

ucloud server User Guide

v2.2 (2012.05)

KT

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1. About ucloud server product

1.1 Product outline

1.1.1 ucloud server(Compute Service) Product composition

olleh ucloud biz is a leading brand in KT cloud computing business offering cloud Infra(IaaS), Platform(PaaS) and Software (SaaS).

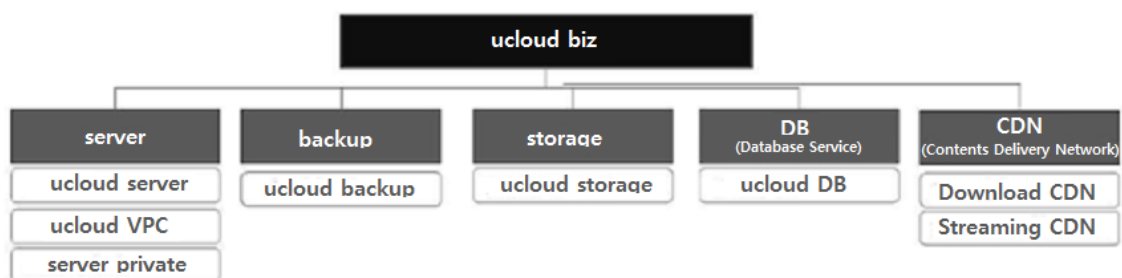
Among them, Infra service providing Computing power such as servers is called 'ucloud server(Compute Service)' service and products are classified into ucloud server, ucloud VPC and server private according to service types and location of installation.

Customers can select appropriate ucloud server products depending on their circumstance and scale.

Classification	owned by HW	management	install place	server type	selling unit
ucloud server	KT cloud center			Shared type	(1~12 vCore)
ucloud VPC	KT cloud center			customer only	Rack unit (Full, 1/2, 1/4 Rack)
server private	KT cloud center (available owning customer)		customer's site	customer only	Rack unit selling or leasing

1.1.2 Product on ucloud server

'ucloud server' is Cloud Server(VM) hosting product and it promptly provides multiple customers (multitenant) with resources by directly assigning resources by Web-based customers (selfprovisioning) on KT public infrastructure basis located in KT cloud center.



Product Classification	server	backup	storage	DB (Database Service)
product Explanation	virtual server service CPU,memory,disk, network	backup and restore service (offers backup SW)	storage service for save/search data	database service (RDB:Relational Database)
supplementary service	auto-scaling Dedicated network	auto-recovery technical support	auto-DR (disaster recovery) manaqed support	monitoring service web firewall snapshot cloud consulting

1.2 Basic product

1.2.1 Product and price structure

1. ucloud server (unit: ₩/month, time, VAT excluded)

Specification			Monthly Rate (₩/month)	Hourly Rate (₩/hour)
CPU (vCore)	Memory(GB)	Disk(GB)		
1	1	100	30,000	65
1	2		40,000	87
2	2		60,000	130
2	4		75,000	163
2	8		110,000	238
4	4		105,000	228
4	8		140,000	303
4	16		200,000	433
8	8		190,000	412
8	16		250,000	542
8	32		380,000	823
12	16		350,000	758
12	32		480,000	1,040

2. Network

Monthly usage less than 100 GB per Cloud server	Free
Monthly usage by customer (on an ID basis) over 100 GB	Refer to the table below.

(unit: ₩/GB, VAT excluded)

Classification	Usage Section	Application by Cloud server	Application by Customer (on an ID basis)		
		Monthly usage less than 100 GB per Cloud server	100 GB ~ 10 TB	10 TB ~ 20 TB	Over 20 TB
Meter Rate	Unit cost by section (per GB)	Free	90	80	70
Flat Rate (by month)	30 TB/month	₩2,000,000/month			
	50 TB/ month	₩3,000,000/month			

3. Addition of Disk and official IP

(unit: ₩/month, time, VAT excluded)

Classification	Unit	Monthly Rate(₩/month)	Hourly Rate(₩/hour)
Additional disk	Per additional 50GB (300 GB at maximum)	6,000	13
Additional official IP	Per 1 IP	5,000	9

4. Operating System

(unit: ₩/month, time, VAT excluded)

Operating System		Rate (per Cloud server)	
		Monthly Rate (₩/month)	Hourly Rate (₩/hour)
Windows	Windows Server 2003 Enterprise (32 bit)	₩20,000/month	₩33/hour
	Windows Server 2008 Enterprise (32,64 bit)		
Linux	Cent OS 5.4 (32,64 bit)	Free	
	Ubuntu 10.04 (32,64 bit)		

	Ubuntu 11.04 (32,64 bit)		
	Debian Squeeze 6 (32,64 bit)		
	Fedora13 (64 bit)		
Linux Enterprise	SuSE Linux enterprise11 (32,64bit) ※ 9hour*5days on-line technical support ※ Only server premium can choose.	₩130,000/month	217

5. Snapshot/Image

(unit: ₩/GB, month, VAT excluded)

Classification	Monthly Rate(₩/month)	Note
Snapshot	₩120/GB	※ Rate calculation on the prorated daily basis when deleted in the middle of the month
Image	₩120/GB	

6. MS-SQL Image

(unit: ₩/month, time, VAT excluded)

Classification	Monthly Rate(₩/month)	Hourly Rate(₩/hour)	Note
MS-SQL 2008 R2 ENT	270,000	585	Use of WIN2008 KOR R2 ENT operating system required

ucloud server enables internet business by providing powerful network environment on shared Gigabit network basis and rate of use is charged as meter rate according to transmission amount (GB) of public network. In general, transmission of 50GB for development and internal test can be used for free.

1.3 Supplementary service package

Supplementary service	Functions	Release schedule	Note	
Management on Cloud Server (VM)	VPX (LB)	Load balancing on server resources	Released	
	Monitoring	VM performance monitor, Error event management such as WAS, DBMS, etc., access control and user management	Released	
	Scale Up/down	Change product without terminating Cloud Server (VM) in use	Not scheduled	
	Snapshot	Saving image material for Backup	'12. 03	
Security	Web firewall	User authentication, access control, trace feature, blocking information leakage	Released	
	RVM F/W	Providing source IP and port-based access control	'12. 02	
	IPS (IDS)	Detecting and blocking external trespassing	'12. 1Q	
	Server vaccine	Management on virus/worm/spyware	Not scheduled	Customers' direct use available
	DB encryption	Coded solution for enhancing security such as customer information, etc.	Not scheduled	Customers' direct use available
	VPN	Virtual access to internal network from outside	Not scheduled	Hybrid service

Functions provided with no charge in case of requesting supplementary service of 1), 2) and 3)

- Creation / Management of Custom Template
- Data Encryption
- SW-based Firewall
- SW-based Load balancing

Classification	Basic charge	Usage-based rate
Auto Scaling	₩5,000/month	Cloud server, storage (calculation on the prorated daily basis with no-stipulation standard)
Auto Recovery	₩5,000/month	Cloud storage (calculation on the prorated daily basis with no-stipulation standard)
Auto DR	₩30,000/month	Cloud server, storage (calculation on the prorated daily basis with no-stipulation standard)

		Network (Charged over 300GB : ₩100/1G)																																		
Monitoring	1,2vcore ₩4,000/month Free-of-charge over 4core	None																																		
Snapshot	Reserve capacity- based charging	(unit: ₩/GB, month, VAT excluded)																																		
		Classification	Saving Charge	Note																																
		Snapshot	₩120/GB	※ Saving charge calculated on the prorated daily basis																																
		Image	₩120/GB																																	
Load balancer	Classified depending on stipulation period and capacity	Classificatio n	100Mbp s	300Mbp s	500Mbps	1Gbps																														
		One-year stipulation	240,000	650,000	1,000,00 0	1,700,00 0																														
		Non- stipulation	300,000	800,000	1,200,00 0	2,000,00 0																														
		※ 1Gbps to be released (unit: ₩/month, VAT excluded)																																		
Web firewall	Classified depending on stipulation period, capacity and dualization	<table border="1"> <thead> <tr> <th rowspan="2">monthly rate</th> <th colspan="4">Single</th> </tr> <tr> <th>200M</th> <th>300M</th> <th>500M</th> <th>700M</th> </tr> </thead> <tbody> <tr> <td>one-year</td> <td>250,000</td> <td>350,000</td> <td>500,000</td> <td>600,000</td> </tr> <tr> <td>Non-stipulation</td> <td>320,000</td> <td>450,000</td> <td>650,000</td> <td>780,000</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th rowspan="2">monthly rate</th> <th colspan="2">Dual</th> </tr> <tr> <th>200M</th> <th>300M</th> </tr> </thead> <tbody> <tr> <td>one-year</td> <td>1,000,000</td> <td>1,450,000</td> </tr> <tr> <td>Non-stipulation</td> <td>1,300,000</td> <td>1,880,000</td> </tr> </tbody> </table>					monthly rate	Single				200M	300M	500M	700M	one-year	250,000	350,000	500,000	600,000	Non-stipulation	320,000	450,000	650,000	780,000	monthly rate	Dual		200M	300M	one-year	1,000,000	1,450,000	Non-stipulation	1,300,000	1,880,000
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2. Introduction and membership of ucloud biz portal

2.1 Membership registration

Log in to olleh ucloud biz Portal. <http://ucloudbiz.olleh.com/en-us/>

Log in if you are already a member of olleh ucloud biz Portal. Otherwise, request membership.

hojintest
artoflife3@naver.com
Olleh! Have a nice day today!

Cloud Console | My Account | Sign Out

Contact us

ucloud Simple monthly Calculator

2 Your first choice The easiest way to build the infrastructure your company wants.

Quick setup and flexible access.
ucloud server is your best choice for cloud computing services in any situation.



After you enter user information for joining olleh ucloud biz Portal, authentication mail will be sent to the typed email.

Check authentication mail on your email account and click Check Authentication button. Then user authentication and membership registration procedures are completed.

Register olleh ucloud biz

Welcome to the ucloud server

User name	<input type="text"/>
E-mail(ID)	<input type="text"/> The e-mail address you entered will be used for sign in ID.
Password	<input type="text"/> You can enter 6 to 12 letters with combination of English alphabet and numbers and special characters.
Confirm password	<input type="text"/>
Auto-up protection	<p>4 E C M Z</p> <p>Please enter the number and letter as shown, Image refresh</p> <input type="text"/>

2.2 Request service

You should subscribe products to use KT Cloud Computing.

You can access to KT ucloud Console by product subscription.

Order Now

[ucloud server](#)
[ucloud storage](#)
[SAP HANA](#)
[Supplementary Service](#)

[Contact us](#)

[ucloud Simple monthly Calculator](#)

Service Rate
1 USD : 1119 Won
(Sep 25, 2012)

ucloud server service subscription



Korea's first quality-proven cloud computing service designed to provide customers with a quick and easy way to manage its network traffic to ensure high performance!

server

Servers, storages, networks, do you want to use as much as you need? Try to subscribe to our **ucloud server** service!

[Services available](#)

Server+ (auto-scaling, auto-recovery)

Do you need the server that scaled automatically if necessary, and, recovered automatically in a failure.

[subscribe a product](#)

You should subscribe products to use KT Cloud Computing.

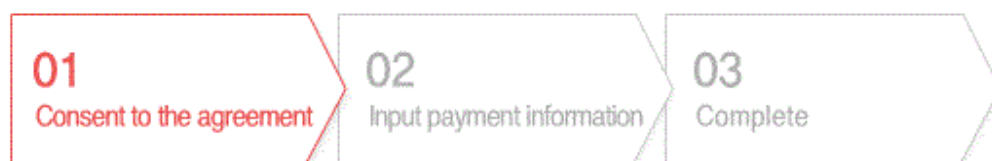
You can access to KT ucloud Console by product subscription.

Procedures for product subscription consist of 4 stages of Consent to agreement, Enter Information, Enter Payment Information and Request/Completion.

2.2.1 Consent to agreement

ucloud server service subscription

products: ucloud server public

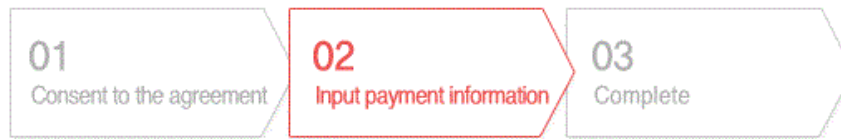


2.2.2 Enter Payment Information

Enter payment information for billing after service use. There currently are four options for payment; (1) credit card, (2) giro, (3) charge added to phone bill, and (4) automatic withdrawal. Credit card authentication is required if a customer intends to pay with credit card. Billing address should be accurately entered for payment through giro. If a customer fails to receive giro and to make payment on time, service use is restricted. Authentication on telephone number to which rate is added is required. In case of automatic withdrawal, authentication on account number is

required and payment is made on 22nd of each month (deferred payment).

ucloud server service subscription



▶ **Payment information** It will be billed as of the following month

Cardholder	<input type="text"/>
card number	<input type="text"/> - <input type="text"/> - <input type="text"/> - <input type="text"/>
Expiration Date	<input type="text" value="Jan."/> <input type="text" value="Year 2010"/> <input type="button" value="authentication"/>

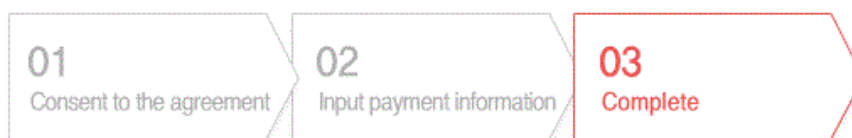
Information on this page is safely transmitted with being coded so you can rest assured.

[sign up](#) [previous](#)

2.2.3 Request/Completion

You can access to cloud console upon request completion.

ucloud server service subscription



Complete service

hojin2's service request is normally registered.

It can take 5 to 10 minutes to complete subscription.
Please experience KT's various cloud service by accessing with cloud console after receiving an **email on subscription completion**.

[see products](#)

2.3 Membership withdrawal

Membership withdrawal is processed on My Page-> Leave a membership.

Please note that a customer's service is deleted upon membership withdrawal. All service in use should be deleted and subscriptions be terminated before requesting membership withdrawal.

Leave a membership

Completed to close your account

Thank you for using ucloud server service.

[go home](#)

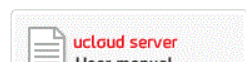
3. How to request product

3.1 How to request ucloud server

Management console->Current State of Service->Request cloud server for requesting cloud server.

ucloud server

- Current State of Service
- Cloud Server
- Disk
- Network
- Network Traffic Statistics
- Check API Key
- Event
- Group Management



Service status

Current State of Use in server

Select Account

cloud server		Disk	network	
Server	2 / 2	Storage	5 / 5 IP	
Use	2 / 2		111.77 KB	
Stop In	0 / 0		(Usage as of 1 days ago)	

Come and experience KT's secure and powerful virtual platform service. Now start ucloud cs.

[➔ Sign up for cloud server](#)

On pop-up for requesting cloud server, set stipulation and location where server will be created. Select the number of vCore, memory size and Storage Size operating system S/W later on. Name the server for easy maintenance and check its duplication.

Apply cloud server
✕

01
Select a OS

02
Select a server

03
Completed

Select OS (Unit: won VAT excluded)

Select	Classification	Type	Price	
			Monthly Plan	Hourly Plan
<input checked="" type="radio"/>	Default OS	Centos 5.4 32bit	Free	Free
<input type="radio"/>	Default OS	Centos 5.4 64bit	Free	Free
<input type="radio"/>	Default OS	Ubuntu 10.04 32bit	Free	Free
<input type="radio"/>	Default OS	Ubuntu 10.04 64bit	Free	Free
<input type="radio"/>	Default OS	Ubuntu 11.04 32bit	Free	Free
<input type="radio"/>	Default OS	Ubuntu 11.04 64bit	Free	Free
<input type="radio"/>	Default OS	Fedora release 13 64 bit	Free	Free
<input type="radio"/>	Default OS	Debian 6 Squeeze 32bit	Free	Free
<input type="radio"/>	Default OS	Debian 6 Squeeze 64bit	Free	Free

cancel
next

Customers whose request for service is completed can access to cloud console and check major events and current state of service that they are use including cloud server, storage, network, etc.

3.2 Service request completed

Click Request button after checking all requested details. Email for checking request will be sent to your email.

Apply cloud server
X

01
Select a OS

02
Select a server

03
Completed

Check a detailed service (Unit : won/month, VAT excluded)

Classification	Oprion		Price
OS	Default OS	Centos 5.4 32bit	Free
Server	CPU	1 vCore	30,000won (26.83\$/month)
	RAM	1.00 GB	
	Default Disk	100GB	

Plan Request Details	You selected the product above as monthly plan.
Cloud Server Name	acp12

Billed

30,000won (26.83\$/month)

Would you request a cloud server with selected details above?

previous

submit

4. How to use service

4.1 Creating ucloud server

4.1.1 How to select Machine Image, Template

Citrix Xen –based virtualization technology is applied to KT cloud.

Machine Image and Template supported on the current version are Window Server 2008

Enterprise 64 bit for Window and CentOS 5.4, ubuntu, debian and fedora for Linux. Machine Image and Template will be additionally provided after optimization and stabilization period.

4.1.2 Create/Start ucloud server

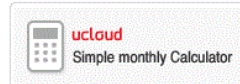
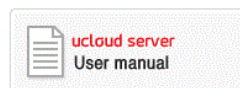
You can check and manage the current state of virtual server you are using and can change composition on cloud server menu. You can also check name of cloud server, operating system a server uses, state, service pack (vCore, memory, storage). Regardless of operating system, remote access enables connection to virtual server through console view.

You can also manage lifecycle of virtual server. Click Start button to start virtual server. You can start virtual server in accordance with selected Machine Image and Template. You can stop, reboot and delete the started virtual server as well.

In addition, you can add IP to virtual server and set Port-Forwarding Rule (detailed explanation on IP additional menu). You can add storage to virtual server, compose and manage it (detailed explanation on storage menu).

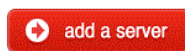
ucloud server

- Current State of Service
- Cloud Server**
- Disk
- Network
- Network Traffic Statistics
- Check API Key
- Event
- Group Management



Cloud server

Select Account



Select State Server Name



Type	Server Name	OS	State	Specification (CPU, RAM)	Console View
server	123	Other PV (64-bit)	use	4 vCore, 4.00 GB	
server	testServer2	SUSE Linux Enterprise Server 11 (32-bit)	use	1 vCore, 1.00 GB	



Explanation

Server Name	testServer2 (1140696d-9f62-4534-bc63-901519ccac12) <input type="button" value="change"/>	Address of Internal IP	172.27.132.107 <input type="button" value="setup port forwarding"/>
Date of Creation	09/21/2012 13:49:33	Plan	Monthly Plan
CPU	1 vCore, 2.00 GHz	Memory	1.00 GB
OS	SUSE Linux Enterprise Server 11 (32-bit)	State	use
Disk	Total 150.00 GB <input type="button" value="add Disk"/>	Classification	server

Name	Type	Capacity	Date of Creation
dd	Data	50.00 GB	09/23/2012 13:11:16
ROOT-40748	Root	20.00 GB	09/21/2012 13:49:33
DATA-40748	Data	80.00 GB	09/21/2012 13:49:33

HA	In Use	<input type="button" value="start"/>	<input type="button" value="stop"/>
----	--------	--------------------------------------	-------------------------------------

4.2 Setting for additional ucloud server

4.2.1 Designating Hostname

Public/Private IP address of virtual server is automatically granted from internal DHCP server and you can check on Computing Service->Cloud server.

Name the virtual server to be manageable and not to duplicate with an already registered one.

DNS service is not currently ready on olleh ucloud biz. We are preparing for service release so take advantage of other private DNS service providers until then.

4.2.2 How to set Firewall

S/W firewall is provided as an option through Virtual Router. You can set accessible Port and IP through Port Forwarding Rule and source IP Filtering function.

4.2.3 How to use VPN

VON service is not currently ready on olleh ucloud biz. Please use OpenSource VPN solution such as Open VPN before service release.

4.3 ucloud server access

Remote access to virtual server is available by default through console view.

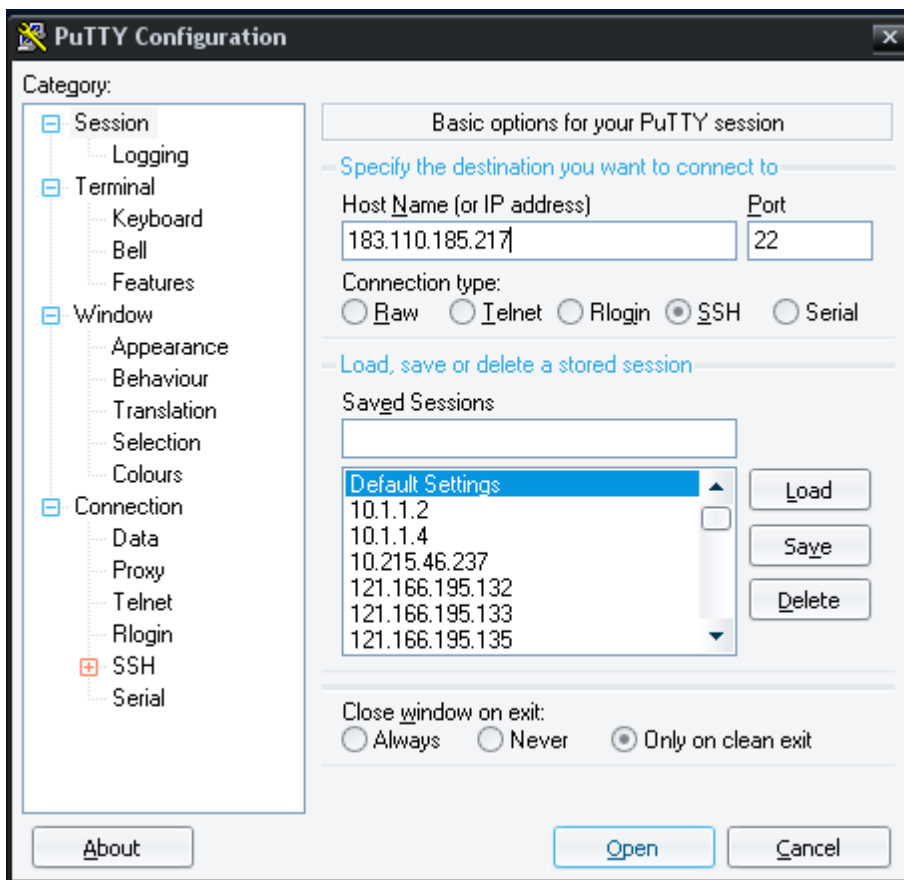
4.3.1 Linux affiliation

Port forwarding setting is required for Terminal access (example: Putty, etc.) Network (number 22 – SSH)

Make access to assigned IP through Port forwarding.

Enter SSH in Connection Type (Port 22).

Click Open.



4.3.2 Windows affiliation

Procedures for remote access in Windows affiliation are as follows.

Start – Run – Enter mstsc

Access to IP assigned through Port forwarding (Port 3389 is blocked according to KT security policy.)



4.4 Termination of ucloud server

You can manage virtual server's lifecycle on Computing Service->Cloud Server menu (Start, Stop, Reboot and Delete). Deleted virtual server cannot be restored after certain time. To change service details of server or assign additional storage, virtual server should be terminated to apply changes.

4.5 Method of additional setting

4.5.1 How to add IP

After you create a virtual server, Virtual Router is created on the virtual server.

Basically, one public IP is assigned to this Virtual Router.

When VM performs internet communication, this IP enables VM to use internet communication.

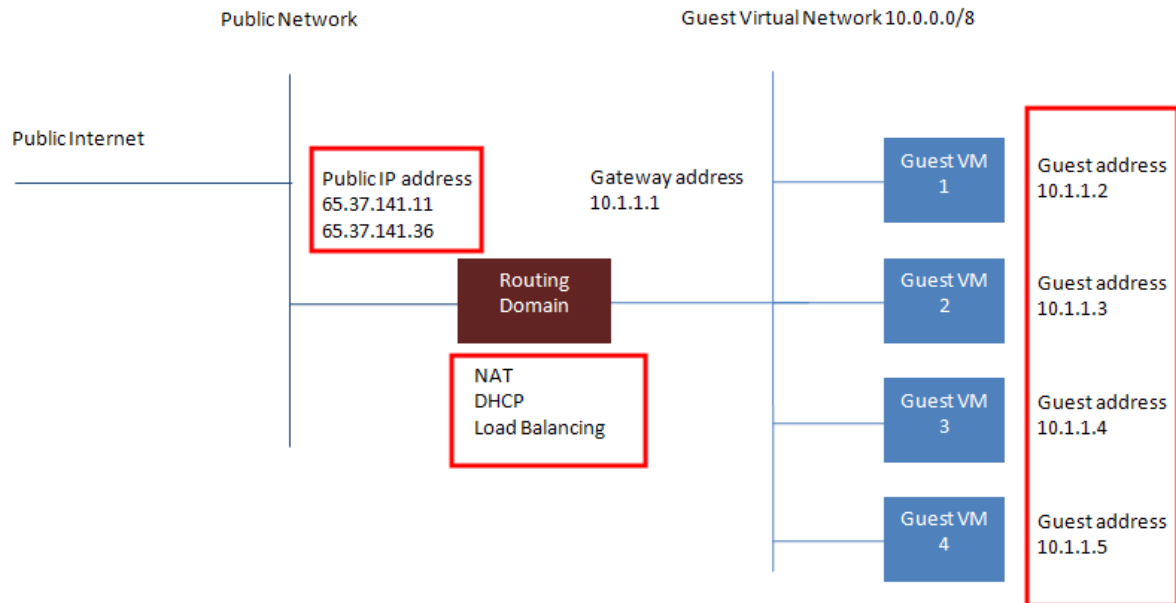
However, Source NAT is applied to Outbound Traffic of all virtual servers through Virtual Router.

SW firewall, SW NAT and SW Load Balance functions are provided through this Virtual Router.

If public IP is added, it is assigned to this Virtual Router and can be used with setting Port Forwarding Rule on required virtual server.

Guest IP enables communication between VM and your VM provides security with being subject to isolation by VLAN technology.

This Virtual Router cannot directly approach System virtual server.



You can check virtual server on which service is provided and assigned IP.

On Port Forwarding Rule setting, you can set Firewall to use service source IP Filtering function on IP assigned to Virtual Router.

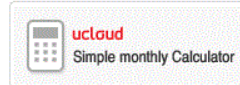
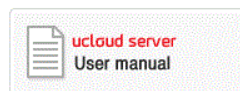
Explanation	Firewall	Port Forwarding	Load Balancer
Source CIDR	Protocol	Start Port	End Port
0.0.0.0/0	TCP		
0.0.0.0/0	tcp	222	222

All of traffic is basically blocked and incoming traffic only from the relevant IP by designating Source IP and CIDR is permitted with designated Port range.

Example) In port forwarding of FTP port (number 21), any IP can make access originally but only certain IP can by setting with F/W function.

ucloud server

- Current State of Service
- Cloud Server
- Disk
- Network**
- Network Traffic Statistics
- Check API Key
- Event
- Group Management



Network

[Change/Cancel flat rate](#)

[add an IP](#)

Select Account | artoflife3@naver.com

Type	Public IP	Network Type	Source NAT
server	14.63.225.77	public	No
server	14.63.225.73	public	No
server	14.63.225.41	public	No
server	14.63.225.131	public	Yes
server	14.63.224.193	public	No

[delete](#) Basically provided public IP cannot be deleted. [change charge plan](#)

- Explanation
- Firewall
- Port Forwarding**
- Load Balancer

cloud server	Public Port	Private Port	Protocol	
123 (f1daa9fa-c5bc-4cc3-9750-2f6a0245d364)			TCP	add
123 (f1daa9fa-c5bc-4cc3-9750-2f6a0245d364)	80	80	tcp	delete

Click Request Additional IP button to add Public IP.

When Public IP available on DHCP server is obtained, conduct mapping on server on which you intend to assign. Port Forwarding Rule can also be set at the same time.

Check all requested details and complete request.

4.5.2 How to add Disk

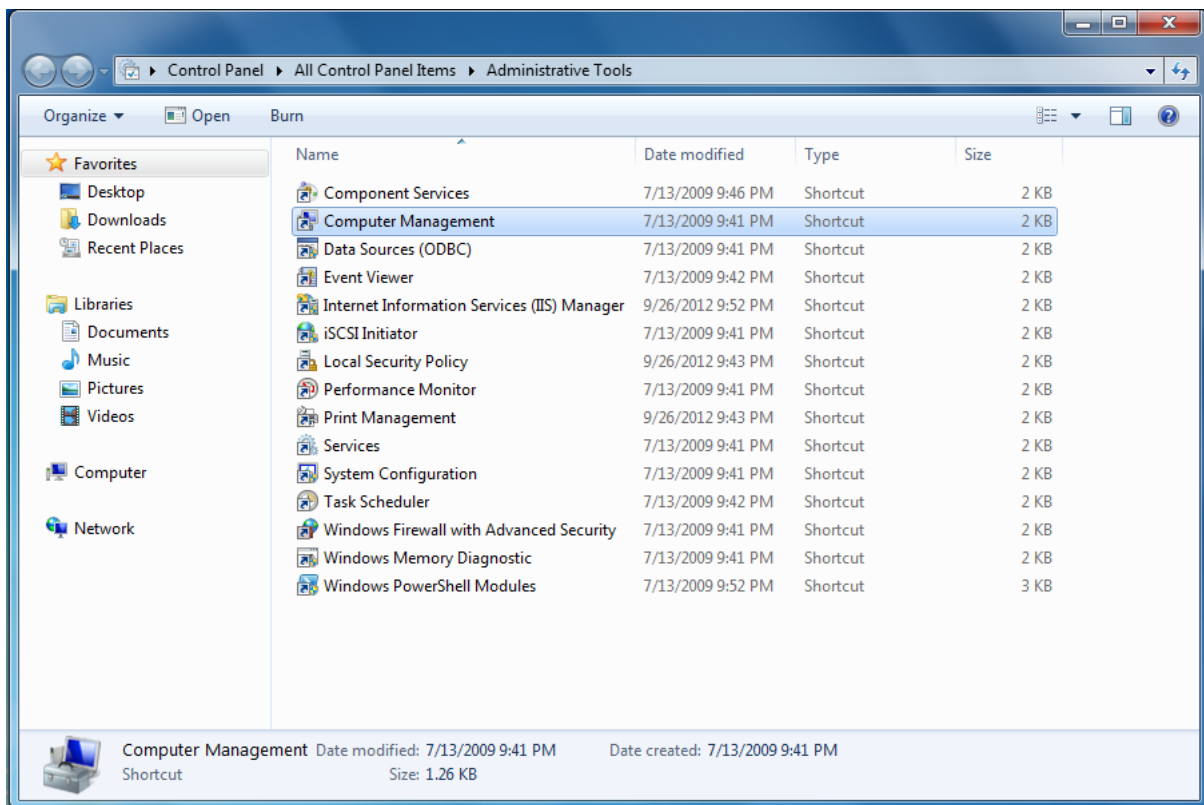
One root volume exists on virtual server and volume can be attached or detached. You can attach up to six volumes and manage them.

To add volume to virtual server, request additional storage first and connect by selecting server to be attached.

4.5.2.1 Add default disk on Windows

In case of Window, add volume and follow "Control Panel->Management Tool->Computer Management" on operating system of virtual server.

Select "Depository->Disk management" on Computer management and window of "Disk initialization and conversion wizard start" pops up. You can immediately progress.

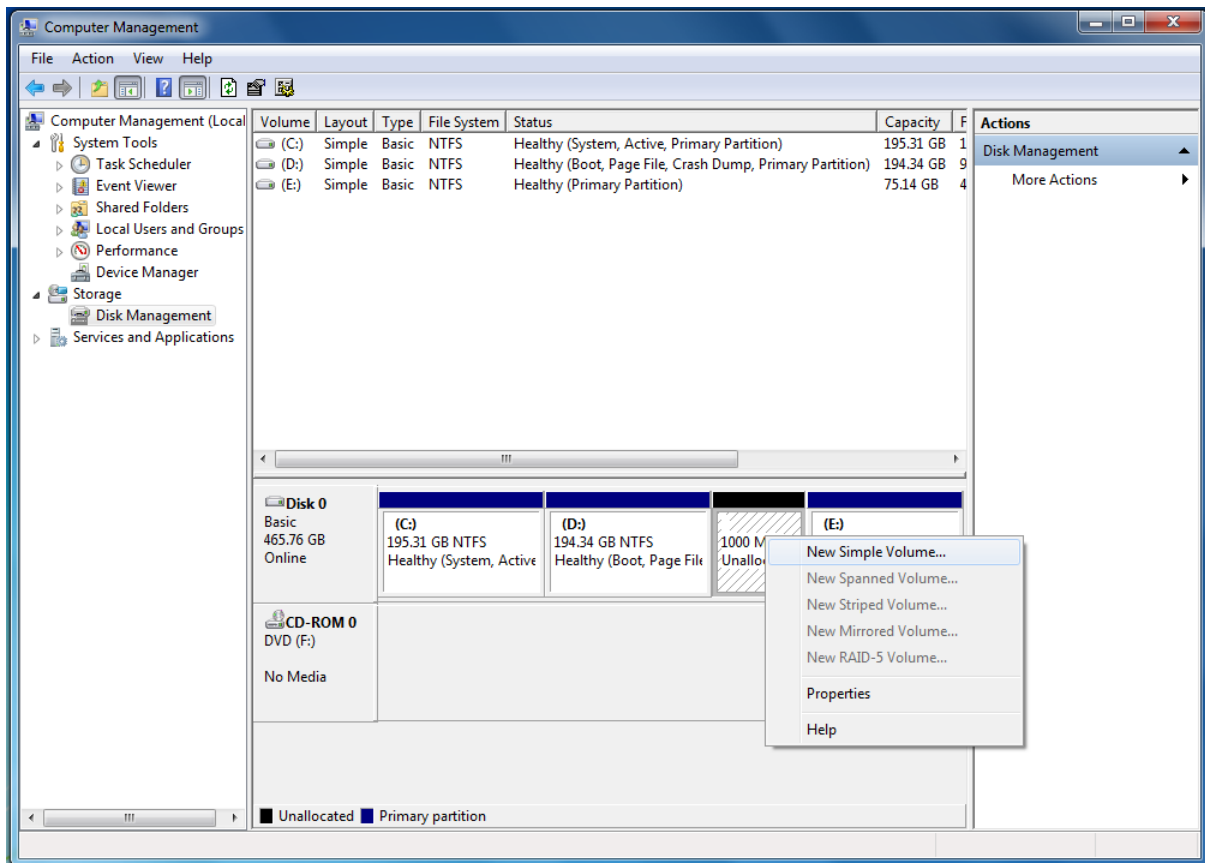


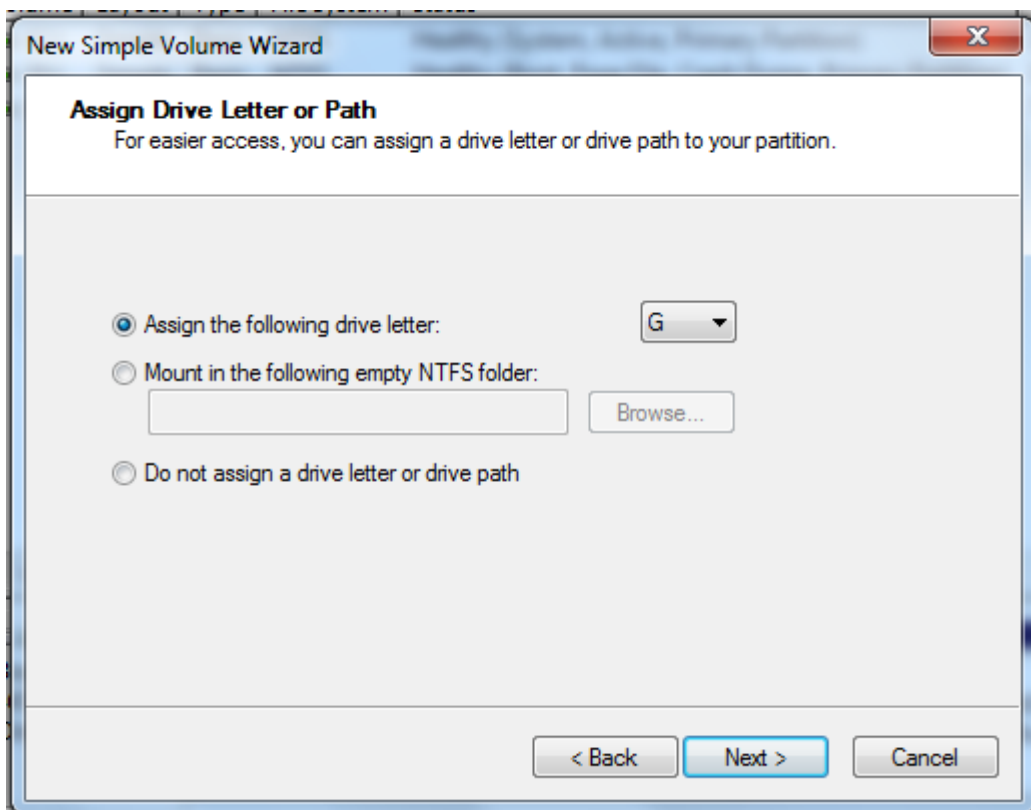
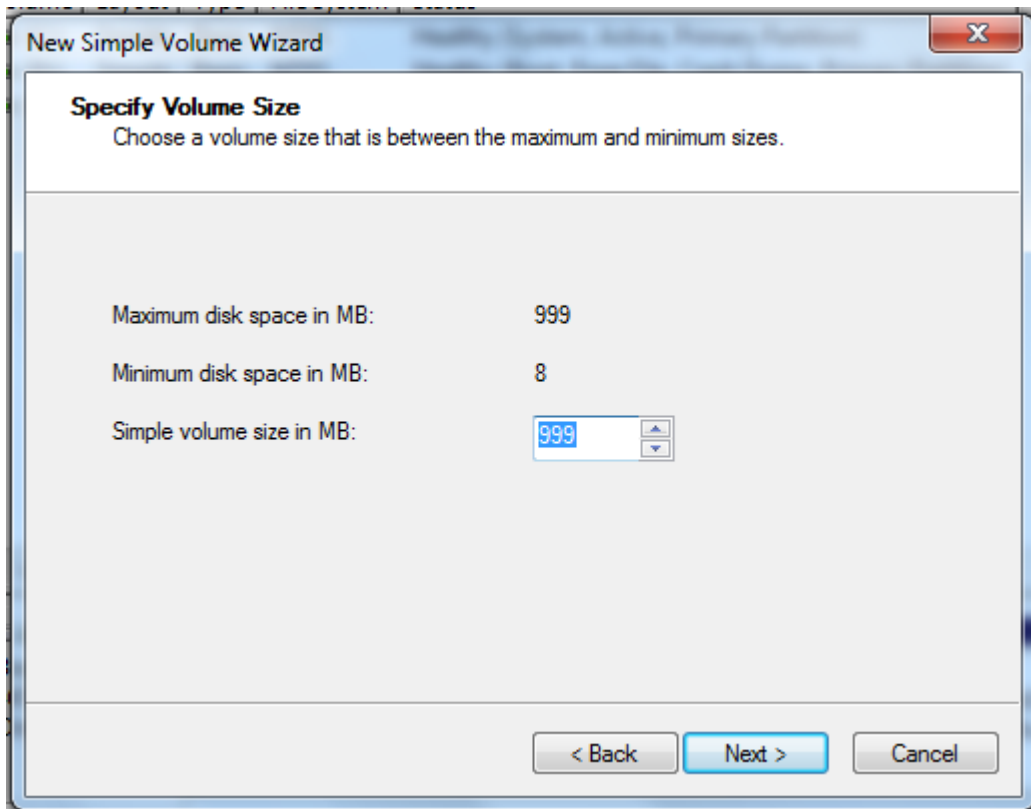
Progress partition creation as the figures below. No specific setting is required in the following procedures.

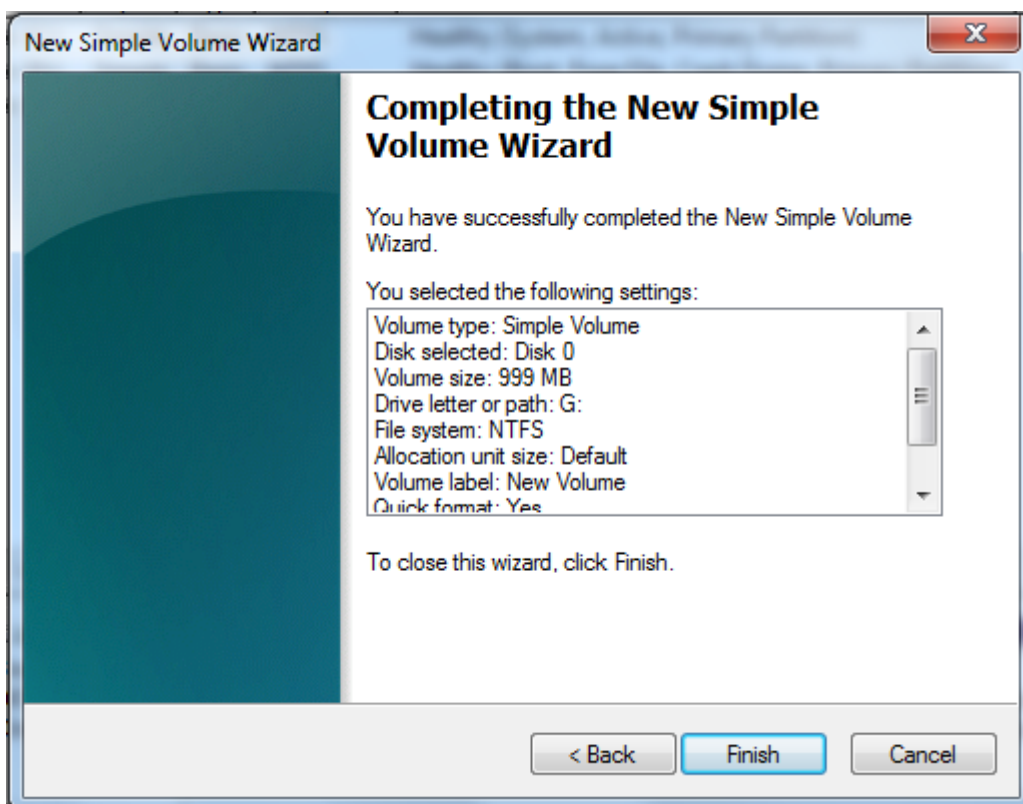
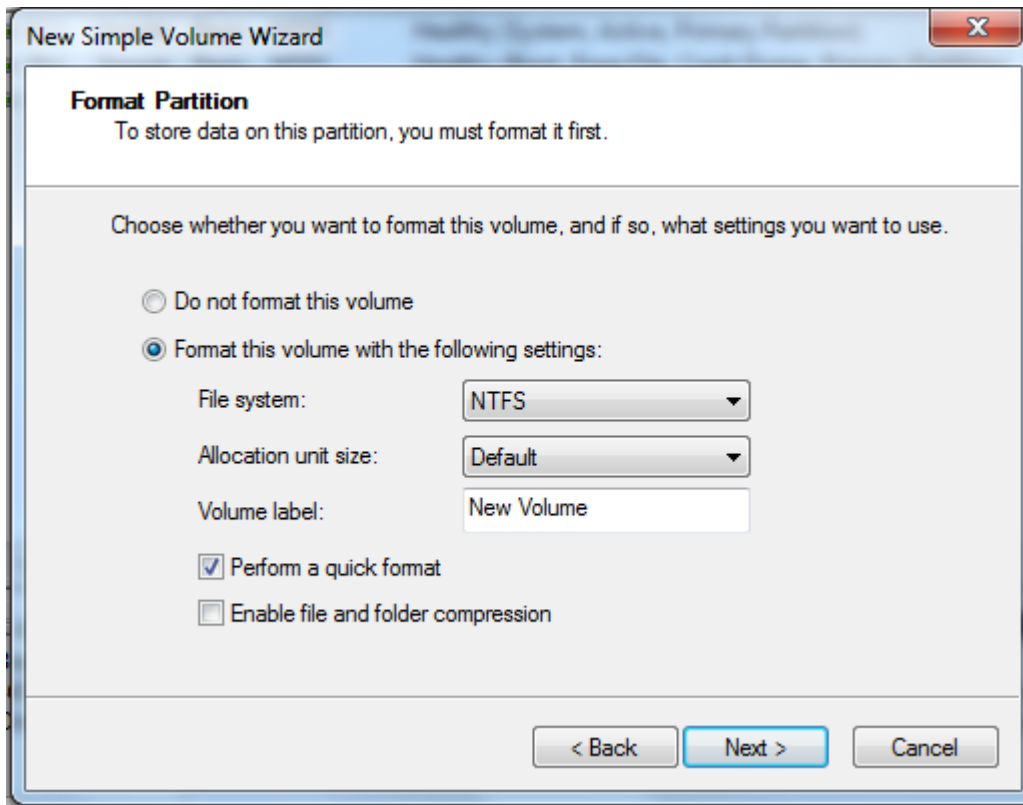
Set "Partition Format" as follows. Select quick format if possible. You don't have to designate volume label.

Set file system as a format you want.

After completing partition creation and format, you can see the additional volume is recognized as below.







4.5.2.2 Add default disk on Linux

In case of Linux VM, volume to be added requires partition procedures on console.

1) Create PV (physical volume)

It is a physical disk. Physical disks should be made a form of PV to make VG and LV on Linux.

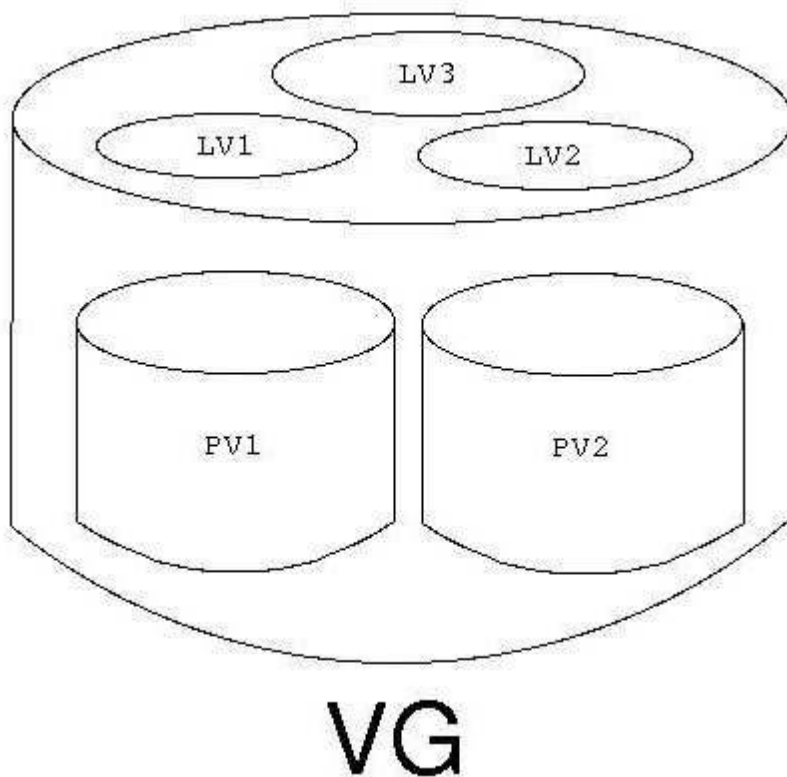
2) Create VG (volume group)

It is a volume combining one or more physical disks. All PV should belong to VG. Of course, all of Linux doesn't have to belong.

3) Create LV (Logical volume)

Users read and write files with access to LV. VG belongs to one or more LV.

Although files seem continuous for users, PV can actually be written in discontinuous space.



Command for checking Volume attached to VM :

fdisk -l

```

Disk /dev/sdd: 2147 MB, 2147483648 bytes
255 heads, 63 sectors/track, 261 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes

Device Boot      Start      End  Blocks  Id System
Disk /dev/sde: 2147 MB, 2147483648 bytes
255 heads, 63 sectors/track, 261 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes

Device Boot      Start      End  Blocks  Id System

```

[Figure 5-6] Screen checked through fdisk

>> /dev/sdd and /dev/sde disks are not assigned.

Creating partition of added disk with Linux LVM

```
[root@ /]#fdisk /dev/sdd
Device contains neither a valid DOS partition table, nor Sun, SGI or OSF disklabel
Building a new DOS disklabel. Changes will remain in memory only,
until you decide to write them. After that, of course, the previous
content won't be recoverable.

Warning: invalid flag 0x0000 of partition table 4 will be corrected by w(rite)

Command (m for help): n
Command action
  e   extended
  p   primary partition (1-4)
p
Partition number (1-4): 1
First cylinder (1-261, default 1):
Using default value 1
Last cylinder or +size or +sizeM or +sizeK (1-261, default 261):
Using default value 261

Command (m for help): t
Selected partition 1
Hex code (type L to list codes): 8e
Changed system type of partition 1 to 8e (Linux LVM)

Command (m for help): w
The partition table has been altered!

Calling ioctl() to re-read partition table.
Syncing disks.
```

```
Disk /dev/sdd: 2147 MB, 2147483648 bytes
255 heads, 63 sectors/track, 261 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
```

Device	Boot	Start	End	Blocks	Id	System
/dev/sdd1		1	261	2096451	8e	Linux LVM

[Figure 5-7] Screen of partition operation with the command of fdisk

Create PV with disk created by Linux LVM

```
[root@ /]#pvscan
PV /dev/sda2   VG VolGroup01   lvm2 [19.88 GB / 0   free]
Total: 1 [19.88 GB] / in use: 1 [19.88 GB] / in no VG: 0 [0   ]
[root@ /]#pvcreate /dev/sdd1
Physical volume "/dev/sdd1" successfully created
[root@ /]#pvcreate /dev/sde1
Physical volume "/dev/sde1" successfully created
[root@ /]#pvscan
PV /dev/sda2   VG VolGroup01   lvm2 [19.88 GB / 0   free]
PV /dev/sdd1   lvm2 [2.00 GB]
PV /dev/sde1   lvm2 [2.00 GB]
Total: 3 [23.87 GB] / in use: 1 [19.88 GB] / in no VG: 2 [4.00 GB]
```

[Figure 5-8] Creating and checking PV

Creating PV with the command of #pvcreate

- Creating VG

```

[root@ /]#vgcreate TestVG /dev/sdd1 /dev/sde1
Volume group "TestVG" successfully created
[root@ /]#vgdisplay
--- Volume group ---
VG Name                TestVG
System ID
Format                 lvm2
Metadata Areas         2
Metadata Sequence No  1
VG Access              read/write
VG Status              resizable
MAX LV                 0
Cur LV                0
Open LV                0
Max PV                 0
Cur PV                2
Act PV                2
VG Size                3.99 GB
PE Size                4.00 MB
Total PE               1022
Alloc PE / Size        0 / 0
Free PE / Size         1022 / 3.99 GB
VG UUID                zRkK0d-fdLS-181R-6FKV-44yn-FZ2Z-bDH9E0

[root@ /]#pvscan
PV /dev/sdd1  VG TestVG    lvm2 [2.00 GB / 2.00 GB free]
PV /dev/sde1  VG TestVG    lvm2 [2.00 GB / 2.00 GB free]
PV /dev/sda2  VG VolGroup01 lvm2 [19.88 GB / 0 free]
Total: 3 [23.87 GB] / in use: 3 [23.87 GB] / in no VG: 0 [0 ]

```

[Figure 5-9] Screen of VG creation

- Creating LV

```

[root@ /]#lucreate -l 1G -n backup TestVG
Logical volume "backup" created
[root@ /]#lvdisplay
--- Logical volume ---
LV Name                /dev/TestVG/backup
VG Name                TestVG
LV UUID                0f4KIL-zsFu-ghLR-0f9A-Wuyv-LSnQ-4WUuK
LV Write Access        read/write
LV Status              available
# open                 0
LV Size                1.00 GB
Current LE              256
Segments               1
Allocation              inherit
Read ahead sectors     auto
- currently set to    256
Block device           253:2

```

[Figure 5-10] Screen of LV creation

Creating file system

```
[root@ /]#mkfs.ext3 /dev/TestVG/backup
mke2fs 1.35 (29-Aug-2006)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
131072 inodes, 262144 blocks
13107 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=268435456
8 block groups
32768 blocks per group, 32768 fragments per group
16384 inodes per group
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376

Writing inode tables: done
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information: done

This filesystem will be automatically checked every 32 mounts or
180 days, whichever comes first.  Use tune2fs -c or -i to override.
```

[Figure 5-11] Screen of file system creation

- Mount after creating /backup folder

```
[root@ /]#mkdir /backup
[root@ /]#ls
backup boot dev home lost+found misc net proc root selinux srv tap var
bin cdrom etc lib media mnt opt RaidTest sbin sjhjb sys usr
[root@ /]#mount /dev/TestVG/backup /backup/
[root@ /]#mount
/dev/mapper/VolGroup01-LogVol00 on / type ext3 (rw)
proc on /proc type proc (rw)
sysfs on /sys type sysfs (rw)
devpts on /dev/pts type devpts (rw,gid=5,mode=620)
/dev/sda1 on /boot type ext3 (rw)
tmpfs on /dev/shm type tmpfs (rw)
/dev/md4 on /RaidTest type ext3 (rw)
none on /proc/sys/fs/binfmt_misc type binfmt_misc (rw)
none on /proc/fs/vmblock/mountPoint type vmblock (rw)
sunrpc on /var/lib/nfs/rpc_pipefs type rpc_pipefs (rw)
/dev/mapper/TestVG-backup on /backup type ext3 (rw)
[root@ /]#
```

[Figure 5-12] Screen of mount

- Adding to /etc/fstab (for automatic mount in rebooting)

```
[root@ /]#cat /etc/fstab
/dev/VolGroup01/LogVol00 / ext3 defaults 1 1
LABEL=/boot /boot ext3 defaults 1 2
/dev/TestVG/backup /backup ext3 defaults 1 2
tmpfs /dev/shm tmpfs defaults 0 0
devpts /dev/pts devpts gid=5,mode=620 0 0
sysfs /sys sysfs defaults 0 0
proc /proc proc defaults 0 0
/dev/VolGroup01/LogVol01 swap swap defaults 0 0
/dev/md4 /RaidTest ext3 defaults 0 0
[root@ /]#
```

[Figure 5-13] Screen of adding fstab

4.6 Snapshot/Image service

'Snapshot' saves the current state of VM disk volumes, makes a user return to the saved state of

snapshot whenever required and enables creation of image and volume.

'Image' is templates composed by snapshot. It is service enabling new creation of VM with the same state in creating snapshot.

Template means procedures of making 'Snapshot' to 'Image.'

It is limitedly provided to root volume of VM as of now and you can create VM with the same state in creating snapshot by utilizing image made by create snapshot. (Snapshot creation, volume creation by using snapshot and function of volume attach will be provided later.)

4.6.1 Major functions

1) 'Snapshot' creation on root volume of ucloud server

- First snapshot on volume is subject to Full snapshot, from second one to Incremental snapshot.

- Full snapshot is again executed on every eighth one in the same volume later on.

Example: 1st time (Full snapshot), 2nd ~ 7th (Incremental snapshot), 8th (Full snapshot),

9th ~ 14th (Incremental snapshot), 15th (Full snapshot)

2) User 'image' creation

Image can be created with created snapshot.

3) VM creation with user 'image'

Multiple, identical VM can be created with created image.

4) 'Volume' creation (scheduled)

Volume can be created with created snapshot.

5) VM attach of created 'volume' (scheduled)

4.6.2 Creating snapshot

Go to "Management Console" → "ucloud server" → "Cloud Server" to create snapshot.

After selecting server for snapshot creation, click "Snapshot" button at the bottom right.

※ Warning: Since snapshot is function for backing up VM volume as virtual disk image, contents on memory of VM or on CPU are not saved. It is recommended to perform operations of snapshot creation with stopped VM for stable snapshot creation.

After entering name of snapshot to be created, click OK button.

Since then, creation of snapshot is operated and you can check the results on "My Snapshot" menu.

Upon completion of creation, the state changes from 'Creating' → 'Use.'

olleh ucloud biz ucloud server additional

ucloud server

① **Cloud Server**

Current State of Service

My Snapshot

My Image

Network

Network Traffic Statistics

Check API Key

Event

Group Management

ucloud server
User manual

ucloud
Simple monthly Calculator

Service Rate
1 USD : 1119 Won
(Sep 25, 2012)

Cloud server Select Account: artoflife3@naver.com **add a server**

Select State: Total Server Name: search

②

Type	Server Name	OS	State	Specification (CPU, RAM)	Console
server	123	Other PV (64-bit)	use	4 vCore, 4.00 GB	
server	testServer2	SUSE Linux Enterprise Server 11 (32-bit)	use	1 vCore, 1.00 GB	

start stop reboot delete change P/W change charge plan

Explanation

Server Name	123 (11daa9fa-c5bc-4cc3-9750-2f6a0245d364) change	Address of Internal IP	172.27.194.215 setup port forwarding
Date of Creation	09/23/2012 16:05:50	Plan	Monthly Plan
CPU	4 vCore, 2.00 GHz	Memory	4.00 GB
OS	Other PV (64-bit)	State	use
Disk	Total 100.00 GB add Disk	Classification	server

③

Name	Type	Capacity	Date of Creation	Create Snapshot/Image
ROOT-40880	Root	20.00 GB	09/23/2012 16:05:51	Snapshot 이미지
DATA-40880	Data	80.00 GB	09/23/2012 16:05:51	Snapshot

HA In Use **start stop**

Create Snapshot

ROOT-41434's snapshot is created.

Enter Snapshot Name

Snapshot Name

* Only include combination of English alphabet, numbers, '.', '-', and '_' are enterable with 3-50 letters.

For Windows VM created before March 25th of 2012, installation of "ucloudCFG.exe" is needed for stable snapshot/image service before creating snapshot.

※ Please refer to Product Information > Supplementary Service > Snapshot Guide.

confirm

cancel

Create Snapshot

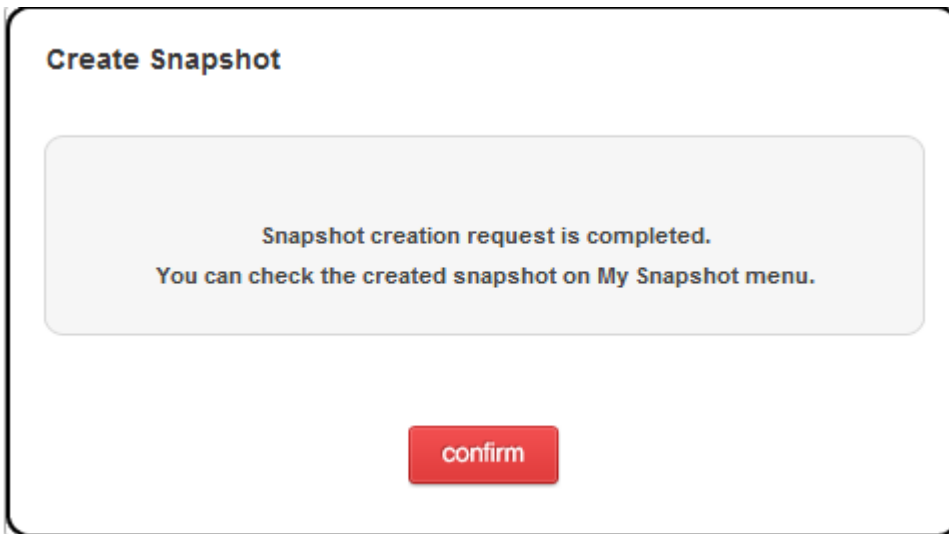
It takes approximately 20 minutes on the 10GB basis of actual reserve of volume size.

You will be notified via email upon completion.

Would you create?

confirm

cancel



4.6.3 Creating user image on created snapshot

You can create user image with created snapshot.

After selecting snapshot to create image and clicking "Creating Image," create user image.

My Snapshot

Select Account: artoflife3@naver.com

<input type="checkbox"/>	Server Name	Volume Name	Snapshot name	State	Date of Creation
<input type="checkbox"/>	testhojin	testhojinDisk	testSnapshot	use	2012-09-21 12:03
<input checked="" type="checkbox"/>	testhojin	ROOT-40726	testSnapshot	use	2012-09-21 12:18

Explanation

ID	90836ad1-a73d-4320-b20e-a6f01b13539c	Snapshot Type	root volume
Volume Size(GB)	20.00 GB	OS Type	SUSE Linux Enterpris
Snapshot Size(GB)	1.95 GB		

After entering name of image to be used, click OK button.

Create Image

Image of snapshot testdd is created.
Please enter the name of image.

Image Name

* Only include combination of English alphabet, numbers, '.', '-', and '_' are enterable with 3-32 letters.

confirm **cancel**

Create Image

It takes approximately 20 minutes on the 10GB basis of actual reserve of volume size ,
and the completion will be notified via email.

Would you create?

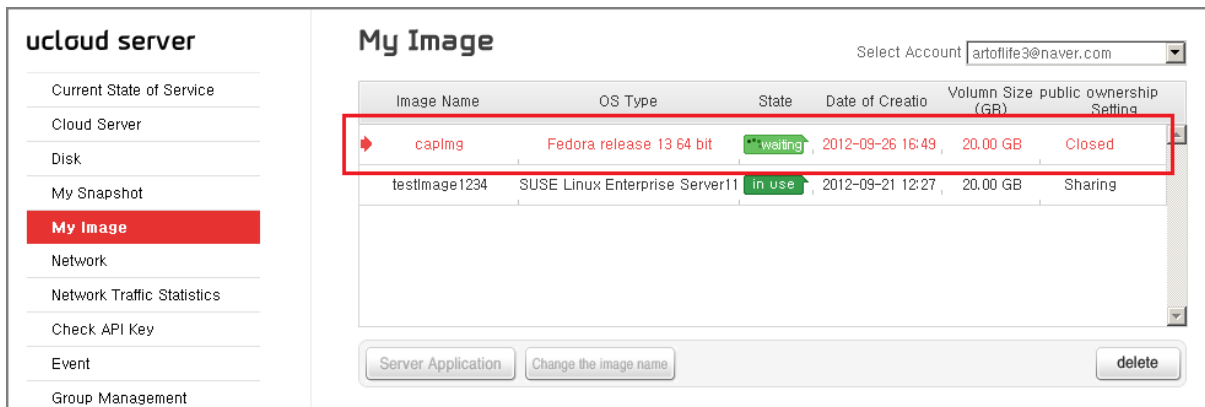
confirm **cancel**

Create Image

Image creation request is completed.
You can check the created image on My Image menu.

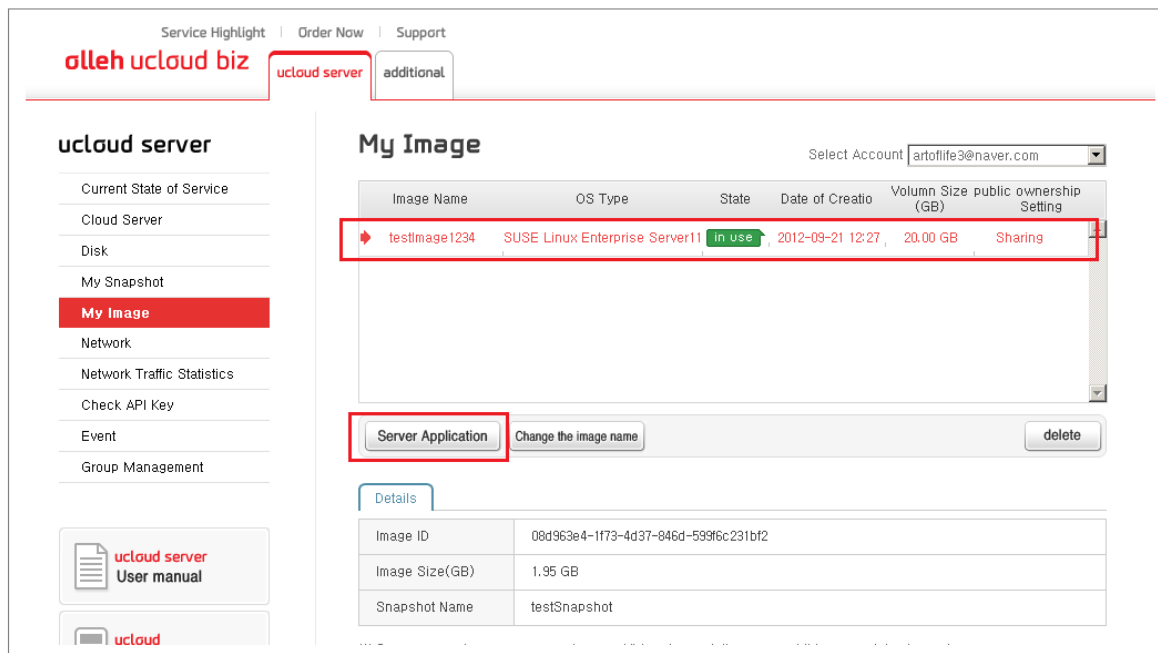
confirm

You can check the created image on 'My Image' menu.



4.6.4 Creating VM by utilizing user image

You can create identical VM by using created user image.



After selecting image on the list of create images to create VM, click "Server Application" button.

OS type is selected the same with image type.

Request VM creation by entering server stipulation, server specification and server name.

Subsequent operations of server creation are identical with those of ucloud server creation.

Go to "Cloud Server" page, check creation state of requested VM, and get password for VM returned.

※ Although identical VM is created, Private IP and part of VM's config information is subject to change.

Apply cloud server X

01
Select cloudserver

02
Confirm

OS spec

(VAT excluded)

Classification	Type	Price	
		monthly plan	hourly plan
Default OS	SUSE Linux Enterprise Server11 SP1 32bit	130000 won/month	217 won/hour

Select server

Monthly Plan hourly plan

(VAT excluded)

Select	CPU	RAM	Default Storage	Price(Unit:won/month)
<input type="radio"/>	1 vCore	1.00 GB	100GB	30,000won
<input type="radio"/>	1 vCore	2.00 GB	100GB	40,000won
<input type="radio"/>	2 vCore	2.00 GB	100GB	60,000won
<input type="radio"/>	2 vCore	4.00 GB	100GB	75,000won
<input type="radio"/>	2 vCore	8.00 GB	100GB	110,000won
<input type="radio"/>	4 vCore	4.00 GB	100GB	105,000won
<input type="radio"/>	4 vCore	8.00 GB	100GB	140,000won
<input type="radio"/>	4 vCore	16.00 GB	100GB	200,000won
<input type="radio"/>	8 vCore	8.00 GB	100GB	190,000won
<input type="radio"/>	8 vCore	16.00 GB	100GB	250,000won
<input type="radio"/>	8 vCore	32.00 GB	100GB	380,000won
<input type="radio"/>	12 vCore	16.00 GB	100GB	350,000won
<input type="radio"/>	12 vCore	32.00 GB	100GB	480,000won

Apply cloud server X

01
Select cloudserver

02
Confirm

Check for Service History (Unit : won/month, VAT excluded)

Classification	Option	Price
OS	My Image SUSE Linux Enterprise Server11 SP1 32bit	130000 won/month
Server	CPU 4 vCore	105,000won/month
	RAM 4.00 GB	
	Default Stroage 100GB	
Plan Request Details	You selected the product above as monthly plan.	
tmpLinuxServer	capdd	

Billed
235,000won/month

Would you request a cloud server with selected details above?

previous
submit

Check Cloud Server Request

Would you request a cloud server?

- Notices -

Default password is created in creating server.
Please wait until the completion of creation.
It may take **10** minutes at maximum to create a server.

*** Password will be sent when creation of cloud server is completed.**
*** You can access to the created server after setting up port forwarding.**

OK
Cancel

ucloud server

Current State of Service

Cloud Server

Disk

My Snapshot

My Image

Network

Network Traffic Statistics

Check API Key

Event

Group Management

ucloud server
User manual

ucloud
Simple monthly Calculator

Service Rate
1 USD : 1119 Won
(Sep 25, 2012)

Cloud server Select Account ➔ add a server

Select State Server Name search

Type	Server Name	OS	State	Specification (CPU, RAM)	Console View
server	capdd	SUSE Linux Enterprise Server 11 (32-bit)	starting	4 vCore, 4.00 GB	
server	capimage2	CentOS 5.4 (32-bit)	in use	1 vCore, 1.00 GB	
server	testImage	SUSE Linux Enterprise Server 11 (32-bit)	stopped	1 vCore, 1.00 GB	
server	123	Other PV (64-bit)	in use	4 vCore, 4.00 GB	
server	testServer2	SUSE Linux Enterprise Server 11 (32-bit)	stopped	1 vCore, 1.00 GB	

start
stop
reboot
delete
change P/W
change charge plan

Details

Server Name	capdd (d66a4c1d-6298-42fd-a380-9cea4be889b0) change	Address of Internal IP	172.27.156.220 setup port forwarding
Date of Creation	09/26/2012 16:23:05	Plan	Monthly Plan
CPU	4 vCore, 2.00 GHz	Memory	4.00 GB
OS	SUSE Linux Enterprise Server 11 (32-bit)	State	starting
Disk	Total 100.00 GB add Disk	Classification	server

Name	Type	Capacity	Date of Creation	Create Snapshot/Image
ROOT-41435	Root	20.00 GB	09/26/2012 16:23:05	

4.6.5 Installing ucloudCFG

4.6.5.1 Download setup file

File name : ucloudCFG.exe

Target OS : Windows 2003/2008(32,64 bit)

Download location : <https://ucloudbiz.olleh.com/portal/portal.file.html>

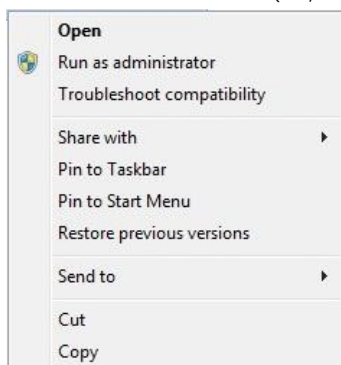
- ucloud biz web → Customer Center → Library → Other Material

4.6.5.2 Install

- ① Run "ucloudCFG.exe"



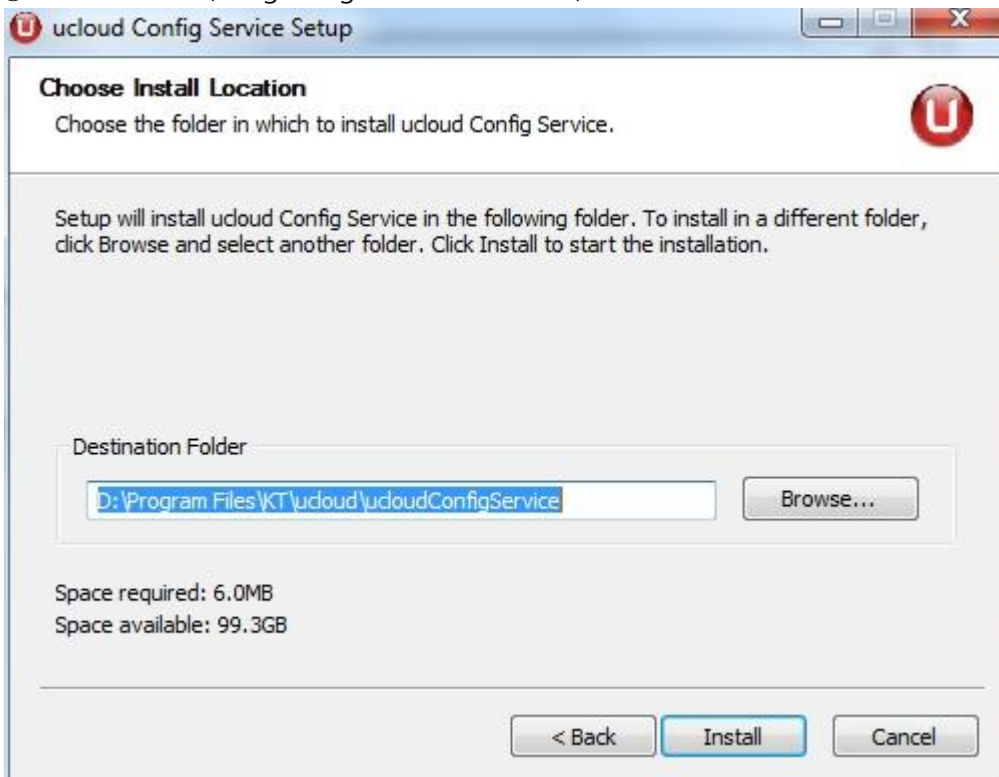
- ※ Run Windows 2008(32,64bit) under administrator's authority.



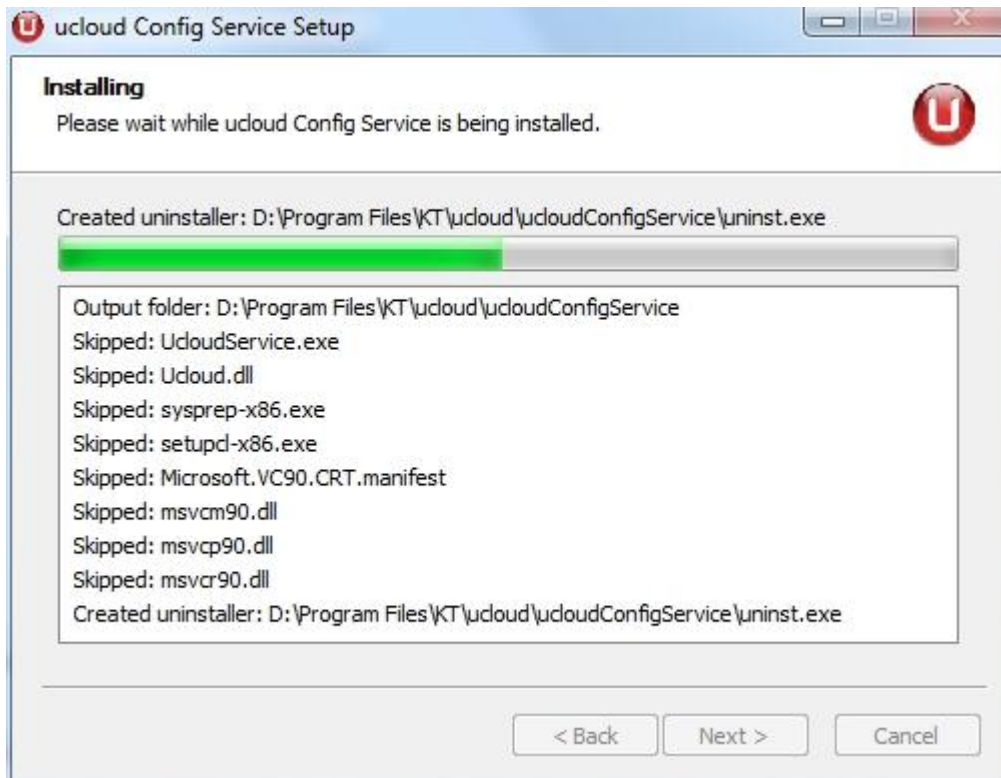
② Select "Next"



③ Select "Next" (designating installation folder)



④ Progress installation

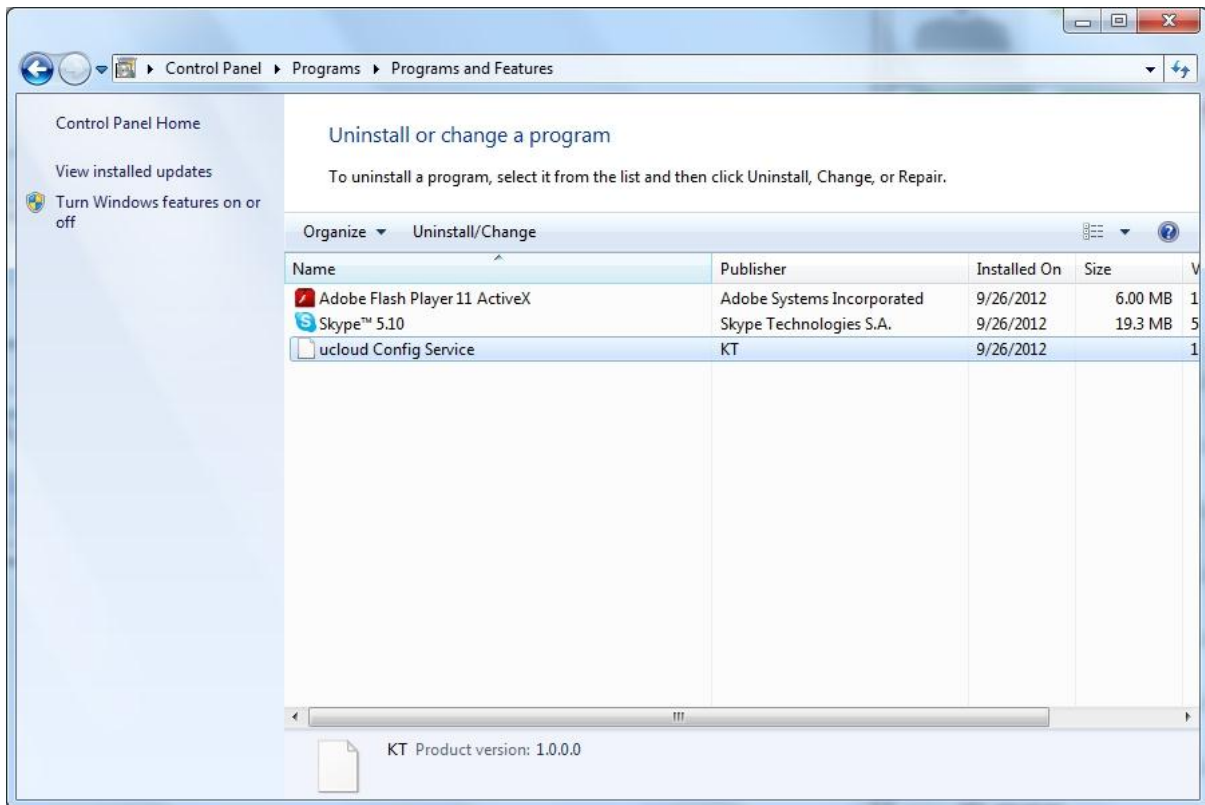


⑤ Completed

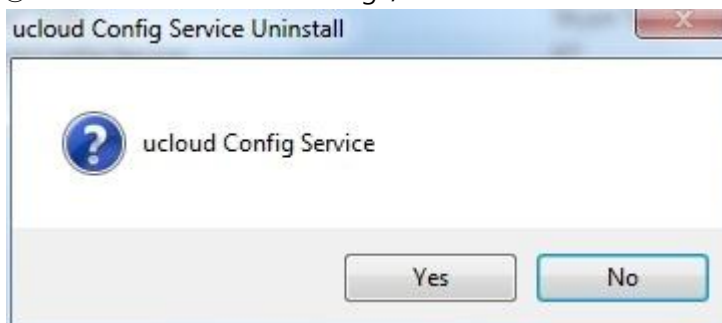


4.6.5.3 Uninstall

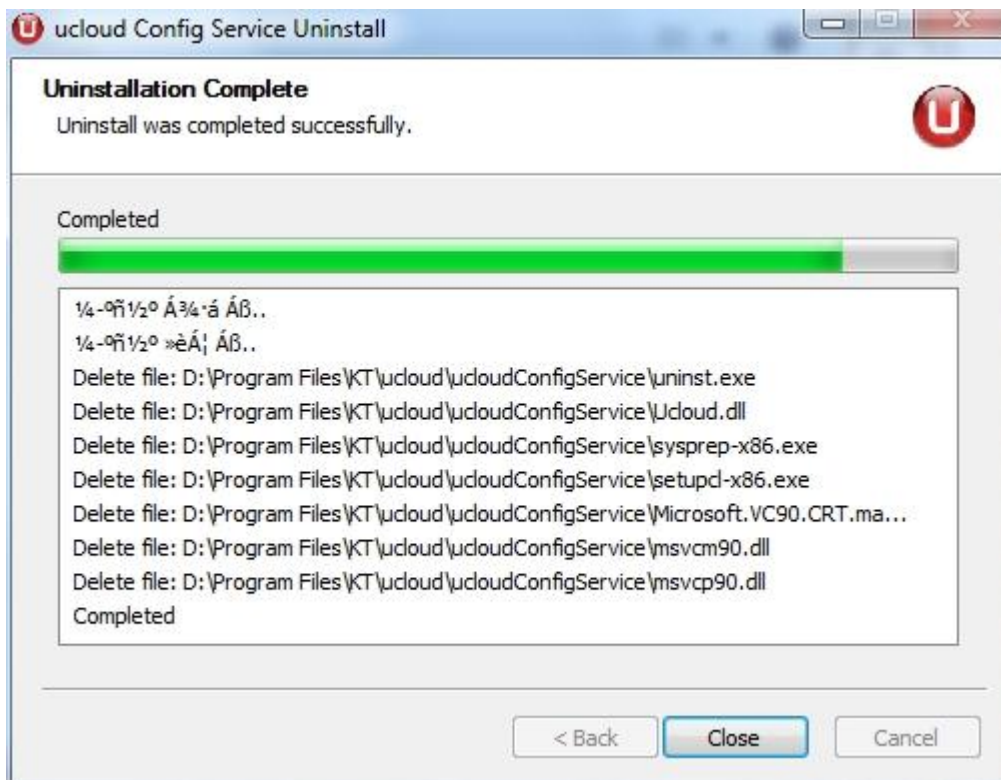
① Control Panel > Add/Delete Program



② Select ucloudService Change/Delete



③ Completed



※ Separate users' execution is not required as it is system control service.

5. Terminating service

5.1 How to terminate service

Minimum use of ucloud service is one day.

You can cancel service on olleh ucloud biz portal.

You can cancel after one day on requested service.

(Refer to the introduction of olleh ucloud biz portal.)

6. Service consulting and inquiry

6.1 Service consulting and error reporting

Service consulting and error reporting with CBT is processed through telephone and bulletin board.

Support

- FAQ**
- Request
- Downloads
- Service guide

Contact us

ucloud Simple monthly Calculator

Service Rate
1 USD : 1119 Won
(Sep 25, 2012)

FAQ

Find answers to commonly raised questions through the users of ucloud service

Total search

Total Member Package Subscription server server+ storage Supplementary Service Others

[ucloud server] How is the performance of ucloud CS compared to global enterprises?

[ucloud server] Are there appropriate and inappropriate applications for virtual server?

[ucloud server] Can I use it for a business abroad?

[ucloud server] How can I request service?

[ucloud server] What should I do with problems or errors in service use?

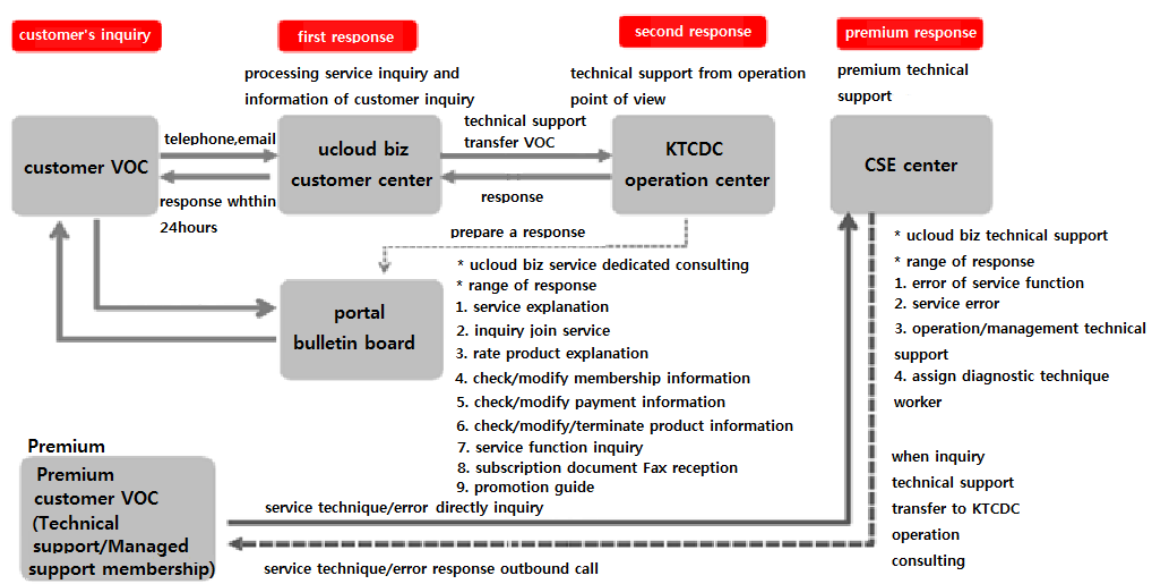
[General] What should I do to request service improvement?

[ucloud server] How long does it take to create a server (resource allotment)?

6.1.2 Telephone consulting

Customers can get general information on service request through telephone consulting on olleh ucloud biz customer center.

)



6.2 Technical support

Upgraded technical support is provided for customers of Technical support or Managed support.

Detailed and immediate consulting and response are available through full-charge professionals of technical support.

6.2.1 Telephone consulting

Customers can directly call full-charge professionals of technical support in CSE center and get consulting.

6.2.2 Email consulting

Customers can directly send email to full-charge professionals of technical support in CSE center and get responded.