gLite Data Management System Hands-on
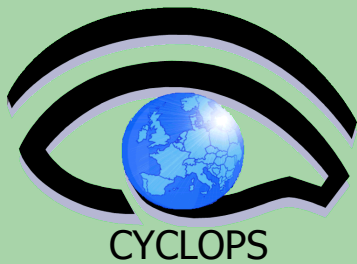
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INFN Catania

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Bologna, 11ʰ-13th April 2007

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Practicals on LFC and lcg-utils

Set up your environment

- Check that the following environment variables, used to specify the catalog type and its location, are set up properly:

  - `export LCG_CATALOG_TYPE=lfc`
  - `export LFC_HOST=lfc-gilda.ct.infn.it`

- Ensure you have created a proxy certificate and it is still valid. If not create it by:

  - `voms-proxy-init --voms gilda`

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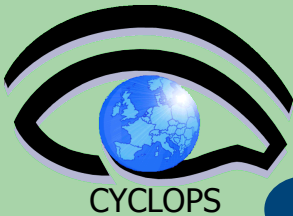# LFC Catalog commands

Listing the entries of a LFC directory

`lfc-ls [-cdiLlRTu] [--comment] path`…

where *path* specifies the LFC pathname (mandatory)

- Remember that LFC has a directory tree structure
- **/grid/<VO_name>/<you create it>**

LFC Namespace	Defined by the user

- All members of a given VO have read-write permissions under their directory
- **-l** (it is a lowercase "L") outputs long listing
- **-R** lists the contents of directories recursively (don't use it so often!)
- You can set **LFC_HOME** to use relative paths *LFC_HOME=/grid/gilda/myDir* ➜ */grid/gilda/myDir/myFile* becomes *myFile*

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Ifc-Is examples

lfc-ls examples

```
$ lfc-ls -l /grid/gilda/tutorial
```

lfc-ls examples

```
$ lfc-ls –l /grid/gilda/tutorial

...
drwxrwxr-x   0 117       102                            0 Mar 15 16:53 lookee
drwxrwxr-x   0 122       102                            0 Mar 15 16:54 miacartella
dr--rwxrwx   0 114       102                            0 Mar 15 16:50 myfolder
drwxrwxr-x   0 114       102                            0 Mar 15 16:51 myfolder2
-rwxrwxr-x   1 129       102                          193 Mar 15 17:06 nome.txt
lrwxrwxrwx   1 129       102                            0 Mar 15 17:11 nome2.txt -> /
grid/gilda/tutorial/nome.txt
drwxrwxr-x   0 129       102                            0 Mar 15 16:53 p19
drwxrwxr-x   3 124       102                            0 Mar 15 17:13 pippo
-rwxrwxr-x   1 124       102                          318 Mar 15 17:18 pippopro.txt
drwxrwxr-x   0 128       102                            0 Mar 15 17:00 pollo
...
```

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lfc-ls examples

$ lfc-ls –l /grid/gilda/tutorial

```
...
drwxrwxr-x   0 117      102                        0 Mar 15 16:53 lookee
drwxrwxr-x   0 122      102                        0 Mar 15 16:54 miacartella
dr--rwxrwx   0 114      102                        0 Mar 15 16:50 myfolder
drwxrwxr-x   0 114      102                        0 Mar 15 16:51 myfolder2
-rwxrwxr-x   1 129      102                      193 Mar 15 17:06 nome.txt
lrwxrwxrwx   1 129      102                        0 Mar 15 17:11 nome2.txt -> /
grid/gilda/tutorial/nome.txt
drwxrwxr-x   0 129      102                        0 Mar 15 16:53 p19
drwxrwxr-x   3 124      102                        0 Mar 15 17:13 pippo
-rwxrwxr-x   1 124      102                      318 Mar 15 17:18 pippopro.txt
drwxrwxr-x   0 128      102                        0 Mar 15 17:00 pollo

...
```

$ export LFC_HOME=/grid/gilda/tutorial
$ lfc-ls –l note.txt

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lfc-ls examples

```
$ lfc-ls -l /grid/gilda/tutorial
```

```
...
drwxrwxr-x   0 117      102                          0 Mar 15 16:53 lookee
drwxrwxr-x   0 122      102                          0 Mar 15 16:54 miacartella
dr--rwxrwx   0 114      102                          0 Mar 15 16:50 myfolder
drwxrwxr-x   0 114      102                          0 Mar 15 16:51 myfolder2
-rwxrwxr-x   1 129      102                        193 Mar 15 17:06 nome.txt
lrwxrwxrwx   1 129      102                          0 Mar 15 17:11 nome2.txt -> /
grid/gilda/tutorial/nome.txt
drwxrwxr-x   0 129      102                          0 Mar 15 16:53 p19
drwxrwxr-x   3 124      102                          0 Mar 15 17:13 pippo
-rwxrwxr-x   1 124      102                        318 Mar 15 17:18 pippopro.txt
drwxrwxr-x   0 128      102                          0 Mar 15 17:00 pollo
...
```

```
$ export LFC_HOME=/grid/gilda/tutorial
$ lfc-ls -l note.txt
```

```
-rwxrwxr-x   1 129      102                        193 Mar 15 17:06 /grid/gilda/tutorial/note.txt
```

LFC Catalog commands

Creating a symbolic link

`lfc-ln -s file linkname`

`lfc-ln -s directory linkname`

Create a link to the specified *file* or *directory* with *linkname*
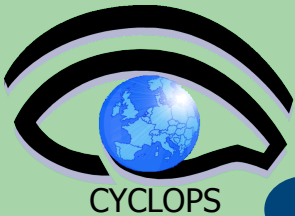
– *Example:*

```
$ lfc-ln -s /grid/gilda/tutorial/prova.txt  /
  grid/gilda/tutorial/linkToProva.txt
```

Let's check the link using lfc-ls with long listing (-l)
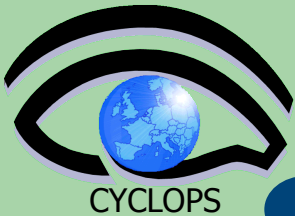
```
$ lfc-ls -l /grid/gilda/tutorial
```

```
lrwxrwxrwx   1 101      102      0 Apr 03 11:42 linkToProva.txt -> /
  grid/gilda/tutorial/prova.txt
```

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LFC Catalog commands

Creating directories in the LFC

```
lfc-mkdir [-m mode] [-p] path...
```

- Where *path* specifies the LFC pathname
- Remember that while registering a new file (using lcg-cr, for example) the corresponding destination directory must be already created in the catalog
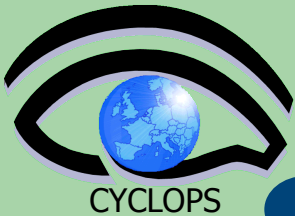
- Examples:

```
$ lfc-mkdir /grid/gilda/tutorial/
  Examples
```

You can just check the directory with:

```
$ lfc-ls -l /grid/gilda/tutorial
```

LFC Catalog commands

LFC Catalog commands

Adding/deleting metadata information

```
lfc-setcomment path comment

lfc-delcomment path
```

lfc-setcomment adds/replaces a *comment* associated with a file/directory in the LFC Catalog

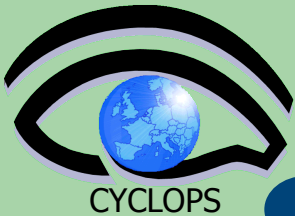*lfc-delcomment* deletes a comment previously added

- Example:

```
lfc-setcomment /grid/gilda/tutorial/hello.txt
'Hello World!'
```

- Check your job with
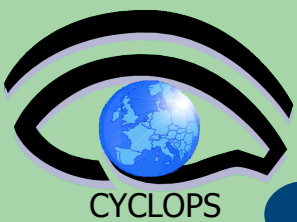
```
lfc-ls --comment /grid/gilda/tutorial/hello.txt
```

```
/grid/gilda/catania hello.txt Hello World!
```

LFC Catalog commands

LFC Catalog commands

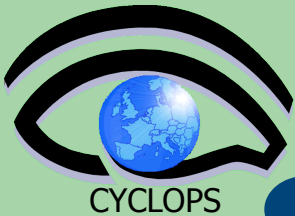- Example:

  ```
  lfc-delcomment /grid/gilda/tutorial/
  hello.txt
  ```

- Check if it was successful with

  ```
  lfc-ls –l --comment /grid/gilda/tutorial/
  hello.txt
  ```
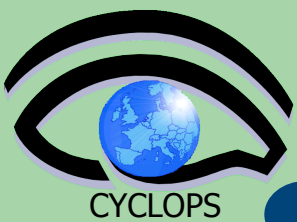
  ```
  -rw-rw-r-- 1 101  102 13 Apr 03 11:23 /grid/gilda/catania/
  hello.txt
  ```

Hands-on Session

Hands-on Session

Exercise No.1:

Hands-on Session

Exercise No.1:

– Log into the UI and initialize your proxy credentials if not already done

Hands-on Session

Exercise No.1:

– Log into the UI and initialize your proxy credentials if not already done

– check that your environment variables are properly set up to use the GILDA catalog
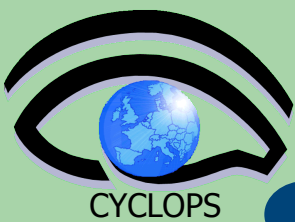
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Hands-on Session

Exercise No.1:

- Log into the UI and initialize your proxy credentials if not already done

- check that your environment variables are properly set up to use the GILDA catalog

- have a look inside the catalog

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Exercise No.1:

– Log into the UI and initialize your proxy credentials if not already done

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– have a look inside the catalog

– create a sub-directory, under /grid/gilda/ bologna, with your surname

Exercise No.1:

– Log into the UI and initialize your proxy credentials if not already done

– check that your environment variables are properly set up to use the GILDA catalog

– have a look inside the catalog

– create a sub-directory, under /grid/gilda/ bologna, with your surname

– put inside the just created dir a link to an existing file (from files in other directories)
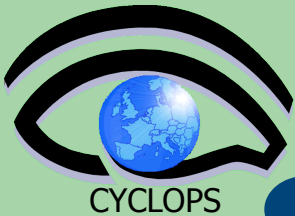
Hands-on Session

Exercise No.1:

– Log into the UI and initialize your proxy credentials if not already done

– check that your environment variables are properly set up to use the GILDA catalog

– have a look inside the catalog

– create a sub-directory, under /grid/gilda/bologna, with your surname

– put inside the just created dir a link to an existing file (from files in other directories)

– add a comment to that file and verify it

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LFC Catalog commands

Summary of the LFC Catalog commands

lfc-chmod	Change access mode of the LFC file/directory
lfc-chown	Change owner and group of the LFC file-directory
lfc-delcomment	Delete the comment associated with the file/directory
lfc-getacl	Get file/directory access control lists
lfc-ln	Make a symbolic link to a file/directory
lfc-ls	List file/directory entries in a directory
lfc-mkdir	Create a directory
lfc-rename	Rename a file/directory
lfc-rm	Remove a file/directory
lfc-setacl	Set file/directory access control lists
lfc-setcomment	Add/replace a comment
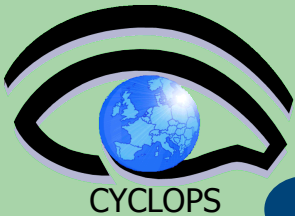
lcg-utils

lcg-utils

- The LCG Data Management tools (usually called *lcg-utils*) allow users to copy files between UI, CE, WN and a SE, to register entries in the File Catalogs and replicate files between SEs.
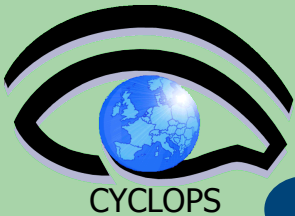
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lcg-utils

- The LCG Data Management tools (usually called *lcg-utils*) allow users to copy files between UI, CE, WN and a SE, to register entries in the File Catalogs and replicate files between SEs.

- Check if LCG_GFAL_INFOSYS environment variable is correctly set to the local GILDA Information Index (BDII)

    - `export LCG_GFAL_INFOSYS=grid004.ct.infn.it:2170`
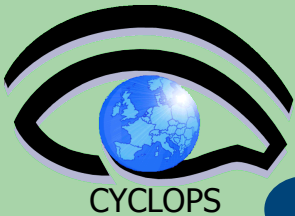
lcg-utils: lcg-cr

lcg-utils: lcg-cr

Upload a file to a SE and register it into the catalog

- ```
  lcg-cr -d dest_file | dest_host -l lfn [-g
  guid] [-l lfn] [-v | --verbose] --vo vo_name
  src_file
  ```

where

- – *dest_host* is the fully qualified hostname of the destination SE
- – *dest_file* is a valid SURL (both sfn:// or srm:// format are valid)
- – *guid* specifies the Grid Unique IDentifier. If this option is not present, a GUID is generated internally
- – *lfn* specifies the Logical File Name associated with the file
- – *vo* specifies the Virtual Organization the user belongs to
- – *src_file* specifies the source file name: the protocol can be *file:///* or *gsiftp:///*

lcg-utils: lcg-cr

- To discover which SEs the user is allowed to use, you can use the **lcg-infosites** command.

  ```
  lcg-infosites --vo gilda se
  ```

  The output is a list of SEs and related information on available/used space

- lcg-cr usage example:

lcg-utils: lcg-cr

- To discover which SEs the user is allowed to use, you can use the **lcg-infosites** command.

  `lcg-infosites --vo gilda se`

  The output is a list of SEs and related information on available/used space

- lcg-cr usage example:

```
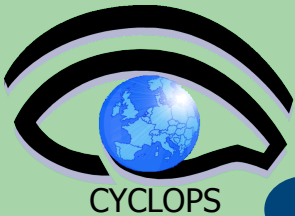$ lcg-cr -v -d trigriden01.unime.it -l lfn:/grid/gilda/tutorial/note.txt --vo
    gilda file:///home/tcaland/note.txt
Using grid catalog type: lfc
Using grid catalog : lfc.trigrid.it
Source URL: file:///home/tcaland/note.txt
File size: 279
VO name: gilda
Destination specified: life006.dft.unipa.it
Destination URL for copy: gsiftp://trigriden01.unime.it/flatfiles/SE00/gilda/generated/2006-04-03/file2cc930b1-
    c61f-4747-b55a-bc521c93622b
# streams: 1
# set timeout to 0 seconds
Alias registered in Catalog: lfn:/grid/gilda/tutorial/note.txt
         279 bytes        0.12 KB/sec avg        0.12 KB/sec inst
Transfer took 29520 ms
Destination URL registered in Catalog: sfn://trigriden01.unime.it/flatfiles/SE00/gilda/generated/2006-04-03/
    file2cc930b1-c61f-4747-b55a-bc521c93622b
guid:aa5952f7-27b8-4acc-b6ee-0031af0a0f19
```

lcg-utils: lcg-aa and lcg-la

lcg-utils: lcg-aa and lcg-la

Adding an alias for a given GUID

```
lcg-aa --vo vo guid lfn
```

where

- – *vo* specifies the Virtual Organization the user belongs to
- – *guid* specifies the Grid Unique Identifier of the file you want to add the alias to
- – *lfn* specifies the new alias

- *Example:*

```
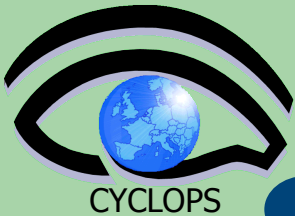$ lcg-aa --vo gilda guid:aa5952f7-27b8-4acc-
  b6ee-0031af0a0f19 lfn:/grid/gilda/tutorial/
  aliasToNote.txt
```

- To check if the previous command was successful, you can use lcg-la command to list the aliases for a given LFN, GUID or SURL

```
$ lcg-la --vo gilda lfn:/grid/gilda/tutorial/
  aliasToNote.txt
```

```
lfn:/grid/gilda/tutorial/note.txt
lfn:/grid/gilda/tutorial/aliasToNote.txt
```

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Hands-on session

Hands-on session

Exercise No.2:

Hands-on session

Exercise No.2:

- verify that your **LCG_GFAL_INFOSYS** is correctly set up

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Hands-on session

Exercise No.2:

– verify that your **LCG_GFAL_INFOSYS** is correctly set up

– create a dummy file

Exercise No.2:

- verify that your **LCG_GFAL_INFOSYS** is correctly set up

- create a dummy file

- check the available storage elements

Hands-on session

Exercise No.2:

– verify that your **LCG_GFAL_INFOSYS** is correctly set up

– create a dummy file

– check the available storage elements

– copy and register the previous created file into your previously created dir

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Hands-on session

Exercise No.2:

- verify that your **LCG_GFAL_INFOSYS** is correctly set up

- create a dummy file

- check the available storage elements

- copy and register the previous created file into your previously created dir

- add an alias to the just uploaded file

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Exercise No.2:

– verify that your **LCG_GFAL_INFOSYS** is correctly set up

– create a dummy file

– check the available storage elements

– copy and register the previous created file into your previously created dir

– add an alias to the just uploaded file

– check if the alias was assigned correctly

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lcg-utils commands for replicas (I)

Copying a file from one SE to another one and register its replica in the Catalog

```
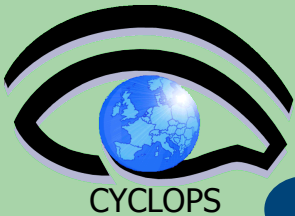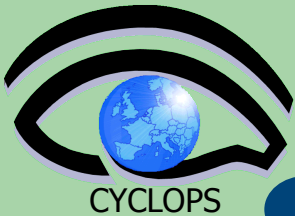lcg-rep -d dest_file | dest_host [-v | --
verbose] --vo vo src_file
```

where

- − *dest_host* is the fully qualified hostname of the destination SE
- − *dest_file* is a valid SURL (both sfn:// or srm:// are valid)
- − *vo* specifies the Virtual Organization the user belongs to
- − *src_file* specifies the source file name: the protocol can be LFN, GUID or SURL. An SURL scheme can be sfn: for a classical SE or srm:

lcg-utils commands for replicas (I)

Copying a file from one SE to another one and register its replica in the Catalog

```
lcg-rep -d dest_file | dest_host [-v | --
verbose] --vo vo src_file
```

where

- *dest_host* is the fully qualified hostname of the destination SE
- *dest_file* is a valid SURL (both sfn:// or srm:// are valid)
- *vo* specifies the Virtual Organization the user belongs to
- *src_file* specifies the source file name: the protocol can be LFN, GUID or SURL. An SURL scheme can be sfn: for a classical SE or srm:

```
$ lcg-rep -v -d grid009.ct.infn.it --vo gilda lfn:/grid/gilda/tutorial/note.txt
Using grid catalog type: lfc
Using grid catalog : lfc.trigrid.it
Source URL: lfn:/grid/gilda/tutorial/note.txt
File size: 279
VO name: gilda
Destination specified: grid009.ct.infn.it
Source URL for copy: gsiftp://gildase.oact.inaf.it/flatfiles/SE00/gilda/generated/2006-04-03/
file02c844ad-1299-44db-a347-75ed3003c11e
Destination URL for copy: gsiftp://grid009.ct.infn.it/flatfiles/SE00/gilda/generated/2006-04-03/
file1e0415e0-3486-42bc-947a-824451f69dc4
# streams: 1
# set timeout to 0
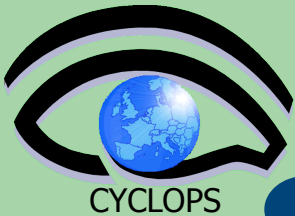          0 bytes        0.00 KB/sec avg        0.00 KB/sec inst
Transfer took 2020 ms
Destination URL registered in LRC: sfn://grid009.ct.infn.it/flatfiles/SE00/gilda/generated/2006-04-03/
file1e0415e0-3486-42bc-947a-824451f69dc4
```

lcg-utils commands for replicas (II)

Listing of replicas for a given LFN, GUID or SURL

```
lcg-lr --vo vo_name file
```

where

– **vo_name** specifies the Virtual Organization the user belongs to
– **file** specifies the Logical File Name, the Grid Unique IDentifier or the Site URL. An SURL scheme can be sfn: for a classical SE or srm:

- Example:

```
$ lcg-lr --vo gilda lfn:/grid/gilda/tutorial/
     note.txt
```

```
sfn://gildase.oact.inaf.it/flatfiles/SE00/gilda/generated/2006-04-03/file02c844ad-1299-44db-
     a347-75ed3003c11e
sfn://grid009.ct.infn.it/flatfiles/SE00/gilda/generated/2006-04-03/
     file1e0415e0-3486-42bc-947a-824451f69dc4
sfn://life006.dft.unipa.it/flatfiles/SE00/gilda/generated/2006-04-03/file2cc930b1-c61f-4747-
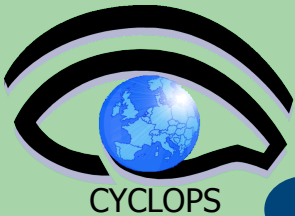     b55a-bc521c93622b
```

we can have the same output using the GUID:

```
$ lcg-lr --vo gilda guid:aa5952f7-27b8-4acc-
     b6ee-0031af0a0f19
```

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lcg-utils commands for replicas (III)

Deleting replicas

```
lcg-del [ -a ] | [ -s se ] [ -v | --verbose ] --vo
vo file
```

where

- *a* is used to delete all replicas of the given file
- *se* specifies the SE from which you want to remove the replica
- *vo* specifies the Virtual Organization the user belongs to
- *file* specifies the Logical File Name, the Grid Unique IDentifier or the Site URL. An SURL scheme can be sfn: for a classical SE or srm:.

Example:

- delete one replica

```
lcg-del --vo gilda -s grid009.ct.infn.it lfn:/grid/
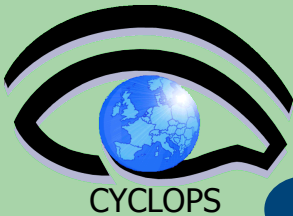gilda/tutorial/note.txt
```

- delete all the replicas

```
lcg-del -a --vo gilda lfn:/grid/gilda/tutorial/
note.txt
```

- let's check if the previous command was successful

```
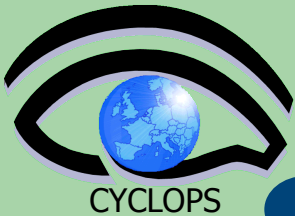lcg-lr --vo gilda lfn:/grid/gilda/tutorial/note.txt
```

lcg_lr: No such file or directory

- or by `lfs-ls /grid/gilda/tutorial` (you will not see anymore note.txt and its alias)

lcg-utils: lcg-cp

lcg-utils: lcg-cp

```
lcg-cp [ -v | --verbose ] --vo vo src_file
dest_file
```

where

- *vo* specifies the Virtual Organization the user belongs to
- *src_file* specifies the source file name: the protocol can be LFN, GUID, SURL or local file. An SURL scheme can be sfn: for a classical SE or srm:
- *dest_file* specifies the destination. The protocol can be file:/// or gsiftp:///

Example:

$ lcg-cp --vo gilda lfn:/grid/gilda/tutorial/note.txt file:/home/ claudio/note2.txt

```
Using grid catalog type: lfc
Using grid catalog : lfc.trigrid.it
Source URL: lfn:/grid/gilda/tutorial/note.txt
File size: 279
VO name: gilda
Source URL for copy: gsiftp://gildase.oact.inaf.it/flatfiles/SE00/
    gilda/generated/2006-04-03/file02c844ad-1299-44db-
    a347-75ed3003c11e
Destination URL: file:/home/claudio/note2.txt
# streams: 1
# set timeout to  0 (seconds)
              0 bytes      0.00 KB/sec avg      0.00 KB/sec inst
Transfer took 1030 ms
```

Hands-on session

Exercise No.3:

Hands-on session

Exercise No.3:

- Create two replicas of the file you previously uploaded (you could also use the alias to point it out)

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Hands-on session

Exercise No.3:

- – Create two replicas of the file you previously uploaded (you could also use the alias to point it out)

- – Check if the operation was successful

Hands-on session

Exercise No.3:

- – Create two replicas of the file you previously uploaded (you could also use the alias to point it out)
- – Check if the operation was successful
- – Download the file back in your UI

Exercise No.3:

- Create two replicas of the file you previously uploaded (you could also use the alias to point it out)

- Check if the operation was successful

- Download the file back in your UI

- Delete just one replica and verify that

Hands-on session

Exercise No.3:

- Create two replicas of the file you previously uploaded (you could also use the alias to point it out)

- Check if the operation was successful

- Download the file back in your UI

- Delete just one replica and verify that

- Delete all the replicas and verify that

Hands-on session

Exercise No.3:

- Create two replicas of the file you previously uploaded (you could also use the alias to point it out)

- Check if the operation was successful

- Download the file back in your UI

- Delete just one replica and verify that

- Delete all the replicas and verify that

- Verify if the entry is still into the catalog

Information Society and Media

Handling entries permissions (I)

Get LFC entries (file/directories) permissions and ACLs

Handling entries permissions (I)

Get LFC entries (file/directories) permissions and ACLs

```
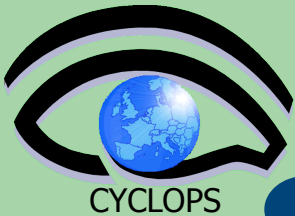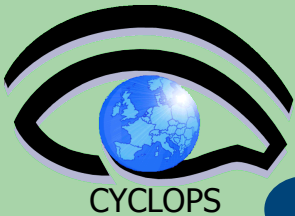lfc-getacl path...
```

Handling entries permissions (I)

Get LFC entries (file/directories) permissions and ACLs

```
lfc-getacl path...
```

CYCLOPS

Get LFC entries (file/directories) permissions and ACLs

```
lfc-getacl path...
```

where path is a LFC file or directory

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Handling entries permissions (I)

```
lfc-getacl path...
```

where path is a LFC file or directory

Example:

```
$ lcg-getacl /grid/gilda/tutorial
```

 # file: /grid/gilda/tutorial

 # owner: /C=IT/O=GILDA/OU=Personal Certificate/L=CATANIA/
CN=CATANIA01/Email=roberto.barbera@ct.infn.it

 # group: gilda

user::rwx

group::rwx   #effective:rwx

other::r-x

default:user::rwx

default:group::rwx

default:other::r-x

CYCLOPS

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Handling entries permissions (II)

Handling entries permissions (II)

Change the permission of a file/directory

`lfc-chmod absolute_mode path...`

where

- absolute_path **is the permission pattern expressed in octal mode**
- path **is a LFC file or directory**

• Example:

```
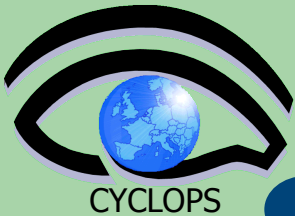$ lfc-chmod 750 /grid/gilda/tutorial/note.txt
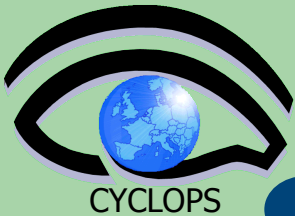$ lfc-getacl /grid/gilda/tutorial/note.txt
```

```
# file: /grid/gilda/tutorial/note.txt
# owner: /C=IT/O=GILDA/OU=Personal Certificate/
L=INFN    Catania/CN=Tony Calanducci/
Email=tony.calanducci@ct.infn.it
# group: gilda
user::rwx
group::r-x                      #effective:r-x
other::---
```

Setting ACLs (I)

Setting ACLs (I)

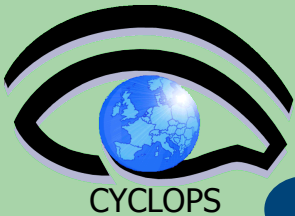```
lfc-setacl [-d] [-m] [-s] acl_entries path...
```

where

- *acl_entries* is a comma separated list of entries. Each entry has colon separated fields: ACL type, id (uid or gid), permission.
  The entries look like:

  user::perm
  user:uid:perm
  group::perm
  group:gid:perm
  mask:perm
  other:perm
  default:user::perm
  default:user:uid:perm
  default:group::perm
  default:group:gid:perm
  default:mask:perm
  default:other:perm

  The ACL type can be abbreviated with the first letter

Setting ACLs (I)

Set LFC directory/file access control list

```
lfc-setacl [-d] [-m] [-s] acl_entries path...
```

where

– *acl_entries* **is a comma separated list of entries. Each entry has colon separated fields: ACL type, id (uid or gid), permission.**

The entries look like:

user::perm
user:uid:perm
group::perm
group:gid:perm
mask:perm
other:perm
default:user::perm
default:user:uid:perm
default:group::perm
default:group:gid:perm
default:mask:perm
default:other:perm

•**user** and **group** -> owner permission

The ACL type can be abbreviated with the first letter

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Setting ACLs (I)

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  mask:perm
  other:perm
  default:user::perm
  default:user:uid:perm
  default:group::perm
  default:group:gid:perm
  default:mask:perm
  default:other:perm

- **user** and **group** -> owner permission

- **user:gid** and **group:gid** -> specific users and groups

The ACL type can be abbreviated with the first letter

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  user::perm
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  group::perm
  group:gid:perm
  mask:perm
  other:perm
  default:user::perm
  default:user:uid:perm
  default:group::perm
  default:group:gid:perm
  default:mask:perm
  default:other:perm

  - **user** and **group** -> owner permission
  - **user:gid** and **group:gid** -> specific users and groups
  - **mask** -> maximum permissions to specific users/groups

The ACL type can be abbreviated with the first letter

Information Society and Media

Setting ACLs (I)

Set LFC directory/file access control list

```
lfc-setacl [-d] [-m] [-s] acl_entries path...
```

where

– *acl_entries* **is a comma separated list of entries. Each entry has colon separated fields: ACL type, id (uid or gid), permission.**

The entries look like:

user::perm
user:uid:perm
group::perm
group:gid:perm
mask:perm
other:perm
default:user::perm
default:user:uid:perm
default:group::perm
default:group:gid:perm
default:mask:perm
default:other:perm

- **user** and **group** -> owner permission

- **user:gid** and **group:gid** -> specific users and groups

- **mask** -> maximum permissions to specific users/groups

- **default** permissions (only for a directory) are inherited by the files or sub-directories of that dir

The ACL type can be abbreviated with the first letter

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Setting ACLs (II)

- **path**   specifies the LFC pathname
- **uid**   can be given as the DN or the corresponding numeric id.
- **gid**   can be given as the VO name or the corresponding numeric id.
- **perm** can be expressed as a combination of characters rwx- or as a value between 0 and 7.

OPTIONS

-d   remove ACL entries. The "perm" field is ignored.

-m   modify existing ACL entries or add new entries.

-s   set the ACL entries. The complete set of ACL entries is replaced.

ACLs example

ACLs example

```
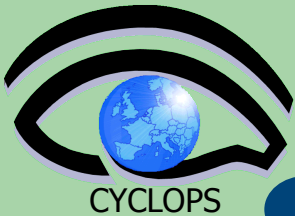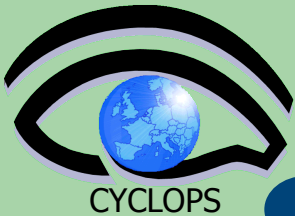$ lfc-setacl -m u:'/C=IT/O=GILDA/OU=Personal
Certificate/L=INFN/CN=Diego Scardaci/
Email=diego.scardaci@ct.infn.it':rwx,g:tri
grid:r-x,m:rwx /grid/gilda/tutorial/
note.txt


$ lfc-getacl /grid/gilda/tutorial/note.txt
```

file: /grid/gilda/tutorial/note.txt

owner: /C=IT/O=GILDA/OU=Personal Certificate/L=INFN Catania/CN=Tony Calanducci/ Email=tony.calanducci@ct.infn.it

group: gilda

user::rwx

user:/C=IT/O=GILDA/OU=Personal Certificate/L=INFN/ CN=Diego Scardaci/Email=diego.scardaci@ct.infn.it:rwx #effective:rwx

group::r-x   #effective:r-x

group:trigrid:r-x   #effective:r-x

mask::rwx

other::---

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- Create an entry in your working FC directory. Take a look to the default permission of it.

CYCLOPS

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Exercise No. 4

- Create an entry in your working FC directory. Take a look to the default permission of it.
- Change the permission in a way that only you (the owner) can delete the entry
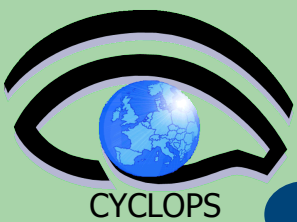
Exercise No. 4

- Create an entry in your working FC directory. Take a look to the default permission of it.

- Change the permission in a way that only you (the owner) can delete the entry

- Ask your neighbor to delete that entry (he should not be able)

Exercise No. 4

- Create an entry in your working FC directory. Take a look to the default permission of it.

- Change the permission in a way that only you (the owner) can delete the entry

- Ask your neighbor to delete that entry (he should not be able)

- Ask again your neighbor his DN and add it as an ACL entry granting full permission.

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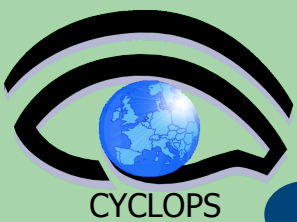
Exercise No. 4

- Create an entry in your working FC directory. Take a look to the default permission of it.

- Change the permission in a way that only you (the owner) can delete the entry

- Ask your neighbor to delete that entry (he should not be able)

- Ask again your neighbor his DN and add it as an ACL entry granting full permission.

- Ask now to delete it (it should be able to do that now) – delete with lcg-del -s STORAGEHOST