



### Wisteria/BDEC-01 (Odyssey) How to login

Information Technology Center The University of Tokyo If you have any questions, please contact Kengo Nakajima at <u>nakajima(at)cc.u-tokyo.ac.jp</u> Please DO NOT contact official support site

#### Before Accessing Odyssey ...

- Please make sure that:
  - -the OS of your PC is the most updated version
  - proper anti-virus software with the most updated version is installed to your PC

- Supercomputers in ITC/U.Tokyo
  - -Information Technology Center, The University of Tokyo
- Login to Odyssey
- After Login

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#### Login to Odyssey

- SSH Public Key Authentication (SSH公開鍵認証, SSH=Secure Shell): Safer than Password Authentication
- Procedures
  - Windows: WSL, Cygwin, Mac-Unix: Terminal
  - 1 Creating Keys (Private Key, Public Key) on PC
    - Passphrase: Password for SSH Public Key Authentication
    - "Empty Passphrase" is prohibited
    - If you have already created keys on your PC before, you can skip (Please make sure it is with "passphrase")
  - 2 Accessing the Portal Site
    - User ID(t36XYZ) and "Initial Password with 8-Characters" (Info-1/Info-2)
    - You are requested to change Password after accessing the portal site
      - Several rules for number of characters, combinations etc.
  - ③ Registration of the Public Key through the Portal Site
    - 2 and 3 are essential, even if you have already had UID's on Odyssey
  - 4 Login to Odyssey by ssh

#### 1 Creating Keys on PC (1/3)

```
$ ssh-keygen -t rsa
```

```
Generating public/private rsa key pair.

Enter file in which to save the key (/home/user/.ssh/id_rsa): <Return↓>
```

Enter passphrase (empty for no passphrase): Your Favorite Passphrase <Return >

Enter same passphrase again: Same Passphrase <Return >

Your identification has been saved in /home/user/.ssh/id\_rsa.

Your public key has been saved in /home/user/.ssh/id\_rsa.pub.

The key fingerprint is:

SHA256;vt880+PTcscHkOyabvxGjeRsMWLAWds+ENsDcReNwKo nakajima@KNs-NEW-VAIO The key's randomart image is:

#### **Procedures**

- ssh-keygen –t rsa <Return↓>
- <Return</li>
- Your Favorite Passphrase < Return \ >
- Same Passphrase <Return↓>
- "Empty Passphrase" is prohibited

### 1 Creating Keys on PC (1/3)

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Enter file in which to save the key (/home/user/.ssh/id_rsa): <Return↓>

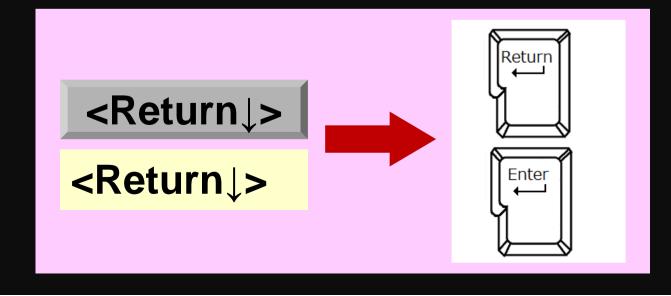
Enter passphrase (empty for no passphrase): Your Favorite Passphrase <Return↓>

Enter same passphrase again: Same Passphrase

Your identification has been saved in /home/user/.ssh/id_rsa.

Your public key has been saved in /home/user/.ssh/id_rsa.pub.
```

The key fingerprint is: SHA256:vt880+PTcscHkOyabvxGjeRsMWLAWds+ENsDcReNwKo nakajima@KNs-NEW-VAIO The key's randomart image is:



#### (1) Creating Keys on PC (1/3)

#### \$ ssh-keygen -t rsa

```
Generating public/private rsa key pair.
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Enter file in which to save the key (/home/user/.ssh/id\_rsa): <Return↓>

Enter passphrase (empty for no passphrase): Your Favorite Passphrase

<Return 1>

Enter same passphrase again: Same Passphrase

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Your public key has been saved in /home/user/.ssh/id rsa.pub.

The key fingerprint is:

SHA256:vt880+PTcscHkOyabvxGjeRsMWLAWds+ENsDcReNwKo nakajima@KNs-NEW-VAIO

The key's randomart image is:

```
--[RSA 2048]-----+
         0=00.0+
          . +0+.
           +oB<sub>-</sub>
        So *o*
       . E B. o
```

#### **Procedures**

- ssh-keygen -t rsa <Return \!>
- <Return<sub>1</sub>>
- Your Favorite Passphrase < Return \ >
- Same Passphrase < Return \ >
- "Empty Passphrase" is prohibited

### 1 Creating Keys on PC (2/3)

```
$ cd ~/. ssh
                             ⇒秘密鍵 (Private Key)
 id rsa
                             ⇒公開鍵 (Public Key)
 id rsa. pub
$ cat id_rsa.pub
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAABAQDa6InmOYYaCrWjQDukjiNEfdW8veUwJyZtEI3oDuOA28
eey6p0wbtI7JB09xnI1707HG4yYv0M81+/nIAHy5tAfJIy0dsPzjTgdTBLdgi3cSf5pWEY6U96
yaErOEi8Wge1HkXrhcwUjGDVTzvTORefe6zLdRziL/KNmmesSQfR5lsZ/ihsjMgFxGaKsHHq/I
ErCtHIIIf9V/Ds2yj6vkAaWH6asBn+ZsRiRFvwHPhkYAnp/j3LY6b8Qfqg0p4WZRenh/HgySWT
YIGi8x67VzMaUlm9qIK0QFMCaK2rivX1fmbwyWJ/vrWDqiek6YXoxLDu+GPeQ4CPvxJcZnqF9g
f3 nakajima@KNs-NEW-VAIO
```

### (1) Copying the Public Key (3/3)

- \$ cd .ssh

id rsa id\_rsa.pub

cat id\_rsa.pub

#### **Procedures**

- cat id rsa.pub <Return \| >
- setting the cursor on "ssh-rsa"
- selecting from "ssh-rsa" to "f3" on the last line and "copy"
- You can include "nakaima@KNs-NEW-VAIO", but registration may fail if multi-byte characters are there (This info. may not appear in certain OS)

ssh-rsa

AAAAB3NzaC1yc2EAAAADAQABAAABAQDa6InmOYYaCrWjQDukjiNEfdW8veUwJyZtEI3oDuOA28 eey6p0wbtI7JB09xnI1707HG4yYv0M81+/nlAHy5tAfJly0dsPzjTgdTBLdgi3cSf5pWEY6U96 yaErOEi8Wge1HkXrhcwUjGDVTzvTORefe6zLdRziL/KNmmesSQfR5lsZ/ihsjMgFxGaKsHHq/I ErCtHIIIf9V/Ds2yj6vkAaWH6asBn+ZsRiRFvwHPhkYAnp/j3LY6b8Qfqg0p4WZRenh/HgySWT YIGi8x67VzMaUlm9qlK0QFMCaK2rivX1fmbwyWJ/vrWDqiek6YXoxLDu+GPeQ4CPvxJcZnqF9g

nakajima@KNs-NEW-VAIO

### 2 Accessing the Portal Site (1/3)

Please prepare the e-mail from me, titled "info"

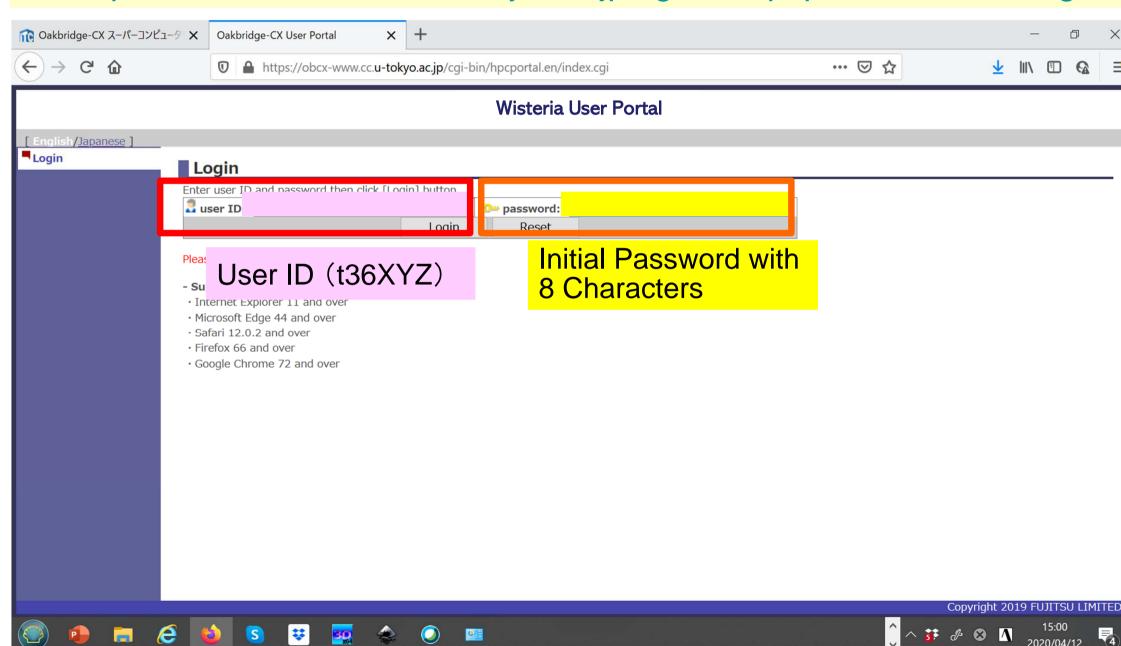
- 1<sup>st</sup> line
  - User ID: t360XY
- 2<sup>nd</sup> line
  - Initial Password (8-Characters): e.g. Pas#w0rd

#### System Information/Portal Site

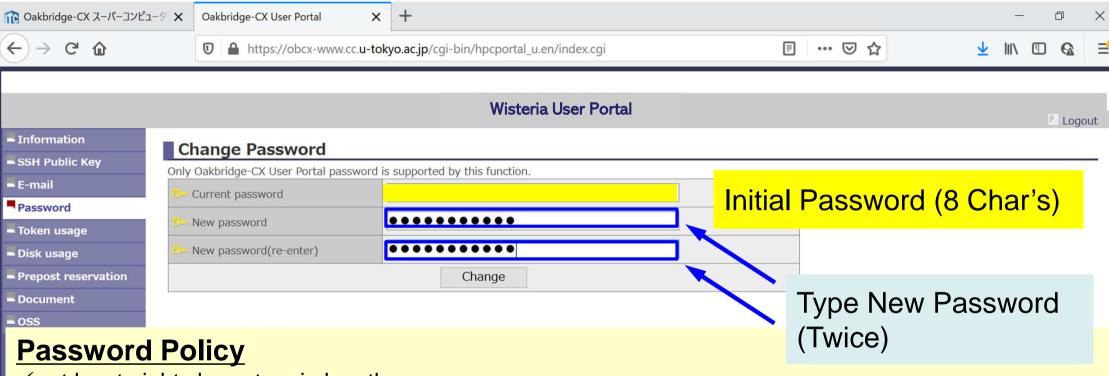
- 日本語
  - https://wisteria-www.cc.u-tokyo.ac.jp/cgi-bin/hpcportal.ja/index.cgi
  - https://www.cc.u-tokyo.ac.jp/supercomputer/wisteria/service/
- English
  - https://wisteria-www.cc.u-tokyo.ac.jp/cgi-bin/hpcportal.en/index.cgi

### 2 Accessing the Portal Site (2/3)

https://wisteria-www.cc.u-tokyo.ac.jp/cgi-bin/hpcportal.en/index.cgi

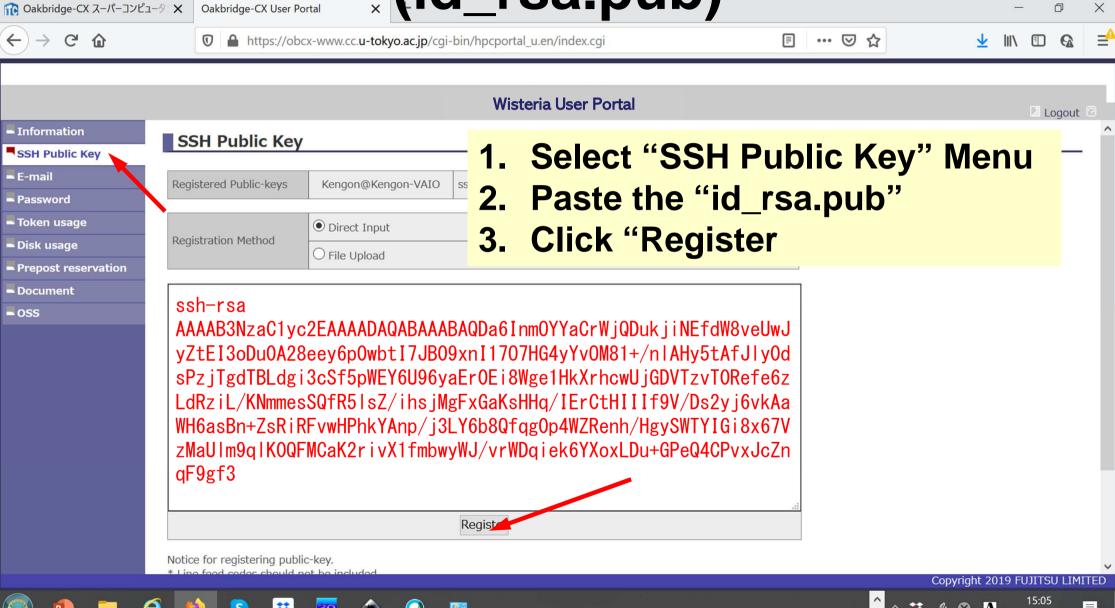


### 2 Changing Initial Password (2/3)

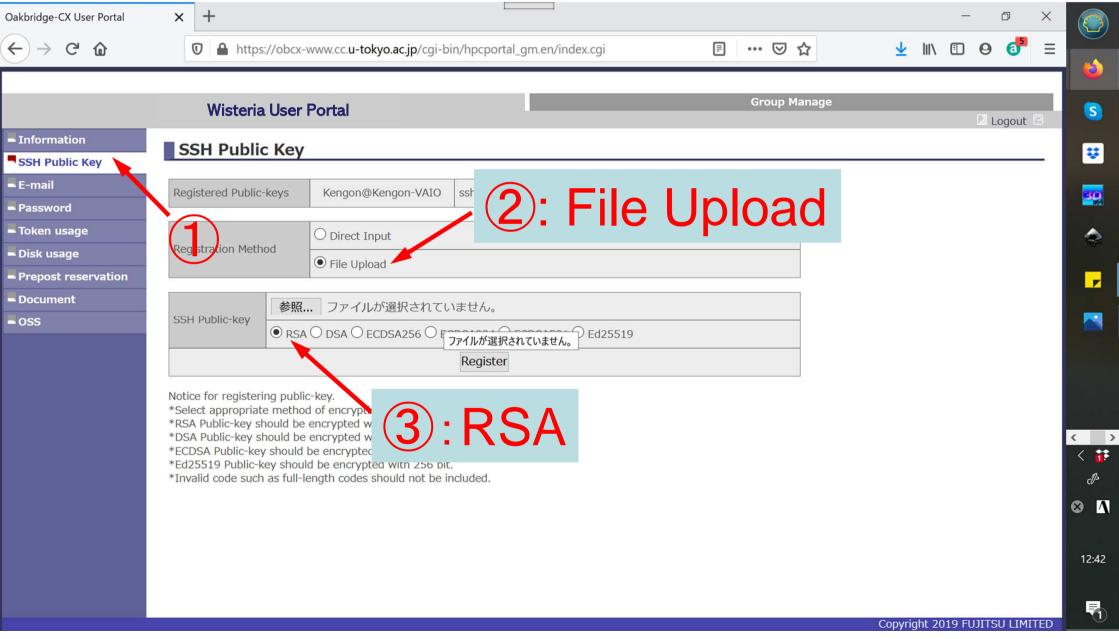


- ✓ at least eight characters in length
- ✓ should not contain three or more characters from current password
- ✓ should not be the same as the past 2 times.
- ✓ should contain all character types of lower case letters, upper case letters, arabic numbers, and special characters
- ✓ special characters can be used are as follow:
  blank, !, ", #, \$, %, &, ', (, ), \*, +, ,, -, ., /, :, ;, <, =, >, ?, @, [, ¥, ], ^, \_, `, {, |, }, ~,
- ✓ not a name or linux dictionary word
- √ do not contain multi-byte characters

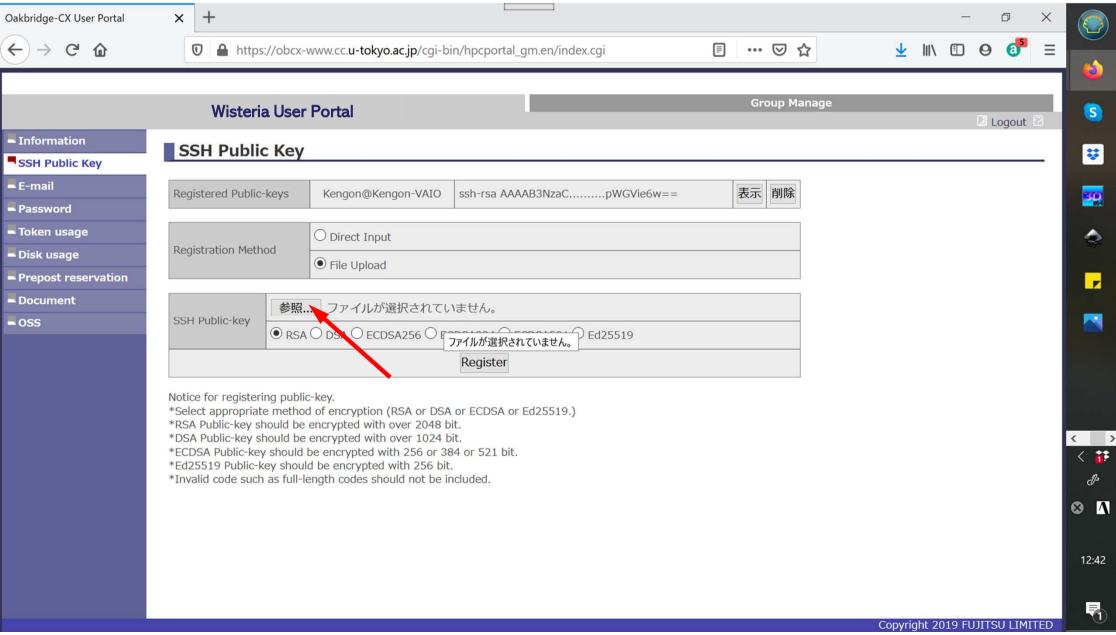
# (id\_rsa.pub) Registration of the Public Key (id\_rsa.pub)



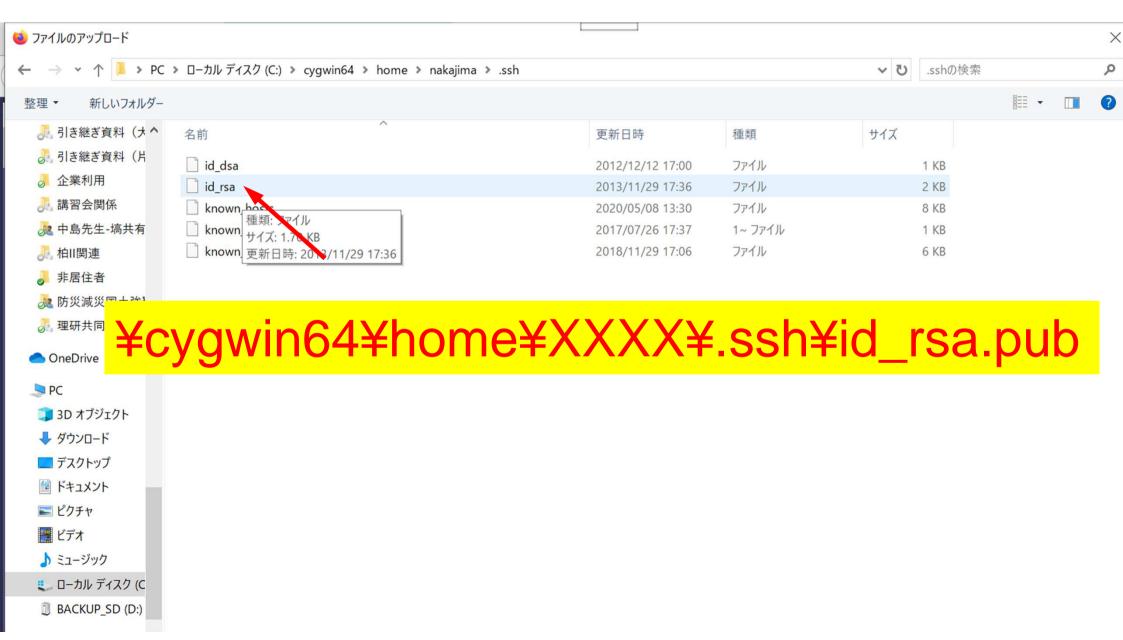
# (id\_rsa.pub): Direct Upload (1/4)



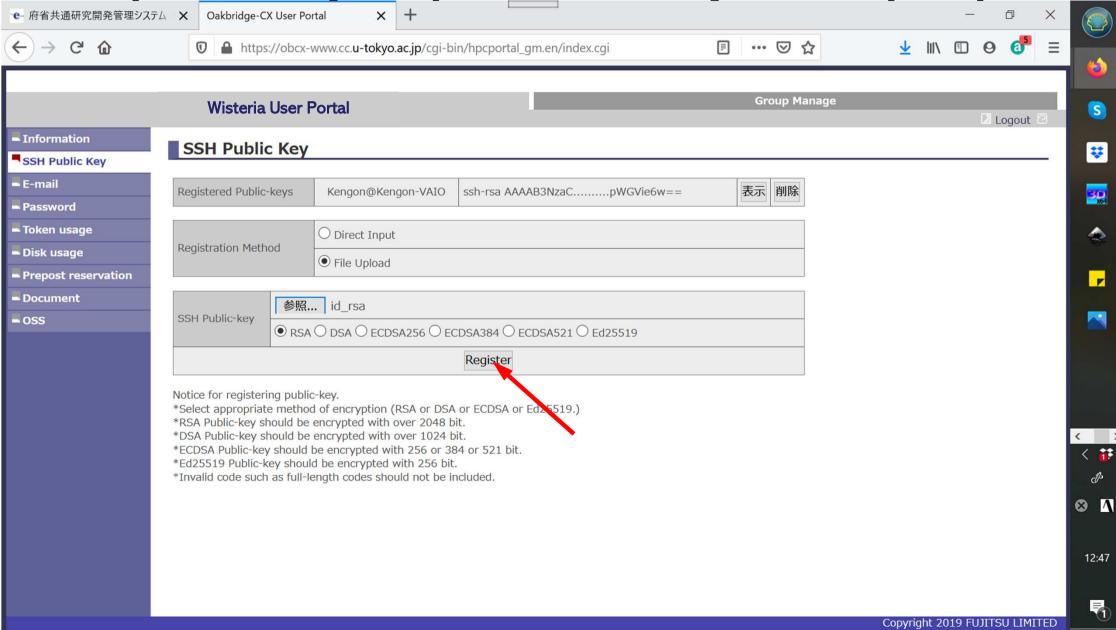
# 3 Registration of the Public Key (id\_rsa.pub): Direct Upload (2/4)



# 3 Registration of the Public Key (id\_rsa.pub): Direct Upload (3/4)



# (id\_rsa.pub): Direct Upload (4/4)



### 4 Login to Odyssey from PC (1/2) Initial

```
$ ssh t36XYZ@wisteria.cc.u-tokyo.ac.jp Return

The authenticity of host 'wisteria.cc.u-tokyo.ac.jp' can't be established.

ECDSA key fingerprint is SHA256:/XXXXX ...

Are you sure you want to continue connecting (yes/no/[fingerprint])? yes Return

Warning: Permanently added 'wisteria.cc.u-tokyo.ac.jp' to the list of known hosts.

Enter passphrase for key '/home/nakajima/.ssh/id_rsa': Your Passphrase Return
```

- 1. ssh t36XYZ@wisteria.cc.u-tokyo.ac.jp <Return>
- 2. yes <Return>
- 3. Your Passphrase <Return>

# 4 Login to Odyssey from PC (1/2) after 2<sup>nd</sup> Login

```
$ ssh t36XYZ@wisteria.cc.u-tokyo.ac.jp Return

Enter passphrase for key '/home/nakajima/.ssh/id_rsa': Your Passphrase Return
```

- 1. ssh t36XYZ@wisteria.cc.u-tokyo.ac.jp <Return>
- 2. Your Passphrase <Return>

#### 4 Login to Odyssey from PC (2/2)

Wisteria/BDEC-01 Information

Date: May. 14, 2021

Welcome to Wisteria/BDEC-01 system

```
* Operation Schedule
05/14(Fri) 10:00 - 05/28(Fri) 09:00 Normal Operation
05/24(Mon) 09:00 - 05/24(Mon) 17:00 HPC Challenge(Odyssey
05/28(Fri) 09:00 - 05/28(Fri) 22:00 System Maintenance
05/28(Fri) 22:00 - Normal Operation
```

Schedule of future maintenance etc. will be displayed

For more information about this service, see https://www.cc.u-tokyo.ac.jp/supercomputer/schedule.php

\* How to use Users Guide can be found at the User Portal (https://wisteria-www.cc.u-tokyo.ac.jp/).

If you have any questions, please refer to the following URL and contact us:

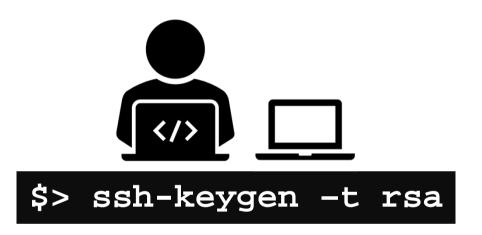
https://www.cc.u-tokyo.ac.jp/supports/contact/

Last login: Mon May 17 10:04:54 2021 from 133.11.59.131

[t00XYZ@wisteria06 ~]\$

Please DO NOT contact this URL if you have questions

## SSH Public Key Authentication (1/4) 1 Creating Keys on PC



id\_rsa

秘密鍵/Private Key

+ Passphrase

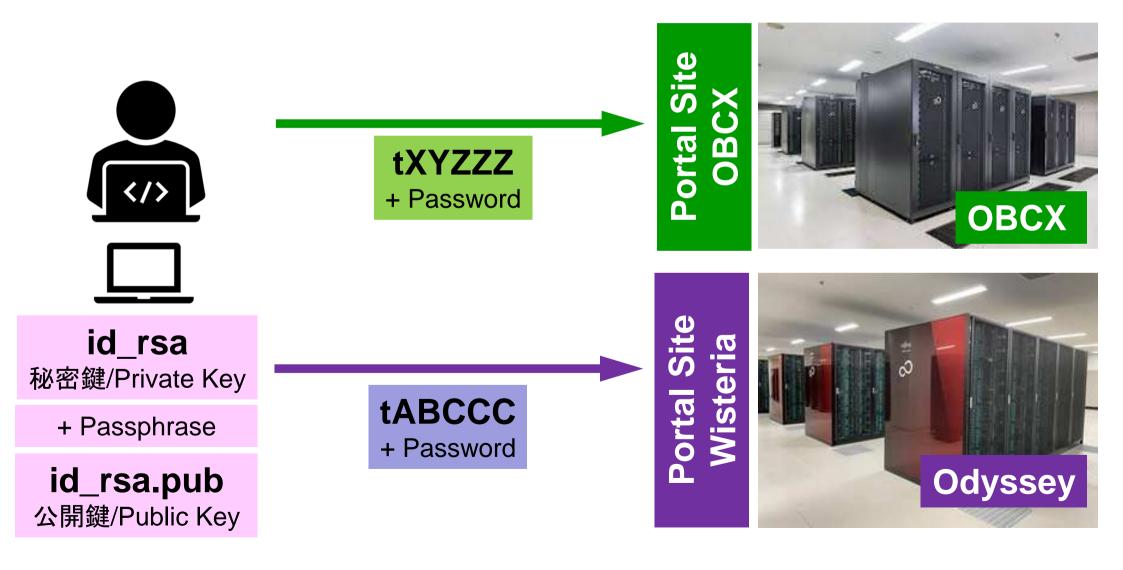
id\_rsa.pub

公開鍵/Public Key





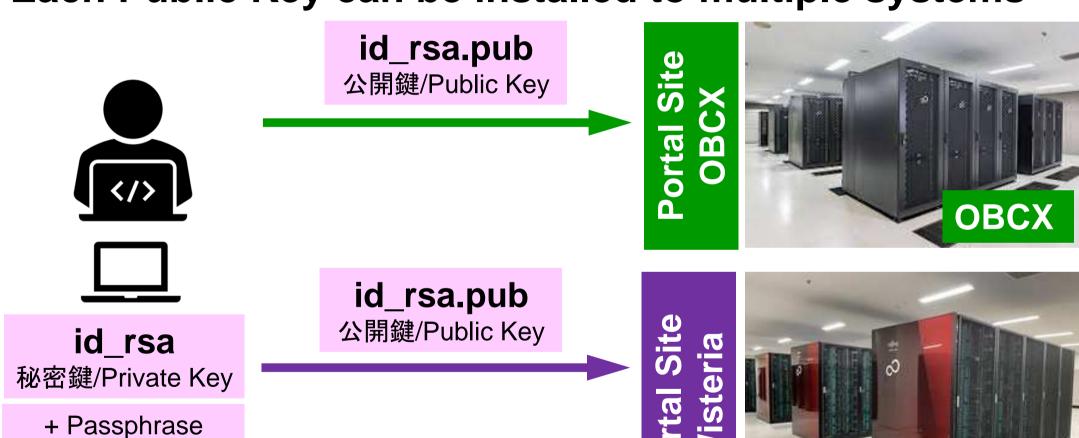
### SSH Public Key Authentication (2/4) 2 Accessing the Portal Site



Odyssey

## SSH Public Key Authentication (3/4) 3 Registration of the Public Key

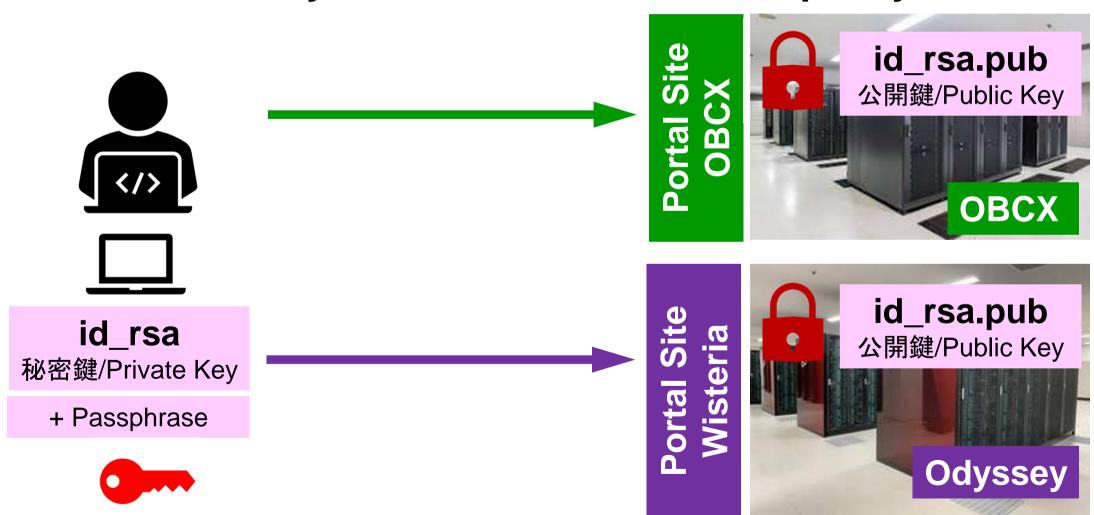
Each Public Key can be installed to multiple systems



### SSH Public Key Authentication (3/4)

3 Registration of the Public Key

Each Public Key can be installed to multiple systems



## SSH Public Key Authentication (4/4) 4 Login to Odyssey etc. from PC

Private Key (id\_rsa) + Passphrase



### SSH Public Key Authentication SSH公開鍵認証

SSH= Secure Shell

#### id\_rsa

- Private Key(秘密鍵) on Your PC
- Keep it confidential! (e.g. do not give it to others, do not copy, do not move etc.)

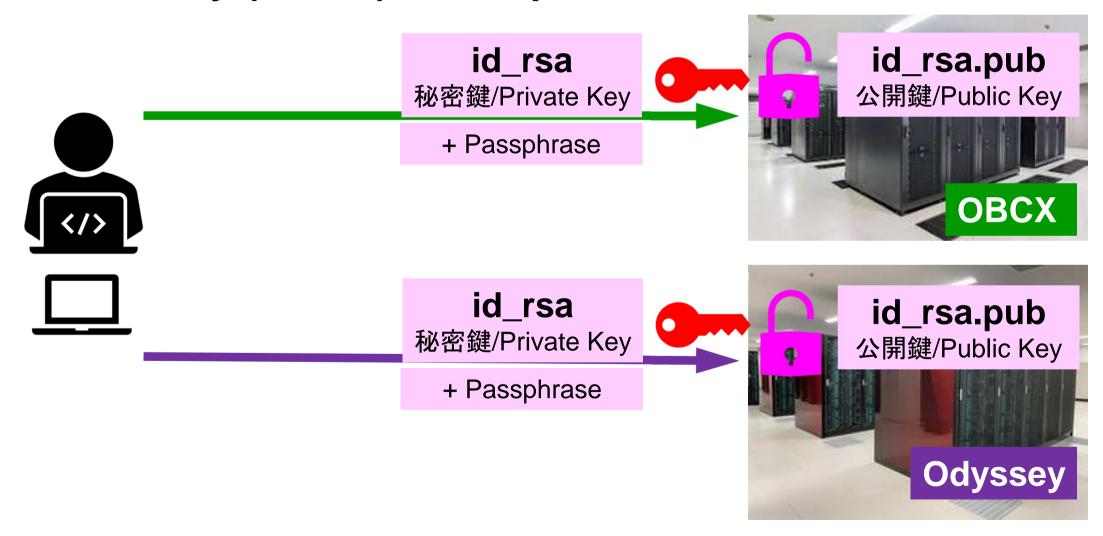
#### id\_rsa.pub

- Public Key(公開鍵) on Supercomputers
- You can copy, can send it to others via e-mail etc.
- If the info of the Private Key on your PC and Public Key on the supercomputer matches, you can login.
- If you have multiple PC's, please create individual set of (Private/Public) keys on each PC
  - You can register multiple Public Key's on Supercomputer

### SSH Public Key Authentication (4/4)

4 Login to Odyssey etc. from PC

Private Key (id\_rsa) + Passphrase



# If you use multiple PC's, you need to create a pair of keys (private/public) on EACH PC!!

\$> ssh-keygen -t rsa







id\_rsa 秘密鍵/Private Key

+ Passphrase

id\_rsa.pub 公開鍵/Public Key id\_rsa 秘密鍵/Private Key

+ Passphrase

id\_rsa.pub 公開鍵/Public Key

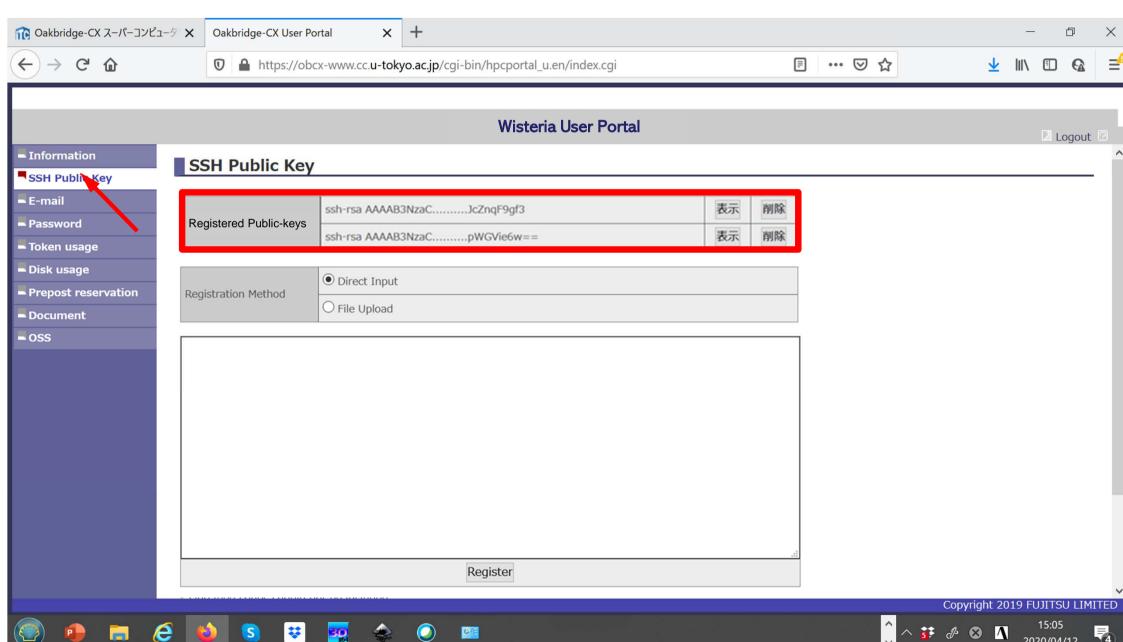




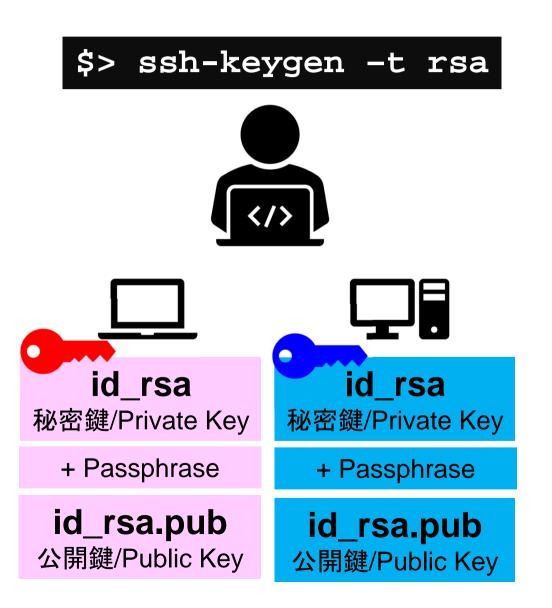
Portal Site Wisteria



#### Multiple public-keys can be registered!



#### Multiple public-keys can be registered!







- Supercomputers in ITC/U.Tokyo
  - Information Technology Center, The University of Tokyo
- Login to Odyssey
- After Login

#### Login to Wisteria from PC

```
$ ssh t36XYZ@wisteria.cc.u-tokyo.ac.jp
Enter passphrase for key '/home/nakajima/.ssh/id_rsa: Your Passphrase <Return↓>
```

- 1. ssh t36XYZ@wisteria.cc.u-tokyo.ac.jp <Return↓>
- 2. Your Passphrase <Return \ >

#### After Login ...

```
pwd
       <Return↓>
/home/t36XYZ
  cd /work/gt36/t36XYZ <Return \>
      <Return↓>
                      1. "/home/t36XYZ" is the default
/work/gt36/t36XYZ
                        login directory
                      2. Because capacity of /home is
       <Return↓>
  Cd
       <Return↓>
                        very small, please move to
                        "/work/gt36/t36XYZ"
/home/t36XYZ
                      3. You can go back to
                        /home/t36XYZ by typing "cd"
```

#### Copy: PC to Wisteria-Odyssey (W-O)

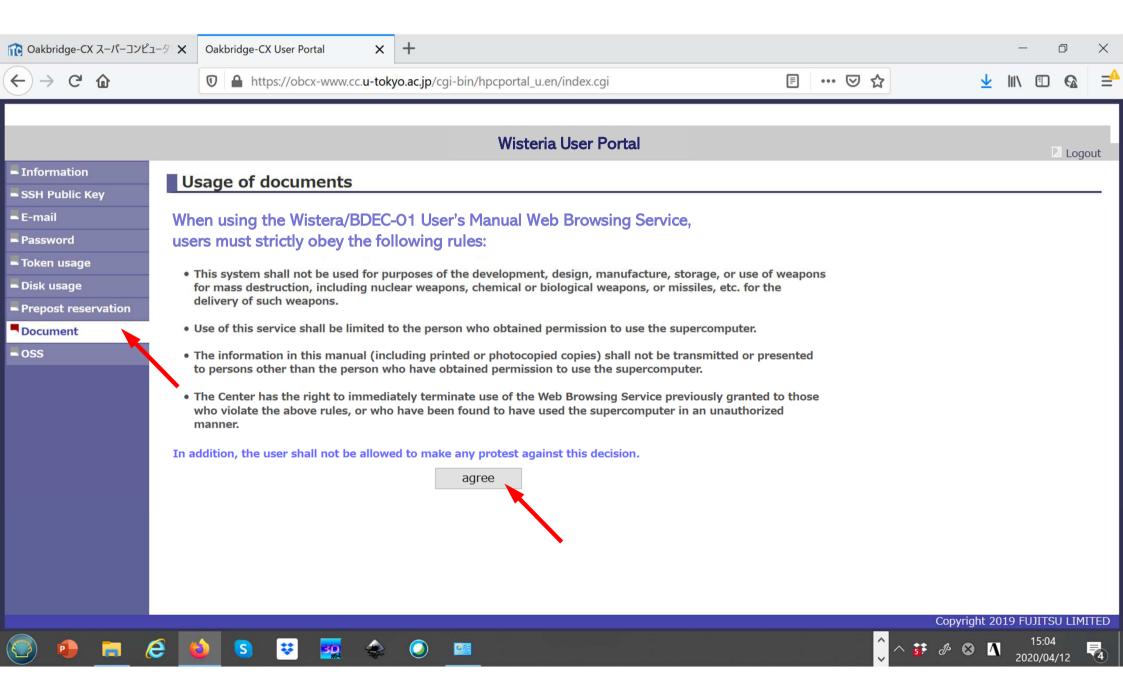
```
$ scp . /a. dat t36XYZ@wisteria.cc.u-tokyo.ac.jp: <Return↓>
 "a.dat" in the Current Directory of PC is copied to /home/t36XYZ on W-O
$ scp ./a.dat t36XYZ@wisteria.cc.u-tokyo.ac.jp:/work/gt36/t36XYZ/test/
 "a. dat" in the Current Directory of PC is copied to
/work/gt36/t36XYZ/test on W-0
$ scp -r ./testL t36XYZ@wisteria.cc.u-tokyo.ac.jp:
 "testL" directory in the Current Directory of PC and its contents are
copied to /home/t36XYZ on W-O
```

\$ scp -r ./testL t36XYZ@wisteria.cc.u-tokyo.ac.jp:/work/gt36/t36XYZ/test "testL" directory in the Current Directory of PC and its contents are copied to /work/gt36/t36XYZ/test on W-0

#### Copy: W-O to PC

```
$ scp t36XYZ@wisteria.cc.u-tokyo.ac.jp:~/a.dat ./
 "a.dat" on /home/t36XYZ on W-O is copied to the Current Directory of PC
$ scp t36XYZ@wisteria.cc.u-tokyo.ac.jp:/work/gt36/t36XYZ/test/a.dat ./
 "a. dat" on /work/gt36/t36XYZ/test on W-O is copied to the Current
Directory of PC
$ scp -r t36XYZ@wisteria.cc.u-tokyo.ac.jp:~/L1 ./
 "L1" directory in /home/t36XYZ on W-O and its contents are copied to
 "L1" directory in the Current Directory on PC
$ scp -r t36XYZ@wisteria.cc.u-tokyo.ac.jp:/work/gt36/t36XYZ/test/L1 ./
 "L1" directory in /work/gt36/t36XYZ/test on W-O and its contents are
copied to "L1" directory in the Current Directory on PC
```

#### Manuals on the Portal Site



### If you have any questions, please contact KN (Kengo Nakajima)

nakajima(at)cc.u-tokyo.ac.jp

Do not contact ITC support directly.

It is strictly prohibited to use the Wisteria/BDEC-01 system for purposes other than this class. You cannot use Aquarius (GPU part).