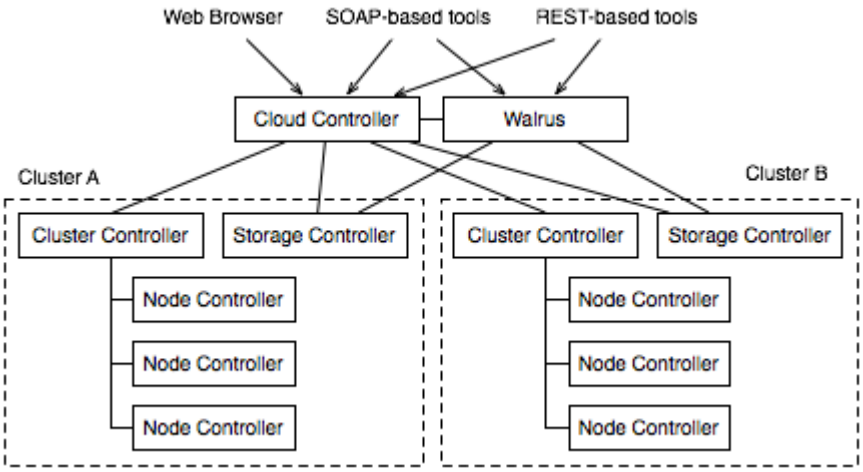

1. Test System
   the Cloud/Cluster/Storage/Walrus Front End Server
   > Atom PC (192.168.2.146)
   the Node Controller(s)
   > DL320G5 (192.168.2.119)

2. Install the Cloud/Cluster/Storage/Walrus Front End Server
   Ubuntu 9.10 Server CD
   > Install ubuntu Enterprise Cloud
   > Cluster
   > IP range

3. Install the Node Controllers(s)
   > Install ubuntu Enterprise Cloud
   > Node

4. Register the Node(s)
   On NC
   > sudo passwd eucalyptus

   On CLC
   > sudo -u eucalyptus ssh-copy-id -i ~eucalyptus/.ssh/id_rsa.pub
   eucalyptus@192.168.2.119
   > sudo euca_conf -addnode 192.168.2.119

5. Obtain Credentials

   From a Command Line

   On CLC

   > mkdir -p ~/.euca

   > chmod 700 ~/.euca

   > cd ~/.euca

   > sudo euca_conf –get-credentials mycreds.zip

   > unzip mycreds.zip

   > cd -

6. Extracting and Using Your Credentials

   > . ~/.euca/eucarc

   > echo “[-r ~/.euca/eucarc] && . ~/.euca/eucarc” >> ~/.bashrc

   > sudo apt-get install euca2ools

   > . ~/.euca/eucarc

   > euca-describe-avaiability-zones verbose

```
AVAILABILITYZONE        jwcluster       192.168.2.146
AVAILABILITYZONE        |- vm types     free / max   cpu   ram  disk
AVAILABILITYZONE        |- m1.small     0002 / 0002   1    128     2
AVAILABILITYZONE        |- c1.medium    0002 / 0002   1    256     5
AVAILABILITYZONE        |- m1.large     0001 / 0001   2    512    10
AVAILABILITYZONE        |- m1.xlarge    0001 / 0001   2   1024    20
AVAILABILITYZONE        |- c1.xlarge    0000 / 0000   4   2048    20
```

7. Install an image from the store

   > https://192.168.2.146:8443 (id/pwd : admin/admin)

   > Store Tab > Install (download image)

8. Run an Image

   > Use the command line

   > if [! -e ~/.euca/mykey.priv]; then

   touch ~/.euca/mykey.priv

   chmod 0600 ~/.euca/mykey.priv

   euca-add-keypair mykey > ~/.euca/mykey.priv

   fi

   > euca-describe-groups

   > euca-authorize default -P tcp -p 22 -s 0.0.0.0/0

   > euca-run-instances $EMI -k mykey -t c1.medium

   ($EMI : https://192.168.2.146:8443 다운받은 이미지 How to run? 클릭으로 확인)

> 확인

> watch -n5 euca-describe-instances

(state : pending → running)

```
RESERVATION     r-30F206E0      admin   default
INSTANCE        i-3C4706BE      emi-DFAC106E    192.168.3.10    172.19.1.2
pending         mykey   0       c1.medium       2010-03-04T00:52:27.052Z
jwcluster       eki-F5D610E6    eri-0A70115C
```

> IPADDR=$(euca-describe-instances | grep $EMI | grep running | tail -n1 |
awk '{print $4}') ex) 192.168.3.10

>접속 : ssh -i ~/.euca/mykey.priv ubuntu@$IPADDR

> INSTANCEID=$(euca-describe-instances | grep $EMI | grep running | tail -n1 |
awk '{print $2}') ex) i-3C4706BE

> terminate instance

on CLC

euca-terminate-instance $INSTANCEID

> reboot instance

on CLC

euca-reboot-intance $INSTANCEID

9. Using Block Storage

> Creating a volume

euca-create-volume –size 1 -z myzone (myzone에 1G 추가)

(euca-describe-availability-zones verbose에서 zone확인)

> Attaching a volume to an instance

euca-attach-volume -i i-467307E6 -d /dev/sdb vol-332804B7

=> instance i- 467307E6에 device명 /dev/sdb으로 volume vol-332804B7 attach

> Detaching a volume

euca-detach-volume vol-332804B7

> Delete a volume (detach → delete)

euca-delete-volume vol-332804B7

> Creating a snapshot

euca-create-snapshot vol-332804B7

snapshot으로 volume 생성하기

> euca-create-volume –snapshot <snapshot-id> –zone <zone>

> euca-describe-volumes로 volume ID확인

> euca-attach-volume -i i-467307E6 -d /dev/sdb vol-332804B7