The **MyProxy** Online Credential Repository

Jim Basney  
NCSA  
jbasney@ncsa.uiuc.edu
What is MyProxy?

- A new component in Globus Toolkit 4.0
  - Independent Globus Toolkit add-on since 2000
- A repository for storing long-lived private keys
  - Keys encrypted with user-chosen password
  - Keys never leave MyProxy server
- A service for retrieving proxy credentials
  - Supporting mobility, delegation, and renewal
- A commonly-used service for grid portal security
  - Integrated with OGCE, GridSphere, and GridPort
MyProxy System Architecture

MyProxy client

MyProxy server

Credential repository

Store proxy

Retrieve proxy

(over private TLS channel)
Proxy Delegation

Server

Client

Generate new key pair

Proxy certificate request

Sign proxy certificate with private key
MyProxy: Credential Mobility

- Obtain certificate
  - cg-login.ncsa.teragrid.org
  - ca.ncsa.uiuc.edu

- Store proxy
  - myproxy.teragrid.org

- Retrieve proxy
  - cg-login.caltech.teragrid.org
  - cg-login.sdsc.teragrid.org
  - cg-login.uc.teragrid.org

http://myproxy.ncsa.uiuc.edu/
MyProxy: Credential Renewal

- Submit job
  - Condor-G
  - MyProxy server
    - Fetch proxy
- Submit job
  - Globus gatekeeper
  - Refresh proxy
MyProxy and Grid Portals

MyProxy server

Login

CHEF portal

Fetch proxy

GridFTP server

Access data

http://myproxy.ncsa.uiuc.edu/
MyProxy: User Registration

1. Request account
2. Set username/password
3. Obtain user certificate
4. Certificate authority
5. Load user’s credentials
6. Retrieve proxy
7. MyProxy server
8. Login with username/password
9. Grid portal
10. Request account
11. Set username/password
12. Obtain user certificate
13. Certificate authority
14. Load user’s credentials
15. Retrieve proxy
16. MyProxy server
17. Login with username/password
18. Grid portal

http://myproxy.ncsa.uiuc.edu/
MyProxy Installation (Unix)

- As an add-on component to GT 3.x
  
  $ gpt-build myproxy*.tar.gz <flavor>

- Set $MYPROXY_SERVER environment variable to myproxy-server hostname
  
  $ export MYPROXY_SERVER=myproxy.ncsa.uiuc.edu

- Set Globus Toolkit environment
  
  $ . $GLOBUS_LOCATION/etc/globus-user-env.sh

- Client installation/configuration complete!
MyProxy Commands

- **myproxy-init**: store proxy
- **myproxy-get-delegation**: retrieve proxy
- **myproxy-info**: query stored credentials
- **myproxy-destroy**: remove credential
- **myproxy-change-pass-phrase**: change password encrypting private key
MyProxy Server Administration

- Install server certificate
- Configure /etc/myproxy-server.config policy
  - Template provided with examples
- Optionally:
  - Configure password quality enforcement
  - Install cron script to delete expired credentials
- Install boot script and start server
  - Example boot script provided
- Use myproxy-admin commands to manage server
  - Reset passwords, query repository, lock credentials
MyProxy CoG Clients

- Commodity Grid (CoG) Kits
  - Provide portable (Java and Python) MyProxy client tools & APIs
  - Support Windows

- For more information:
  - http://www.cogkit.org/
MyProxy Community Support

- myproxy-users@ncsa.uiuc.edu mailing list
- Bug tracking:
  http://bugzilla.ncsa.uiuc.edu/
- Anonymous CVS access
  :pserver:anonymous@cvs.ncsa.uiuc.edu:/CVS/myproxy
- Contributions welcome!
  - Feature requests, bug reports, patches, etc.
Thank you!

Contact:
http://myproxy.ncsa.uiuc.edu/
jbasney@ncsa.uiuc.edu

Questions/Comments?