2017

JAIST Cloud Service User's Guide

RESEARCH CENTER FOR ADVANCED
COMPUTING INFRASTRUCTURE,

System overview

JAIST Cloud Service is a JAIST web service that makes it easy to create virtual machines. Depending on the function you demand, you can flexibly set performance. In addition, the created virtual machine can be automatically assigned a fixed IP address that can not only access from the campus network, but also can use administrator privileges.

Please do use it.

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2017.12.13

1．Login to the system

The address of JAIST Cloud Service is as follows.
https://vportal.jaist.ac.jp/vcac/org/JAIST/

When you access the system for the first time, the domain selection screen appears. Please select "ad.jaist.ac.jp" and proceed to the next step.
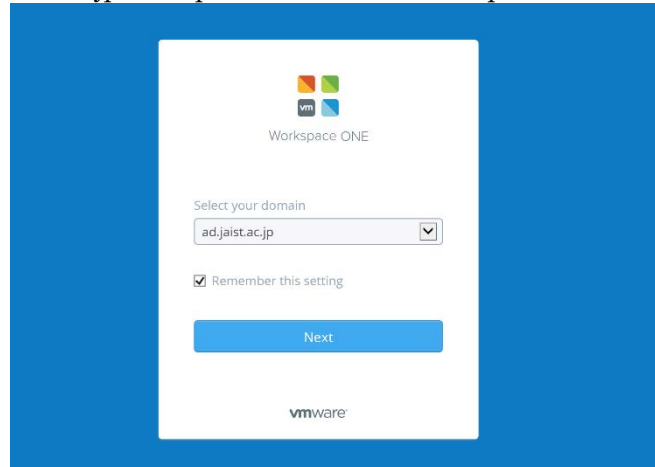

Figure 1.1 Domain selection screen

Next, enter your user name and password and login. Please enter the same user name and password as JAIST's web service (such as Web-Mail).
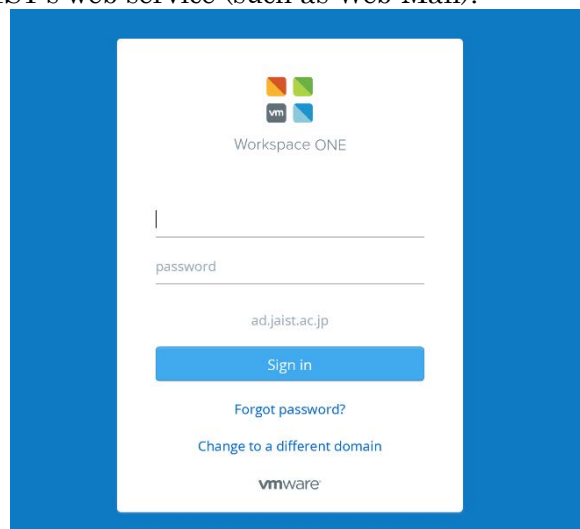

Figure 1.2 Login screen

When you log in, your homepage will be displayed. Interfaces such as calendar showing virtual machine's loan due date (freely usable expiration date) and virtual machine creation dialog are listed here.
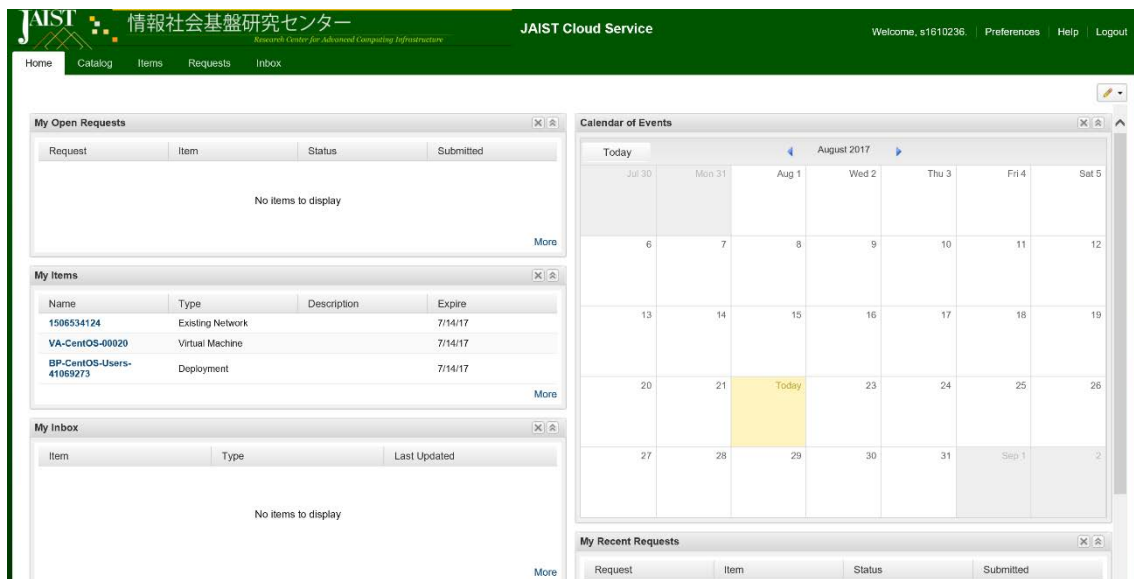
Figure 1.3 JAIST Cloud Service Home Screen

In this system, we guide how to create virtual machines with the concept of "borrowing (hereinafter referred to as" loaning "). In order to get the loan from the virtual machine, after selecting the desired virtual machine type from the "catalog" of the virtual machine, "apply" the loan. The virtual machine you applied and rented out will be displayed as an "item".

You can select the contents of the application, the list of items, browse the catalog of the virtual machine, etc. by selecting it from the tab on the upper left of the screen.
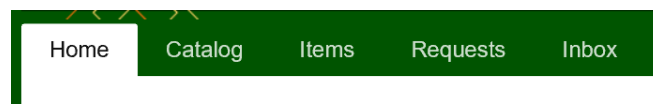

Figure 1.4 JAIST Cloud Service Features and Tab Menu

2．Creating a virtual machine

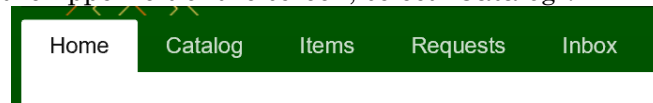From the tabs on the upper left of the screen, select "Catalog".

Figure 2.1 JAIST Cloud Service features and tab menu

In the catalog screen, information about virtual machines that can be created is displayed in a list. In the figure below, there is a catalog called "CentOS 7 Desktop", and you can create a virtual machine defined in this catalog. In the catalog name, the name of the virtual machine OS that can be created etc. is displayed, so please refer to it.

The catalogs named as "AWS" is using Amazon Web Service (EC2). Notice that, you don't need to pay the charge of use by yourself. It will be paid by JAIST.

For cost saving, please don't forget to shutdown the machine when it isn't in use.

Clicking on the "application" button in the displayed "CentOS 7 Desktop" will proceed to virtual machine creating label "New application".
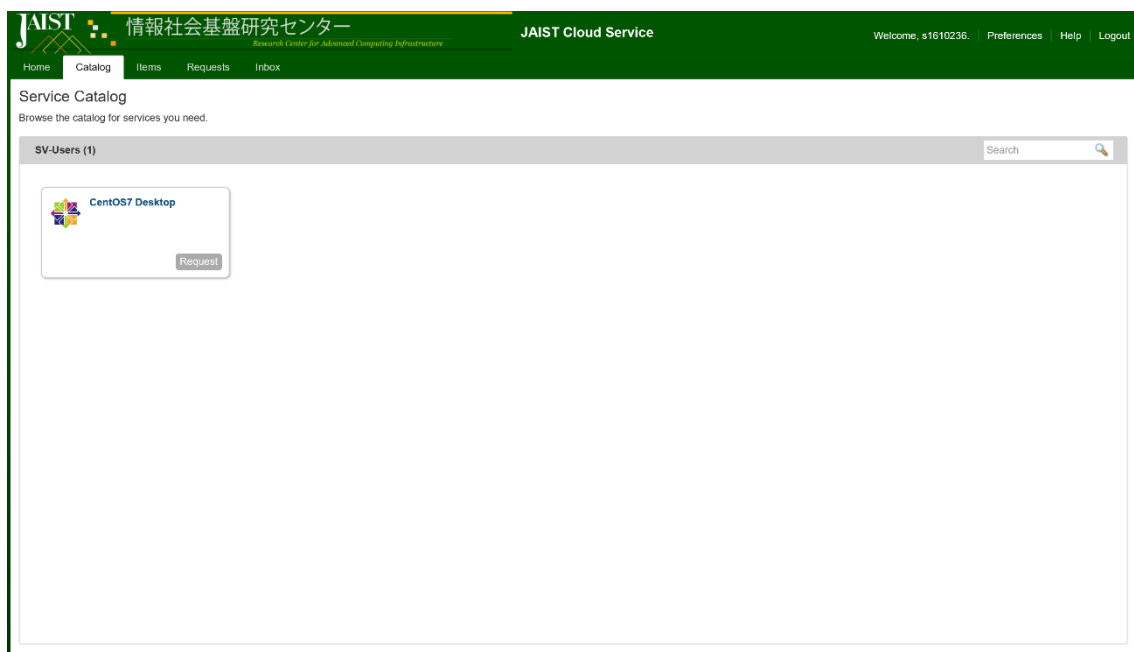
Figure 2.2 Service catalog list

On the new application screen, you can set the duration and specifications of the virtual machine you want to use.
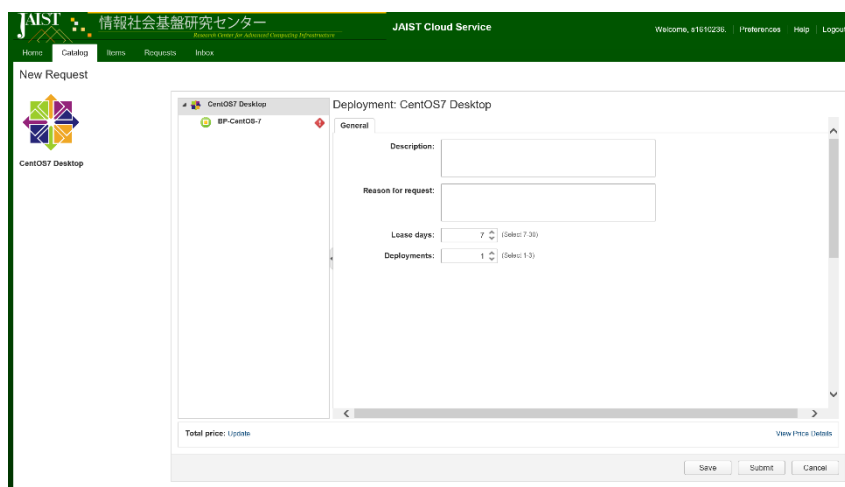

Figure 2.3 New application screen for virtual machine lending

You can set the details by clicking on the item in the list (shown below) in the center of the screen of the new application.
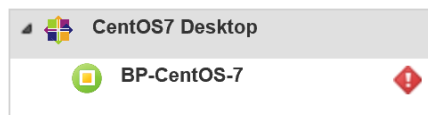

Figure 2.4 New application list and items

By clicking the icon, (or) of this item, you can set the description of the virtual machine and the period you want to use. The period you want to use the virtual

machine can be set by "lease days". While using the virtual machine, the lease period can be extended any number of times. However, for one extension request for lease, the maximum number of days for extension is 30 days from the extension application date.

Figure 2.5 Lease Days Setting Screen

After that, or By clicking the icon of the virtual machine you can set the specifications of the virtual machine.

Figure 2.6 Specification screen of the virtual machine to be lent out

When you use JAIST Private Cloud (Not AWS)., you must set the initial password. In the item called "InitialRootPassword", enter the character string to be used as the initial password. Please note that this password will be asking compulsorily to be changed later, so please set the password to be used only for installation. So do not set it as an important password that you commonly use after installation.

When all settings are completed, please click on the "Send" button at the bottom right of the screen to confirm the entries.

In addition, there is an item "total price" on the screen, the amount may be displayed, but this is only displaying the maintenance cost of the system, please use it for free. Creation and use of virtual machines are free and will not be charged. Please do not worry.

If the operation proceeds normally, you can check the processing status on the "Application" screen. The "application" screen can be selected from the tab on the upper left of the screen.

The list shows information on all the virtual machines you applied for creation in the past. The latest application will be displayed at the top.

Once the status of the item displayed in the list is "Succeeded", you can use the virtual machine.

Figure 2.7 Application list screen

3．Using created virtual machine

If you select "Item" in the tab on the upper left of the screen, a list of available virtual machines will be displayed.

Figure 3.1 Item list screen

Here、by clicking on the icon (or), you can browse the details of the created virtual machine. You can also manage the power of the virtual machine.
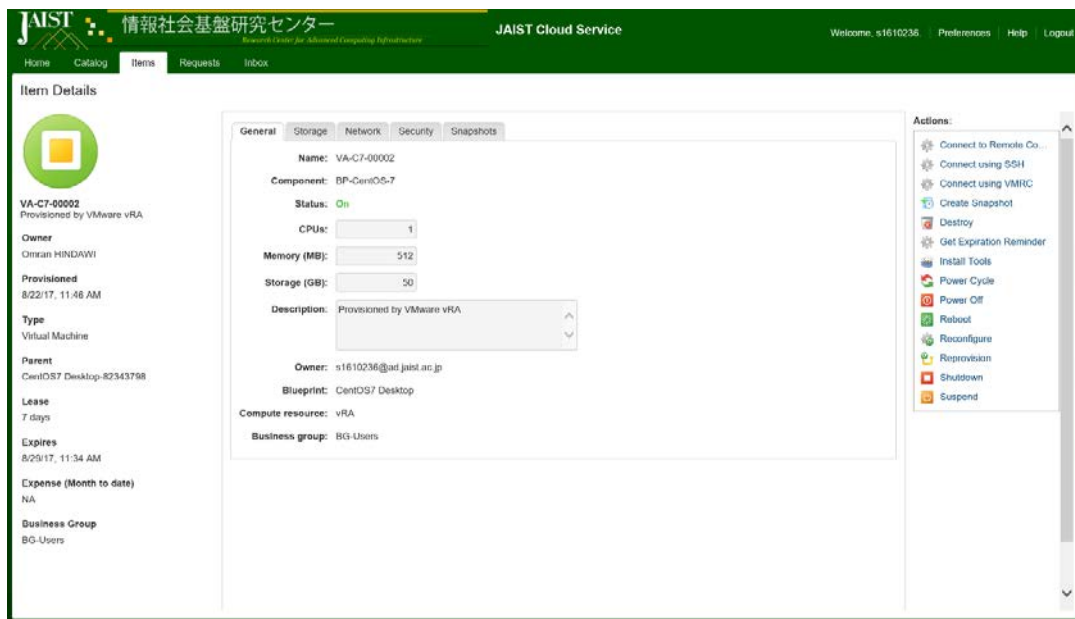
Figure 3.2 Item Detail Screen

On the right side of the screen there is a menu labeled "Action". Here you can command power management such as shutting down and restarting the virtual machine.
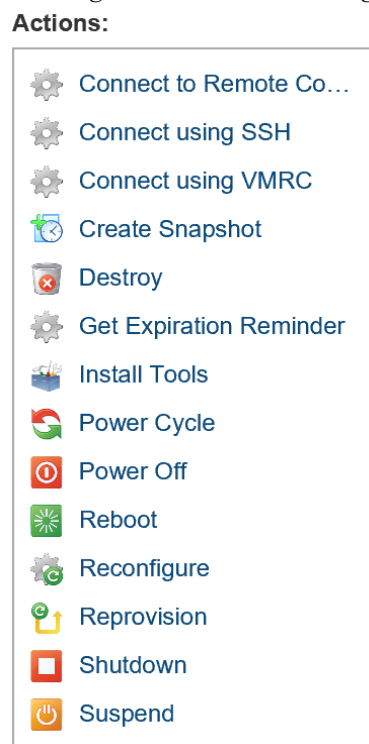

Figure 3.3 List of possible actions

In order to use the virtual machine, SSH connection is required. In order to connect with SSH, it is necessary to know the IP address. On the details screen of the item, you can know the IP address of the virtual machine by clicking the "Network" tab. In this example, it is "150.65.34.19".
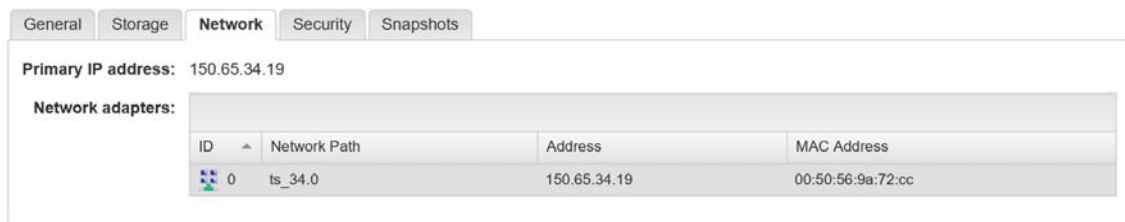
Figure 3.4 Network information of the virtual machine

4. SSH connection to virtual machine

Please connect to the IP address of the virtual machine with SSH. (VDI provided by Advanced Computing Research Center: Tera Term can be used in virtual desktop environment.)
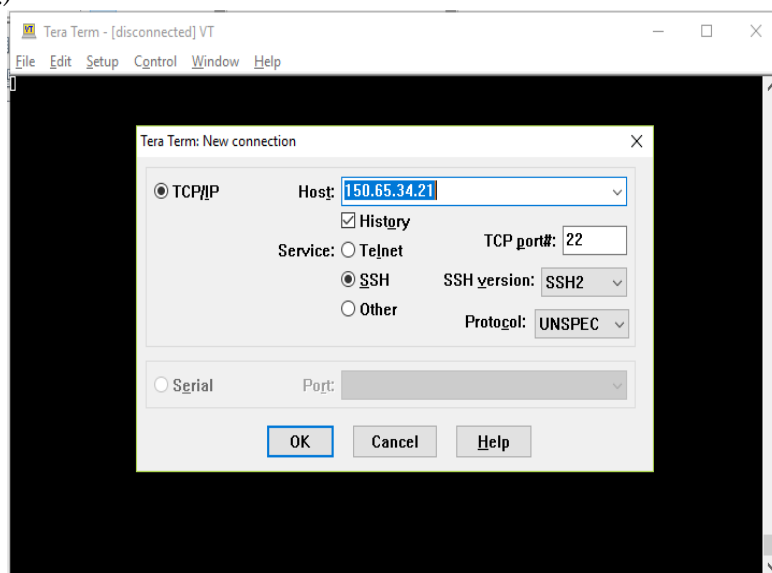

Figure 4.1 Tera Term: New connection

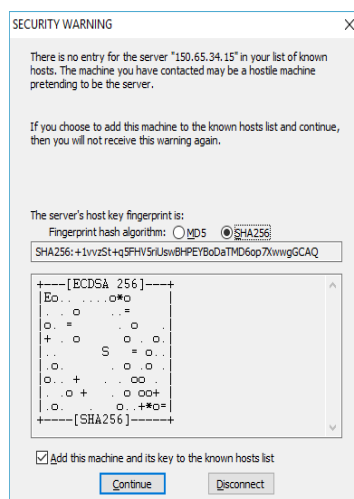When connecting for the first time, the dialog below will appear, click "continue"

Figure 4.2 Tera Term: "SECURITY WARNING" notification dialog upon connecting for the first time

4.1. Virtual Machine of JAIST Private Cloud

The initial username of the virtual machine is "jaist". Please login with the initial user name and the initial password set earlier. Please choose plain text authentication.
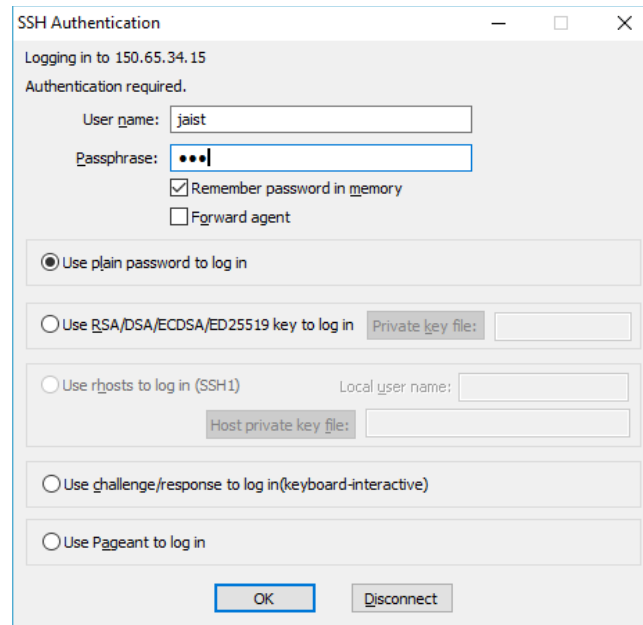

Figure 4.3　Tera Term "SSH Authentication" dialog

When logging in to the virtual machine you created for the first time, you will be prompted to change your password.
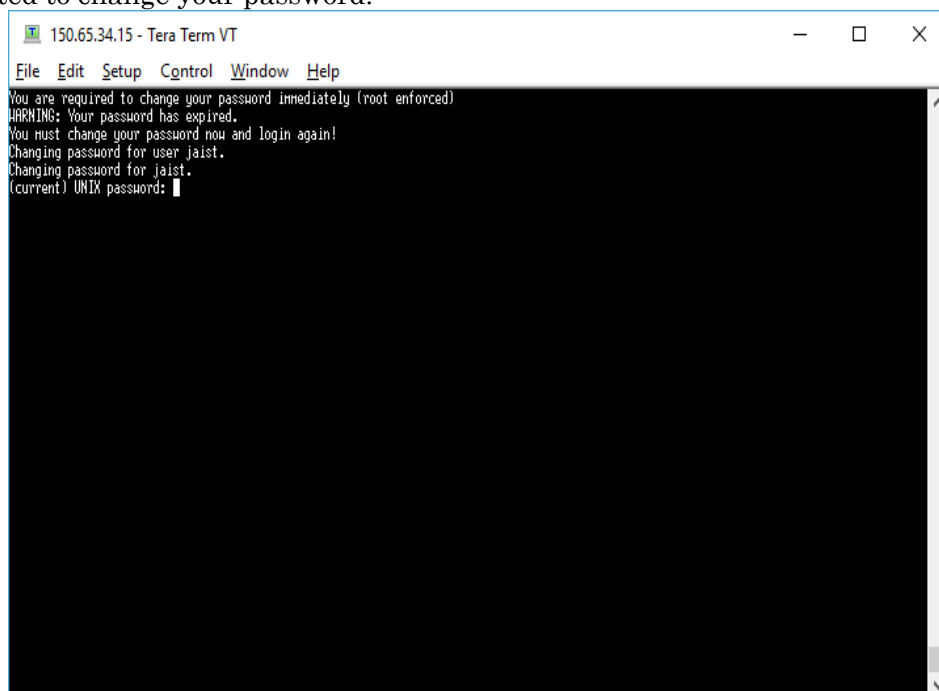

Figure 4.4　Password change prompt upon connecting for the first time

When you set the password, the connection will be closed at once. Please login again.
Please use the newly set password to login.

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4.2. Virtual Machine of AWS

Digital Certificate is required for SSH connection. Please download the certificate of the virtual machine from Action Menu (Figure 3.2)
Detail of the usage is:

From Windows:
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/putty.html

From Mac OS:
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AccessingInstancesLinux.html

5. Changing the lease duration

A virtual machine created by JAIST Cloud Service has a default expiration date. This expiration date is referred to as "lease" of the system and can be up to 30 days. You can change it after the virtual machine is created.

To change the expiration, first access the corresponding item. Select "Items" tab, then click "Deployments" to display the list of virtual machines.
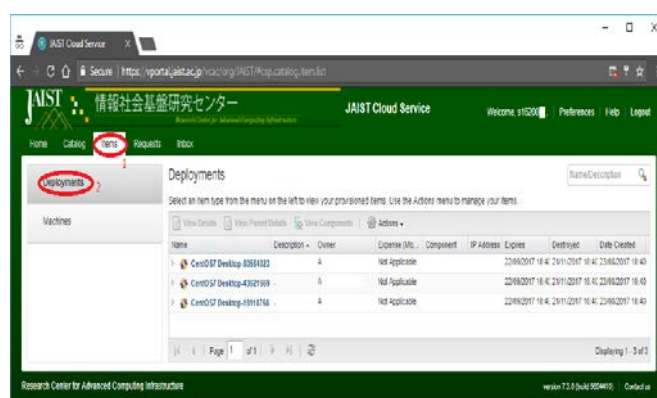
Figure 5.1 The tabs menu with the "Items" tab and "Deployments"

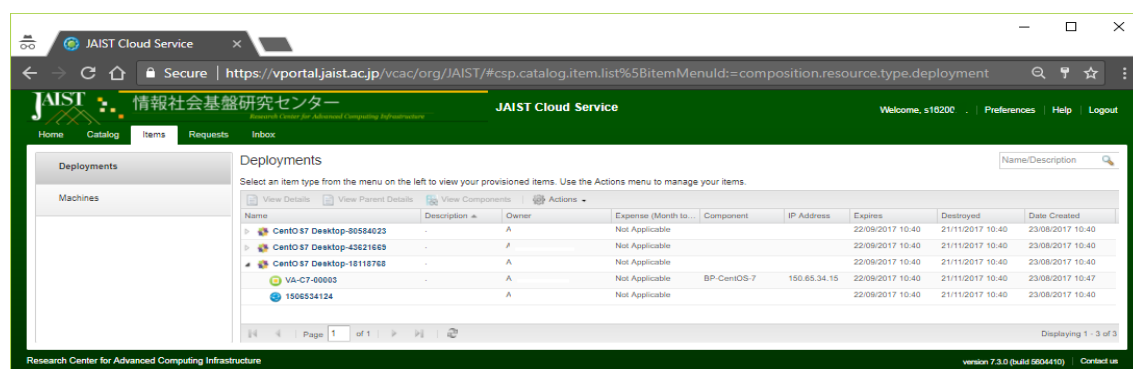When you expand an item its details get listed as shown below.

Figure 5.2 An example "Deployments" list of "Items"

The items displayed in the list are organized as shown below the mark. The virtual machine and the network are displayed under the corresponding item.

Figure 5.3 Example of one expanded virtual machine in the "Deployments" list of "Items"

Please click the icon to display the details of the item. You can change the lease by clicking "Change lease" in the "Actions" list on the right of the screen.
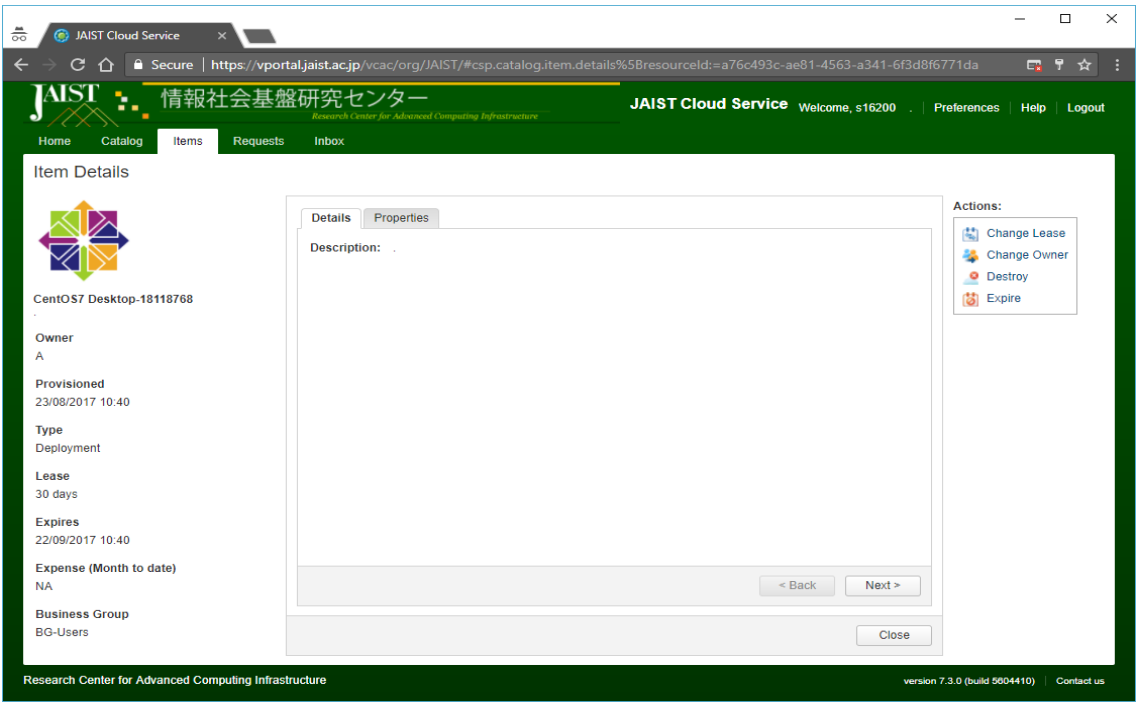

Figure 5.4 "Item Details" screen

6. Removing a virtual machine

Virtual machines that are no longer needed can be deleted regardless of the lease. First, display the list of items and display the list of virtual machines from the "Deployments" list.
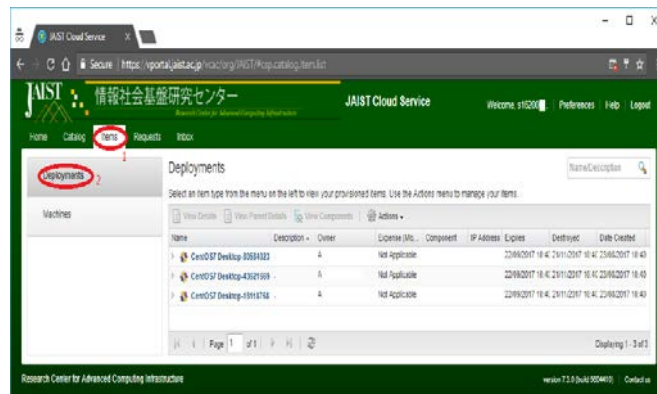
Figure 6.1 The tabs menu with the "Items" tab and "Deployments"

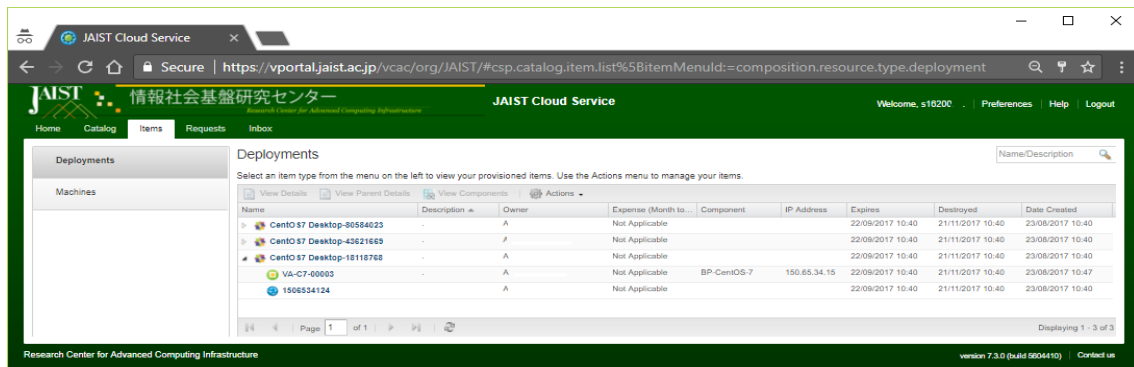When you click "Deployments", all of the items are listed as shown below.

Figure 6.2 An example "Deployments" list of "Items"

Click on the [icon] icon to display the details of the item. You can delete the virtual machine by clicking "Delete" in "Actions" list on the right side of the screen.
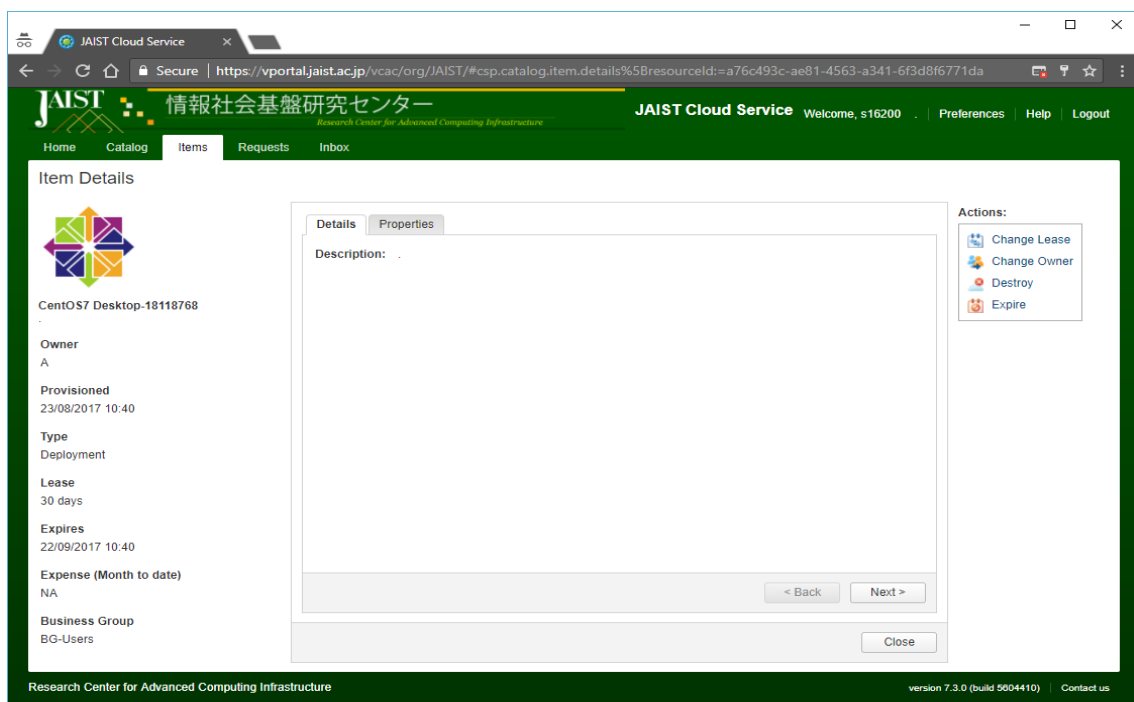
Figure 6.3 "Item Details" screen

When you click "Destory", the "New Request" for "Destroy" screen is displayed. To request the deletion of the virtual machine, please push the "submit" button to send the request.
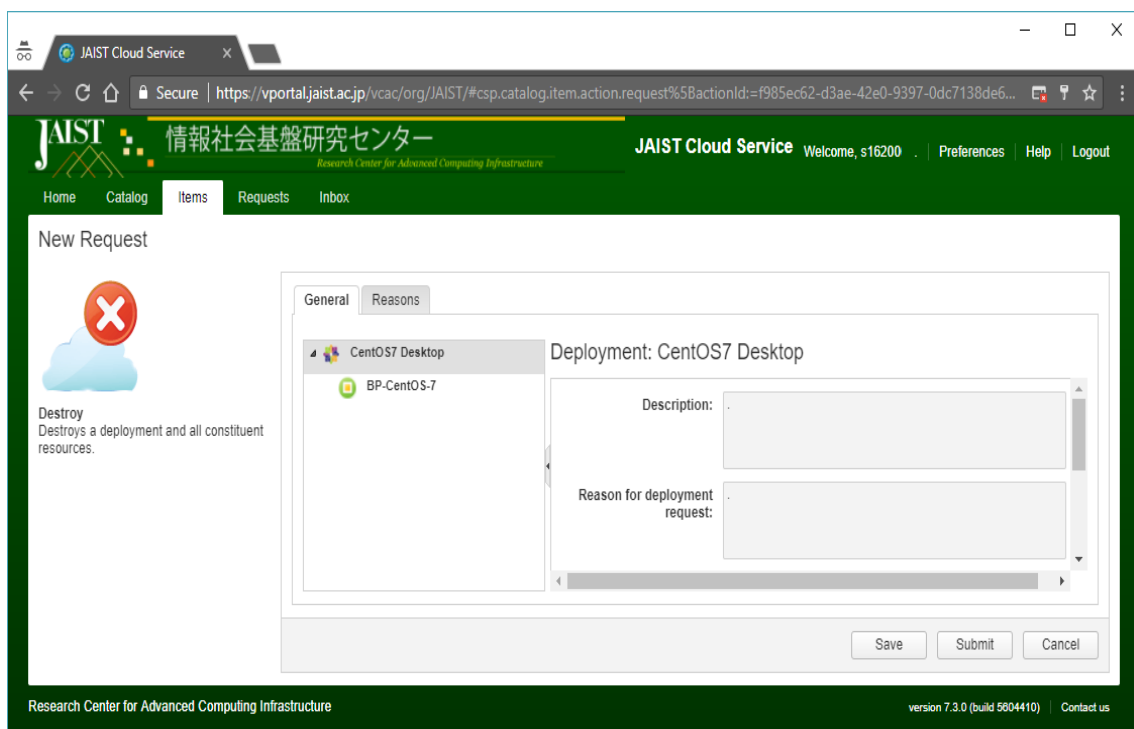

Figure 6.4 Request for deletion screen

When the request is sent successfully, a confirmation dialog will be displayed.

Figure 6.5 Deletion request submitting confirmation

You can check the processing status of the requested deletion in the "Requests" screen. Note that processing takes some time. When the deletion of the virtual machine is completed, the status will be "Successful".
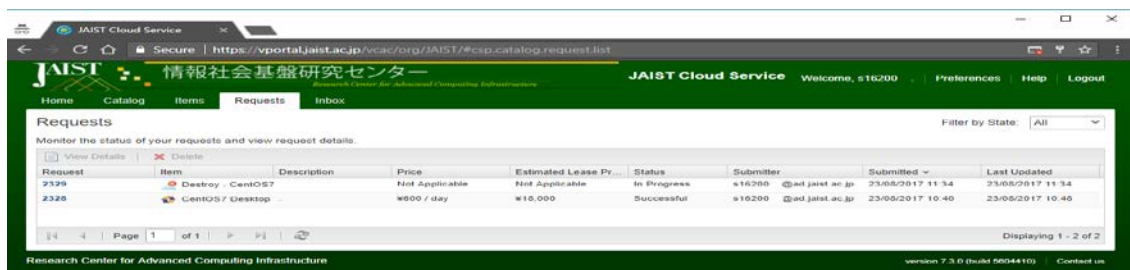

Figure 6.6 Example of the "Requests" screen

7. Restoring a virtual machine

After the lease expiration, a virtual machine can be restored within two months.

The restoration of the virtual machine is handled by applying for change of the lease time. First, please expand the item.
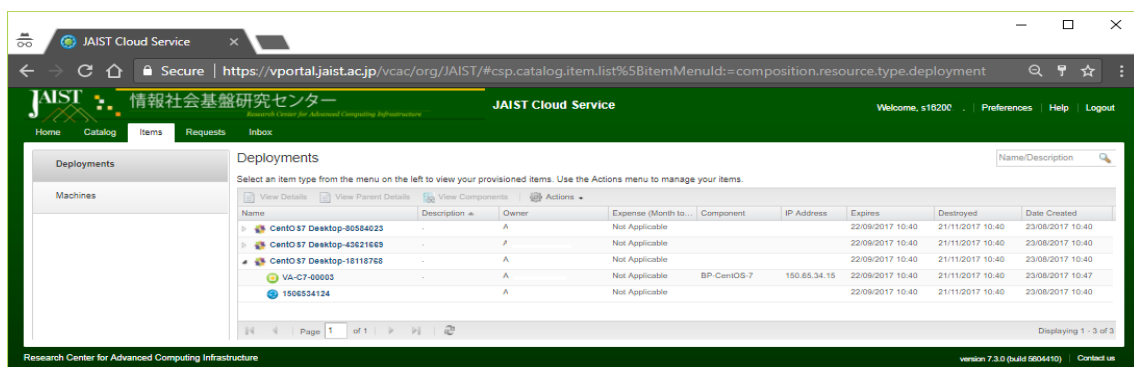

Figure 7.1 An example "Deployments" list of "Items"

Next, choose the details of the virtual machine you want to restore, and click "Change Lease" from the "Actions" list. Please set the desired expiration of the lease in the "Change Lease" dialog.
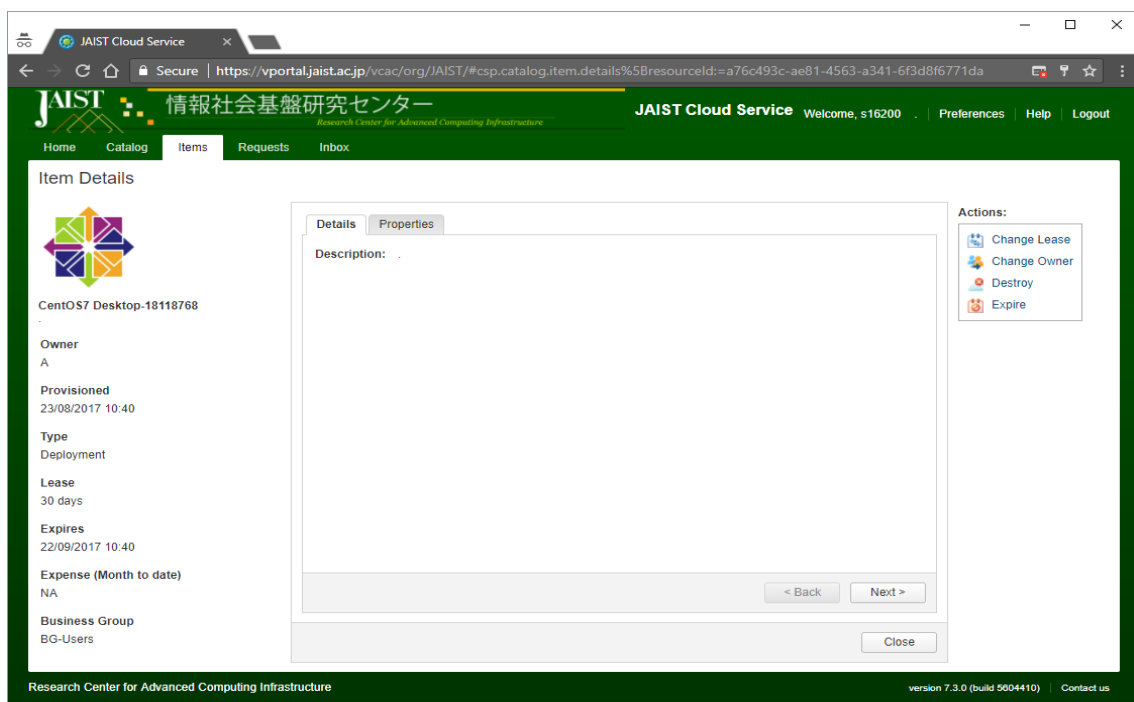
Figure 7.2 "Item Details" screen

Figure 7.3 "Changing Lease" dialog

After requesting the lease change, you can check the processing in the "Requests" screen. When the status changes to "Successful", the virtual machine can be used again.
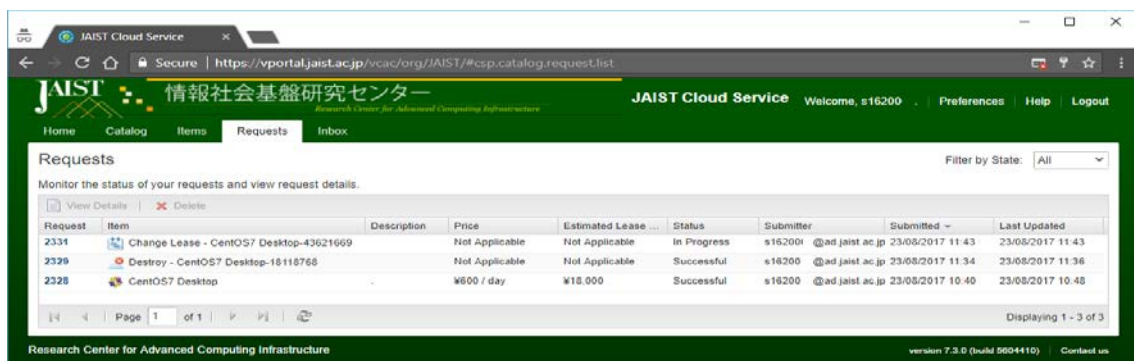

Figure 7.4 Example of the "Requests" screen

The virtual machine can only be restored within 2 months after the lease. Please note that after 2 months, the virtual machine will be deleted permanently.

8. **root** privileges and password

For the virtual machines provided by this service, root privilege can be used. To use the root privilege, please use the sudo command.
The root user's password can be changed by using sudo command and passwd command. For details, refer to the example of the command below.

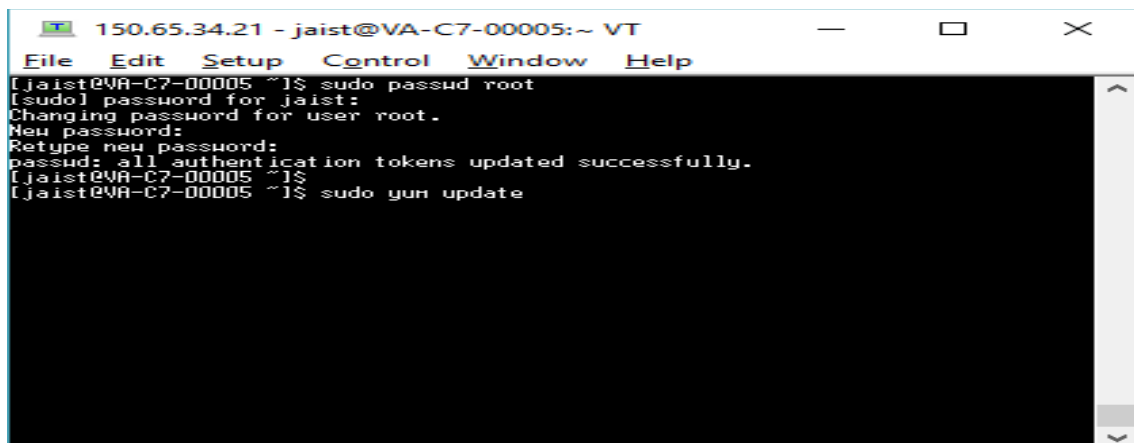【Example 1】To change "**root**" password
```
$ sudo passwd root
```

【Example 2】To execute commands that require root privileges
```
$ sudo [command]
```

To update packages using yum
```
$ sudo yum update
```


Figure 8.1 Example commands

9. Accessing the virtual machines remotely

To use a remote console, first display details of the item from the "Item Details" screen and click "Connect to Remote Console" from the the "Actions" menu.
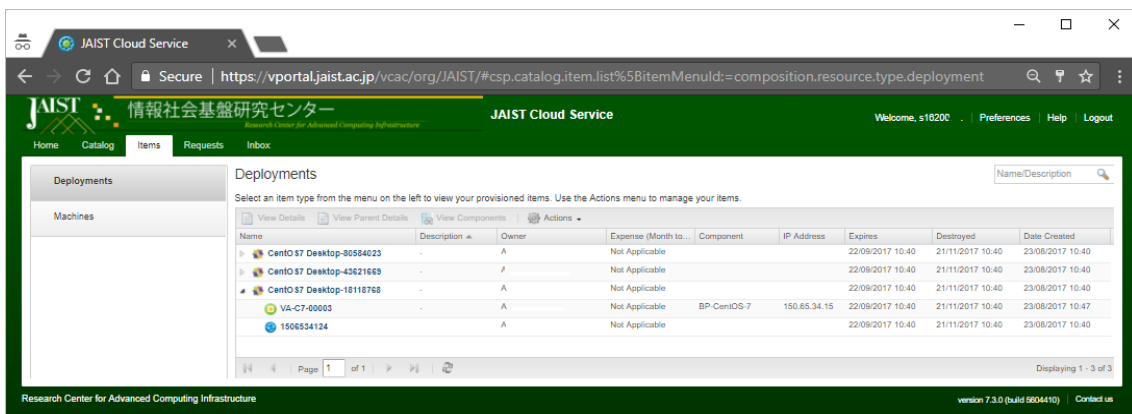
Figure 9.1 An example "Deployments" list of "Items"
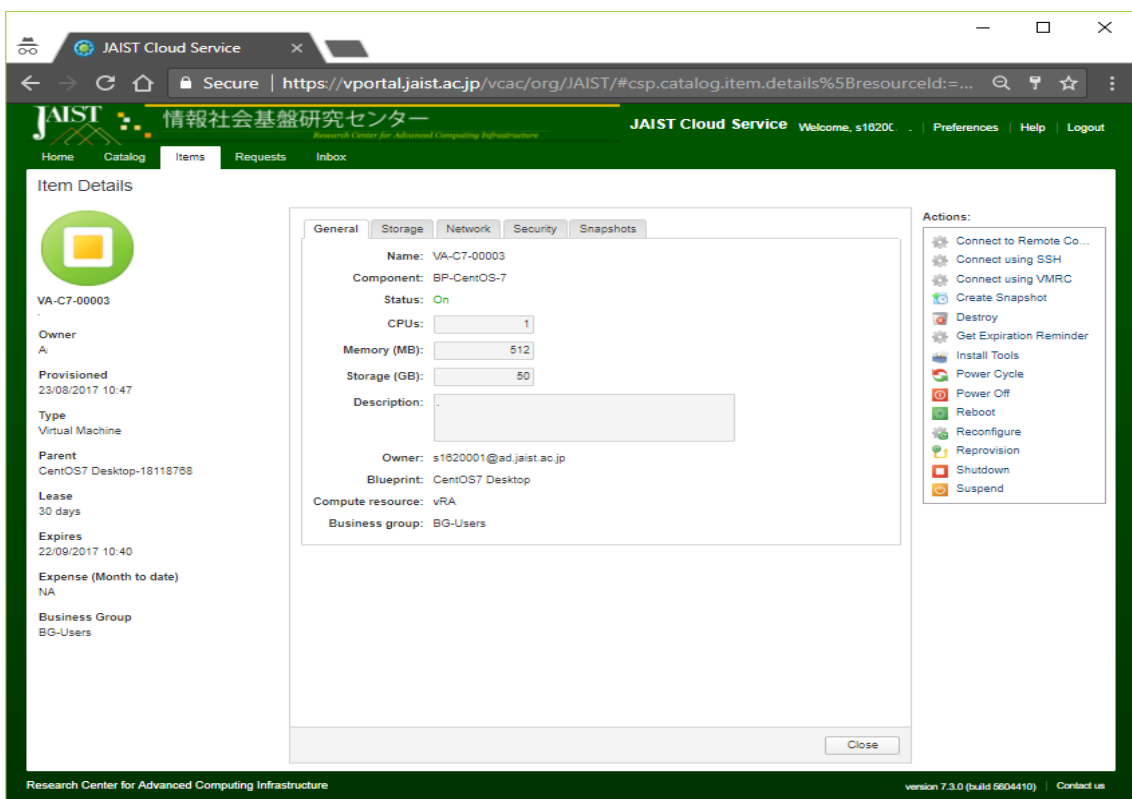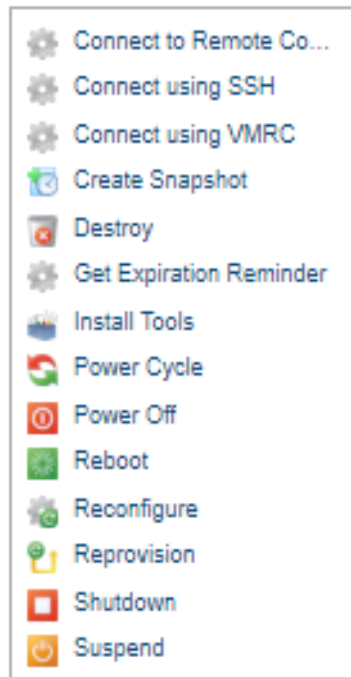

Figure 9.2 "Item Details" screen

Figure 9.3 "Actions" menu list

When you click "Connect to Remote Console" link, the remote console starts up in a separate tab/window.
Make sure you enable popups for this page to get the new tab/window.
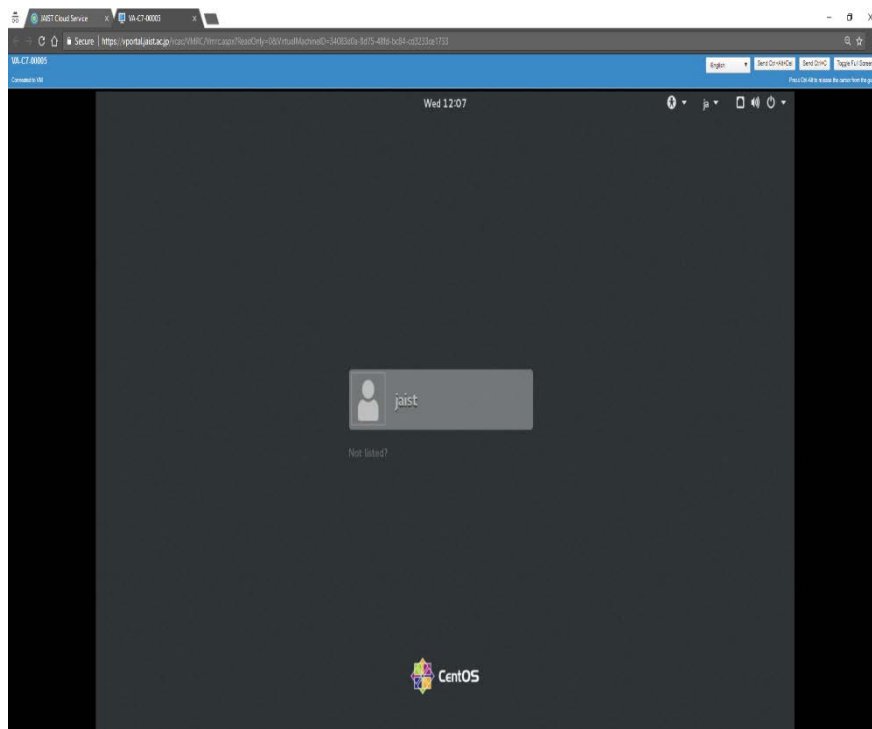

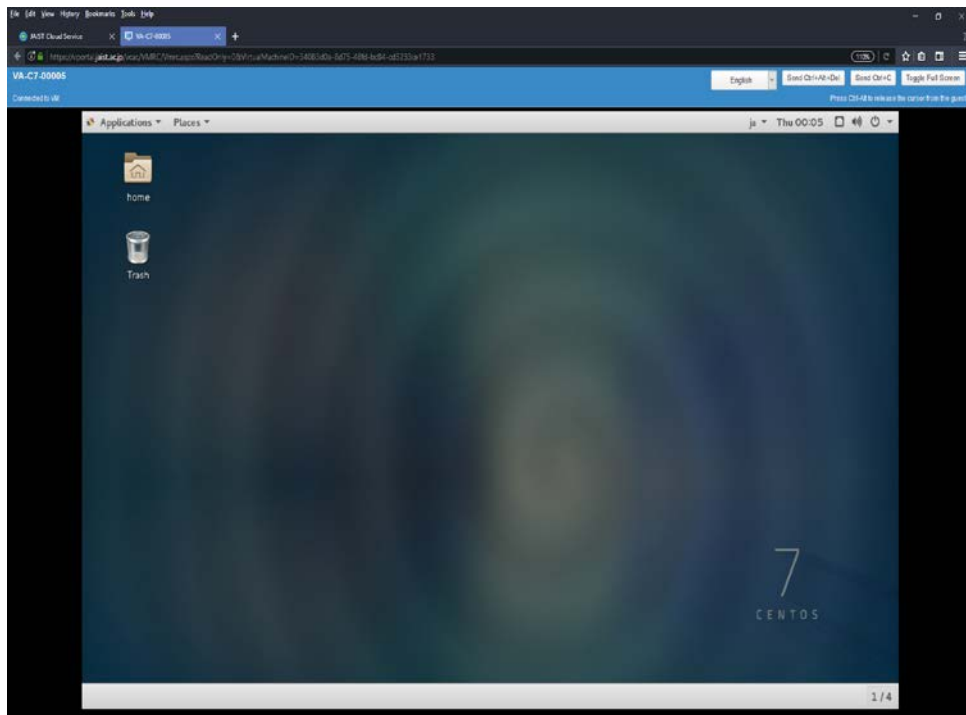Figure 9.4 Remote console login to the virtual machine

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Figure 9.5   Remote console connection to the virtual machine desktop

Login   to the remote console of the virtual machine using the username and password made before. After login, the desktop is displayed and can be used just as any normal machine.

When you connect remotely for the first time, a license confirmation screen may be displayed. When you accept the license, the GUI login screen will be displayed, please follow the steps above.

If the desktop is not shown, try changing the browser zooming factor.