

## Data download from NECAT by using Sync Script

To retrieve your remotely-collected data from NECAT, you can use the sync script. **Please be aware that this script is only compatible with Python3. Using it with Python2 will result in an error message.**

### Initiating the Download:

- 1- Navigate to the NE-CAT Remote GUI homepage.
- 2- Click the 'sync' button next to the session you wish to download. This will download the sync script to your local machine.

Group	Inst	Line	Start	Finish	Directory	Support	Options
NE-CAT	Cornell University	E	2023-02-03 10:27 CST	2023-08-01 09:00 CDT	/gpfs2/users/necat/necat_E_6954	Jon Schuermann	<b>Sync</b> <input type="button" value="Conserve"/> <input type="button" value="Control"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>

### Running the Script:

- On Linux or Apple systems, open a terminal window.
- Use the command: `python <name of script>.py`
- By default, this command will display the options page. With this new script, we do have new features, please read all the options and examples.

```
sync_v3.0.2.py
-----
usage: sync_necat_E_7152.py [-h] [-a] [-d] [-r] [-m] [-q] [-t TARGET] [--test] [--runsinterval RUNSINTERVAL] [--snapsinterval SNAPSINTERVAL]

Sync files from necat

options:
  -h, --help            show this help message and exit
  -a, --active           Sync files
  -d, --directory       Choose directory to sync
  -r, --repeating        Repeating sync
  -m, --multithread     Sync in multiple threads [NB: Experimental]
  -q, --quiet           Run silently
  -t TARGET, --target TARGET
                        Directory where data will be synced to [default .]
  --test               Test full transfer
  --runsinterval RUNSINTERVAL
                        Interval between repeated syncs of full and runs data in seconds [default: 300s]
  --snapsinterval SNAPSINTERVAL
                        Interval between repeated syncs of snapshots when using -m in seconds [default: 5s]

Examples: python sync_necat_E_7152.py --test           Test transfer of all files, no files synced
          python sync_necat_E_7152.py -a             Sync all files once
          python sync_necat_E_7152.py -a -r         Sync all files repeating
          python sync_necat_E_7152.py -a -r -m      Sync all files repeating in multiple threads [NB: experimental]
          python sync_necat_E_7152.py -at /tmp/myfiles
                                                    Sync files once to /tmp/myfiles directory
          python sync_necat_E_7152.py -a -d         Sync specific files by selecting them from a file tree
```

### Downloading Specific Data:

- **Warning:** If your rsync version is outdated, you will get a warning and this option will not work.
  - o To Upgrade rsync:
    - Install HomeBrew from <https://brew.sh/>
    - Open terminal and run “brew install rsync”
    - Source to rsync “/opt/homebrew/bin/rsync”

- Use the '-d' option to selectively download data rather than the entire session. This allows you to pick specific files or directories from your session directory tree.

```
Directory tree:
1  .
2  |
3  |---images
4  |   |
5  |   |---Igor
6  |   |   |
7  |   |   |---96
8  |   |   |   |
9  |   |   |   |---runs
10 |   |   |   |   |
11 |   |   |   |   |---FJH11a_2
12 |   |   |   |---snaps
13 |   |   |---runs
14 |   |   |   |
15 |   |   |   |---thaum6_02s_02d
16 |   |   |   |---thaum6_05s_05d
17 |   |   |   |---thaum7_01s_01d
```

- Example: To view the directory tree of your session, use
- `python sync_neocat_E_6954.py -da`

From the displayed tree, select the desired files or file numbers (e.g., 6, 8) to initiate their download. Should the transfer be interrupted, you can easily resume by restarting the script from its last position. It will pick up from where it left off.

### Targeted Directory Download:

- Utilize the '-t' option for downloading data from a specific directory. For guidance, consult the 'Example' section at the start of the script or use the '-h' option to access examples.

### Important Note:

The sync script you download has a 72-hour expiration. Should you require data retrieval after this expiration:

1. Navigate back to the NE-CAT Remote GUI.
2. Re-download the sync script. This process will reset the expiration timer.