

## Quick Start Guide

Last Update: June 3, 2024.

## SSH key generation / How to login to RCCS server

In order to proceed with the following operations, the email address registered at the time of application is required. (Please check this FAQ item.)

Please register your SSH public key according to the information on ["How to set your password and put your public key" page](#). After that, you can connect to login server "ccfep.ims.ac.jp" using your user ID (three-character ID) and registered key. If you don't have SSH key, guides below might be helpful to you. (PDF version of guide is also available; please see the bottom of this page)

- [PuTTY version](#) (Windows)
- [Tera Term version](#) (Windows)
- [MobaXterm version](#) (Windows)
- OpenSSH environment (Terminal.app (mac), Linux, Windows PowerShell etc.)
  - You can use "ssh-keygen" command. Ed25519, ECDSA-384, ECDSA-256, RSA 4096 bits keys can be used.
    - Ed25519(recommended): [ssh-keygen -t ed25519](#)
    - ECDSA-384: [ssh-keygen -t ecdsa -b 384](#)
    - ECDSA-256: [ssh-keygen -t ecdsa -b 256](#)
    - RSA 4096 bits: [ssh-keygen -t rsa -b 4096](#)
    - (ECDSA-521 keys are not available)
  - Generated keys should be uploaded according to the instruction in ["How to set your password and put your public key" page](#). After the completion of this step, you can login to our server via SSH.
    - (e.g. [ssh \(uid; 3 letters\)@ccfep.ims.ac.jp](#))
  - [Ed25519 key generation sample is available in this page.](#)

## File Transfer via SCP/SFTP

Before trying to transfer files, you should finish the SSH key generation and registration described above. For WinSCP and FileZilla, we have prepared guides, see below. (PDF version of guide is also available; please see the bottom of this page)

If you have trouble with keys, please update your SCP/SFTP software and retry.

- [WinSCP version](#) (Windows)
- [FileZilla version](#) (Windows, mac, Linux)
- OpenSSH environment (Terminal.app (mac), Linux, Windows PowerShell etc.)
  - scp/sftp commands are available. Also, sshfs can be used for this purpose.
- VSCode + SSH FS extension
  - RSA keys may not be available. Please try with ECDSA or Ed25519 keys. (June, 2023)
  - (Remote - SSH extension is not available due to the security limitation. (Mar 3, 2022))

## Job Submission Guides

- [Sample Jobs](#)
- [Gaussian Job Submission using g16sub](#)
  - [sample Gaussian input file \(ch3cl.gjf\)](#)

## Tips

- [Environment Modules](#)
- [Gaussian YouTube Channel](#)
  - Official YouTube channel of Gaussian, Inc.

## Guides in PDF format (obsolete)

- [SSH key generation / How to login to RCCS server: PuTTY \(pdf\)](#)
- [SSH key generation / How to login to RCCS server: TeraTerm \(pdf\)](#)
- [SSH key generation / How to login to RCCS server: MobaXterm \(pdf\)](#)
- [Data transfer: WinSCP \(pdf\)](#)
- [Data transfer: FileZilla \(pdf\)](#)

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