

ECMWF training course - 2017

ECaccess tutorial

NOTES:

- 1 . This session is meant to give you a flavour of the services provided with ECaccess.
- 2 . As you are at ECMWF and have no ActivIdentity card for the training UID's, we cannot use the normal gateway (ecaccess.ecmwf.int).
- 3 . For this tutorial **only**, we have set up the training UIDs on a gateway called **teaccess-vzone.ecmwf.int**.
- 4 . We have also forced the passcode to be **fixed** for all UIDs. See welcome letter from Monday with passwords. Make sure you use your own **UID!**
- 5 . As we stay within the ECMWF local network, there is no real need to use ECaccess, but imagine that you are back in your office at "HOME".
- 6 . Once this tutorial is over, you can forget about "ecaccess-vzone.ecmwf.int" and the fixed passcode.
- 7 . Back at HOME, simply remember "**ecaccess.ecmwf.int**" (or the ECaccess gateway installed locally) and the passcodes generated by your ActivIdentity card.
- 8 . When "**tr??**" or "**class??**" is given below, use your own training UID and local desktop system.

1. Interactive access

1. ssh - [X11]

```
$ ssh [-X] tr??@teaccess-vzone.ecmwf.int
```

... you will be prompted for a hostname. If you just press 'enter', the default "ecgate" will be chosen.

2. NX

As we don't have NX plugin installed the test gateway, you will not be able to test this option.

<https://teaccess-vzone.ecmwf.int/>

2. FTP and SFTP

From a local terminal, run “ftp teaccess-vzone.ecmwf.int” or “sftp teaccess-vzone.ecmwf.int”. This allows you to transfer files from or to ECMWF.

From a web browser (or from a file manager which supports FTP or SFTP, such as conqueror or dolphin), you can try to use the URL

<ftp://tr??@teaccess-vzone.ecmwf.int/>

OR

<sftp://tr??@teaccess-vzone.ecmwf.int/>

3. Web access

From your web browser, you can access the URL

<http://teaccess-vzone.ecmwf.int/>

Use your “tr??” UID and the fixed passcode to login. You can try the browsing, monitoring, submission facilities ...

4. ETools

Please copy an example batch job using the following command:

```
cp ~trx/mars_ectrans.job ~/.
```

On your local desktop system (class??), we will try to download a script, run it in batch mode and then get the output back. A sample ksh session with comments follows:

```
# change into a working directory
$ cd /tmp/tr??

# request the certificate, you can check its validity with “ecaccess-certificate-list”
$ ecaccess-certificate-create

# In the $HOME directory at ECMWF try to find a suitable job to “download”,
# e.g. Retrieve_extract_bufc.cmd
$ ecaccess-file-dir # or
$ ecaccess-file-dir --long home:/trx/mars_ectrans.job

# download the file
$ ecaccess-file-get mars_ectrans.job # or
$ ecaccess-file-get home:/trx/mars_ectrans.job

# Check the job, then submit the job to ecgate; A job-id (jid used below) will be returned.
$ ecaccess-job-submit mars_ectrans.job

# monitor the job
$ ecaccess-job-list [jid]

# get job output back and check.
```

```

$ ecaccess-job-get [jid] output_file
$ less output_file          # GRRRR ... get the real job output file with
                             # ecaccess-file-get and check it. To avoid these
                             # 'redirection' output files from ECaccess, you can
                             # remove the SLURM output and error directives.

# The files generated by our example job are located in $SCRATCH
$ ecaccess-file-dir scratch:

# get the output file which was generated by the example job
$ ecaccess-file-get scratch:europa.grib

# delete the job from spool area
$ ecaccess-job-delete [jid]

# check that all your jobs have been removed from the queue
$ ecaccess-job-list

# preparation for unattended file transfers
$ cd /tmp/tr??.; mkdir ecmwf

```

5. ectrans (unattended transfers):

1. Setup of destination information via ECaccess WebToolkit:

```
$ ecaccess-association-get -template tr??_assoc tr??_assoc.txt
```

Edit top of file tr??_assoc.txt:

```

#####
# Main Parameters
#####
$name='tr??_assoc';          # the name you have used when
                             # requesting template, which you can change

$active='yes';              # activate this association

$comment='My test association'; # you can give it a comment

$grantedUserList="";        # you can provide comma separated uids to allow
                             # others to use this association

$directory='/tmp/tr??.ecmwf'; # the destination directory

$hostName='class??.ecmwf.int'; # the destination host

$login='tr??.';             # the destination user name

$protocol='genericSftp';    # the protocol which is supported at your destination

```

```
$ ecaccess-association-put -password tr??_assoc.txt
```

This command will prompt you for a password, and this time you will have to use your Unix password!!!

OR

2. Setup of destination information via the web. Access the URL:

<http://teaccess-vzone.ecmwf.int/>

Go to “Ectrans Setup” – lower left corner, then select “add association”. Enter the following info:

```

Association name: tr??_assoc          # you are free to choose this name.
                                       # "from_reading" is most likely already used

```

Host name: class??.ecmwf.int	# Once at home, this will be one of your # local systems
Directory: /tmp/tr??.ecmwf	
Default Destination: genericSftp	
Login: tr??	# At home, this will be your UID on your # local systems.
Password: *****	# your tr?? Unix password

Four default destination types are defined and are available to you: genericFtp, genericSftp and genericFile and genericFtps. Use “genericSftp”. Now you can create the association by pressing the “MS User” button.

3. From **ecgate**, you can now use ectrans ...

login to ecgate

```
$ ssh ecgate
```

check the syntax

```
$ ectrans
```

find an appropriate file, e.g.

```
$ ls $SCRATCH/europe.grib
```

use ectrans; transfer ID returned

```
$ ectrans -gateway teaccess-vzone.ecmwf.int -remote tr??_assoc \
-verbose -source $SCRATCH/Europe.grib
```

check with ectrans whether the transfer is successful

```
$ ectrans -check <TID>
```

Check it in /tmp/tr??.ecmwf on your local system

```
$ ls /tmp/tr??.ecmwf
```

Ttransfer file again; Mistake ... the remote file is already there.

```
$ ectrans -gateway teaccess-vzone.ecmwf.int -remote tr??_assoc \
-verbose -source $SCRATCH/europe.grib
```

4. Check status from your local system:

shows the status of the transfer.

```
$ ecaccess-ectrans-list
```

The transfer is no longer needed delete it OR

```
$ ecaccess-ectrans-delete <TID>
```

to retry the transfer and overwrite the local file

```
$ ecaccess-ectrans-restart -overwrite <TID>
```

5. You can now edit your job to include the ectrans command, with ‘-overwrite’, resubmit it. If you resubmit the job, the data file ‘europe.grib’ will be automatically sent back to you. Last extra thing you could is to ask the job output file to be returned to you after completion.

```
$ ecaccess-job-submit -remote tr??_assoc -transferOutput -sterr2Stdout -gateway \
teaccess-vzone.ecmwf.int mars_ectrans.job
```