

An abstract 3D graphic at the top of the page features several rectangular blocks of varying sizes and orientations, some in white, some in grey, and some in red. They appear to be floating or arranged in a grid-like pattern against a light background.

FUJITSU Cloud Service K5 IaaS Service Portal User Guide

Version 1.4
FUJITSU LIMITED

All Rights Reserved, Copyright FUJITSU LIMITED 2015-2016

Preface

Purpose of This Manual

This manual describes procedure for using the features that are provided by FUJITSU Cloud Service K5 IaaS.



Service Portal provides a subset of the main features that are provided by K5. In order to

Tip use the full set of features please use REST API

Recommend the following related manuals for reference :

- K5 Portal User Guide
- IaaS Features Handbook
- IaaS API User Guide
- IaaS API Reference
 - Foundation Service
 - Network
 - Application Platform Service
 - Management Administration
 - Contract Management

Abbreviations

Table 1: Name of product described as follows

Name of the Product	Abbreviation	
FUJITSU Cloud Service K5 IaaS	K5 IaaS	
Microsoft® Windows Server® 2012 SE R2	Windows 2012 R2	
Microsoft® Windows Server® 2008 SE R2	Windows 2008 R2	Windows
Microsoft® Windows Server® 2008 EE R2	Windows 2008 R2	
Red Hat® Enterprise Linux® 6.5 (for Intel64)	RHEL6.5	Linux
Community Enterprise Operating System 6.5	CentOS 6.5	CentOS
Community Enterprise Operating System 7.2	CentOS 7.2	
Red Hat Update Infrastructure	RHUI	
Windows Server Update Services	WSUS	
VMware® vSphere®	VMware vSphere	VMware
VMware® ESX®	ESX	
VMware® ESXi™	ESXi	
VMware® vCenter Server™	vCenter Server	
VMware® vSphere® Client	vSphere Client	
VMware Tools™	VMware Tools	

Trademark

- Microsoft, Windows, Windows Server, and the names of other Microsoft products are either registered trademarks or trademarks of Microsoft Corporation of United States and/or other countries.
- Oracle and Java are registered trademarks of Oracle and/or its affiliates.
- Xeon is a trademark of Intel Corporation of U.S. and/or other countries.
- Linux[®] is a registered trademark of Linus Torvalds of United States and other countries.
- Red Hat and Red Hat Enterprise Linux are registered trademarks of Red Hat, Inc. of U.S. and other countries where this registered.
- Ubuntu is a registered trademark of Canonical Ltd.
- OpenStack is a registered trademark of OpenStack, LLC of the United States.
- VMware and VMware products are registered trademarks of VMware Inc. of United States of America and /or other countries.
- SAP and SAP logo, SAP R/3, mySAP.com, mySAP Business Suite and other SAP products are registered trademarks of SAP AG of Germany and/or other countries.
- All other company names and product names are trademarks or registered trademarks of their respective owners.

It should be noted that trademark symbol ([™] or [®]) which is appended to the system names or product names of this document are omitted.

Export restrictions

Export/release of this document to third party may require necessary procedures in accordance with the regulations of resident country and/or US export control laws therefore all the necessary steps must be taken.

Notice

- Information in this document may be subject to change without prior notice.
- No part of the content of this document can be reproduced without written permission of Fujitsu Limited.
- Fujitsu assumes no responsibility for infringement of any patent rights or other rights of third parties arising from the use of information in this document.

Revision History

Version	Date updated on	Section	Overview
1.2	29th February, 2016	<i>Creating a Network and Subnet</i> on page 26	Modified explanation
1.3	1st April, 2016	User Registration User creation Display of previous usage fee (fixed amount)	Associated with K5 portal display, Function transfer
1.4	19th May, 2016	Addition to Multi region usage procedure.	

Contents

Part 1: Preface.....	1
1.1 Points to Note.....	2
1.1.1 Operation Environment.....	2
1.1.2 Cookies Settings Confirmation.....	2
Part 2: Assigning a Role to User.....	5
2.1 Assign an Administrator Role as per Group Registration.....	6
2.1.1 User Group Registration.....	6
2.2 Assigning a specific Role.....	8
2.2.1 Assign Roles for a Specific Project.....	8
Part 3: Creating a Group.....	10
3.1 Creating a Group That Is Granted a Role for a Specific Project..	11
3.1.1 Creating a Group for a Specific Project granted with the System Owner role.....	11
3.2 Creating a Group That Is Granted a Role for Multiple Projects..	14
3.2.1 Creating a Group for Multiple Projects granted with System Owner role.....	14
3.2.2 Grant and Verify the Group Role.....	15
Part 4: Utilization of Multi-region.....	17
4.1 Start Region Utilization.....	18
4.1.1 Start Region Utilization.....	18
4.1.2 Connect to the Utilized Region.....	20
Part 5: Creating a Virtual System.....	23
5.1 Building a Virtual Network.....	24
5.1.1 Creating a Virtual Router.....	24
5.1.2 Connecting a Virtual Router to an External Network.....	25
5.1.3 Creating a Network and Subnet.....	26
5.1.4 Connecting Virtual Router to Virtual Network.....	29
5.1.5 Creating a Key Pair.....	30
5.1.6 Acquiring a Global IP Address.....	32
5.1.7 Creating a Security Group.....	34
5.1.8 Setting Rules for a Security Group.....	35
5.2 Creating a Virtual Server.....	38
5.2.1 Creating a Virtual Server.....	38
5.2.2 Assigning a Global IP to the Virtual Server.....	41
5.3 Creating a Load Balancer.....	43
5.3.1 Creating a Security Group for the Load Balancer.....	43

5.3.2 Creating a Security Group Rule for the Load Balancer.....	44
5.3.3 Creating a Load Balancer.....	46
5.3.4 Enabling the Health Check Function of the Load Balancer.....	49
5.3.5 Adding a Virtual Server to which the Workload is Distributed by the Load Balancer...50	
5.4 Using a Template.....	53
5.4.1 Creating a Stack and Displaying the Stack Details.....	53
5.4.2 Editing a Stack.....	55
5.4.3 Deleting a Stack.....	56
Part 6: Operating a Virtual System.....	58
6.1 Connecting to a Virtual Server.....	59
6.1.1 Logging in to the Virtual Server via SSH.....	59
6.2 Deleting a Virtual Server.....	60
6.2.1 Deleting a Virtual Server.....	60
6.3 Monitoring Service Basics.....	63
6.3.1 Creating an Alarm and Displaying the Details.....	63
6.3.2 Displaying Monitored Items and Statistics of the Sample Data.....	65
6.3.3 Creating a Schedule.....	67
6.3.4 Deleting a Schedule.....	69
Part 7: Using the Management Functions.....	71
7.1 Displaying Usage Charges.....	72
7.1.1 Displaying a Provisional Usage Charge.....	72

Part 1: Preface

Topics:

- *Points to Note*

1.1 Points to Note

1.1.1 Operation Environment

This section describes the operation environment of Service Portal.

Service Portal works on the following operating systems and browsers.

Table 2: Operating Environment

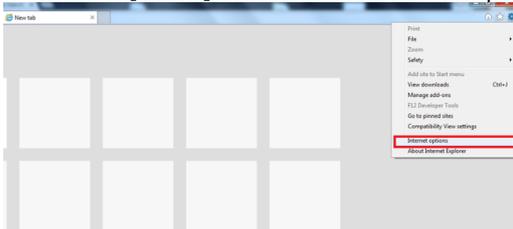
Type	Supported Version
Operating system (OS)	<ul style="list-style-type: none">Windows 7/8/8.1
Browser	<ul style="list-style-type: none">Microsoft Internet Explorer 11

1.1.2 Cookies Settings Confirmation

In order to use the Service Portal, you need to enable your browser's cookies.

Procedure

1. From the [Tools] button of Internet Explorer, click on [Internet Options] menu.



2. Click on [Privacy] button, check the internet Zone setting if its on [medium] or not. In case it is not, then please set it on [Medium].

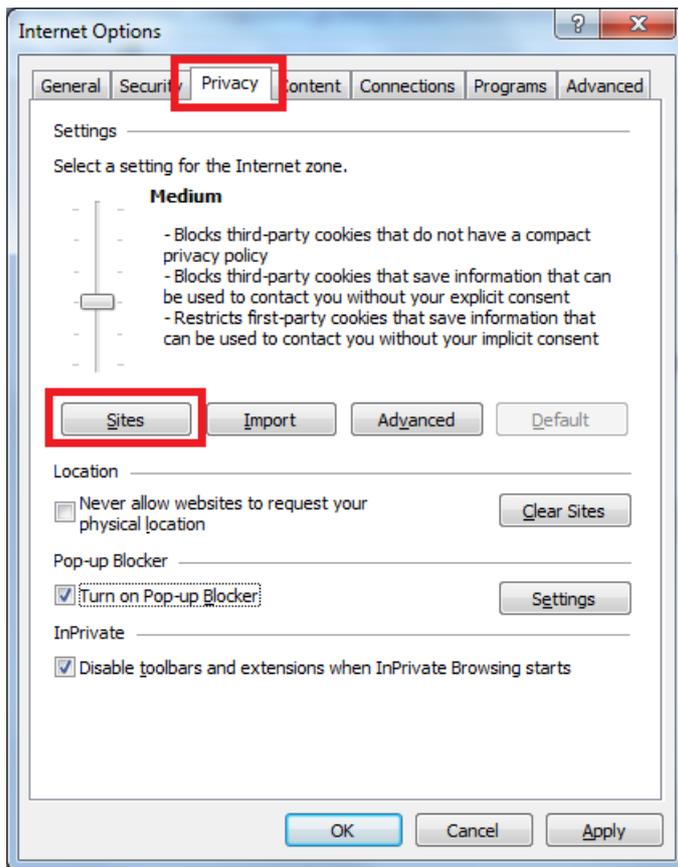


Cookies are now enabled.

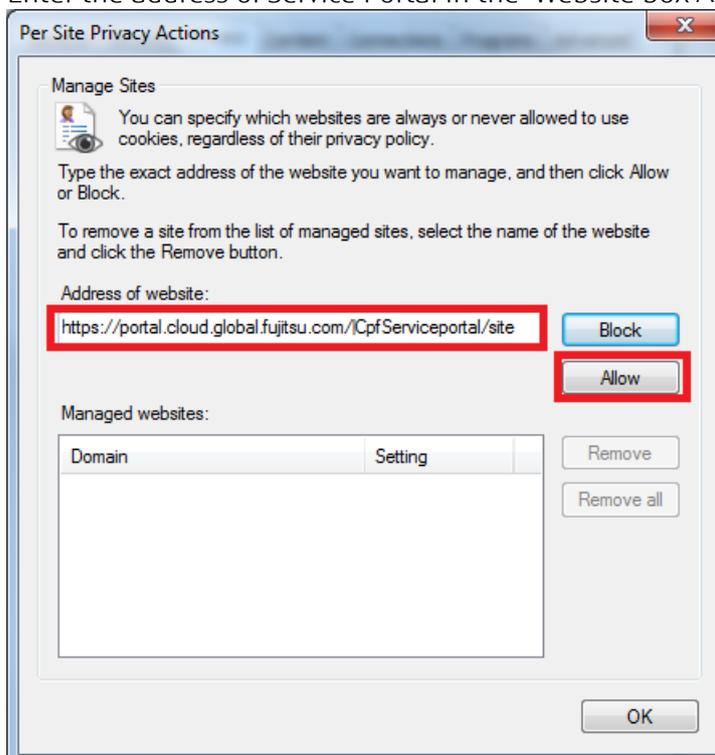


Tip If you are unable to set the level of the Internet zone to "Medium," Please apply the following below individual site setting.

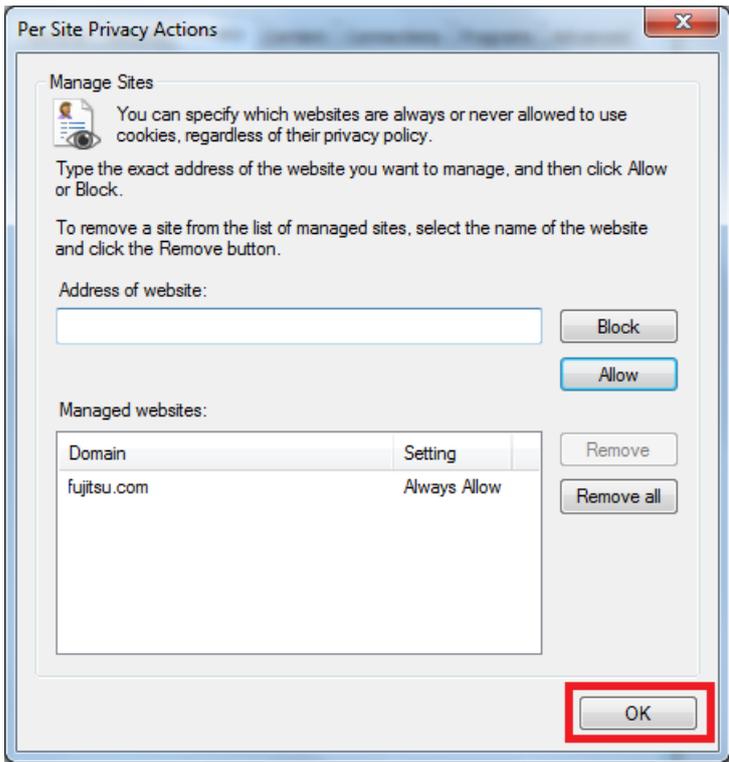
3. Click the [Site] button.



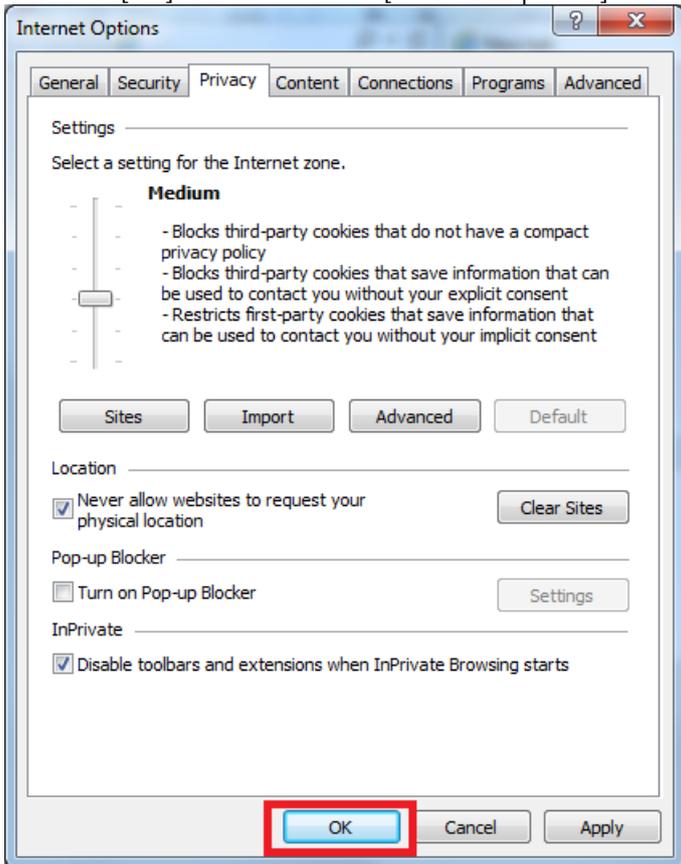
4. Enter the address of Service Portal in the "Website box Address" and click the [Allow] button.



5. Click the [OK] button.



6. Click the [OK] button to close [Internet Options].

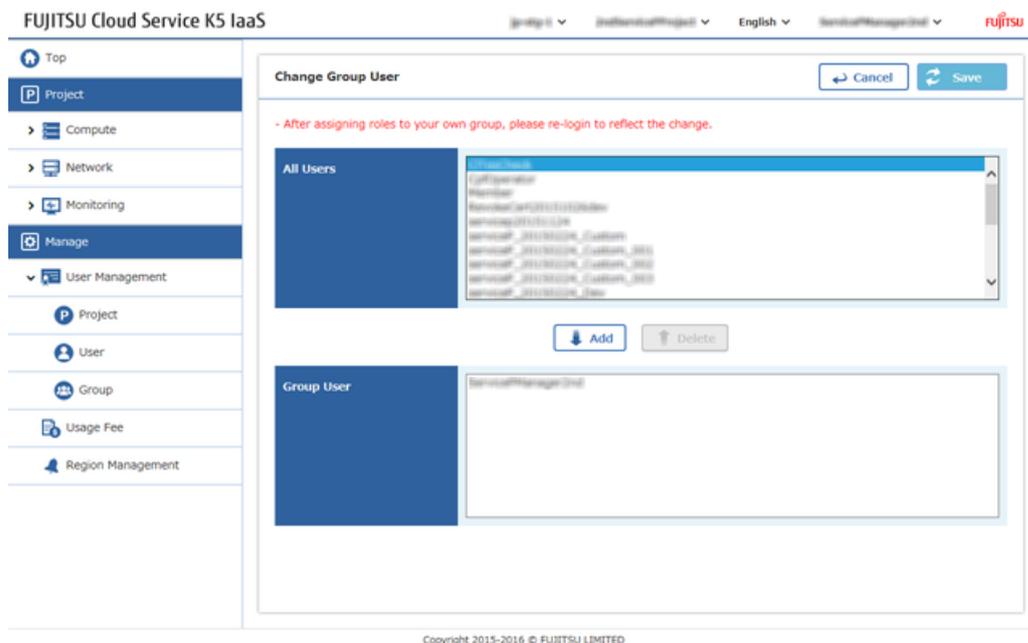


As per above, cookies enabling procedure is complete for each individual site.

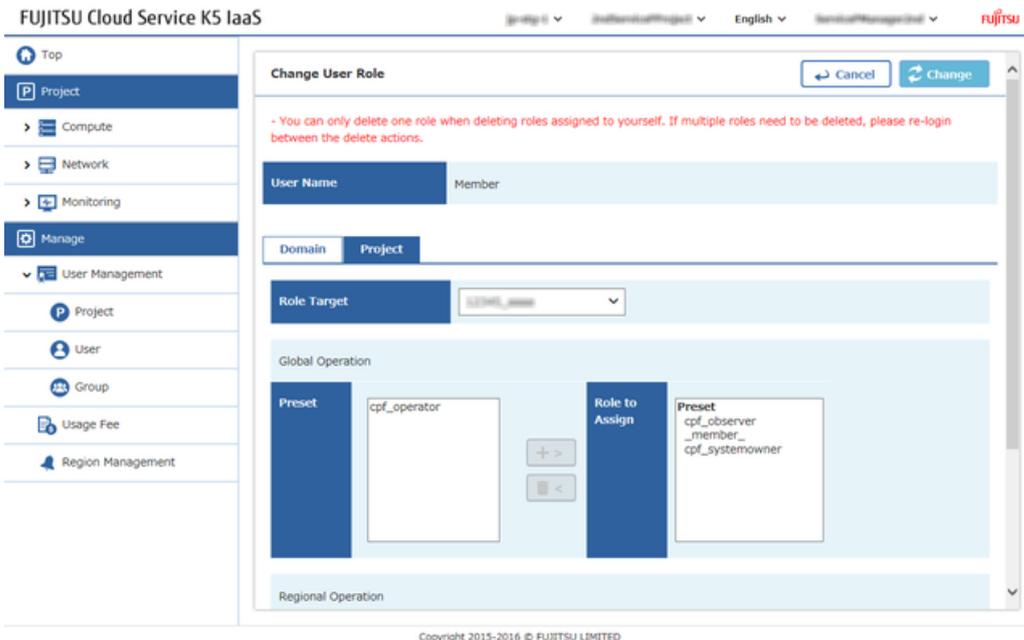
Part 2: Assigning a Role to User

Topics:

- *Assign an Administrator Role as per Group Registration*
- *Assigning a specific Role*



4. Confirm if the selected user has been moved to [Group User] column and then click the [Save] button.



Settings	User A	User B	User C
Role Target	Select a specific project to which the roles are granted		
Role	Select [Operator role] and add to the [Role to Assign] column.	Select [System Owner role] and add to the [Role to Assign] column.	Select [Observer role] and add to the [Role to Assign] column.

4. Check the settings on the confirmation screen and click the [OK] button.

Part 3: Creating a Group

Topics:

- *Creating a Group That Is Granted a Role for a Specific Project*
- *Creating a Group That Is Granted a Role for Multiple Projects*

3.1 Creating a Group That Is Granted a Role for a Specific Project

3.1.1 Creating a Group for a Specific Project granted with the System Owner role

It is possible to create a new group and grant any role to that group for a specific project.

Before you begin

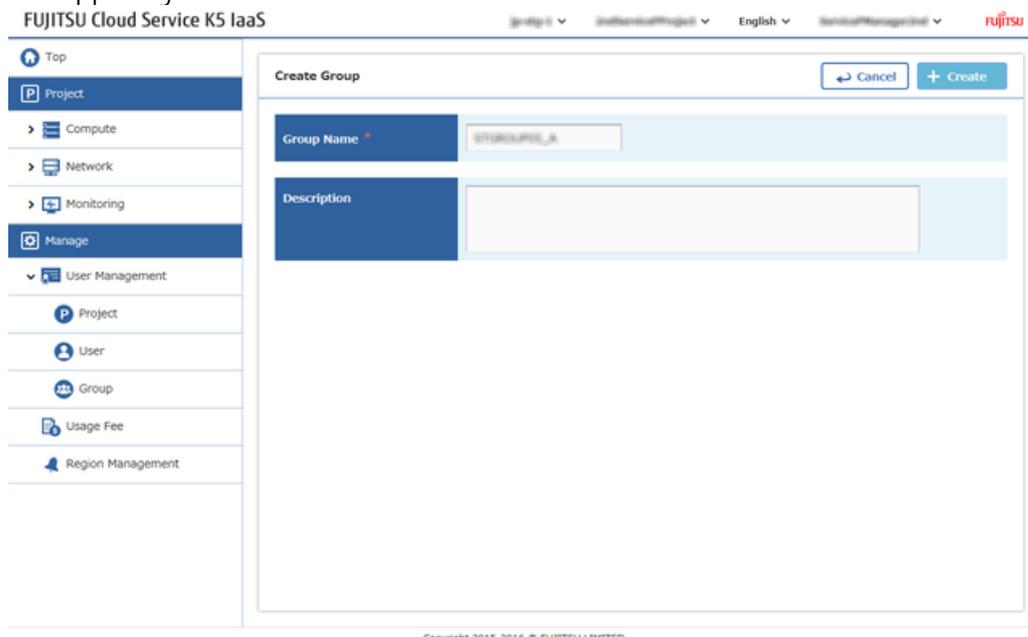
Log in as a user who was granted a role in [User Group Registration](#) on page 6.

About this task

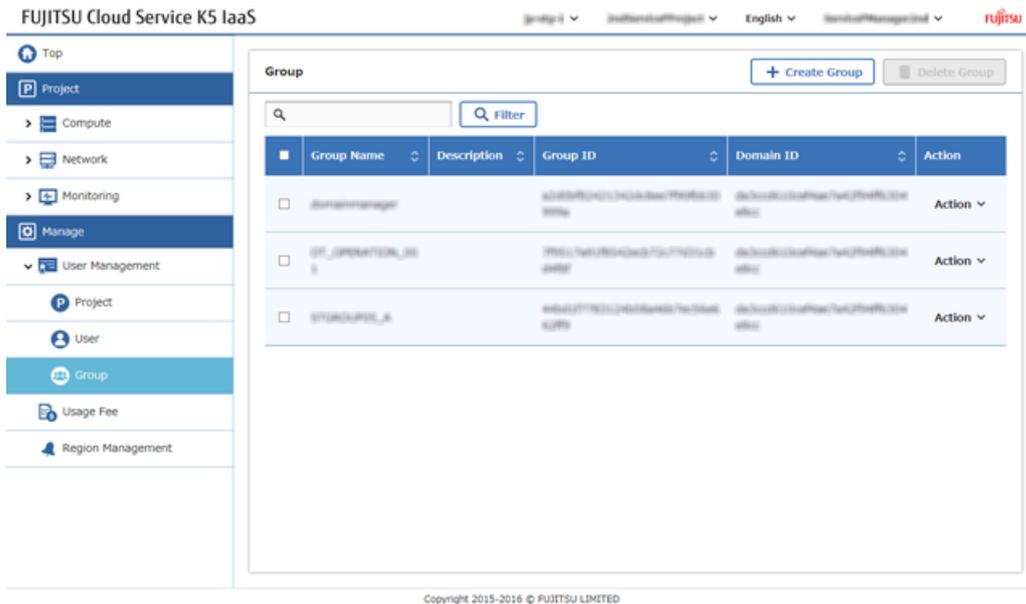
This section explains the procedure of creating a new group and grant the System Owner role to the group for a specific project.

Procedure

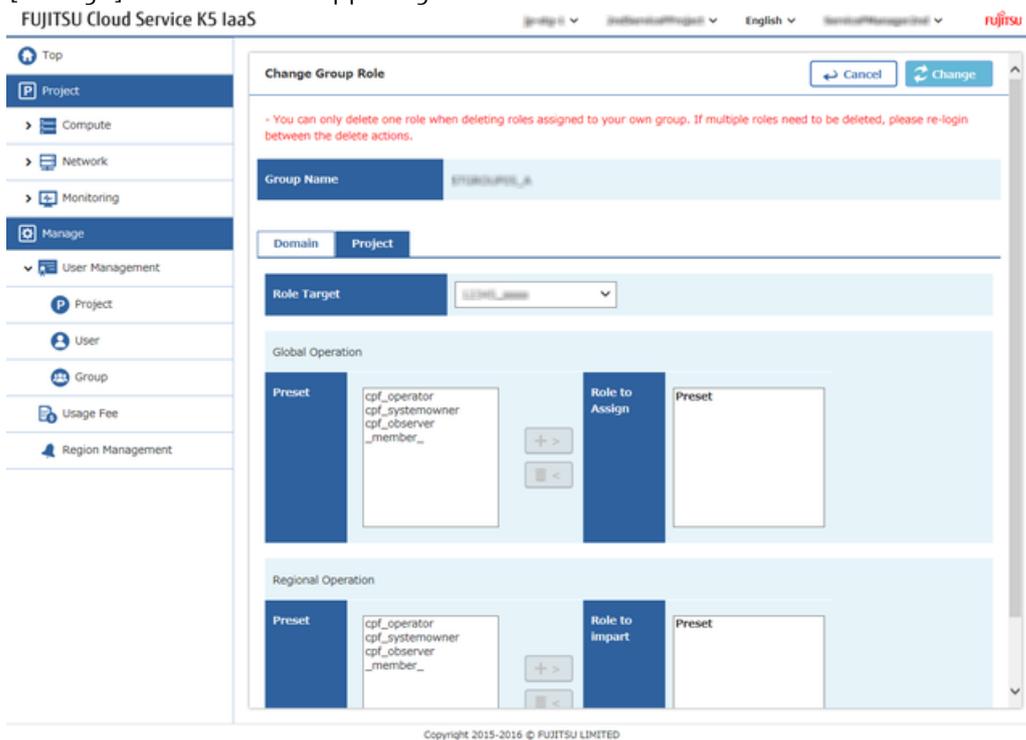
1. From the left-side menu, click on [User Management] > [Group].
The [Group] list screen will be displayed.
2. Click the [Create Group] button on the [Group] screen.
3. On the [Create Group] screen, enter a name for the group and click the [Create] button on the upper right corner of the screen.



4. On the [Group] screen, click the [Action] menu of the created group, and then click [Change Role].



- When the [Change Group Role] screen appears, assign the required roles, and then click the [Change] button on the upper right corner of the screen.



Item Name	Description
Role Target	Select a specific project
Role	From the [Preset] column, select the [System Owner Role] and add to the [Role to Assign] column.

- From the screen of [Result of Group Role Change], check the contents and complete the procedure by clicking the [OK] button displayed on the top right corner .

- Top
- Project
- Compute
- Network
- Monitoring
- Manage
- User Management
 - Project
 - User
 - Group
 - Usage Fee
 - Region Management

Result of Group Role Change

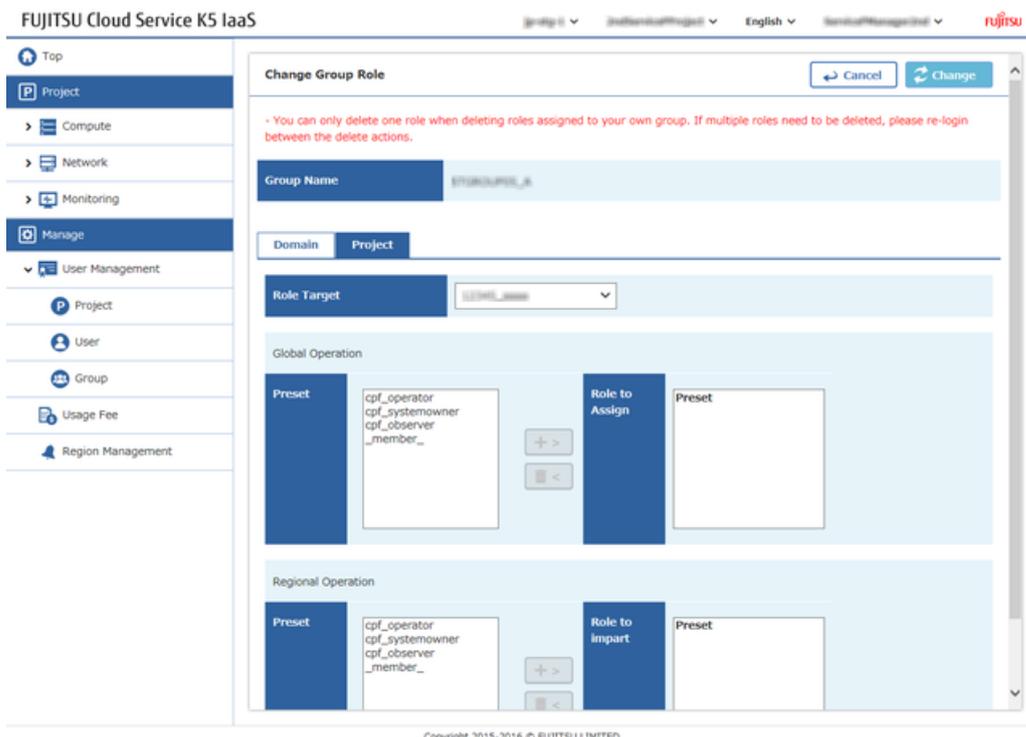
OK

Global Operation

Role Name	Allocation Target Scope	Control Type	Role Type	Success / Failure
member	Roles allocated between group and project	Add	Preset	Success

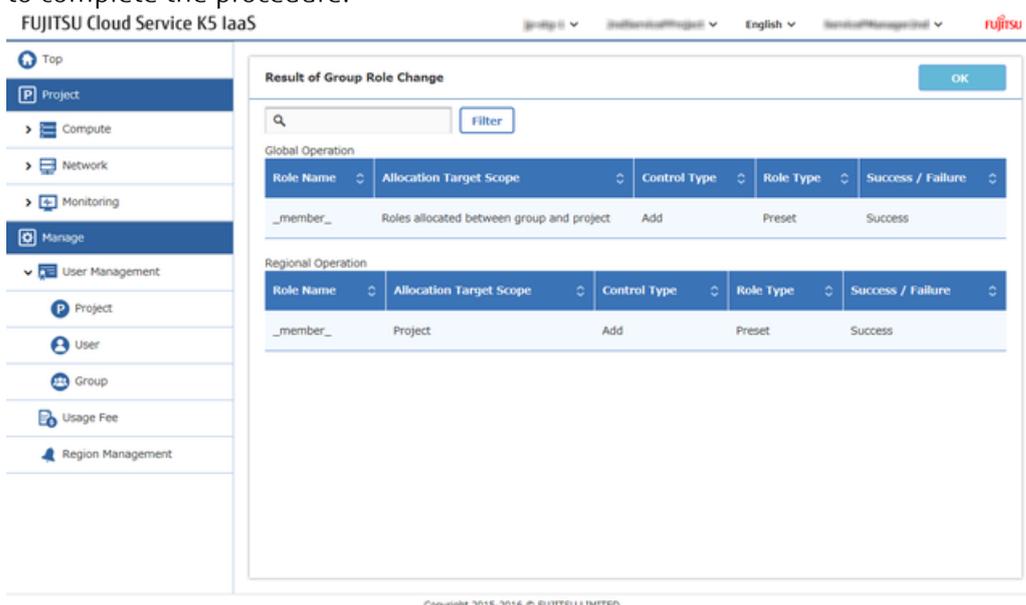
Regional Operation

Role Name	Allocation Target Scope	Control Type	Role Type	Success / Failure
member	Project	Add	Preset	Success



Item Name	Description
Role Target	 Tip Select a different project from the project which has been already granted a role.
Role	From the [Project] column, select [System Owner Role] and add to the [Role to Assign] column.

- From the [Result of Group Role Change] screen, check the contents, and click the [OK] button to complete the procedure.



3.2.2 Grant and Verify the Group Role

Even if the user is not granted with the role, if user belongs to that group then it is possible to perform the work granted to that group.

Before you begin

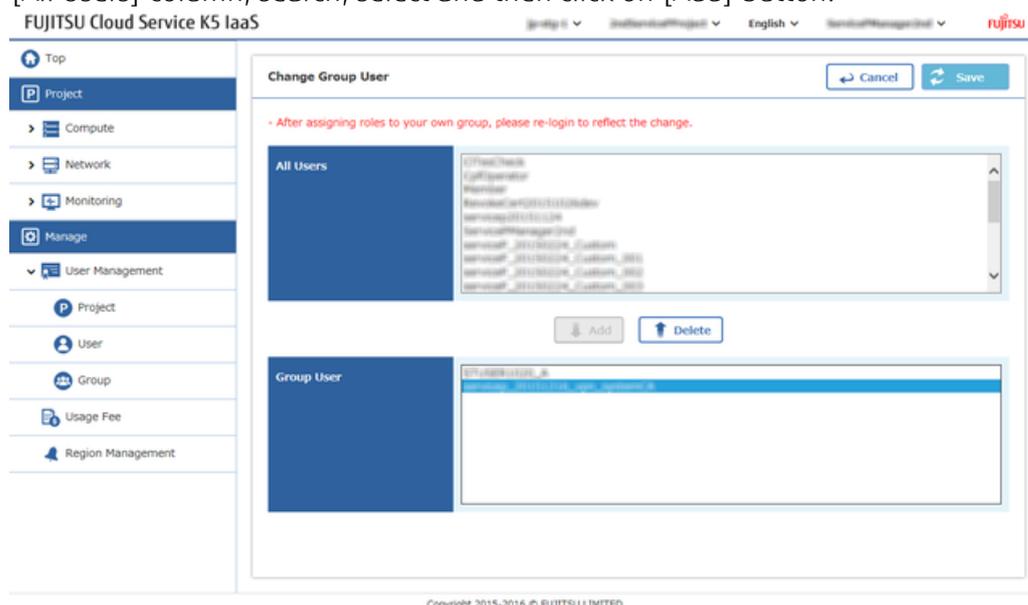
- Log in as the user who was granted a role in *User Group Registration* on page 6.
- Prepare the users who have only the Member role.
- Use the project that was created in the procedure described in *Creating a Group for a Specific Project granted with the System Owner role* on page 11.

About this task

This section describes the procedure of how to add the users who have only the Member role to a group.

Procedure

1. From the left-side menu, click [User Management] > [Group].
The [Group] list screen will be displayed.
2. From the [Group] screen, find the group which has specific role, and click on [Change Group User] from the [Action] menu of the group.
3. From the [Change Group User] screen, find users who have only the Member role from the [All Users] column, search, select and then click on [Add] button.



4. Confirm that the target users have been added to the [Group User] column, and then click [Save] button to complete the procedure.

Part 4: Utilization of Multi-region

Topics:

- [Start Region Utilization](#)

4.1 Start Region Utilization

4.1.1 Start Region Utilization

In case of using a different region other than the current region then, follow the "start usage procedure" of that region.

Before you begin

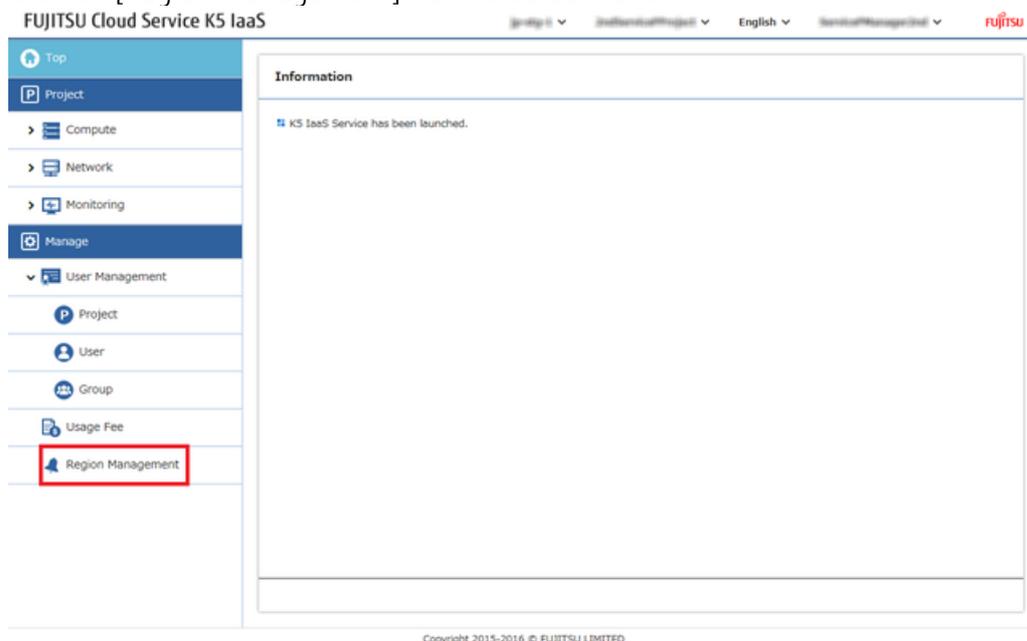
- Login as Contractor role User.
- There might be some regions which are not used yet out of multiple regions that exists.

About this task

Below steps explains "start usage procedure" of the region.

Procedure

1. Click on [Region Management] from left side menu.



2. From the [Manage Regions Used] screen, out of the regions which have [Not Used] status, in order to start the usage of those region, click on [Start Use] from the [Action] menu. .

FUJITSU Cloud Service K5 IaaS

Project | English | Service/Manager/ID

Top

Project

- Compute
- Network
- Monitoring
- Manage
- User Management
 - Project
 - User
 - Group
 - Usage Fee
 - Region Management

Manage Regions Used

Region Name	Status	Action
jp-east-1	In Use	Action
jp-west-1	Not Used	Action Start Use

Copyright 2015-2016 © FUJITSU LIMITED

3. Once the screen is changed to [Manage Regions Used], check for [Preparing] status.

FUJITSU Cloud Service K5 IaaS

Project | English | Service/Manager/ID

Top

Project

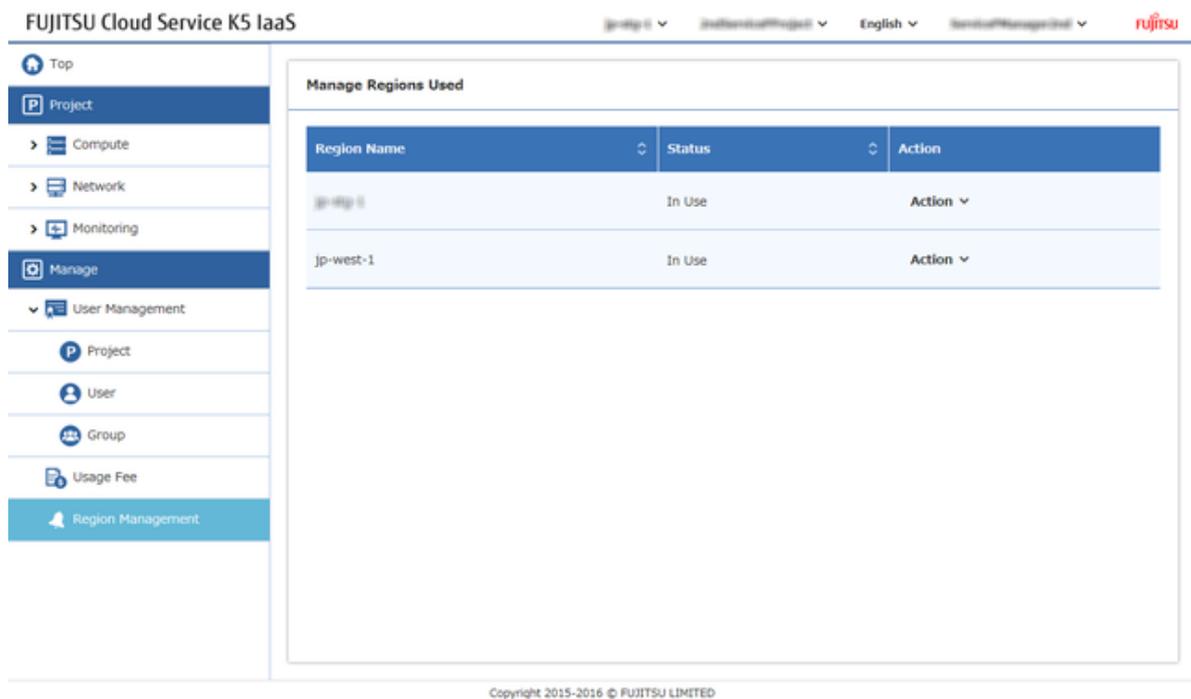
- Compute
- Network
- Monitoring
- Manage
- User Management
 - Project
 - User
 - Group
 - Usage Fee
 - Region Management

Manage Regions Used

Region Name	Status	Action
jp-east-1	In Use	Action
jp-west-1	Preparing	Action

Copyright 2015-2016 © FUJITSU LIMITED

4. Refresh the screen after a while, check for the status as [In use] of the region which was previously [Preparing].



4.1.2 Connect to the Utilized Region

When the user starts the usage of the region in a Contractor role, that user and all the users of that domain can start the usage of that region.

Before you begin

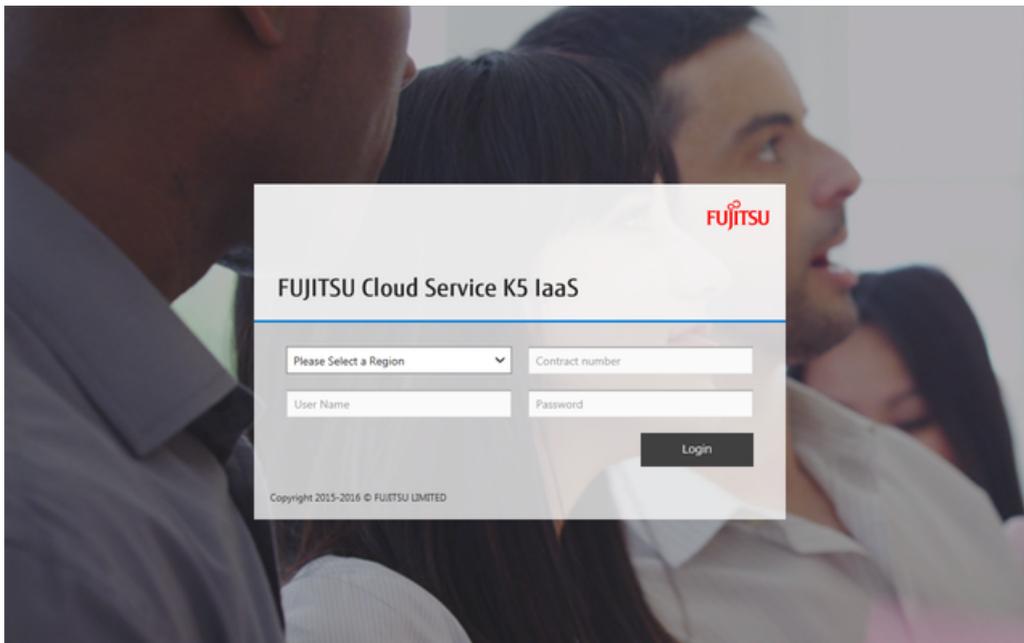
Arrange the user and operate which belongs to domain with Contractor role created as mentioned in [Start Region Utilization](#) on page 18

About this task

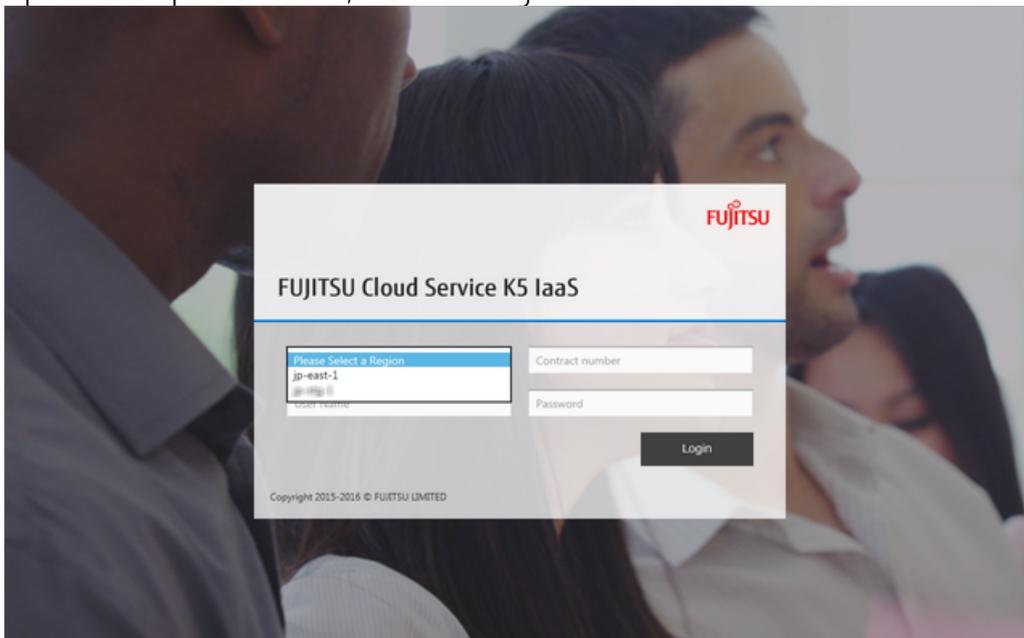
When the "usage" of that region has been implemented, then login to that region is possible.

Procedure

1. Open the Login Page



2. Open the drop down menu, select the region which need to be used.



3. When you enter the [Contract number], [User name], [Password] and click on [Login] button, you can login to the desired region. If the header part is selected as region name, then please make sure that the selected region name is included in the URL. .

Browser address bar: <https://portal.jp-east-1.cloud.global.fujitsu.com/cp/ServicePortal/site/jp-east-1/Top>

Page Title: FUJITSU Cloud Service K5 IaaS

Language: **jp-east-1** | [us-east-1](#) | [English](#)

Navigation Menu:

- Top
- Project
 - Compute
 - Network
 - Monitoring
- Management
 - User Management
 - Usage Fee

Information Panel:

Information

- K5 IaaS Service has been launched.

Copyright 2015-2016 © FUJITSU LIMITED

Part 5: Creating a Virtual System

Topics:

- [*Building a Virtual Network*](#)
- [*Creating a Virtual Server*](#)
- [*Creating a Load Balancer*](#)
- [*Using a Template*](#)

5.1 Building a Virtual Network

5.1.1 Creating a Virtual Router

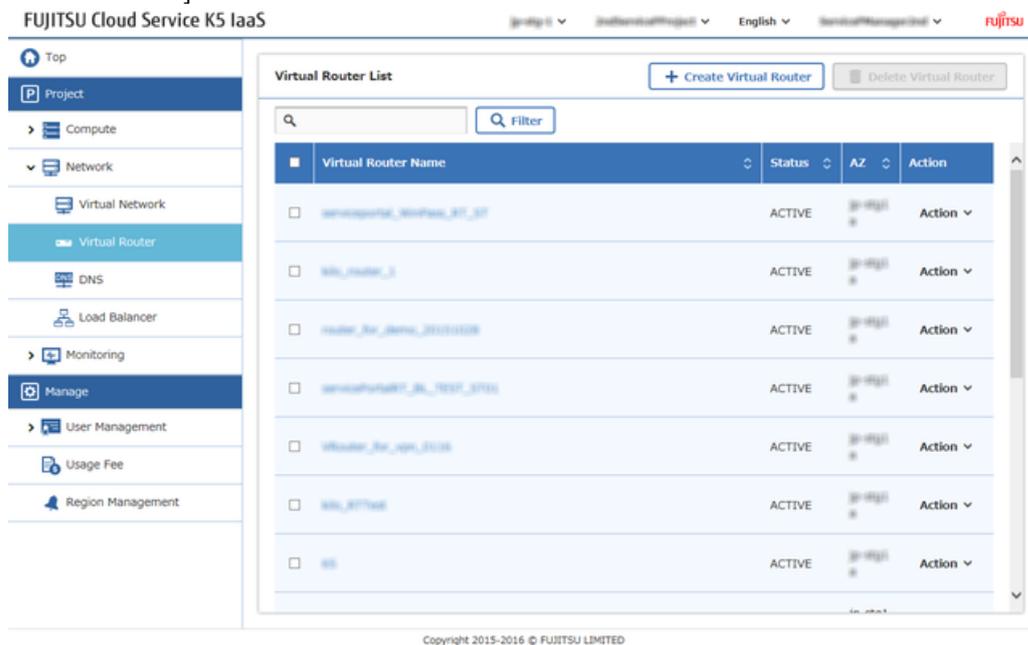
Create a virtual router to communicate with virtual resources that are created on the K5 IaaS system.

About this task

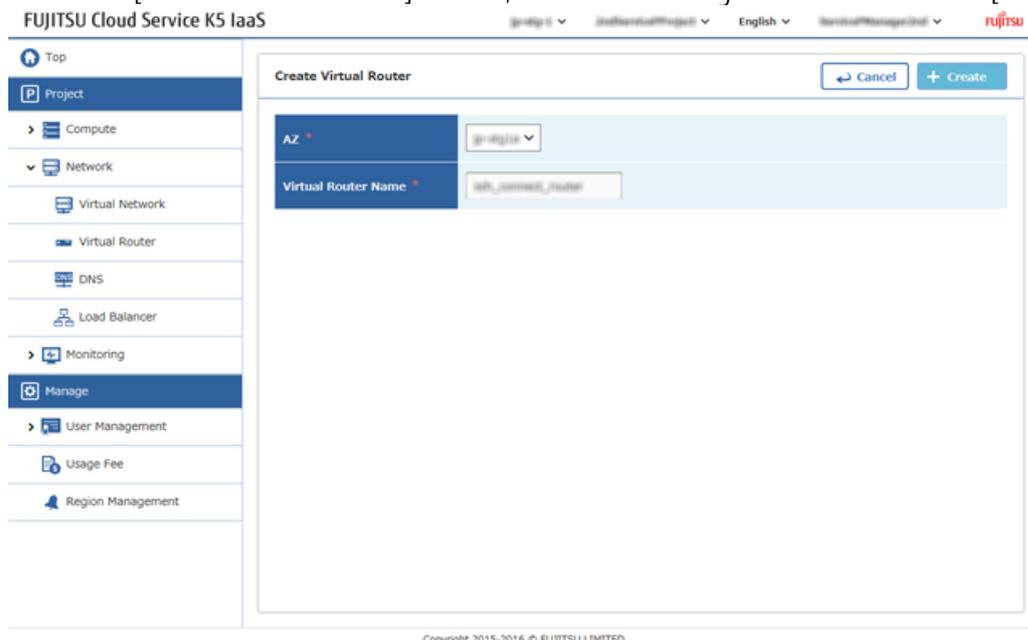
This section describes the procedure for creating a virtual router.

Procedure

1. From the left-hand menu, select [Network] > [Virtual Router], and then click on [Create Virtual Router] button.



2. From the [Create Virtual Router] screen, enter the settings items and click on [Create] button.



Item Name	Description
AZ	Select the availability zone where the virtual router will be created
Virtual Router Name	Specify a name for the virtual router

3. The procedure is complete when the created virtual router has been added on the [Virtual Router List] screen and the status is [Active].

5.1.2 Connecting a Virtual Router to an External Network

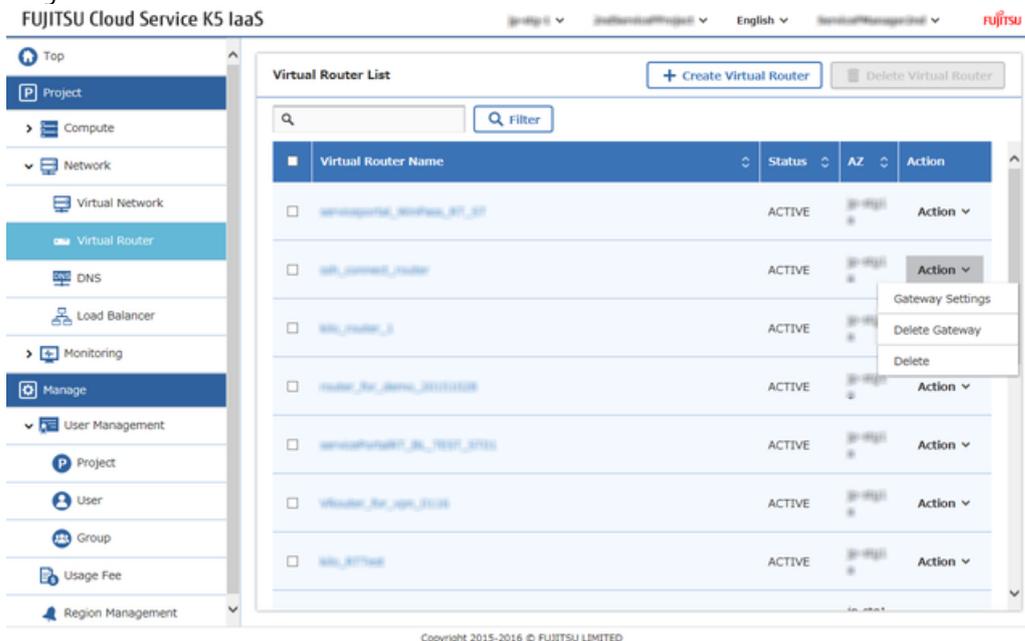
Configure the settings to enable the created virtual router to communicate with an external network (Internet).

About this task

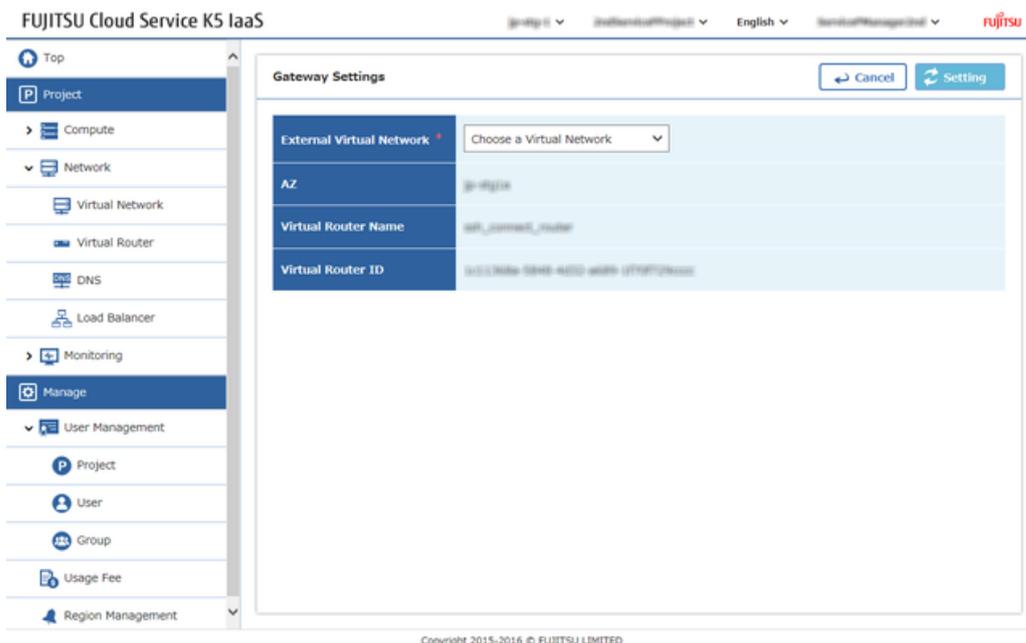
This section explains the procedure to connect an external network to the virtual router that was created in [Creating a Virtual Router](#) on page 24.

Procedure

1. From the left-hand menu, click on [Network] > [Virtual Router].
The [Virtual Router List] screen will be displayed.
2. From the [Virtual Router List] screen, click [Gateway Settings] on the [Action] menu of the target virtual router.



3. On the [Gateway Settings] screen, from the [External Virtual Network] pull-down menu, select the external network intended for connection to the virtual router.



4. Click the [Setting] button in the upper right corner of the screen to complete the procedure.

5.1.3 Creating a Network and Subnet

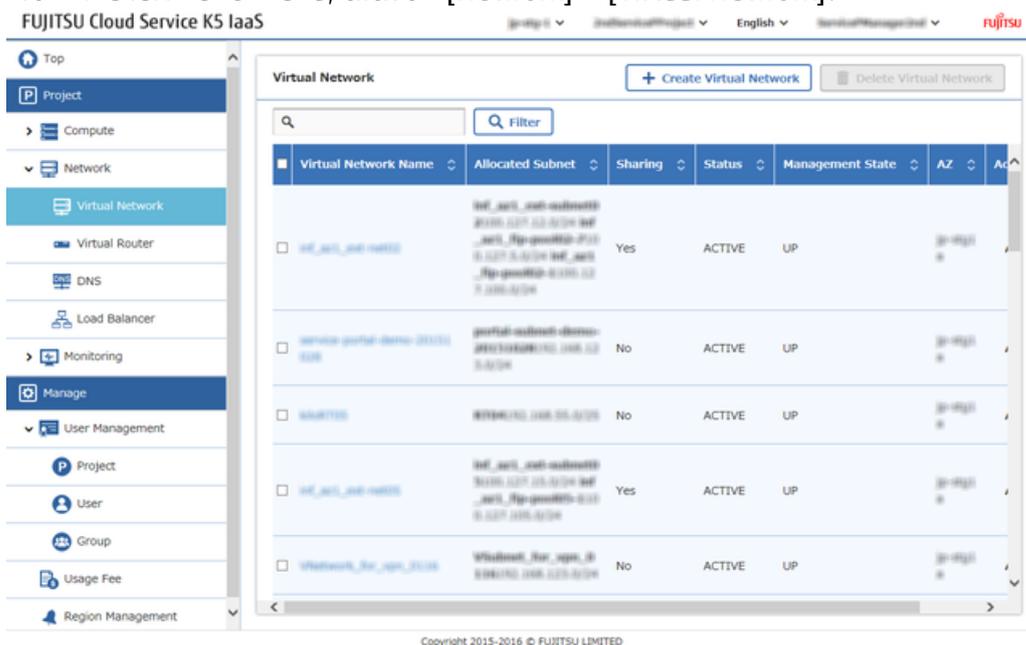
Create a virtual network and subnet in order to deploy the Virtual servers etc.

About this task

This section describes the procedure for creating a virtual network and configuring settings of private IP addresses range as its subnet.

Procedure

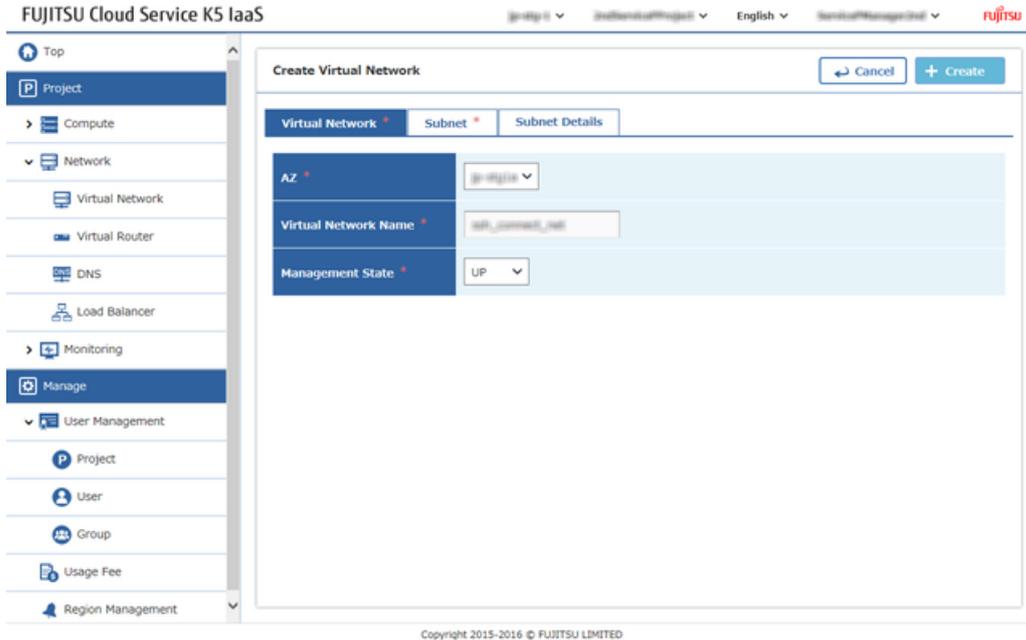
1. From the left-hand menu, click on [Network] > [Virtual Network].



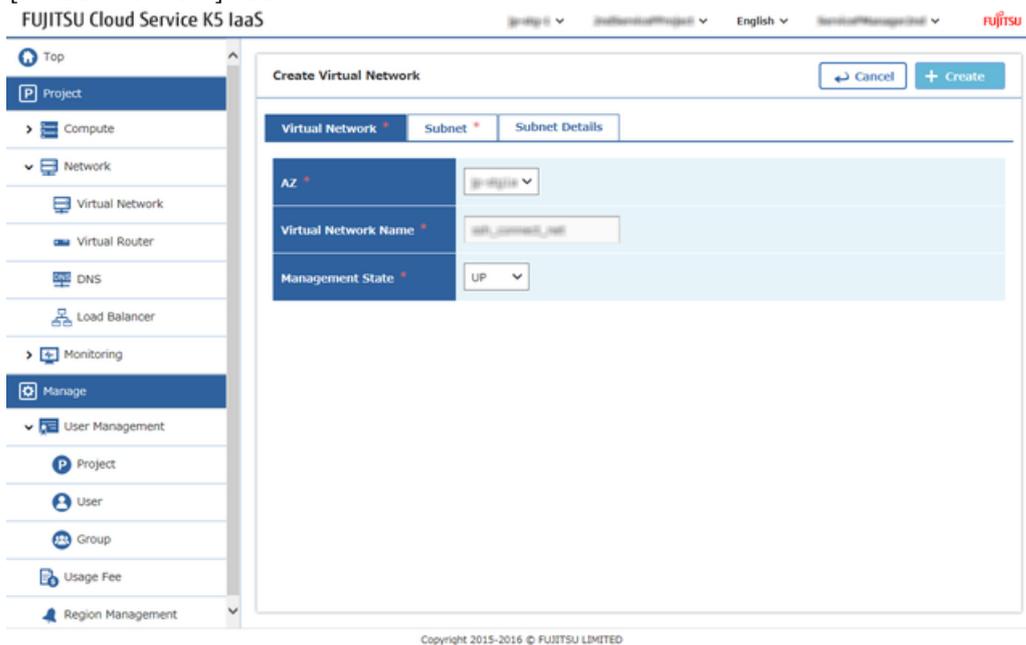
The [Virtual Network] list screen will be displayed

2. On the [Virtual Network] list screen, click the [Create Virtual Network] button.

- On each tab of the [Create Virtual Network] screen, enter the settings items and click the [Create] button.

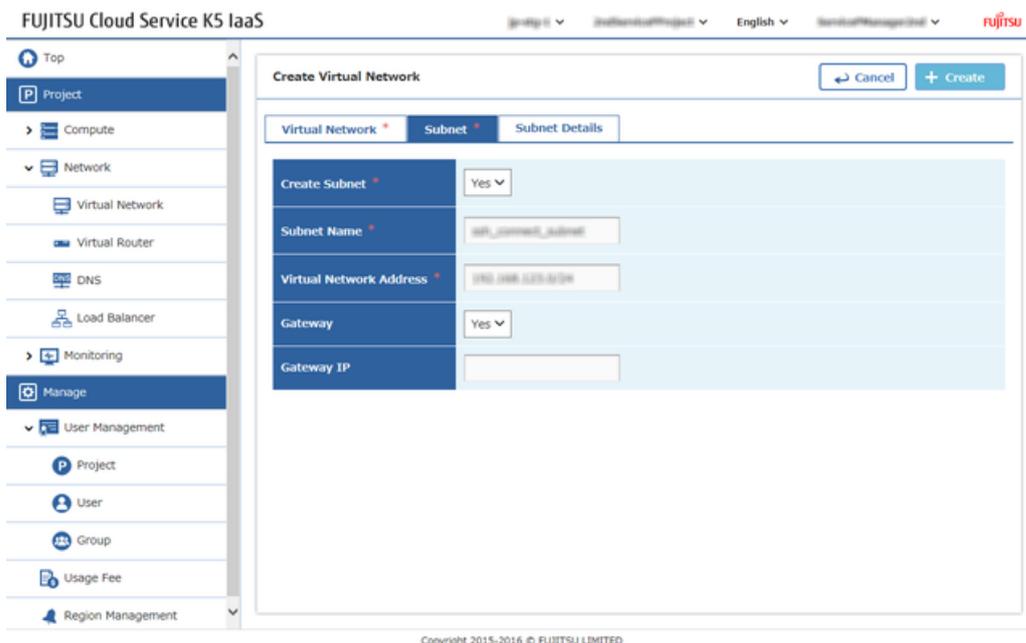


[Virtual Network] tab



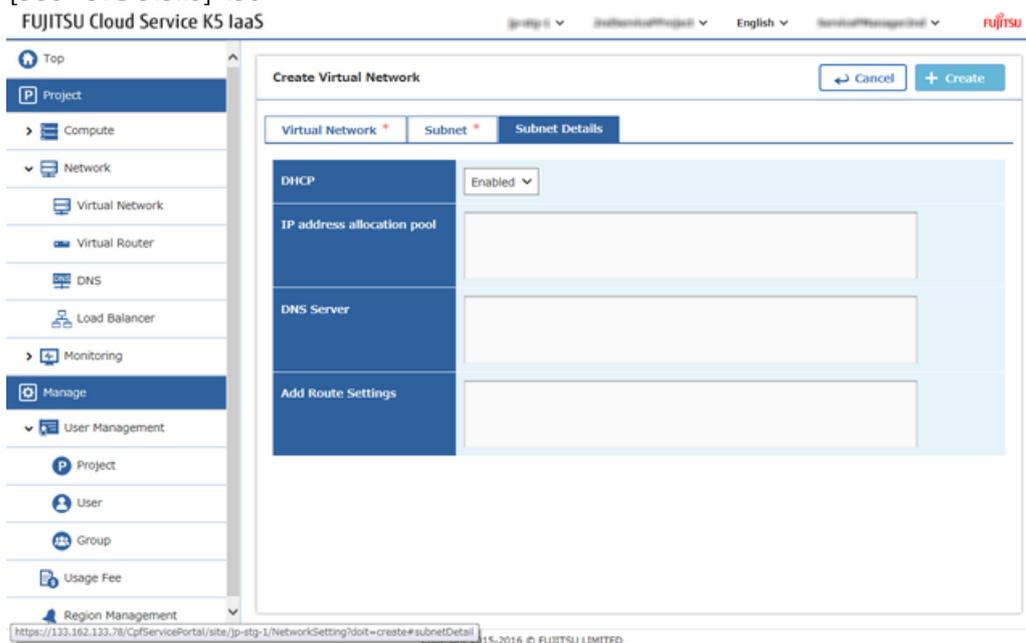
Item Name	Description
AZ	Select an availability zone for the creation destination  Tip Select the availability zone that was selected in Creating a Virtual Router on page 24.
Virtual Network Name	Specify any virtual network name
Administrative Status	Select [UP]

[Subnet] tab



Item Name	Description
Create Subnet	Select [Yes]
Subnet Name	Specify any subnet name
Virtual Network Address	Specify the network address which is used for virtual server in the CIDR notation <div style="border-top: 1px dotted red; padding-top: 5px;">  Example: 192.168.123.0/24 </div> <div style="border-top: 1px dotted red; padding-top: 5px;"> Tip </div>
Gateway	Select [Yes]
Gateway IP	Specify in accordance with the virtual network address

[Subnet Details] tab



Item Name	Description
DHCP	Select [Enabled]

Item Name	Description
IP address allocation pool	Do not set
DNS Server	Select the DNS server of Availability Zone for the creation Destination Ex: Such as for 'uk-1a', set 62.60.39.9 and 62.60.39.10
Add Route Settings	Do not set

- The procedure is complete once the row of created virtual network has been added on the [Virtual Network] screen.

5.1.4 Connecting Virtual Router to Virtual Network

Configure the settings to enable an external network (Internet) to communicate with the virtual network via a virtual router.

About this task

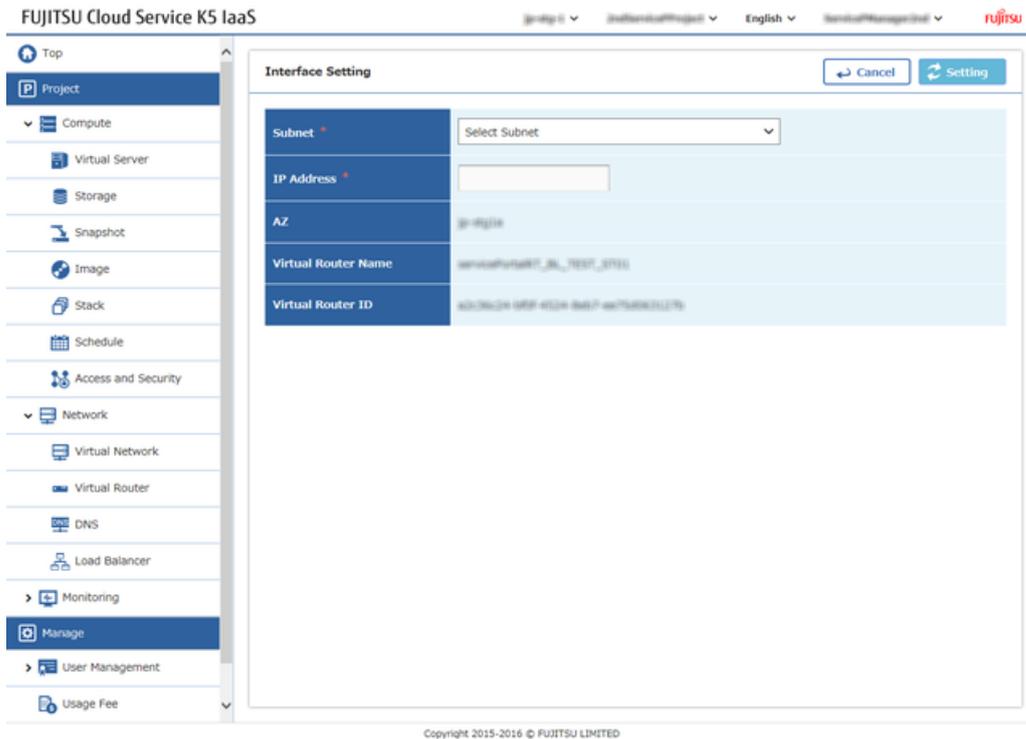
This section describes the procedure of connecting a virtual network created in [Creating a Network and Subnet](#) on page 26 to the virtual router that is used in [Connecting a Virtual Router to an External Network](#) on page 25.

Procedure

- From the left-hand menu, click [Network] > [Virtual Router].
The [Virtual Router] list screen will be displayed.
- On the [Virtual Router] list screen, click the name of the target virtual router.
- On the [Virtual Router Details] screen, click the [Add Interface] button.

The screenshot displays the 'Virtual Router Details' page in the Fujitsu Cloud Service K5 IaaS console. The left-hand navigation menu is visible, with 'Network' > 'Virtual Router' selected. The main content area shows the details of a specific virtual router, including its name, ID, availability zone (AZ), status (ACTIVE), and external gateway. Below the details, there is an 'Interface' section with a table listing two active interfaces. Each interface has a checkbox, a port name, a private IP address, a status of 'ACTIVE', a type of 'network:router_interface', a management state of 'true', and a global IP address. An 'Action' dropdown menu is provided for each interface. The '+ Add Interface' button is located above the table, and the 'Remove Interface' button is to its right. The page footer indicates 'Copyright 2015-2016 © FUJITSU LIMITED'.

- From the [Interface Setting] screen, enter the following settings items, and then click the [Setting] button.



Item Name	Description
Subnet	Select the subnet which is connected to the virtual router
IP Address	Specify the gateway IP address of the above subnet

5. The procedure is complete once the set interface has been added on the [Virtual Router Details] screen.

5.1.5 Creating a Key Pair

Create a key pair to be used while logging into Linux Virtual Server.

About this task

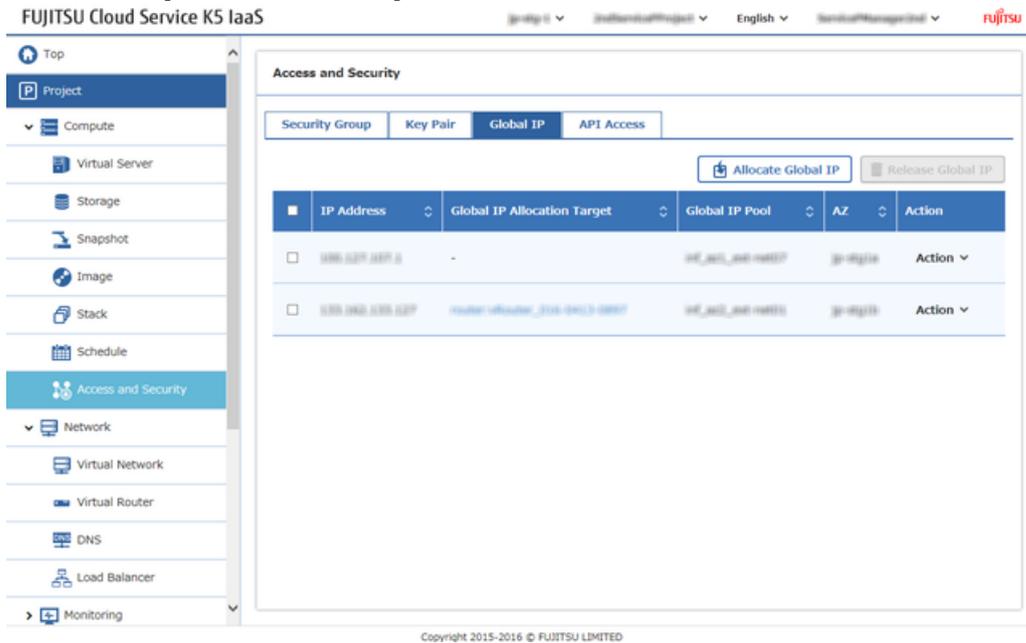
This section describes the procedure of creating a key pair that is used for SSH logins and downloading of the created key file.

Procedure

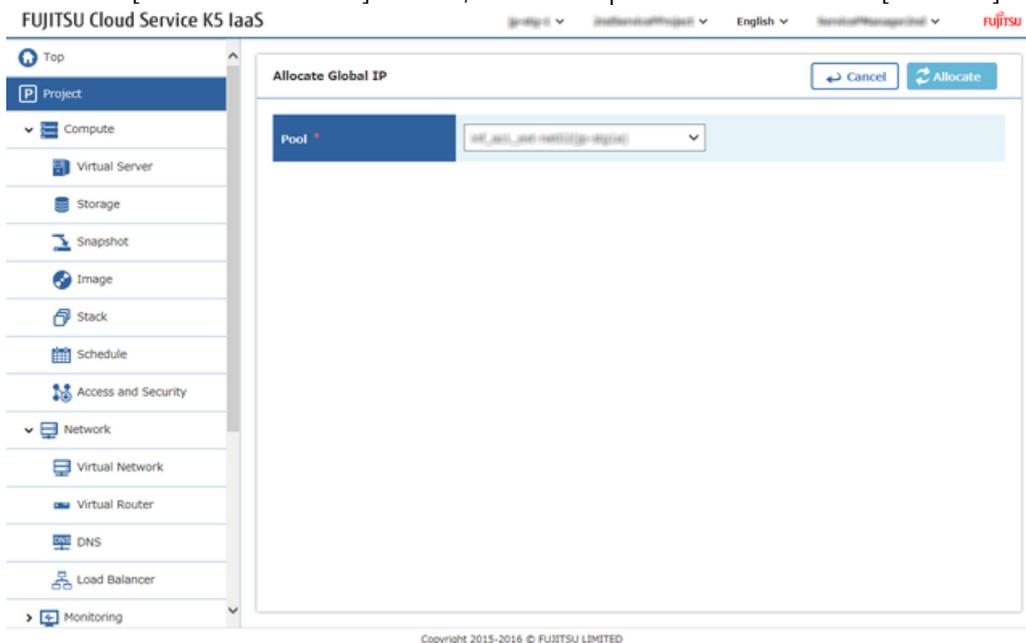
1. From the left-hand menu, click on [Compute] > [Access and Security].

Procedure

1. From the left-hand menu, click [Compute] > [Access and Security].
The [Access and Security] screen will be displayed.
2. From the [Access and Security] screen, click on the [Global IP] tab.
3. Click on the [Allocate Global IP] button.

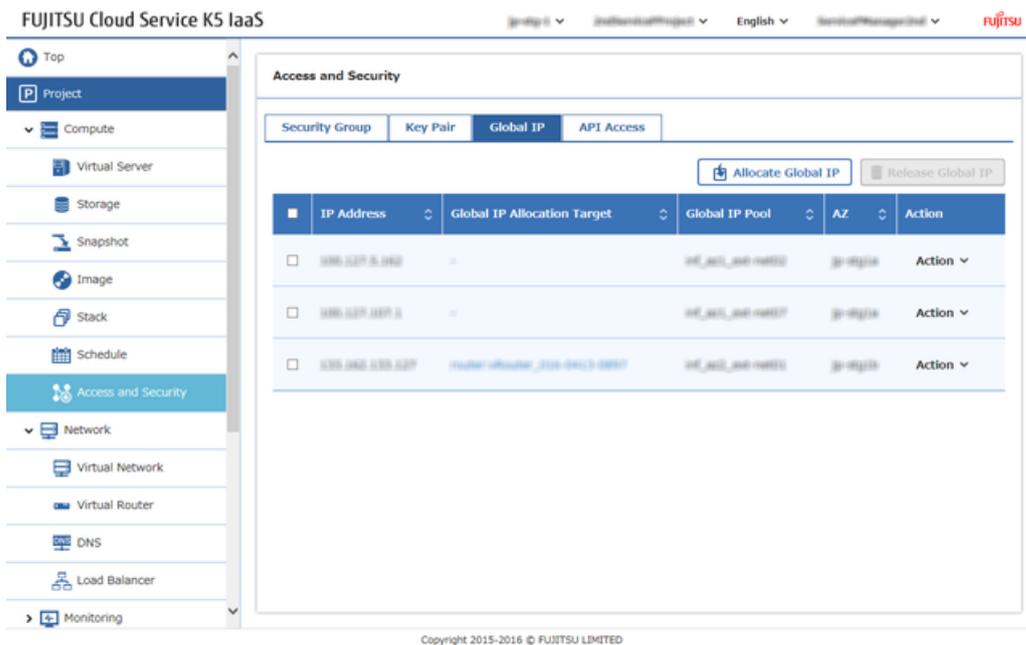


4. From the [Allocate Global IP] screen, select the pool and click on the [Allocate] button.



 Select the pool which is applicable to the external network which was connected in [Tip Connecting a Virtual Router to an External Network](#) on page 25.

The procedure is complete when the new IP address has been added to the global IP list given on the [Global IP] tab.



5.1.7 Creating a Security Group

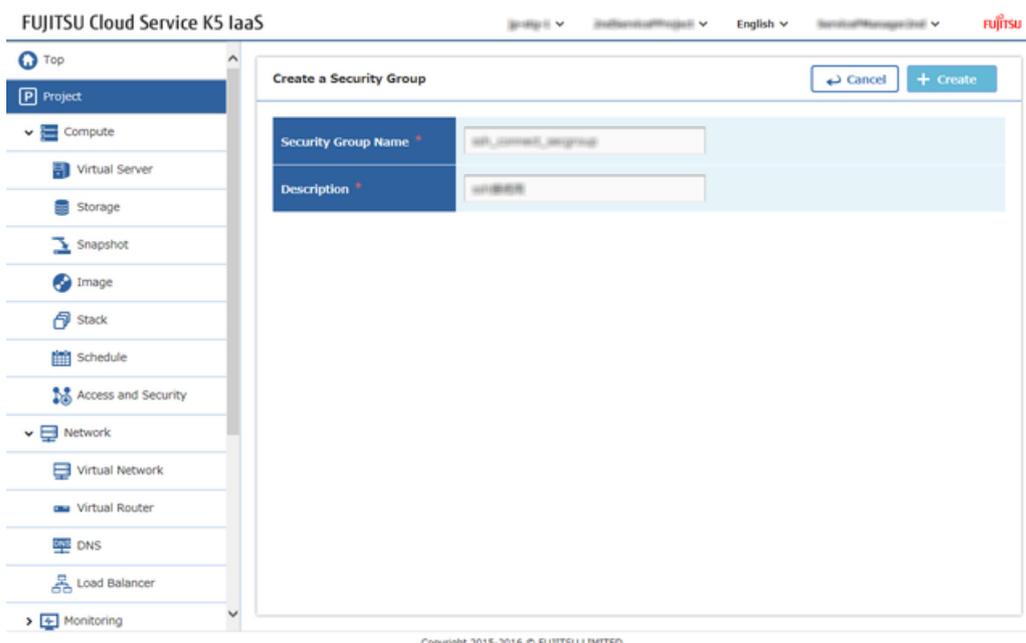
Create a security group to limit the unnecessary communication from the Internet and allow only necessary communication.

About this task

This section describes the procedure of creating a security group for SSH connections.

Procedure

1. From the left-hand menu, click on [Compute] > [Access and Security].
The [Access and Security] screen will be displayed.
2. On the [Security Group] tab, click the [Create Security Group] button.
3. On the [Create Security Group] screen, enter the following settings items and then click on the [Create] button.



Item Name	Description
Security Group Name	Specify any security group name
Description	Specify a description for the security group which is to be created.

The procedure is complete once the created security group has been added on the [Security Group] List screen.

5.1.8 Setting Rules for a Security Group

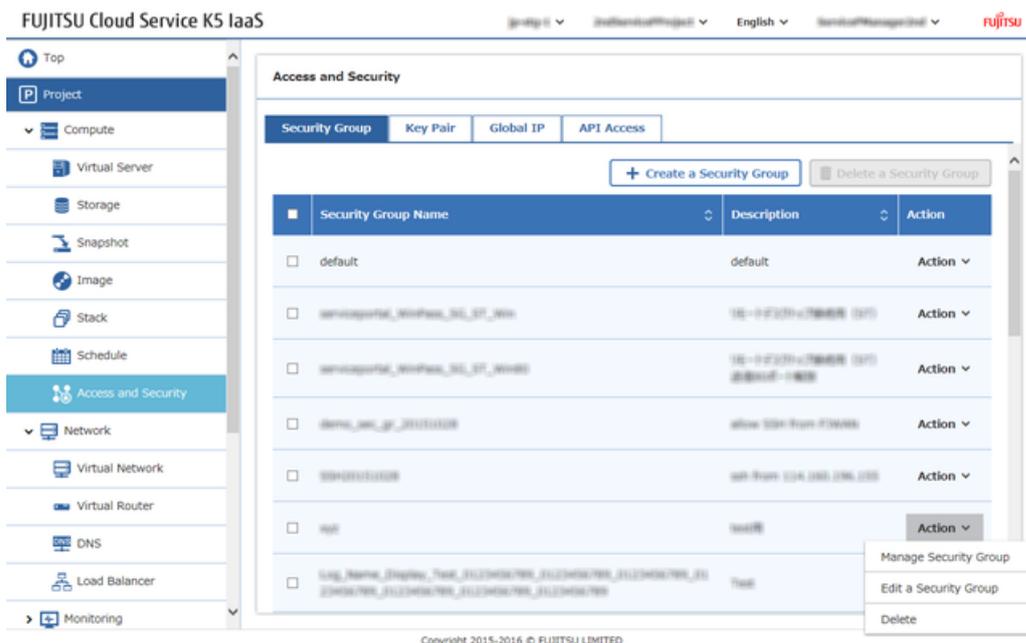
About this task

At the time of security group creation, security default rules are set automatically. Set rules in order to make necessary communication.

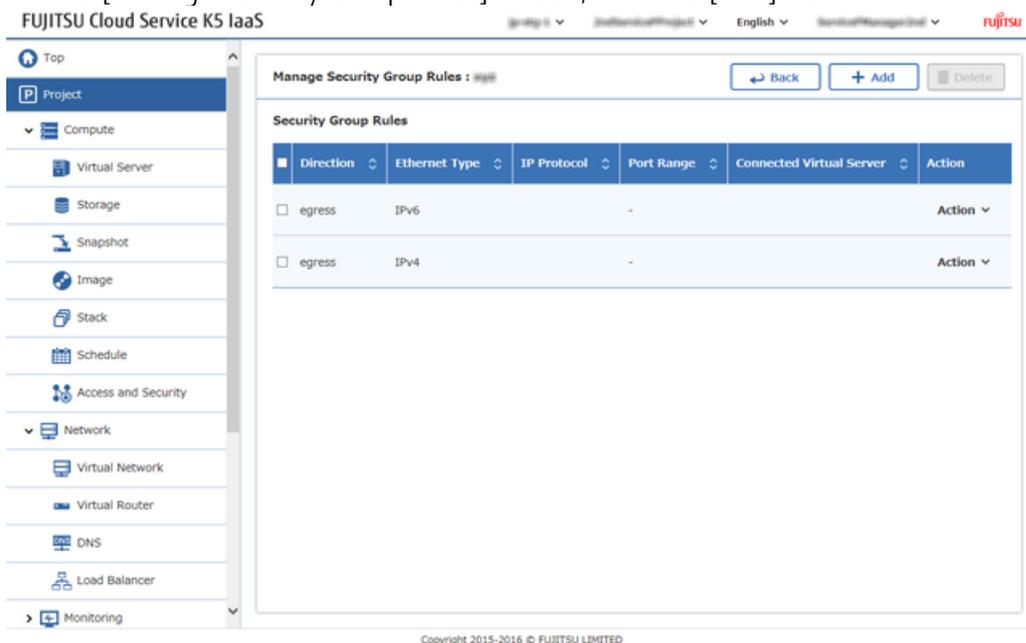
This section describes the procedure of creating a rule used for SSH connections.

Procedure

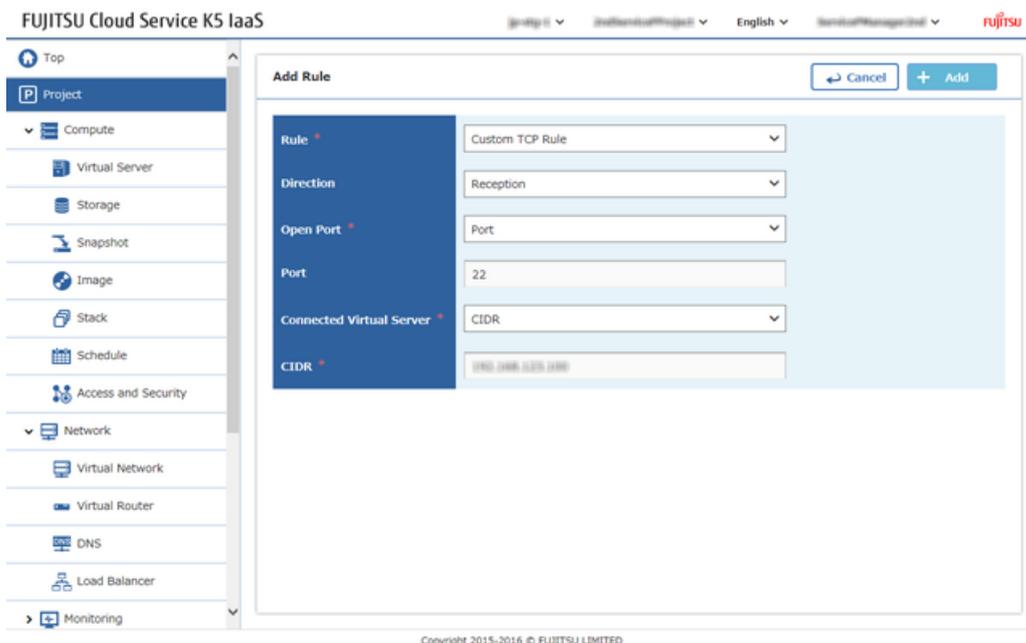
1. From the left-hand menu, click on [Compute] > [Access and Security].
The [Access and Security] screen will be displayed.
2. From the [Security Group] tab, click [Manage Security Group] on the [Action] menu which is intended for setting of the security group.



3. On the [Manage Security Group Rules] screen, click the [Add] button.



4. On the [Add Rule] screen, enter the following additional items of the receiver rules and then click the [Add] button.



Item Name	Description
Rule	Select [Custom TCP Rule]
Direction	Select [Reception]
Open Port	Select [Port]
Port	Specify "22"
Connected Virtual Server	Select [CIDR]
CIDR	Specify the IP address of the client PC for communication.

5. Also enter the following additional items of the sender rules and add them by repeating step 3 through step 4.

Item Name	Description
Rule	Select [Custom TCP Rule]
Direction	Select [Send]
Open Port	Select [Port]
Port	Specify "22"
Connected to	Select [CIDR]
CIDR	Specify the IP address of the client PC for communication.

The procedure is complete once the created rules have been added to the [Manage Security Group Rules] screen.

5.2 Creating a Virtual Server

5.2.1 Creating a Virtual Server

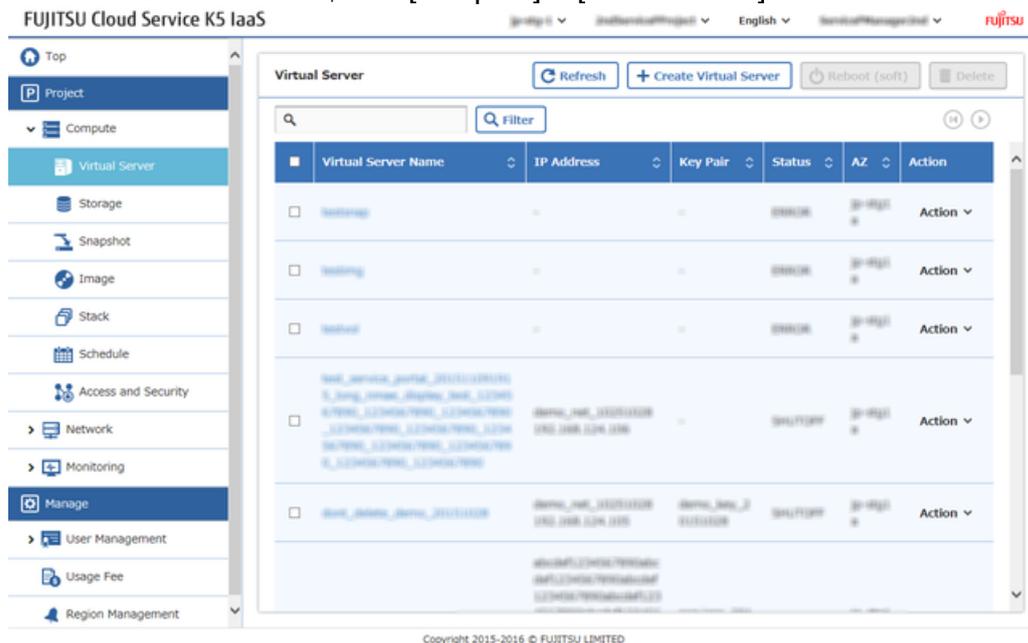
Create a virtual server.

About this task

This section explains the procedure of creating a new virtual server using a CentOS image.

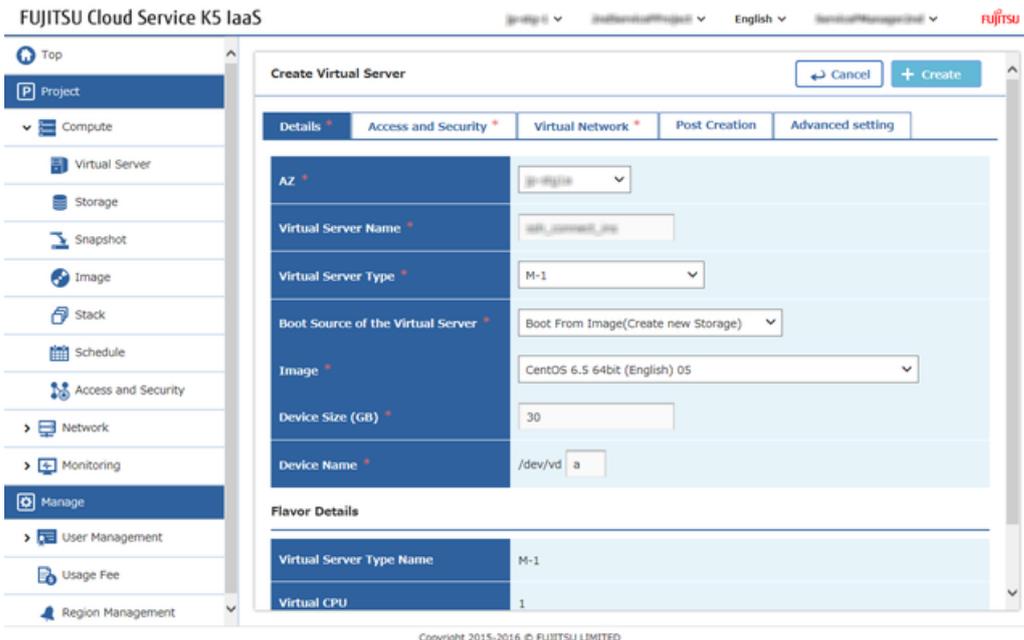
Procedure

1. From the left-hand menu, click [Compute] > [Virtual Server].



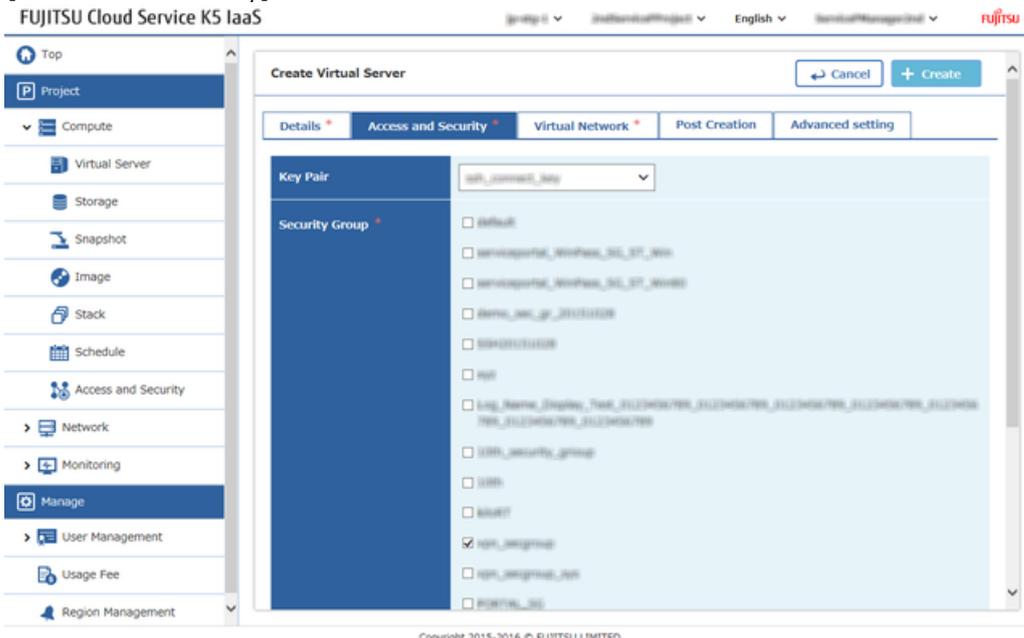
The [Virtual Server] list screen will be displayed.

2. From the [Virtual Server] list screen, click the [Create Virtual Server] button.
3. From [Creating virtual server] screen, enter the following setting item on each tab [Details] tab



Item Name	Description
AZ	Specify the availability zone to deploy virtual server
Virtual Server Name	Specify any virtual server name
Virtual Server Type	Select a virtual server type according to the performance requirement
Boot Source of the Virtual Server	Select [Boot from image (create new storage)]
Image	Select [CentOS 6.5 64bit(English) xx]  xx is a two-digit number. Tip
Device Size (GB)	Specify "30."
Device Name	Specify "a."

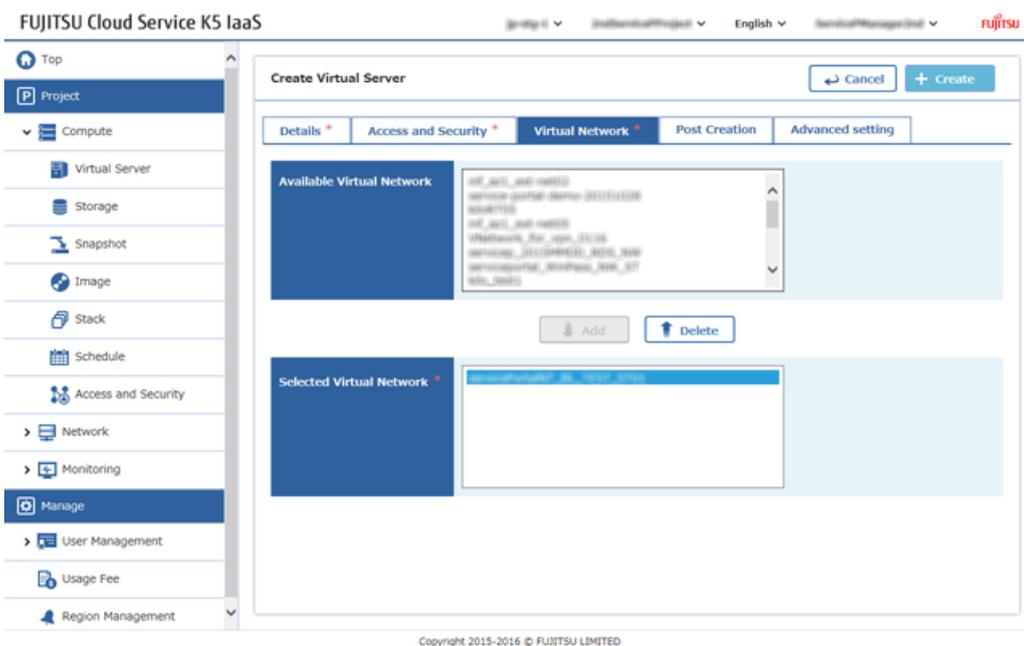
[Access and Security] tab



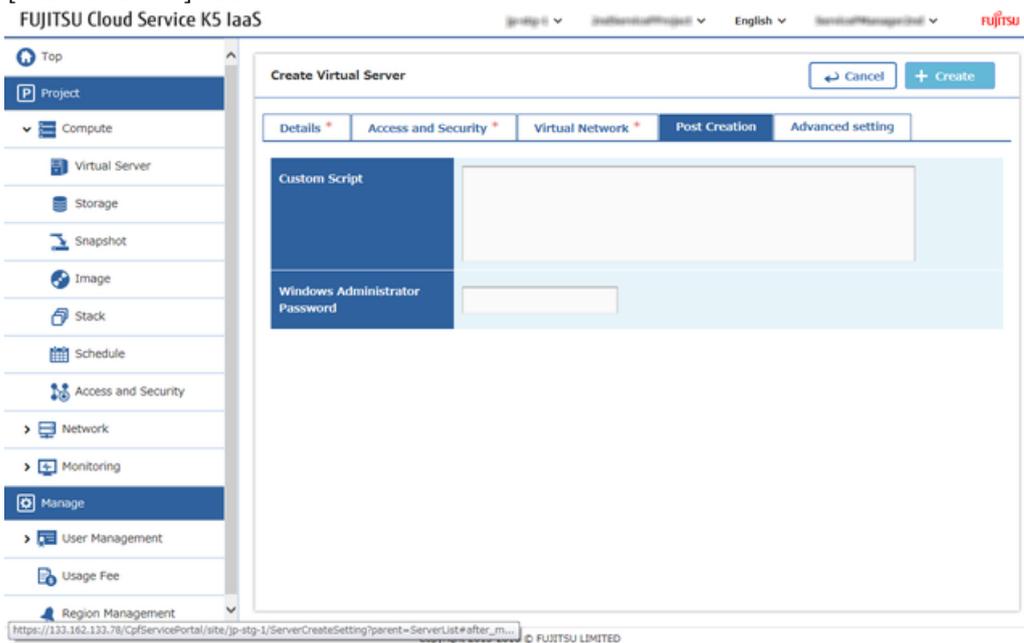
Item Name	Description
Key Pair	Select the key pair name that was created in Creating a Key Pair on page 30
Security Group	Check the security group name that was created in Creating a Security Group on page 34 <div style="border-top: 1px dotted red; padding-top: 5px;">  Clear the [default] check box. Tip </div>

[Network] tab

Select the virtual network that was created in [Creating a Network and Subnet](#) on page 26 from the [Available Virtual Network] column, and then click the [Add] button.



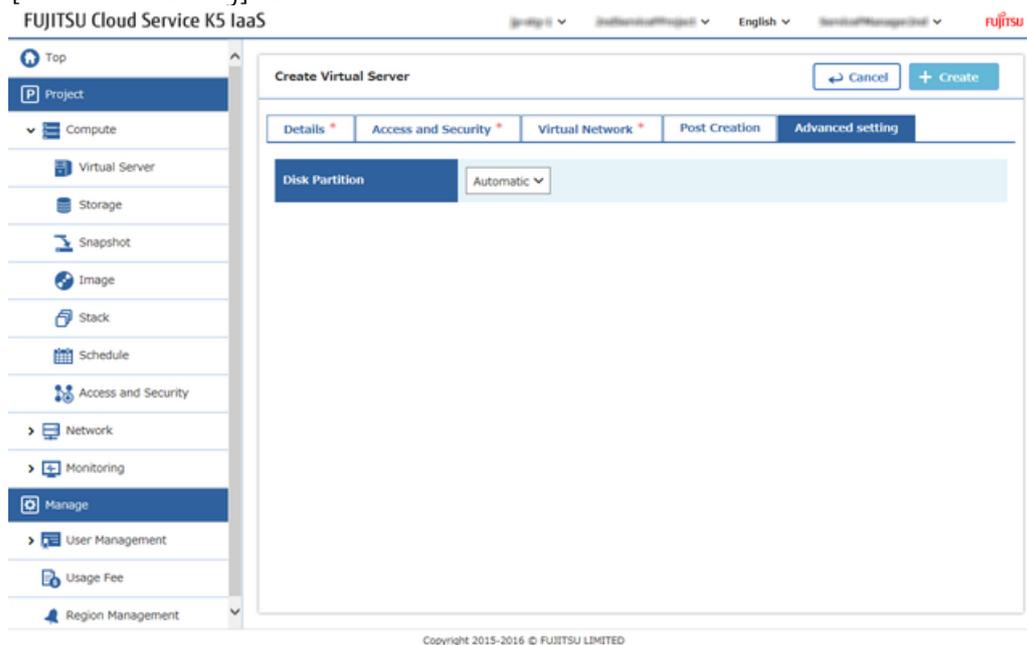
[Post Creation] tab



 Leave the Windows Administrator password as blank.

Tip

[Advanced setting] tab



Item Name	Description
Disk Partition	Select [Automatic]

4. Once information entering is completed in each tab, click on the [Create] button.
5. The procedure is complete once the created server has been added to the [Virtual Server] list screen.



Tip

The status is [BUILD] immediately after creation. Refresh the screen after a brief period of time. If the status is [ACTIVE], starting of the virtual server is complete.

5.2.2 Assigning a Global IP to the Virtual Server

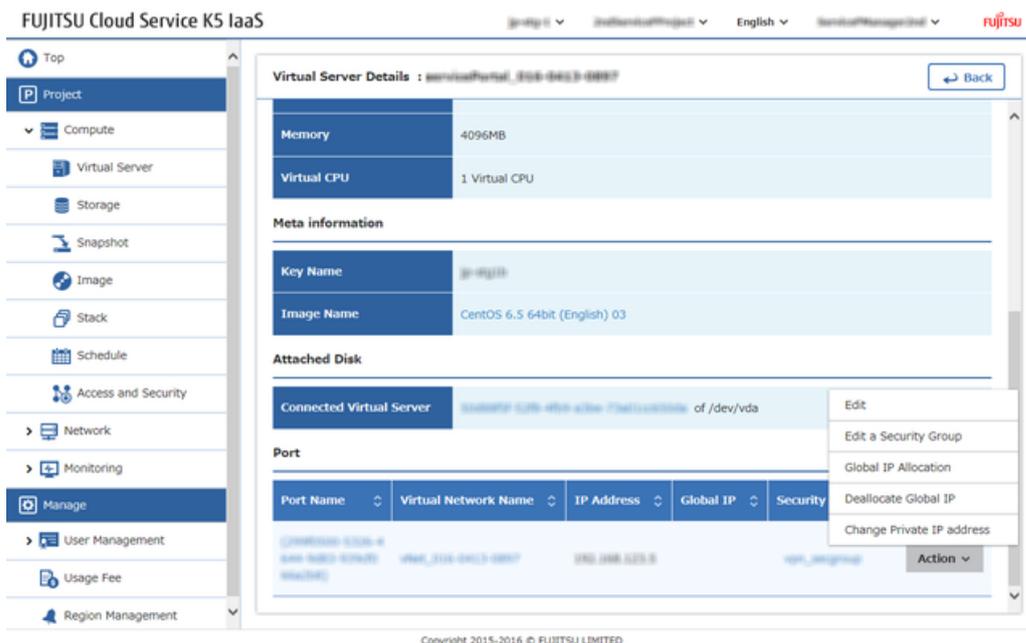
Assign a global IP address to a running virtual server in order to connect to the internet .

About this task

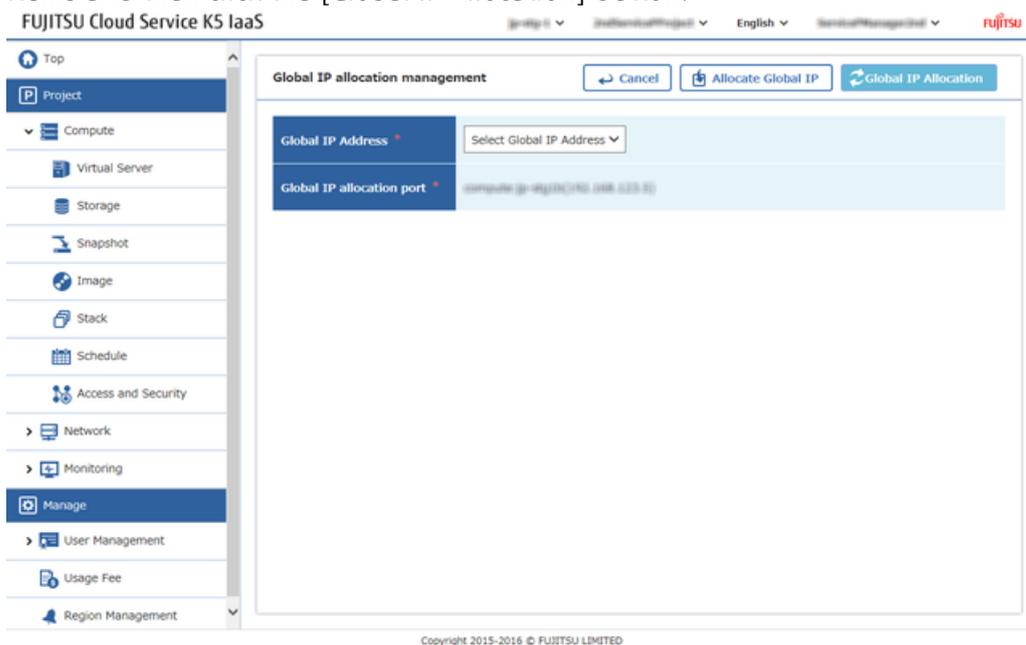
This section describes the procedure of assigning a global IP address to the virtual server which was created in [Creating a Virtual Server](#) on page 38.

Procedure

1. From the left-hand menu, click [Compute] > [Virtual Server].
The [Virtual Server] list screen will be displayed.
2. Click on [Global IP Allocation] from the [Action] menu of the virtual server, to which you want to assign the global IP address.



- From the [IP Address] tab of the [Global IP allocation management] screen, set the following items and then click the [Global IP Allocation] button.



Item Name	Description
Global IP Address	Select the IP address which was acquired in Acquiring a Global IP Address on page 32
Global IP allocation port	Do not change the default selection

- Procedure is completed once, the global IP address is added to the [Virtual Server] list screen, in the [IP address] column of the Virtual server row to which the IP address was assigned. .

5.3 Creating a Load Balancer

5.3.1 Creating a Security Group for the Load Balancer

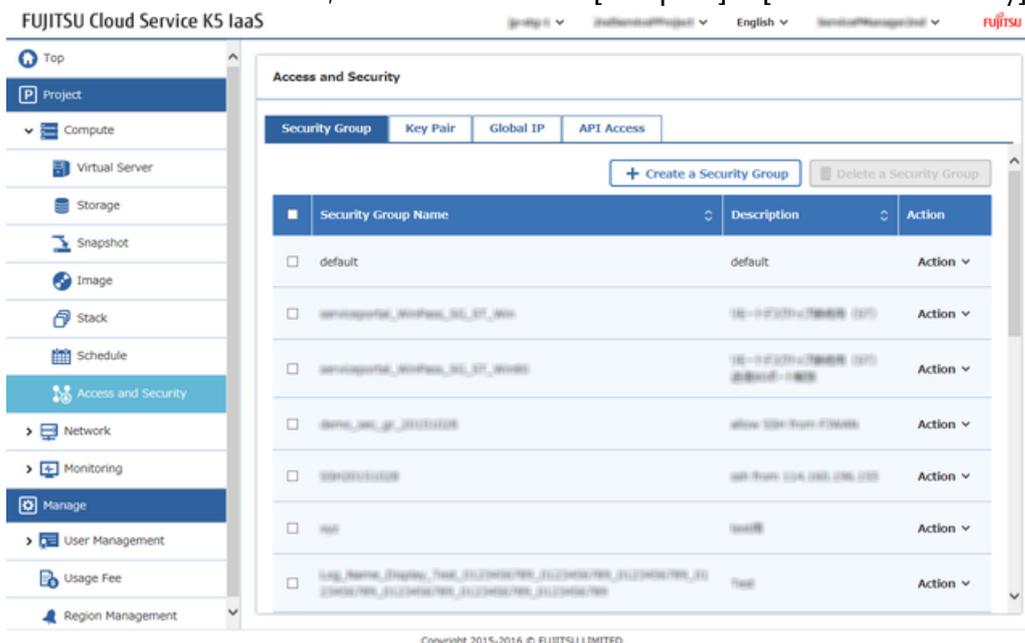
Create a security group in order to protect the load balancer from an unauthorised communication which can be accessed from the Internet.

About this task

While creating the load balancer, create the security group beforehand. The creation procedure is as shown below.

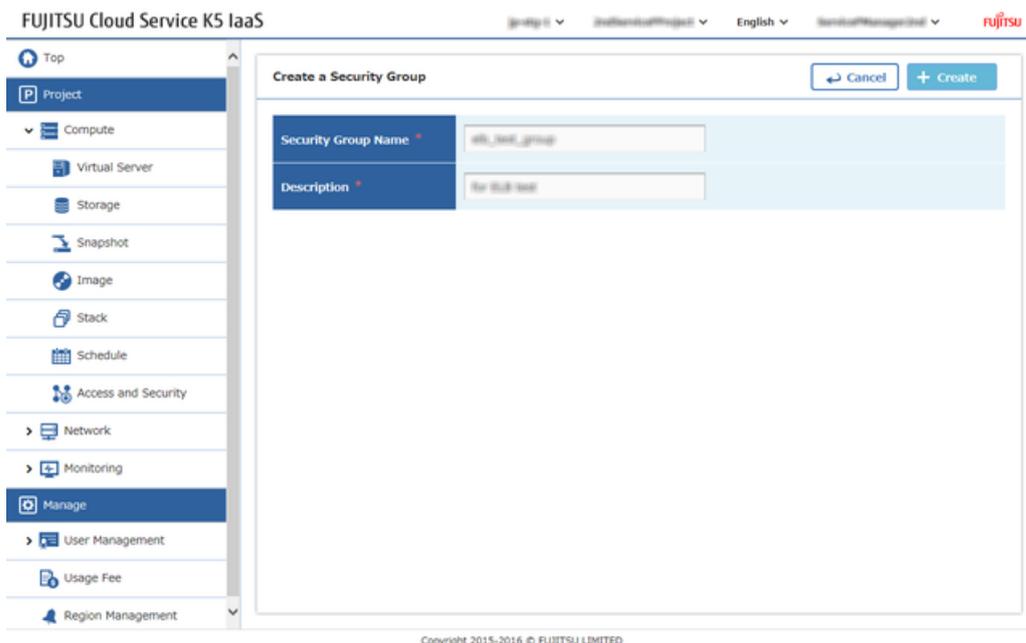
Procedure

1. From the left-hand menu, click in the order of [Compute] > [Access and Security].



The [Access and Security] screen will be displayed.

2. On the [Access and Security] screen, click on the [Create a Security Group] button.
3. On the [Create a Security Group] screen, enter the following settings items and then click the [Create] button.



Item Name	Description
Security Group Name	Specify any security group name
Description	Specify a description for the security group to be created

The procedure is complete once the created security group has been added to the [Security Group List] screen.

5.3.2 Creating a Security Group Rule for the Load Balancer

Create a rule, for the security group which was created for the load balancer.

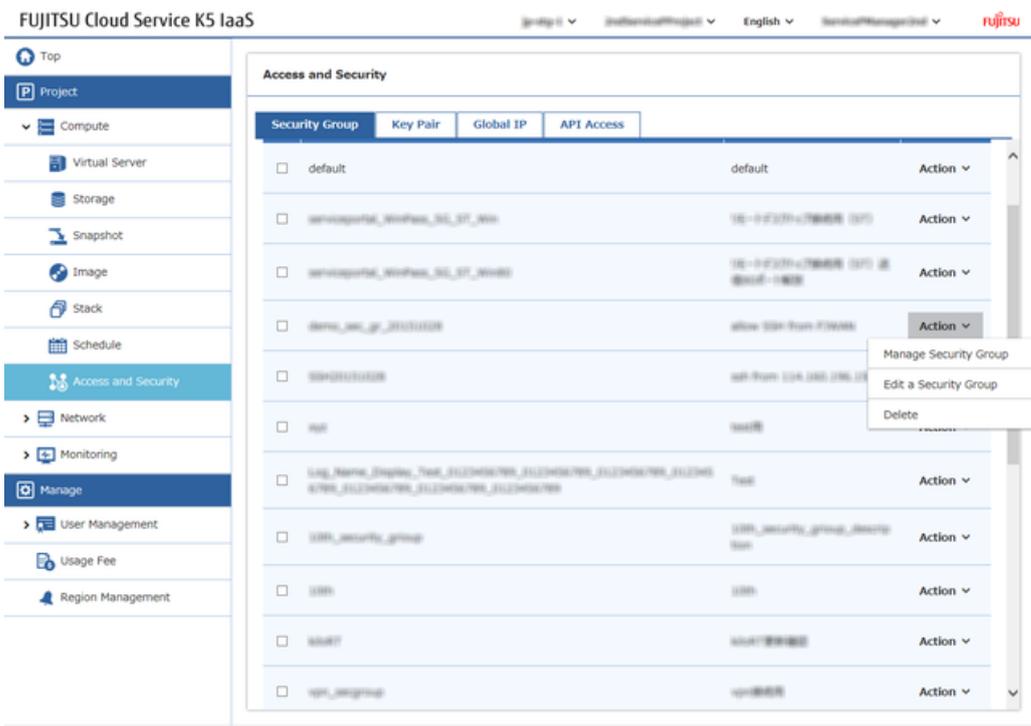
About this task

Create a rule that allows the following type of communication for the security group which was created in [Creating a Security Group for the Load Balancer](#) on page 43:

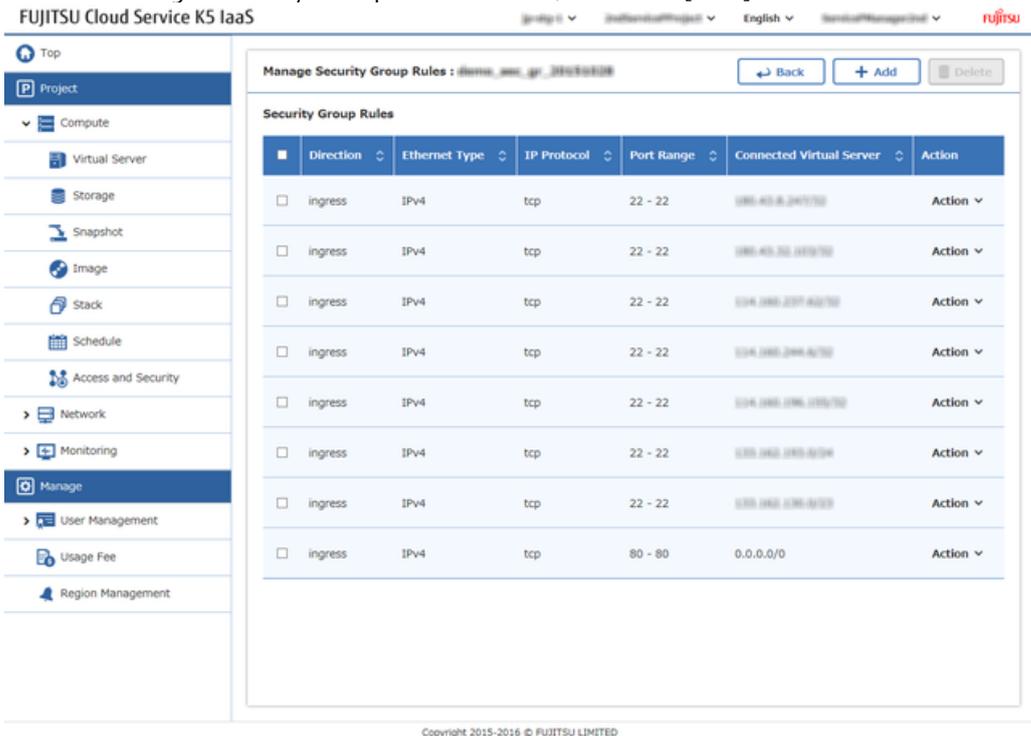
- HTTP

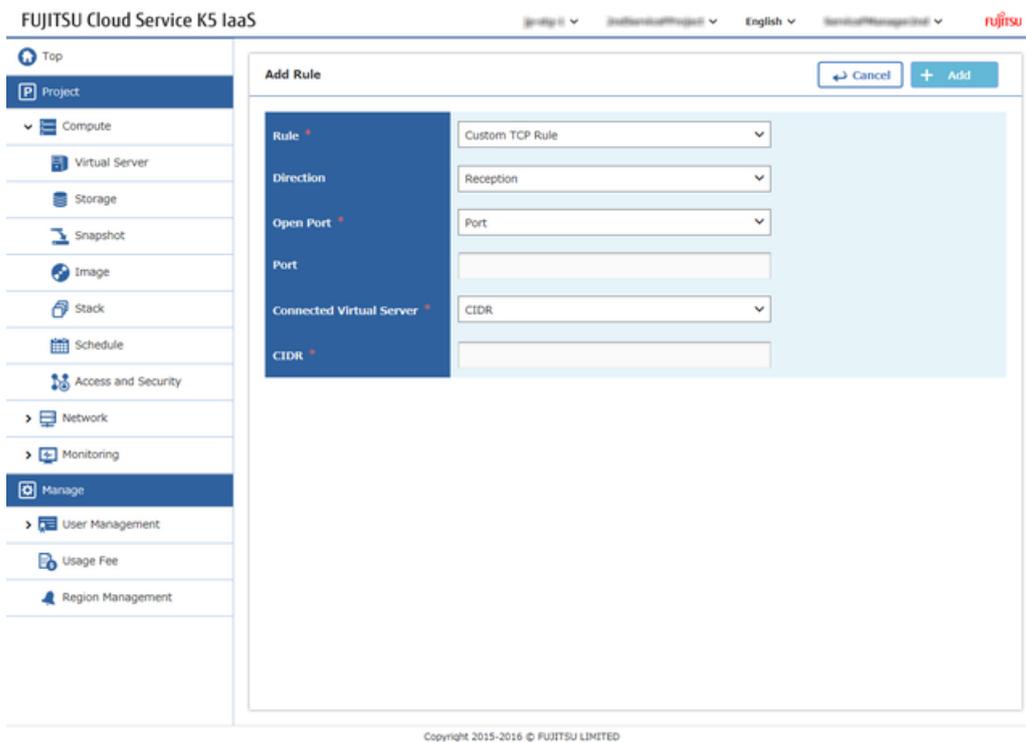
Procedure

1. From the left-hand menu, click [Compute] > [Access and Security].
The [Access and Security] screen will be displayed.
2. On the [Access and Security] screen, click on the [Action] menu for the intended security group, and then click [Manage Security Group].



3. On the Manage Security Group Rules screen, click the [Add] button.





4. On the [Add Rule] screen, enter the following settings and then click the [Add] button.

Item Name	Description
Rule	Select [Custom TCP Rule]
Direction	Select [Reception]
Open Port	Select [Port]
Port	Specify "80"
Connected to	Select [CIDR]
CIDR	xxx.xxx.xxx.0/24  Tip Limit the allowed range (source address) as per requirement

The procedure is complete once the configured settings have been added to the [Security Group Rules] Administration screen.

5.3.3 Creating a Load Balancer

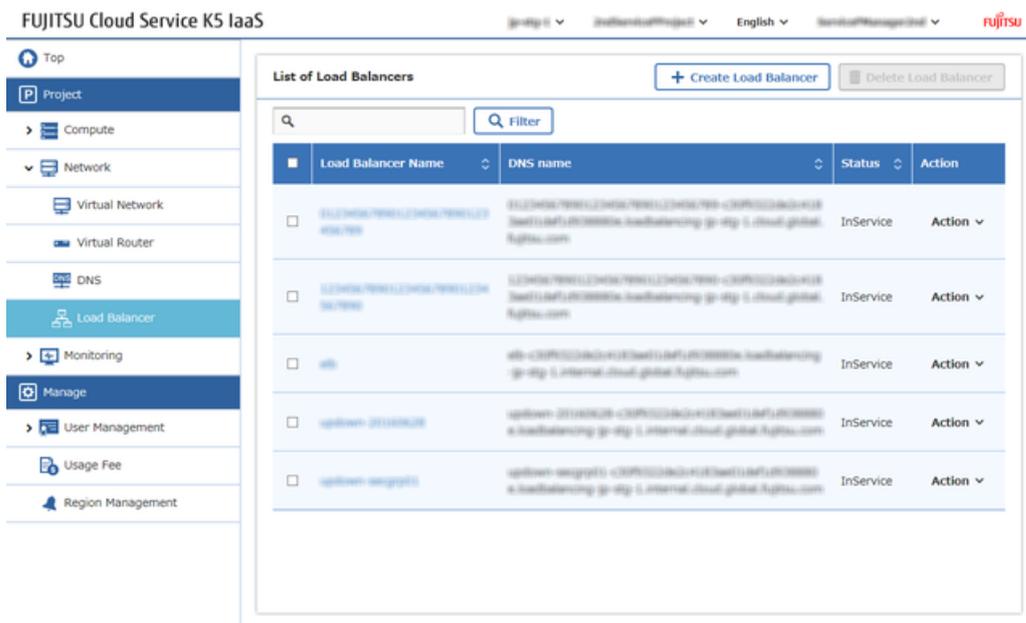
Deploy Load balancer in order to handle by using auto scale, in the case of excessive Access or to increase the availability usage in Availability Zone.

About this task

This section describes the procedure to create a load balancer and deploy it for use with the virtual servers that were created in *Creating a Virtual Server* on page 38. In this example, the protocol for distribution is HTTP.

Procedure

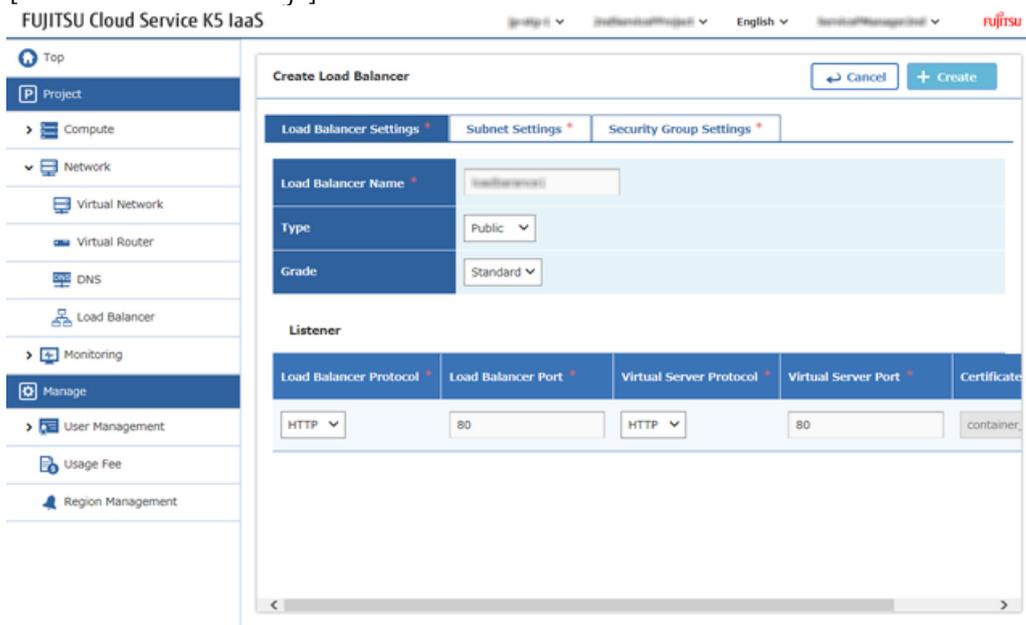
1. From the left-hand menu, click [Network] > [Load Balancer].



Copyright 2015-2016 © FUJITSU LIMITED

The [List of Load Balancer] screen will be displayed.

2. Click the [Create Load Balancer] button on the [List of Load Balancer] screen.
3. On each tab of the [Create Load Balancer] screen, set the following items.
[Load Balancer Settings] tab



Copyright 2015-2016 © FUJITSU LIMITED

Item Name	Description
Load Balancer Name	Specify a load balancer name
Type	Select [Public] <div style="border: 1px dashed red; padding: 5px;"> <p> Note When the [Public] type creation is completed, it can be referred on the internet .</p> </div>

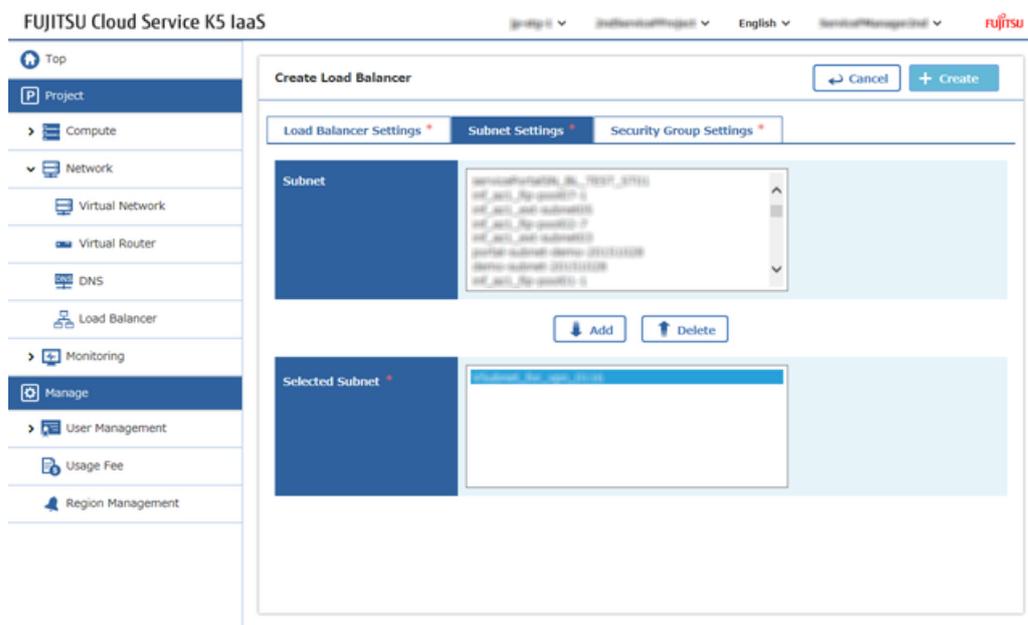
Item Name	Description
Grade	Select [Standard]

Table 3: [Listener] Section

Item Name	Description
Load Balancer Protocol	Select [HTTP]
Load Balancer Port	Specify "80"
Virtual Server Protocol	Select [HTTP]
Virtual Server Port	Specify "80"
Certificate	Do not set

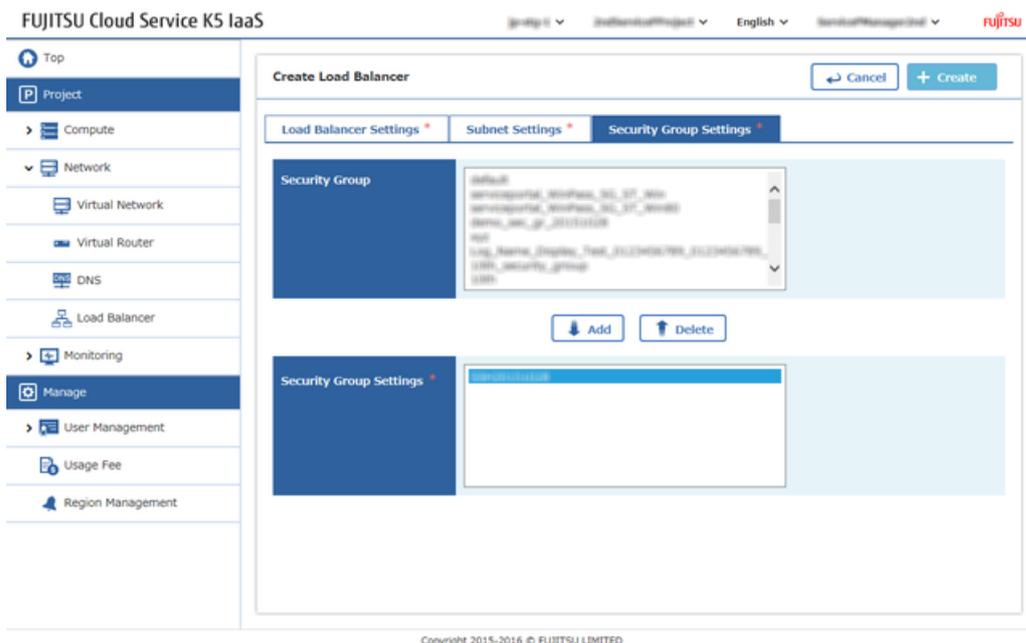
[Subnet Settings] tab

Select the subnet in order to deploy the load balancer from the [Subnet] column, and then click the [Add] button.



[Security Group Settings] tab

Select the security group which was created in [Creating a Security Group for the Load Balancer](#) on page 43 from the [Security Group] column, and then click the [Add] button.



4. When the entering the information is completed in each tab, click the [Create] button.
The procedure is complete once when the created load balancer has been added on the [List of Load Balancer] screen.

5.3.4 Enabling the Health Check Function of the Load Balancer

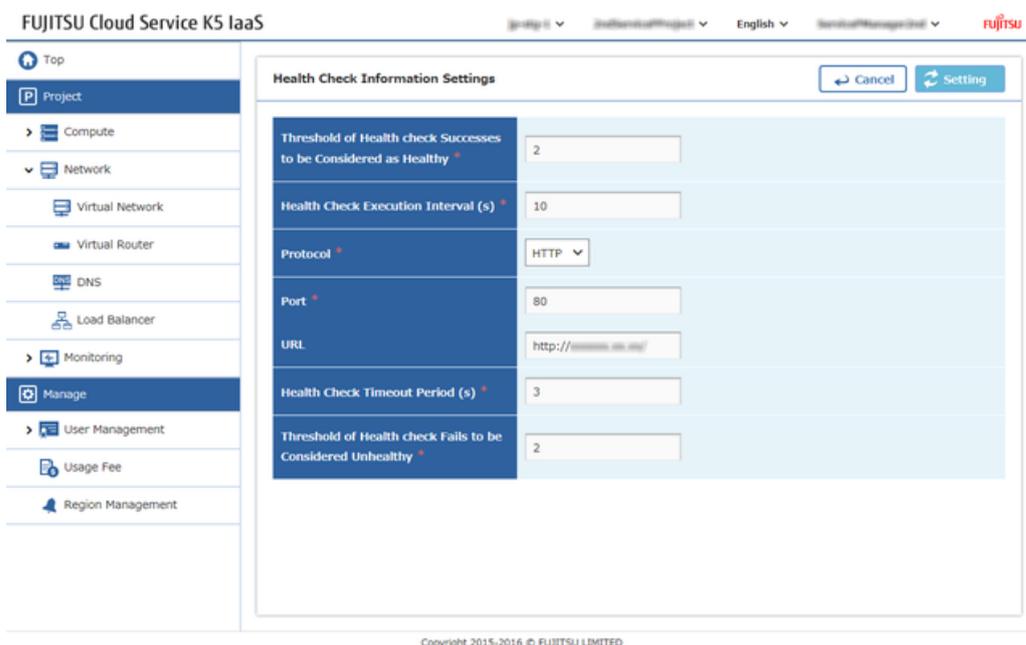
Health check can be carried out for the virtual servers in which the load is distributed by the load balancer.

About this task

This section describes the procedure for enabling the health check function for the load balancer that was created in [Creating a Load Balancer](#) on page 46.

Procedure

1. From the left-hand menu, click [Network] > [Load Balancer].
The [List of Load Balancer] screen will be displayed.
2. On the [List of Load Balancer] screen, click [Health Check Information Setting] on the [Action] menu for the intended load balancer.
3. Set the following items on the [Health Check Information Settings] screen, and then click the [Setting] button.



Item Name	Description
Threshold of health check Successes to be Considered as Healthy	Specify "2"
Health Check Execution Interval (s)	Specify "10"
Protocol	Select [HTTP]
Port	Specify "80"
URL	Specify the URL of the landing page of Apache that is installed in the virtual server
Health Check Timeout Period (s)	Specify "3"
Threshold of Health check Fails to be Considered Unhealthy	Specify "2"

4. Click the appropriate load balancer name on the [List of Load Balancer] screen.
5. The procedure is complete once the configured settings are displayed on the [Health Check Information] tab of the [Load Balancer Details] screen.

5.3.5 Adding a Virtual Server to which the Workload is Distributed by the Load Balancer

After you have finished configuring the settings of the security group, the distribution protocol, and the health check function for the load balancer, add the virtual servers which require workload distribution..

Before you begin

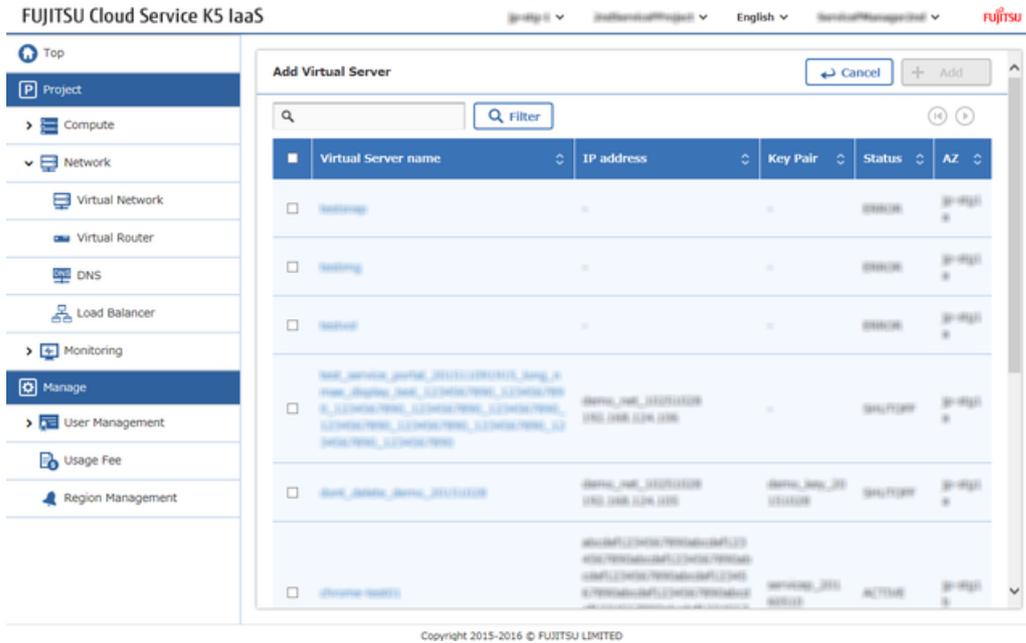
Create two or more virtual servers by following the steps in [Creating a Virtual Server](#) on page 38.

About this task

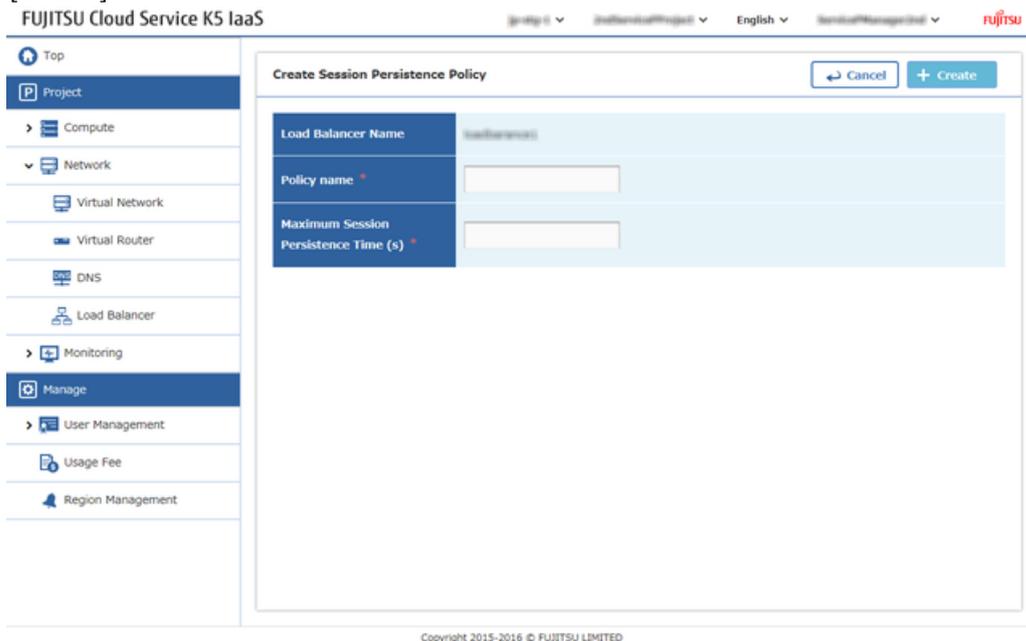
This section describes the procedure for adding multiple virtual servers to a single load balancer. It also describes the procedure for configuring the settings related to session maintenance.

Procedure

1. From the left-hand menu, click [Network] > [Load Balancer].
The [List of Load Balancer] screen appears.
2. On the [List of Load Balancer] screen, click [Add Virtual Server] on the [Action] menu for the intended load balancer.
3. On the [Add Virtual Server] screen, select and check mark all the virtual servers which require workload distribution, and then click the [Add] button.



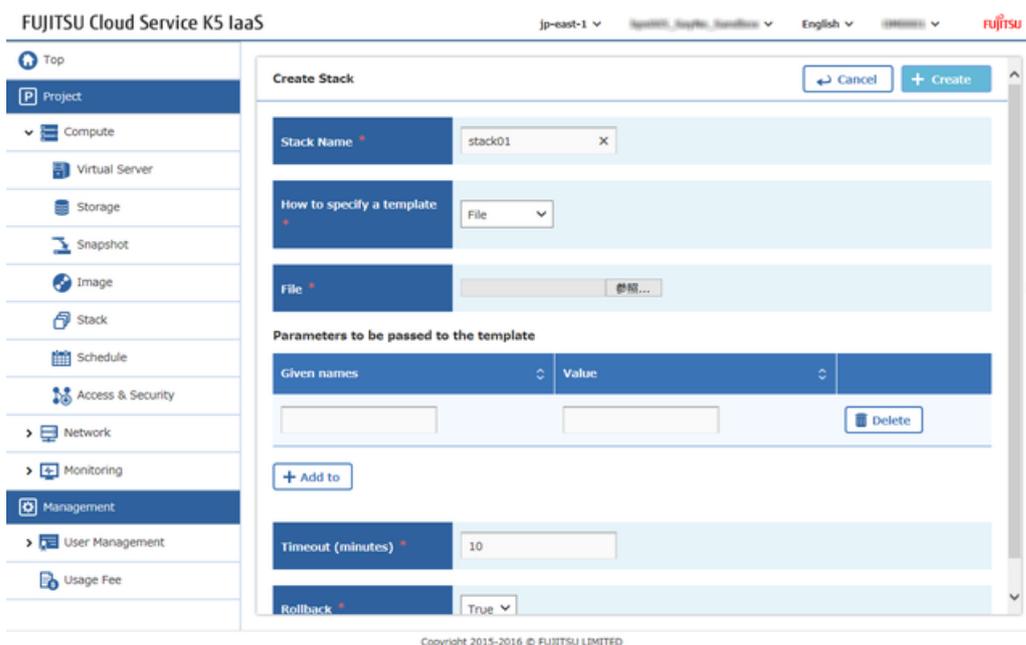
4. Return to the [List of Load Balancer] screen, and click [Create Session Maintenance Policy] from the [Action] menu.
5. Set the following items on the [Create Session Maintenance Policy] screen, and then click the [Create] button.



Item Name	Description
Policy Name	Specify a policy name

Item Name	Description
Maximum Session Persistence Time (s)	Specify "300"

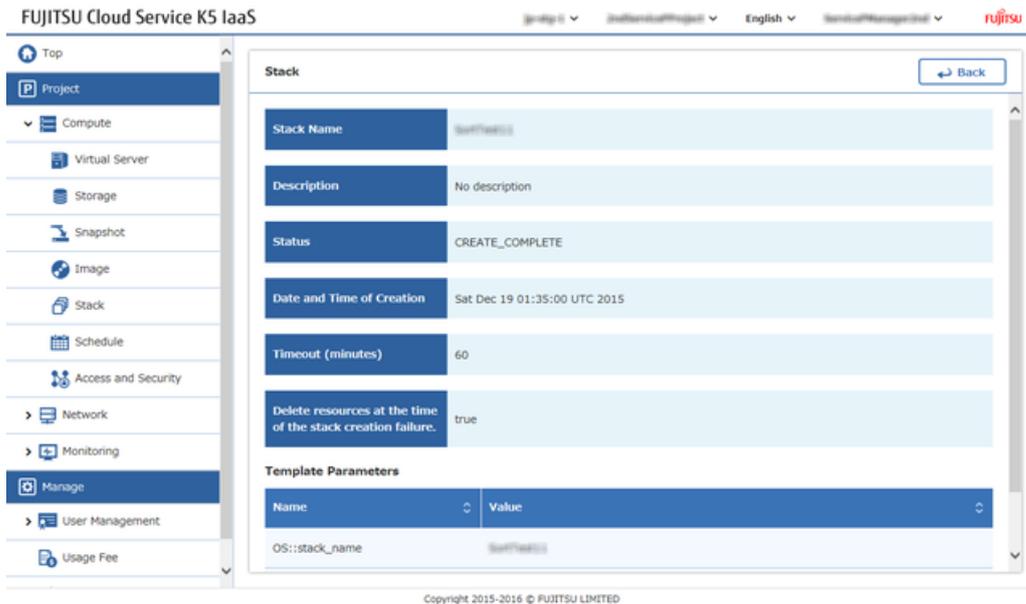
6. Click the appropriate load balancer name on the [List of Load Balancer] list screen.
7. The procedure is complete once the configured settings are displayed on the [Virtual Server Information] tab and on the [Policy Information] tab which are located on the [Load Balancer Details] screen.



Item Name	Description
Stack Name	Specify any stack name
How to specify a template	Select [File]
File	Specify the template file that has been created
Parameters to be passed to the template	Specify the required parameter names and values according to the contents of the template file to be used
Timeout (minutes)	Specify "10"
Rollback	Select [False] to delete the resources for which deployment has failed, in cases when the timeout period elapses and deployment still cannot be carried out <div style="border-top: 1px dotted red; padding-top: 5px;">  [True] disables the rollback. Tip </div>

The procedure is complete when the created stack is displayed on the [Stack] list screen.

4. Click the stack name on the same row as the created stack.



The details screen of the corresponding stack will be displayed.

5.4.2 Editing a Stack

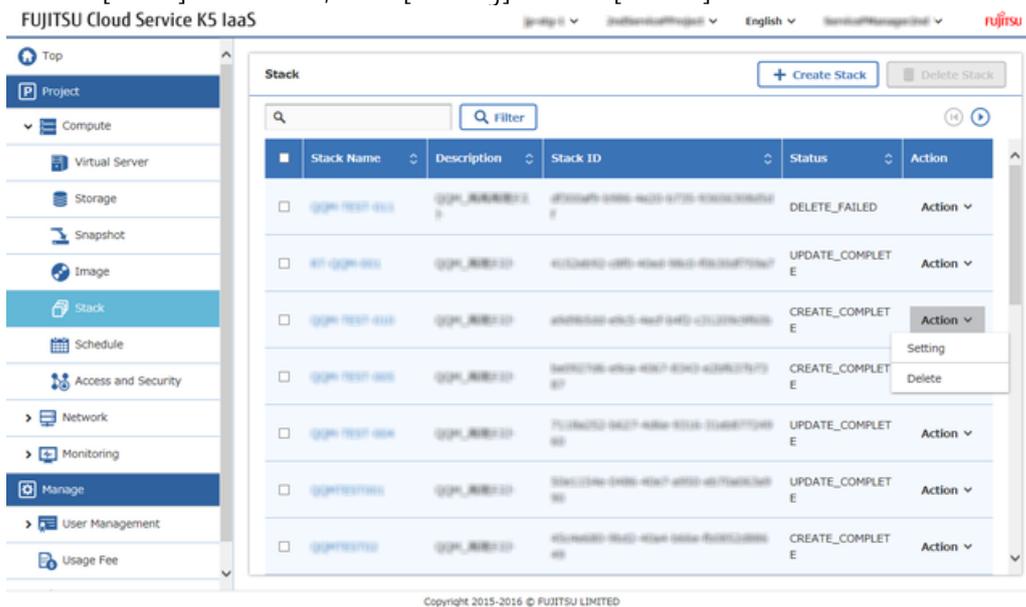
You can edit the deployed stack by using a YAML template whose configuration has been changed.

About this task

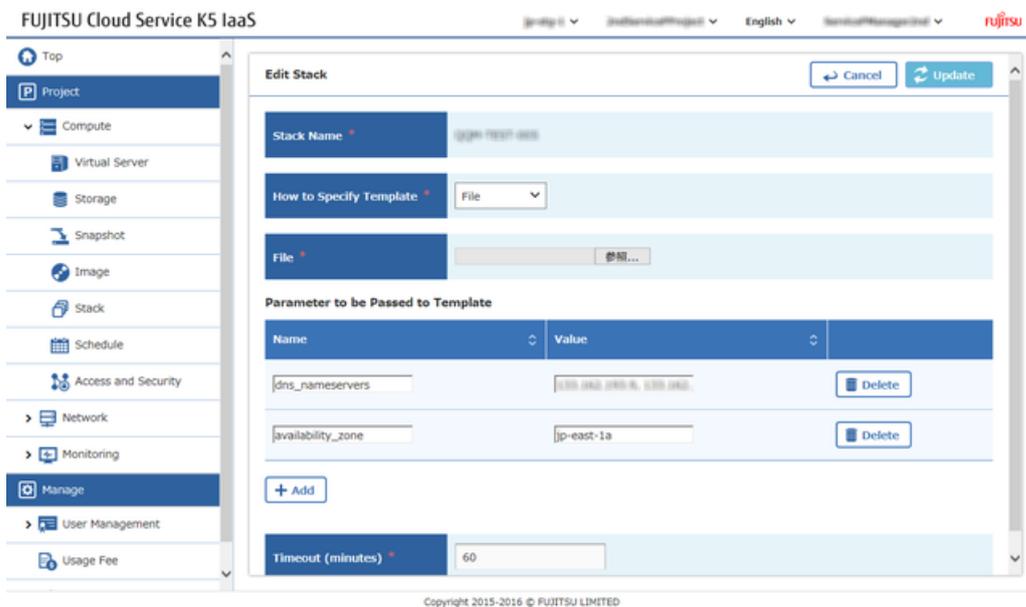
This section describes the procedure for editing the deployed stack by using a YAML template file whose configuration has been changed.

Procedure

1. From the left-hand menu, click **[Compute]** > **[Stack]**.
The **[Stack]** list screen will be displayed.
2. On the **[Stack]** list screen, click **[Setting]** on the **[Action]** menu of the stack to be edited.



3. Change the following items on the **[Edit Stack]** screen and then click the **[Update]** button.



Item Name	Description
How to Specify Template	Select [File]
File	<p> Tip Click the reference button of the [File] column and specify the template file that has been created.</p>
Parameters to be passed to Template	Specify the required parameter items and values according to the contents of the template file to be used
Timeout (minutes)	Specify "15"

5.4.3 Deleting a Stack

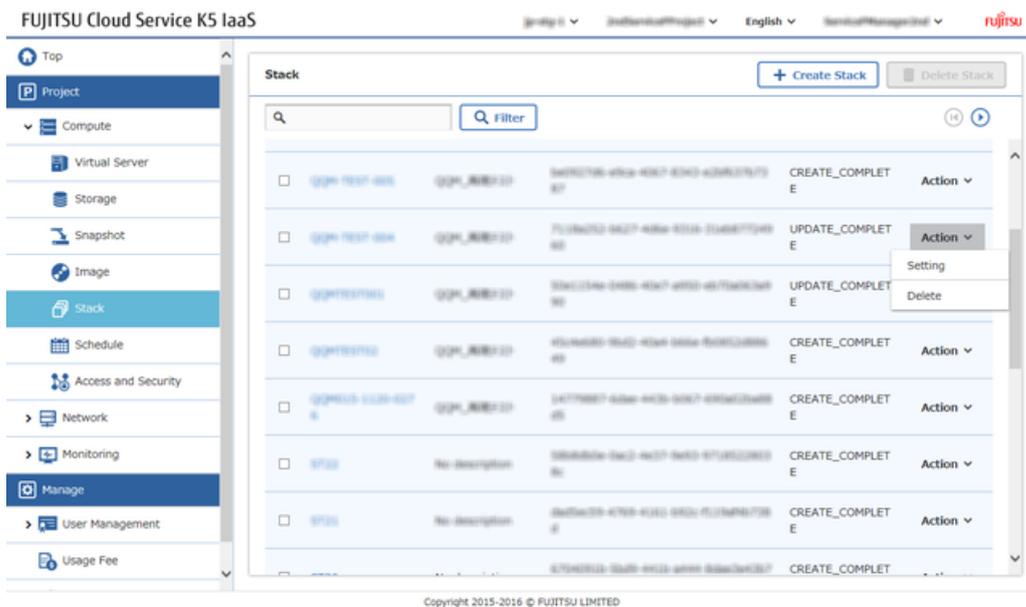
Delete a deployed stack that is no longer required.

About this task

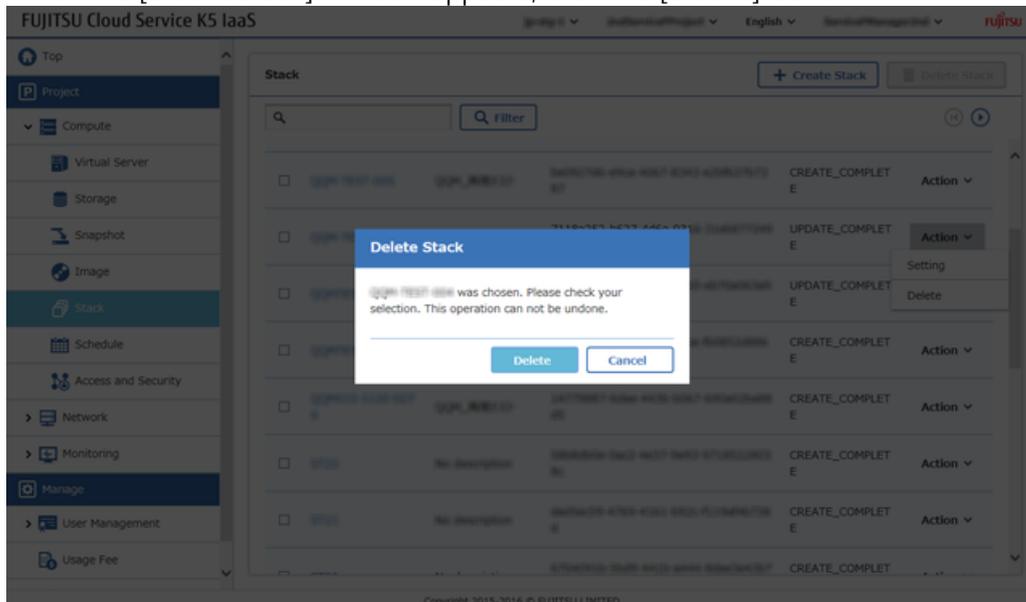
This section describes the procedure for deleting a stack.

Procedure

1. From the left-hand menu, click [Compute] > [Stack].
The [Stack] list screen will be displayed.
2. On the [Stack] list screen, click [Delete] on the [Action] menu for the stack that you want to delete.



3. When the [Delete Stack] window appears, click the [Delete] button.



The procedure is complete once the corresponding operated stack has been deleted from the [Stack] list screen.



Tip

It takes some time to complete the deletion. (During the deletion, [DELETE_IN_PROGRESS] is displayed.)

Part 6: Operating a Virtual System

Topics:

- [*Connecting to a Virtual Server*](#)
- [*Deleting a Virtual Server*](#)
- [*Monitoring Service Basics*](#)

6.1 Connecting to a Virtual Server

6.1.1 Logging in to the Virtual Server via SSH

Login to the Virtual server, by connecting through internet with the Global IP address assigned to the virtual server.

Before you begin

Install an SSH client such as TeraTerm on the PC.

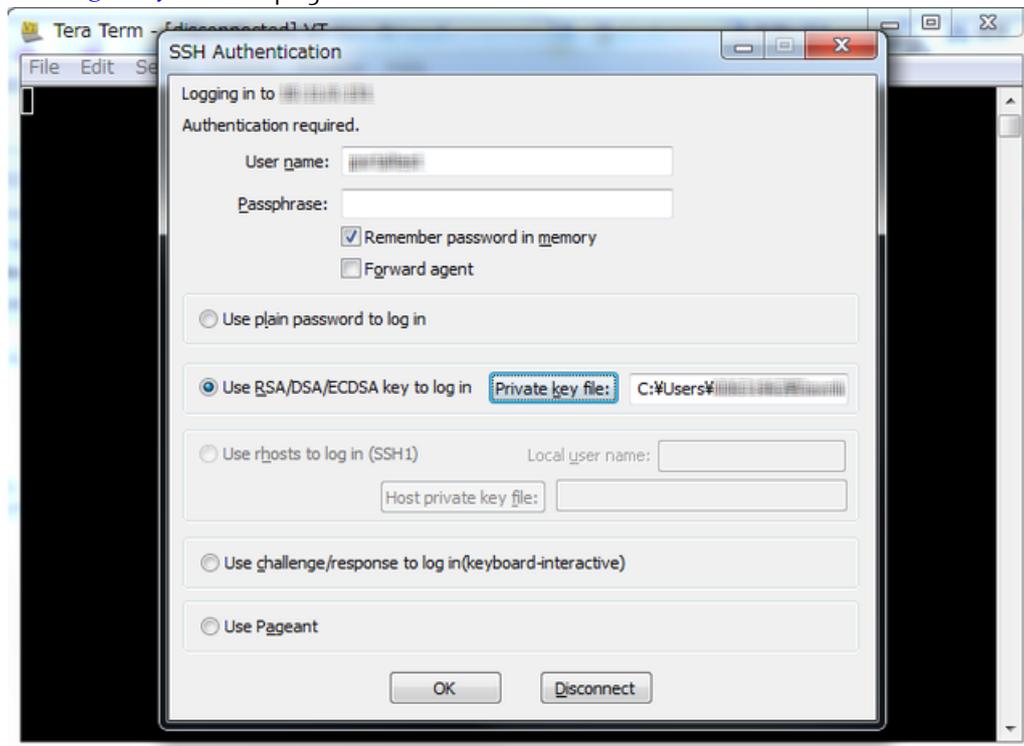
About this task

Connect via SSH to the global IP address that was assigned to the virtual server in [Assigning a Global IP to the Virtual Server](#) on page 41. This section describes the procedure of connecting to Linux Virtual Server.

Procedure

1. Connect to the global IP address to SSH, by using the SSH client.
2. Undergo the authentication process in order to login to the virtual server.
 - Authentication Using Key Pair

When the authentication window appears, specify the ID that was entered in the [Post Creation] tab in [Creating a Virtual Server](#) on page 38 and the key file that was created in [Creating a Key Pair](#) on page 30.



Results

When the authentication information is correct, the prompt will be displayed.

6.2 Deleting a Virtual Server

6.2.1 Deleting a Virtual Server

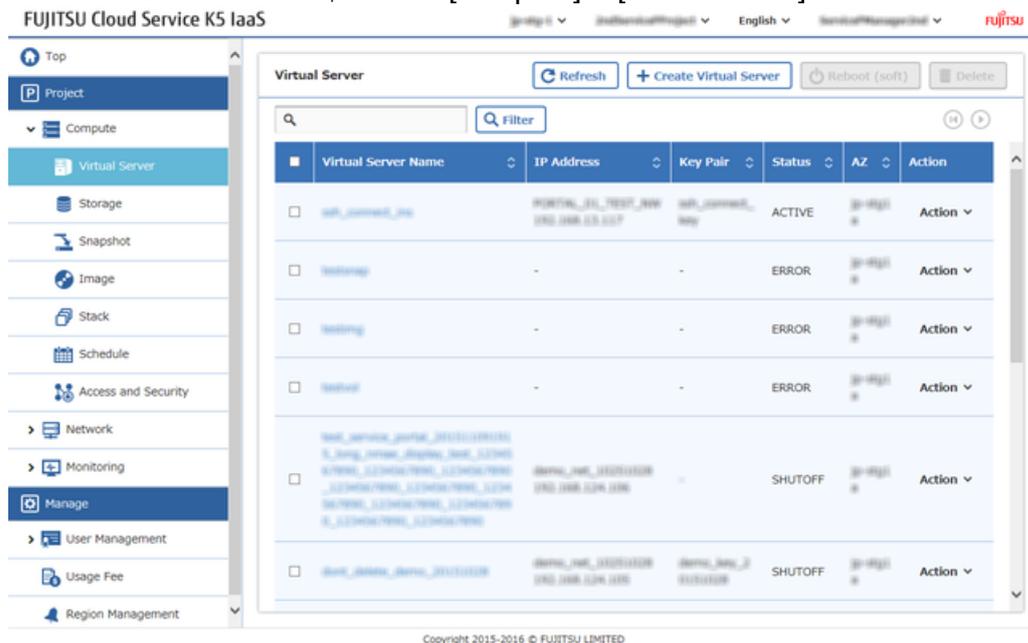
Delete a deployed virtual server.

About this task

This section describes the procedure for deleting a virtual server.

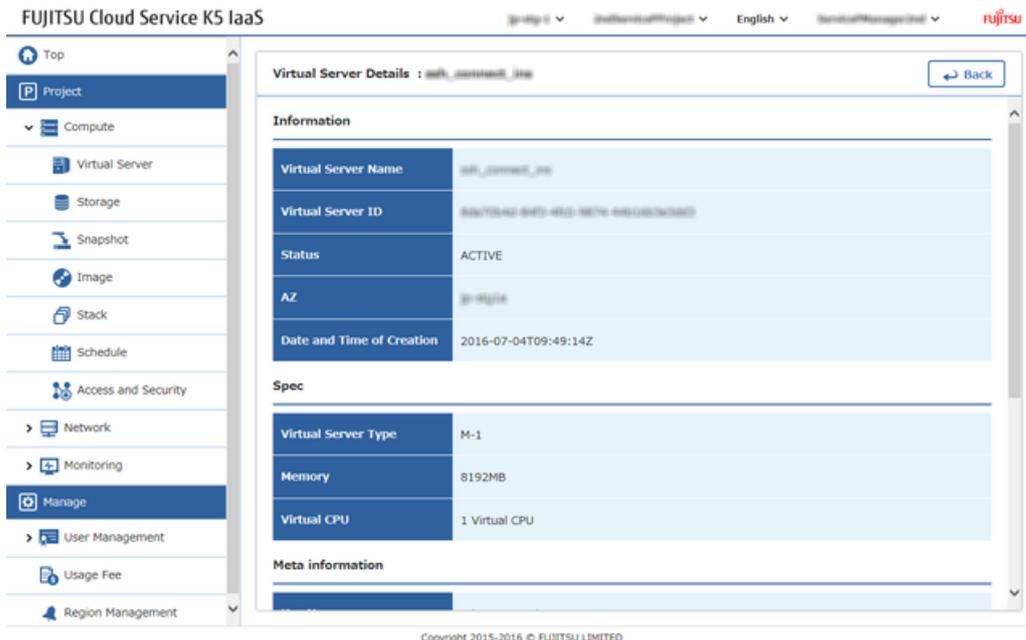
Procedure

1. From the left-hand menu, click on [Compute] > [Virtual Server].



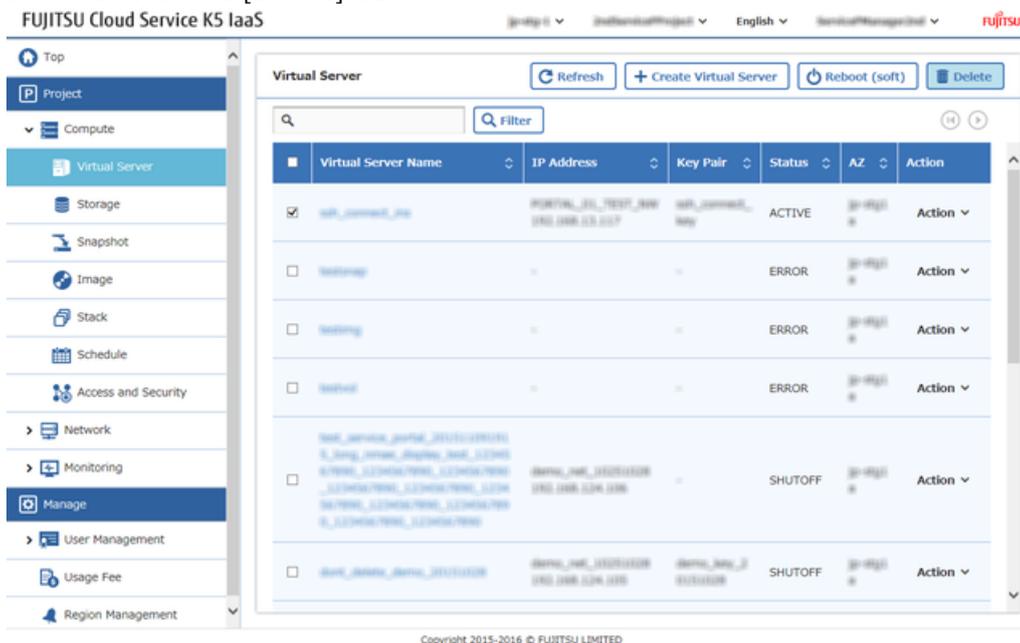
The [Virtual Server] list screen will be displayed.

2. On the [Virtual Server] list screen, click the name of the virtual server machine which needs deletion and [Virtual Server Details] screen will be displayed.

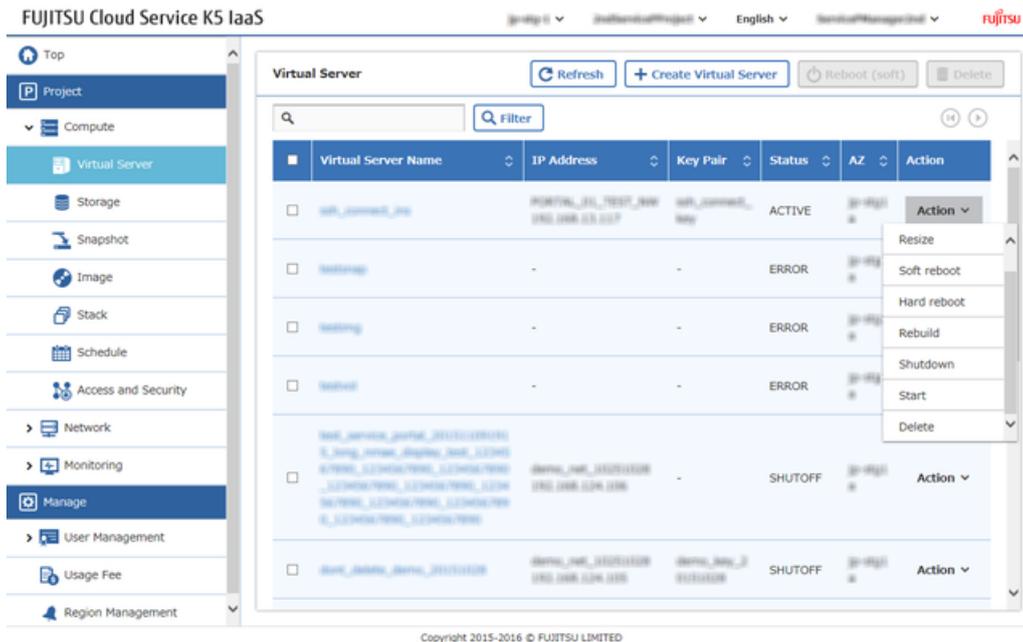


Note In case at the time of Virtual server creation, the system storage is set as "Do not Delete" then the disk displayed at that time on the screen will not be deleted. If necessary, please delete it from the [Storage] List screen.

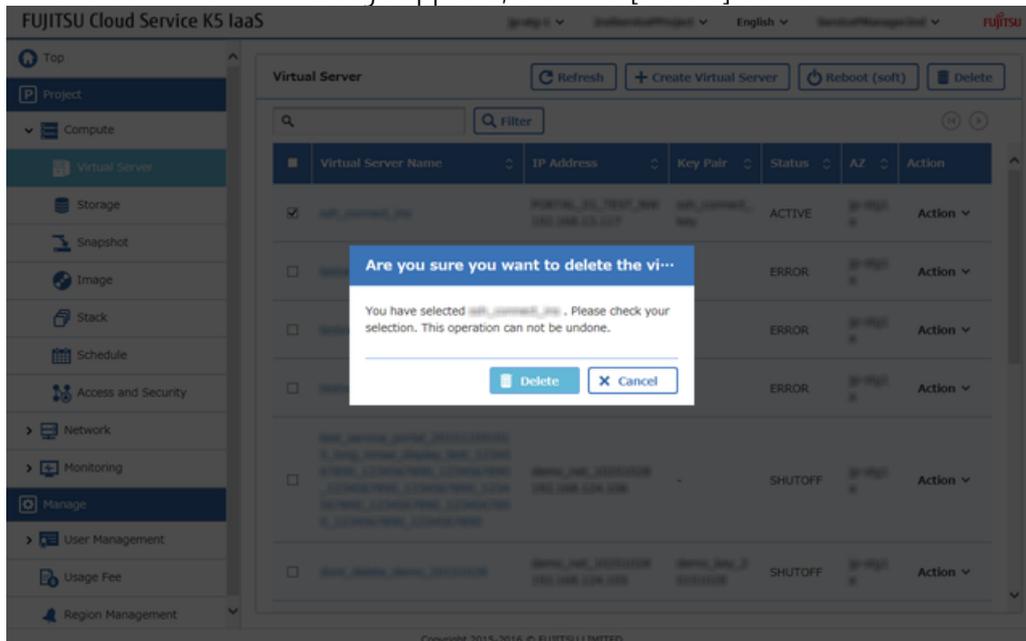
3. Click the [Back] button to return to the [Virtual Server] list screen.
4. Select the virtual server which needs to be deleted and use either of the following methods for deletion
 - On the [Virtual Server] list, use the check box on the left end of the list to select the target, and then click the [Delete] button



- On the [Virtual Server] list, select [Delete] on the [Action] menu that is in the right end of the row for the target virtual server



5. When a confirmation message appears, click the [Delete] button.



Results

After the [Virtual Server] list screen appears, confirm that the deleted virtual server is not displayed on the list.



Tip

As per the processing status, the virtual server is will left behind .In that case, after waiting for a while, please refresh by clicking the [Refresh] button.

6.3 Monitoring Service Basics

6.3.1 Creating an Alarm and Displaying the Details

You can create an alarm that contains the settings such as a threshold, for a specific monitored item, and an "action" when the threshold is reached.

About this task

This section describes the procedure to create an alarm for a monitored item, for example, the CPU utilization of a virtual server.

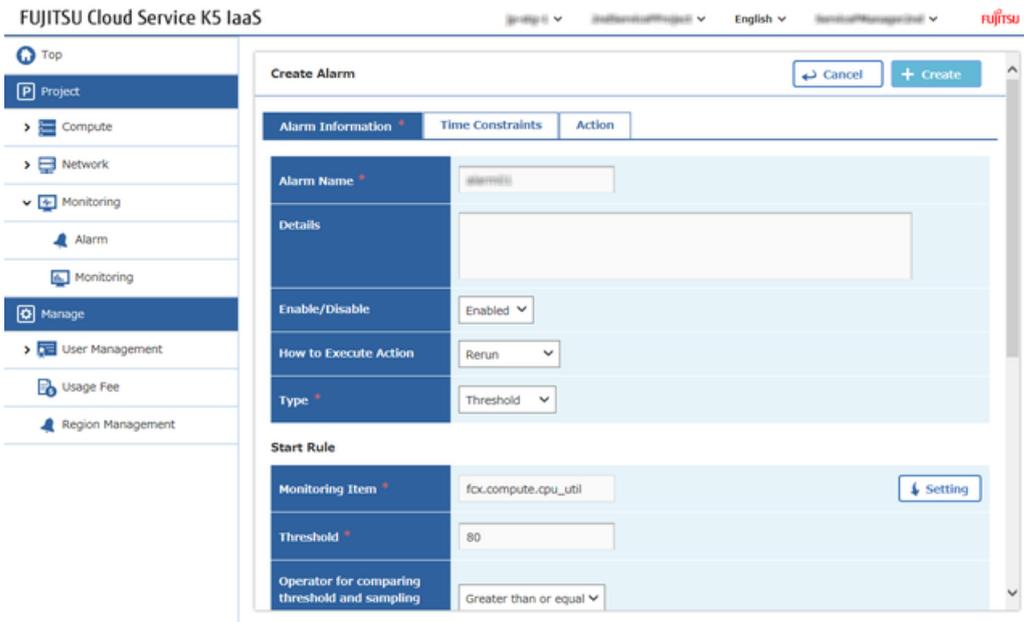
Procedure

1. From the left-hand menu, click [Monitoring] > [Alarm].
The [Alarm List] screen will be displayed.
2. Click the [Create Alarm] button on the [Alarm List] screen.

The screenshot shows the 'Alarm List' screen in the FUJITSU Cloud Service K5 IaaS console. The left-hand navigation menu is visible, with 'Monitoring' > 'Alarm' selected. The main content area displays a table of existing alarms. The table has the following columns: Alarm Name, Description, Type, Status, Enable/Disable, User ID, and Action. There are four rows of alarms listed. The first row is for 'CPUUsage', the second for 'MemoryUsage', the third for 'NetworkUsage', and the fourth for 'DiskUsage'. Each row has a checkbox on the left and an 'Action' dropdown on the right. A '+ Create Alarm' button is located at the top right of the table area. The page footer indicates 'Copyright 2015-2016 © FUJITSU LIMITED'.

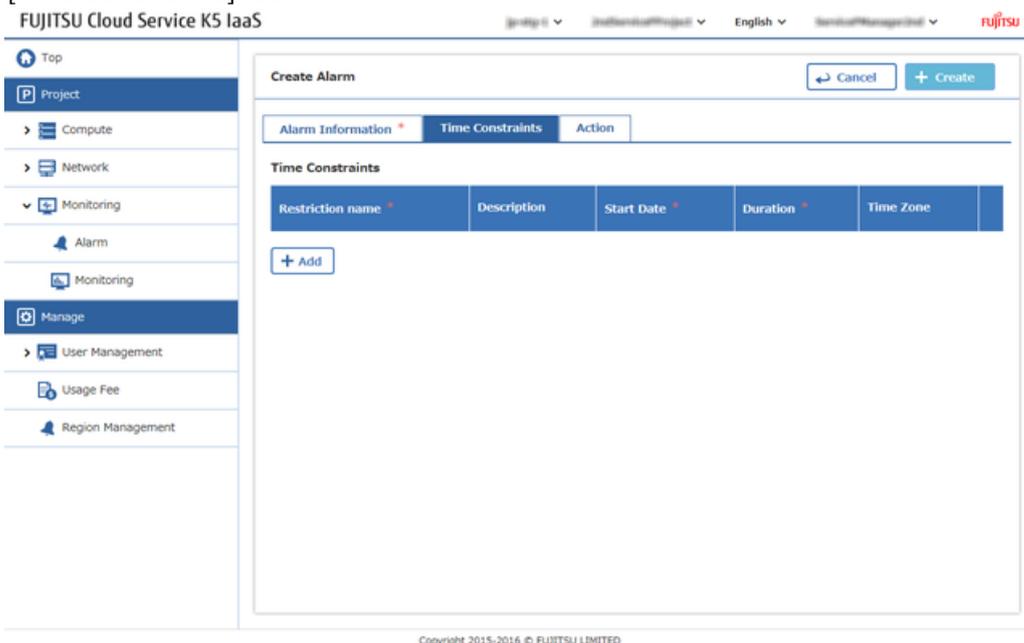
Alarm Name	Description	Type	Status	Enable/Disable	User ID	Action
<input type="checkbox"/> CPUUsage	Alarm when fxc.compute.instance is gt a avg of 3.0 over 60 seconds	threshold	threshold	false	sfjcs:Project/Default/Project/Default/ID/0	Action
<input type="checkbox"/> MemoryUsage	Alarm when fxc.ipfloating is eq a avg of 60.0 over 60 seconds	combination	combination	true	sfjcs:Project/Default/Project/Default/ID/0	Action
<input type="checkbox"/> NetworkUsage	Alarm when fxc.network is eq a avg of 60.0 over 60 seconds	threshold	threshold	true	sfjcs:Project/Default/Project/Default/ID/0	Action
<input type="checkbox"/> DiskUsage	Alarm when fxc.compute.cpu_util is eq a avg of 90.0 over 60 seconds	threshold	threshold	true	sfjcs:Project/Default/Project/Default/ID/0	Action

3. On each tab of the [Create Alarm] screen, enter the settings and click the [Create] button.
[Alarm Information] tab

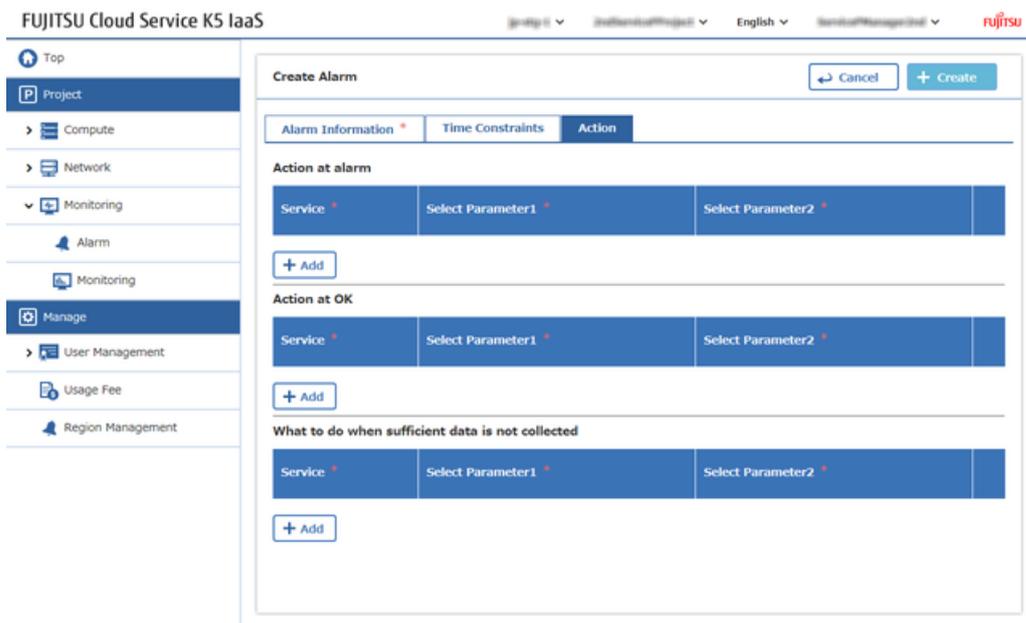


Click the [Setting] button for the [Monitoring Item] column, and select the CPU utilization rate, "fcx.compute.cpu_util", of the virtual server which needs to be monitored.

[Time Constraints] tab

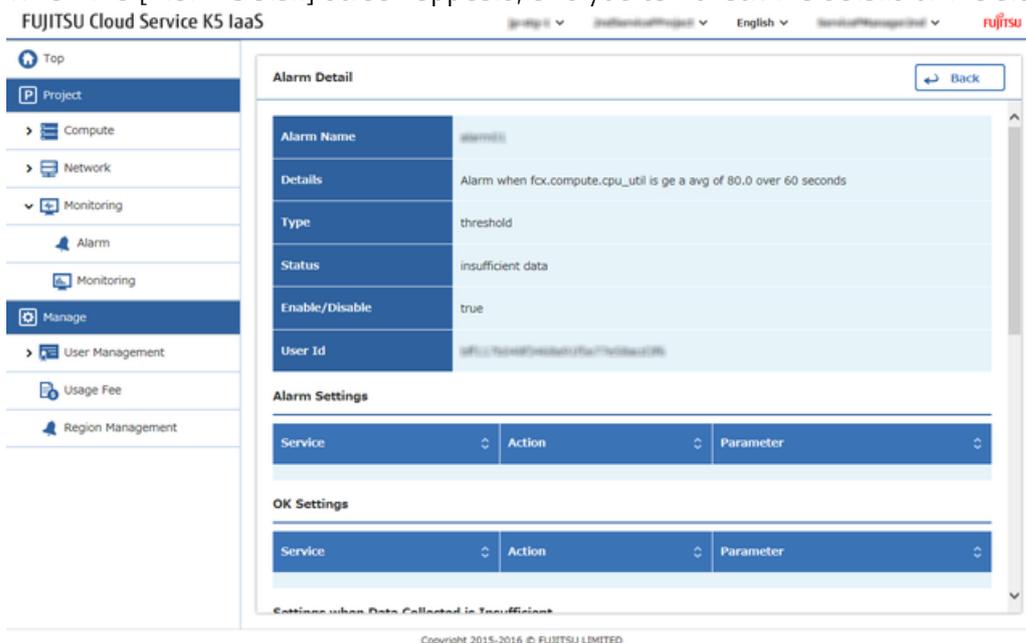


[Action] tab



Creation is complete when the created alarm appears in the [Alarm List] screen.

4. To check the details of the created alarm, click the link of the alarm name on the [Alarm List] screen.
5. When the [Alarm Detail] screen appears, and you can check the details of the alarm.



6.3.2 Displaying Monitored Items and Statistics of the Sample Data

You can check and display the items of the virtual resources that are provided by standard system.

About this task

This section describes the procedure to use the following display functions related to item to be monitored.

- Displaying the monitored item list
- Filtering the monitored items
- Displaying statistics related to the monitored items

Procedure

1. From the left-hand menu, click [Monitoring] > [Monitoring].
The [Monitoring Item] list screen appears.

The screenshot shows the 'Monitoring Item' list screen in the FUJITSU Cloud Service K5 IaaS console. The left-hand menu is expanded to show 'Monitoring'. The main content area displays a table with the following columns: Monitoring Item Name, Monitoring Item Type, Monitoring Item Unit, and Resource ID. The table lists several items, including 'fcx.port' and 'fcx.compute.disk.write.bytes.rate'.

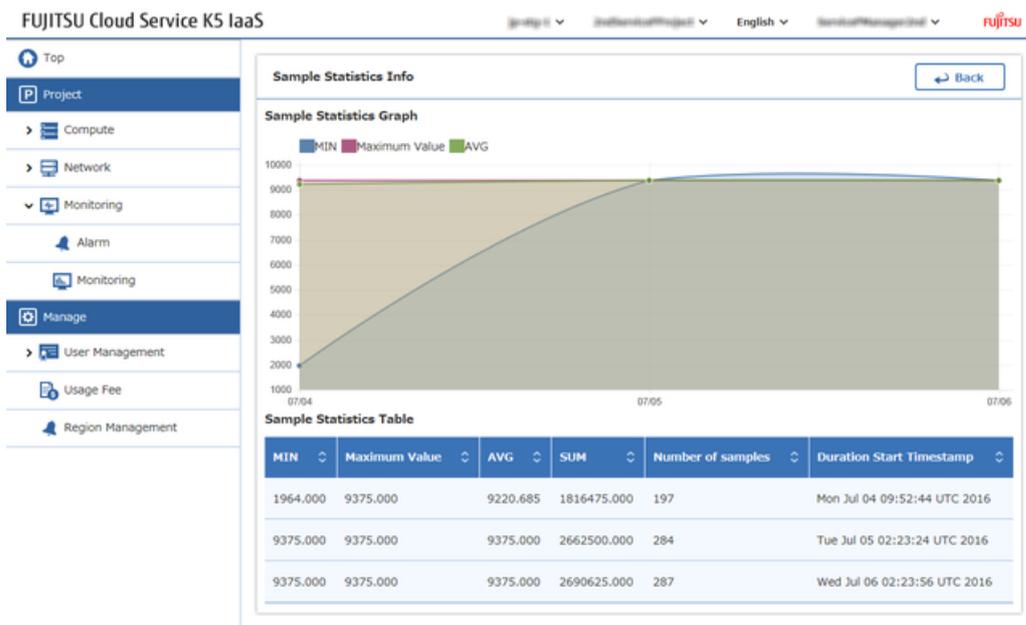
Monitoring Item Name	Monitoring Item Type	Monitoring Item Unit	Resource ID
fcx.port	gauge	port	451234567-1234-5678-9101-234567890123
fcx.port	gauge	port	807654321-9876-5432-1098-765432109876
fcx.port	gauge	port	987654321-0123-4567-8901-234567890123
fcx.compute.disk.write.bytes.rate	gauge	B/s	80a710b42-84f2-4f52-9876-456789012345
fcx.compute.disk.read.request.s.rate	gauge	request/s	80a710b42-84f2-4f52-9876-456789012345
fcx.compute.network.incoming.bytes.rate	gauge	B/s	instance-000123456-80a710b42-84f2-4f52-9876-456789012345-3-1ap001234567890
fcx.compute.network.outgoing.bytes.rate	gauge	B/s	instance-000123456-80a710b42-84f2-4f52-9876-456789012345-3-1ap001234567890

2. In order to narrow down the list of monitored items, enter a string in the input column, and click the [Filter] button.
Monitored Item name will display the narrowed down monitoring items which includes the entered string.

The screenshot shows the 'Monitoring Item' list screen with a filter applied. The search input contains 'loadbalancing' and the 'Filter' button is clicked. The table now displays only items related to load balancing.

Monitoring Item Name	Monitoring Item Type	Monitoring Item Unit	Resource ID
fcx.loadbalancing.throughput	delta	B	loadbalancing()
fcx.loadbalancing.instance.health.y	gauge	instance	loadbalancing()
fcx.loadbalancing.instance.unhealthy	gauge	instance	loadbalancing()
fcx.loadbalancing.throughput	delta	B	up10em-rcsgp0()
fcx.loadbalancing.instance.health.y	gauge	instance	up10em-rcsgp0()
fcx.loadbalancing.instance.unhealthy	gauge	instance	up10em-rcsgp0()
fcx.loadbalancing.instance.health.y	gauge	instance	up10em-rcsgp0()
fcx.loadbalancing.throughput	delta	B	up10em-rcsgp0()

3. On the monitored item list, click the name of the monitored item, in order to check the required statistics.



The sample statistics of the monitoring items which were clicked, these can be checked by the graphical change displayed on the screen .

6.3.3 Creating a Schedule

Create a schedule to send a signal (apply the scaling policy) to a stack at the specified time.

Before you begin

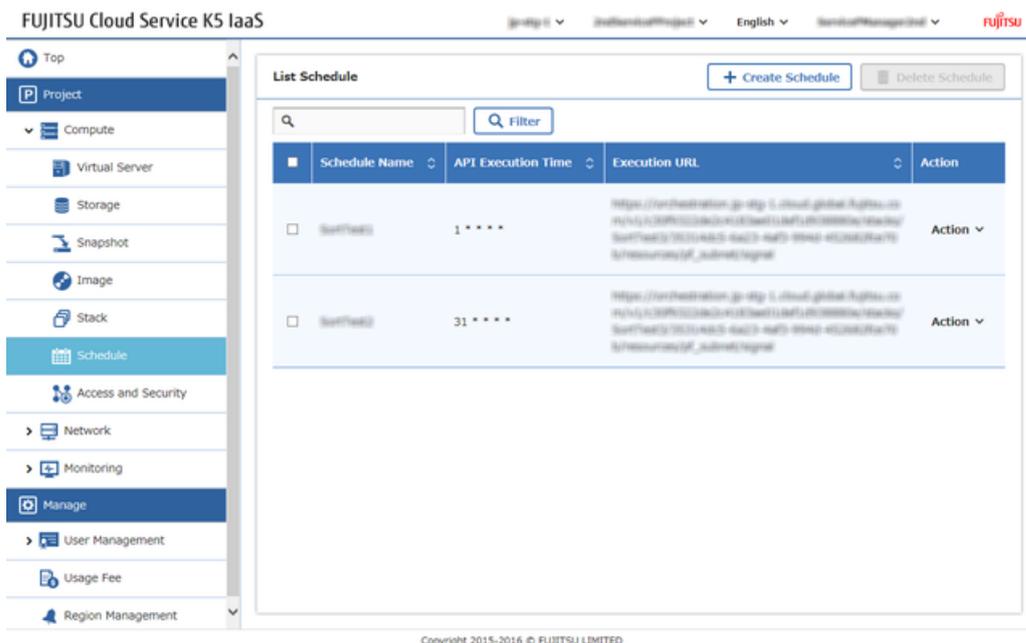
You need to create a stack that includes auto-scaling settings in advance.

About this task

This section describes the procedure to create a schedule for the stack that was created in [Creating a Stack and Displaying the Stack Details](#) on page 53.

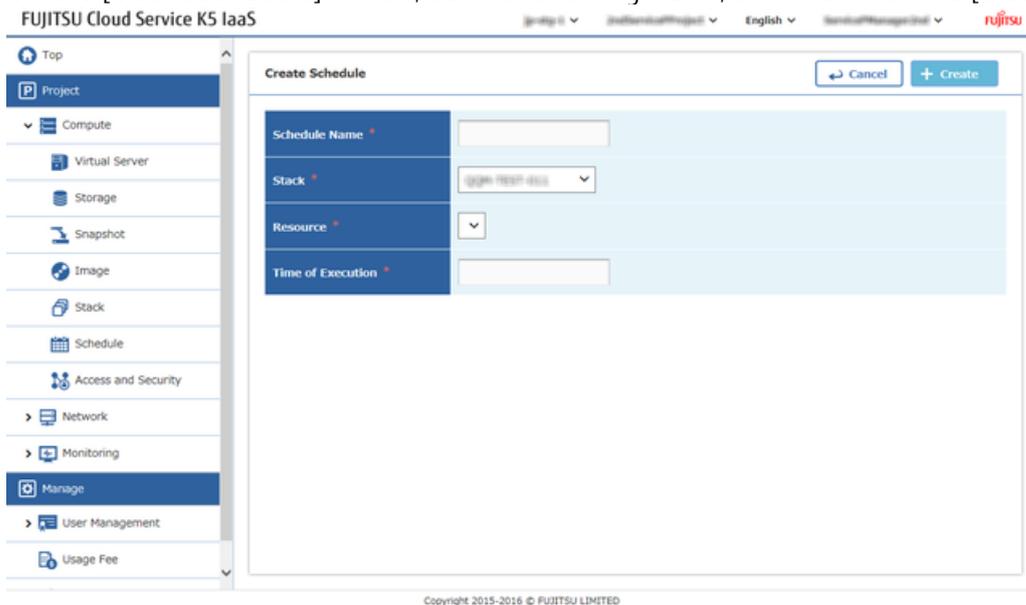
Procedure

1. From the left-hand menu, click [Compute] > [Schedule].



The [List Schedule] screen appears.

2. Click the [Create Schedule] button on the [List Schedule] list screen.
3. On the [Create Schedule] screen, set the following items, and then click the [Create] button.



Item Name	Description
Schedule Name	Specify a schedule name  Note The schedule name must be unique to the domain.
Stack	Select the target stack
Resource	Select the target to apply this schedule
Time to Execution	Specify the time in the format of "Minute Hour DOM Month DOW" (with the fields separated by single-byte spaces)  Example: 00 02 * * *

Item Name	Description
	Tip

Table 4: Format of the [Time to Execution] Field

Field	Values That Can Be Specified
Minute	From 0 to 59, * specifies every minute
Hour	From 0 to 23, * specifies every hour
DOM	From 1 to 31, * specifies every day
Month	From 1 to 12, or from jan to dec, * specifies every month
DOW	From 0 to 7 (0 and 7 specifies Sunday), or from sun to sat, * specifies all days

The procedure is complete once the created schedule appears on the [List Schedule] list screen.

6.3.4 Deleting a Schedule

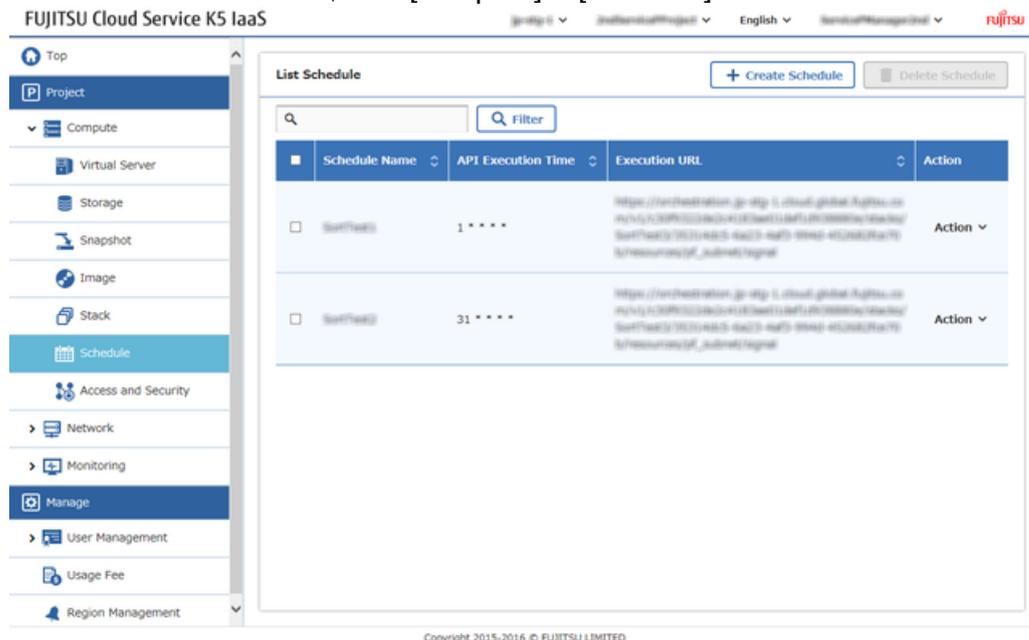
Delete a schedule that is no longer needed.

About this task

This section describes the procedure to delete a created schedule.

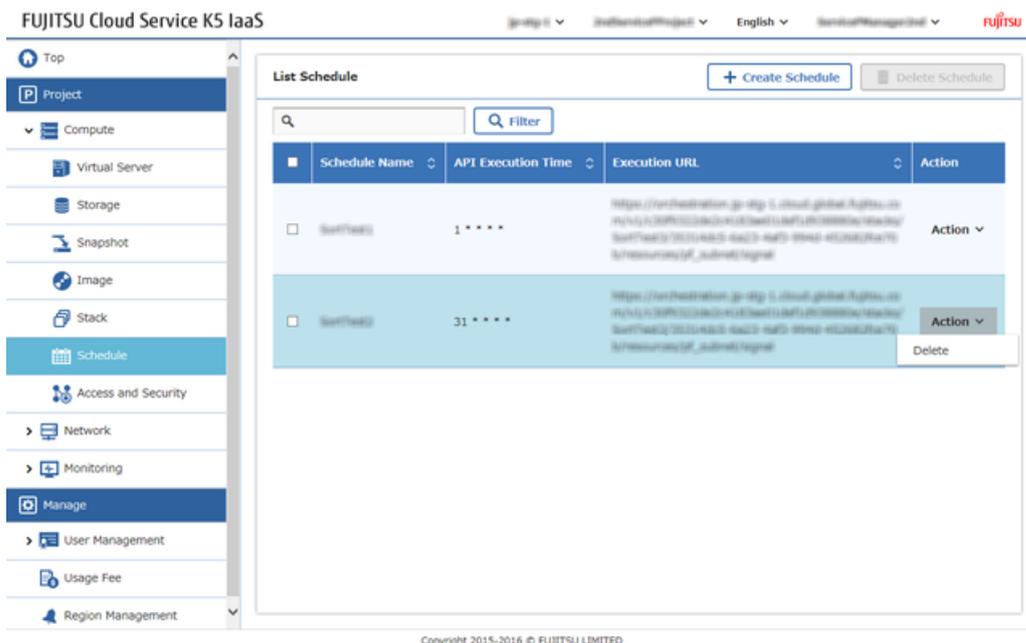
Procedure

1. From the left-hand menu, click [Compute] > [Schedule].

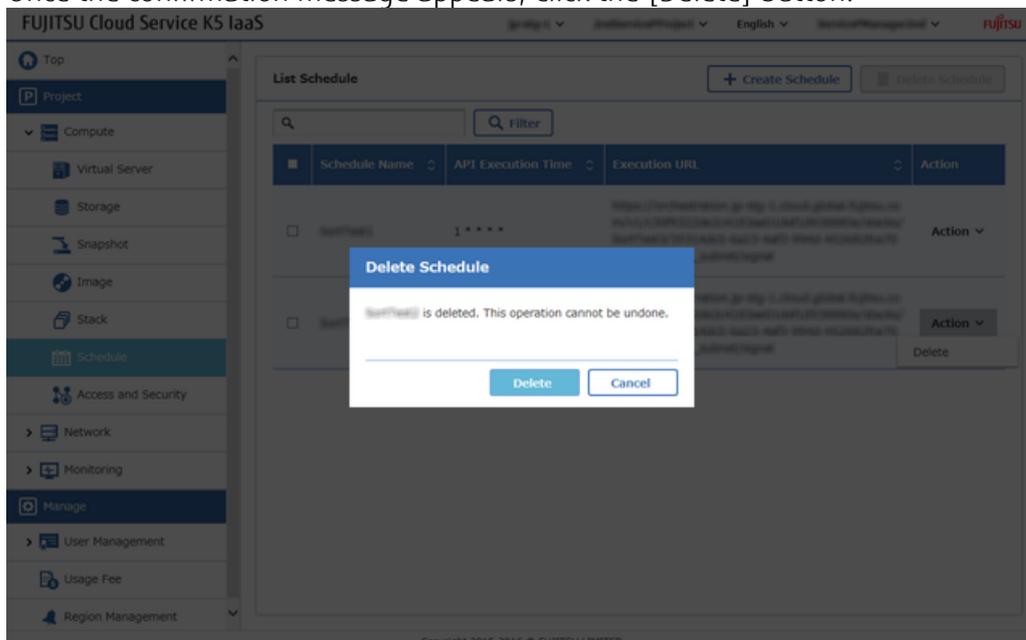


The [List Schedule] list screen appears.

2. Click [Delete] on the [Action] menu for the schedule to be deleted.



3. Once the confirmation message appears, Click the [Delete] button.



The procedure is complete when the deleted schedule no longer appears on the [List Schedule] list screen.

Part 7: Using the Management Functions

Topics:

- [Displaying Usage Charges](#)

7.1 Displaying Usage Charges

7.1.1 Displaying a Provisional Usage Charge

Display the usage charges of amount which is not fixed, such as charges for the current month.

About this task

You can check the following information on the screen that displays the provisional usage charges:

- Total amount that was used for all projects within the contract number
- Total amount for each project and its usage details

Procedure

From the left-hand menu, click [Usage Fee] to display the [Usage Details(Interim)] screen.

Usage Details(Interim)

- Always check your invoice for the amount billed.
- The final billing amount can be found on the billing screen of the K5 portal
- The billing amount for each item on the list is displayed excluding tax.

Basic Charges Information

Use Period: 2016/07/01 ~ 2016/07/09 (UTC)

Total Charges within Contract: Project

Billing Amount (excluding Tax): (JPY) 0.0

Charges Breakdown

Item Name	Unit Price - Unit Name	Usage - Unit Name	Charges
Usage detail			
Free promotion	0.0 / Number*Hours	1,296.0 Number*Hours	0.0
Free promotion	0.0 / Number*Hours	351.0 Number*Hours	0.0
Free promotion	0.0 / Number*Hours	432.0 Number*Hours	0.0
Free promotion	0.0 / Number*Hours	432.0 Number*Hours	0.0

Copyright 2015-2016 © FUJITSU LIMITED

FUJITSU Cloud Service K5 IaaS
Service Portal User Guide 1.4 version

Published Date July, 2016
All Rights Reserved, Copyright FUJITSU LIMITED 2015-2016

- Reprinting of part or the whole of the contents of this document will be changed without prior notice for improvement.
- Reprinting of part or the whole of the contents of this document is strictly forbidden.