

Data Backup within CESNET Data Storage

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Data Backup within Goliath Computing Farm

- Only home directories
- Full backup once a month (on the first day)
- Incremental backup every day
- Data kept for one year

- For data recovery send a request to the RT system

fzu@rt4.cesnet.cz

Use of CESNET Data Storage

Advantages:

- Easily accessible
- 2 TB of data space per user
- High data redundancy and security
- Free of any additional charge

Data Storage Access

- Storage facilities located in Pilsen, Jihlava and Brno
→ three **login servers** (only few shell commands available)

Pilsen **ssh.du1.cesnet.cz**

Jihlava **ssh.du2.cesnet.cz**

Brno **ssh.du3.cesnet.cz**

ssh username@ssh.du2.cesnet.cz

- NFS mounted to MetaCentrum worker nodes and login servers as directories:

/storage/plzen2-archive/

/storage/jihlava2-archive/

/storage/brno5-archive/

DS User Directory Structure

- In each Data Storage location:
 - **user home directory**
 - pre-prepared **subdirectories** (symbolic links) corresponding to virtual organizations (**VO**), which the user is a member of - **store data here only**

/home/username/VO_metacentrum-tape_tape/

/VO_storage-cache_tape/

Quotas

- **quotas**

/home/username/ **50 MB**

VO_metacentrum-tape_tape/ **2 TB**

VO_storage-cache_tape/ 500 GB

- quota status:

see “Quotas Overview” at MetaCentrum website

<https://metavo.metacentrum.cz/en/myaccount/index.html>

Data Backup/Data Archive

Simple procedure in three steps:

Step 1: Set up a user account at MetaCentrum

Step 2: Check your account at CESNET Data Storage

Step 3: Back up your files to CESNET Data Storage

Data Backup/Data Archive

Step 1. Set up a user account at Metacentrum

Fill in a registration form available at <https://metavo.metacentrum.cz/en/application/index.html>

Your identity will be checked on-line through the **eduID.cz** (enter username and password for **your VERSO account**)

Step 2. Check your account at CESNET Data Storage

`ssh username@ssh.du2.cesnet.cz` (enter username and password for **your MetaCentrum account**)

`ls -l VO_metacentrum-tape_tape/`

`mkdir VO_metacentrum-tape_tape/directory-for-backup`

Step 3. Copy your files using the rsync or scp command

Log in to the server you are going to copy files from

`cd ~/backed-up-directory/`

`rsync backed-up-directory username@ssh.du2.cesnet.cz:VO_metacentrum-tape_tape/directory-for-backup/`

or use `scp` command

Data Recovery

Only one step:

Log in to the server you are going to copy files to

`scp username@ssh.du2.cesnet.cz:VO_metacentrum-tape_tape/directory-for-backup/file ./`

Recommendations

- To archive high amount of small files compress your files before copying, e.g. using **tar** or **7z** command
- DS Pilsen suitable only for storing big files – maximum of 50 000 files
- Files not accessed for a long time may be moved to a lower and slower layer **migration policy** due to Hierarchical Storage Management (**HSM**)
media: disk cache/disks → MAID disks → magnetic tapes

Useful links

For more detailed information see:

- User documentation at Computing Center TWiki
https://www.farm.particle.cz/twiki/bin/view/VS/VsMetaCentrumEn#6_CESNET_Data_Storage
- CESNET Data Storage website
<https://du.cesnet.cz/en/navody/home-migrace-plzen/start>
- MetaCentrum website
https://wiki.metacentrum.cz/wiki/Archival_data_handling

Thank you for your attention