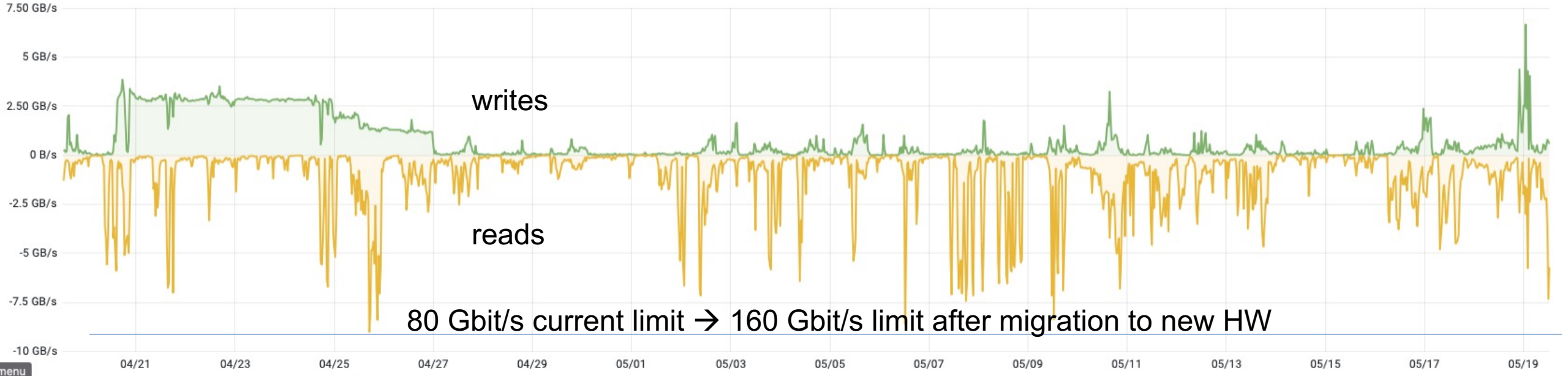
Condor

- major update of condor-version finished (was needed due to security issues)
- Now running $CondorVersion: 9.0.4 Jul 29 2021 BuildID: 552036
- Changed from developer branch (that we used historically because the KRB support was only available there for a long time) to stable branch :)
- Some features, especially htmap and submit through python bindings need to be configured and documented

NAF Storage

DUST

- Migration to new NFS server hardware next week
- Includes an upgrade of Ganesha (NFS server software) from 2.7 → 3.5
- No downtime required, new servers will be added in small units and checked for stability
  → in case of problems, move back to old servers
- Ganesha 3.5 supports NFSv4.1 instead of NFSv4.0, can be enabled after successful migration
  → NFSv4.1 includes protocol enhancements
- Future: Upgrade from 4x10 Gbit/s to 2x100 Gbit/s planned for NFS servers



Host Certificate incompatibilities

Python 2.7 clients

- Migrating host certificates to new CA (dCache, CE)
- Have seen problems where old user clients cannot establish SSL handshakes with new certificate endpoints
  - Affecting file access via Grid protocols (davs, gridFTP,...)
- Current working hypothesis: legacy Python 2.7 clients using outdated gfal/globus libraries
- So far ~half of dCache doors migrated to new certificates
  - i.e., connection errors can look random depending on what door is selected for a transfer

AOB

- PRC
- Hardware procurements
- Ukraine Charkiv @ NAF