



Data Transfer Options for Ranger

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Overview

- Data Transfer options
 - Small transfers, speed not an issue
 - sftp
 - Large or secure transfers
 - globus-url-copy
 - uberftp
 - gridftp (Windows)
- Security
 - Proxy Certificates
- Demo



Secure file transfer - sftp

- `sftp <username>@tg-login.ranger.tacc.teragrid.org`
- Enter password
- Navigate to appropriate local and remote directories
- Copy file

- Your performance may vary:
 - Getting 31 MB file
 - deneshta (my Mac) - 3.1 MB/s - 10 sec
 - linuxlogin3 (CAC login node) - 0.854 MB/s - 37 sec



GridFTP

- GridFTP is authenticated by X509 Certificates - no need to enter password every time you start a transfer
- Proxy Certificates generated by myproxy service at NCSA
- Set up environment to use globus tools
 - export GLOBUS_LOCATION=/opt/globus
 - ./opt/globus/etc/globus-user-env.sh
- Get proxy certificate
 - myproxy-logon -s myproxy.teragrid.org -l zollweg
- Start ftp session
 - /opt/uberftp/bin/uberftp



Performance

- You can get additional bandwidth by using parallel streams:
 - `/opt/uberftp/bin/uberftp tg-login.ranger.tacc.teragrid.org -mode E -parallel 8`

File size	<u>Time</u> stream	<u>Time</u> extended block, parallel 8
32 MB	6 sec (5.145 MB/s)	2 sec (15.435 MB/s)