

# Storage & Data Transfer Service

高效能科學計算服務 使用者教育訓練工作坊 2023

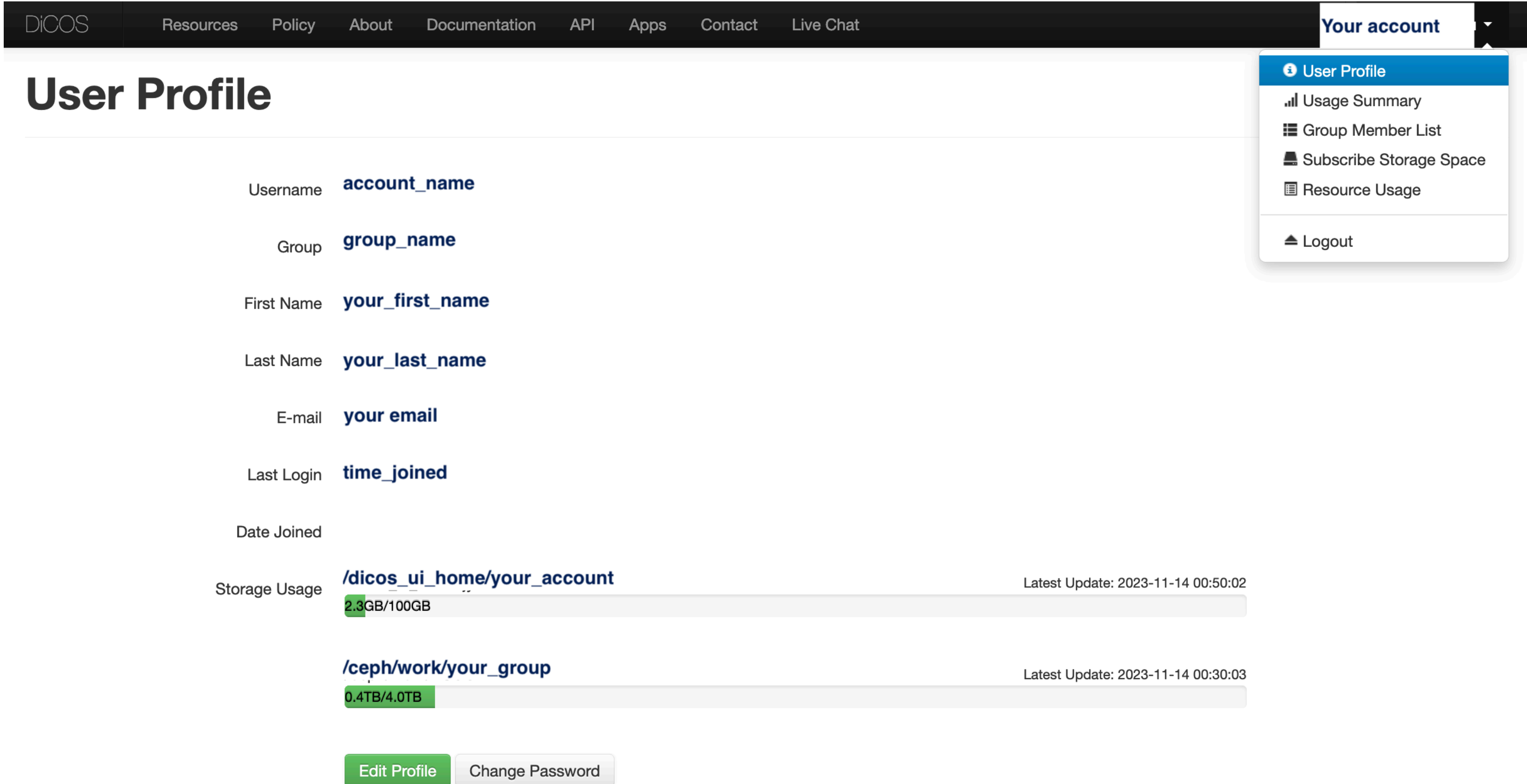
**User Training Workshop 2023**

# Storage Space

- Home Space
  - /dicos\_ui\_home/{user\_account}
- Group Working Space
  - /ceph/work/{group}
  - 3TB free for each group
- Group Preservation & 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. The navigation bar includes links for Resources, Policy, About, Documentation, API, Apps, Contact, and Live Chat, along with a 'Your account' dropdown menu. The profile information includes Username (account\_name), Group (group\_name), First Name (your\_first\_name), Last Name (your\_last\_name), E-mail (your email), and Last Login (time\_joined). The Date Joined field is empty. Storage usage is shown for two locations: /dicos\_ui\_home/your\_account (2.3GB/100GB) and /ceph/work/your\_group (0.4TB/4.0TB). The page also features 'Edit Profile' and 'Change Password' buttons.

Field	Value
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	/dicos_ui_home/your_account (2.3GB/100GB) Latest Update: 2023-11-14 00:50:02
	/ceph/work/your_group (0.4TB/4.0TB) Latest Update: 2023-11-14 00:30:03

[Edit Profile](#) [Change Password](#)

# Introduction of Home Space

- /dicos\_ui\_home/{user\_account}
- \*Backup your important data in Home Space
- \*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

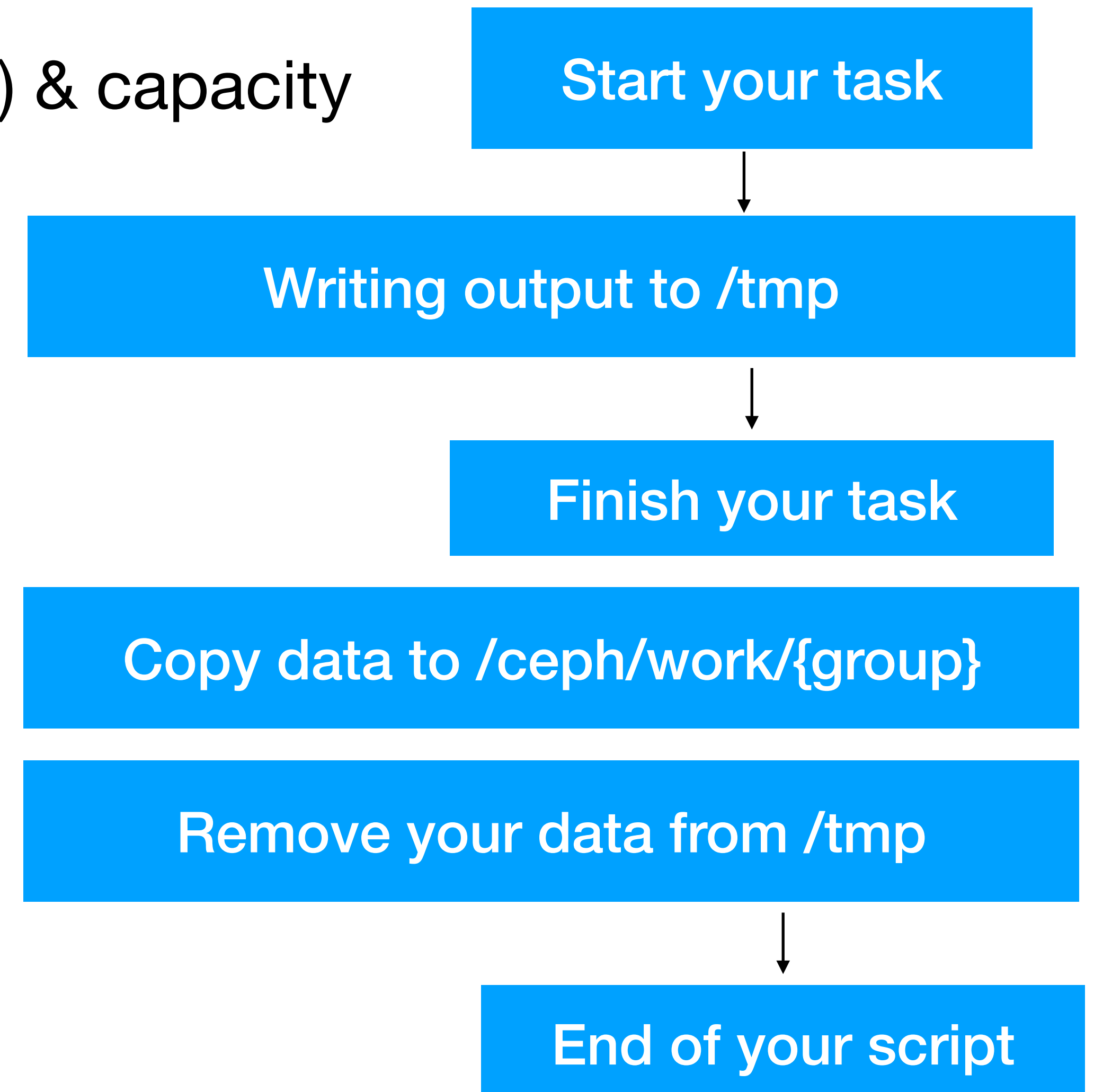
- /ceph/work/{group}
- 3TB free space for each group
- This space is shared among all members of the group
- PI has full access and manage rights in this space
- PI can subscribe & upgrade for more space via [dicos.grid.sinica.edu.tw](http://dicos.grid.sinica.edu.tw)
- \*Backup your important data in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

# 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



# Group Preservation & Backup Service

- Tape System will be purchased next year
- /ceph/project/{group\_account}



# 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]/

## 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]/

## 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
- Unsubscription process will be blocked when space couldn't release or cancelling year plan
  - Please contact [dicos-support@twgrid.org](mailto:dicos-support@twgrid.org)



**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
```

# Using /tmp as Intermediate Working Space

- Create Temporary File in Linux

```
$ mktemp
```

```
$ /tmp/1mjAhAH3YM
```

```
$ mktemp /tmp/jyou-XXXXXX
```

```
$ /tmp/jyou-WxWtv
```

- Create Temporary Directory

```
$ mktemp -d
```

```
$ /tmp/tmp.1mjAhAH3YM
```

```
$ mktemp -d /tmp/jyou-XXXXXX
```

```
$ /tmp/jyou-WxWtv
```

# Using /tmp as Intermediate Working Space

- Copy Temporary File:
  - `wget https://raw.githubusercontent.com/ASGCOPS/Hands-on-STORAGE-2023/main/temporary\_file.sh`

```
1  #!/bin/bash
2
3  # Create a temporary file with a unique name under /tmp/ directory
4  TMPFILE=$(mktemp /tmp/Workshop-XXXXX)
5
6  # Append "User Training Workshop 2023" to the temporary file
7  echo "User Training Workshop 2023" >> $TMPFILE
8
9  # Get the filename (without the path) of the temporary file
10 filename=$(basename "$TMPFILE")
11
12 # Copy the temporary file to the specified destination directory (/ceph/work/ASGC/Workshop/)
13 cp $TMPFILE /ceph/work/ASGC/Workshop/$filename
14
15 # Remove the temporary file from /tmp/ directory to clean up
16 rm $TMPFILE
17
```

# Using /tmp as Intermediate Working Space

- Copy Temporary Directory:
  - `wget https://raw.githubusercontent.com/ASGCOPS/Hands-on-STORAGE-2023/main/temporary\_directory.sh`

```
1  #!/bin/bash
2
3  # Create a temporary directory with a unique name under /tmp/ directory
4  TMPDIR=$(mktemp -d /tmp/Workshop-XXXXX)
5
6  # Append "User Training Workshop 2023" to a file named "Workshop.text" inside the temporary directory
7  echo "User Training Workshop 2023" >> $TMPDIR/Workshop.text
8
9  # Get the directory name (without the path) of the temporary directory
10 filename=$(basename "$TMPDIR")
11
12 # Recursively copy the entire temporary directory to the specified destination directory (/ceph/work/ASGC/Workshop/)
13 cp -r $TMPDIR /ceph/work/ASGC/Workshop/$filename
14
15 # Remove the temporary directory and its contents from /tmp/ directory to clean up
16 rm -r $TMPDIR
17
```



# Data Transfer using SFTP

- Node for Data Transfer: [slurm-ui.twgrid.org](http://slurm-ui.twgrid.org) or [dicos-sftp.twgrid.org](http://dicos-sftp.twgrid.org)
- Linux Command

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

```
## Upload file
```

```
$ sftp> put filename
```

```
## Download file
```

```
$ sftp> get filename
```

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

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

# Data Transfer using FileZilla

1. Download [FileZilla Client](#)

2. Host (主機):

- [dicos-sftp.twgrid.org](https://dicos-sftp.twgrid.org)

- [slurm-ui.twgrid.org](https://slurm-ui.twgrid.org)

3. Account (使用者名稱):  
account

4. Password (密碼): password

5. Port (連接埠): 22

