

# Globus Online Tutorial

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## *Hands-On Session*

### Trainers

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### 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 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
```

Similarly, 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.