UQMS User Guide

United Quantum Measuring System

Notation: <This-is-a-variable> can be replaced.

* Warning ! : Do **NOT** rename any file you will SCP to server.

Page 1 Measurement Flow

– First at Local

1. Generate the `ExpParasSurvey.toml` according to the exp you want.
    - Use `UQMS\Executions\SurveyAssign.py`
    - Can be generated to an arbitary file path.
2. Fill in the Survey.toml and prepare the HardwareConfig you need.
    1. **QM**: `<arbitrary-name>_config.pkl` and `<arbitrary-name>_spec.pkl`
    2. **Qblox**: `QD_file`
3. Packaging your configs with a folder named `'ExpConfigs'`.
4. SCP `ExpConfigs` and `ExpParasSurvey.toml` to server Destination

– Second by Remote

1. SSH to the server and Start the env `conda activate UQMS`
2. Run the measurement with the bash file, see appendix for more.

– Final by FileZilla-Client

1. Check the raw data and picture in the ~/Data, see appendix for more.

Page 2 Connection tools

– SSH Connections

Connect: `ssh -p <port> <user-name>@<server-ip>`

Close: `exit`

– SSH via VPN

Connect: `ssh -p <port> <user-name>@<Lab-Website>`

– SCP all items in a folder to Destination

```
scp -P <port> -r <folder-path>/* <user-name>@<server-ip>:"<Destination>"
```

- Destination: `/home/<user-name>/MeasConfigs/`

– SCP a file to Destination

```
scp -P <port> -r <file_path> <user-name>@<server-ip>:"<Destination>"
```

– SCP back all items in a folder from the Server

```
scp <user-name>@<server-ip>:/path/to/dir/ /local/dir/path
```

Appendix

1. Bash files for executing a measurement or registeration.

1.1 meas_exe.sh -> run the measurement with a console.
1.2 meas_BGexe.sh -> rum the measurement at the BackGround (no console shown).
1.3 chip_register.sh -> Register a new sample (Only need S0-Survey to execute with).

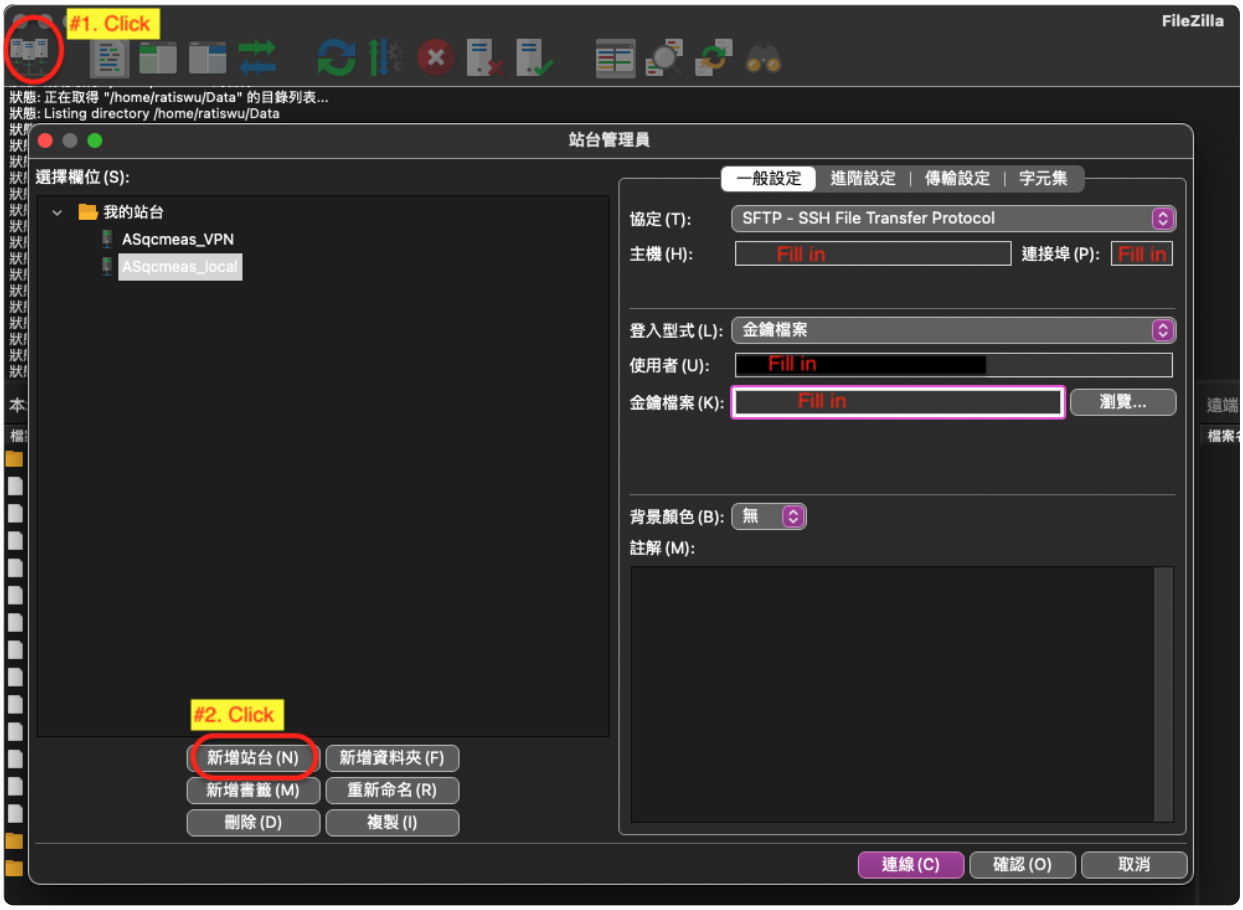
2. Reattach your background executions

If you use `meas_BGexe.sh`, then the log file with name `<JOB-name>` will be generated. Kill this python running with the command:

```
tmux send-keys -t <JOB-name> C-c
```

3. FileZilla settings (via SFTP)

We use FileZilla Client to transfering the data. The following picture is the communications setup, please download the application first. You will need two different communications if you connect with VPN.



4. SSH KeyAuthentication

1. Generate the public-private Key pair

2. Upload your public key to server