NAF News and Updates

No NAF tech talk: We assume you already know the NAF

**Rather a loose collection of some (hopefully) interesting
and helpful items**

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DESY

Using the Grid part of the NAF

> The NAF has some resources in the Grid sites of DESY-HH and DESY-ZN

> You should use a special VOMS-group to use that

  ▪ Advantages for you: Higher priority, better access, especially in times with a lot of other activity

  ▪ Advantages for us: We can do the accounting properly, and if the resources are well used, have good arguments to ask for more

> Technicalities:

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

  ▪ … and you might have to change something in your job submission tool

  ▪ Please consult Ganga / CRAB / …. docu

Lustre

> Advisory:

- The old Lustre instance will be discontinued by end of this month! Already mounted read-only

- Please move your (still needed) data to /scratch/hh/current/[YouExperiment]

> Lustre is good if you

- Want to write large files in it (like ROOT files or the like)

- … and read them with high bandwidth

> Lustre is not so good

- If you have many small files (N*100k files with <100k size)

- >1000 files in one directory (this holds for basically every file system)

   Think about sub-directory structure

AFS

> We have several spaces on AFS

> $HOME

- In backup, rather small size
- Use for personal code

> AFS-scratch

- No backup, can be several GB
- E.g. small ntuples, personal SW release

> AFS-Group space

- For SW releases used by several / all people, managed by experiment support

> AFS don't's:

- Do not make links to other files systems in $HOME directory
- Do not make links to other AFS cells (like CERN) in $HOME either
- It is not possible to have more than 65k entries in a directory

SGE batch system

> You want an interactive session on a batch node?

- qrsh -now n (and some options, resource requests)

> Specify resources needed. Most important (pitfall:-))

- Memory: e.g. `-l h_vmem=2G`
- Also needed for qrsh
- The smaller the requested resources, the faster you will be served. (Also for job duration)

> Array jobs: Useful for many identical/similar jobs

> Output of your jobs: Please clean up periodically, eventually create tar-balls of your logs files

- Remember: Problems with too many small files, and too many files in one directory

> Monitoring of the Batch queue, and your special job:

- http://naf.desy.de/nuc/monitoring/ (first link)
- Can also show you the resources needed by some job
- … and might help you find out why your job has crashed

Tools:

> AutoProxy (Snapshot of the NAF docu)

Login to the naf via:	`gsissh atlas.naf.desy.de`
Initialize the UI	`ini glite`
Prepare environment (X509_USER_PROXY)	`ini autoproxy`
Deposit the proxy on the myproxy server, it will ask for the password of your certificate	`ap_gen.sh`
This will make the automation mechanism run for your account	`touch .globus/.autoproxy`

Now you created a long live proxy on the myproxy server in the naf.
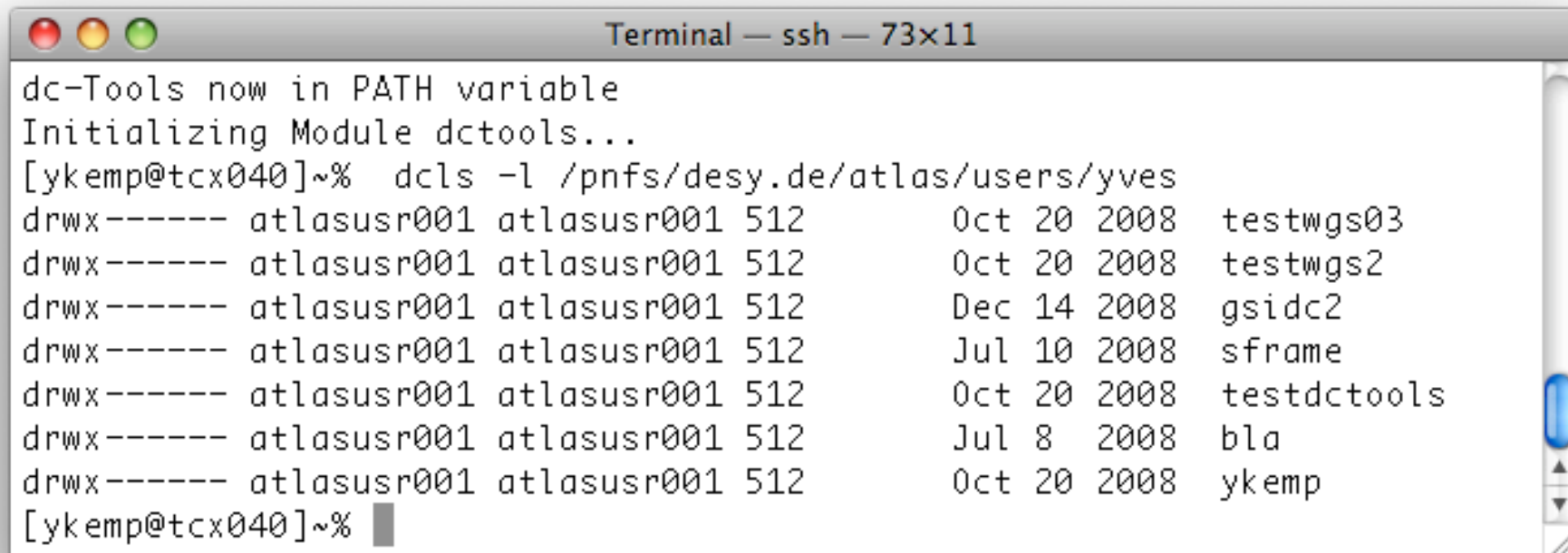 To be able to use it, you need again to initialize the environment

Re-Login to the naf via:	`gsissh atlas.naf.desy.de`
Initialize the UI	`ini glite`
Prepare environment (X509_USER_PROXY)	`ini autoproxy`
Check your Proxy	`voms-proxy-info --all`

Every time you are on a new machine or on a worker-node in the batch system, just initialize the environment and you will have an automatic prolonged proxy for the lifetime of your long live proxy.

dcTools

> /pnfs-Mount will be discontinued in the NAF

- Security reasons
- Filebrowsing should still be easy, no need of srmls, but still secure:

> dcTools   (but of course, you still can use srm tools if you want)

> Currently migration to newer gridftp client used under the hood

- Should happen this month

```
                        Terminal — ssh — 73×11
dc-Tools now in PATH variable
Initializing Module dctools...
[ykemp@tcx040]~%  dcls -l /pnfs/desy.de/atlas/users/yves
drwx------ atlasusr001 atlasusr001 512        Oct 20 2008   testwgs03
drwx------ atlasusr001 atlasusr001 512        Oct 20 2008   testwgs2
drwx------ atlasusr001 atlasusr001 512        Dec 14 2008   gsidc2
drwx------ atlasusr001 atlasusr001 512        Jul 10 2008   sframe
drwx------ atlasusr001 atlasusr001 512        Oct 20 2008   testdctools
drwx------ atlasusr001 atlasusr001 512        Jul 8  2008   bla
drwx------ atlasusr001 atlasusr001 512        Oct 20 2008   ykemp
[ykemp@tcx040]~%
```

Accessing the NAF AFS cell from outside

> Useful for exchanging small scripts, or running your preferred editor at home

```
voms-proxy-init --rfc

/afs/naf.desy.de/products/scripts/naf_token <naf-login>
```

> Disclaimer: Only tested for SL4 and SL5 machines, might work with other linuxes, will not work for MacOS

Support

> Different entry points

> "On the NAF, the compilation of ExpSW fails with …"

  - Naf-<YourExp>-support@desy.de (replace the obvious…)
  - Experiment experts will listen to you and help you

> "The space /bla/blubb is full"

  - Also experiment support list: They manage the resources

> "Machine XY is hanging" "file system /foo/bar is broken" "I cannot log in"

  - Naf-helpdesk@desy.de
  - DESY first level support, will either solve your problem or redirect to experts

> "dCache is not working"

  - GGUS is another option

> Please be as detailed as possible in error description:

  - Machine, Time, Command, File path, output, …

Documentation and communication channels

> A true sentence (always): Documentation could be better.

> We see that we have to work on our part of the documentation, and will do so. Promised.

> The above sentence also holds for "communication".

> We try to inform you about things as good as possible, and think about other channels. Some input from the NUC.

> http://naf.desy.de/ (in case you did not know:-))

Communication (2) and last slide

> You have a good idea to improve the NAF? You are welcome!

> Andreas and I am around still today and tomorrow, just talk to us!

  ▪ Or send us an email, or give us a call (This is not an alternative to support channels!!)

> And of course, you can / should also contact your experiment representative in the NUC (see its web page for names and emails)

> The next months will be challenging: Data will be there, and our first real test is there

  ▪ We want to have as close a contact with YOU as possible!

  ▪ Provide the best possible analysis infrastructure for YOU!