OpenStack Nova 安装手册

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实验环境

硬件:

DELL R410(1 台)

- CPU : Intel(R) Xeon(R) CPU E5620 @ 2.40GHz * 2
- 内存:16GB

硬盘:300GB

网卡: Broadcom Corporation NetXtreme II BCM5716 Gigabit Ethernet * 2

DELL R710(1 台)

CPU : Intel(R) Xeon(R) CPU E5606 @ 2.13GHz * 2

- 内存:32GB
- 硬盘:250GB

网卡: Broadcom Corporation NetXtreme II BCM5709 Gigabit Ethernet * 4

系统:

Ubuntu Server 11.04 x64

Openstack 版本:

Diablo4 release (2011.3)

架构部署

机器型号/主机名	外网 IP	内网 IP	作用
R410/r410-control1	60.12.206.111	192.168.1.2	控制节点
R710/r710-compute1	60.12.206.99	192.168.1.3	计算节点1
实例网段为 10.0.0.0/24 , floating ip 为 60.12.206.114,实例网段桥接在内网网卡上 , 网络模式采用 FlatDHCP			

服务器系统安装

- 1. Ubuntu server 11.04 x64 使用默认安装方式
- 2. 服务器外网使用 eth0
- 3. 服务器内网使用 eth1
- 4. 除 apache 及 noVNC 外,所有服务均监听内网 IP

控制节点安装

NTP 时钟服务安装

- 安装 NTP 时钟同步服务器 apt-get install -y ntp ntpdate
- 2. 同步时间 /etc/init.d/ntp stop ntpdate ntp.api.bz
- 编辑/etc/ntp.conf,将文件内容替换为如下: restrict 127.0.0.1 restrict 192.168.1.0 mask 255.255.255.0 nomodify server ntp.api.bz server 127.127.1.0 # local clock fudge 127.127.1.0 stratum 10 driftfile /var/lib/ntp/drift
- 4. 重启 ntp 服务 /etc/init.d/ntp restart

MYSQL 数据库服务安装

- 预设 MYSQL 数据库服务 root 密码为 openstack cat << MYSQL_PASSWORD |debconf-set-selections mysql-server-5.1 mysql-server/root_password password openstack mysql-server-5.1 mysql-server/root_password_again password openstack MYSQL_PASSWORD
- 安装 MYSQL 数据库服务 apt-get install -y mysql-server
- 更改 MYSQL 数据库服务监听内网网卡 IP sed -i '/bind-address/s/127.0.0.1/192.168.1.2/g' /etc/mysql/my.cnf
- 4. 重启 MYSQL 数据库服务 /etc/init.d/mysql restart
- 5. 检测服务是否正常启动

通过 netstat -ltunp 查看是否有 tcp 3306 端口监听 如果没有正常启动请查看/var/log/mysql 下相关 log 排错

RABBITMQ 消息队列服务安装

- 安装 RABBITMQ 消息队列服务 apt-get install -y rabbitmq-server
- 更改 RABBITMQ 消息队列服务 guest 用户默认密码为 openstack rabbitmqctl change_password guest openstack

NOVA 服务安装

1. 导入所需更新源

echo 'deb http://ppa.launchpad.net/openstack-release/2011.3/ubuntu natty main' >>/etc/apt/sources. list

2. 导入服务密钥

apt-key adv --keyserver keyserver.ubuntu.com --recv-keys 94CA80414F1043F6495425C37D21C2EC3D 1B4472

- 3. 更新 APT 源列表 apt-get update
- 4. nova-api、nova-network、nova-objectstore、nova-scheduler 服务安装 apt-get install -y nova-api nova-network nova-objectstore nova-scheduler

GLANCE 镜像存储服务安装

 安装 glance apt-get install -y glance

KEYSTONE、noVNC、Dashboard 服务相关依赖包安装

1. APT 安装相关包

apt-get install -y python-dev libxml2-dev libxslt1-dev libsasl2-dev libldap2-dev libsqlite3-dev libssl-dev python-pip swig git python-dateutil apache2 libapache2-mod-wsgi python-numpy

2. pip 安装相关包

pip install passlib sqlalchemy-migrate prettytable glance python-cloudfiles nose==1.0.0 Django==1.3 django-nose==0.1.2 django-registration==0.7 django-mailer mox nosexcover

KEYSTONE 认证服务安装

1. 下载 keystone 认证服务程序

cd /opt

git clone https://github.com/cloudbuilders/keystone.git

cd keystone git checkout diablo cd ..

 安装 keystone 认证服务 cd keystone python setup.py install python setup.py develop

- 建立 keystone 认证服务数据库 mysql -uroot -popenstack -e 'create database keystone'
- 为 keystone 认证服务数据库建立访问所需用户名 mysql -uroot -popenstack -e "grant select,insert,update,delete,create,drop,index,alter on keystone.* to keystone@'localhost' identified by 'keystone'"
- 5. 建立 keystone 认证服务启动所需用户 useradd -s /bin/bash -g nogroup -m -d /var/log/keystone keystone
- 建立 keystone 认证服务配置文件存放路径 mkdir /etc/keystone
- 7. 生成 keystone 认证服务配置文件 cp /opt/keystone/etc/keystone.conf /etc/keystone/ 编辑/etc/keystone/keystone.conf , 更改如下: default_store = sqlite service_host = 0.0.0.0 admin_host = 0.0.0.0 sql_connection = sqlite:///keystone.db 更改为 #default_store = sqlite service_host = 192.168.1.2 admin_host = 192.168.1.2 sql_connection = mysql://keystone:keystone@localhost/keystone
- 8. 生成 keystone 认证服务数据

编辑/etc/keystone/keystone_data.sh , 添加如下内容: #!/bin/bash # 建立 tenant 名为 admin keystone-manage \$* tenant add admin # 建立属于 admin tenant 的用户名为 admin 密码为 openstack 的用户 keystone-manage \$* user add admin openstack admin # 建立管理员规则 keystone-manage \$* role add Admin

建立 keystone 管理员规则

keystone-manage \$* role add KeystoneAdmin

建立 keystone 服务管理员规则

keystone-manage \$* role add KeystoneServiceAdmin

将管理员规则赋予 admin 用户

keystone-manage \$* role grant Admin admin

将 keystone 管理员规则赋予 admin 用户

keystone-manage \$* role grant KeystoneAdmin admin

将 keystone 服务管理员规则赋予 admin 用户

keystone-manage \$* role grant KeystoneServiceAdmin admin

添加 nova compute 服务

keystone-manage \$* service add nova compute "Nova Compute Service"

添加 glance image 服务

keystone-manage \$* service add glance image "Glance Image Service"

添加 keystone identity 服务

keystone-manage \$* service add keystone identity "Keystone Identity Service"

添加 nova compute 访问点

keystone-manage \$* endpointTemplates add RegionOne nova http://192.168.1.2:8774/v1.1/%tenant_i d% http://192.168.1.2:8774/v1.1/%tenant_id% http://192.168.1.2:8774/v1.1/%tenant_id% 1 1

添加 glance image 访问点

keystone-manage \$* endpointTemplates add RegionOne glance http://192.168.1.2:9292/v1.1/%tenan t_id% http://192.168.1.2:9292/v1.1/%tenant_id% http://192.168.1.2:9292/v1.1/%tenant_id% 1 1 # 添加 keystone identity 访问点

keystone-manage \$* endpointTemplates add RegionOne keystone http://192.168.1.2:5000/v2.0 http:/

/192.168.1.2:35357/v2.0 http://192.168.1.2:5000/v2.0 1 1

为 tenant 为 admin 及 admin 用户建立一个名为 openstack , 过期时间为 2015 年 2 月 5 日 0 点的 token keystone-manage \$* token add openstack admin admin 2015-02-05T00:00

#为 tenant为 admin及 admin 用户建立一个类型为 EC2的证书,其 key和 secret分别为 admin 用户的用户名 和密码

keystone-manage \$* credentials add admin EC2 'admin' 'openstack' admin

9. 建立 keystone 认证服务启动脚本配置文件

在/etc/init/下建立名为 keystone.conf 的文件,内容如下: description "Keystone API server" author "Soren Hansen <soren@linux2go.dk>"

start on (local-filesystems and net-device-up IFACE!=lo) stop on runlevel [016]

respawn

exec su -c "keystone --config-file=/etc/keystone/keystone.conf --log-dir=/var/log/keystone --log-file =keystone.log" keystone

- 10. 建立 keystone 认证服务启动脚本 In -sv /lib/init/upstart-job /etc/init.d/keystone
- 启动 keystone 认证服务 /etc/init.d/keystone start
- 12. 验证 keystone 服务是否正常启动 通过 netstat -ltunp 检测是否有 tcp 5000 和 35357 端口的监听 , 如果没有 , 请查看/var/log/keystone 下的相关 日志排错

OPENSTACK.COMPUTE 扩展库安装

1. 下载 openstack.compute 扩展库

cd /opt

git clone https://github.com/jacobian/openstack.compute.git

cd openstack.compute

git checkout master

cd ..

 安装 openstack.compute 扩展库 cd openstack.compute python setup.py install python setup.py develop

OPENSTACKX 扩展库安装

下载 openstackx 扩展库
 cd /opt
 git clone https://github.com/cloudbuilders/openstackx.git
 cd openstackx
 git checkout diablo
 cd ..

 安装 openstackx 扩展库 cd openstackx python setup.py install python setup.py develop

PYTHON-NOVACLIENT 扩展库安装

1. 下载 python-novaclient 扩展库

cd /opt

git clone https://github.com/cloudbuilders/python-novaclient.git

cd python-novaclient

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git checkout diablo cd ..

 安装 python-novaclient 扩展库 cd python-novaclient python setup.py install python setup.py develop

QUANTUM 模块安装

1. 下载 quantum 扩展库

cd /opt git clone https://github.com/openstack/quantum.git cd quantum git checkout stable/diablo cd ..

 安装 quantum 扩展库 cd quantum python setup.py install python setup.py develop

OPENSTACK-DASHBOARD 控制面板安装

- 下载 openstack-dashboard 控制面板 cd /opt git clone https://github.com/openstack/openstack-dashboard.git cd openstack-dashboard git checkout master cd ..
- 2. 安装 openstack-dashboard 控制面板

cd openstack-dashboard/django-openstack python setup.py install python setup.py develop cd .. cd openstack-dashboard python setup.py install python setup.py develop

- 建立 openstack-dashboard 控制面板数据库 mysql -uroot -popenstack -e 'create database dashboard'
- 4. 为 openstack-dashboard 控制面板数据库建立访问所需用户名

mysql -uroot -popenstack -e "grant select,insert,update,delete,create,drop,index,alter on dashboard.* to dashboard@'localhost' identified by 'dashboard'"

5. 配置 openstack-dashboard 控制面板

```
cd /opt/openstack-dashboard/openstack-dashboard/local
   cp local_settings.py.example local_settings.py
   编辑 local_settings.py,更改如下内容:
   DATABASES = {
     'default':{
       'ENGINE': 'django.db.backends.sqlite3',
       'NAME': os.path.join(LOCAL_PATH, 'dashboard_openstack.sqlite3'),
    },
  }
   更改为
   DATABASES = {
      'default':{
          'ENGINE': 'django.db.backends.mysql',
          'NAME': 'dashboard',
          'USER': 'dashboard',
          'PASSWORD': 'dashboard',
          'HOST': 'localhost',
          'PORT': '3306',
      },
  }
   OPENSTACK_KEYSTONE_URL = http://localhost:5000/v2.0/
   OPENSTACK_KEYSTONE_ADMIN_URL = http://localhost:35357/v2.0
   OPENSTACK_ADMIN_TOKEN = "999888777666"
   更改为
   OPENSTACK_KEYSTONE_URL = "http://192.168.1.2:5000/v2.0/"
   OPENSTACK_KEYSTONE_ADMIN_URL = "http://192.168.1.2:35357/v2.0"
   OPENSTACK_ADMIN_TOKEN = "openstack"
6. 配置 apache
   mkdir /opt/openstack-dashboard/.blackhole
   chown -R www-data:www-data/opt/openstack-dashboard
   编辑/etc/apache2/sites-available/default 文件,将内容替换为如下:
   <VirtualHost *:80>
      WSGIScriptAlias / /opt/openstack-dashboard/openstack-dashboard/dashboard/wsgi/django.wsgi
      WSGIDaemonProcess dashboard user=www-data group=www-data processes=3 threads=10
      SetEnv APACHE_RUN_USER www-data
      SetEnv APACHE_RUN_GROUP www-data
      WSGIProcessGroup dashboard
```

DocumentRoot /opt/openstack-dashboard/.blackhole/

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Alias /media /opt/openstack-dashboard/openstack-dashboard/media

<Directory />
Options FollowSymLinks

AllowOverride None

</Directory>

<Directory /opt/openstack-dashboard/>

Options Indexes FollowSymLinks MultiViews

AllowOverride None

Order allow, deny

allow from all

</Directory>

ErrorLog /var/log/apache2/error.log LogLevel warn CustomLog /var/log/apache2/access.log combined </VirtualHost>

7. 建立 openstack-dashboard 控制面板数据库结构

/opt/openstack-dashboard/openstack-dashboard/dashboard/manage.py syncdb

- 8. 重启 apache 服务 /etc/init.d/apache restart
- 9. 验证 openstack-dashboard 控制面板

首先通过 netstat -ltunp 查看 80 端口的监听,其次通过浏览器访问 web 服务是否可以看到如下界面:

User Name		
Password		

如不成功请查看/var/log/apache/下错误日志

noVNC 服务安装

1. 下载 noVNC 服务

cd /opt

git clone https://github.com/cloudbuilders/noVNC.git

cd noVNC git checkout diablo cd ..

NOVA 服务配置

1. 建立 nova 服务数据库

mysql -uroot -popenstack -e 'create database nova'

2. 为 nova 服务数据库建立访问所需用户名

mysql -uroot -popenstack -e "grant select,insert,update,delete,create,drop,index,alter on nova.* to nova@'192.168.1.%' identified by 'nova'"

3. 配置 nova 服务

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cp /opt/keystone/examples/paste/nova-api-paste.ini /etc/nova/api-paste.ini 编辑/etc/nova/api-paste.init,更改如下内容: service_host = 127.0.0.1 auth_host = 127.0.0.1 auth_uri = http://127.0.0.1:5000/ admin_token = 999888777666 更改为 service_host = 192.168.1.2 auth_host = 192.168.1.2 auth_uri = http://192.168.1.2:5000/ admin_token = openstack 编辑/etc/nova.conf,更改为如下内容 #general --logdir=/var/log/nova --state_path=/var/lib/nova --lock_path=/var/lock/nova --verbose=True --use_syslog=False #nova-objectstore --use s3=True --s3_host=192.168.1.2 --s3_port=3333 #rabbit --rabbit_host=192.168.1.2 --rabbit_port=5672 --rabbit_password=openstack #ec2 --ec2_listen=192.168.1.2 --ec2_listen_port=8773 IT 运维专家网------"我为人人,人人为我!知识源于分享,源于交流!"---LinuxTone 技术交流

#osapi

--osapi_listen=192.168.1.2 --osapi_listen_port=8774 --osapi_extensions_path=/opt/openstackx/extensions --api_paste_config=/etc/nova/api-paste.ini #db --sql_connection=mysql://nova:nova@192.168.1.2/nova --sql_idle_timeout=600 --sql_max_retries=3 --sql_retry_interval=3 #glance --glance_host=192.168.1.2 --glance_api_servers=192.168.1.2:9292 --image_service=nova.image.glance.GlanceImageService #nova-network --dhcpbridge_flagfile=/etc/nova/nova.conf --dhcpbridge=/usr/bin/nova-dhcpbridge --network_manager=nova.network.manager.FlatDHCPManager --linuxnet_interface_driver=nova.network.linux_net.LinuxBridgeInterfaceDriver

4. 建立 nova 数据库结构

nova-manage db sync

- 建立名为 private, ip 地址范围为 10.0.0.0/24, 网络 id 为 1, 主机数 256 个, 桥接在 eth1 网卡, 桥接卡名称为 br1 的实例网络段,并启用多 nova-network nova-manage network create private 10.0.0.0/24 1 256 --bridge=br1 --bridge_interface=eth1 --mul ti_host='T'
- 建立可分配的 floating ip nova-manage floating create 60.12.206.114

7. 重启相关服务

/etc/init.d/nova-api restart /etc/init.d/nova-network restart /etc/init.d/nova-objectstore restart /etc/init.d/nova-scheduler restart

8. 检测相关服务是否启动成功

查看/var/log/nova/nova-api.log 最下方是否有如下输出: 2011-11-28 00:44:29,390 INFO nova.wsgi [-] Started ec2 on 192.168.1.2:8773 2011-11-28 00:44:29,390 INFO nova.wsgi [-] Started osapi on 192.168.1.2:8774 并通过 netstat -ltunp 查看是否有 tcp 8773 和 8774 的端口监听

查看/var/log/nova/nova-network.log 最下方是否有如下输出:

```
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```

2011-11-28 00:46	:05,519 INFO nova.rpc [-] Connected to AI	MQP server on 19	2.168.1.2:56	72	
2011-11-28 00:46	:05,520 DEBUG nova [-] Creating Consume	er connection for S	Service netv	vork fr	rom
(pid=7592) start	/usr/lib/python2.7/dist-packages/nova/servic	e.py:153			
通过命令 nova-ma	nage service list 查看是否有如下输出:				
nova-network	r410-control1	nova	enabled	:-)	201
1-11-27 16:48:36					
查看/var/log/nova	/nova-objectstore.log 最下方是否有如下输出:				
2011-11-28 00:46	:46,017 INFO nova.wsgi [-] Started S3 Obje	ectstore on 192.16	8.1.2:3333		
并通过 netstat -ltu	unp 查看是否有 tcp 333 的端口监听				
查看/var/log/nova	/nova-scheduler.log 最下方是否有如下输出:				
2011-11-28 00:47	:59,789 INFO nova.rpc [-] Connected to Al	MQP server on 19	2.168.1.2:56	72	
2011-11-28 00:47	7:59,790 DEBUG nova [-] Creating Consume	r connection for S	Service sche	duler	from
(pid=7805) start	/usr/lib/python2.7/dist-packages/nova/servi	ce.py:153			
通过命令 nova-ma	nage service list 查看是否有如下输出:				
nova-scheduler	r410-control1	nova	enabled	:-)	201
1-11-27 16:48:40					

如上述有哪些服务没有成功启动请查看相关/var/log/nova 下相关 log 排错

GLANCE 镜像存储服务配置

 建立 glance 镜像存储服务数据库 mysql -uroot -popenstack -e 'create database glance'

2. 为 glance 镜像存储服务数据库建立访问所需用户名

mysql -uroot -popenstack -e "grant select,insert,update,delete,create,drop,index,alter on glance.* to glance@'localhost' identified by 'glance'"

3. 配置 glance 镜像存储服务

cp /opt/keystone/examples/paste/glance-api.conf /etc/glance/glance-api.conf cp /opt/keystone/examples/paste/glance-registry.conf /etc/glance/glance-registry.conf 编辑/etc/glance-glance-api.conf , 更改如下内容 : bind_host = 0.0.00 registry_host = 0.0.00 rabbit_password = guest service_host = 127.0.0.1 auth_host = 127.0.0.1 auth_host = 127.0.0.1 auth_uri = http://127.0.0.1:5000/ admin_token = 999888777666 更改为 bind_host = 192.168.1.2 registry_host = 192.168.1.2

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rabbit_password = openstack service_host = 192.168.1.2 auth_host = 192.168.1.2 auth_uri = http://192.168.1.2:5000/ admin_token = openstack

编辑/etc/glance/glance-registry.conf,更改如下内容: bind_host = 0.0.0 sql_connection = sqlite:///glance.sqlite service_host = 127.0.0.1 auth_host = 127.0.0.1 auth_uri = http://127.0.0.1:5000/ admin_token = 999888777666 更改为 bind_host = 192.168.1.2 sql_connection = mysql://glance:glance@localhost/glance service_host = 192.168.1.2 auth_host = 192.168.1.2 auth_host = http://192.168.1.2:5000/ admin_token = openstack

4. 重启相关服务

/etc/init.d/glance-api restart /etc/init.d/glance-registry restart

- 检测服务是否成功启动 通过命令 netstat -ltunp 查看是否有 tcp 9191 和 9292 端口监听 如果没有启动成功请查看/var/log/glance 下相关 log 排错
- 6. 通过 glance 上传镜像 glance add -H 192.168.1.2 -A openstack name=win2k3 is_public=true < win2k3.img

noVNC 服务配置

配置 noVNC 服务
 向/etc/nova/nova.conf 添加如下内容:
 #nova-vncproxy
 --vnc_enabled=True
 --vncproxy_url=http://60.12.206.111:6080
 --vncproxy_wwwroot=/opt/noVNC
 --vncproxy_manager=nova.vnc.auth.VNCProxyAuthManager

将计算节点 ip 和主机名对应关系添加到/etc/hosts 文件内

2. 建立 noVNC 服务启动程序软链接

In -sv /opt/noVNC/utils/nova-wsproxy.py /usr/bin/nova-wsproxy

3. 建立 noVNC 服务启动脚本配置文件

在/etc/init/下建立名为 nova-vncproxy.conf 文件,内容如下: description "Nova VNC proxy" author "Vishvananda Ishaya <vishvananda@gmail.com>"

start on (filesystem and net-device-up IFACE!=lo) stop on runlevel [016]

exec su -c "nova-wsproxy 6080 --web /opt/noVNC --flagfile=/etc/nova/nova.conf" nova

- 建立 noVNC 启动脚本
 In -sv /lib/init/upstart-job /etc/init.d/nova-vncproxy
- 5. 重启相关服务 /etc/init.d/nova-api restart /etc/init.d/nova-vncproxy start
- 检测服务是否启动成功
 通过 netstat -ltunp 查看是否有 tcp 6080 端口监听
 如没启动成功请以前台模式启动并查找问题

计算节点安装

NTP 时钟同步配置

 安装 NTP 相关命令包 apt-get install -y ntpdate

> 跟控制节点同步时间并写入硬件 ntpdate 192.168.1.2 hwclock -w

将时间同步添加到计划任务
 echo ' 30 8 ** * root /usr/sbin/ntpdate 192.168.1.2;hwclock -w' >>/etc/crontab

NOVA 服务安装

1. 导入所需更新源

echo 'deb http://ppa.launchpad.net/openstack-release/2011.3/ubuntu natty main' >>/etc/apt/sources.list

2. 导入服务密钥

apt-key adv --keyserver keyserver.ubuntu.com --recv-keys 94CA80414F1043F6495425C37D21C2EC3D 1B4472

3. 更新 APT 源列表 apt-get update

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 nova-network、nova-compute 服务安装 apt-get install -y nova-network nova-compute

NOVA 服务配置

```
1. 配置 nova 服务
    编辑/etc/nova.conf,更改为如下内容
    #general
    --logdir=/var/log/nova
    --state_path=/var/lib/nova
    --lock_path=/var/lock/nova
    --verbose=True
    --use_syslog=False
    #nova-objectstore
    --use_s3=True
    --s3_host=192.168.1.2
    --s3_port=3333
    #rabbit
    --rabbit_host=192.168.1.2
    --rabbit_port=5672
    --rabbit_password=openstack
    #ec2
    --ec2_host=192.168.1.2
    --ec2_port=8773
    --ec2_url=http://192.168.1.2:8773/services/Cloud
    #osapi
    --osapi_host=192.168.1.2
    --osapi_port=8774
    #db
    --sql_connection=mysql://nova:nova@192.168.1.2/nova
    --sql_idle_timeout=600
    --sql_max_retries=3
    --sql_retry_interval=3
    #glance
    --glance_host=192.168.1.2
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```

--glance_api_servers=192.168.1.2:9292

--image_service=nova.image.glance.GlanceImageService

#libvirt

--connection_type=libvirt

--libvirt_type=kvm

--snapshot_image_format=qcow2

--use_cow_image=True

--libvirt_use_virtio_for_bridges=True

#nova-scheduler

--scheduler_driver=nova.scheduler.multi.MultiScheduler

--max_cores=48

--start_guests_on_host_boot=True

--resume_guests_state_on_host_boot=True

#nova-network

--dhcpbridge_flagfile=/etc/nova/nova.conf

--dhcpbridge=/usr/bin/nova-dhcpbridge

--network_manager=nova.network.manager.FlatDHCPManager

--linuxnet_interface_driver=nova.network.linux_net.LinuxBridgeInterfaceDriver

--fixed_range=10.0.0.0/24

--flat_interface=br1

- --flat_network_bridge=eth1
- --flat_network_dhcp_start=10.0.0.2

--floating_range=60.12.206.114

--multi_host=true

- --public_interface=eth0
- --force_dhcp_release=true

--use_ipv6=False

2. 启动相关服务

/etc/init.d/nova-network restart /etc/init.d/nova-compute restart

3. 检测服务是否启动成功

通过命令 netstat –ntap 查看是否有类似如下连接状态:

tcp	0	0 192.168.1.3:26342	192.168.1.2:5672	ESTABLISHED 29466/python
tcp	0	0 192.168.1.3:19757	192.168.1.2:3306	ESTABLISHED 29466/python
tcp	0	0 192.168.1.3:27483	192.168.1.2:5672	ESTABLISHED 29510/python
tcp	0	0 192.168.1.3:4423	192.168.1.2:3306	ESTABLISHED 29510/python
tcp	0	0 118.26.228.117:59878	211.101.24.8:56527	ESTABLISHED 29817/2
tcp	0	0 192.168.1.3:9542	192.168.1.2:3306	ESTABLISHED 29510/python
tcp	0	0 192.168.1.3:4422	192.168.1.2:3306	TIME_WAIT -
tcp	0	0 192.168.1.3:26340	192.168.1.2:5672	ESTABLISHED 29510/python
tcp	0	0 192.168.1.3:4424	192.168.1.2:3306	ESTABLISHED 29510/python
tcp	0	0 192.168.1.3:26328	192.168.1.2:5672	ESTABLISHED 29466/python

查看/var/log/nova/nova-network.log 最下方是否有如下输出: 2011-11-28 00:46:05,519 INFO nova.rpc [-] Connected to AMQP server on 192.168.1.2:5672 2011-11-28 00:46:05,520 DEBUG nova [-] Creating Consumer connection for Service network from (pid=7592) start/usr/lib/python2.7/dist-packages/nova/service.py:153

查看/var/log/nova/nova-compute.log 最下方是否有如下输出:

2011-11-28 17:06:24,491 INFO nova.rpc [-] Connected to AMQP server on 192.168.1.2:5672 2011-11-28 17:06:24,492 DEBUG nova [-] Creating Consumer connection for Service compute from (pid=31197) start /usr/lib/python2.7/dist-packages/nova/service.py:153

通过在控制节点执行 nova-manage service list 结果是否有如下输出(红字):

Binary	Host	Zone	Status State Upda	ated_At
nova-scheduler	r410-control1	nova	a enable	d :-)
2011-11-28 09:07	:21			
nova-network	r410-control1	nov	a enable	d :-)
2011-11-28 09:07	:21			
nova-compute	r710-compute1	nov	a enable	d :-)
2011-11-28 09:07	:14			
nova-network	r710-compute1	nov	a enable	d :-)
2011-11-28 09:07	:22			

通过管理员登陆 dashboard 在 SYSTEM PANEL 面板通过左侧 Services 标签查看是否有计算节点 nova-compute 和 nova-network 服务,并且颜色是否为绿色,如图:

r	Bervice				Rectoria
Services		Hypervisor: OEMU(rdtscp. pdpe1eb. dca. xtpr. tm2, est. vmx, ds_cpl. monitor, pbe, tm, ht, ss, acpi, ds,			
Instances	nova-compute	vme) • Allocable Cores: 48 (56 Lised: 54 Physical/Virtual)	Enabled	True	The ship
Flavors)	Allocable Storage: 9.8TB (672.0GB Used, 15TB Physical) System Parming IGB (0GB Used, 15TB Physical)	LINGDICG	inde	DISERC
Images		- Naren Kain Titton (Bon oard)			
	nova-network				
Tenants	(Sector Thinks		Enabled	True	Dizable
Users	3				

如上述有哪些服务没有成功启动请查看相关/var/log/nova 下相关 log 排错

DASHBOARD 使用基础

建立 Keypairs

通过 USER DASHBOARD 面板左侧 Keypairs 标签,点击 Add New Keypair,如图:

openstack Us	SER DASHBOARD SYSTEM F	PANEL State
Manage Compute	Keypairs	
Overview		
Instances	Info	There are currently no keypairs.
Images	Add Nous Kouppir	Impart Maya air
Snapshots	Add Hew Keypan	infibire Keypan
Keypairs		
Floating IPs		
Security Groups		

输入 keypair 名字,这里假名为 openstack,点击 Add Keypair 按钮,如图:

D openstack Us	ER DASHBOARD SYSTEM PANEL	
Manage Compute	Create Keypair	
Overview		
Instances	Keypair Name	
Images	openstack	
Snapshots		Add Keppair
Keypairs		
Floating IPs		
Security Groups		

此后会要求下载一个 pem 文件,可以通过这个文件登陆启动的系统



通过 USER DASHBOARD 面板左侧 Security Groups 标签,点击 Create Security Group,如图:

Manage Compute Security Groups Q Emile	
Dvenew Nene Desciption Access	
instances Insigns default default terraise	
Snapshots County Comp	
Keynaer	
Floating IPs	
Security Broups	

输入 name,在 Name 输入 test, Description 输入 test,点击 Create Security Group,如图:

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anage Compute	Create Security Group	
Overview		
Instances	Name	Description:
mages	test	From here you can create a new security group
Snapshots	Description	
Ceypairs		
Floating IPs	Create Security Group	
Security Groups		

建立成功后会自动跳转回 Security Groups 标签,可以看到我们建立的新安全组 test,如图:

Manage Compute	Security 0	Q Sector		
Overview Instances	Info	Socounfully involved one	unity-Burnit pour	
	Name		Description	Actions
Keypaira	default		default	Lift Room
Finating IPs				ball Bass
Security Groups	and.			-

点击我们创建的安全组的 Edit Rules,进入如下界面,如图:

openstack o	SER CARMENARD EVETEM PAREL 30	admin at admin
Manage Compute	Edit Security Group Rules	
Instances	Rules for Security Group 'test'	Add a suite
images	IP Protocol Fram Part To Part CIDR Actions	Add a rule
Snepshots	No rules for this security group	ip protocol
Keypeira		From part
Floating IPs		
Security Groups		To put
		Cid
		And Take

我们默认放所有,规则如下

Ip protocol:tcp, From port:0, To port:65535, Cidr:0/0 Ip protocol:udp, From port:0, To port:65535, Cidr:0/0 Ip protocol:icmp, From port:-1, To port:-1, Cidr:0/0 添加完毕后,如图:

vervew stances nages napshote	Info Rules for S	tures Security G	enfuly soler Group 'te	Inde 6				
nages napshota	Rules for S	Security G	Group 'te	et'				
			eren Foots	50		Add a r	rule	
leypairs	IP Protocol	From Port	To Port	CIDR	Actors	lp protace		
loating IPs	top	0	65535	0/0	#14	top		
Security Groups	udp		B5535	a/a	-	From port		
	icmp	-1	-1	0/0	**	To purt		

启动实例

通过 USER DASHBOARD 面板左侧 Images 标签,在已上传的镜像后点击 Launch,如图:

openstack 🛛 🗤	SER CAGHBOARD SYSTEM PANEL 😘				admin at admin
Manage Compute	Images				Q 1
Overview	ID Name				
Images		11/24/21 at 00.45-38	11/24/11 at 01:04:10	Active	Lautich
Snapshots	33 ubuntuso.so-648it	11/23/11 at 00.11.00	11/23/11 at oo 97.96	Active	Laureth

输入实例名称,这里假设为 first instance,通过 Flavor 下拉列表选择你要启动的实例配置,通过 Key Name 下 拉列表选择你已有的 keypair,通过 Securtiy Group 列表框选择我们建立的安全组 test,点击 Launche Instance,

fanage Compute	Launch Instance		
Overview			
Instances	Server Name	Description:	
Images	first instance	Specify the details for launching	j an instance. Also please make note
Snapshota	User Data	table below; all tenants have qui yns are allowed to provision	otas which define the limit of resou
Keypairs			
Floating IPs		Quata Name	Limit
		RAM (MB)	51200MB
		Floating iPs	10
		Instances	10
	T I I I I I I I I I I I I I I I I I I I		
	ml.tiny (lvcpu / 068 Disk / 512008 Run)	Volumes	
	nl.tiny (lvepu / 06B Disk / 512MB Ram) Key Name	Volumes	10

此后通过 USER DASHBOARD 面板左侧 Instances 标签,可以看到你刚刚启动的实例,实例刚启动再状态栏 Build,如图:

fanage Compute	Inst	ances					Q Innerthan
instances	Su	CCESS	Instance was successful	y lounched			
images Geoerland	10						
Ceypairs Floating IPs	IC.						Section to Referent
	38.5	first instance inpendacki	• defeut	ubantu-server-10.10-x64	 g11MB Ram k VCPU o56 Disk. 	Build	ung unit Cereste

当实例状态变为 Active 后,我们可以通过 vnc 连接,如图:

State	Actions
Active	Terminate Reboot Log VNC Console Edit Snapshot

通过 VNC 连接实例

通过 USER DASHBOARD 面板左侧 Instances 标签,找到我们启动的 first instance 实例->Actions 下的 VNC Console 链接,会新打开一个窗口,如图:



通过此窗口我们就可以访问启动的实例了

为实例分配外网 IP

通过 USER DASHBOARD 面板左侧 Floating IPs 标签,点击 Allocate IP 按钮,将出现一个可用外网 IP,如图:

D openstack	иен раковнала 🤧	ops_lluhongwel at luflongwei		
Manage Compute	Floating IP	s		Q 2-0-0-0
Overview Instances	Success	Successifiely also start Planting (P * as θ_{2} and θ_{2}^{*} to target $^{*}S^{*}$		
images Snapshots	ø		Instance	Agtione
Keyperts			Nane	Technicke Als so man the Anatomic
Floating IPs Security Groups	All south of the			

点击 Associate Floating IP 链接,进入如下界面,Floating IP 是要分配的 IP, Instance 下拉列表选择你要讲此 IP 给予哪个实例,最后点击 Associate IP,如图:

opensiack	CR DROMOUND CO	as iufon
Manage Compute	Associate Floating IP	
Overview		
Instances	Floating ip	Description:
Images		Associate a floating ip with an instance.
	Instance	
Keymaire	id: 38, name: first instance	*
in parts	Associa	ate 12
Floating IPs		
Security Groups		

成功后会跳转到 Floating IPs 标签,可以查看到我们已经分配完成,如图:

Manalan Contentes				
unuque compute	Floating IPs			Q december
Overview				
Instances :)	Into		outing IP were seen to instance 26	
Images	10			
Snepshots			HISTORY.	ACTOR
Keypara	Po logation		Instance ID-39 Instance ID-39	Belwave
Floating IPs				2ingiorinte
Security Groups	Allocate II			

接下来就可以通过 ssh 连接你的实例了