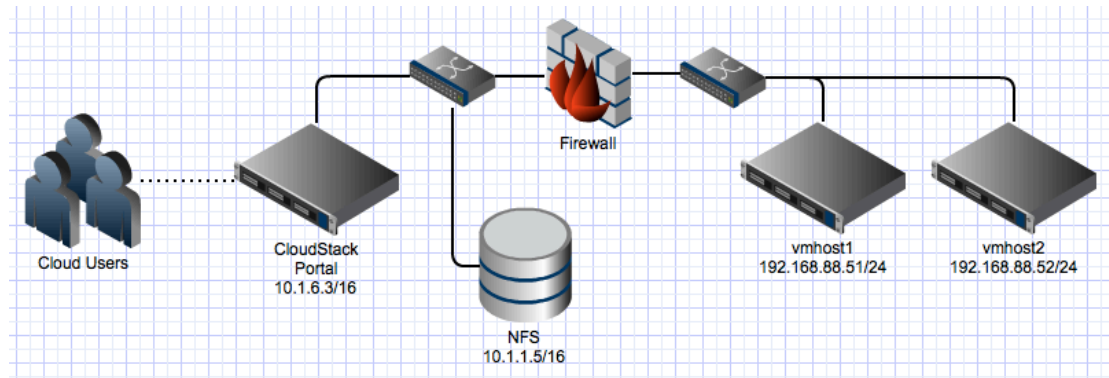Basic Installasi CloudStack 3.0.2 + CentOS 6.2 + KVM Hypervisor
By Heince @2012

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

Installasi 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

Installasi:
#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**

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

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

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`

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

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

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:

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.

CloudStack

Virtualized Servers   Networking   Storage
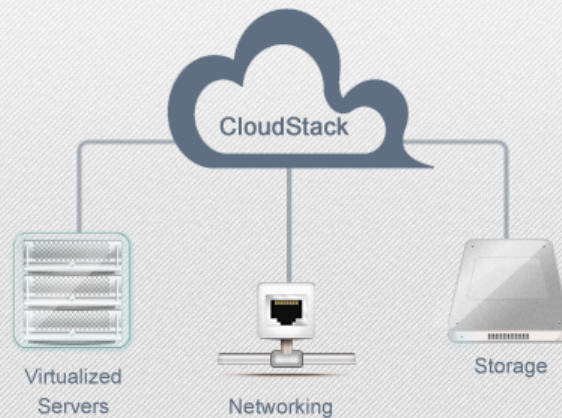
I have used CloudStack before, skip this guide   Continue with basic installation

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: TESTING

* DNS 1: 8.8.8.8

DNS 2: 8.8.4.4

* Internal DNS 1: 8.8.8.8

Internal DNS 2: 8.8.4.4

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'

click 'Continue'

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.

Back   **OK**

click 'Ok'

Pilih Hypervisor 'KVM'

Add Cluster

Hypervisor: KVM

* Name: testingcluster

Back   **Continue**

Click 'Continue'

Register VM host ke cluster

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

Tambahkan Primary Storage

click 'Ok'

click 'Continue'

Tambahkan Secondary Storage
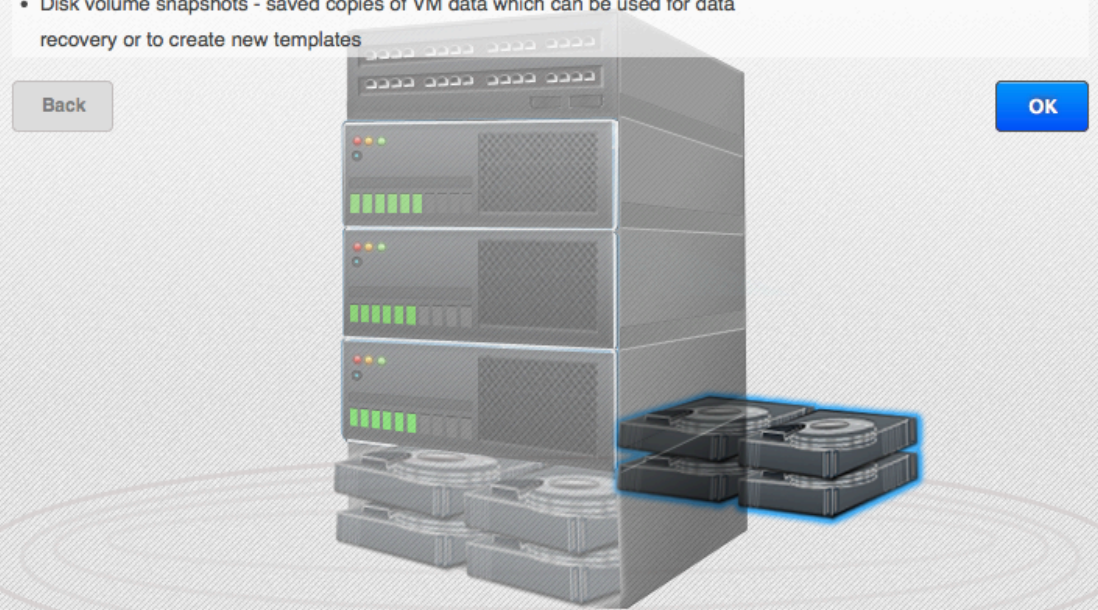
click 'Ok'

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 ....

Hore ! .. klik 'Launch'

Ini dia tampilan dashboard nya:
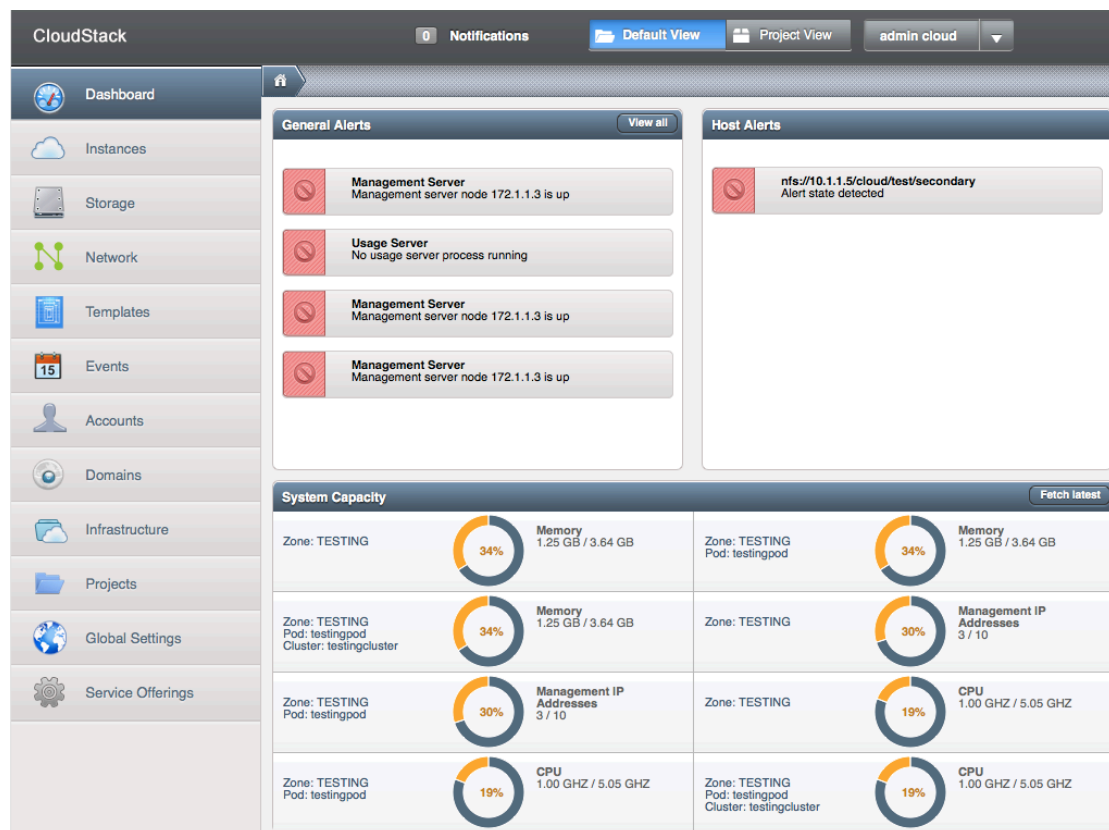
by default, CloudStack akan mendownload image template CentOS5.5, progressnya bias dilihat dr menu Templates – klik CentOS 5.5xx

disini masi sekitar 31%

Name	
CentOS 5.5(64-bit) no GUI (KVM	
SystemVM Template (KVM)	

Details

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

○ **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
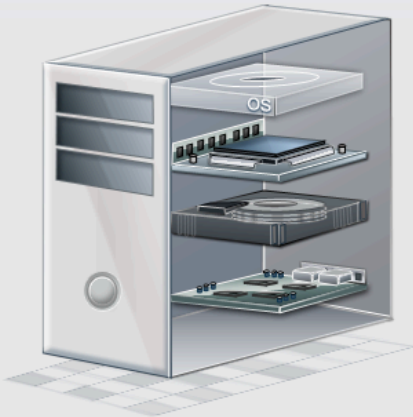
Previous   Cancel   **Next**
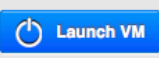
Disini kolom name akan menjadi hostname server.
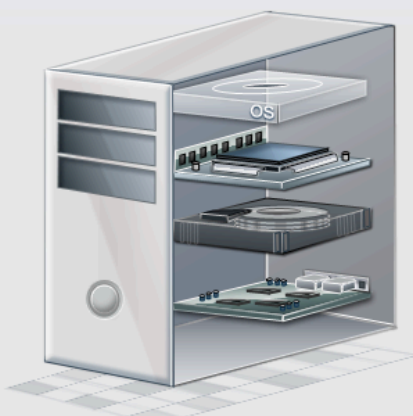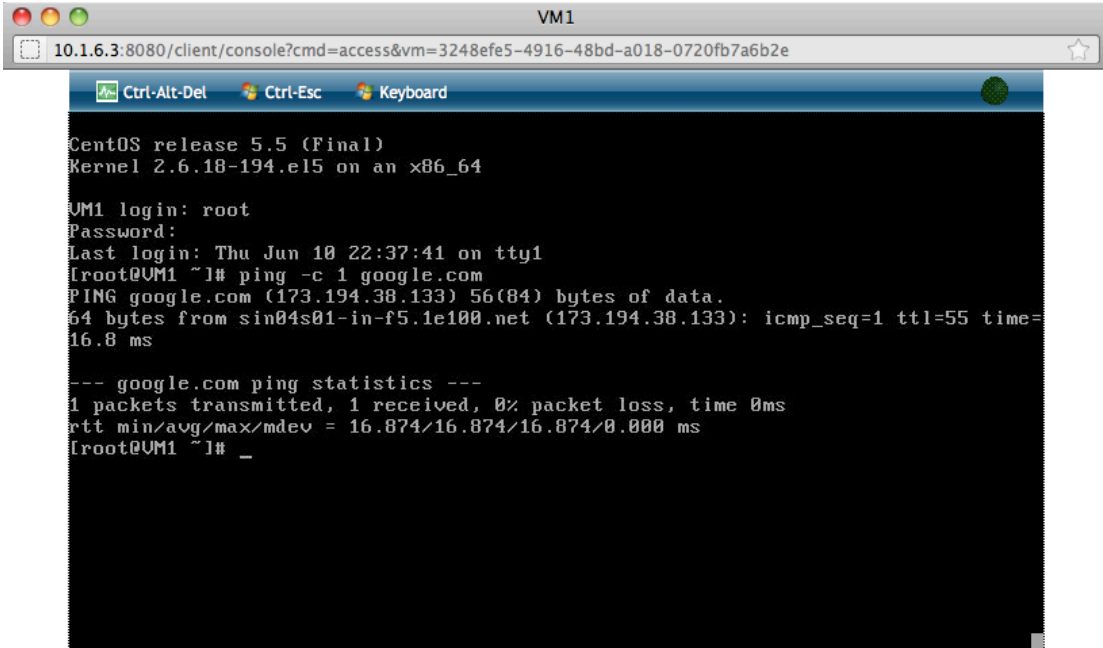

klik 'Launch VM'

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'

Good Luck!