

Openstack_v10(CL-210课程)_05

2018年3月15日 0:05

查看Director部署环境

登陆workstation初始化环境

```
[student@workstation ~]$ lab resilience-overcloud-depl setup
```

登陆director部署主机

```
[root@foundation0 ~]# ssh stack@director
```

```
[stack@director ~]$ cat stackrc |grep ^OS_
```

//该文件登陆时会被自动加载

```
OS_PASSWORD=$(sudo hiera admin_password)
OS_AUTH_URL=https://172.25.249.201:13000/v2.0
OS_USERNAME=admin
OS_TENANT_NAME=admin
OS_BAREMETAL_API_VERSION=1.15
OS_NO_CACHE=True
OS_CLOUDNAME=undercloud
OS_IMAGE_API_VERSION=1
```

```
[stack@director ~]$ env |grep OS
```

```
HOSTNAME=director.lab.example.com
OS_IMAGE_API_VERSION=1
OS_PASSWORD=0fc4ee7f0a939a801853d45a076e84ad0013dbd2
OS_AUTH_URL=https://172.25.249.201:13000/v2.0
OS_USERNAME=admin
OS_TENANT_NAME=admin
OS_NO_CACHE=True
OS_CLOUDNAME=undercloud
```

```
[stack@director ~]$ head -12 undercloud.conf
```

//查看部署网络的IP变量信息

```
[DEFAULT]
local_ip = 172.25.249.200/24
undercloud_public_vip = 172.25.249.201
undercloud_admin_vip = 172.25.249.202
local_interface = eth0
masquerade_network = 172.25.249.0/24
dhcp_start = 172.25.249.51
dhcp_end = 172.25.249.59
network_cidr = 172.25.249.0/24
network_gateway = 172.25.249.200
inspection_iprange = 172.25.249.150,172.25.249.180
generate_service_certificate = true
```

```
[stack@director ~]$ ip a s
```

//查看本机IP地址信息

```
3: eth1: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP qlen 1000
    inet 172.25.250.200/24 brd 172.25.250.255 scope global eth1
6: br-ctlplane: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UNKNOWN qlen 1000
    inet 172.25.249.200/24 brd 172.25.249.255 scope global br-ctlplane
    inet 172.25.249.202/32 scope global br-ctlplane
    inet 172.25.249.201/32 scope global br-ctlplane
```

```
[stack@director ~]$ openstack network list
```

ID	Name	Subnets
1c9299c0-9727-4d95-beba-9ecf06d5edf7	tenant	c4b13893-efde-466e-8368-0f758bd985bf
3016f24b-c43c-44eb-af9-96cde72cfe4b	storage_mgmt	3aa092d6-7468-451a-ba71-3814797f5a84
8bf39a1c-769b-4589-aed3-ac04e46de05f	storage	dd99df09-e436-4602-b17c-c947780ff8ea
91470c57-a539-4b8d-bd36-59ed4251e0d4	external	068d412a-be85-48f7-b0af-2ac3bc179a88
d73f35f3-5d23-4fb5-8b43-1e834cd332ab	internal_api	47dc4e18-27c5-4150-bb2d-8d3e58fc9460
fcdf7cf66-7540-48a0-ad90-0dcd92aee5c8	ctlplane	e77abf18-e607-474e-a696-797d90710ff2

//查看ctlplane网络的子网ID(subnets)信息

```
[stack@director ~]$ openstack subnet show e77abf18-e607-474e-a696-797d90710ff2
```

//查看部署网络的地址池, DNS, 网关设置

Field	Value
allocation_pools	172.25.249.51-172.25.249.59
cidr	172.25.249.0/24
created_at	2017-08-04T16:45:50Z
description	
dns_nameservers	172.25.250.254
enable_dhcp	True
gateway_ip	172.25.249.200
host_routes	destination='169.254.169.254/32', gateway='172.25.249.200'
id	e77abf18-e607-474e-a696-797d90710ff2
ip_version	4
ipv6_address_mode	None
ipv6_ra_mode	None
name	
network_id	fcd7cf66-7540-48a0-ad90-0dcd92aee5c8
project_id	ded05b4989bb48ecaac791ecba3802ff
project_id	ded05b4989bb48ecaac791ecba3802ff
revision_number	4
service_types	[]
subnetpool_id	None
updated_at	2017-08-04T18:02:03Z

```
[stack@director ~]$ cat instackenv-initial.json
```

//每个节点电源管理的账户信息

```
{
  "nodes": [
    {
      "name": "controller0",
      "pm_user": "admin",
      "arch": "x86_64",
      "mac": [ "52:54:00:00:f9:01" ],
      "cpu": "2",
      "memory": "8192",
      "disk": "40",
      "pm_addr": "172.25.249.101",
      "pm_type": "pxe_ipmitool",
      "pm_password": "password"
    },
    {
      "name": "compute0",
      "pm_user": "admin",
      "arch": "x86_64",
      "mac": [ "52:54:00:00:f9:02" ],
      "cpu": "2",
      "memory": "6144",
      "disk": "40",
      "pm_addr": "172.25.249.102",
      "pm_type": "pxe_ipmitool",
      "pm_password": "password"
    },
    {
      "name": "ceph0",
      "pm_user": "admin",
      "arch": "x86_64",
      "mac": [ "52:54:00:00:f9:03" ],
      "cpu": "2",
      "memory": "3072",
      "disk": "40",
      "pm_addr": "172.25.249.103",
      "pm_type": "pxe_ipmitool",
      "pm_password": "password"
    }
  ]
}
```

```
[stack@director ~]$ openstack baremetal node list
```

//列出目前云上环境(overcloud)已经部署的主机节点列表

```
[stack@director ~]$ openstack baremetal node list -c Name -c "Power State" -c "Provisioning State" -c Maintenance
```

[stack@director ~]\$ **openstack server list**

//列出环境中所有主机与IP地址信息

ID	Name	Status	Networks	Image Name
c3cc04ff-3a5e-47e9-afad-09e417ab47c4	overcloud-compute-0	ACTIVE	ctlplane=172.25.249.53	overcloud-full
2799c626-db04-4d63-b875-a96006a02de9	overcloud-cephstorage-0	ACTIVE	ctlplane=172.25.249.58	overcloud-full
9d03a91b-96cc-441e-af96-6e7343e6db92	overcloud-controller-0	ACTIVE	ctlplane=172.25.249.52	overcloud-full

[stack@director ~]\$ **openstack flavor list**

//查看主机箱列表，查看各节点的配置

ID	Name	RAM	Disk	Ephemeral	VCPUs	Is Public
04919ea8-4e8c-40b5-ba27-df3ff3dadd29	control	4096	30	0	1	True
387f9cd4-4432-4d77-ac2b-58f7d284936e	baremetal	4096	20	0	1	True
521cf111-8ba8-426c-8384-1d370ea86f57	block-storage	2048	10	0	1	True
91cebf1a-1951-4712-8068-cca11656d980	compute	4096	20	0	1	True
a9c8a09f-29ec-4336-9e54-dc462ade5921	ceph-storage	2048	10	0	1	True
e925f921-d9b3-4ab5-9776-76ee1e2efcb2	swift-storage	2048	10	0	1	True

[stack@director ~]\$ **openstack flavor show control**

//单独查看control这个主机箱的详细信息

Field	Value
OS-FLV-DISABLED:disabled	False
OS-FLV-EXT-DATA:ephemeral	0
access_project_ids	None
disk	30
id	04919ea8-4e8c-40b5-ba27-df3ff3dadd29
name	control
os-flavor-access:is_public	True
properties	capabilities:boot_option='local', <u>capabilities:profile='control'</u> , cpu_arch='x86_64', name='control'
ram	4096
rxtx_factor	1.0
swap	
vcpus	1

capabilities设置中包括一个profile='control'标签，当使用这个主机箱时，这个机箱为拥有profile='control'相同标签的主机使用

[stack@director ~]\$ **openstack baremetal node list -c Name -c "Power State"**

//查看主机列表

Name	Power State
controller0	power on
compute0	power on
ceph0	power on

[stack@director ~]\$ **openstack baremetal node show controller0**

//查看节点的详细信息

//主机节点拥有与control相同的标签属性

Field	Value
console_enabled	False
created_at	2017-08-04T18:02:23+00:00
driver	pxe_ipmitool
driver_info	{u'ipmi_password': u'*****', u'ipmi_address': u'172.25.249.101', u'deploy_ramdisk': u'a8b7672d-33d0-4648-9b33-c2730a3683d6', u'deploy_kernel': u'f963739f-aa66-4b28-b5c3-4c84d6ab1211',
power_state	power on
properties	{u'memory_mb': u'8192', u'cpu_arch': u'x86_64', u'local_gb': u'39', u'cpus': u'2', u'capabilities': <u>u'profile:control,boot_option:local'</u> }

[stack@director ~]\$ **ls templates/cl210-environment/**

//查看部署云环境需要的变量文件

00-node-info.yaml 22-change_root_password-env.yaml 34-ips-from-pool-all.yaml 60-post-config.yaml
02-low-memory-usage.yaml 30-network-isolation.yaml 40-compute-extraconfig.yaml
20-storage-environment.yaml 32-network-environment.yaml 50-pre-config.yaml

[stack@director ~]\$ ls templates/cl210-configuration/single-nic-vlans/
ceph-storage.yaml compute.yaml controller.yaml

扩展compute节点 (将compute1加入openstack云, 扩展计算能力)

登陆workstation初始化环境:

[student@workstation ~]\$ lab resilience-scaling-nodes setup

登陆director主机操作:

\$ ssh stack@director

[stack@director ~]\$ source stackrc

[stack@director ~]\$ wget http://materials.example.com/instackenv-onenode.json

//下载ompute1的主机信息

[stack@director ~]\$ cat instackenv-onenode.json

```
{
  "nodes": [
    {
      "pm_user": "admin",
      "arch": "x86_64",
      "name": "compute1",
      "pm_addr": "172.25.249.112",
      "pm_password": "password",
      "pm_type": "pxe_ipmitool",
      "mac": [
        "52:54:00:00:f9:0c"
      ],
      "cpu": "2",
      "memory": "6144",
      "disk": "40"
    }
  ]
}
```

[stack@director ~]\$ openstack baremetal import --json instackenv-onenode.json

//有新的主机时, 可以使用import命令将主机添加到部署列表中 (需要耐心等待)

Started Mistral Workflow. Execution ID: 9ae1495f-0209-44af-97a1-1bc64f4160cc

Successfully registered node UUID e5e1ad95-2fcf-4e5b-a4a2-e25c2663eae

Started Mistral Workflow. Execution ID: a3e6e527-ac34-46af-a060-8aadb0078e35

Successfully set all nodes to available.

[stack@director ~]\$ openstack baremetal node list

UUID	Name	Instance UUID	Power State	Provisioning State	Maintenance
00688f66-1630-4b6d-a5bd-b59e2f71865b	controller0	9d03a91b-96cc-441e-af96-6e7343e6db92	power on	active	False
8eb00992-51fe-4452-8e62-101a2526bc2d	compute0	c3cc04ff-3a5e-47e9-afad-09e417ab47c4	power on	active	False
e61f7eb9-141e-4e45-ae30-346af076c2b7	ceph0	2799c626-db04-4d63-b875-a96006a02de9	power on	active	False
e5e1ad95-2fcf-4e5b-a4a2-e25c2663eae	compute1	None	power off	available	False

[stack@director ~]\$ openstack baremetal node manage compute1

//设置主机状态为可管理状态

[stack@director ~]\$ openstack baremetal node list -c Name -c "Provisioning State"

Name	Provisioning State
controller0	active
compute0	active
ceph0	active
compute1	manageable

```
[stack@director ~]$ openstack overcloud node introspect --all-manageable --provide
```

//对所有标记为manageable的主机节点进行环境检查（也可以使用节点名称进行检查），需要耐心等待... ..

Started Mistral Workflow. Execution ID: 87492460-45c4-46b3-bece-b6d37c5e075a

Waiting for introspection to finish...

```
[stack@director ~]$ openstack flavor list
```

```
[stack@director ~]$ openstack flavor show compute
```

//查看主机箱标签

Field	Value
OS-FLV-DISABLED:disabled	False
OS-FLV-EXT-DATA:ephemeral	0
access_project_ids	None
disk	20
id	91cebf1a-1951-4712-8068-ccal1656d980
name	compute
os-flavor-access:is_public	True
properties	capabilities:boot_option='local', capabilities:profile='compute', cpu_arch='x86_64', name='compute'
ram	4096
rxtx_factor	1.0
swap	
vcpus	1

```
[stack@director ~]$ openstack baremetal node show compute1
```

Field	Value
console_enabled	False
created_at	2018-03-14T23:54:52+00:00
driver	pxe_ipmitool
driver_info	{u'ipmi_password': u'*****', u'ipmi_address': u'172.25.249.112', u'deploy_ramdisk': u'a8b7672d-33d0-4648-9b33-c2730a3683d6', u'deploy_kernel': u'f963739f-aa66-4b28-b5c3-4c84d6ab1211', u'ipmi_username': u'admin'}
power_state	power off
properties	{u'memory_mb': u'6144', u'cpu_arch': u'x86_64', u'local_gb': u'39', u'cpus': u'2', u'capabilities': u'cpu_vt:true,cpu_aes:true,cpu_hugepages_1g:true,cpu_hugepages:true,boot_option:local'}

//主机节点与主机箱的标签不符

```
[stack@director ~]$ openstack baremetal node set compute1 --property "capabilities=profile:compute,boot_option:local"
```

//更新主机节点的熟悉标签

```
[stack@director ~]$ openstack baremetal node show compute1
```

```
[stack@director ~]$ vim templates/cl210-environment/00-node-info.yaml
```

//修改计算节点数量

//修改前为1

ComputeCount: 1

//修改后为2

ComputeCount: 2

```
[stack@director ~]$ openstack overcloud deploy --templates ~/templates --environment-directory ~/templates/cl210-environment
```

//读取环境变量，读取模板扩容openstack组件（根据主机性能不同，可能需要20-40分钟）

```
[stack@director ~]$ openstack help overcloud deploy
```

usage: openstack overcloud deploy [--templates [TEMPLATES]]

```
[--control-scale CONTROL_SCALE]  
[--compute-scale COMPUTE_SCALE]  
[--environment-directory <HEAT ENVIRONMENT DIRECTORY>]
```