Chapter Five

Configuring Eucalyptus

INTRODUCTION

This section describes the parameters that need to be set in order to launch Eucalyptus for the first time. The first launch of Eucalyptus is different than a restart of a previously running Eucalyptus deployment in that it sets up the security mechanisms that will be used by the installation to ensure system integrity.

Eucalyptus configuration is stored in a text file, /etc/eucalyptus/eucalyptus.conf, that contains key-value pairs specifying various configuration parameters. Eucalyptus reads this file when it launches and when various forms of reset commands are sent it the Eucalyptus components.

Perform the following tasks after you install Eucalyptus software, but before you start the Eucalyptus services.

CONFIGURE 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 (No VLAN) modes, traffic to instances pass through the CC. So, in this modes clients must be able to connect to the CC. In System and Static modes, clients need to connect directly to the NC. The CC does not act as a router in these two modes.

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-	Change the VNET_MODE from “SYSTEM“ to “MANAGED-

		NOVLAN".	NOVLAN".
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 192.168.41.215 - 192.168.41.240 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_ADDRSPERNET	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. 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://[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

Frontend Configuration

Make the required changes in the file /etc/eucalyptus/eucalyptus.conf Given below is the Networking Configuration part of the eucalyptus.conf file after editing it as required.

```
# NETWORKING CONFIGURATION
##############################################################################
VNET_MODE="MANAGED-NOVLAN"
```

```
VNET_PRIVINTERFACE="eth0"
VNET_PUBINTERFACE="eth1"
VNET_BRIDGE="br0"
#VNET_MACMAP="AA:DD:11:CE:FF:ED=192.168.1.2 AA:DD:11:CE:FF:EE=192.168.1.3"
VNET_PUBLICIPS="192.168.41.215-192.168.41.240"
VNET_SUBNET="10.1.0.0"
VNET_NETMASK="255.255.0.0"
VNET_ADDRSPERNET="32"
VNET_DNS="192.168.254.2"
#VNET_DOMAINNAME="eucalyptus.internal"
#VNET_BROADCAST="192.168.1.255"
#VNET_ROUTER="192.168.1.1"
#VNET_LOCALIP="your-public-interface's-ip"
VNET_DHCPDAEMON="/usr/sbin/dhcpd41"
VNET_DHCPUSER="dhcpd"
```

Nodes Configuration

Get the eucalyptus.conf file from any of the nodes, edit it as per requirement and copy it back to all nodes

Copy one file

```
scp root@vm-container-0-0:/etc/eucalyptus/eucalyptus.conf ~
```

Edit the file

```
# NETWORKING CONFIGURATION
##############################################################################
VNET_MODE="MANAGED-NOVLAN"
VNET_PRIVINTERFACE="eth0"
VNET_PUBINTERFACE="eth0"
VNET_BRIDGE="eth0"
#VNET_MACMAP="AA:DD:11:CE:FF:ED=192.168.1.2 AA:DD:11:CE:FF:EE=192.168.1.3"
#VNET_PUBLICIPS="your-free-public-ip-1 your-free-public-ip-2 ..."
#VNET_SUBNET="192.168.0.0"
#VNET_NETMASK="255.255.0.0"
#VNET_ADDRSPERNET="32"
#VNET_DNS="your-dns-server-ip"
#VNET_DOMAINNAME="eucalyptus.internal"
#VNET_BROADCAST="192.168.1.255"
#VNET_ROUTER="192.168.1.1"
#VNET_LOCALIP="your-public-interface's-ip"
VNET_DHCPDAEMON="/usr/sbin/dhcpd41"
#VNET_DHCPUSER="dhcpd"
```