15、计算（Nova）服务

使用OpenStack Compute来托管和管理云计算系统。

OpenStack Compute可以在标准硬件上横向扩展，并下载图像到启动实例。

Nova下的子类：

nova-api服务接收和响应终端用户计算API调用。

nova-api-metadata服务接受从实例元数据请求。

nova-compute服务工人守护进程创建和终止虚拟机实例通过 hypervisor APIs。

nova-consoleauth守护程序控制台代理提供的授权用户令牌。

nova-novncproxy守护进程提供了一个代理来访问运行的实例通过VNC连接。

nova-spicehtml5proxy提供通过SPICE连接访问运行实例的代理。

创建该服务的数据库和数据库管理账户

controller#

mysql -u root -p123

CREATE DATABASE nova\_api;

CREATE DATABASE nova;

CREATE DATABASE nova\_cell0;

GRANT ALL PRIVILEGES ON nova\_api.\* TO 'nova'@'localhost' \

IDENTIFIED BY 'nova';

GRANT ALL PRIVILEGES ON nova\_api.\* TO 'nova'@'%' \

IDENTIFIED BY 'nova';

GRANT ALL PRIVILEGES ON nova.\* TO 'nova'@'localhost' \

IDENTIFIED BY 'nova';

GRANT ALL PRIVILEGES ON nova.\* TO 'nova'@'%' \

IDENTIFIED BY 'nova';

GRANT ALL PRIVILEGES ON nova\_cell0.\* TO 'nova'@'localhost' \

IDENTIFIED BY 'nova';

GRANT ALL PRIVILEGES ON nova\_cell0.\* TO 'nova'@'%' \

IDENTIFIED BY 'nova';

exit

创建nova用户、服务、API

controller#

openstack user create --domain default --password-prompt nova

此处需要输入密码：

openstack role add --project service --user nova admin

openstack service create --name nova \

--description "OpenStack Compute" compute

openstack endpoint create --region RegionOne compute public http://controller:8774/v2.1

openstack endpoint create --region RegionOne compute internal http://controller:8774/v2.1

openstack endpoint create --region RegionOne compute admin http://controller:8774/v2.1

创建placement用户、服务、API

controller#

openstack user create --domain default --password-prompt placement

此处需要输入密码：

openstack role add --project service --user placement admin

openstack service create --name placement --description "Placement API" placement

创建API时按照OpenStack官网的操作会有报错

openstack endpoint create --region RegionOne placement public http://controller/placement

openstack endpoint create --region RegionOne placement internal http://controller/placemen

openstack endpoint create --region RegionOne placement admin http://controller/placement

报错提示

Failed to create resource provider record in placement API for. Got 404: <!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">

<html><head>

<title>404 Not Found</title>

</head><body>

<h1>Not Found</h1>

<p>The requested URL /placement/resource\_providers was not found on this server.</p>

</body></html>

解决办法：

查看API的ID，然后根据ID删除原来配置的三个API

openstack endpoint service list

openstack endpoint delete service\_ID

然后在使用以下API

openstack endpoint create --region RegionOne placement public http://controller:8778

openstack endpoint create --region RegionOne placement admin http://controller:8778

openstack endpoint create --region RegionOne placement internal http://controller:8778

推荐直接使用

openstack endpoint create --region RegionOne placement public http://controller:8778

openstack endpoint create --region RegionOne placement admin http://controller:8778

openstack endpoint create --region RegionOne placement internal http://controller:8778

配置nova配置文件（备份配置文件，删除配置文件里的所有数据，使用提供的配置）：

controller#

cp /etc/nova/nova.conf /etc/nova/nova.conf.bak

vi /etc/nova/nova.conf

[DEFAULT]

enabled\_apis = osapi\_compute,metadata

transport\_url = rabbit://openstack:openstack@controller

#本机IP地址

my\_ip = 192.168.215.100

use\_neutron = True

firewall\_driver = nova.virt.firewall.NoopFirewallDriver

[api\_database]

connection = mysql+pymysql://nova:nova@controller/nova\_api

[database]

connection = mysql+pymysql://nova:nova@controller/nova

[api]

auth\_strategy = keystone

[keystone\_authtoken]

auth\_uri = http://controller:5000

auth\_url = http://controller:35357

memcached\_servers = controller:11211

auth\_type = password

project\_domain\_name = default

user\_domain\_name = default

project\_name = service

username = nova

password = nova

[vnc]

enabled = true

vncserver\_listen = $my\_ip

vncserver\_proxyclient\_address = $my\_ip

[glance]

api\_servers = http://controller:9292

[oslo\_concurrency]

lock\_path = /var/lib/nova/tmp

[placement]

os\_region\_name = RegionOne

project\_domain\_name = Default

project\_name = service

auth\_type = password

user\_domain\_name = Default

auth\_url = http://controller:35357/v3

username = placement

password = placement

修改nova的HTTP配置文件

（由于包错误，您必须启用对Placement API的访问，在文件末尾添加。）

controller#

vi /etc/httpd/conf.d/00-nova-placement-api.conf

<Directory /usr/bin>

<IfVersion >= 2.4>

Require all granted

</IfVersion>

<IfVersion < 2.4>

Order allow,deny

Allow from all

</IfVersion>

</Directory>

同步数据库

controller#

su -s /bin/sh -c "nova-manage api\_db sync" nova

su -s /bin/sh -c "nova-manage cell\_v2 map\_cell0" nova

su -s /bin/sh -c "nova-manage cell\_v2 create\_cell --name=cell1 --verbose" nova

su -s /bin/sh -c "nova-manage db sync" nova

查看cell\_v2所生成的UUID

controller#

nova-manage cell\_v2 list\_cells

开机自启动和启动服务

controller#

systemctl enable openstack-nova-api.service \

openstack-nova-consoleauth.service openstack-nova-scheduler.service \

openstack-nova-conductor.service openstack-nova-novncproxy.service

systemctl restart openstack-nova-api.service \

openstack-nova-consoleauth.service openstack-nova-scheduler.service \

openstack-nova-conductor.service openstack-nova-novncproxy.service