MyProxy NMI Integration

Jim Basney, NCSA
Marty Humphrey, University of Virginia
http://myproxy.ncsa.uiuc.edu/
MyProxy is an online repository for grid credentials.

- Secure credential storage
- Convenient credential access
- Flexible credential management
Examples of MyProxy in use:
Credential mobility:

- Obtain certificate: ca.ncsa.uiuc.edu
- Store proxy: myproxy.teragrid.org
- Retrieve proxy:
  - tg-login.ncsa.teragrid.org
  - tg-login.caltech.teragrid.org
  - tg-login.sdsc.teragrid.org
  - tg-login.uc.teragrid.org
Grid portals:

- CHEF portal
- MyProxy server
- GridFTP server

Login → CHEF portal → Fetch proxy → GridFTP server → Access data
Proxy renewal:

Submit job → Workload management system → Submit job

Refresh proxy → Globus gatekeeper

Fetch proxy → MyProxy server
Long-term credential storage:

- Request account
- Username, password
- Obtain user’s certificate
- Load user’s credentials
- MyProxy server
- Retrieve proxy
- Change password
- Certificate authority
NMI integration:

- MyProxy included in NMI R3 & R4
- Packaged with GPT
- Uses Globus Toolkit security libraries

- Used by NMI components:
  - OGCE NMI portal
  - Condor-G

www.ogce.org
MyProxy OGSI implementation:

- Initial release this month for GT 3.0
- Designed to leverage OGSI functionality
Hardware-secured MyProxy:

Ongoing work:

- Continued OGSA development
- Credential access control (XACML, SAML)
- Credential exchange protocols (WS-Trust)
- Audit logging, monitoring, and event notification
- Additional authentication methods (Kerberos, PAM, OTP, SRP)
- Managing multiple credentials
Acknowledgements:

- Shiva Chetan
- Sumin Song
- Feng Qin
- Xiao Tu
- Shaun Arnold
- Jun Wang
- Greg Mattes
- Glenn Wasson
- Jarek Gawor
- Daniel Kouril
- Jason Novotny
- Miroslav Ruda
- Benjamin Temko
- Von Welch
- Markus Lorch
- Charles Severance

Supported by NSF Middleware Initiative