Research Express is on its way!

- The demonstration will start at 12:30 pm.
- To use the Live Chat:
  - Maximize your browser window so you can see the postings.
  - If you refresh the browser page, you'll need to log in again.
  - After the demonstration, staff will remain available in the chat for a few minutes to answer additional questions.

Today's topic: Using IDL on Mills
Using IDL on Mills
Objectives

- Interactive IDL
  - GUI
  - command line
- Batch IDL
Interactive Compute Node

$ qlogin

[(it_css:traine)@mills ~]$ qlogin
Your job 39086 ("QLOGIN") has been submitted
waiting for interactive job to be scheduled ...
Your interactive job 39086 has been successfully scheduled.
Establishing /opt/shared/GridEngine/local/qlogin_ssh session to host n015 ...
[traine@n015 ~]$
Interactive VALET

$ vpkg_require idl
Interactive idlde

$ idlde
Interactive *IDL*de

plot a sine curve

```
IDL> orig = sin((findgen(200)/35)^2.5)
IDL> plot,orig
IDL> exit
```

from: [http://www.bu.edu/tech/research/training/scv-software-packages/idl/](http://www.bu.edu/tech/research/training/scv-software-packages/idl/)
Interactive idlde demo

IDL> demo
Interactive IDL (from shell)

$ idl
IDL> orig = sin((findgen(200)/35)^2.5)
IDL> plot,orig
IDL> exit
Batch

- Once operations are established
- Easily reproducible
- Often involves multiple files
- Our example: factoring a large number into primes
Batch Scripts

$ cp -r ~trainf/idl-demo.
$ cd idl-demo

Explain what each file does

adapted from: http://www.personal.psu.edu/users/s/w/swf13/SGE/idlexample.html
Batch Begin

$ qsub factor.qs

[itcss:traine]\@mills idl-demo]$ qsub factor.qs
Your job 39109 ("factor.qs") has been submitted
Batch Monitor

Use qstat to check your job submission

$ qstat
Batch Results

View result files:

- factor.txt
- factor.qs.poXXX
- factor.qs.oXXX

[(it_css:traine)@mills idl-demo]$ ls
factor_batch factor.qs  factor.qs.po39109  factor.txt  prime.pro
factor.pro  factor.qs.o39109  factor.sn  main.pro
Licensing

- A limited number of licenses available for evaluation during the summer
- 1 license/node
- $100/license
Summary

- Interactive
- Batch

workgroup, qlogin, qsub, scripts ( .qs, .sh, .pro, .qs.oXXXXX, .qs. poXXXXX)
More information

- IT Research Computing
  http://www.it.udel.edu/research-computing
Contact the IT Support Center

- **Email:** consult@udel.edu
  
  If you make the first line of the e-mail message
  
  Type=Cluster-Mills
  
  your question will be routed more quickly.

- **Phone:** (302) 831-6000

- **Text:** (302) 722-6820