Endpoint Setup with Globus Connect Multiuser

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What is Globus Connect Multiuser?
- Packages a GridFTP server and MyProxy CA, pre-configured for use with Globus Online

Why Globus Connect Multiuser?
- Create transfer endpoints in minutes
  - Easily set up a Globus Online endpoint on any server, which then enables users with local accounts on that server to transfer files to/from that endpoint
- Avoid complex GridFTP install

What’s new?
- Available as part of the Globus Toolkit
- Native packages
  - RPMs and DEBs
- No need to setup SSH keys
Globus Connect Multiuser Demo
The goal of this session is to show you (hands-on) how to take a resource and turn it into a Globus Online endpoint.

Each of you is provided with an amazon EC2 machine for this tutorial.
Log into your host

Your slip of paper has the host information.

Log in as user “gw13”:

\texttt{Ssh gw13@ec2-xx-xx-xx-xx-xx.compute-1.amazonaws.com}

Use the password on the slip of paper.

\texttt{gw13} has passwordless sudo privileges.
curl -LoS http://www.globus.org/ftp/pub/gt5/5.2/stable/installers/repo/globus-repository-5.2-stable-precise_0.0.3_all.deb

sudo dpkg -i globus-repository-5.2-stable-precise_0.0.3_all.deb

sudo aptitude update

sudo aptitude -y install globus-connect-multiuser

sudo vi /etc/globus-connect-multiuser.conf

<-- replace "SHORT_HOSTNAME" with "gw13dtn"

sudo globus-connect-multiuser-setup <-- enter Globus Online username and password
Try doing the following

Create a file called tutorial.txt in /home/joe

Go to the GO Web UI -> Start Transfer

Select endpoint username#gw13dt\n
Activate the endpoint as user “joe” (not gw13). You should see joe's home directory.

Transfer between this endpoint and your Globus Connect or any other endpoint you have access to.
Try to access the endpoint created by the person sitting next to you.

You will get the following message:

‘Could not find endpoint with name ‘gw13dtm’ owned by user ‘username of person sitting next to you’

Go to your Globus Connect Multiuser server machine

```bash
sudo vi /etc/globus-connect-multiuser.conf
```

<-- uncomment “Public = False” and replace “False” with “True”

Now when you access your neighbor’s endpoint, you will not get the message anymore, rather you will be prompted for username and password.

But you can not access it since you do not have an account on that machine.
Enable sharing

```
sudo vi /etc/globus-connect-multiuser.conf
```

<-- uncomment Sharing = True

Go to the GO Web UI -> Start Transfer

Select endpoint `username#gw13dtn`

Share your home directory on this endpoint with neighbor

Access your neighbor’s endpoint
Globus Online / Globus Connect Multiuser Interaction

1. Access Endpoint
2. Username password
3. TLS handshake
4. Username password
5. Step 5
6. Transfer request
7. Step 6
8. Access files
9. Step 9

Globus Online (Hosted Service)

MyProxy
Online CA

PAM

GridFTP
Server

Remote Cluster / User’s PC

Campus Cluster

Globus Connect Multiuser

Local Storage

Local Authentication System
(LDAP, RADIUS, Kerberos etc)

Username password

Certificate
Firewall configuration

- Allow inbound connections to port 2811 (GridFTP control channel), 7512 (MyProxy CA)
  - From 174.129.226.69

- Allow inbound connections to ports 50000-51000 (GridFTP data channel)
  - If transfers to/from this machine will happen only from/to a known set of endpoints (not common), you can restrict connections to this port range only from those machines

- **If your firewall restricts outbound connections**
  - Allow outbound connections if the source port is in the range 50000-51000
MyProxy OAuth server

- **Site passwords flow through Globus Online**
  - Globus Online does not store passwords
  - Just pass along to MyProxy servers at site
  - Still a security concern for some sites

- **OAuth**
  - Sites run a MyProxy OAuth server
    - MyProxy OAuth server in Globus Connect Multiuser (coming soon)
  - Users enter username and password only on a site’s webpage
  - Globus Online gets an X.509 credential via OAuth protocol
**Globus Connect Multi User**

1. **Access Endpoint**
   - **Username**
   - **Password**
   - **Certificate**

2. **Redirect**
   - **Username**
   - **Password**
   - **Certificate**

3. **OAuth Server**
   - **Username**
   - **Password**
   - **Certificate**

4. **GCMU**
   - **Username**
   - **Password**

5. **MyProxy Online CA**
   - **Certificate**

6. **GridFTP Server**
   - **Certificate**

7. **Transfer Request**
   - **Certificate**

8. **Remote Cluster / User’s PC**
   - **Certificate**

9. **AuthenDAC & Data Transfer**

10. **Access Files**

11. **Campus Cluster**

   - **Local Storage**
   - **Local Authentication System (LDAP, RADIUS, Kerberos etc)**

   - **GridFTP Server**

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