

Date : 30 / 05 / 2013

Decided to run only five nodes at a time due to the overheating caused by AC's incapability to handle more servers simultaneously.

Reinstalling Rocks Version 6.1

Date : 31 / 05 / 2013

Rocks Installation

We advise you to go through the [rocks official documentation](#) [1] before the installation to understand the basics of cluster.

Frontend

The installation on the Frontend is done using a disk image either by a DVD or a bootable USB drive. The Jumbo DVD has all the required rolls in one single disk image. The x86 64 version of Rocks 6.1 can be downloaded from [here](#) [2]

- Insert the DVD/USB Drive and restart the main node (Frontend). A boot screen will be displayed with a prompt. Enter the following command to start the installation

build

- The next screen shows the list of all rolls in the DVD. Select the required rolls from the list. The kernel, base, os and web-server rolls are mandatory. Additional rolls can be installed by using DVD based rolls. Hit next to proceed.
- The next screen is for entering Cluster Information. Enter the details for Host name, cluster name, organization, locality, state, country, contact, URL, latitude and longitude. The fully-qualified host name is mandatory and is important for several cluster services.
- The next screen has the option to set the **eth1** (which is the interface to public network) IP address. This is the public IP of the cluster(connected to internet). Enter the public IP as 192.168.41.203
- The next screen has the option to set the private network **eth0** IP address and netmask. This is the IP address of the private network between the Frontend and the nodes. The IP address used is 10.1.1.1 and the netmask is 255.255.0.0.
- Now configure the gateway and DNS. Gateway used is 192.168.41.1 and DNS servers used are 192.168.254.2, 192.168.254.3.
- Enter the root password of the cluster when prompted.
- Configure the time by selecting the time zone for the cluster followed by inputting a

Network Time Protocol(NTP) server that will keep the clock on the frontend in sync.

- The next screen shows the option for the partitioning of the hard disk of the Frontend. Select "Manual Partitioning" since the configuration of "Auto Partitioning" provides insufficient space for the /var partition which is used by the Eucalyptus Cloud to upload machine images.
- **The Partition used for the frontend is :**

service network restart

Partition Name	Size
/	170 GB
/var	480 GB
/export	170 GB
swap	1 GB

Ethernet Switch Installation

- If the frontend and the vm-containers are connected via an ethernet switch, we have to first run the command
insert-ethers
and then select Ethernet Switch from the list that pops up.
- This is because the default behavior of many managed ethernet switches is to issue DHCP requests in order to receive an IP address that clients can use to configure and monitor the switch.

Nodes Installation

- Before installing the nodes, we must make their partition manual.
- First, run the command
cd /export/rocks/install/site-profiles/6.1/nodes/
- Copy the file skeleton.xml to replace-partition.xml
cp skeleton.xml replace-partition.xml
- Open **replace-partition.xml** and replace all content in the <pre> section with
echo "rocks manual" > /tmp/user_partition_info

- Run the following commands to write the changes to the rocks distro which will be used to install the nodes.

***cd /export/rocks/install
rocks create distro***

- For each of the nodes we have to install make sure that the following are done in order:
- Type the command
insert-ethers
- Select VM Container from the list.
- Start one of the nodes. The node must be booted through PXE (not through hard disk).
- Select PXEBoot while booting the nodes. When the frontend machine receives the DHCP request from the compute node, the screen shows a discovered appliance.
- Once a (*) mark appears near the discovered device, you can quit insert ethers by pressing F8.
- The node is named as vm-container-X-Y automatically and installation starts on the node. At this point the installation can be monitored from the frontend using the command
rocks-console vm-container-X-Y

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Steps to avoid receiving message inside terminal from log

To avoid getting error messages from node computer, you can try restarting the rsyslog daemon run by the operating system.

service stop rsyslog

service start rsyslog

Enabling Public Web Access to Your Frontend:

- To permanently enable selected web access to the cluster from other machines on the public network, follow the steps below.
- To open port 80 (the 'www' service) for the public network of frontend, execute:

Opening Web Access to Public

remove the rule

rocks remove firewall host=localhost rulename=A40-WWW-PUBLIC-LAN

Now, make it

```
rocks add firewall host=frontend network=public protocol=tcp \
service=www chain=INPUT action=ACCEPT \
flags="-m state --state NEW --source 0.0.0.0/0.0.0.0" \
rulename=A40-WWW-PUBLIC-NEW
```

Date 03 / 06 / 2013

Eucalyptus

Eucalyptus is a Linux-based software architecture that implements scalable private and hybrid clouds within your existing IT infrastructure. Eucalyptus allows you to provision your own collections of resources (hardware, storage, and network) using a self-service interface on an as-needed basis.

You should understand the basic components of Eucalyptus before trying to install it.

Preparing the network:

[Managing firewall through Rocks](#) [3] .

To open the required ports,run the following commands

Opening ports in Frontend

```
rocks add firewall host=frontend network=public protocol=tcp service=8443 \
chain=INPUT action=ACCEPT rulename=E10-PORT-8443
```

```
rocks add firewall host=frontend network=public protocol=tcp service=8772 \
chain=INPUT action=ACCEPT rulename=E10-PORT-8772
```

```
rocks add firewall host=frontend network=public protocol=tcp service=8773 \
chain=INPUT action=ACCEPT rulename=E10-PORT-8773
```

```
rocks add firewall host=frontend network=public protocol=tcp service=8774 \
chain=INPUT action=ACCEPT rulename=E10-PORT-8774
```

```
rocks add firewall host=frontend network=public protocol=tcp service=8776\  
chain=INPUT action=ACCEPT rulename=E10-PORT-8776
```

```
rocks add firewall host=frontend network=public protocol=tcp service=8777 \  
chain=INPUT action=ACCEPT rulename=E10-PORT-8777
```

```
rocks add firewall host=frontend network=public protocol=tcp service=8080 \  
chain=INPUT action=ACCEPT rulename=E10-PORT-8080
```

list of tcp ports @ frontend

8443 : SSL port for the administrative web user interface.

8772 : DEBUG ONLY: JMX port. This is disabled by default

8773 : Web services port for the CLC, Walrus, SC, and VB; also used for external and internal communications by the CLC and Walrus

8774 : Web services port on the CC.

8776 : Used by the image cacher on the CC

8777 : Database port on the CLC.

8080 : Port for the administrative web user interface. Forwards to 8443.

/*EDITED

Before synchronising the firewall rules we need to remove two rules from the existing firewall.
The command to remove the rules are :

```
rocks remove firewall global rulename=R900-PRIVILEGED-TCP  
rocks remove firewall global rulename=R900-PRIVILEGED-UDP
```

Sync the above firewall rules to rocks frontend using

```
rocks sync host firewall frontend
```

Accepting everything from TCP and UDP

```
iptables -A INPUT -p udp --dport 0:1023 -j ACCEPT  
iptables -A INPUT -p tcp --dport 0:1023 -j ACCEPT  
/sbin/service iptables save
```

Opening ports required for DNS functioning

```

iptables -A INPUT -p tcp -m tcp --sport 53 --dport 1024:65535 -m state \ --state ESTABLISHED -j
ACCEPT
iptables -A INPUT -p udp -m udp --sport 53 --dport 1024:65535 -m state \ --state ESTABLISHED -j
ACCEPT
iptables -A OUTPUT -p tcp -m tcp --sport 1024:65535 --dport 53 -m state \ --state
NEW,ESTABLISHED -j ACCEPT
iptables -A OUTPUT -p udp -m udp --sport 1024:65535 --dport 53 -m state \ --state
NEW,ESTABLISHED -j ACCEPT

```

EDITED*/

Firewall in Nodes

```

rocks add firewall appliance=vm-container protocol=tcp \
service=8775 network=all chain=INPUT action=ACCEPT \
rulename=E10-PORT-8775

```

This is the Web services port for the NC.

Sync the firewall rules to all the nodes using

rocks sync host firewall vm-container

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Checking if you have configured the ports properly.

You may use any tool like netstat, netcat or lsof to check the connection between ports.

We need to verify the following before proceeding further:

(1)

Java Program

```

import java.net.*;
import java.io.*;

```

```

public class PortMonitor {

```

```

    /**

```

```

* JavaProgrammingForums.com
*/
public static void main(String[] args) throws Exception {

    //Port to monitor
    final int myPort = 8775;
    ServerSocket ssock = new ServerSocket(myPort);
    System.out.println("port " + myPort + " opened");

    Socket sock = ssock.accept();
    System.out.println("Someone has made socket connection");

    OneConnection client = new OneConnection(sock);
    String s = client.getRequest();

}

}

class OneConnection {
    Socket sock;
    BufferedReader in = null;
    DataOutputStream out = null;

    OneConnection(Socket sock) throws Exception {
        this.sock = sock;
        in = new BufferedReader(new InputStreamReader(sock.getInputStream()));
        out = new DataOutputStream(sock.getOutputStream());
    }

    String getRequest() throws Exception {
        String s = null;
        while ((s = in.readLine()) != null) {
            System.out.println("got: " + s);
        }
        return s;
    }
}

##### End of file #####3

```

The above program will create a socket that will listen to the port specified in the program. Use this program as server which will listen to the specified port, and telenet into that server's ip

with the specified to check the connection.

Example

(1) Verify connection from and end-user to the CLC on ports 8773

Now run the program in frontend with argument 8773

```
javac Portmonitor.java  
java Portmonitor 8773
```

From any other system telnet into frontend with port 8773

```
telnet 192.168.41.203 8773  
Trying 192.168.41.203...  
Connected to 192.168.41.203.  
Escape character is '^]'.  
hello
```

Output @ frontend when connection is established

```
port 8773 opened  
Someone has made socket connection  
got: hello
```

Understand the scenario for each of the verification step given above using the program and telnet.

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Configure SELinux

SELinux is not supported by Eucalyptus

1. Open /etc/selinux/config and edit the line SELINUX=enforcing to SELINUX=permissive.
2. Save the file.
3. Run the following command:
4. setenforce 0

Configure NTP

Eucalyptus requires that each machine have the Network Time Protocol (NTP) daemon started and configured to run automatically on reboot.

Do this on all the nodes and frontend

Check the status of ntpd daemon

```
service status ntpd
```

Update the time using any server

```
ntpdate -u 0.pool.ntp.org
```

Sync the time with the hardware clock

```
hwclock --systohc
```

Configuring Firewall

If you have existing firewall rules on your hosts, you must allow Eucalyptus access. Take backup of the current iptable configuration in the frontend as well the nodes.

In frontend:

```
cp /etc/sysconfig/iptables /etc/sysconfig/iptables.backup  
/etc/init.d/iptables restart
```

In Nodes:

```
rocks run host vm-container 'cp /etc/sysconfig/iptables etc/sysconfig/iptables.backup; \  
/etc/init.d/iptables restart;'
```

Installing Eucalyptus

Enabling Centos Repos

In nodes

```
rocks run host vm-container \  
"sed 's/enabled = 0/enabled = 1/' /etc/yum.repos.d/CentOS-Base.repo > 1 ; \  
mv -f 1 /etc/yum.repos.d/CentOS-Base.repo;"
```

1. Configure the Eucalyptus package repository on each host that will run a Eucalyptus component

(both in the frontend and the nodes)

yum install

http://downloads.eucalyptus.com/software/eucalyptus/3.2/centos/6/x86_64/eucalyptus-release-3.2.noarch.rpm

2. Configure the Euca2ools package repository on each host that will run a Eucalyptus component or Euca2ools
(both in the frontend and the nodes)

yum install

http://downloads.eucalyptus.com/software/euca2ools/2.1/centos/6/x86_64/euca2ools-release-2.1.noarch.rpm

3. Configure the EPEL package repository on each host that will run a Eucalyptus component or Euca2ools

(both in the frontend and the nodes)

yum install

http://downloads.eucalyptus.com/software/eucalyptus/3.2/centos/6/x86_64/epel-release-6.noarch.rpm

4. Configure the ELRepo repository on each host that will run Walrus.(only in the frontend)

yum install

http://downloads.eucalyptus.com/software/eucalyptus/3.2/centos/6/x86_64/elrepo-release-6.noarch.rpm

5. Install the Eucalyptus node controller software on each planned NC host:(only in the nodes)

yum install eucalyptus-nc

6. Check that the KVM device node has proper permissions.

Run the following command:

ls -l /dev/kvm

Verify the output shows that the device node is owned by user root and group kvm.

crw-rw-rw- 1 root kvm 10, 232 Nov 30 10:27 /dev/kvm

If your kvm device node does not have proper permissions, you need to reboot your NC host.

To solve python boto dependency error, it must be done in both the frontend and the nodes

Find the python-boto rpm and install it

wget \ <http://dl.fedoraproject.org/pub/epel/6/i386/python-boto-2.5.2-3.el6.noarch.rpm>; \
rpm -Uvh py*rpm"

dependency issue

```
yum --enablerepo=elrepo install drbd83-utils kmod-drbd83
```

and make sure you have enabled elrepo repo in yum

change enabled = 0 to enabled = 1 in /etc/yum.repos.d/elrepo*

Configuring network modes

This section provides detailed configuration instructions for each of the four Eucalyptus networking modes. Eucalyptus requires network connectivity between its clients (end-users) and the cloud components (CC, CLC, and Walrus). In Managed and Managed (No VLAN) modes, traffic to instances pass through the CC. So, in these two modes clients must be able to connect to the CC.

The /etc/eucalyptus/eucalyptus.conf file contains all network-related options in in the “Networking Configuration” section. These options use the prefix VNET_. The most commonly used VNET options are described in the following table. The set of networking settings that apply to a cloud varies based on its networking mode. Each setting in this section lists the modes in which it applies. Unless otherwise noted, all of these settings apply only to CCs.

The /etc/eucalyptus/eucalyptus.conf file contains all network-related options in in the Networking Configuration section. These options use the prefix VNET_. The most commonly used VNET options are described in the following table.

We are using Managed-NoVLAN mode, below he have described the parameters to be for set for our network.

Option	Description	Remark for Nodes	Remark for Frontend
VNET_MODE	The networking mode in which to run. The same mode must be specified on all CCs and NCs in the entire cloud.	Change the VNET_MODE from “SYSTEM” to “MANAGED-NOVL AN”.	Change the VNET_MODE from “SYSTEM” to “MANAGED-NOVL AN”.

VNET_PRIVINTERFACE	The name of the network interface that is on the same network as the NCs. In Managed and Managed (No VLAN) modes this must be a bridge for instances in different clusters but in the same security group to be able to reach one another with their private addresses. Default: eth0	We have connected our private inter cluster network with eth0 interface.	We have connected our private inter cluster network with eth0 interface.
VNET_PUBINTERFACE	On a CC, this is the name of the network interface that is connected to the "public" network		We have connected our public network with eth1 interface.
VNET_BRIDGE	On an NC, this is the name of the bridge interface to which instances network interfaces should attach	Change it to eth0.	#Comment this line in the frontend.
VNET_PUBLICIPS	The range of public IP addresses to be assigned to the instances. If this is undefined then instances will receive only private IP addresses.	Assign IP's ranging from 192.168.41.211 - 192.168.41.216, which are usually free in NSL network.	Assign IP's ranging from 192.168.41.211 - 192.168.41.216, which are usually free in NSL network.
VNET_SUBNET, VNET_NETMASK	The address and network mask of the network the cloud should use for instances' private IP addresses.		Change the subnet to 10.1.0.0 and netmask to 255.255.0.0
VNET_ADDRSPEC	Eucalyptus assigns a distinct subnet of private IP addresses to each security group. This setting dictates how many addresses each of these subnets should contain. Specify a power of 2 between 16 and 2048. This is directly related, though not equal, to the number of instances that may reside in each security group, as Eucalyptus reserves eleven addresses per security group.	Assign it a value 32. https://engage.eucalyptus.com/customer/portal/articles/256617-calculating-security-groups	Assign it a value 32. Change the default password for the administration user. You can do this using the euare-usermodlogi nprofile or by logging in to the Eucalyptus Administrator Console

			(https://[CLC_IP_address]:8443). The first time you log in to the console, you are prompted for a new password. https://engage.eucalyptus.com/customer/portal/articles/256617-calculating-security-groups
VNET_DNS	The address of the DNS server to supply to instances in DHCP responses.		Assign DNS to 192.168.254.2 (Our campus local DNS)
VNET_DHCPDAEMON	The ISC DHCP executable to use. This is set to a distro-dependent value by packaging.		In Centos 6,the default is dhcp41.
VNET_DHCPUSER	The user the DHCP daemon runs as on your distribution. For CentOS 6 and RHEL 6, this is typically root.		In Centos dhcpd daemon runs dhcp

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Frontend Eucalyptus.conf (Only network configuration section, after the required changes)

```
#####
# NETWORKING CONFIGURATION
#
# The set of networking settings that apply to a cloud varies based on
# its networking mode. Each setting in this section lists the modes in
# which it applies. Unless otherwise noted, all of these settings apply
# only to CCs. All settings that lack default values must be specified
# in the networking modes that use them.
#####
```

The networking mode in which to run. The same mode must be specified
on all CCs and NCs in the entire cloud. Valid values include SYSTEM,
STATIC, MANAGED, and MANAGED-NOVLAN.

VNET_MODE="MANAGED-NOVLAN"
#Zeus is set to MANAGED_NOVLAN MODE

The name of the network interface that is on the same network as
the NCs. In Managed and Managed (No VLAN) modes this may need to be
a bridge. The default is "eth0".
Networking modes: Static, Managed, Managed (No VLAN)
VNET_PRIVINTERFACE="eth0"

On a CC, this is the name of the network interface that is connected
to the "public" network. The default is "eth0".
Networking modes: Managed, Managed (No VLAN)
#

On an NC, this is the name of the network interface that is connected
to the same network as the CC. Depending on the hypervisor's
configuration, this may be a bridge or a physical interface that is
attached to the bridge. The default is "eth0".
Networking modes: Managed
VNET_PUBINTERFACE="eth1"

On an NC, this is the name of the bridge interface to which instances'
network interfaces should attach. A physical interface that can reach
the CC must be attached to this bridge.
Networking modes: System, Static, Managed (No VLAN)
#VNET_BRIDGE="br0"

A map of MAC addresses to IP addresses that Eucalyptus should allocate
to instances when running in Static mode. Separate MAC addresses and
IP addresses with '=' characters. Separate pairs with spaces.
Networking modes: Static
#VNET_MACMAP="AA:DD:11:CE:FF:ED=192.168.1.2 AA:DD:11:CE:FF:EE=192.168.1.3"

A space-separated list of individual and/or hyphenated ranges of public
IP addresses to assign to instances.
Networking modes: Managed, Managed (No VLAN)
VNET_PUBLICIPS="192.168.41.211 192.168.41.212 192.168.41.213 192.168.41.214
192.168.41.215 192.168.41.216"

The address and network mask of the network the cloud should use for
instances' private IP addresses.

Networking modes: Static, Managed, Managed (No VLAN)

VNET_SUBNET="10.1.0.0"

VNET_NETMASK="255.255.0.0"

The number of IP addresses to allocate to each security group.

Specify a power of 2 between 16 and 2048.

Networking modes: Managed, Managed (No VLAN)

VNET_ADDRSPERNET="32"

The address of the DNS server to supply to instances in DHCP responses.

Networking modes: Static, Managed, Managed (No VLAN)

VNET_DNS="192.168.254.2"

The network broadcast address and default gateway to supply to instances
in DHCP responses.

Networking modes: Static

#VNET_BROADCAST="192.168.1.255"

#VNET_ROUTER="192.168.1.1"

Set this to the IP address that other CCs can use to reach this CC
if layer 2 tunneling between CCs does not work. It is not normally
necessary to change this setting.

Networking modes: Managed, Managed (No VLAN)

#VNET_LOCALIP="your-public-interface's-ip"

The ISC DHCP server executable to use. The default is

"/usr/sbin/dhcpd3".

Networking modes: Static, Managed, Managed (No VLAN)

VNET_DHCPDAEMON="/usr/sbin/dhcpd41"

The user as which the DHCP daemon runs on your distribution.

The default is "dhcpd".

Networking modes: Static, Managed, Managed (No VLAN)

VNET_DHCPUSER="dhcpd"

END OF FILE

Now make a config file for Node and copy it to all other nodes

The required changes at nodes are as follows:

```
VNET_PUBINTERFACE = 'eth0'
VNET_PRIVINTERFACE = 'eth0'
VNET_BRIDGE = 'eth0'
```

Nodes Eucaplytus.conf (Only network configuration section, after the required changes)

```
#####
# NETWORKING CONFIGURATION
#
# The set of networking settings that apply to a cloud varies based on
# its networking mode. Each setting in this section lists the modes in
# which it applies. Unless otherwise noted, all of these settings apply
# only to CCs. All settings that lack default values must be specified
# in the networking modes that use them.
#####

# The networking mode in which to run. The same mode must be specified
# on all CCs and NCs in the entire cloud. Valid values include SYSTEM,
# STATIC, MANAGED, and MANAGED-NOVLAN.
VNET_MODE="MANAGED-NOVLAN"

# The name of the network interface that is on the same network as
# the NCs. In Managed and Managed (No VLAN) modes this may need to be
# a bridge. The default is "eth0".
# Networking modes: Static, Managed, Managed (No VLAN)
VNET_PRIVINTERFACE="eth0"

# On a CC, this is the name of the network interface that is connected
# to the "public" network. The default is "eth0".
# Networking modes: Managed, Managed (No VLAN)
#
# On an NC, this is the name of the network interface that is connected
# to the same network as the CC. Depending on the hypervisor's
# configuration, this may be a bridge or a physical interface that is
# attached to the bridge. The default is "eth0".
# Networking modes: Managed
VNET_PUBINTERFACE="eth0"

# On an NC, this is the name of the bridge interface to which instances'
# network interfaces should attach. A physical interface that can reach
```



```
# the CC must be attached to this bridge.
# Networking modes: System, Static, Managed (No VLAN)
VNET_BRIDGE="eth0"

# A map of MAC addresses to IP addresses that Eucalyptus should allocate
# to instances when running in Static mode. Separate MAC addresses and
# IP addresses with '=' characters. Separate pairs with spaces.
# Networking modes: Static
#VNET_MACMAP="AA:DD:11:CE:FF:ED=192.168.1.2 AA:DD:11:CE:FF:EE=192.168.1.3"

# A space-separated list of individual and/or hyphenated ranges of public
# IP addresses to assign to instances.
# Networking modes: Managed, Managed (No VLAN)
#VNET_PUBLICIPS="192.168.41.211 192.168.41.212 192.168.41.213 192.168.41.214
192.168.41.215 192.168.41.216"

# The address and network mask of the network the cloud should use for
# instances' private IP addresses.
# Networking modes: Static, Managed, Managed (No VLAN)
#VNET_SUBNET="10.1.0.0"
#VNET_NETMASK="255.255.0.0"

# The number of IP addresses to allocate to each security group.
# Specify a power of 2 between 16 and 2048.
# Networking modes: Managed, Managed (No VLAN)
#VNET_ADDRSPERNET="256"

# The address of the DNS server to supply to instances in DHCP responses.
# Networking modes: Static, Managed, Managed (No VLAN)
#VNET_DNS="192.168.254.2"

# The network broadcast address and default gateway to supply to instances
# in DHCP responses.
# Networking modes: Static
#VNET_BROADCAST="192.168.1.255"
#VNET_ROUTER="192.168.1.1"

# Set this to the IP address that other CCs can use to reach this CC
# if layer 2 tunneling between CCs does not work. It is not normally
# necessary to change this setting.
# Networking modes: Managed, Managed (No VLAN)
#VNET_LOCALIP="your-public-interface's-ip"
```

```
# The ISC DHCP server executable to use. The default is
# "/usr/sbin/dhcpd3".
# Networking modes: Static, Managed, Managed (No VLAN)
VNET_DHCPDAEMON="/usr/sbin/dhcpd41"
```

```
# The user as which the DHCP daemon runs on your distribution.
# The default is "dhcpd".
# Networking modes: Static, Managed, Managed (No VLAN)
#VNET_DHCPUSER="dhcpd"
```

```
##### end of file #####
```

You may use the following scripts to delete, copy files into the nodes

Copying a file named eucalyptus to a location /etc/eucalyptus in all nodes

```
for i in {0..4}; do scp eucalyptus.conf root@vm-container-0-$i:/etc/eucalyptus/eucalyptus.conf;
done
```

Deleting a file from all nodes

```
for i in {0..5}; do ssh vm-container-0-$i 'rm -rf /etc/eucalyptus/eucalyptus.conf' ; done
```

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Loop Devices

In order to start new instances, Eucalyptus needs a sufficient number of loop devices to use for SC and NC components. An SC with insufficient loop devices fails to create new EBS volumes. An NC with insufficient loop devices fails to start new instances.

Excellent description of a loop device [] http://en.wikipedia.org/wiki/Loop_device .

In Frontend and Nodes

- open the /etc/eucalyptus/eucalyptus.conf file
- Uncomment the following line:

```
# CREATE_SC_LOOP_DEVICES=256
```

- Repeat this on all the nodes and frontend.

This script may be useful,

```
rocks run host vm-container " sed  
's/#CREATE_NC_LOOP_DEVICES=256/CREATE_NC_LOOP_DEVICES=256/'  
/etc/eucalyptus/eucalyptus.conf >1 ;mv -f 1 /etc/eucalyptus/eucalyptus.conf;"
```

Note:

Keep the default value enact, if you ever get an error compiling that there is not much of loop devices.

Go here

<https://engage.eucalyptus.com/customer/portal/articles/288556-increasing-the-number-of-loop-devices-in-rhel-centos>

<http://chee-yang.blogspot.in/2009/06/linux-increase-number-of-loop-devices.html>

Date : 18 / 05 / 2013

Skipping from official documentation (Not required in our setup as of now)

[]

http://www.eucalyptus.com/docs/3.2/ig/configuring_multi_cluster.html#configuring_multi_cluster

[]

http://www.eucalyptus.com/docs/3.2/ig/configuring_iptables.html#configuring_iptables

Yeah, Its almost done :)

This is Sparta we can't stop now God Zeus !

Starting Eucalyptus.

Starting Eucalyptus

1. Start the Cloud Controller

- Log in to the Cloud Controller (CLC).
- Please ensure that the "eucalyptus-cloud" process is not running prior to executing this command.
- Enter the following command to initialize the CLC:

`/usr/sbin/euca_conf --initialize`

You will get something like this if you succeed

"Initializing a new cloud. This may take a few minutes.

Initialize command succeeded "

- Enter the following command to start the CLC:

`service eucalyptus-cloud start`

Starting Eucalyptus services: done

2. Start Walrus

Since we have setup CLC and walrus in the same node (frontend) there is no need to start / initialize anything.

3. Start the CC

Log in to the CC server(frontend) and enter the following:

`service eucalyptus-cc start`

Starting Eucalyptus cluster controller: done

4. Start SC

If you installed SC on the same host as the CLC, skip this step.

5. Start the NCs

Log in to an NC server and enter the following command:

rocks run host vm-container "service eucalyptus-nc start"

6. Verify the Startup

At this point, all Eucalyptus components are enabled and starting up.

One quick way to determine if the components are running is to run netstat on the various hosts and look to see when the service ports are allocated to a process.

1. To check if the clc is listening on ports 8443.

```
sudo netstat -tulpn |grep 8443
tcp      0      0 0.0.0.0:8443          0.0.0.0:*             LISTEN   31412/eucalyptus-cl
```

2. To check if Walrus,CLC and SC are listening on port 8773.

```
sudo netstat -tulpn |grep 8773
tcp      0      0 0.0.0.0:8773          0.0.0.0:*             LISTEN   31412/eucalyptus-cl
udp      0      0 228.7.7.3:8773        0.0.0.0:*             31412/eucalyptus-cl
udp      0      0 192.168.41.203:8773    0.0.0.0:*             31412/eucalyptus-cl
```

3. The CC is listening on port 8774

```
sudo netstat -tulpn|grep 8774
tcp      0      0 :::8774               :::*                   LISTEN   3624/httpd
```

4. To check if the NC is listening to port 8775.

```
rocks run host vm-container "hostname; netstat -tulpn |grep 8775"
```

A similar output like the one below will be given by all the nodes.

```
vm-container-0-0.local
tcp      0      0 0.0.0.0:8775          0.0.0.0:*             LISTEN   6140/httpd
```

Registering Cluster

You will have to run all these commands in frontend.

Register Walrus

```
/usr/sbin/euca_conf --register-walrus --partition walrus --host 192.168.41.203 \
--component walrus-zeus
```

Created new partition 'walrus'

SERVICE walrus walrus walrus-zeus DISABLED 14

http://192.168.41.203:8773/services/Walrus arn:euca:bootstrap:walrus:walrus-zeus/

Warning: Permanently added '192.168.41.203' (RSA) to the list of known hosts.

Registering CC

```
/usr/sbin/euca_conf --register-cluster --partition zeus-cluster --host 192.168.41.203 \  
--component cc-zeus
```

Created new partition 'zeus-cluster'

SERVICE cluster zeus-cluster cc-zeus NOTREADY 15

http://192.168.41.203:8774/axis2/services/EucalyptusCC arn:euca:eucalyptus:zeus-cluster:cluster:cc-zeus/

Registering the SC

```
/usr/sbin/euca_conf --register-sc --partition zeus-cluster --host 192.168.41.203 \  
--component sc-zeus
```

WARNING:

Newly registered SCs will be in the BROKEN state until they are explicitly configured to use a backend storage provider. The output of the registration for the first SC registered in a partition will look like:

SERVICE storage zeus-cluster sc-zeus BROKEN 16

http://192.168.41.203:8773/services/Storage arn:euca:eucalyptus:zeus-cluster:storage:sc-zeus/

*Registered the first storage controller in partition 'zeus-cluster'. You must choose a storage back end with
``euca-modify-property -p zeus-cluster.storage.blockstoragemanager=\$BACKEND''*

Registering NC

```
/usr/sbin/euca_conf --register-nodes "10.1.255.249 10.1.255.250 10.1.255.251 10.1.255.252  
10.1.255.253"
```

TIP :)

The private IP's may differ get the ips using (in frontend)

```
cat /etc/hosts
```

```
127.0.0.1    localhost.localdomain localhost

10.1.255.254 network-0-0.local    network-0-0
10.1.255.253 vm-container-0-0.local vm-container-0-0
10.1.255.251 vm-container-0-2.local vm-container-0-2
10.1.255.252 vm-container-0-3.local vm-container-0-3
10.1.255.250 vm-container-0-4.local vm-container-0-4
10.1.255.249 vm-container-0-5.local vm-container-0-5
10.1.1.1     zeus.local    zeus
192.168.41.203 zeus.nitc.ac.in
```

Now check all the IP's of vm-container's

[Configuring the Runtime Environment](#)

Generate Administrator Credentials

Now that you have installed and configured Eucalyptus, you're ready to start using it. To do so, you must generate credentials.

Important

When you run the `euca_conf --get-credentials` command, you are requesting the access and secret keys and an X.509 certificate and key. You cannot retrieve an existing X.509 certificate and key. You can only generate a new pair.

Generate administrator credentials

```
/usr/sbin/euca_conf --get-credentials admin.zip
```

```
unzip admin.zip
```

Source the eucarc file

```
source eucarc
```

Note : When you source something remember not to change the present working directory, if

you do you will have to source the eucarc again

Configuring the Storage Controller

Configuring the SC to use the local filesystem (Overlay)

This was the default configuration option for the SC in pre-3.2 Eucalyptus. In this configuration the SC itself hosts the volume and snapshots for EBS and stores them as files on the local filesystem. It uses standard linux iSCSI tools to serve the volumes to instances running on NCs.

1. Configure the SC to use the OverlayManager for storage.

```
euca-modify-property -p zeus-cluster.storage.blockstoragemanager=overlay
```

The output of the command should be similar to:

```
PROPERTY PARTI00.storage.blockstoragemanager overlay was <unset>
```

2. Verify that the property value is now: 'overlay'

```
euca-describe-properties | grep blockstorage
```

Output :

```
PROPERTY zeus-cluster.storage.blockstoragemanager overlay
```

Configuring DNS

Configuring the subdomain

Eucalyptus provides a DNS service that you can configure to:

- Map instance IPs and Walrus bucket names to DNS host names
- Enable DNS delegation to support transparent failover in HA mode

The DNS service will automatically try to bind to port 53. If port 53 cannot be used, DNS will be disabled. Typically, other system services like dnsmasq are configured to run on port 53. To use the Eucalyptus DNS service, you will need to disable these services.

Before using the DNS service, configure the DNS sub domain name that you want Eucalyptus to handle as follows after the Eucalyptus Cloud Controller (CLC) has been started.

Log in to the CLC (the primary CLC in an HA setup) and enter the following:

```
euca-modify-property -p system.dns.dnsdomain=192.168.41.203
```


Turn on IP Mapping

To turn on mapping of instance IPs to DNS host names:

1. Enter the following command on the CLC (the primary CLC in an HA setup):

euca-modify-property -p bootstrap.webservices.use_instance_dns=true

2. If you wish to modify the subdomain that is reported as part of the instance DNS name, please enter the following command:

euca-modify-property -p cloud.vmstate.instance_subdomain=eucalyptus

When this value is modified, the public and private DNS names reported for each instance will contain the specified custom DNS subdomain name, instead of the default value, which is eucalyptus. For example, if this value is set to foobar, the instance DNS names will appear as euca-A.B.C.D.foobar.<subdomain>.

Configure the Master DNS Server

Note : Please read for DNS and creating a zone file before attempting to the steps given below.

- A good wiki article is available for understanding dns http://en.wikipedia.org/wiki/Zone_file
- A you should always look @ the original documentation provided by eucalyptus http://www.eucalyptus.com/docs/eucalyptus/3.2/ig/setting_up_dns.html#setting_up_dns

Set up your master DNS server to forward the Eucalyptus subdomain to the primary and secondary CLC servers, which act as name servers.

The following example shows how the Linux name server bind is set up to forward the Eucalyptus subdomain.

1. Open /etc/named.conf and set up the eucadomain.yourdomain zone.

```
#=====#
#           Edit the file to include everything given below           #
#=====#
acl rocks-trusted {
    10.1.0.0/16;
    127.0.0.1;
```

```
};

options {
    directory "/var/named";
    dump-file "/var/named/data/cache_dump.db";
    statistics-file "/var/named/data/named_stats.txt";
    forwarders { 192.168.254.2; 192.168.254.3; };
    allow-recursion { rocks-trusted; };
    allow-query { rocks-trusted; };
};

controls {
    inet 127.0.0.1 allow { localhost; } keys { rndckey; };
};

zone "." IN {
    type hint;
    file "named.ca";
};

zone "0.0.127.in-addr.arpa" IN {
    type master;
    file "named.localhost";
    allow-update { none; };
};

zone "local" {
    type master;
    notify no;
    file "private.domain";
};

zone "1.10.in-addr.arpa" {
    type master;
    notify no;
    file "reverse.private.domain.1.10";
};

zone "csedcluster.nitc.ac.in" {
    type master;
    file "/etc/named/db.csedcluster.nitc.ac.in";
};
```

```
#forward eucadomain.yourdomain ie eucalyptus.192.168.41.203
zone "eucalyptus.csedcluster.nitc.ac.in" {
    type forward;
    forward only;
    forwarders { 192.168.41.203; };
};
```

```
include "/etc/rndc.key";
##### End of File #####
```

Step 2:

Create /etc/named/db.csedcluster.nitc.ac.in if it does not exist. If your master DNS is already set up for csedcluster.nitc.ac.in you will need to add name server entries for CLC IP. The zone file modified for our cluster is given below.

```
##### Contents of file /etc/named/db.csedcluster.nitc.ac.in #####
```

```
$TTL 604800
@ IN SOA csedcluster.nitc.ac.in. root.csedcluster.nitc.ac.in. (
2 ; Serial
604800 ; Refresh
86400 ; Retry
2419200 ; Expire
604800 ) ; Negative Cache TTL
;
@ IN NS ns.csedcluster.nitc.ac.in.
@ IN A 192.168.41.203
```

```
;Assuming the master dns being the local campus dns 192.168.254.2
ns.csedcluster.nitc.ac.in. IN A 192.168.41.203
```

```
;Add entries for primary and secondary CLCs
eucalyptus.csedcluster.nitc.ac.in. IN NS clc0.eucalyptus.csedcluster.nitc.ac.in.
```

```
;Since we have only one CLC one one record is enough
clc0.eucalyptus.csedcluster.nitc.ac.in. IN A 192.168.41.203
```

End of file

Now restart the service named
service named restart

Configuring Node Controller

To alleviate potential problems, we recommend performing the following steps on each NC:

1. Log in to an NC server and open the `/etc/eucalyptus/eucalyptus.conf` file.
2. Change the `CONCURRENT_DISK_OPS` parameter to the number of disk-intensive operations you want the NC to perform at once. On some Linux installations, a sufficiently large amount of local disk activity can slow down process scheduling. This can cause other operations (e.g., network communication and instance provisioning) appear to stall. Examples of disk-intensive operations include preparing disk images for launch and creating ephemeral storage. Set this value to 1 to serialize all disk-intensive operations. Set to a higher number to increase the amount of disk-intensive operations the NC will perform in parallel.
3. Set `DISABLE_KEY_INJECTION=1` to disable key injection. By default, the node controller uses the filesystem to perform key injection. This is potentially an unsafe practice.

```
rocks run host vm-container " sed \ 's/#CONCURRENT_DISK_OPS =0/CONCURRENT_DISK_OPS=1/'  
/etc/eucalyptus/eucalyptus.conf >1 ;mv -f 1 /etc/eucalyptus/eucalyptus.conf;"
```

```
rocks run host vm-container " sed \ 's/#DISABLE_KEY_INJECTION="0"/DISABLE_KEY_INJECTION="1"/'  
/etc/eucalyptus/eucalyptus.conf >1 ;mv -f 1 /etc/eucalyptus/eucalyptus.conf;"
```

use something of this sort to check the files are updated properly,

```
ssh vm-container-0-4 cat /etc/eucalyptus/eucalyptus.conf | grep DISABLE
```

Set Up Security Groups

In Managed and Managed (No VLAN) networking modes, you must configure the system with parameters that define how Eucalyptus will allocate and manage virtual machine networks. These virtual machine networks are known as security groups. The relevant parameters are set in the `eucalyptus.conf` on all machines running a CC. These parameters are:

- `VNET_SUBNET`

- VNET_NETMASK
- VNET_ADDRSPERNET

The CC will read VNET_SUBNET and VNET_NETMASK to construct a range of IP addresses that are available to all security groups. This range will then be further divided into smaller networks based on the size specified in VNET_ADDRSPERNET. Note that Eucalyptus reserves eleven addresses per security group, so these networks will be smaller than the value specified in VNET_ADDRSPERNET.

The first time an instance runs in a given security group, Eucalyptus chooses an unused range of IPs of size specified in VNET_ADDRSPERNET. Eucalyptus then implements this network across all CCs. All instances that run within this given security group obtain a specific IP from this range.

If your networking environment is already using VLANs for other reasons, Eucalyptus supports the definition of a smaller range of VLANs that are available to Eucalyptus. To configure Eucalyptus to use VLANs within a specified range:

1. Choose your range (a contiguous range of VLANs between 2 and 4095).
2. Configure your cluster controllers with a VNET_SUBNET/VNET_NETMASK/VNET_ADDRSPERNET that is large enough to encapsulate your desired range.
3. We have VNET_NETMASK as 255.255.0.0 and VNET_SUBNET 10.1.0.0
4. We should have distinct VLAN Tags for each security group.
5. No of Security Groups is calculated by dividing $VNET_NETMASK/VNET_ADDRSPERNET$ i.e $(2^{(16)}-2)/32=2048$. [Refer <https://engage.eucalyptus.com/customer/portal/articles/256617-calculating-security-groups>]
6. Configure your cloud controller to work within that range. Use the following commands to verify that the range is now set to be 2-2048, a superset of the desired range.

```
euca-describe-properties | grep cluster.maxnetworktag
euca-describe-properties | grep cluster.minnetworktag
```

7. Constrict the range to be within the range that the CC can support as follows:

```
euca-modify-property -p cloud.network.global_max_network_tag=2050
euca-modify-property -p cloud.network.global_min_network_tag=2
```

8. Make sure that the difference between the max and min value should be equal to 2048 (ie

the no of security groups).

Change the default password for the administration user.

You can do this using the `euare-usermodloginprofile` or by logging in to the Eucalyptus Administrator Console (<https://192.168.41.203:8443>). The first time you log in to the console, you are prompted for a new password.

Hardware Failure

A serious hardware was noted in one of working servers and all the work done in the same node was irrecoverably lost. We had manually clean the RAM and its slot.

Configuring Eucalyptus Administrator Console <https://192.168.41.203:8443> for the first time.

Enter the following details to login into the console for the first time

Account : eucalyptus

User: admin

Password: admin

email id `sudev_bcs10@nitc.ac.in`

password new : spartan

Caching Images on the Cluster Controller

To reduce calls to Walrus, Eucalyptus provides a means for images, including ramdisk and kernel images, to be cached on a cluster controller (CC). If this feature is enabled, when Eucalyptus starts an instance, it will first look for the instance image in the CC image cache

location. If the image is not found in the CC image cache, it will be loaded from Walrus, and stored in the cache if space is available.

1. Edit `/etc/eucalyptus/eucalyptus.conf` as follows:

1. Uncomment the `CC_IMAGE_PROXY` line and specify the IP of the CC host on which to cache images.

Set this to make the CC cache images, kernels and ramdisks. NCs must
be able to reach the CC with the specified value.

```
CC_IMAGE_PROXY="192.168.41.203"
```

2. Set `CC_IMAGE_PROXY_PATH` to point to the location of the image cache.

Set this to the location where the CC image proxy should store cached
images. The default is `/var/lib/eucalyptus/dynserv/`

```
CC_IMAGE_PROXY_PATH="/var/lib/eucalyptus/dynserv"
```

3. Set `CC_IMAGE_PROXY_CACHE_SIZE` to the maximum size of the image cache.

Set this to the maximum size (in megabytes) of the CC image proxy cache.
The default is 32768, or 32 gigabytes.

```
CC_IMAGE_PROXY_CACHE_SIZE="20480"
```

4. Create a data directory at the location specified in `CC_IMAGE_PROXY_PATH`, and give the “eucalyptus” user full access to the directory.

```
mkdir -p /var/lib/eucalyptus/dynserv/data  
chmod -R 777 /var/lib/eucalyptus/dynserv/
```

5. Perform a clean restart of the cluster controller.

```
service eucalyptus-cc cleanrestart
```

Inspect System Health

Eucalyptus provides access to the current view of service state and the ability to manipulate the state. You can inspect the service state to either ensure system health or to identify faulty services. You can modify a service state to maintain activities and apply external service placement policies.

View Service State

Use the `euca-describe-services` command to view the service state. The output indicates:

- Component type of the service
- Partition in which the service is registered
- Unique name of the service
- Current view of service state
- Last reported epoch (this can be safely ignored)
- Service URI
- Fully qualified name of the service (This is needed for manipulating services that did not get unique names during registration. For example: internal services like reporting or DNS)

The default output includes the services that are registered during configuration, as well as information about the DNS service, if present. You can obtain additional service state information, such as internal services, by providing the `-system-internal` flag.

You can also make requests to retrieve service information that is filtered by either:

- current state (for example, NOTREADY)
- host where service is registered
- partition where service is registered
- type of service (for example, CC or Walrus)

When you investigate service failures, you can specify `-events` to return a summary of the last fault. You can retrieve extended information (primarily useful for debugging) by specifying `-events -events-verbose`.

Modify Service State

To modify a service:

1. Enter the following command on the CLC, Walrus, SC machines:
2. `eucalyptus-cloud stop`
3. On the CC, use the following command:
4. `eucalyptus-cc stop`

View User Resources

To see resource use by your cloud users, Eucalyptus provides the following commands with the `-verbose` flag:

- **euca-describe-groups** verbose: Returns information about security groups in your account, including output type identifier, security group ID, security group name, security group description, output type identifier, account ID of the group owner, name of group granting permission, type of rule, protocol to allow, start of port range, end of port range, source (for ingress rules) or destination (for egress rules), and any tags assigned to the security group.
- **euca-describe-instances** verbose: Returns information about your instances, including output type identifier, reservation ID, name of each security group the instance is in, output type identifier, instance ID for each running instance, EMI ID of the image on which the instance is based, public DNS name associated with the instance (for instances in the running state), private DNS name associated with the instance (for instances in running state), instance state, key name, launch index, instance type, launch time, availability zone, kernel ID, ramdisk ID, monitoring state, public IP address, private IP address, type of root device (ebs or instance-store), placement group the cluster instance is in, virtualization type (paravirtual or hvm), any tags assigned to the instance, hypervisor type, block device identifier for each EBS volume the instance is using, along with the device name, the volume ID, and the timestamp.
- **euca-describe-keypairs** verbose: Returns information about key pairs available to you, including keypair identifier, keypair name, and private key fingerprint.
- **euca-describe-snapshots** verbose: Returns information about EBS snapshots available to you, including snapshot identifier, ID of the snapshot, ID of the volume, snapshot state (pending, completed, error), timestamp when snapshot initiated, percentage of completion, ID of the owner, volume sized, description, and any tags assigned to the snapshot.
- **euca-describe-volumes** verbose: Describes your EBS volumes, including volume identifier, volume ID, size of the volume in GiBs, snapshot from which the volume was created, availability zone, volume state (creating, available, in-use, deleting, deleted, error), timestamp of the volume creation, and any tags assigned to the volume.

Images and Instances

Creating a Image using eustore utility.

Please go through this video (official eucalyptus guideline to Image and instances)

<http://www.youtube.com/watch?v=dNLuvoxJ4NY&feature=share&list=PLtXDGditMPwfkGbr4AYHBbwVELAJjpt>

First look for the available images in the eucastore, using the command

```
eustore-describe-images
```

sample output [Instance id, os name, architecture, type, available kernel version, os version]

2518794716	fedora	x86_64	starter	kvm	Fedora 16
0278205488	fedora	x86_64	starter	kvm	Fedora 17
1483421470	centos	x86_64	training	xen, kvm, vmware	Training
2130260817	centos	x86_64	starter	kvm	CentOS 5.9

Note down the instance id for which you want to create a bucket.

Using the eustore-install-image command you can download and create a bucket for instances for the available images listed in eustore-describe-images.

Suppose you want to install a fedora 16 image,

```
eustore-install-image -i 2518794716 -k kvm -b fedora16
```

-i => Instance id (refer sample output from eustore-describe-images)

-k => Preferred kernel (its KVM)

-b => Bucket name for the walrus (say fedora16)

Now, wait for the images to download and a bucket will be created this may take several hours / minutes depending upon clc load at the time (use gnome-system-monitor or command top to monitor processor load).

Check the installed images using the command

```
euca-describe-images
```

sample output:

```
IMAGE eri-56443654 fedora16/initrd-3.6.6-1.fc16.x86_64.manifest.xml 263355912650
available private x86_64 ramdisk instance-store

IMAGE eki-26613B8E fedora16/vmlinuz-3.6.6-1.fc16.x86_64.manifest.xml 263355912650
available private x86_64 kernel instance-store

IMAGE eri-91373457 fedora16/initrd-3.6.6-1.fc16.x86_64.img.manifest.xml 263355912650
available private x86_64 ramdisk instance-store

IMAGE emi-6F593BFE fedora16/fedora16-x86_64.manifest.xml 263355912650 available
private x86_64 machine eki-26613B8E eri-91373457 instance-store
```

To make the images public

By default in 3.2 images are registered as private. You need to run
'euca-modify-image-attribute -l emi-XXX -a all' to give everyone permission to run your image.

For example,

```
euca-modify-image-attribute -l emi-6F593BFE -a all
```

This will give permission for everyone to run the image you have created (by default the permission to all the images are set to private).

Creating a key-pair

This will help in using a keypairs rather than having a root password for each EMI.

To create a keypair

1. Creating a private key

```
euca-add-keypair adminkey > adminkey
```

Initialising an image

```
euca-describe-images
```

get the emi id that you want to run as a virtual machine, use the id in as parameter to

```
euca-run-instance
```

 along with your private key that you generated

sample command

```
euca-run-instance -k adminkey emi-XX-XX
```

Check the status of the instance using the command

```
euca-describe-instance
```

Once you see the status of the images running you will be provided with a public and private ip which can be used to access your instance

```
ssh -i <private-key-file> <ip-assigned-to-instance>
```

example

```
ssh -i adminkey 192.168.41.XX
```

The first one is a ram disk image
203, 207

Shutting down the cloud and cluster

The process should be of the reverse order in which you started the cloud components.

- First, we must terminate all the running instances

```
euca-terminate-instances <instance_id>
```

- Shutdown all the NCs

```
rocks run host vm-container "service eucalyptus-nc stop"
```

- Shutdown the CC,

```
service eucalyptus-cc cleanstop
```

- Walrus and CC shutdown

```
service eucalyptus-cloud stop
```

- Shutdown all the nodes,

```
rocks run host vm-container "init 0"
```

- To shutdown the frontend

```
init 0
```

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Moved the rules.d files into backup location IN FRONTEND and vm-container-0-4

```
cd /etc/udev/rules.d  
mkdir backup
```

```
mv 70* backup
```

changing vm-container-0-4 as per the documentation a change in the value of

changed the /etc/resolv.conf for vm-container-0-4

ERROR :

Unable to find credentials.

This is due to the lack of admin private keys in the present working folder.

Create the admin credentials

```
/usr/sbin/euca_conf --get-credentials admin.zip  
unzip and source the eucarc file.  
unzip admin.zip && source eucarc
```

Its better to add the environment variables contained in the eucarc to be sourced automatically so that there is no need to source it each time you login into the shell.

1. Create a folder under your home directory name it .euca
2. enter into the directory and execute

```
/usr/sbin/euca_conf --get-credentials admin.zip  
unzip admin.zip
```
3. Now edit the bashrc file (~/.bashrc) and append the following lines into it

```
if [ -f ~/.euca/eucarc ]; then  
    . ~/.euca/eucarc  
fi
```

Now to the file will be sourced automatically each time you login into the bash shell.

DNS SERVICE BROKEN OR DISABLED

Symptom:

`euca-describe-services` // command to output status of eucalyptus status

shows service-dns as broken or disabled.

Also check the log files where you will see something as show below

```
2013-06-23 13:41:53 ERROR | CHECK:null arn:euca:eucalyptus::dns:192.168.41.203/  
BROKEN->DISABLED=BROKEN [Address already in use]  
2013-06-23 13:41:58 INFO | Initializing DNS  
2013-06-23 13:41:58 ERROR | java.net.BindException: Address already in use  
2013-06-23 13:41:58 ERROR | DNS could not be initialized. Is some other service running on  
port 53?  
2013-06-23 13:41:58 ERROR | java.lang.RuntimeException: Address already in use
```

Note : This happens due to the services named / bind (depends on your operating system version), rpcbind, dnsmasq trying to use the port 53 which is also the required by eucalyptus and results in a conflict so we will have to stop these eucalyptus services first and then find out the services that services using port 53 (named / bind / rpc bind)and stop them.

Also you will have to repeat this every time you restart entire system.As a service stopped will be restarted through init.d .

Execute the following command in the terminal :

`netstat -tlupn|grep 53`

This is to see which all processes are using the port 53.

First ,we have to stop the following services.

`service eucalyptus-cc stop`

`service eucalyptus-cloud stop`

After that find if bind or dnsmasq is running.

`ps aux | grep named`

```
ps aux | grep dnsmasq
```

If we see Bind or Dnsmasq using the port 53 we have to stop that service.

```
service dnsmasq stop
```

```
service named stop
```

Restart the cloud and cc services.

```
service eucalyptus-cloud start
```

```
service eucalyptus-cc start
```

Now, it will show that service dns is loaded. After sometime, it will be enabled. If not, stop the process 'rpc_bind ' and start it again .

Binary file being downloaded instead of showing the login interface for the eucalyptus

There may be case when you get a binary file instead of showing the website.

(1) Make sure that you have your DNS configured to our campus local ie 192.168.254.2

(2) Also try to access the website using the url <https://192.168.41.203:8443> ,
<https://csedcluster.nitc.ac.in:8443/> use https instead of http.

LINK:

- [1] <http://central6.rocksclusters.org/roll-documentation/base/6.1/index.html>
- [2] http://www.rocksclusters.org/wordpress/?page_id=449.
- [3] <http://www.rocksclusters.org/roll-documentation/base/5.5/firewall.html>

30 / 6 2013

Vm-0-0
resolv.conf
changed

vm-0-0 and vm-0-1 70* deleted

vm-0-0 vm-0-1 changing VIRTIO

[https://engage.eucalyptus.com/customer/portal/questions/1012523-unable-to-ping-or-ssh-into-n
ew-instances-](https://engage.eucalyptus.com/customer/portal/questions/1012523-unable-to-ping-or-ssh-into-new-instances-)

Date 2/ 7/ 2013

Hardware Failiure

PCI Internal Slot failure

Cleaning the RAM and cpu sink solves the problem.

Iptables frontend

*nat

```
# MASQUERADE (host) :  
-A POSTROUTING -o eth1 -j MASQUERADE  
COMMIT
```

*filter

```
:INPUT ACCEPT [0:0]  
:FORWARD DROP [0:0]  
:OUTPUT ACCEPT [0:0]  
# A10-REJECT-411-TCP (host) :
```

```
-A INPUT -p tcp --dport 372 -j REJECT --sport 1024:65535
# A10-REJECT-411-UDP (host) :
-A INPUT -p udp --dport 372 -j REJECT --sport 1024:65535
# A15-ALL-LOCAL (global) :
-A INPUT -j ACCEPT -i lo
# A20-ALL-PRIVATE (global) :
-A INPUT -i eth0 -j ACCEPT
# A20-SSH-PUBLIC (global) :
-A INPUT -i eth1 -p tcp --dport ssh -j ACCEPT -m state --state NEW
# A30-RELATED-PUBLIC (global) :
-A INPUT -i eth1 -j ACCEPT -m state --state RELATED,ESTABLISHED
# A40-HTTPS-PUBLIC-LAN (host) :
-A INPUT -i eth1 -p tcp --dport https -j ACCEPT -m state --state NEW --source
192.168.41.0/255.255.255.0
# A40-WWW-PUBLIC-NEW (host) :
-A INPUT -i eth1 -p tcp --dport www -j ACCEPT -m state --state NEW --source 0.0.0.0/0.0.0.0
# A50-FORWARD-RELATED (host) :
-A FORWARD -i eth1 -o eth0 -j ACCEPT -m state --state RELATED,ESTABLISHED
# A60-FORWARD (host) :
-A FORWARD -i eth0 -j ACCEPT
# E10-PORT-5005 (host) :
-A INPUT -i eth1 -p tcp --dport 5005 -j ACCEPT
# E10-PORT-7500 (host) :
-A INPUT -i eth1 -p udp --dport 7500 -j ACCEPT
# E10-PORT-8080 (host) :
-A INPUT -i eth1 -p tcp --dport 8080 -j ACCEPT
# E10-PORT-8443 (host) :
-A INPUT -i eth1 -p tcp --dport 8443 -j ACCEPT
# E10-PORT-8772 (host) :
-A INPUT -i eth1 -p tcp --dport 8772 -j ACCEPT
# E10-PORT-8773 (host) :
-A INPUT -i eth1 -p tcp --dport 8773 -j ACCEPT
# E10-PORT-8774 (host) :
-A INPUT -i eth1 -p tcp --dport 8774 -j ACCEPT
# E10-PORT-8776 (host) :
-A INPUT -i eth1 -p tcp --dport 8776 -j ACCEPT
# E10-PORT-8777 (host) :
-A INPUT -i eth1 -p tcp --dport 8777 -j ACCEPT
# R10-GANGLIA-UDP (host) : block ganglia traffic from non-private interfaces
-A INPUT -p udp --dport 8649 -j REJECT
# R20-MYSQL-TCP (host) : block mysql traffic from non-private interfaces
-A INPUT -p tcp --dport 3306 -j REJECT
# R30-FOUNDATION-MYSQL (host) : block foundation mysql traffic from non-private interfaces
```

```
-A INPUT -p tcp --dport 40000 -j REJECT  
COMMIT
```

####IRC Interaction with Eucalyptus Employee

[16:34] <jeevan_ullas> Guest78476: are you using rocks cluster
[16:35] <jeevan_ullas> mayur:
http://www.eucalyptus.com/docs/eucalyptus/3.2/ig/configuring_iptables.html
[16:38] <Guest78476> yes im using rocks cluster with centos 6
[16:39] <jeevan_ullas> i have never heard anyone getting success with rocks+euca 3.x
[16:39] <jeevan_ullas> did you compile from source?
[16:39] <jeevan_ullas> oh you are running with stock centos 6?
[16:40] <Guest78476> ohk but can you check our conf files ?
[16:40] <Guest78476> coz we were able to run an instance and ssh into it once using 3.2
[16:40] <jeevan_ullas> sure
[16:41] <Guest78476> thanks a lot
[16:42] <Guest78476> no we were able to install it using yum
[16:42] <jeevan_ullas> you were running everything perfectly fine with same configuration on 3.2
eucalyptus but its not working with 3.3 ?
[16:43] <Guest78476> we were able to ssh into instance from the clc
[16:43] <jeevan_ullas> ok looking at eucalyptus.conf from CC
[16:44] <Guest78476> using 3.2 and thats the reason why we taught so trying out 3.3
[16:44] <jeevan_ullas> your VNET_SUBNET is 10.1.0.0 and VNET_NETMASK is 255.255.0.0
this is similar to your actual physical interfaces
[16:44] <jeevan_ullas> right?

[16:44] <Guest78476> yes

[16:45] <jeevan_ullas> please dont do that. its not recommended to use a network which is used

[16:45] <Guest78476> please note that eth0 is our bridge not the physical interface

[16:45] <jeevan_ullas> please use a completely free network

[16:45] <Guest78476> what about our dns ?

[16:45] <jeevan_ullas> understood, but still ... you need to correct that part

[16:45] <jeevan_ullas> VNET_SUBNET and VNET_NETMASK

[16:46] <Guest78476> ohk let me try that and can you please have a look into our dns config ?

[16:46] <Guest78476> coz rocks already has lot configuration written into it

[16:46] <jeevan_ullas> i am checking routing table and i see all your nodes point to CC as gateway (10.1.1.1)

[16:46] <Guest78476> yes

[16:48] <jeevan_ullas> ok

[16:48] <jeevan_ullas> for the moment i would ignore the DNS config as problem is with instance networking

[16:48] <jeevan_ullas> dns can be checked later.

[16:49] <Guest78476> ohk

[16:49] <Guest78476> i will ping you after i change the vnet subnet and mask

[16:49] <Guest78476> thanks for helping us

[16:49] <jeevan_ullas> i dont understand why you have bridges on the CC

[16:49] <jeevan_ullas> for both the interfaces you seem to have setup bridges

[16:50] == kushal [~kdas@fedora/kushal] has quit [Quit: Leaving]

[16:51] == kushal [~kdas@fedora/kushal] has joined #eucalyptus

[16:51] <Guest78476> ohk i will comment out that now

[16:51] <jeevan_ullas> you dont really need bridge on CC unless you are doing multi-clusters

[16:51] <Guest78476> it was actually commented out, typo mistake

[16:52] <jeevan_ullas> nope i mean you got eth0 and eth1 on CC , correct? they are bridges.

[16:52] <jeevan_ullas> so instead of that why not have peth0 and peth1 only.

[16:52] <jeevan_ullas> bridge is required on nodes when you are using MANAGED-NOVLAN

[16:52] <Guest78476> ohkay i will do that too

[16:53] <jeevan_ullas> ok i am checking, where did you get this EMI from?

[16:53] <jeevan_ullas> eutstore?

[16:53] <Guest78476> yes

[16:53] <jeevan_ullas> ok let me see whats up with it

[16:53] <Guest78476> we had sucess only with fedora17

[16:53] <jeevan_ullas> fedora 16 , hmm

[16:55] <Guest78476> so if I give VNET as 11.1.0.0 and subnet the same, I wont have to change the addresspernet right ?

[16:56] <Guest78476> i mean the calculation remains the same for security graoups

[16:56] <jeevan_ullas> you have it set to 32 but its preferred to have it to 64 , better that way.

[16:57] <jeevan_ullas> as you have many nodes i expect many different users

[16:57] <Guest78476> okay

[17:09] <Guest78476> tried doing that but getting the same error <http://pastebin.com/EkpCxRyN>

[17:10] <jeevan_ullas> i am really sorry man
[17:10] <jeevan_ullas> i cant even download the EMI you are having trouble with
[17:10] <jeevan_ullas> can you try to download it from emis.eucalyptus.com ?
[17:10] <jeevan_ullas> by any chance?
[17:10] <Guest78476> yes
[17:10] <Guest78476> we can
[17:10] <jeevan_ullas> ok if you download it and loopback mount it
[17:10] <jeevan_ullas> you can go to etc/sysconfig/ , there is a file in there its call network
[17:11] <jeevan_ullas> can you show me the content of that file?
[17:11] <Guest78476> so you want me to download a fedora 17 img and look into the file right ?
[17:11] <jeevan_ullas> nope the one with trouble
[17:11] <jeevan_ullas> fedora 16
[17:11] <Guest78476> ohk sure
[17:13] <Guest78476> oh i think the site is not working now
[17:13] <Guest78476> it was fine till yesterday
[17:13] <jeevan_ullas> lol yeah
[17:14] <Guest78476> we are trying to run centos 6.3 now
[17:14] <jeevan_ullas> i reported it to our IT department
[17:15] <jeevan_ullas> you must have the .img file somewhere right
[17:18] <Guest78476> i have it for fedora17
[17:18] <mayur> hello jeevan, is it safe to perform iptables_preload step ?? I am concerned about warning given by euca that "only if it will not interrupt the Service of Eucalyptus" ??
[17:18] <jeevan_ullas> mayur: yeah for you i recommend not to touch that
[17:18] <Guest78476> fedora16 we did it through eustore cant find its img
[17:19] <mayur> ok thnx for the reply
[17:19] <jeevan_ullas> Guest78476: it should be in /tmp if it was recently down
[17:19] <jeevan_ullas> s/down/done
[17:20] <Guest78476> nope we did some restarts
[17:20] <jeevan_ullas> hmm lets try our luck then, do you have files larger than 100MB in /tmp
[17:21] <jeevan_ullas> or /var/tmp/
[17:21] <Guest78476> let me check
[17:21] <Guest78476> that
[17:23] <Guest78476> nope :(
[17:23] <Guest78476> i tried using
[17:23] <Guest78476> find /var/tmp -type f -size +100MB
[17:23] <Guest78476> and /tmp too
[17:24] <jeevan_ullas> fine, lets see if you can get the .img from the one that is in walrus
[17:24] <jeevan_ullas> you need to run euca-download-bundle command
[17:24] <Guest78476> with aruguments ?
[17:25] <Guest78476> bucket name ?
[17:25] <jeevan_ullas> yeah sorry you need to give some arguments
[17:25] <jeevan_ullas> hold on
[17:26] <jeevan_ullas> euca-download-bundle -b <bucket name> -p <prefix> -d .

[17:26] <Guest78476> yeah got it
[17:26] <Guest78476> how do i combine these to single img ?
[17:27] <jeevan_ullas> euca-unbundle
[17:28] <Guest78476> meanwhile i would like to let you know that we have the same routing error with fedora17 img
[17:29] <Guest78476> and network file for fedra17 says this
[17:29] <Guest78476> NETWORKING=yes HOSTNAME=zeus.nitc.ac.in
GATEWAY=192.168.41.1
[17:29] <jeevan_ullas> cool i am checking now from my end
[17:29] <jeevan_ullas> just got emis.eucalyptus.com working again
[17:30] == stone-head [~rudy@gateway/tor-sasl/stonehead/x-68591269] has quit [Ping timeout: 240 seconds]
[17:30] == stone-he1d [~rudy@gateway/tor-sasl/stonehead/x-68591269] has joined #eucalyptus
[17:31] <Guest78476> hey
[17:31] <Guest78476> here is the output for network file fedora16
[17:31] <Guest78476> NETWORKING=yes HOSTNAME=zeus.nitc.ac.in
GATEWAY=192.168.41.1
[17:33] <jeevan_ullas> ok can you do me a favour
[17:33] <Guest78476> sure
[17:33] <jeevan_ullas> in this file can you put a string
[17:33] <jeevan_ullas> NOZEROCONF=yes
[17:33] <jeevan_ullas> and save that file?
[17:34] <Guest78476> ohk then ?
[17:34] <jeevan_ullas> then bundle,upload and register the modified .img file to walrus
[17:35] <jeevan_ullas> you would get a new EMI id, the only difference in this EMI is that its having NOZEROCONF=yes in its /etc/sysconfig/network
[17:35] <Guest78476> we are yet to compile one img properly in eucalyptus without eustore ... it will be very helpful if you tell us the command to bundle an emi from .img
[17:35] <jeevan_ullas> sure no problem
[17:35] <jeevan_ullas> can you show me the output of euca-describe-images
[17:37] <Guest78476> euca-describe-images
[17:37] <Guest78476> <http://pastebin.com/tMD5EWh4>
[17:38] <jeevan_ullas> and what is the name of the .img file ?
[17:39] <Guest78476> the image file fedora16-x86_64.img
[17:39] <jeevan_ullas> euca-bundle-image -i fedora16-x86_64.img --kernel eki-4FF434E4 --ramdisk eri-3CA83882 --arch x86_64
[17:40] <jeevan_ullas> run that command 1st
[17:40] <jeevan_ullas> this is the bundling process ,it would give an output which would go in /var/tmp/bun-xxxxx/
[17:42] <Guest78476> silly doubt so when we mount something and make changes in the mount destination does it really change the mounted .img ?
[17:43] <jeevan_ullas> i would hope so otherwise it should give an error when you save and quit
[17:43] <jeevan_ullas> :D

[17:43] <Guest78476> yea true
[17:43] <Guest78476> done
[17:43] <Guest78476> bundling done
[17:43] <jeevan_ullas> ok lets upload the bundle now using the following command
[17:44] <jeevan_ullas> euca-upload-bundle -b fedora16-nozeroconf -m
/var/tmp/bun-xxxx/fedoraxxxx.manifest.xml
[17:45] <Guest78476> ohk done
[17:45] <jeevan_ullas> now lets register it using this command
[17:45] <jeevan_ullas> euca-register <output of euca-upload-bundle> --arch x86_64
[17:45] <jeevan_ullas> it would be something like <bucket name>/<manifest file name>
[17:47] <Guest78476> euca-register: error: argument -n/--name is required
[17:47] <Guest78476> name for the new bucket
[17:47] <Guest78476> ?
[17:47] <jeevan_ullas> yeah sorry -n "fedora 16 nozeroconf"
[17:47] <jeevan_ullas> thats the name of your EMI
[17:47] <jeevan_ullas> new stuff in 3.3.0 , it was there earlier as well but now its mandatory
[17:48] <Guest78476> ohk
[17:48] <Guest78476> got the emi
[17:48] <Guest78476> shall i try running this now ?
[17:48] <jeevan_ullas> yeah please
[17:49] <Guest78476> thanks
[17:49] <jeevan_ullas> lets see what it does now
[17:51] <Guest78476> yea hope it works
[17:51] <Guest78476> so if this is the case, it will be difficult to run images right ?
[17:53] <Guest78476> hey
[17:54] <Guest78476> they went to shutting directly from pending
[17:54] <Guest78476> it didnt run
[17:54] <jeevan_ullas> ok
[17:54] <jeevan_ullas> did it go to a NC?
[17:54] <jeevan_ullas> can you check nc.log for the instance ID
[17:55] <Guest78476> sure give me second
[17:56] == lwade [~lwade@host86-168-170-214.range86-168.btcentralplus.com] has quit
[Remote host closed the connection]
[17:58] <Guest78476> nc.log <http://pastebin.com/Jn1Jfx1i>
[17:58] == rci-mbp [~risaacson@70-90-78-101-BusName-mn.hfc.comcastbusiness.net] has
quit [Ping timeout: 256 seconds]
[17:59] <jeevan_ullas> was the new EMI , emi-37483ADE
[18:01] <Guest78476> yes
[18:01] <jeevan_ullas> ok i need to see the complete output of all commands i told you to
execute starting from euca-bundle-image to euca-register
[18:02] <Guest78476> sorry ...
[18:02] <Guest78476> since we stdoutted the log file
[18:02] <Guest78476> i cant find the old ones

[18:02] <Guest78476> but the ones were not showing any error
[18:03] <Guest78476> i can show you my history anyway
[18:03] <jeevan_ullas> ok
[18:04] <jeevan_ullas> show me the 3 commands for some reason the image didnt get uploaded properly it seems
[18:05] <Guest78476> <http://pastebin.com/Aq911aPC>
[18:05] <Guest78476> ohk do you want me to sort out them for you ?
[18:07] == mmcgarrah__ [~mmcgarrah@64.246.215.5] has quit [Ping timeout: 246 seconds]
[18:07] == mmcgarrah [~mmcgarrah@64.246.215.5] has joined #eucalyptus
[18:08] <jeevan_ullas> nope thats ok
[18:08] <jeevan_ullas> the command looks correct
[18:08] <Guest78476> yea
[18:08] <Guest78476> and this happens with centos too
[18:09] <jeevan_ullas> oh
[18:09] <jeevan_ullas> you are using CC Image proxy
[18:09] <Guest78476> yes
[18:09] <jeevan_ullas> man that sucks, i dont know when it has worked correctly ever.
[18:09] <jeevan_ullas> is there any particular reason you are using CC image proxy
[18:09] <Guest78476> ohk i remove that and try again
[18:10] <Guest78476> yea image starts running very soon
[18:10] <Guest78476> i think :D
[18:10] <jeevan_ullas> we can definitely get back to it
[18:10] <jeevan_ullas> for the time being lets disable it and restart the CC service, i think that should disable it
[18:10] <Guest78476> so i will remove that and try again
[18:10] <Guest78476> give me some time
[18:11] <jeevan_ullas> sure

[19:24] <Guest78476> hey
[19:25] <Guest78476> we have same error even now
[19:25] <Guest78476> <http://pastebin.com/Cvm8D5Qg>
[19:25] <Guest78476> My name is sudev A C
[19:25] <Guest78476> what should i do to contact you later ?, you seems to be offline now
[19:26] <Guest78476> could you please send me any suggestion to rectify this error to
[19:26] <Guest78476> sudev_bcs10@nitc.ac.in please
[19:29] <Guest78476> what is the best pratice to run eucalyptus ? How do really do it a cluster with 15 nodes ? coz without rocks like managment software you will have lot of time waste in ssh'ing into each node and do something ... is there anything for centos to make it easier for a cluster ?
[20:38] <Guest78476> did you mean firewall ?
[20:38] <jeevan_ullas> yeah
[20:40] <Guest78476> here is the output for service iptables status

<http://pastebin.com/DCvdf65r>

[20:40] <jeevan_ullas> can you turn off the firewall on the NCs ?

[20:41] <Guest78476> yeah sure

[20:41] <Guest78476> but we have allowed access for 8775

[20:41] <jeevan_ullas> nope there is more to that

[20:41] <Guest78476> im stop firewall

[20:41] <jeevan_ullas> not just 8775

[20:41] <Guest78476> and i will try

[20:41] <jeevan_ullas> also please make sure FORWARD chain is having default policy set to ACCEPT instead of DROP

[20:43] <Guest78476> turning off iptables service will do all this right ?

[20:43] <Guest78476> i mean the forward chain policy too ?>

[20:43] <jeevan_ullas> lets make sure it does by checking again

[20:43] <jeevan_ullas> iptables -F ; service iptables stop

[20:43] <Guest78476> thanks

[20:45] <Guest78476> do i have to restart network ?

[20:45] <Guest78476> @ nc ?

[20:46] <jeevan_ullas> iptables-save

[20:46] <jeevan_ullas> can you show output plz?

[20:47] <Guest78476> no output

[20:47] <Guest78476> i think we did it right :P

[20:47] <jeevan_ullas> iptables -nvL

[20:47] <jeevan_ullas> :D

[20:48] <Guest78476> <http://pastebin.com/MNr6kUmd>

[20:48] <Guest78476> seems perfect

[20:48] <jeevan_ullas> ok

[20:48] <Guest78476> restart eucalyptus-nc ?

[20:48] <jeevan_ullas> lets try a new instance creation plz with that same emi

[20:48] <jeevan_ullas> the new one

[20:49] <Guest78476> okay NOZEROCONF right ?

[20:49] <jeevan_ullas> yes

[20:50] <Guest78476> started running

[20:50] <Guest78476> let me check console output

[20:53] <Guest78476> <http://pastebin.com/iRVaLD89>

[20:53] <Guest78476> route info seems to be gone

[20:54] <jeevan_ullas> ok this is better

[20:54] <Guest78476> but still getting a 113 error

[20:54] <Guest78476> yea

[20:54] <jeevan_ullas> it has got IP but it still has zeroconf stuff

[20:54] <Guest78476> o

[20:54] <Guest78476> oh

[20:54] <jeevan_ullas> now we need to find out if the change you made really went in or not

[20:54] <jeevan_ullas> let me tell you
[20:54] <jeevan_ullas> line number 11 in console output
[20:54] <jeevan_ullas> ci-info: route-2: 169.254.0.0 0.0.0.0 255.255.0.0 eth0 U
[20:54] <jeevan_ullas> that tells us that the instance has a route using 169.254.0.0
[20:54] <Guest78476> yes
[20:55] <jeevan_ullas> which should not be there because we put nozeroconf=yes in network file
[20:55] <jeevan_ullas> this route will not allow the instance to talk to metadata service
[20:55] <Guest78476> oh what can we do now ?
[20:55] <jeevan_ullas> now we need to get to the NC where this instance is running
[20:55] <Guest78476> should i try stopping iptables @ CLC ?
[20:55] <jeevan_ullas> nope :)
[20:56] <jeevan_ullas> dont do that
[20:56] <jeevan_ullas> never touch iptables on the machine running CC
[20:56] <Guest78476> yea ohk cool
[20:56] <jeevan_ullas> go to the NC and where the instance is
[20:56] <jeevan_ullas> /var/lib/eucalyptus/instances/work/
[20:56] <Guest78476> the log file ?
[20:56] <jeevan_ullas> nope the instance has a file that contains the disk
[20:58] <Guest78476> yea got it
[20:58] <jeevan_ullas> hmm can you show me output of these 2 commands
[20:58] <jeevan_ullas> fdisk -l ; ls -ltrh (on that directory)
[20:59] <Guest78476> you mean to run these commands inside
/var/lib/eucalyptus/instances/work/
[20:59] <jeevan_ullas> inside work there is a directory right?
[21:00] <jeevan_ullas> you need to go inside that and there you would have another directory
with instance ID
[21:00] <Guest78476> or inside the instance directory ?
[21:00] <Guest78476> asdjg h
/var/lib/eucalyptus/instances/work/GV8ZJ4HPNAGWG8OWQPMJV/i-10D6438F
[21:00] <Guest78476> right ?
[21:01] <Guest78476> fdisk -l
[21:01] <Guest78476> <http://pastebin.com/2wiv0AxA>
[21:02] <jeevan_ullas> ok
[21:02] <Guest78476> ls -ltrh
[21:02] <Guest78476> <http://pastebin.com/FWQSYzNH>
[21:03] <jeevan_ullas> damn head is not working , have to do it more simpler
[21:03] <jeevan_ullas> lets do this
[21:03] <Guest78476> what is not working ?
[21:03] <jeevan_ullas> can you for time being make sure you have only this NC working in the
cluster and rest all off
[21:03] <jeevan_ullas> my head :D
[21:04] <jeevan_ullas> what you need to do is this on all NCs except this one
[21:04] <Guest78476> ohk

[21:04] <jeevan_ullas> service eucalyptus-nc stop

[21:04] <jeevan_ullas> so when you start a new instance its 100% going to come back on this NC

[21:05] <jeevan_ullas> after you have stopped eucalyptus-nc on all NCs on the current NC go to

[21:05] <jeevan_ullas> /var/lib/eucalyptus/instances/cache/

[21:05] <jeevan_ullas> there you should have a directory with the emi ID you are using

[21:06] <Guest78476> dont we have to stop all the instances running first before stopping the nc's ?

[21:07] <jeevan_ullas> yeah please do that

[21:07] <Guest78476> ohk

[21:08] <Guest78476> trying to run a new instance now

[21:09] <jeevan_ullas> no

[21:09] <jeevan_ullas> dont run the instance just now

[21:09] <jeevan_ullas> go to that directory

[21:09] <jeevan_ullas> /var/lib/eucalyptus/instances/cache/

[21:09] <jeevan_ullas> there is a directory there with the EMI id right

[21:09] <jeevan_ullas> the one which you modified

[21:09] <jeevan_ullas> go inside that there is a file call blocks

[21:10] <Guest78476> we did stop all instances

[21:10] <Guest78476> i mean from all nc's

[21:10] <jeevan_ullas> yes all NCs please stop all instances and stop eucalyptus-nc service on all those NCs

[21:11] <jeevan_ullas> has that been done?

[21:11] <jeevan_ullas> please dont stop eucalyptus-nc service on this 1 NC

[21:11] <Guest78476> yes

[21:11] <Guest78476> yeah

[21:11] <jeevan_ullas> cool so on this NC where eucalyptus-nc is still running

[21:11] <jeevan_ullas> you go to that directory i said

[21:11] <Guest78476> there

[21:12] <Guest78476> yes now ?

[21:12] <jeevan_ullas> go inside the directory having the EMI

[21:12] <jeevan_ullas> you can see a file call blocks

[21:12] <Guest78476> yeah

[21:12] <jeevan_ullas> loopback mount it

[21:13] <Guest78476> ohk

[21:13] <jeevan_ullas> that has etc/sysconfig/network file inside of it

[21:13] <jeevan_ullas> check if NOZEROCONF=yes is there or not, if not add it and save quit

[21:13] <jeevan_ullas> then unmount that loopback mount

[21:13] <jeevan_ullas> and create a new instance from CLC again

[21:13] <jeevan_ullas> this time the new instance would pick the EMI from cache with the changes

[21:13] <jeevan_ullas> brb have a meeting back in 30 mins

[21:14] <Guest78476> ohk i will all this

[21:15] <Guest78476> *i will try all this
[21:15] <Guest78476> thanks again
[21:26] <jeevan_ullas> did it help
[21:27] <Guest78476> nope
[21:27] <Guest78476> same result
[21:28] <jeevan_ullas> did you unmount the loopback mount ?
[21:28] <Guest78476> yea
[21:28] <Guest78476> freed the loopdevice too
[21:28] <jeevan_ullas> can you show me what is the output
[21:28] <jeevan_ullas> of etc/sysconfig/network
[21:28] <jeevan_ullas> on that blocks file
[21:28] <jeevan_ullas> cat etc/sysconfig/network
[21:29] <Guest78476> is it mounted somewhere ?
[21:29] <Guest78476> i mean should mount the blocks file again ?
[21:30] <jeevan_ullas> ya
[21:30] <jeevan_ullas> mount it again
[21:30] <Guest78476> stop the instance ?
[21:31] <jeevan_ullas> no need
[21:31] <jeevan_ullas> the blocks file is not associated to instance rather the EMI
[21:33] <Guest78476> <http://pastebin.com/LUrZZUjJ>
[21:33] <Guest78476> looks fine
[21:34] <jeevan_ullas> why is the gateway stuff hardcoded?
[21:34] <jeevan_ullas> did you add that?
[21:34] <Guest78476> nope
[21:34] <jeevan_ullas> strange
[21:34] <Guest78476> I want to tell you something
[21:34] <jeevan_ullas> can you remove that
[21:34] <Guest78476> wait
[21:34] <jeevan_ullas> yeah plz
[21:35] <Guest78476> ifconfig @ nc
[21:36] <Guest78476> for eth0 there is no gateway specified
[21:36] <jeevan_ullas> oh?
[21:36] <jeevan_ullas> eth0 is bridge right
[21:36] <Guest78476> yes
[21:36] <Guest78476> pastebin limit exceeded any other site ?
[21:37] <jeevan_ullas> how big is it ? :D
[21:37] <jeevan_ullas> try <http://paste.fedoraproject.org>
[21:37] <Guest78476> not that the output is big
[21:37] <Guest78476> just the limit for no of posts
[21:38] <Guest78476> <http://paste.fedoraproject.org/22148/13726950/>
[21:38] <Guest78476> and the resolv.conf
[21:39] <jeevan_ullas> route -n
[21:39] <Guest78476> <http://ur1.ca/ehykk>

[21:39] <Guest78476> <http://ur1.ca/ehykr>

[21:40] <jeevan_ullas> yeah the gateway is there on the NC

[21:40] <jeevan_ullas> so all good

[21:40] <jeevan_ullas> its in the default route as well

[21:40] <jeevan_ullas> can you show me the latest console output

[21:42] <Guest78476> <http://ur1.ca/ehylu>

[21:43] <jeevan_ullas> hmm where the hell it is picking up this

[21:43] <jeevan_ullas> ci-info: route-2: 169.254.0.0 0.0.0.0 255.255.0.0 eth0 U

[21:43] <Guest78476> no idea

[21:44] <Guest78476> tried serching for dhcp running @ our network there was none

[21:44] <jeevan_ullas> did you modify the blocks file of the EMI you are trying to run instance from

[21:44] <Guest78476> yes

[21:44] <Guest78476> the network file

[21:44] <Guest78476> you asked to modify right ?

[21:45] <jeevan_ullas> yeah its very sill question to ask but i am just confirming that we are modifying the file in the EMI which we are working

[21:45] <jeevan_ullas> yeah

[21:45] <jeevan_ullas> did you modify inside the EMI and not the NC right?

[21:45] <jeevan_ullas> i think you are modifying in the NC and not the EMI

[21:45] <Guest78476> wait

[21:46] <jeevan_ullas> do you see the difference? in NC it would be /etc/sysconfig/network and inside EMI its etc/sysconfig/networking (notice the first /)

[21:46] <jeevan_ullas> sorry etc/sysconfig/network

[21:46] <jeevan_ullas> thats relative path

[21:46] <Guest78476> oh shit

[21:46] <Guest78476> im real sorry

[21:46] <Guest78476> for wasting so much of time

[21:47] <jeevan_ullas> lol

[21:47] <jeevan_ullas> its k

[21:47] <Guest78476> wait

[21:47] <Guest78476> i think i did it right

[21:47] <Guest78476> :(

[21:47] == jeevan_ullas [~jeevan@fedora/jeevanullas]

[21:47] == realname : Deependra Singh Shekhawat

[21:47] == channels : #eucalyptus

[21:47] == server : holmes.freenode.net [London, UK]

[21:47] == : is using a secure connection

[21:47] == account : jeevan_ullas_

[21:47] == End of WHOIS

[21:47] <jeevan_ullas> i dont think so

[21:47] <Guest78476> checking history

[21:47] <jeevan_ullas> can you go to that directory /tmp/1/etc/sysconfig/network

[21:48] <Guest78476> got
[21:48] <Guest78476> it my mistake
[21:48] <Guest78476> so sorry
[21:48] <jeevan_ullas> ok lets fix that
[21:48] <Guest78476> i will get back to you after i do it properly
[21:48] <jeevan_ullas> sure
[21:54] <Guest78476> route cleared
[21:55] <Guest78476> but error with
[21:55] <Guest78476> 113
[21:55] <jeevan_ullas> meaning?
[21:55] <jeevan_ullas> can you show console output
[21:55] <Guest78476> <http://ur1.ca/ehyqz>
[21:56] <jeevan_ullas> damn
[21:56] <Guest78476> :(
[21:56] <jeevan_ullas> this is some other problem again
[21:58] <jeevan_ullas> there are some zeroconf rules on the clc and the nc
[21:58] <jeevan_ullas> lets remove them from routing table
[21:58] <Guest78476> okay...
[21:59] <Guest78476> very sorry to trouble you again ...how can i do this ?
[21:59] <jeevan_ullas> route del -host 169.254.0.0 netmask 255.255.0.0 dev eth0
[21:59] <jeevan_ullas> route del -host 169.254.0.0 netmask 255.255.0.0 dev eth1
[21:59] <jeevan_ullas> can you try this on NC first
[22:00] <jeevan_ullas> then show me output of route -n
[22:00] <Guest78476> "ip route " or "route"
[22:00] <jeevan_ullas> route
[22:01] <Guest78476> error <http://ur1.ca/ehyt7>
[22:02] <jeevan_ullas> instead of -host try -net
[22:02] <Guest78476> done
[22:03] <Guest78476> now retry again ?
[22:03] <jeevan_ullas> ok yes
[22:06] <Guest78476> i only removed the route in nc
[22:06] <Guest78476> same result
[22:06] <Guest78476> now shall i try removing it on cc ?
[22:06] <Guest78476> and retry ?
[22:06] <jeevan_ullas> same result?
[22:06] <jeevan_ullas> did it get remove?
[22:07] <Guest78476> removed only at nc
[22:07] <jeevan_ullas> ok lets do that on cc
[22:07] <Guest78476> okay
[22:10] <Guest78476> same resukt
[22:10] <jeevan_ullas> ok its removed?
[22:10] <Guest78476> yea
[22:10] <jeevan_ullas> ok one more try

[22:10] <jeevan_ullas> lets create a new instance from that emi again
[22:10] <jeevan_ullas> lets hope it works this time
[22:11] <Guest78476> route -n @ <http://paste.fedoraproject.org/22164/97005137/>
[22:11] <jeevan_ullas> this is on NC/
[22:11] <jeevan_ullas> ?
[22:12] <Guest78476> no cc
[22:12] <jeevan_ullas> ok cool
[22:12] <jeevan_ullas> lets fire the instance
[22:12] <Guest78476> doing :)
[22:13] <Guest78476> no luck
[22:13] <Guest78476> :(
[22:14] <jeevan_ullas> it might be related to the version of cloud-init installed on the image
[22:14] <Guest78476> hmm
[22:14] <jeevan_ullas> is there any particular reason for using fedora 16 ?
[22:14] <Guest78476> no
[22:14] <jeevan_ullas> cloud-init old release might have some bugs
[22:14] <jeevan_ullas> which causes this issue in particular setup
[22:14] <jeevan_ullas> do you have fedora 17?
[22:14] <Guest78476> we are not able to run centos too
[22:14] <Guest78476> yeah
[22:14] <Guest78476> shall try that ?
[22:15] <Guest78476> *i
[22:15] <jeevan_ullas> centos from eustore?
[22:15] <Guest78476> yes
[22:15] <jeevan_ullas> please try that
[22:15] <jeevan_ullas> that one should not have zeroconf problem iirc
[22:15] <Guest78476> we are trying that now
[22:16] <jeevan_ullas> ok
[22:18] <Guest78476> are you in india ?
[22:19] <jeevan_ullas> yes
[22:19] <jeevan_ullas> in Pune.
[22:19] <Guest78476> ohkay
[22:19] <Guest78476> so this must be boring job right ?
[22:19] <jeevan_ullas> lol
[22:20] <jeevan_ullas> there are ton of things,
[22:20] <Guest78476> I'm computer science student of NIT Calicut
[22:20] <jeevan_ullas> cant say for sure
[22:20] <jeevan_ullas> yeah i saw that
[22:20] <Guest78476> you from rajasthan ?
[22:20] <jeevan_ullas> yep
[22:20] <Guest78476> where ?
[22:20] <jeevan_ullas> Jaipur
[22:21] <Guest78476> ohk

[22:22] <Guest78476> I use to live in kota
[22:23] <Guest78476> worse issue with centos
[22:23] <Guest78476> pending -> terminated
[22:24] <Guest78476> nc.log <http://ur1.ca/ehz13>
[22:24] <jeevan_ullas> oh
[22:24] <Guest78476> trying fedora17 now
[22:25] <jeevan_ullas> ok
[22:25] <Guest78476> ohk same error
[22:29] <jeevan_ullas> strange
[22:29] <jeevan_ullas> is it getting terminated?
[22:29] <Guest78476> yes only centos
[22:29] <jeevan_ullas> oh
[22:29] <jeevan_ullas> fedora 17 does not have the nozeroconf set so it should not work i think
[22:29] <Guest78476> fedora 17 - http:169... not found
[22:30] <jeevan_ullas> its the problem in the EMIs eucalyptus is providing , the fedora 16 and fedora 17 should have NOZERCONF=yes in etc/sysconfig/network
[22:30] <jeevan_ullas> which is not there hence the 1st problem
[22:30] <jeevan_ullas> but you seem to hitting another issue on top of that regarding the access of meta-data service from instance
[22:31] <Guest78476> so its not possible in rocks ?
[22:31] <Guest78476> we did it once with 3.2 but was not satisfied
[22:31] <jeevan_ullas> i am not sure currently in what ways rocks can cause this or not
[22:31] <Guest78476> ohk
[22:32] <Guest78476> so what do you suggest try with bare centos ?
[22:32] <Guest78476> *stock ?
[22:33] <jeevan_ullas> yeah you should try the centos 6 EMI from eustore
[22:33] <jeevan_ullas> the nc.log you gave me does not show any error
[22:34] <Guest78476> unable to get metrics for instance i-427D45BE (OK if it was terminated---should soon expire from the cache)
[22:34] <Guest78476> i was watching the log
[22:34] <Guest78476> it never tried to fetch anything from axis i suppose
[22:34] <Guest78476> i mean the walrus stuff
[22:35] <jeevan_ullas> yeah thats the problem
[22:35] <jeevan_ullas> it should have , see if there are any error on the clc logs
[22:35] <jeevan_ullas> they are in /var/log/eucalyptus/cloud-output.log
[22:37] <Guest78476> ohk
[22:38] <Guest78476> what to do?
[22:38] <jeevan_ullas> to be honest i am out of ideas atm
[22:38] <jeevan_ullas> lets get to it tomorrow
[22:38] <Guest78476> yea
[22:38] <Guest78476> me too
[22:39] <Guest78476> i really appreciate for what you did for us
[22:39] <Guest78476> can i ask you something

[22:39] <jeevan_ullas> no problem lets see if we can get it running for at-least 1 EMI for you
[22:39] <Guest78476> shall we chuck rocks
[22:39] <Guest78476> and restart whole thing with stock centos
[22:39] <Guest78476> i know it will be hard to manage 15 nodes
[22:39] <Guest78476> but still
[22:40] <Guest78476> whats say ?
[22:40] <jeevan_ullas> that would be ideal
[22:40] <jeevan_ullas> if you can do that it should work
[22:40] <jeevan_ullas> i cant say for sure current issue is because of rocks
[22:40] <jeevan_ullas> but i know it would work without rocks because we run such clouds
[22:40] <jeevan_ullas> in production
[22:41] <Guest78476> tell me the best version of
[22:41] <Guest78476> eucalyptus and centos combo
[22:41] <jeevan_ullas> centos 6.4?
[22:41] <Guest78476> 6.4 and 3.2 ?
[22:41] <Guest78476> 3.2 eucalyptus ?
[22:42] <jeevan_ullas> yeah 3.2.2 is stable
[22:42] <jeevan_ullas> stable than 3.3.0 for sure
[22:42] <jeevan_ullas> lol
[22:42] <Guest78476> or much lower version ?
[22:42] <Guest78476> :D
[22:42] <jeevan_ullas> 3.2.2 is very stable
[22:42] <Guest78476> ohk
[22:42] <jeevan_ullas> 3.3.0 is just more feature
[22:42] <jeevan_ullas> but stablility is not good man
[22:43] <Guest78476> there is not much in 3.3 release notes to opt for 3.3 i suppose
[22:43] <Guest78476> then why 3.3
[22:43] <Guest78476> ?
[22:44] <jeevan_ullas> 3.3. has got elastic load balancing
[22:44] <jeevan_ullas> auto scaling
[22:44] <jeevan_ullas> tagging
[22:44] <jeevan_ullas> filtering
[22:44] <jeevan_ullas> iAM roles
[22:44] <jeevan_ullas> cloudwatch
[22:44] <jeevan_ullas> all these new features
[22:44] <Guest78476> ohh
[22:44] <Guest78476> kk..
[22:44] <Guest78476> are you really out of time or cani ask you more ?
[22:45] <jeevan_ullas> sure ask away
[22:45] <jeevan_ullas> i sitll have few more mins
[22:45] <Guest78476> like should we change the network structure ?
[22:45] <Guest78476> like
[22:45] <jeevan_ullas> that looks ok

[22:45] <Guest78476> connecting all eth0's to switch
[22:45] <Guest78476> and connecting internet lan to switch instead of switch ?
[22:46] <Guest78476> *instead of eth1?
[22:53] <jeevan_ullas> your network structure is fine
[22:55] <Guest78476> okay
[22:55] <Guest78476> thanks a lot man
[22:56] <Guest78476> see you tomorrow
[22:56] <Guest78476> and sorry for the relative path mistake
