



Weekly meeting

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10/22/2014

Athena/python/AMI/grid/VO

1. People should import a grid certificate into the browser and the shell. We can import the certificate of IHEP. It is recognized at cern.
2. You also should register VO(virtual organization?) and AMI(atlas management interface).
3. Then you are accessible to the website you will go into and so on.
4. `$ setupATLAS`
5. `$ asetup 19.1.1.1(athena version) (to set up Athena)`
6. `$ python (go into python interactive prompt)`

dq2

- To load the environment on lxplus do:
\$ voms-proxy-init -voms atlas
\$ LocalSetupDQ2Client
- To check a dataset if existed in the system(DQ2).
\$ dq2-ls dataset's name
- To query the replicas of this dataset
\$ dq2-ls -r dataset's name
- To list the files in a dataset
\$ dq2-ls -f dataset's name
- To query a site with available replicas
\$ dq2-ls -L SFU-LCG2_DATADISK -f dataset's name
- To download a single file from the dataset
\$ dq2-get -f filename dataset's name

PanDa

- Firstly ,to set up the cvmfs software environment and to set up the Panda Clients
 - \$ setupATLAS
 - \$ localSetupPandaClient
- Secondly, to test the job locally
 - \$ prun --outDS user.<nickname>.pruntest --exec file.py
- Thirdly, submitting your job
 - \$ pathena /path /____.py -inDS=__ -outDS=__
- Then you can enter the [big panda monitor](#) (or typing \$pbook---another method) to monitoring its status.
- Finally, download it by
 - \$ dq2-get -f ...(where we can download?)

Ganga

- setupATLAS
- locasSetupGanga
(\$ganga--Enter the Ipython interface)
- Two ways to submit jobs
one is submitting the job in cmd line.
the other is in the Ipython interface.
- Two ways to monitor jobs
one is using the [big panda monitor](#).
the other is in the Ipython interface.
- Download the outputs(how to merge all the outputs?)

Browsing an xAOD in ROOT

1. source a script to be able to access the ATLAS software

```
$ setupATLAS
```

2. setup our Analysis Release

```
$ rcSetup Base,2.0.10
```

3. Now we will define which tutorial version we are using, which will set where the data can be found

```
$ export ALRB_TutorialData=/afs/cern.ch/atlas/project/PAT/tutorial/cern-oct2014/
```

4. Browsing the xAOD with the TBrowser

```
$ root -l filename (same as opening root file)
```

```
$ TBrowser b
```

5. PyROOT

```
$ vi xAODPythonMacro.py
```

```
$ chmod +x xAODPythonMacro.py
```

```
$ ./xAODPythonMacro.py
```

6. Setting up the requirements for the analysis release

6.1 Installing rcSetup

```
$ mkdir -p ~/ATLAS/sw/rcSetup
```

```
$ cd ~/ATLAS/sw/rcSetup/
```

```
$ svn co svn+ssh://svn.cern.ch/repos/atlasoff/rcSetup/tags/rcSetup-00-04-04
```

```
$ ln -s rcSetup-00-04-04 latest
```

```
vi ~/ATLAS/sw/rcSetup/rcSetup_conf.py
```

```
vi ~/.bashrc
```

6.2 Building AnalysisBase-2.0.14

```
$ cd ~/ATLAS/sw/releases
```

```
$ rcSetupLocal -d Base,2.0.14
```

xAOD analysis in ROOT

- To **Create your analysis package and Event Loop algorithm**

```
$ rc make_skeleton MyAnalysis
```

```
$ rc find_packages
```

```
$ rc compile
```

```
$ROOTCOREBIN/user_scripts/EventLoop/make_skeleton MyAnalysis  
MyxAODAnalysis
```

- **Modifying the script named** “Makefile.RootCore”, “MyxAODAnalysis.cxx”
and “MyxAODAnalysis.h”

- Then

```
$ rc find_packages
```

```
$ rc compile
```

```
$ rm -rf submitDir/(output directory)
```

```
$ root -l 'ATestRun.cxx ("submitDir")'
```