

Table of Contents

DIRAC Grid Storage Quota.....	1
Before executing the commands in this tutorial.....	1
What is my current quota?.....	1
What is my current usage?.....	1
How to find old data?.....	1
How much data is that?.....	2
How to remove it?.....	3
I have a lot of empty directories. What should I do ?.....	3

DIRAC Grid Storage Quota

A similar tutorial on working with your grid quota in ganga is given in [GridAndDataManagement](#).

Before executing the commands in this tutorial

Since at least v8r3p2, doing

```
> SetupProject LHCbDirac
```

no longer works to set the environment. If you want to work with LHCbDirac in bash, instead open a sub-shell with

```
> lb-run LHCbDirac/prod bash --norc
```

You will then need to do

```
> lhcb-proxy-init
```

Once these things are done, the following commands should work within the bash sub-shell you just opened.

What is my current quota?

To obtain your current DISK quota you can perform the following on the CLI:

```
> dirac-dms-user-quota
2009-09-29 14:05:49 UTC dirac-dms-user-quota.py INFO: Current quota found to be 10.0 GB
```

As you can see the current quota for my account is 10GB.

What is my current usage?

To obtain your current DISK usage you can perform the following on the CLI:

```
> dirac-dms-storage-usage-summary --Dir /lhcb/user/<u>/<username>/
DIRAC SE                Size (TB)                Files
-----
CERN-USER                1.3                      2230
CERN-tape                0.0                      215
CNAF-FAILOVER            0.0                      1
CNAF-USER                0.2                      414
GRIDKA-USER              0.3                      867
IN2P3-USER               0.2                      424
NIKHEF-USER              0.2                      488
PIC-FAILOVER             0.0                      1
PIC-USER                 0.2                      393
RAL-USER                 0.6                      898
```

How to find old data?

To remove data one must first obtain the list of LFNs to remove. To find all the files in your directory you can use the following script:

```
> dirac-dms-user-lfns --help
2011-12-07 15:29:16 UTC Framework NOTICE: Get the list of all the user files.
```

GridStorageQuota < LHCb < TWiki

```
2011-12-07 15:29:16 UTC Framework NOTICE: Usage:
2011-12-07 15:29:16 UTC Framework NOTICE:   dirac-dms-user-lfns [option|cfgfile] ...
2011-12-07 15:29:16 UTC Framework NOTICE: General options:
2011-12-07 15:29:16 UTC Framework NOTICE:   -o: --option=          : Option=value to add
2011-12-07 15:29:16 UTC Framework NOTICE:   -s: --section=        : Set base section for relative
2011-12-07 15:29:16 UTC Framework NOTICE:   -c: --cert=           : Use server certificate to co
2011-12-07 15:29:16 UTC Framework NOTICE:   -d: --debug           : Set debug mode (-dd is extra
2011-12-07 15:29:16 UTC Framework NOTICE:   -h: --help           : Shows this help
2011-12-07 15:29:16 UTC Framework NOTICE: Options:
2011-12-07 15:29:16 UTC Framework NOTICE:   -D: --Days=          : Match files older than numbe
2011-12-07 15:29:16 UTC Framework NOTICE:   -M: --Months=        : Match files older than numbe
2011-12-07 15:29:16 UTC Framework NOTICE:   -Y: --Years=         : Match files older than numbe
2011-12-07 15:29:16 UTC Framework NOTICE:   -w: --Wildcard=      : Wildcard for matching filena
2011-12-07 15:29:16 UTC Framework NOTICE:   -b: --BaseDir=       : Base directory to begin sear
2011-12-07 15:29:16 UTC Framework NOTICE:   -e: --EmptyDirs     : Create a list of empty direc
```

By using the `--Days`, `--Months` and `--Years` options it is possible to select files which were produced before a given time. This can be useful when trying to remove old data only. The base directory of the LFC to be search can be supplied (by default this is just your home directory in the LFC) which restricts the search to the supplied namespace. Finally, a wild card can be given to find only files of a given type or name. For example, to find the root files in the `/lhcb/user/a/acsmith/B+2DStar-D0_0008/3237` directory which are older than 1 month:

```
> dirac-dms-user-lfns --BaseDir=/lhcb/user/a/acsmith/B+2DStar-D0_0008/3237 -M 1 --Wildcard='*.root
2009-09-29 14:26:21 UTC dirac-dms-user-lfns.py INFO: Will search for files in /lhcb/user/a/acsmi
2009-09-29 14:26:31 UTC dirac-dms-user-lfns.py INFO: /lhcb/user/a/acsmith/B+2DStar-D0_0008/3237:
2009-09-29 14:26:32 UTC dirac-dms-user-lfns.py INFO: /lhcb/user/a/acsmith/B+2DStar-D0_0008/3237/
.
.
.
2009-09-29 14:28:29 UTC dirac-dms-user-lfns.py INFO: /lhcb/user/a/acsmith/B+2DStar-D0_0008/3237/
2009-09-29 14:28:29 UTC dirac-dms-user-lfns.py INFO: 205 matched files have been put in lhcb-use
```

As you can see this has placed all the files found in your search in a local file (`lhcb-user-a-acsmith-B+2DStar-D0_0008-3237.lfns`).

Using the option `-e` or `--EmptyDirs`, you can get a list of all your empty directories, that use no space but pollute unduly the namespace. Empty directories can then be deleted by the `dirac-dms-clean-directory` command (see below).

How much data is that?

Once you have a list of files you can check how much data this is by using the following script (passing LFNs or files that contains LFNs as arguments):

```
> dirac-dms-data-size --help
2009-09-29 14:56:07 UTC Framework INFO: Usage:
2009-09-29 14:56:07 UTC Framework INFO: ./dirac-dms-data-size.py (<options>|<cfgFile>)*
2009-09-29 14:56:07 UTC Framework INFO: Options:
2009-09-29 14:56:07 UTC Framework INFO: -o: --option=          : Option=value to add
2009-09-29 14:56:07 UTC Framework INFO: -s: --section=        : Set base section for relative parsed
2009-09-29 14:56:07 UTC Framework INFO: -c: --cert=           : Use server certificate to connect to Co
2009-09-29 14:56:07 UTC Framework INFO: -h: --help           : Shows this help
2009-09-29 14:56:07 UTC Framework INFO: -u: --Unit=          : Unit to use [GB] (MB,GB,TB,PB)
```

For example to calculate the size (in MB) of the data found in the previous search plus one other file from another directory I can do the following:

```
> dirac-dms-data-size -u MB /lhcb/user/a/acsmith/B+2DStar-D0_0005/3130/3130610/Tuple.root lhcb-us
2009-09-29 14:58:35 UTC dirac-dms-data-size.py INFO: -----
```

How to find old data?

```

2009-09-29 14:58:35 UTC dirac-dms-data-size.py INFO: Files | Size (MB)
2009-09-29 14:58:35 UTC dirac-dms-data-size.py INFO: -----
2009-09-29 14:58:35 UTC dirac-dms-data-size.py INFO: 206 | 172.7
2009-09-29 14:58:35 UTC dirac-dms-data-size.py INFO: -----

```

How to remove it?

To remove your old files you can use the following script (passing LFNs or files that contains LFNs as arguments):

```

> dirac-dms-remove-files lhcb-user-a-acsmith-B+2DStar-D0_0002.lfns /lhcb/user/a/acsmith/B+2DStar-
2009-09-29 15:21:35 UTC dirac-dms-remove-files.py INFO: ReplicaManager.__removePhysicalReplica: R
2009-09-29 15:21:43 UTC dirac-dms-remove-files.py INFO: ReplicaManager.__removeCatalogReplica: R
2009-09-29 15:22:04 UTC dirac-dms-remove-files.py INFO: ReplicaManager.__removePhysicalReplica: R
2009-09-29 15:22:12 UTC dirac-dms-remove-files.py INFO: ReplicaManager.__removeCatalogReplica: R
2009-09-29 15:22:19 UTC dirac-dms-remove-files.py INFO: ReplicaManager.__removePhysicalReplica: R
2009-09-29 15:22:20 UTC dirac-dms-remove-files.py INFO: ReplicaManager.__removeCatalogReplica: R
2009-09-29 15:22:35 UTC dirac-dms-remove-files.py INFO: Successfully removed 205 files

```

Now it probably takes some time to sync the corresponding DB, containing the storage space used. So please wait a bit.

I have a lot of empty directories. What should I do ?

Nothing. These will be cleaned up centrally by the Dirac system periodically for you.

-- AndrewCSmith - 2009-09-29

This topic: LHCb > GridStorageQuota

Topic revision: r16 - 2017-06-27 - ThomasLatham



Copyright &© 2008-2019 by the contributing authors. All material on this collaboration platform is the property of the contributing authors.

Ideas, requests, problems regarding TWiki? Send feedback