

Storage & Data Transfer Service

User Training Workshop 2024

Storage Space

- Home Space(100GB for free, not extendable)
 - /dicos_ui_home/{user_account}
- Group Working Space
 - /ceph/work/{group}
 - 3TB free for each group (pay for extension)
- Backup Space (Will be available in the future)
- Please back up to secure your data in these spaces

Storage Space

- Check Your Usage <https://dicos.grid.sinica.edu.tw/profile/info>

●

The screenshot shows the DICOS User Profile page. At the top, there is a navigation bar with links for Resources, Policy, About, Documentation, API, Apps, Contact, and Live Chat. On the right side of the navigation bar, there is a 'Your account' dropdown menu with options: User Profile, Usage Summary, Group Member List, Subscribe Storage Space, Resource Usage, and Logout. The main content area is titled 'User Profile' and displays the following information:

- Username: **account_name**
- Group: **group_name**
- First Name: **your_first_name**
- Last Name: **your_last_name**
- E-mail: **your email**
- Last Login: **time_joined**
- Date Joined

Storage Usage is shown for two locations:

- /dicos_ui_home/your_account** (Latest Update: 2023-11-14 00:50:02) with a progress bar showing 2.3GB/100GB.
- /ceph/work/your_group** (Latest Update: 2023-11-14 00:30:03) with a progress bar showing 0.4TB/4.0TB.

At the bottom, there are two buttons: 'Edit Profile' and 'Change Password'.

Introduction of Home Space

- /dicos_ui_home/{user_account}
- *Backup your important data in Home Space
 - Raid5
 - less efficient & not extendable
- *Home space will be cleared once your account is expired and deleted.
- Avoid using Home Space as job's working space

Introduction of Group Working Space

- /ceph/work/{group}
- 3TB free space for each group
- This space is shared among all members of the group
- PI has full access and manage rights in this space
- PI can subscribe & upgrade for more space via dicos.grid.sinica.edu.tw
- *Backup your important data in Group Working Space

Subscribe More Group Working Space

- PI can subscribe for upgrade storage space
- <https://dicos.grid.sinica.edu.tw/accounting/subscribe-storage>
- Day plan NT\$3 per day
- Year plan NT\$1000 per year

DICOS Resources Policy About Documentation API Apps Contact Live Chat Jingya You

訂閱儲存空間 Subscribe Storage Space

1. 訂閱時，會需要等待一段空間創建的時間。
When subscribing, there will be a waiting period for the space to be created.
2. 重複訂閱時，同樣的空間容量會累加。不同方案(plan: day/year)訂閱時空間大小會累加，但收費機制不同，plan: day 會於每個月的帳單內顯示；plan: year則會於訂閱當月帳單顯示並事先收費。
Multiple subscription can be additional size. Different plan (plan: day/year) are different paymentent. For the day plan, it will show on monthly bill; for the year plan, the payment will charge on current month bill.
3. 刪除訂閱後，plan: day 會在滿1天後刪除，例：2023-08-01建立的空間若當天取消訂閱，會在1天後2023-08-02刪除，若在2023-08-02取消訂閱則順延至2023-08-03刪除；plan: year 會在1年後刪除，例：2023-08-01建立的空間會在2024-08-01刪除，若超過2024-08-01取消則順延至2025-08-01。若訂閱的儲存空間裡在超過時間後還有檔案，皆等待至檔案清空或資料夾大小小於保留的空間大小才會進行刪除/重設，期間費用還是按照收費機制照計算。
After unsubscribe, for the day plan, it will be deleted the space after 1 day, for example, if the space was created on 2023-08-01 and unsubscribed on the same day, it will be deleted on 2023-08-02. If unsubscribed on 2023-08-02, it will be deleted on 2023-08-03; for the year plan, the space will be deleted after 1 year, for example, if the space was created on 2023-08-01, it will be deleted on 2024-08-01. If unsubscribed after 2024-08-01, the deletion will be postponed to 2025-08-01.
If there is still some files in the subscribed space, the deletion or reduce space will delay to execute and charge the paymentent of period.
4. 請注意：刪除訂閱後，因系統機制，將無法馬上進行訂閱相同空間，請等待畫面上顯示正在刪除儲存空間的標記消失後，才能再進行訂閱。
Attention: the subscription will be unavailable after unsubscription process, please wait for the label of "Wait to Delete Storage Space..." finished.

More pricing information in <https://dicos.grid.sinica.edu.tw/resources>

Subscribe More Group Working Space

加購工作短期儲存空間 Upgrade Work Space

1T = NT \$3/1 day
PATH: /ceph/work/[group]/

Subscribe

加購工作短期儲存空間：1年方案 Upgrade Work Space：1 year plan

1T = NT \$1000/1 year
PATH: /ceph/work/[group]/

Subscribe

Current Storage Space

工作短期儲存空間 Work Space

GROUP: ASGC
PLAN: year
PATH: /ceph/work/ASGC/
Latest Update: 2023-07-27 00:30:04

0.0/5

工作短期儲存空間 Work Space

GROUP: ASGC
PLAN: day
PATH: /ceph/work/ASGC/
Latest Update: 2023-07-27 00:30:04

0.0/5

Unsubscribe Space

- Clear your data and release your space before unsubscription.
- Unable to unsubscribe if the space is not released
 - remove data until less or equal to target subscription
- Unsubscription process will be blocked when space couldn't release or cancelling year plan
 - Please contact dicos-support@twgrid.org

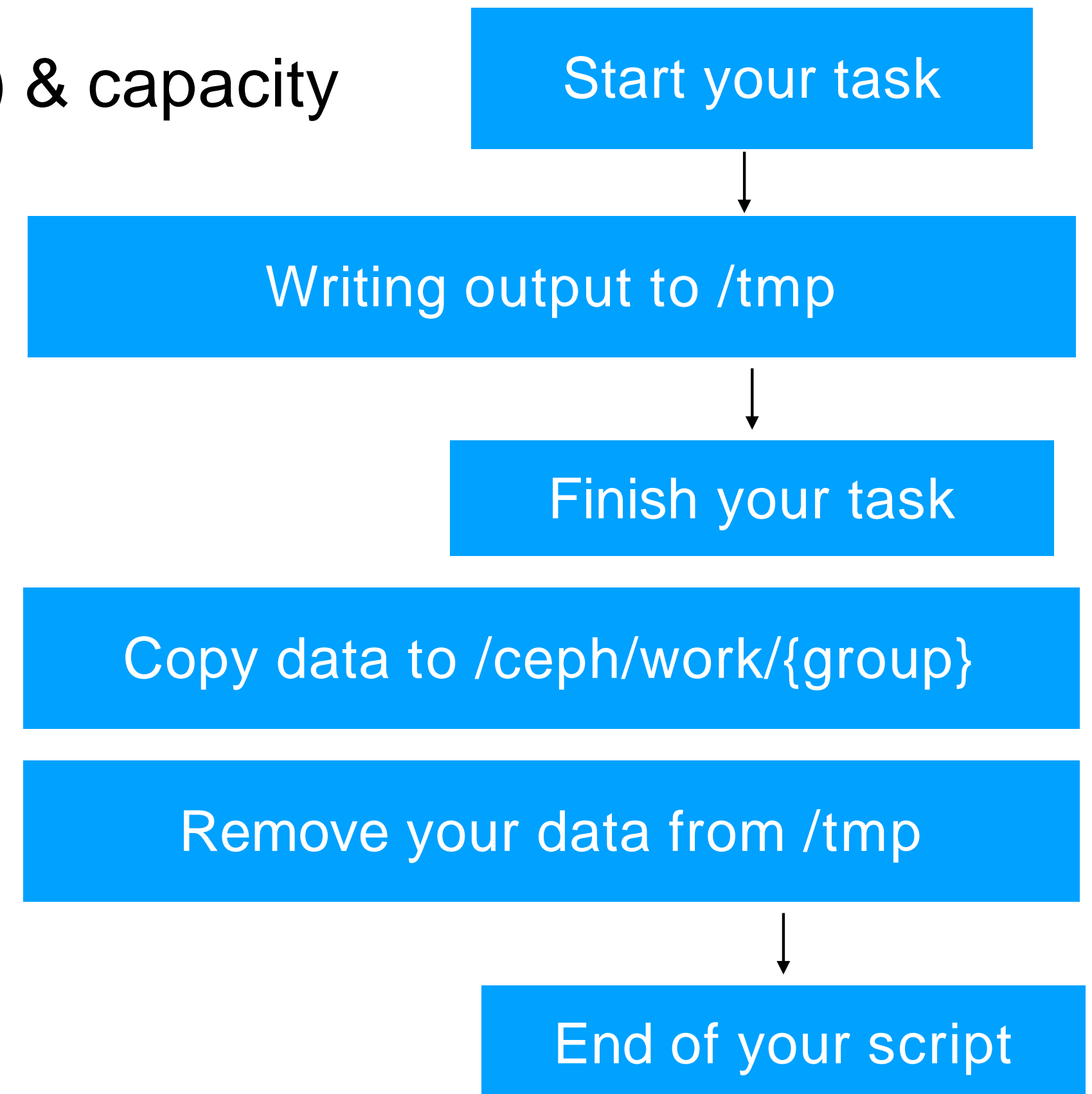


Working Space for Computing Jobs

- Group Working Space: `/ceph/work/{group}`
- Specify output files in Group Working Space if your program has high IO wait.
- You can also use `/tmp` as intermediate job working space
 - See instructions
- Data Transfer
 - See instructions

Using /tmp as Intermediate Working Space

- Each worker node has different spec (e.g. SSD) & capacity
 - [HDR1] SSD 1TB & [FDR5] NO SSD
- /tmp directory will be cleaned anytime
- Copy intermediate data to /ceph/work/{group}
- Remove files from /tmp when tasks finish



Backup Service

- Tape System will be purchased next year
- Will be at /ceph/project/{group_account}

Hands-on

Linux Basic Command to Manipulate Files

Login

```
$ ssh username@slurm-ui.twgrid.org
```

```
$ ssh username@dicos-sftp.twgrid.org
```

Show current path

```
$ pwd
```

Move file

```
$ mv {src} {dest}
```

Remove file

```
$ rm file_name
```

Remove directory

```
$ rm -r dir_name
```

See file

```
# cat file_name
```

Using Group Working Space

- Move data & Run shell script

```
$ mv storage_handson/group_workingspace_demo.sh /ceph/work/Others/{username}_data.sh  
$ cd /ceph/work/Others  
  
$ sh /ceph/work/Others/{username}_data.sh
```

- Run command

```
$ cd /ceph/work/Others  
$ echo "hello" >> {username}_hello.txt  
  
$ cat {username}_hello.txt
```

Using /tmp as Intermediate Working Space

- Create Temporary File in Linux

```
$ mktemp  
$ /tmp/1mjAhAH3YM  
  
$ mktemp /tmp/user-XXXXX  
$ /tmp/user-WxWtv
```

- Create Temporary Directory

```
$ mktemp -d  
$ /tmp/tmp.1mjAhAH3YM  
$ mktemp -d /tmp/user-XXXXX  
$ /tmp/user-WxWtv
```

Using /tmp as Intermediate Working Space

- Copy Temporary File(storage_handson/temporary_file.sh):

```
#!/bin/bash

# Create a temporary file with a unique name under /tmp/ directory
TMPFILE=$(mktemp /tmp/Workshop-XXXXX)

# Append "User Training Workshop 2024" to the temporary file
echo "User Training Workshop 2024" >> $TMPFILE

# Get the filename (without the path) of the temporary file
filename=$(basename "$TMPFILE")

# Copy the temporary file to the specified destination directory (/ceph/work/Others/)
Cp $TMPFILE /ceph/work/Others/$filename

# Remove the temporary file from /tmp/ directory to clean up
rm $TMPFILE
```


Using /tmp as Intermediate Working Space

- Copy Temporary Directory(storage_handson/temporary_directory.sh):

```
#!/bin/bash

# Create a temporary directory with a unique name under /tmp/ directory
TMPDIR=$(mktemp -d /tmp/Workshop-XXXXX)

# Append "User Training Workshop 2024" to a file named "Workshop.text" inside the temporary directory
echo "User Training Workshop 2024" >> $TMPDIR/Workshop.text

# Get the directory name (without the path) of the temporary directory
filename=$(basename "$TMPDIR")

# Recursively copy the entire temporary directory to the specified destination directory (/ceph/work/Others/)
cp -r $TMPDIR /ceph/work/Others/$filename

# Remove the temporary directory and its contents from /tmp/ directory to clean up
rm -r $TMPDIR
```

Data Transfer using SFTP

- Node for Data Transfer: slurm-ui.twgrid.org or dicos-sftp.twgrid.org
- Linux Command

```
$ sftp username@slurm-ui.twgrid.org
```

```
## Upload file
```

```
$ sftp> put filename
```

```
## Download file
```

```
$ sftp> get filename
```

```
$ scp username@slurm-ui.twgrid.org:/ceph/work/Others/mydata/this.file .
```

```
$ scp -r username@slurm-ui.twgrid.org:/ceph/work/Others/mydata .
```

Data Transfer using FileZilla

1. Download [FileZilla Client](#)

2. Host (主機):

- dicos-sftp.twgrid.org

- slurm-ui.twgrid.org

3. Account (使用者名稱):
account

4. Password (密碼): password

5. Port (連接埠): 22

