

# SSH Key Creation and Login (Tera Term version)

National Institutes of Natural Sciences  
Okazaki Research Facilities  
Research Center for Computational Science (RCCS)

(Verified with Tera Term 5.1)

# Changelog

- Jul. 11, 2019 First version
- Jan. 15, 2020 Minor update of images for version 4.105
- Feb 2, 2021 Minor updates including recommended key types
- Jan 5, 2022 Verified with Tera Term 4.106
- Jan 16, 2023 Update notice about RSA key
- Mar 6, 2023 Add description about Tera Term 5.0 beta 1
- Jun 2, 2023 Minor fix of wording
- Nov 20, 2023 Update address of official website & test with 5.0
- Jan 18, 2024 Verified with Tera Term 5.1

# Introduction

The aim of this document is to explain how to login to RCCS supercomputer using Tera Term.

# Table of Contents

- Install Tera Term
- SSH key creation
- Register public key
- Login

# Install Tera Term

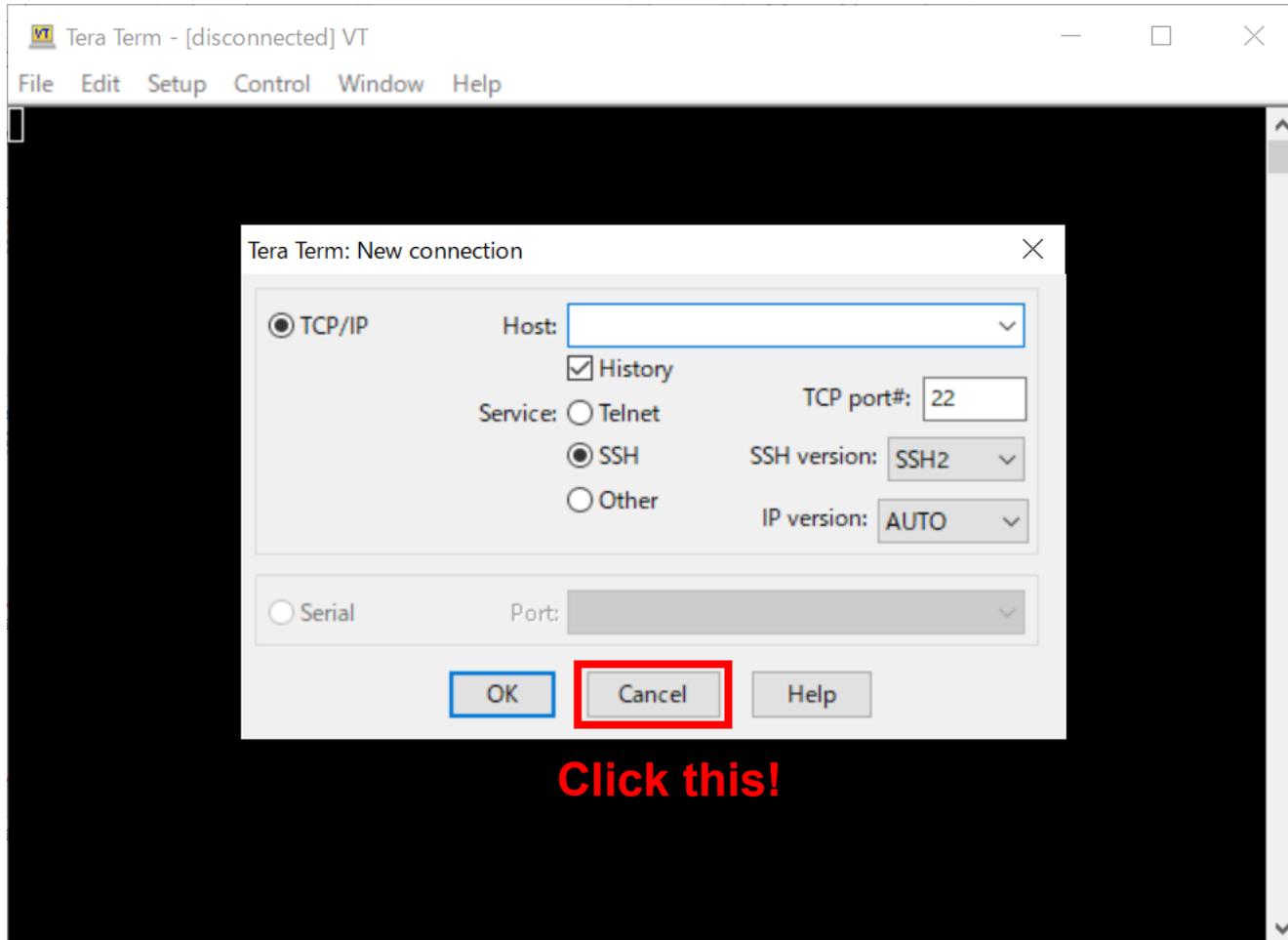
Tera Term can be downloaded from the following site.

<https://teratermproject.github.io/index-en.html>

Please install Tera Term according to the instruction.

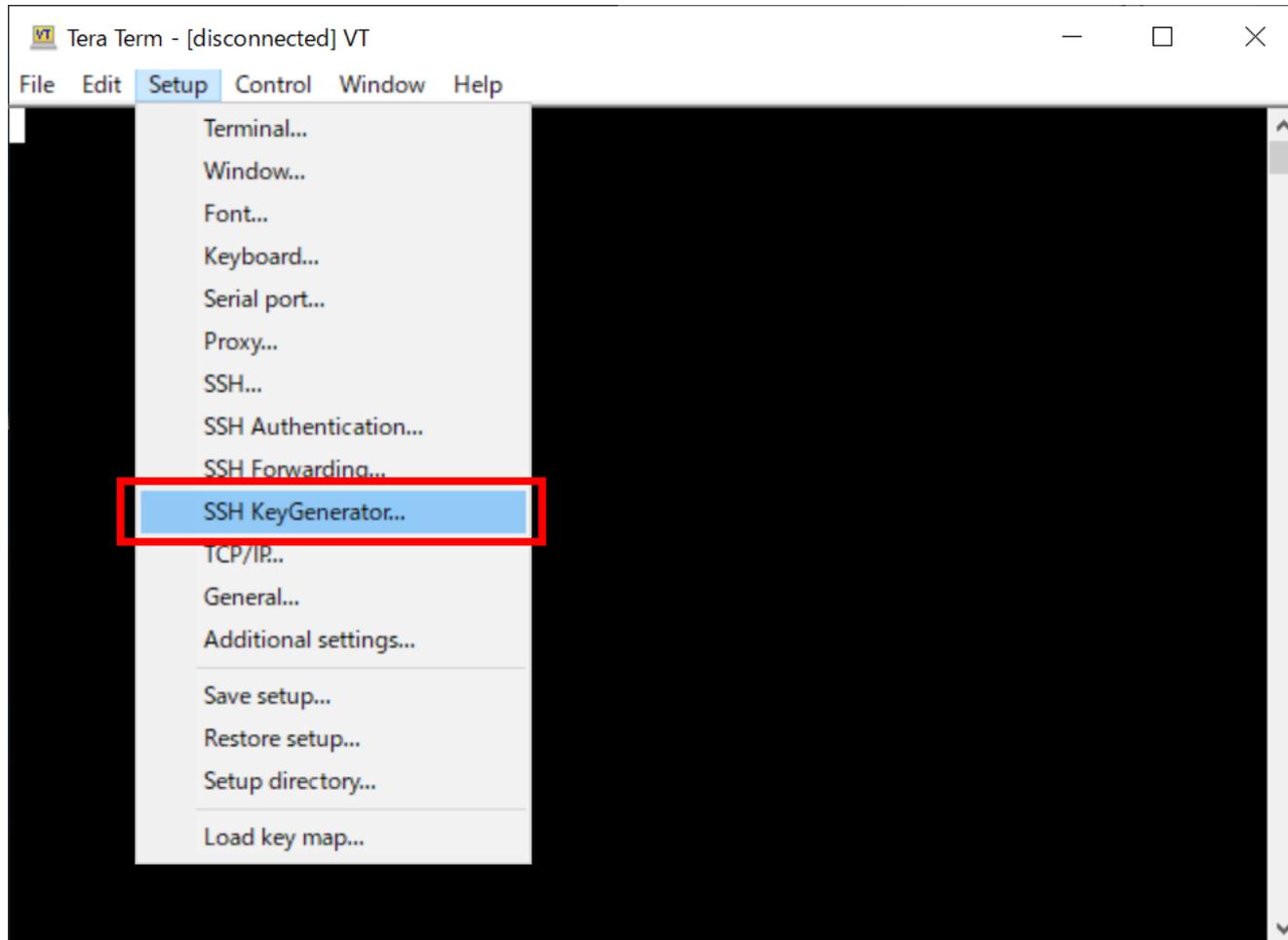
# SSH key creation (1)

Launch Tera Term, and then cancel connection.



# SSH key creation (2)

Select [SSH KeyGenerator] from [Setup] menu.



# SSH key creation (3)

Specify key type and the click “Generate” button.

TTSSH: Key Generator

Key type

RSA1  RSA  DSA

ECDSA-256  ECDSA-384

ECDSA-521  ED25519

Key Bits:

4096

Generate

Close

Key passphrase:

Confirm passphrase:

Comment:

bcrypt KDF format

Number of rounds:

Save public key

Save private key

\* To use RSA key, please use Tera Term 5.0, 4.107, or later version.

Following key types are recommended in RCCS:

- ED25519
- ECDSA-521, ECDSA-384, ECDSA-256
- RSA 4096 bits (choose **RSA** and change “Key Bits” to 4096)\*

If you have no preference, try ED25519.

# SSH key creation (4)

Once key generation finished, set passphrase and then save **both of two keys** (public key & private key)

TTSSH: Key Generator

Key type  
 RSA1  RSA  DSA  
 ECDSA-256  ECDSA-384  
 ECDSA-521  ED25519

Key Bits: 256

Generate  
Close  
Help

Key passphrase: .....  
Confirm passphrase: ..... 1

Comment: RCCS Key 2

bcrypt KDF format Number of rounds: 16

3a Save public key 3b Save private key

RCCS recommends passphrase of 10 or more characters and containing all the following 4 types of characters.

- Lower case
- Upper case
- Number
- Symbol

You might want to give an easy-to-understand name for this key.  
(If you don't have any plans to have other SSH keys, default name would be enough.)

save public key

save private key

The private key file must be kept secret!

# Register Public Key

Before login, you need to register the public key.

The procedure of the public key registration is available from the following link.

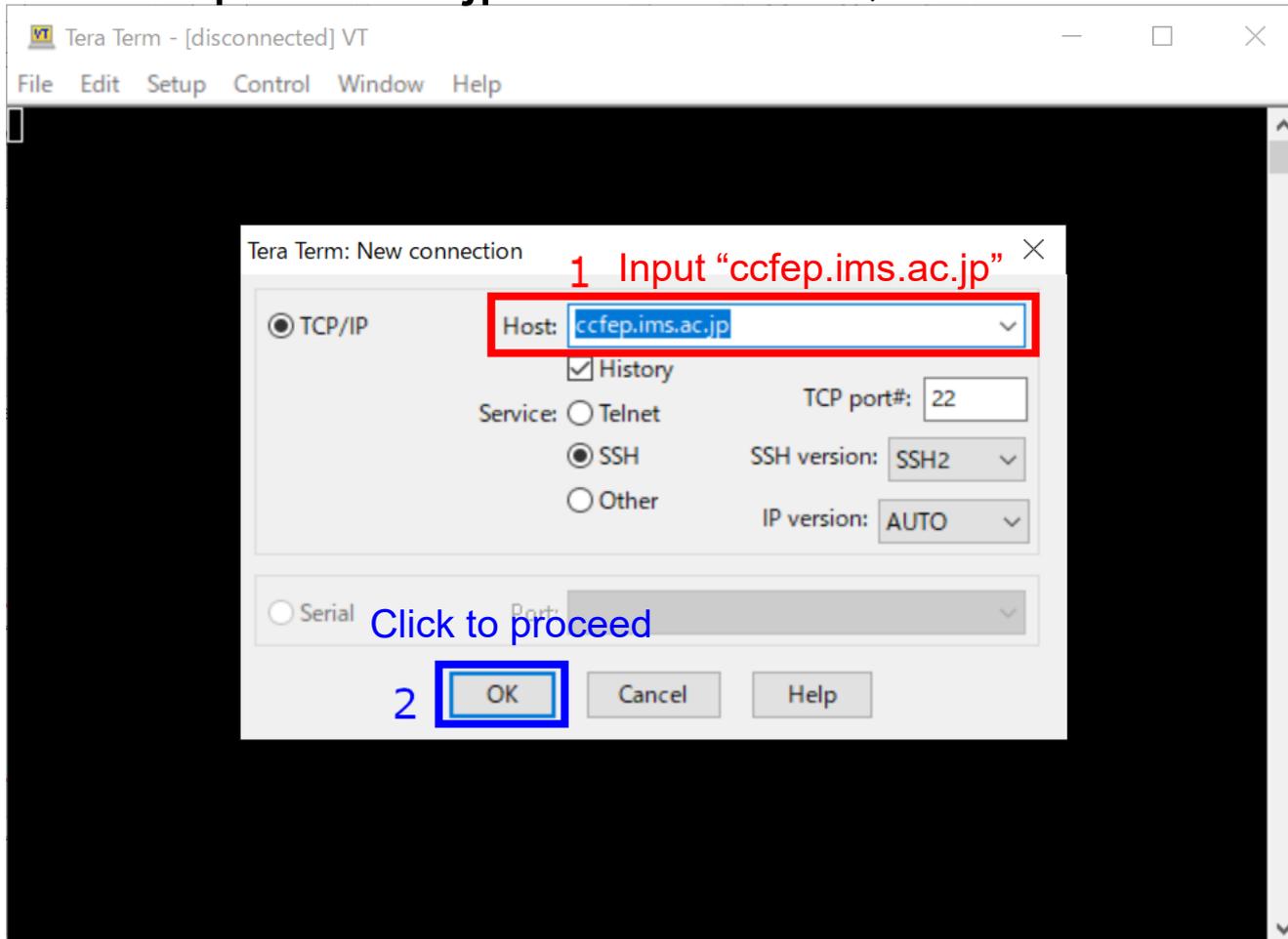
<https://ccportal.ims.ac.jp/en/account/>

The private key file must be kept secret.

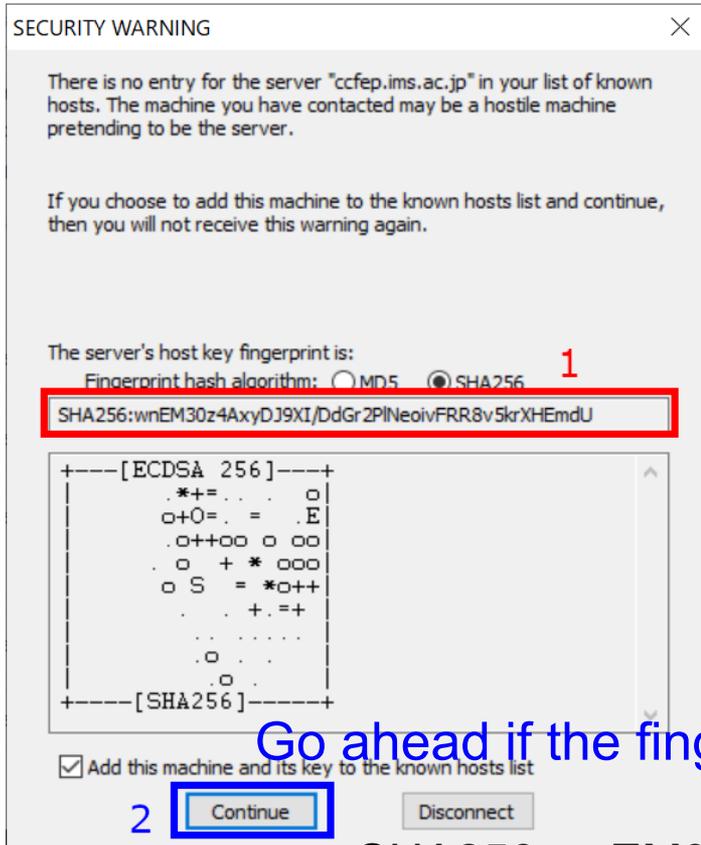
# Login (1)

Restart Tera Term or select [New connection] from [File] menu to go back to the initial state.

Then type “ccfep.ims.ac.jp” in Host box, and click “OK”.



# Login (2)



Upon first connection, security alert will be shown.

Check the fingerprint; this must match with either of the fingerprint in the list below.

Go ahead if the fingerprint is valid

Fingerprints  
of valid  
server keys

- SHA256:wnEM30z4AxyDJ9XI/DdGr2PINeoivFRR8v5krXHEmdU
- SHA256:0KL38Yn/kBee1pAuxyKwenEwXjtPxr9ZElolfVqXvbl
- SHA256:Nhg+9Lgj3XeuW///A/j7jqgUJllxWehryCtStlp1Dirs
- MD5:ad:de:79:30:81:b0:b1:6a:17:f5:6f:ea:f4:b4:3b:de
- MD5:e3:a9:bb:6f:e4:a9:37:fd:98:14:54:16:3c:81:2d:aa
- MD5:07:7e:df:7b:16:47:a8:f5:7c:48:b0:a3:d3:86:71:6a

# Login (3)

Input your ID, private key location, and passphrase for the private key.

The screenshot shows the 'SSH Authentication' dialog box for logging into 'ccfep.ims.ac.jp'. The dialog is annotated with numbers 1 through 5 and corresponding instructions:

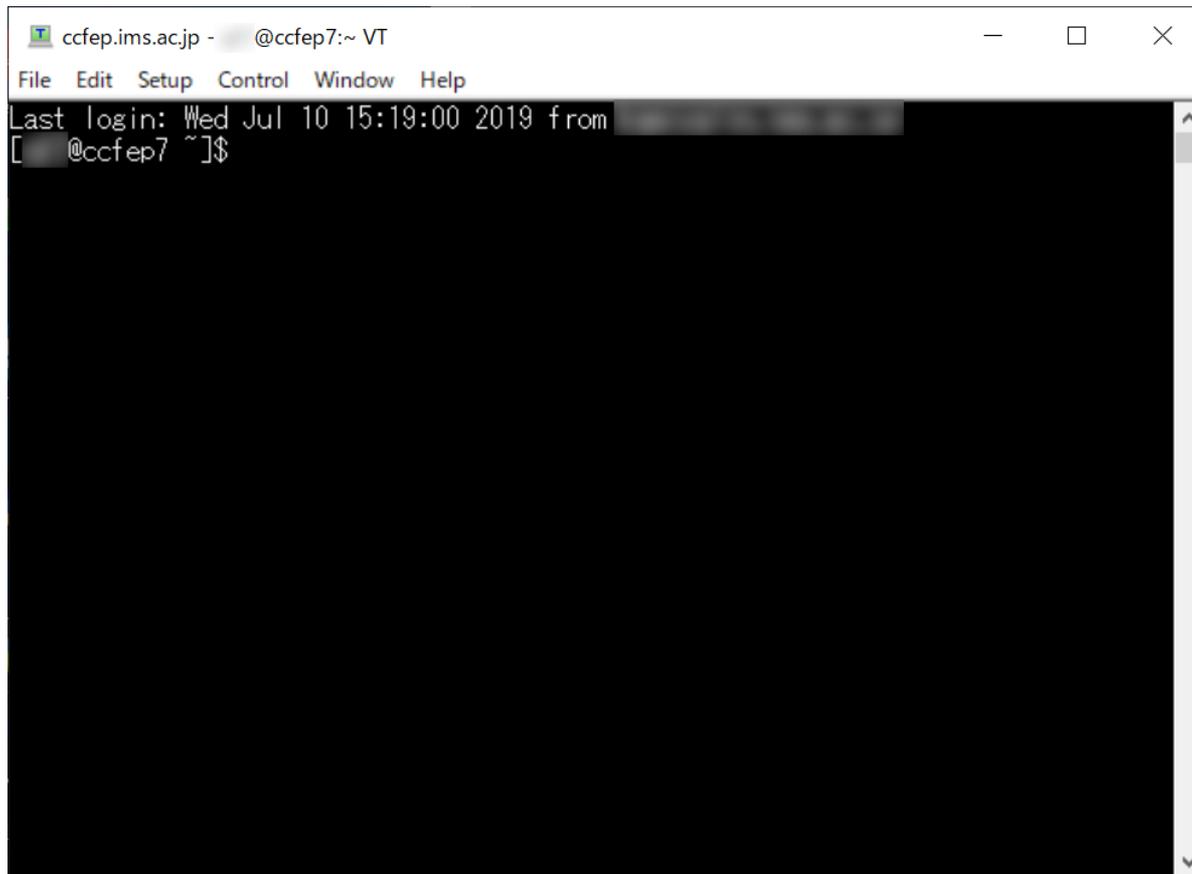
- 1** (green): Points to the 'User name' field, with the instruction 'Input user account given by RCCS (three-letter ID)'.
- 2** (red): Points to the 'Passphrase' field, with the instruction 'Input the passphrase of the private key'.
- 3** (orange): Points to the 'Remember password in memory' checkbox, with the instruction '(optional) uncheck to improve security'.
- 4a** (blue): Points to the radio button for 'Use RSA/DSA/ECDSA/ED25519 key to log in', with the instruction 'Click to select'.
- 4b** (blue): Points to the 'Private key file' field, with the instruction 'Specify private key file'.
- 5** (red): Points to the 'OK' button, with the instruction 'OK'.

The dialog also includes a 'Forward agent' checkbox, 'Authentication methods' section with radio buttons for 'Use plain password to log in', 'Use RSA/DSA/ECDSA/ED25519 key to log in', 'Use rhosts to log in (SSH1)', 'Use keyboard-interactive to log in', and 'Use Pageant to log in'. The 'Private key file' field contains the text 'fid\_rsa' and a browse button (...).

(You can set default user name and private key location on "Setup" menu.)

# Login (4)

If everything works fine, you will successfully login to login server.



```
ccfep.ims.ac.jp - [redacted]@ccfep7:~ VT
File Edit Setup Control Window Help
Last login: Wed Jul 10 15:19:00 2019 from [redacted]
[redacted]@ccfep7 ~]$
```