Ranger
Hardware and Environment

Drew Dolgert (Nate, Susan, others)
- Connect
- Compile
- Run
- Transfer files
<table>
<thead>
<tr>
<th>Chunks</th>
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<tbody>
<tr>
<td>• What is TeraGrid?</td>
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<td>• What is Ranger?</td>
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<tr>
<td>• Secure Shell</td>
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<tr>
<td>• Basic Shell Scripting</td>
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<tr>
<td>• Make</td>
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<tr>
<td>• Modules</td>
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<td>• Secure Copy</td>
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<td>• GridFTP</td>
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<tr>
<td>Prefix</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>kilo</td>
</tr>
<tr>
<td>mega</td>
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<tr>
<td>giga</td>
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<tr>
<td>tera</td>
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<td>peta</td>
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Grid
Computing
Storage
Visualization

Data Courtesy of: Diego A. Donzis, P.K. Yeung
Visualization by: Gregory P. Johnson, Kelly P. Gaither
Consulting
Portal
portal.teragrid.org
Allocations

Startup & Education | Research

- Jan 15
- April 15
- July 15
- October 15
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<th>62976</th>
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<td>579</td>
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<td>123</td>
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<td>1700</td>
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scheduler
train4xx@ranger.tacc.utexas.edu
train4xx@tg-login.ranger.tacc.teragrid.org
train4xx@login3.ranger.tacc.utexas.edu
Exercise

2.2 Use SSH to Connect

2.3 Starting: Read Examples
- or -

2.4 Further: Using X-Windows
Variables

Working Directory

(other things)
```bash
${PATH}
/bin:$HOME/bin
```
Exercise

3.3 Learn Modules
$PATH

$LD_LIBRARY_PATH

$TACC_PACKAGE_INC
$TACC_PACKAGE_LIB
$TACC_PACKAGE_DIR
Make

Target: dependency, dependency command line command line
Compile with Make

sciprog: main.c main.h
cc main.c -o sciprog
archive:
zip archive.zip main.*

make sciprog
make archive
Exercise

3.5 Exercise: Compilation
Run in batch!
Check out Section 4.3.
account
name
variables
join
Dear Scheduler,

TODO
Exercise

4.6 Exercise: Run in Batch
$HOME

$WORK

$SCRATCH
scp from to

user@machine.domain.edu:path
5.5 Exercise: Retrieve Files with SCP
GridFTP

TeraGrid Credentials → uberftp

globus-url-url-copy
Getting Good Speeds

- memory
- bandwidth
- CPU
- disk speed
- NIC
- your computer
- internet
- local switch
- campus hub
- remote computer