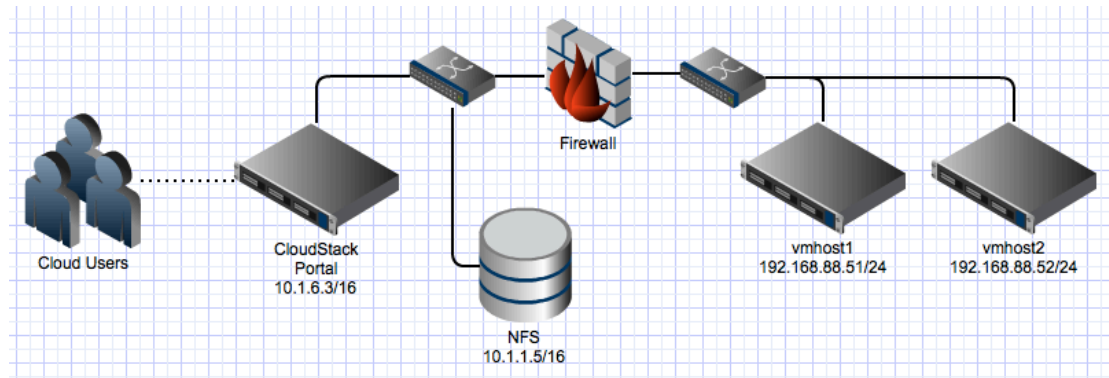


Basic Installasi CloudStack 3.0.2 + CentOS 6.2 + KVM Hypervisor By Heince @2012

Download packagenya disini:

<http://sourceforge.net/projects/cloudstack/files/CloudStack%20Acton/3.0.2/CloudStack-oss-3.0.2-1-rhel6.2.tar.gz/download>

Topologi:



Environment Setting:

- Tiap Server diinstall CentOS 6.2 x86_64 minimal install.
- Tiap Server hanya punya 1 interface card
- Tidak ada DHCP service di network 192.168.88.0/24
- DNS 1: 8.8.8.8
- DNS 2: 8.8.4.4
- Routing network 10.1.0.0/16 dan 192.168.88.0/24
- Semua server dapat mengakses internet
- NFS Share Primary = 10.1.1.5:/cloud/test/primary
- NFS Share Secondary = 10.1.1.5:/cloud/test/secondary
- Range system vm ip : 192.168.88.11 - 20
- Range Guest vm : 192.168.88.101 - 150

Instalasi management server

Hostname

Hostname : mgtsvr1.example.com

Edit /etc/hosts:

```
10.1.6.3      mgtsvr1.example.com mgtsvr1
```

SELinux

Saat ini CloudStack belum mendukung SELinux, jadi harus di set permissive / disabled.

Jalankan perintah berikut untuk setting permissive mode:

```
#setenforce 0
```

Edit /etc/selinux/config, ganti Enforcing menjadi 'permissive'

```
# This file controls the state of SELinux on the system.
# SELINUX= can take one of these three values:
#     enforcing - SELinux security policy is enforced.
#     permissive - SELinux prints warnings instead of
#                 enforcing.
#     disabled - No SELinux policy is loaded.
SELINUX=permissive
# SELINUXTYPE= can take one of these two values:
#     targeted - Targeted processes are protected,
#     mls - Multi Level Security protection.
SELINUXTYPE=targeted
```

NTP

NTP Service dibutuhkan agar waktu pada server konsisten.

Install NTP :

```
#yum install -y ntp
#chkconfig ntpd on
#service ntpd start
```

NFS Client

Instalasi:

```
#yum install -y nfs-utils
```

DATABASE

Install MySQL Server:

```
#yum install -y mysql-server
```

edit /etc/my.cnf, tambahkan baris berikut dibawah [mysqld] :

```
innodb_rollback_on_timeout=1  
innodb_lock_wait_timeout=600  
max_connections=350  
log-bin=mysql-bin  
binlog-format = 'ROW'
```

Autostart dan start mysql server:

```
#chkconfig mysqld on  
#service mysqld start
```

Ubah MySQL root password :

```
#!/usr/bin/mysqladmin -u root -p 'passwordku'
```

Paket CloudStack

Extract:

```
#tar -xf CloudStack-oss-3.0.2-1-rhel6.2.tar.gz
```

Instalasi :

```
#cd CloudStack-oss-3.0.2-1-rhel6.2  
#./install.sh
```

Pilih option 'M' dan tekan 'enter' untuk memulai instalasi.

Setup DB & management:

```
# cloud-setup-databases cloud:password@localhost --deploy-  
as=root:passwordku
```

```
# cloud-setup-management
```

System Template Setup

CloudStack menyediakan template VM untuk mengatur console proxy, secondary storage dan virtual network appliance.

Image tsb harus di download ke NFS share secondary :

```
#mkdir /mnt/secondary
#mount 10.1.1.5:/cloud/test/secondary /mnt/secondary
# /usr/lib64/cloud/agent/scripts/storage/secondary/cloud-
install-sys-tmplt -m /mnt/secondary -u
http://download.cloud.com/templates/acton/acton-systemvm-
02062012.qcow2.bz2 -h kvm -F
```

KVM Setup

Set SELinux seperti management server diatas.

Edit /etc/hosts
192.168.88.52 vmhost2

Extract:
#tar -xf CloudStack-oss-3.0.2-1-rhel6.2.tar.gz

Instalasi :
#cd CloudStack-oss-3.0.2-1-rhel6.2
#./install.sh

Pilih option 'A' dan tekan 'enter' untuk memulai instalasi.

Libvirt

Edit /etc/libvirt/qemu.conf
vnc_listen=0.0.0.0

Restart Libvirt:
#service libvirtd restart
#/etc/init.d/messagebus start

PORTAL AKSES

<http://10.1.6.3:8080/client>

Default username : admin

Default password : password

Tampilan Login:

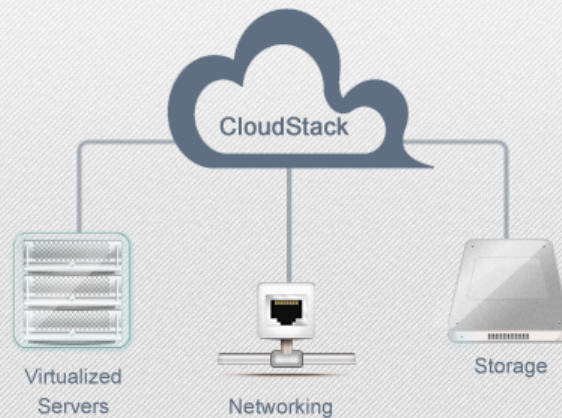
CloudStack

| |
|---------|
| admin |
| |
| Domain |
| Log On |
| English |

Click 'Log On'

CloudStack™ is a software platform that pools computing resources to build public, private, and hybrid Infrastructure as a Service (IaaS) clouds. CloudStack™ manages the network, storage, and compute nodes that make up a cloud infrastructure. Use CloudStack™ to deploy, manage, and configure cloud computing environments.

Extending beyond individual virtual machine images running on commodity hardware, CloudStack™ provides a turnkey cloud infrastructure software stack for delivering virtual datacenters as a service - delivering all of the essential components to build, deploy, and manage multi-tier and multi-tenant cloud applications. Both open-source and Premium versions are available, with the open-source version offering nearly identical features.



[I have used CloudStack before, skip this guide](#)

[Continue with basic installation](#)

Click 'Continue with basic Installation' , reset admin password:

Please change your password.

New Password:

Confirm password:

[Save and continue](#)

Buat Zone

Let's add a zone

What is a zone?

A zone is the largest organizational unit within a CloudStack™ deployment. A zone typically corresponds to a single datacenter, although it is permissible to have multiple zones in a datacenter. The benefit of organizing infrastructure into zones is to provide physical isolation and redundancy. For example, each zone can have its own power supply and network uplink, and the zones can be widely separated geographically (though this is not required).

Back

OK

click 'Ok'

Add zone

* Name:

* DNS 1:

DNS 2:

* Internal DNS 1:

Internal DNS 2:

Back Continue

click 'Continue'

Buat POD

Let's add a pod

What is a pod?

A pod often represents a single rack. Hosts in the same pod are in the same subnet.

A pod is the second-largest organizational unit within a CloudStack™ deployment. Pods are contained within zones. Each zone can contain one or more pods; in the Basic Installation, you will have just one pod in your zone

Back

OK



click 'Ok'

Add Pod

* Name:

* Gateway:

* Netmask:

* IP Range:

click 'Continue'

Add guest network

* Gateway:

* Netmask:

* IP Range:

click 'Continue'

Buat Cluster

Let's add a cluster

What is a cluster?

A cluster provides a way to group hosts. The hosts in a cluster all have identical hardware, run the same hypervisor, are on the same subnet, and access the same shared storage. Virtual machine instances (VMs) can be live-migrated from one host to another within the same cluster, without interrupting service to the user. A cluster is the third-largest organizational unit within a CloudStack™ deployment. Clusters are contained within pods, and pods are contained within zones.

CloudStack™ allows multiple clusters in a cloud deployment, but for a Basic Installation, we only need one cluster.



click 'Ok'

Pilih Hypervisor 'KVM'

Add Cluster

Hypervisor:

KVM

* Name:

testingcluster

Back

Continue

Click 'Continue'

Register VM host ke cluster

Let's add a host

What is a host?

A host is a single computer. Hosts provide the computing resources that run the guest virtual machines. Each host has hypervisor software installed on it to manage the guest VMs (except for bare metal hosts, which are a special case discussed in the Advanced Installation Guide). For example, a Linux KVM-enabled server, a Citrix XenServer server, and an ESXi server are hosts. In a Basic Installation, we use a single host running XenServer or KVM.

The host is the smallest organizational unit within a CloudStack™ deployment. Hosts are contained within clusters, clusters are contained within pods, and pods are contained within zones.



click 'Ok', masukkan ip address vm host, username dan password :

Add Host

* Host Name:

* Username:

* Password:

Tambahkan Primary Storage

Let's add primary storage

What is primary storage?

A CloudStack™ cloud infrastructure makes use of two types of storage: primary storage and secondary storage. Both of these can be iSCSI or NFS servers, or localdisk.

Primary storage is associated with a cluster, and it stores the disk volumes of each guest VM for all the VMs running on hosts in that cluster. The primary storage server is typically located close to the hosts.

Back

OK



click 'Ok'

Add Primary Storage

* Name:

Protocol:

* Server:

* Path:

[Back](#)

[Continue](#)

click 'Continue'

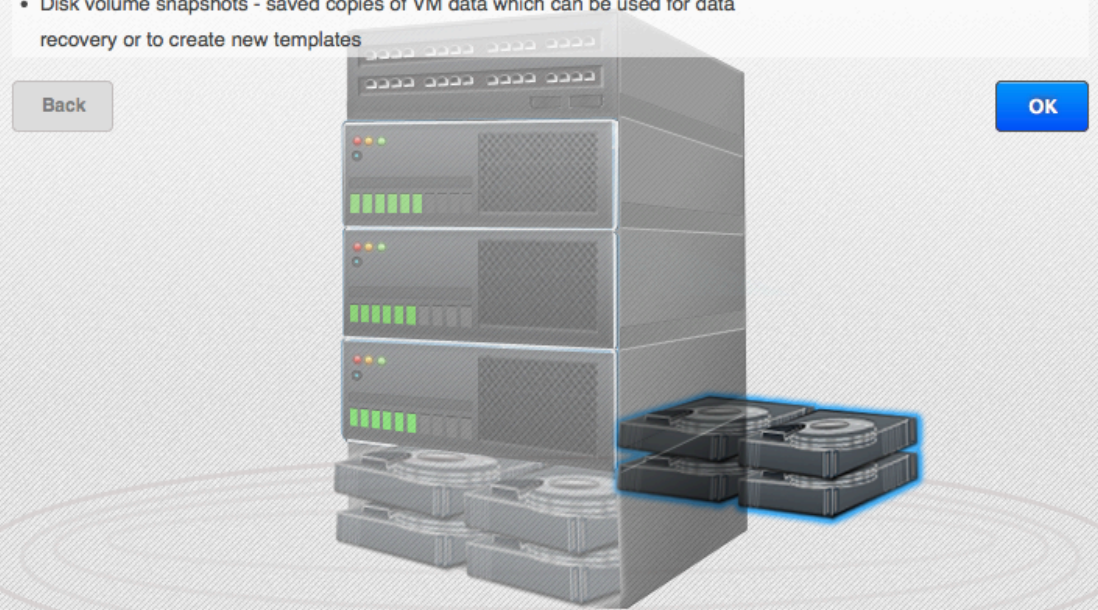
Tambahkan Secondary Storage

Let's add secondary storage

What is secondary storage?

Secondary storage is associated with a zone, and it stores the following:

- Templates - OS images that can be used to boot VMs and can include additional configuration information, such as installed applications
- ISO images - OS images that can be bootable or non-bootable
- Disk volume snapshots - saved copies of VM data which can be used for data recovery or to create new templates



click 'Ok'

Add Secondary Storage

* NFS Server:

* Path:

click 'Continue'

Congratulations!

Click the launch button.

Back

Launch

Now building your cloud...

- ✓ Creating zone
- ✓ Creating physical networks
- ✓ Configuring physical networks
- ✓ Enabling Security Group provider
- ✓ Creating guest network
- ✓ Creating pod
- ✓ Configuring guest traffic
- ✓ Creating cluster
- ✓ Adding host
- ✓ Creating primary storage
- ✓ Creating secondary storage
- ✓ Zone creation complete
- ✓ Enabling zone...
- Creating system VMs (this may take a while)

Siapin kopi + rokok + cemilan sambil goyang kaki

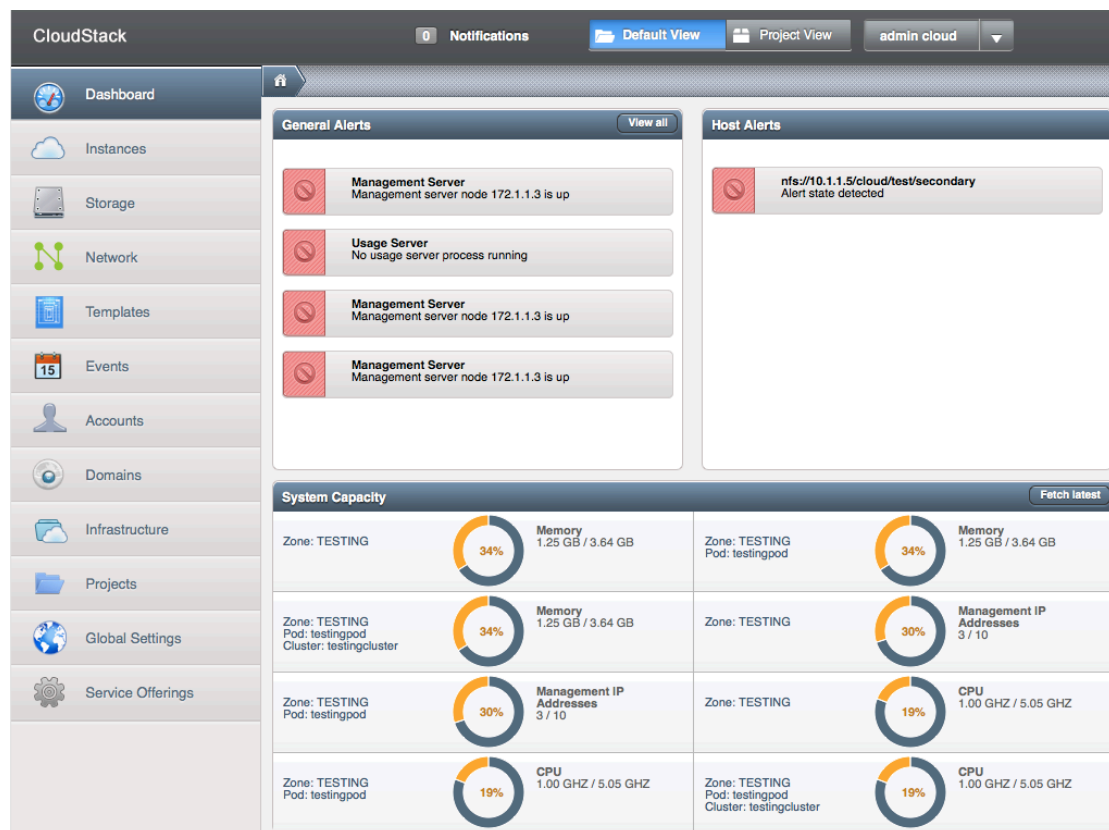
Cloud setup successful!

You may now continue.

Launch

Hore ! .. klik 'Launch'

Ini dia tampilan dashboard nya:



by default, CloudStack akan mendownload image template CentOS5.5, progressnya bias dilihat dr menu Templates – klik CentOS 5.5xx

disini masi sekitar 31%

| Name | |
|---------------------------------|--------------------------------------|
| CentOS 5.5(64-bit) no GUI (KVM) | |
| SystemVM Template (KVM) | |
| | |
| Name | CentOS 5.5(64-bit) no GUI (KVM) |
| ID | db410f8b-2c89-483f-a933-8bcfa80c8531 |
| Zone name | TESTING |
| Zone ID | aab971b8-67c5-46ff-a841-a724efbe895b |
| Description | CentOS 5.5(64-bit) no GUI (KVM) |
| Hypervisor | KVM |
| Type | BUILTIN |
| Ready | No |
| Status | 31% Downloaded |

setelah status Ready = Yes, kita bias menggunakan template tsb untuk mencreate vm.

Create VM Instance

Klik Instances menu – Add Instance

Add Instance

1 Setup

2 Select a template

3 Compute offering

4 Data Disk Offering

5 Network

6 Review

Select a zone

A zone typically corresponds to a single datacenter. Multiple zones help make the cloud more reliable by providing physical isolation and redundancy.

TESTING


Select ISO or template

☒ Template

OS image that can be used to boot VMs

☐ ISO

Disc image containing data or bootable media for OS



Cancel

Next

Add Instance

1 Setup

2 Select a template

3 Compute offering

4 Data Disk Offering

5 Network


6 Review

Please select a template for your new virtual instance.


Featured

Community

My templates

 **CentOS 5.5(64-bit) no GUI (KVM)**

CentOS 5.5(64-bit) no GUI (KVM)



Previous

Cancel

Next

Add Instance

1 Setup

2 Select a template

3 Compute offering


4 Data Disk Offering

5 Network

6 Review

☐ **Medium Instance**
Medium Instance

☒ **Small Instance**
Small Instance



Previous

Cancel

Next

Add Instance

1 Setup

2 Select a template

3 Compute offering

4 Data Disk Offering

5 Network


6 Review

☒ No Thanks

☐ **Small**
Small Disk, 5 GB

☐ **Medium**
Medium Disk, 20 GB

☐ **Large**
Large Disk, 100 GB



Previous

Cancel

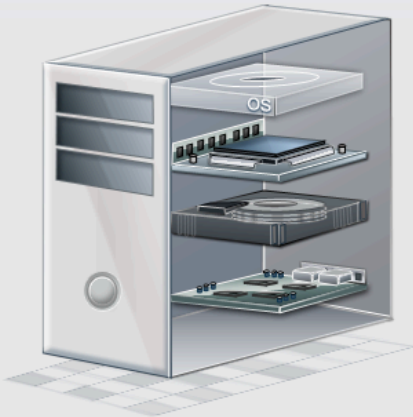
Next

Add Instance

1 Setup > 2 Select a template > 3 Compute offering > 4 Data Disk Offering > 5 Network > 6 Review

Please select security group(s) for your new VM

Previous Cancel Next



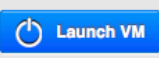
Disini kolom name akan menjadi hostname server.

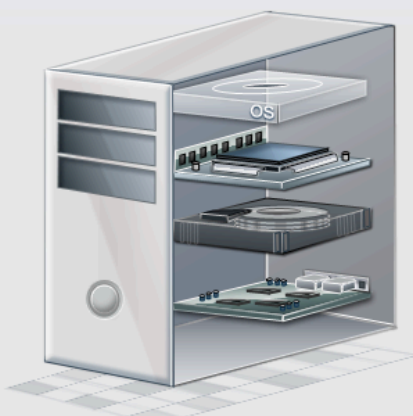
Add Instance

1 Setup > 2 Select a template > 3 Compute offering > 4 Data Disk Offering > 5 Network > 6 Review

Please review the following information and confirm that your virtual instance is correct before launch.







| | |
|-------------------------|----------------------|
| Name (Optional) | VM1 |
| Add to group (Optional) | |
| Zone | Edit |
| Hypervisor | Edit |
| Template | Edit |
| Compute offering | Edit |
| Data Disk Offering | Edit |
| Primary Storage | Edit |

Previous Cancel 









klik 'Launch VM'

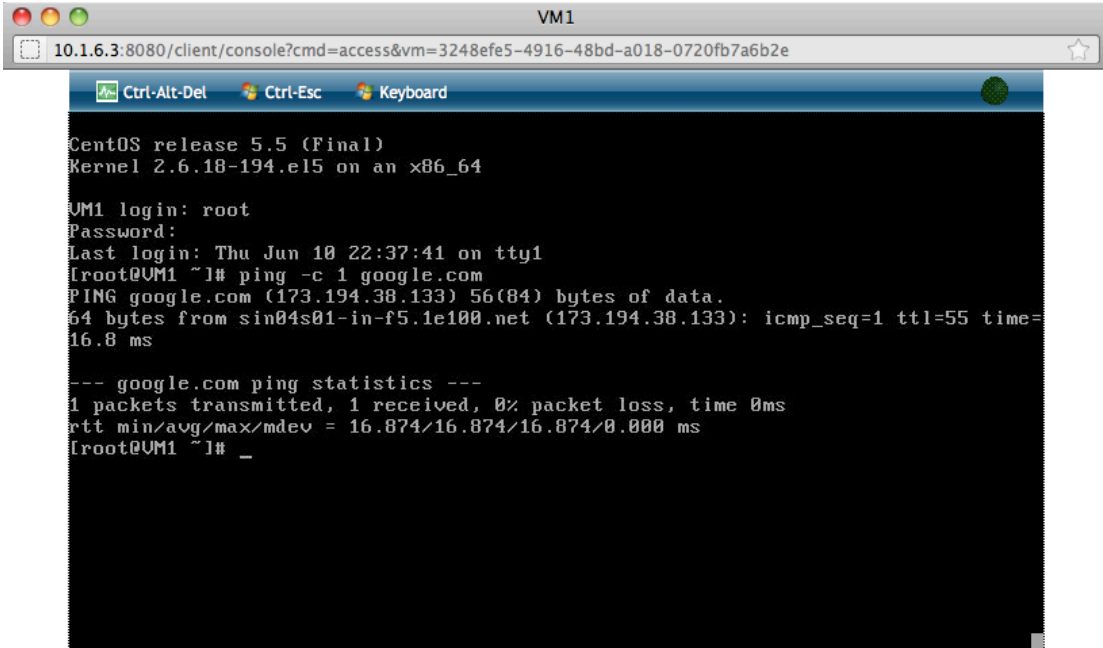
Waktu pertama kali create VM butuh waktu lebih lama, karena CloudStack butuh waktu untuk mempersiapkan Virtual Router.

| Display name | Internal name | Zone name | State | Actions |
|--------------|---------------|-----------|--|---|
| VM1 | i-2-3-VM | TESTING |  Starting |      |

akhirnya :

| Display name | Internal name | Zone name | State | Actions |
|--------------|---------------|-----------|---|---|
| VM1 | i-2-3-VM | TESTING |  Running |      |

view built in console , default root password template CentOS 5.5 = 'password'



```
CentOS release 5.5 (Final)
Kernel 2.6.18-194.el5 on an x86_64

VM1 login: root
Password:
Last login: Thu Jun 10 22:37:41 on tty1
[root@VM1 ~]# ping -c 1 google.com
PING google.com (173.194.38.133) 56(84) bytes of data.
64 bytes from sin04s01-in-f5.1e100.net (173.194.38.133): icmp_seq=1 ttl=55 time=
16.8 ms

--- google.com ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 16.874/16.874/16.874/0.000 ms
[root@VM1 ~]# _
```

Good Luck!