NAF User Meeting - Program

Topics for today:

- short review of important NAF issues
- NAF use cases
- discussion
  - more on general issues
  - less on experiment specific problems

NAF Introduction and Status

NAF User Meeting 2008 — 27th November 2008

Wolfgang Ehrenfeld
for the NAF User Committee
DESY

National Analysis Facility

`http://naf.desy.de`

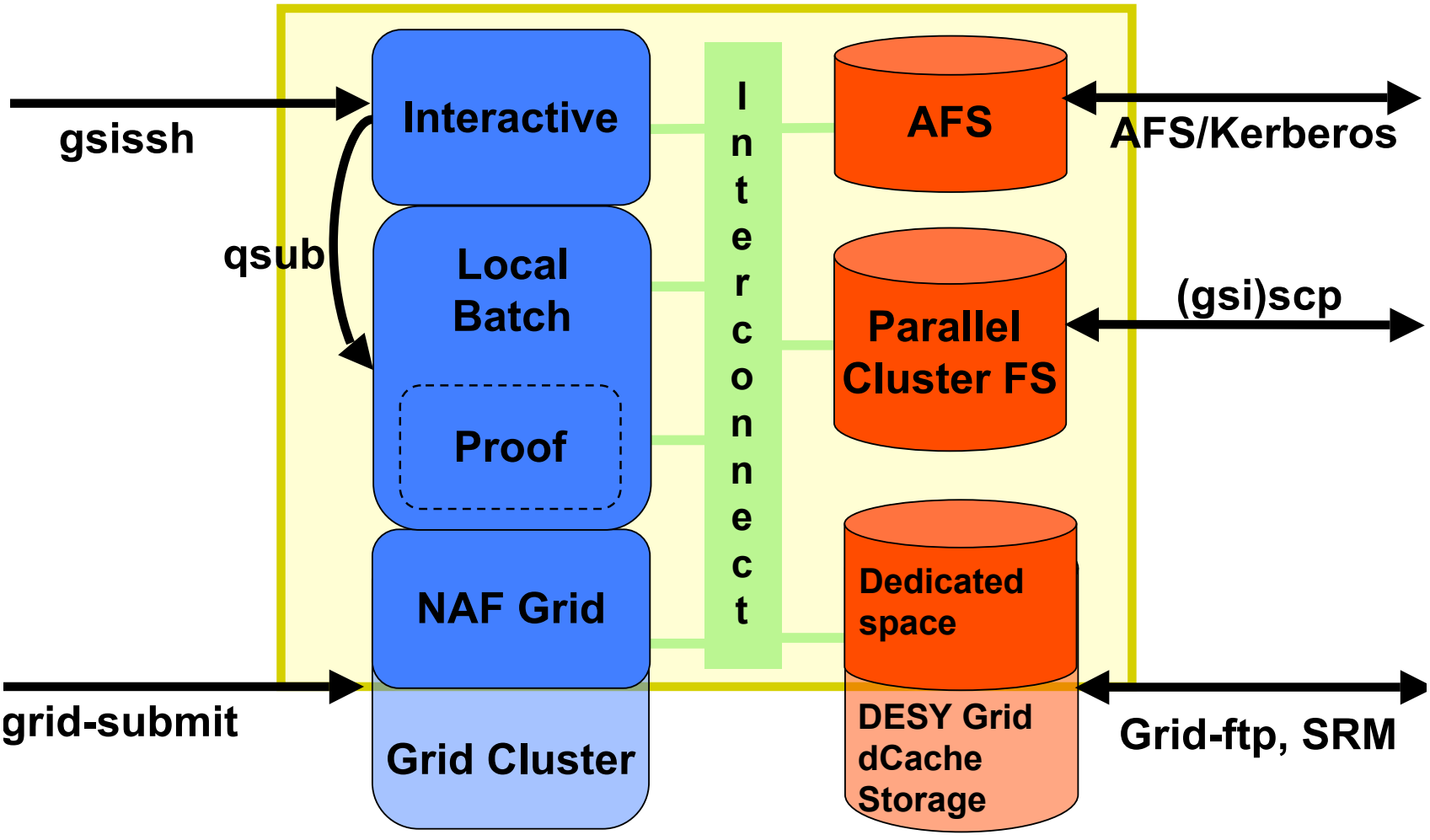
The National Analysis Facility (NAF) is part of the Strategic Helmholtz Alliance (`http://terascale.de`) for German particle physics.

Planned for a size of about 1.5 average Tier2, but with more data.

The NAF provides:

- additional Grid resources to DESY T2
- interactive resources

NAF Building Blocks



Grid Resources

Additional GRID resources (computing and storage) integrated into DESY T2. These can be used in the same way as standard GRID resources.

Further:

- dedicated computing fair share with higher priority
- dedicated storage for write access

German VOMS groups are needed to identify yourself for usage of dedicated resources:

```
voms-proxy-init -voms atlas:/atlas/de
                      cms:/cms/dcms
                      ilc:/ilc/de
                      calice:/calice/de
```

Batch System

Sun Grid Engine (SGE) is used as batch system.

Commands are similar to LSF/PBS, but job resources (e. g. CPU time and memory) are used for job scheduling. The less resources are requested the faster the job is scheduled.

The system is optimised for different use cases:

testing	below 15min
PROOF	below 1h
analysis	below 12h
long	below 48h

- main emphasis is on analysis jobs
- PROOF jobs have simple over subscription $\rightarrow$ faster start up
- testing jobs have double over subscription $\rightarrow$ fastest start up
- long jobs can not fill up the full system

Batch System

Memory is a consumable resource:

- default is 512 MB
- 2 GB per core available
- job will be killed if resources are used up
- job will not be scheduled if resources are not available
- better operations: no side effect from memory eater

→ plan your resources with care!

What else:

- maximum running time is 48h, will be extended to 1w.
- see `https://www.ifh.de/dv-bin/nafssl/stat` for accounting/log info, e. g. → `jobs of user`
- in case of questions write to `naf-helpdesk@desy.de`

Storage

There are three types of storage available at the NAF:

AFS:	home directories, software/project directories, for important data, backup
Lustre:	high performance (IO) file system scratch, usually temporary space, no backup
dCache:	grid enabled storage, no backup `/pnfs` deprecated, use `dctools` or dcap/gsidcap access via experiment tools

Recommendations:

- store your results (histograms and small ntuples) in AFS
- store output from MC/ntuple production on dCache
- for ntuple processing copy ntuples to Lustre

Support

For documentation and support see/read `http://naf.desy.de`

The NAF is a joint venture between DESY IT and the German LHC Groups. Hence support is divide between them:

- non-experiment specific: `naf-helpdesk@desy.de` common problems as login, hardware, OS, AFS, batch system, common software
- experiment specific:

ATLAS:	GridKaUser HN, `naf-atlas-support@desy.de`
CMS:	`naf-cms-users@desy.de`, `naf-cms-support@desy.de`
LHCb:	`http://naf-lhcb.physi.uni-heidelberg.d`
ILC:	`naf-ilc-support@desy.de`

Accounts, AFS quota and extra AFS volumes are administrated by the experiments.

NAF User Committee

2 contacts from each experiment:

ATLAS	Jan Erik Sundermann, Wolfgang Ehrenfeld (chair)
CMS	Carsten Hof, Hartmut Stadie
LHCb	Johan Blouw (co-chair), Alexey Zhelezov
ILC	Steve Aplin, Niels Meyer
NAF	Andreas Gellrich, Kai Leffhalm

- discuss operational issues between experiments and NAF admins
- discuss and agree on experiment or NAF requests
- discuss evolution of NAF hardware over the next years
- `http://naf.desy.de/nuc`

If you have comments/questions for the NAF User Committee contact either your experiment contacts or the NUC chair.

Summary

NAF is working!

Discussion/Feedback

- NAF services
  - batch
  - storage
  - support
- use cases
  - is everything in place for your work?
  - which NAF features do you like?
  - what could be improved?
  - why are you not using the NAF?
- NAF User Meetings
  - was this meeting useful?
  - should we have yearly meetings?
  - which format should they have?
- tutorials
- anything else?