Globus Online Tutorial

Hands-On Session

# Trainers

**Matthias Hofmann**, Technische Universitaet Dortmund, Germany (matthias.hofmann@tu-dortmund.de)

**Ioan Lucian Muntean**, Technical University of Cluj-Napoca, Romania (ioan.lucian.muntean@cs.utcluj.ro)

# PREREQUISITES

Download the archive with the training SSH keys (see link below)

<http://www.egcf.eu/trainings/egcf2014.tar.gz.enc>

Password protected archive with training SSH keys:

* File: egcf2014.tar.gz.enc

Command to decrypt and unpack the file:

* openssl aes-256-cbc -d -in egcf2014.tar.gz.enc -out egcf2014.tar.gz

Every participant to the training receives one login, with the format: ige\_user0XY, between ige\_user001 and ige\_user030.

Every participant will create a Globus Online account and add the identities: X.509 Grid Certificate and SSH public key.

# TRAINING SITES USED IN THE EXERCISES

## StratusLab sites (training machines with GT 5.x installed):

|  |  |
| --- | --- |
| onevm-185.lal.in2p3.fr | onevm-157.lal.in2p3.fr |
| onevm-147.lal.in2p3.fr | onevm-159.lal.in2p3.fr |
| onevm-151.lal.in2p3.fr | onevm-165.lal.in2p3.fr |
| onevm-152.lal.in2p3.fr | onevm-171.lal.in2p3.fr |
| onevm-153.lal.in2p3.fr | onevm-174.lal.in2p3.fr |
| onevm-156.lal.in2p3.fr | onevm-175.lal.in2p3.fr |
| onevm-178.lal.in2p3.fr | onevm-168.lal.in2p3.fr |

## EGCF Testbed sites:

1. gt5-ige.drg.lrz.de (LRZ, Germany)
2. gt-ige.utcluj.ro (TUCN, Romania)

# WORKING SESSION

(demonstrated for ige\_user029 - each participant should use his training login and the training machine assigned to him):

# 1. Login to your training machine

ssh -i egcf2014/user-ssh-keys/ ige\_user029/ige\_user029\_id\_rsa ige\_user029@onevm-168.lal.in2p3.fr

# 2. Put your proxy certificate to a MyProxy server

myproxy-init -l ige\_user029 -s myproxy.lrz.de

(sudo apt-get install myproxy)

# 3. GO CLI Exercises

Get help on the CLI commands:

\* if you have a trusted personal X.509 certificate, proceed with gsissh

gsissh YOURGOUSERNAME@cli.globusonline.org help

\* if you have a training certificate, proceed with ssh

ssh -i egcf2014/user-ssh-keys/ige\_user029/ige\_user029\_id\_rsa ionelm@cli.globusonline.org help

### a. Create endpoint:

(create endpoint onevm-168)

ssh -i egcf2014/user-ssh-keys/ige\_user029/ige\_user029\_id\_rsa YOURGOUSERNAME@cli.globusonline.org endpoint-add -p gsiftp://onevm-168.lal.in2p3.fr:2811 -s '/O=Grid/OU=GlobusTest/OU=simpleCA-acalgrid103.labacal.utcluj.ro/CN=onevm-168.lal.in2p3.fr' onevm-168

(create endpoint gt5-ige-lrz)

ssh -i egcf2014/user-ssh-keys/ige\_user029/ige\_user029\_id\_rsa YOURGOUSERNAME@cli.globusonline.org endpoint-add -p gsiftp://gt5-ige.drg.lrz.de:2811 gt5-ige-lrz

gsissh -t YOURGOUSERNAME@cli.globusonline.org endpoint-add -p gsiftp://gt5-ige.drg.lrz.de:2811 gt5-ige-lrz

Similarily, add two more training machines as Globus Online endpoints.

(activate endpoint gt5-ige-lrz)

ssh -i egcf2014/user-ssh-keys/ige\_user029/ige\_user029\_id\_rsa YOURGOUSERNAME@cli.globusonline.org endpoint-activate gt5-ige-lrz -m myproxy.lrz.de

### b. List available endpoints.

b.1 Identify the command for listing endpoints, see details of the command (how to use, parameters etc.)

gsissh YOURGOUSERNAME@cli.globusonline.org help endpoint-list

gsissh YOURGOUSERNAME@cli.globusonline.org man endpoint-list

b.2 Export the list of available endpoints in CSV format

gsissh YOURGOUSERNAME@cli.globusonline.org endpoint-list -f name,subjects,credential\_status -O csv > eps.csv

b.3 Find out more detailed information about the endpoints: your laptop running Globus Connect, go#ep1, and your tutorial machine.

b.4 Activate source and destination endpoints (all endpoints).

gsissh YOURGOUSERNAME@cli.globusonline.org help endpoint-activate

(next command should fail)

ssh -i egcf2014/user-ssh-keys/ige\_user029/ige\_user029\_id\_rsa YOURGOUSERNAME@cli.globusonline.org endpoint-activate YOURGOUSERNAME#onevm-168

(this one should work)

ssh -i egcf2014/user-ssh-keys/ige\_user029/ige\_user029\_id\_rsa YOURGOUSERNAME@cli.globusonline.org endpoint-activate YOURGOUSERNAME#onevm-168 -m myproxy.lrz.de

(Try with -t to hide password)

ssh -t -i egcf2014/user-ssh-keys/ige\_user029/ige\_user029\_id\_rsa YOURGOUSERNAME@cli.globusonline.org endpoint-activate YOURGOUSERNAME#onevm-168 -m myproxy.lrz.de

(If you have a trusted certificate, try with gsissh insted ssh)

gsissh -t YOURGOUSERNAME@cli.globusonline.org endpoint-activate -m myproxy.lrz.de YOURGOUSERNAME#gt-ige

### c. Submit data transfer request.

c.1 List endpoint content

gsissh -t YOURGOUSERNAME@cli.globusonline.org help ls

gsissh -t YOURGOUSERNAME@cli.globusonline.org ls YOURGOUSERNAME#gt5-ige-lrz/

c.2 Transfer file interactively/synchronously

gsissh -t YOURGOUSERNAME@cli.globusonline.org scp YOURGOUSERNAME#gt5-ige-lrz:/~/gram\_20110916.log YOURGOUSERNAME#gt5-ige-lrz:/~/gram\_20110916\_copy.log

Check if the file is there:

(invoke CLI command 'ls')

Remove it:

gsissh -t YOURGOUSERNAME@cli.globusonline.org delete

YOURGOUSERNAME#gt5-ige-lrz/~/gram\_20110916\_copy.log

c.3 Submit a transfer request

ssh -i egcf2014/user-ssh-keys/ige\_user029/ige\_user029\_id\_rsa YOURGOUSERNAME@cli.globusonline.org transfer

YOURGOUSERNAME#onevm-168/~/egcf2014/ YOURGOUSERNAME#gt5-ige-lrz/~/ -r

c.4 Check the status of transfer

ssh -i egcf2014/user-ssh-keys/ige\_user029/ige\_user029\_id\_rsa YOURGOUSERNAME@cli.globusonline.org status <TASK ID>

c.5 List the content of the endpoint

ssh -i egcf2014/user-ssh-keys/ige\_user029/ige\_user029\_id\_rsa YOURGOUSERNAME@cli.globusonline.org ls YOURGOUSERNAME#onevm-168/

c.6 Submit a list (sequence) of transfers. Check if the files are there.

c.7 Remove a file from an endpoint:

gsissh -t YOURGOUSERNAME@cli.globusonline.org delete

YOURGOUSERNAME#gt5-ige-lrz/~/gram\_20110916\_copy.log

### d. Monitor the status of a request.

d.1 Check status of the remove operation:

YOURGOUSERNAME@gt-ige:~$ gsissh -t YOURGOUSERNAME@cli.globusonline.org status 50fde914-df05-11e3-b4b1-22000a971261

Task ID : 50fde914-df05-11e3-b4b1-22000a971261

Request Time: 2014-05-19 03:26:29Z

Command : delete (+1 input line)

Label : n/a

Status : SUCCEEDED

Connection to cli.globusonline.org closed.

d.2 Check the status of the last file transfers.

### e. Change the data transfer request.

Change the deadline of a transfer request.

## 4. SCRIPTING AGAINST GO CLI

4.a Activate a list of endpoints.

4.b Distribute a file/folder to a list of endpoints.

4.c Print the status of each transfer.

# 5.\* Install Globus Connect Personal on your laptop and on your training machine.

1. Download the latest version of Globus Connect Personal from your Globus Online account.

2. (For Linux) Unpack the archive

tar -xzf globusconnect-latest.tgz
cd globusconnectpersonal-2.1.1/
./globusconnectpersonal –help

3. Register the local endpoint

./globusconnectpersonal –setup <Your Key Generated by Globus Online>

4. Start Globus Connect Personal

./globusconnectpersonal -start &