Local Workstations

Our local computer workstations and storage are administered by the Physics Computer Group. Contact help (at) physics.utexas.edu if you have technical issues or for an account (undergraduates will need to ask Peter Onyisi to send the email for them). Once you are logged in, you will have access to the full set of ATLAS and CERN software, as well as backed up space for code (/code) and a 14 TB data storage space (/data). You can ssh to the machines from off-campus.

Workstation names

tau{1,2,3,4,5}.hep.utexas.edu

Disk areas to use

You should use your home area sparingly (only for things like your thesis). Make directories with your username under /data and /code. Place large data files in your /data area, and check out/develop your code in your /code area.

Kerberos

Kerberos is a system for "single sign on" where you log in with your password once and get a ticket. With this ticket, you can use Kerberos-enabled applications, in particular SSH terminal login and scp and xrdcp to copy files from CERN. To get your Kerberos ticket, type

```
    kinit mycernusername@CERN.CH
```

replacing mycernusername with your actual username of course. The capitalization of CERN.CH is required. It will prompt for your password; if you get the password wrong it will give an error, and if you get it right there will be no further message. You can see the tickets you have with klist, and get rid of your tickets with kdestroy.

Setting up SSH for CERN

You will want to enable SSH to use Kerberos. This will be needed so, for example, you don't have to keep entering your password when running SVN checkouts of packages from CERN (SVN is tunneled over SSH). Edit (or create) the file $HOME/.ssh/config so that it contains the following:

```
    Host *.cern.ch
    PubkeyAuthentication no
    GSSAPIAuthentication yes
    GSSAPIDelegateCredentials yes
    GSSAPITrustDns yes
    # add following line if your CERN username and UT physics username are different; replace mycernusername with actual username
    User mycernusername
    Host *
    ForwardX11 yes
```

This will set you up to use Kerberos (GSSAPI) authentication to connect to CERN, and will also forward X11 so you can run GUI applications remotely.

Setting up ATLAS software on the workstations

The ATLAS software is distributed to us via CVMFS, a caching filesystem that automatically pulls updates from CERN on demand. To gain access to ATLAS and CERN software, run the following lines at the bash prompt:

```
    export ATLAS_LOCAL_ROOT_BASE=/cvmfs/atlas.cern.ch/repo/ATLASLocalRootBase/
    export ALRB_localConfigDir=/code/localConfig
    . /cvmfs/atlas.cern.ch/repo/ATLASLocalRootBase/user/atlasLocalSetup.sh
```

(you can put these lines in your .bash_profile to execute them automatically on login). The following scripts are useful:

- `asetup` to set up an ATLAS release
- `localSetupROOT` to set up the latest ROOT release
- `localSetupGLite` to set up basic Grid tools (including `voms-proxy-init` to get a Grid proxy)
- `localSetupDQ2Client` to set up the DQ2 tools to browse and download ATLAS Grid datasets
- `localSetupPandaClient` to set up the ATLAS Panda Grid job submission tools