

GISAIID poxCLI™

Command Line Interface (CLI) for batch uploading consensus sequences and metadata to the EpiPox™ database

1. Description

This document describes the installation and usage of the poxCLI software for making batch submissions of consensus sequence data and metadata to GISAIID from the command line.

Use of this software requires familiarity with the *nix command line terminal. For a basic overview, please refer to myriad [available web resources on the topic](#).

2. Installation

After downloading the software move it to a preferred destination prior to installation. Add the destination to the \$PATH variable to allow running with poxCLI -h. For additional help on adding folders to \$PATH, refer to online resources. If not adding to the \$PATH, use a relative path to run the file. For example, change into the directory containing the file and run ./poxCLI -h.

Note to macOS users: This software has not yet been notarized by Apple. As a result, might issue a warning at the start of installation. To overcome this issue, see <https://support.apple.com/en-us/HT202491#openanyway>

3. Usage

Get help, top level

After running poxCLI -h, the following should be printed to screen.

```
usage: poxCLI [-h] ...
```

```
Version 4 Command Line Interface (CLI) for uploading sequences and metadata to GISAIID.
```

```
options:
```

```
-h, --help show this help message and exit
```

```
Sub-commands help:
```

```
upload    Upload sequences and metadata.
version   Show version and exit.
```

The above output shows two sub-commands:

- poxCLI upload (refer to section 3.1)
- poxCLI version (refer to section 3.2)

3.1. Upload

Use of a GISAID CLI requires a client-ID as an additional security measure that compliments standard GISAID access credentials. Obtain a client-ID by clicking the “Request client-ID” from where you downloaded this software, complete all required fields and click “Request.”

Once the metadata file is prepared in CSV format, and a sequences file in FASTA format have been prepared the upload via CLI can begin.

To get help on the upload sub-command, do `poxCLI upload -h` or `poxCLI upload --help`. If the program is working correctly, the following will be printed to standard out (i.e., ‘stdout’):

```
usage: poxCLI upload [-h] [--username USERNAME] [--password PASSWORD] [--clientid CLIENTID] [--log LOG] --metadata METADATA --fasta FASTA [--proxy PROXY] [--dateformat {YYYYMMDD,YYYYDDMM,DDMMYYYY,MMDDYYYY}]
                        [--debug]
```

Perform upload of sequences and metadata to GISAID's curation zone.

options:

| | |
|---|---|
| <code>-h, --help</code> | show this help message and exit |
| <code>--username USERNAME</code> | Your GISAID username. (default: None) |
| <code>--password PASSWORD</code> | Your GISAID password. (default: None) |
| <code>--clientid CLIENTID</code> | Submitter's client-ID. Follow the steps in the README to request a client-ID. (default: None) |
| <code>--log LOG</code> | All output logged here. (default: None) |
| <code>--metadata METADATA</code> | The csv-formatted metadata file. (default: None) |
| <code>--fasta FASTA</code> | The fasta-formatted nucleotide sequences file. (default: None) |
| <code>--proxy PROXY</code> | Proxy-configuration for HTTPS-Request in the form: <code>http://username:password@proxy:port</code> (default: None) |
| <code>--dateformat {YYYYMMDD,YYYYDDMM,DDMMYYYY,MMDDYYYY}</code> | Specify the date format, with 'Y' for 'year', 'M' for 'month', 'D' for 'day'. Dates will parse correctly with the following delimiters: '/', '.', '-' or '-'. (default: YYYYMMDD) |
| <code>--debug</code> | Switch on debugging output. (default: False) |

During upload, a message similar to the following will be printed to stdout.

```
INFO; Logon status: ok;
SUCCESS; hMpxV/Canada/TEST_DONOTRELEASE-ON-PHIL134/2022 assigned to
accession: EPI_ISL_18640198
SUCCESS; hMpxV/Japan/TEST_DONOTRELEASE-TMPH-0129/2023 assigned to accession:
EPI_ISL_18640199
INFO; Logoff status: ok;
```

Any ERROR or WARNING messages will also be printed to stdout here.

When making larger submissions, it is useful to save stdout messages to file. All stdout messages can be redirected to a new file by adding `--log logfile.txt` to the command. If the file exists, messages will be appended to the file.

Following a successful upload, submissions can be edited inside EpiPox™.

3.2 Version

To retrieve the software version number, enter:

```
poxCLI version
```

This user manual concurs with version:

```
poxCLI version: 4.1.2
```

4. Support

For additional CLI queries contact `clisupport[at]gisaid.org`.

5. FAQs

What does the error “submitter invalid” mean?

The submitter column in the `metadata.csv` file contains an email address that is not authenticated for use by the submitter. To fix, either: 1) change the email address in the row of the metadata file to be equal to the email address of the submitter performing the upload; 2) email `clisupport[at]gisaid.org` to request adding the email address(es) to the list of authorized email addresses for the submitter (e.g., if you are uploading on behalf of someone else, aka “Submitter Proxy”, not to be confused with “internet proxy” under the `--proxy` option);

What format should the location be in?

The following are acceptable: `continent / country / region` and `continent / country / region / sub-region`, but; `country / region / sub-region, country / region` and `region / sub-region` are not. Hence, `Europe/Germany/Bavaria/Munich` and `Europe/Germany/Bavaria` are acceptable, but `Mexico / Jalisco / Puerto Vallarta` needs to be corrected to `North America / Mexico / Jalisco / Puerto Vallarta`. Spaces and hyphens in the location are allowed.

How to correct submitted sequence or metadata?

Update data via My Files within EpiPox™. Or contact the curation team and provide the EPI_ISL accession numbers and the information to be updated using a table (.xls, .csv or .tsv).

How to add additional information to the location field?

Use the `pox_add_location` field to add the extra data (e.g., Lat-Lon, suburb, postal code etc.).

What does “date unPlausible” mean in the error messages?

This error can be caused by having a date value younger than the submission date (UTC). Adjust the problematic date in the `metadata.csv` file accordingly and attempt to resubmit.

Upload was interrupted. How to re-start the upload?

Simply re-run the last command. Samples already submitted will show a message indicating that the sample has already been assigned an accession, such as `WARNING; <SAMPLE NAME>; validation_error; pox_virus_name: already exists; existing_ids: ['<EXISTING EPI_ISL>']`