A Crash Course on Vesta and the ALCF

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Crash Course Overview

- This crash course will take approximately 25 minutes.
- Get an account and access to an allocation
- Logging into Vesta
- Copying the source files
- Building the code
- Submitting a job and seeing the output
Getting an Account

- Go to https://accounts.alcf.anl.gov/accounts/request.php and click on “Request for an Account”
- Select the project name you want to be a part of
- Select (or type) your project PI's name and email address in the account sponsor fields and then click submit
- Once we receive your account sponsor's approval, we will begin the account creation process
- Once your account is created, we will send you a Cryptocard token to login to the ALCF resources, if needed
Log into Vesta and copy the source files

** Instructions also available at: http://www.alcf.anl.gov/~mantrala/

- $ ssh username@vesta.alcf.anl.gov
- Resync Instructions: https://www.alcf.anl.gov/resource-guides/using-cryptocards
- username@vestalac1:~> cp -Rp ~mantrala/hydro
- mantra@vestalac1:~> cd hydro
- mantra@vestalac1:~/hydro> ls
- 1d_hydro.c Makefile movie.sh
- Build the code, and submit the job
- mantra@vestalac1:~/hydro> make
  Command not found error?
  Type: soft add +mpiwrapper-gcc
- Run Make again
- mpicc 1d_hydro.c -o hydro
- mantra@vestalac1:~/hydro> ls
- 1d_hydro.c hydro Makefile movie.sh
- mantra@vestalac1 :~/hydro> qsub –A ATPESC2013 –q Q.ATPESC2013 -n 2 -t 10 hydro
- 299010
- Wait for the job to complete, you can watch it by running qstat
See the output

- `mantrala@vestalca1 :~/hydro> ls`
  - 1d_hydro.c step_0400_00 step_1100_01 step_1900_00 step_2600_01
  - 299010.cobaltlog step_0400_01 step_1200_00 step_1900_01 step_2700_00
  - 299010.error step_0500_00 step_1200_01 step_2000_00 step_2700_01
  - 299010.output step_0500_01 step_1300_00 step_2000_01 step_2800_00
  - hydro step_0600_00 step_1300_01 step_2100_00 step_2800_01
  - Makefile step_0600_01 step_1400_00 step_2100_01 step_2900_00
  - movie.sh step_0700_00 step_1400_01 step_2200_00 step_2900_01
  - step_0000_00 step_0700_01 step_1500_00 step_2200_01 step_3000_00
  - step_0000_01 step_0800_00 step_1500_01 step_2300_00 step_3000_01
  - step_0100_00 step_0800_01 step_1600_00 step_2300_01 step_3100_00
  - step_0100_01 step_0900_00 step_1600_01 step_2400_00 step_3100_01
  - step_0200_00 step_0900_01 step_1700_00 step_2400_01
  - step_0200_01 step_1000_00 step_1700_01 step_2500_00
  - step_0300_00 step_1000_01 step_1800_00 step_2500_01
  - step_0300_01 step_1100_00 step_1800_01 step_2600_00

- `mantrala@vestalca1 :~/hydro> make movie`
- See graphical output!
Need ALCF Token or Login Assistance During this Workshop?

- Email support@alcf.anl.gov and put “ATPESC” in the subject line to expedite your request, or
- Call us at 630-252-3111 (toll-free 866-508-9181)