CRAB User Guide
For the Texas A&M University USCMS Tier 3 Site

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This guide is meant for users running CRAB jobs through the Texas A&M Brazos cluster. The system has been made to mirror other sites as closely as possible and hence the guide will cover the basic workflow of CRAB at other places with specific changes custom to Brazos. There are also links included for a complete tutorial and other information regarding CRAB.

This guide will assume you are using the bash shell. There will be several commands that are specific to bash, for example the export command is used to set environment variables. If you are using the csh shell you will need to use their commands, so instead of export you would use the setenv command.

Step 1) ssh to hurr.tamu.edu with your NetID and Password

Step 2) Source gLite environment:

bash$ source /home/hepxadmin/gLite/gLite-UI/etc/profile.d/grid_env.sh

Step 3) Move into the /src directory of the CMSSW version you wish to use and set environment variables, assuming you have already installed the version you need.

bash$ cd ~/CMS_X_Y_Z/src
bash$ cmsenv

Step 4) Source the latest CRAB environment:

bash$ source /home/hepxadmin/crab/current/crab.sh

Step 5) You are now ready to begin using CRAB with Brazos. With your .py and crab.cfg files ready, you can use the canonical CRAB commands to create and submit jobs to the grid/Brazos as you would from any other location (a full list of crab commands can be obtained by typing ‘crab –h’ on the command line)
A complete Hands-On CRAB tutorial is located here

https://twiki.grid.iu.edu/bin/view/ReleaseDocumentation/HandsOnCRAB

**Important Notes:** For expedience, it is best to change to your /src working directory immediately after you log in, and then paste the 3 environment sourcing lines IN THIS ORDER:

```
bash$ source /home/hepxadmin/gLite/gLite-UI/etc/profile.d/grid_env.sh
bash$ cmsenv
bash$ source /home/hepxadmin/crab/current/crab.sh
```

Before using any CRAB commands you may also have to create a proxy using your grid certificate with the following command:

```
bash$ voms-proxy-init -voms cms
```

If you do not have your grid certificate installed on your account in Brazos, please follow the instructions on this webpage:

https://twiki.cern.ch/twiki/bin/view/CMSPublic/WorkBookStartingGrid#ObtainingCert

**Further Information:** The following is a list of common and useful CRAB commands

**crab --create:** This will create your jobs with the parameters you have listed in your crab.cfg file. The output should display the number of jobs created.

**crab --submit:** This command will submit your jobs to the grid. The output should give you a CMS Dashboard link to follow the progress of your job as well as a link for the CRAB server.

**crab --status:** This command will give you a status update for your jobs, including information about the progress of each job, where it was sent, and whether it completed or failed.

More details about CRAB can be found on the workbook here:

https://twiki.cern.ch/twiki/bin/viewauth/CMS/WorkBookStartingGrid