Globus Usage at University of Nebraska Campuses

Dr. David Swanson
Director, Holland Computing Center
University of Nebraska

Globus World, ANL
04/16/14
Outline

• HCC Environment
• Data Transfer Tools pre-Globus Online
• Globus Online Initial Steps
• Coming Soon
• Wish List
“Our main theme this year is Setting Up a Campus Data Service”
https://github.com/djw8605/HCCDashboard

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(GridFTP works)
Data Movement in CMS

- Subscription Request
- Status/Registration
- Negotiation
- Transfers

PhEDEx
- Registration
- Data Location Authority

DAS/DBS

Target Site Storage
- SRM
- Gridftp

Hosting Site Storage
- SRM
- Gridftp

Data Movement in CMS

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Data Transfer Options, OSG

• Batch Transfers
  - < 100 MB: Condor File Transfer [UWisc]
  - < 500 MB: http caching (squid)
  - < 2 GB: GridFTP [Globus]

• Streaming Transfers
  - “small”, generic: Parrot/Chirp [CCTools, ND]
  - “big”, HEP: xrootd [SLAC]
HEP ... and the rest of campus

• GridFTP ... FTW!
  – requires considerable admin intervention

• The rest use: winSCP or Filezilla or CyberDuck
Storage Options

- /home: ZFS, small, quotas, backed up
- /work: Lustre, “large,” no quota, purged
- /shared: ZFS, not (always) backed up
  Privately owned
- HDFS (CMS only)
- Library: custodial storage
- Offsite Tape: increased security, per year
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Globus implementation

- Created 2 Globus Connect Server (endpoints)
- on transfer servers
- Dedicated to largest clusters
- Mounts lustre natively (IB)
  - Also other Filesystems
- No login shell, SCP only initially
- Use Duo Authentication
Two-Factor Authentication

- Duo Authentication now used at HCC
- Affects only end-point activation
- modified default login handler to call Duo web API
- also modified look and feel of default activation page
HCC Globus Endpoint Activation

Welcome to the Globus Endpoint activation page. To activate this Endpoint, please sign in with your HCC username and password.

Two-Factor Authentication

Device: iOS (XXX-XXX-8188) •

- Duo Push RECOMMENDED
- Phone call
- Passcode

Next SMS passcode starts with 2 (send more)

Log in

For help, contact hcc-support@unl.edu
Globus Advantages

- Integrated, simple interface for all resources
  - Planning to add further endpoints this month
- Third party transfers (no login shell required)
- PLUS accounts will allow users to control sharing to external users – popular with user base
- High Performance in a simple interface
Wish List

• Finer grained access/sharing controls
  – User/group quotas?
  – Eliminate sharing of files I don’t own
    • (trusts user to understand file permissions... )

• Even friendlier web interface
  – Error reporting
  – Read only warnings

• HIPAA compliance (??)
Credit Due

• Vas Vasiliadis
• Emelie Harstad, Adam Caprez, Josh Samuelson
• UW-Madison, ND, Globus, CFPA
• NSF (CC-NIE, CMS, OSG)
• Brian Bockelman, Derek Weitzel, Garhan Attebury
• NU Administration, NRI, Holland Foundation
YOU WANT YOUR COUSIN TO SEND YOU A FILE? EASY. HE CAN EMAIL IT TO— ... OHH, IT'S 25 MB? HMM... DO EITHER OF YOU HAVE AN FTP SERVER? NO, RIGHT. IF YOU HAD WEB HOSTING, YOU COULD UPLOAD IT...

HMM. WE COULD TRY ONE OF THOSE MEGASHARE UPLOAD SITES, BUT THEY'RE FLAKY AND FULL OF DELAYS AND PORN POPUPS.

HOW ABOUT AIM DIRECT CONNECT? ANYONE STILL USE THAT?

OH, WAIT, DROPBOX! IT'S THIS RECENT STARTUP FROM A FEW YEARS BACK THAT SYNCs FOLDERS BETWEEN COMPUTERS. YOU JUST NEED TO MAKE AN ACCOUNT, INSTALL THE—

OH, HE JUST DROVE OVER TO YOUR HOUSE WITH A USB DRIVE?

UH, COOL, THAT WORKS, TOO.

I LIKE HOW WE'VE HAD THE INTERNET FOR DECADES, YET "SENDING FILES" IS SOMETHING EARLY ADOPTERS ARE STILL FIGURING OUT HOW TO DO.