OpenStack基本概念及环境准备

讲解Openstack的一些基本概念以及环境的基本准备。

Openstack基础概念讲解

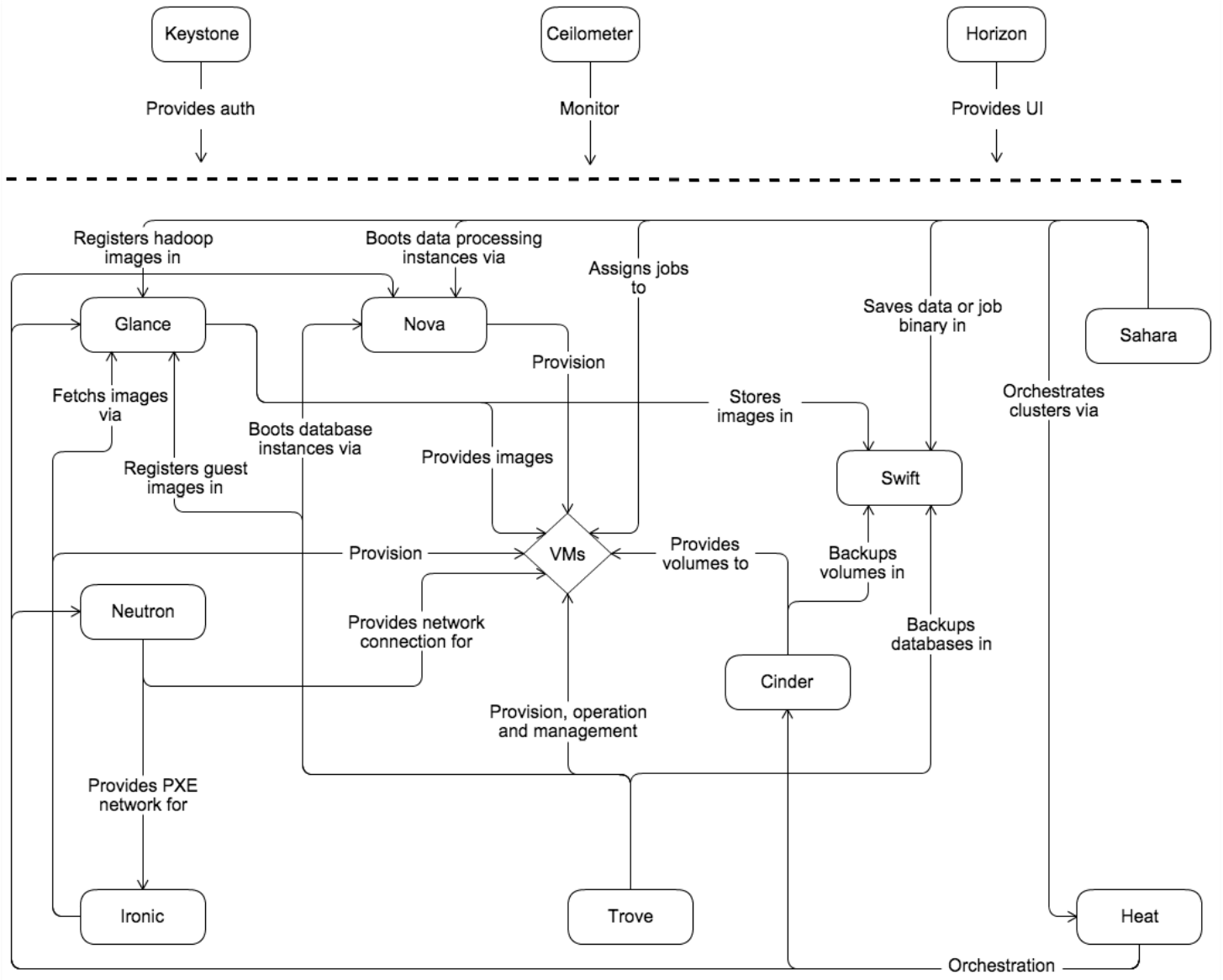
IaaS平台：主要来提供基础设施：

1.计算资源：以虚拟机的形式来提供 OpenStack将其叫做实例 instance，提供CPU和内存资源

2.存储资源

3.网络资源

概念架构（Conceptual architecture）



OpenStack组件

身份验证和授权的KeyStone

Glance组件，提供image（镜像）即虚拟机的模版的上传、下载和搜索。需要对接存储资源，比如Ceph，本地目录等。

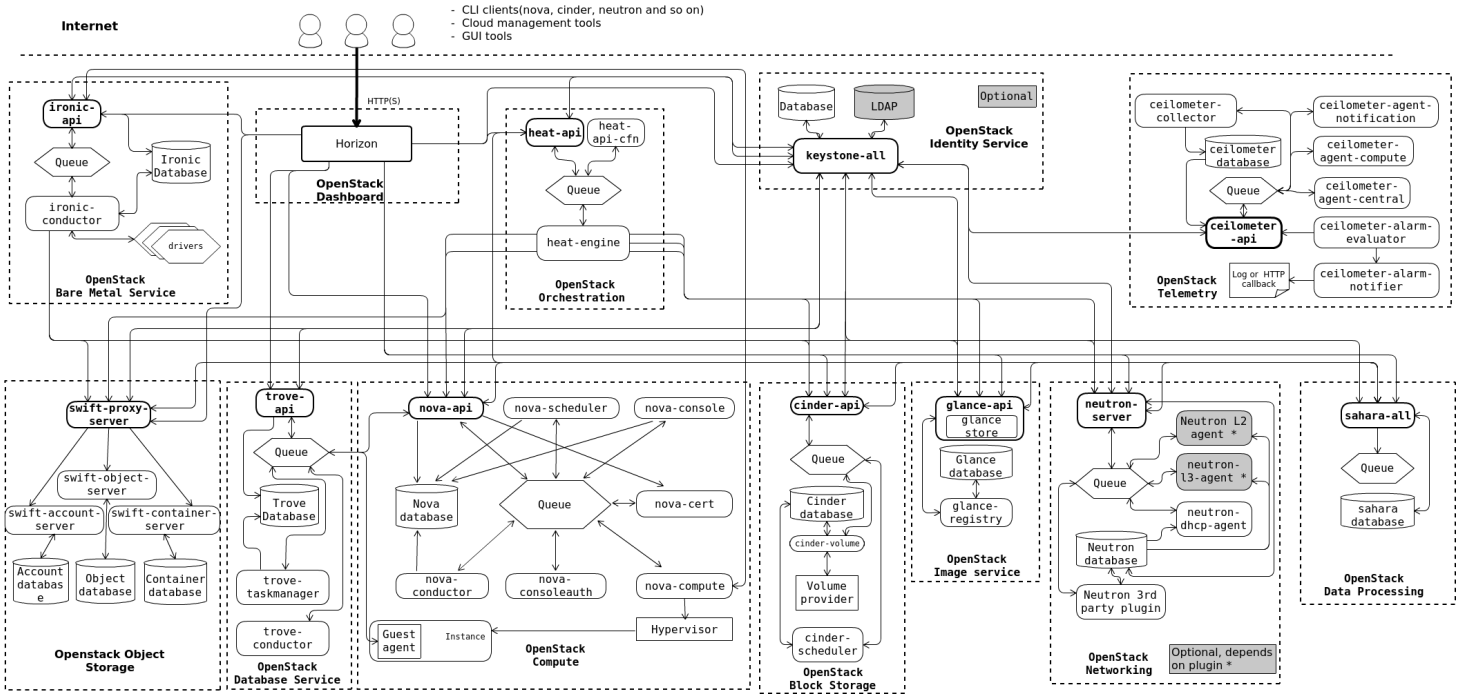
Nova组件，对instance的生命周期管理。KVM/FusionCompute/EXSI

Cinder组件，为instance提供永久存储，通过Cinder对接Ceph、LVM、，用Driver对接，其本身不提供永久存储。

Neutron组件，为我们的实例提供网络资源：子网、DHCP、Port、security rule、Route等

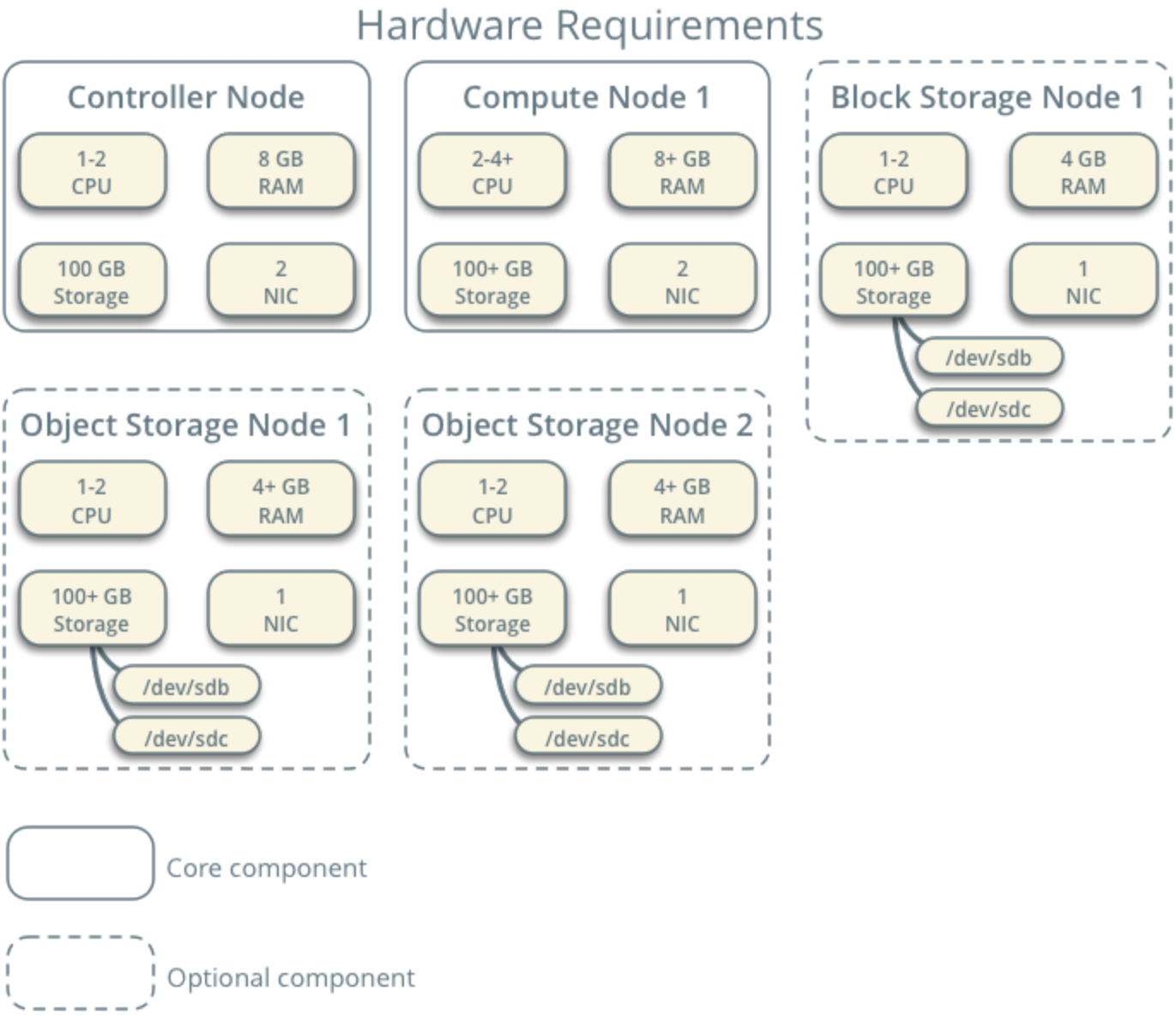
Horizon组件，Web的管理。

逻辑架构（Logical architecture）：



组件与组件之间通讯，通过api进行通讯。
组件内则通过Queue通讯队列进行通讯。

架构规划



虚拟机安装与环境准备

操作系统

CentOS7

节点类型

控制Controller节点

- 内存Mem：8G+
- CPU：2+

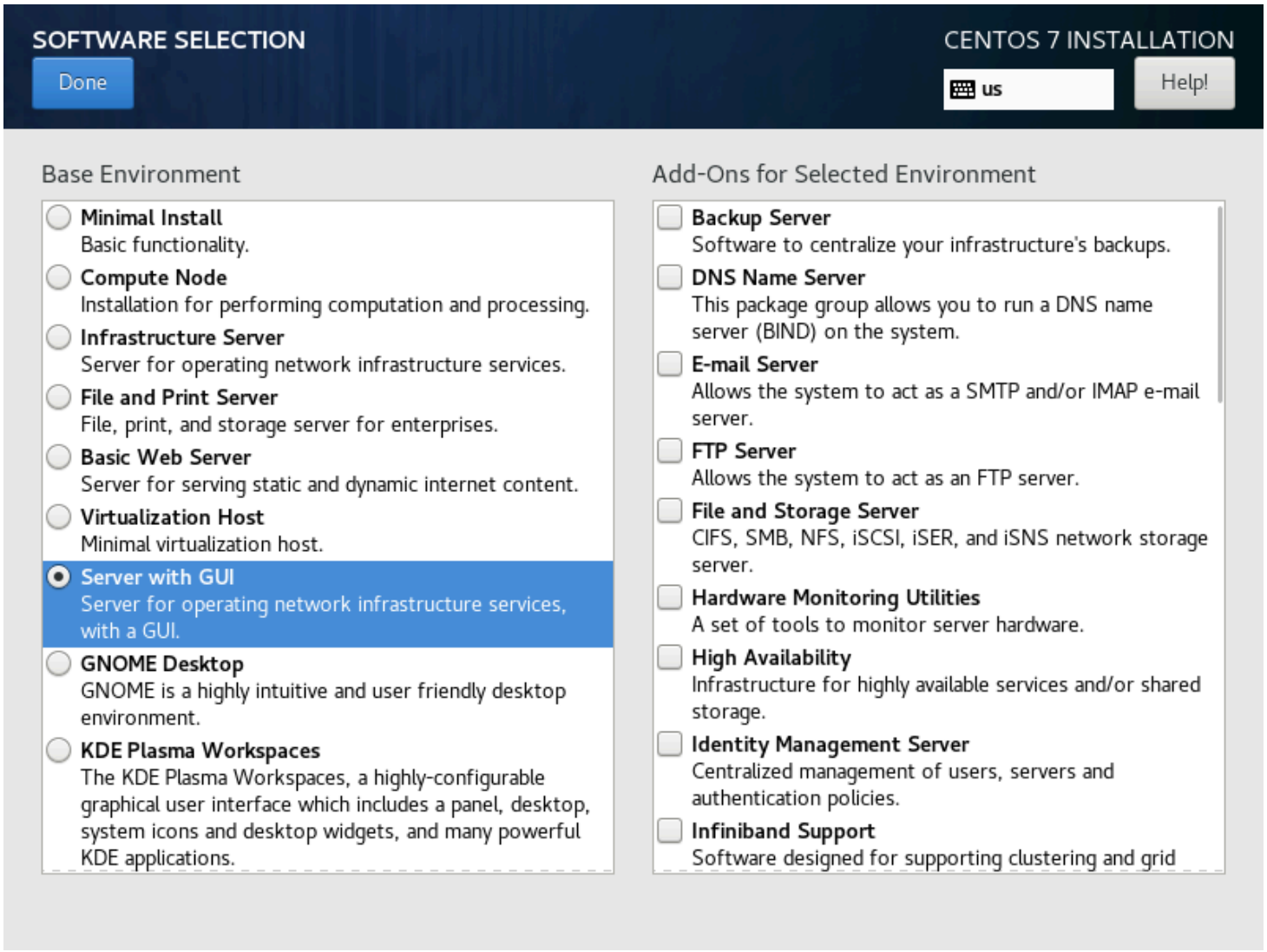
- NIC：2
- disk：100G

运行的服务：KeyStone，Glance，RabbitMQ，MySQL，MemCache，Redis以及其他组件的API服务（例如nova-api,cinder-api）

有个网卡需要连接外网

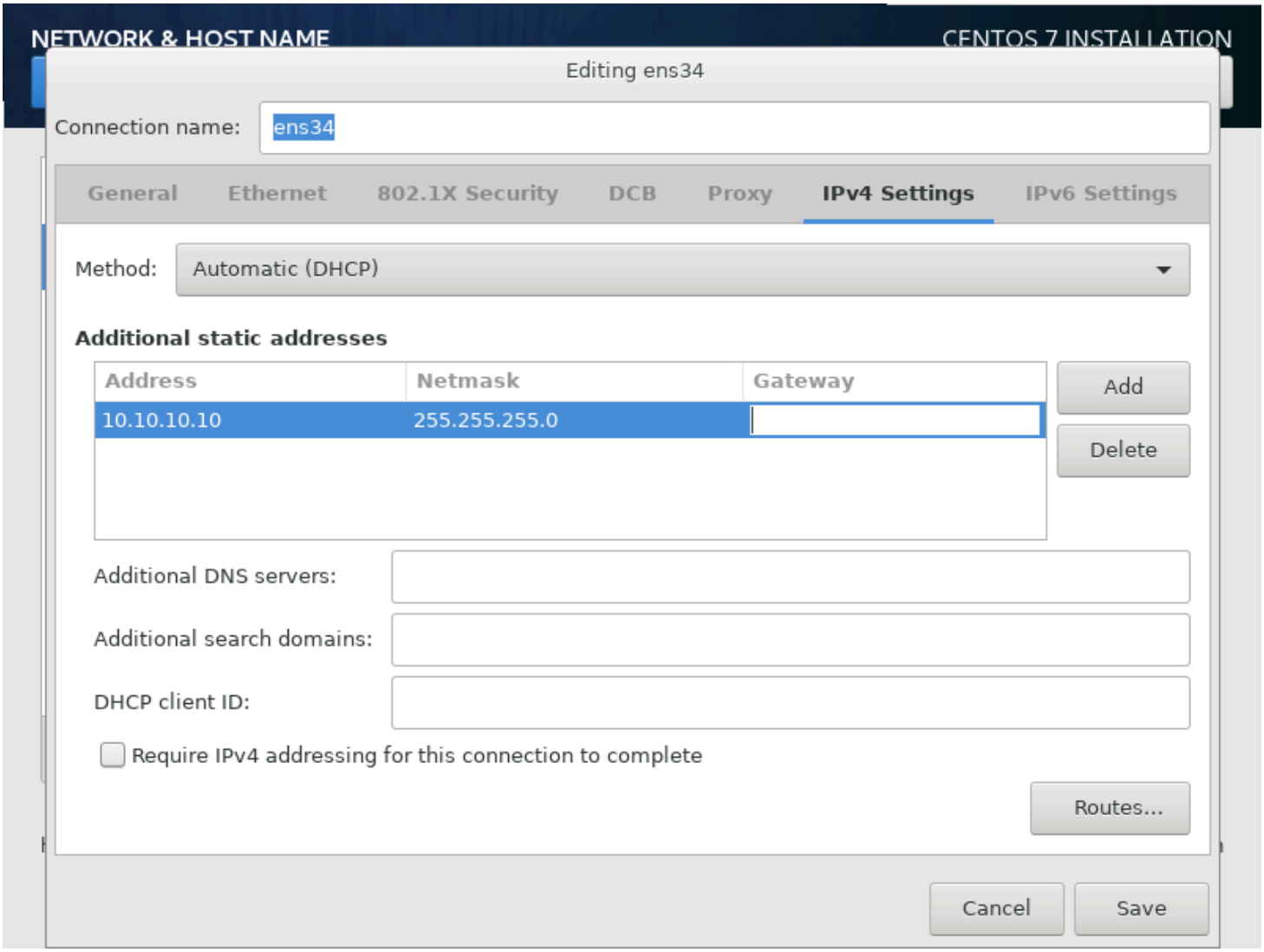
例如：

SOFTWARE SELECTION：安装Server with GUI



网卡分配：

- Nat：DHCP
- ManageNetWork：10.10.10.0/24 10.10.10.10，不需要配置Gateway



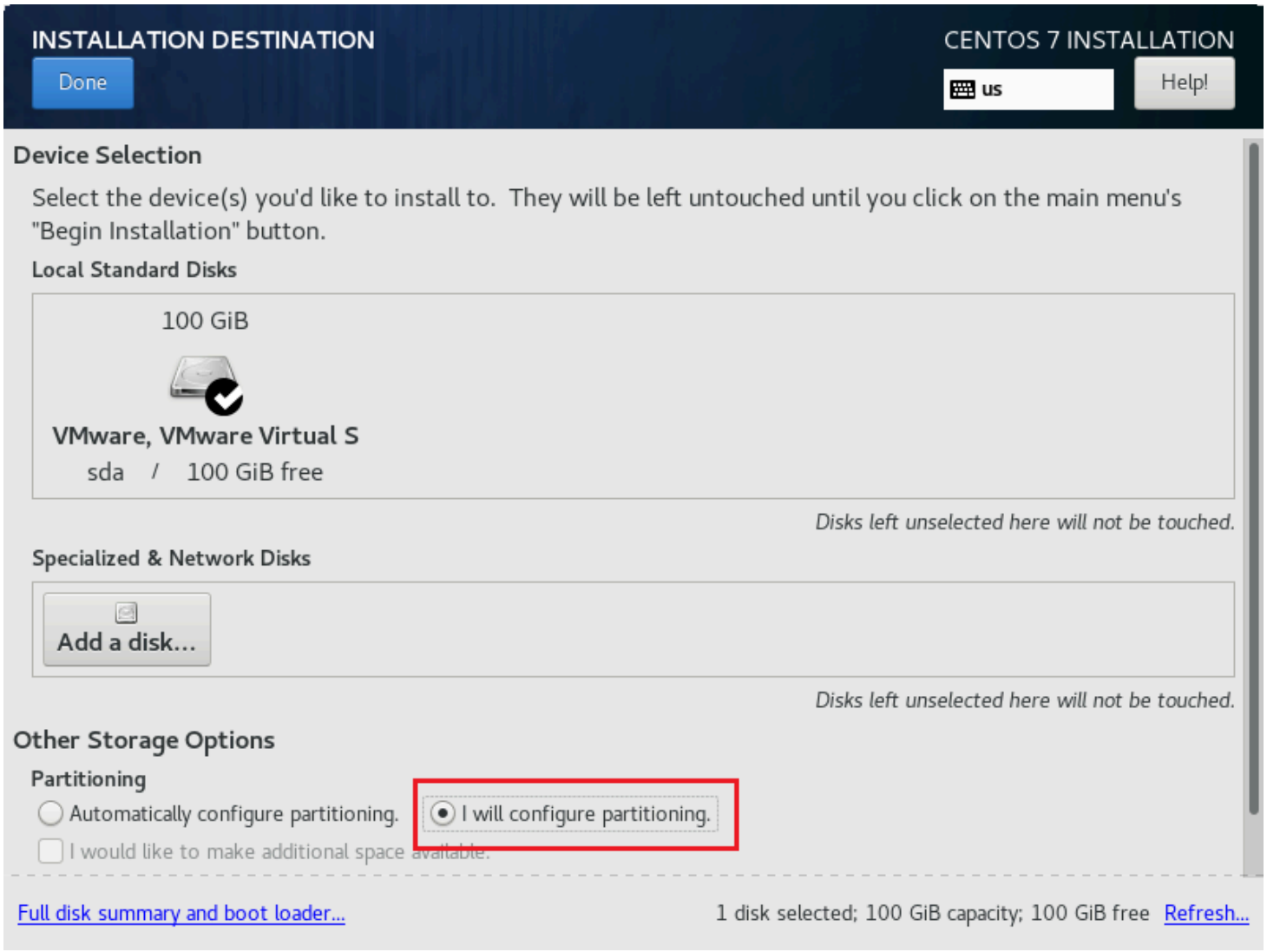
- Tenant Network：不需要配配置IP，做隧道VXLAN

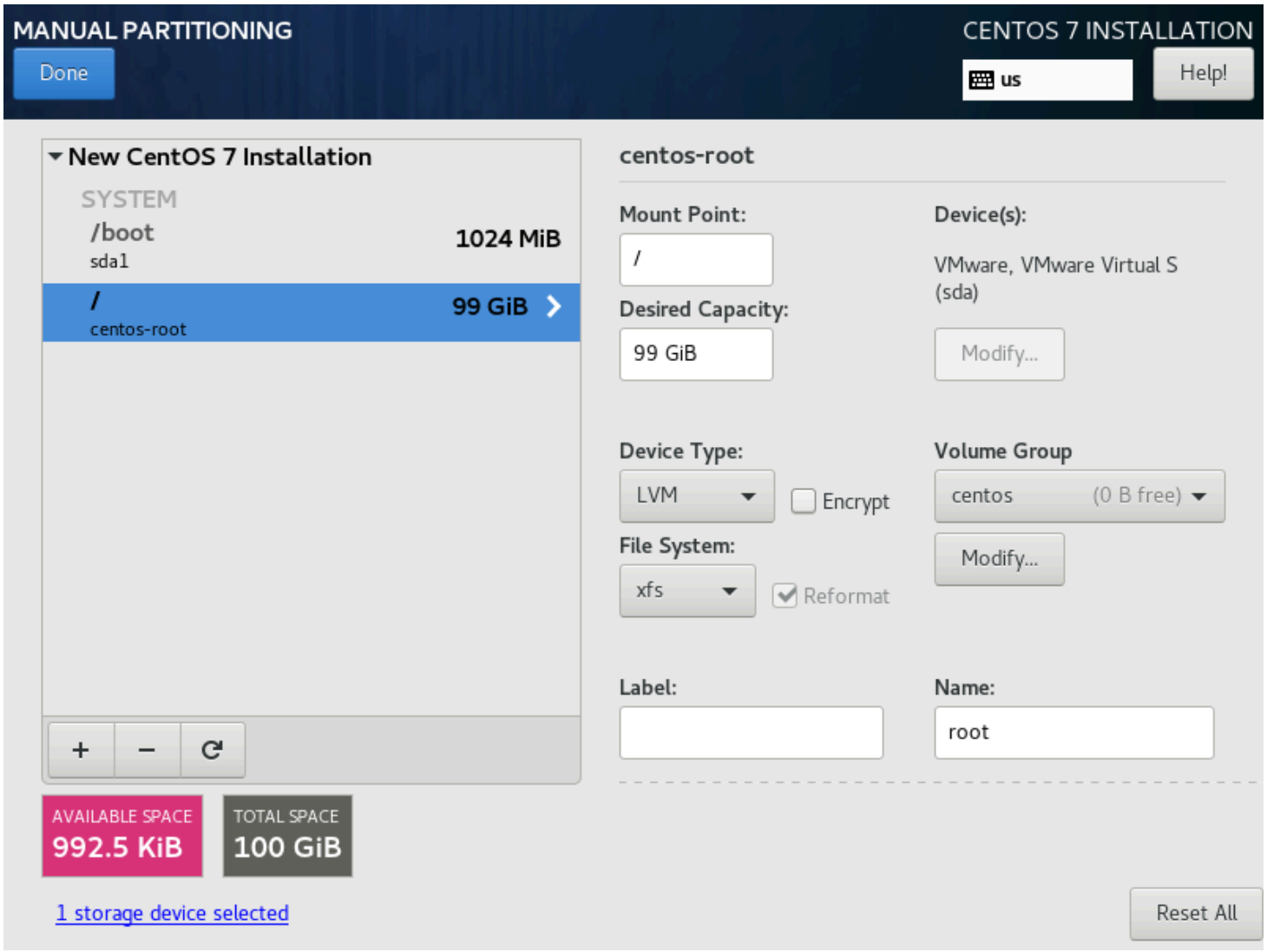
controller.example.com

分区：

- /boot：1G
- /：99G

选择自定义分区：


INSTALLATION DESTINATION
Done
CENTOS 7 INSTALLATION
us
Help!
Device Selection
Select the device(s) you'd like to install to. They will be left untouched until you click on the main menu's "Begin Installation" button.
Local Standard Disks
100 GiB
VMware, VMware Virtual S
sda / 100 GiB free
Disks left unselected here will not be touched.
Specialized & Network Disks
Add a disk...
Disks left unselected here will not be touched.
Other Storage Options
Partitioning
Automatically configure partitioning.
I will configure partitioning.
I would like to make additional space available.
Full disk summary and boot loader...
1 disk selected; 100 GiB capacity; 100 GiB free
Refresh...



Root密码：caicloudcat

用户名：caicloudcat，密码也是caicloudcat

计算Compute节点

- 内存Mem：8G以上
- CPU：2+
- NIC：2
- disk：100G

运行服务：nova-compute，计算节点必须要支持虚拟化技术，比如KVM。

Windows11下可能会出现无法虚拟化，解决方式参考以下的文章：

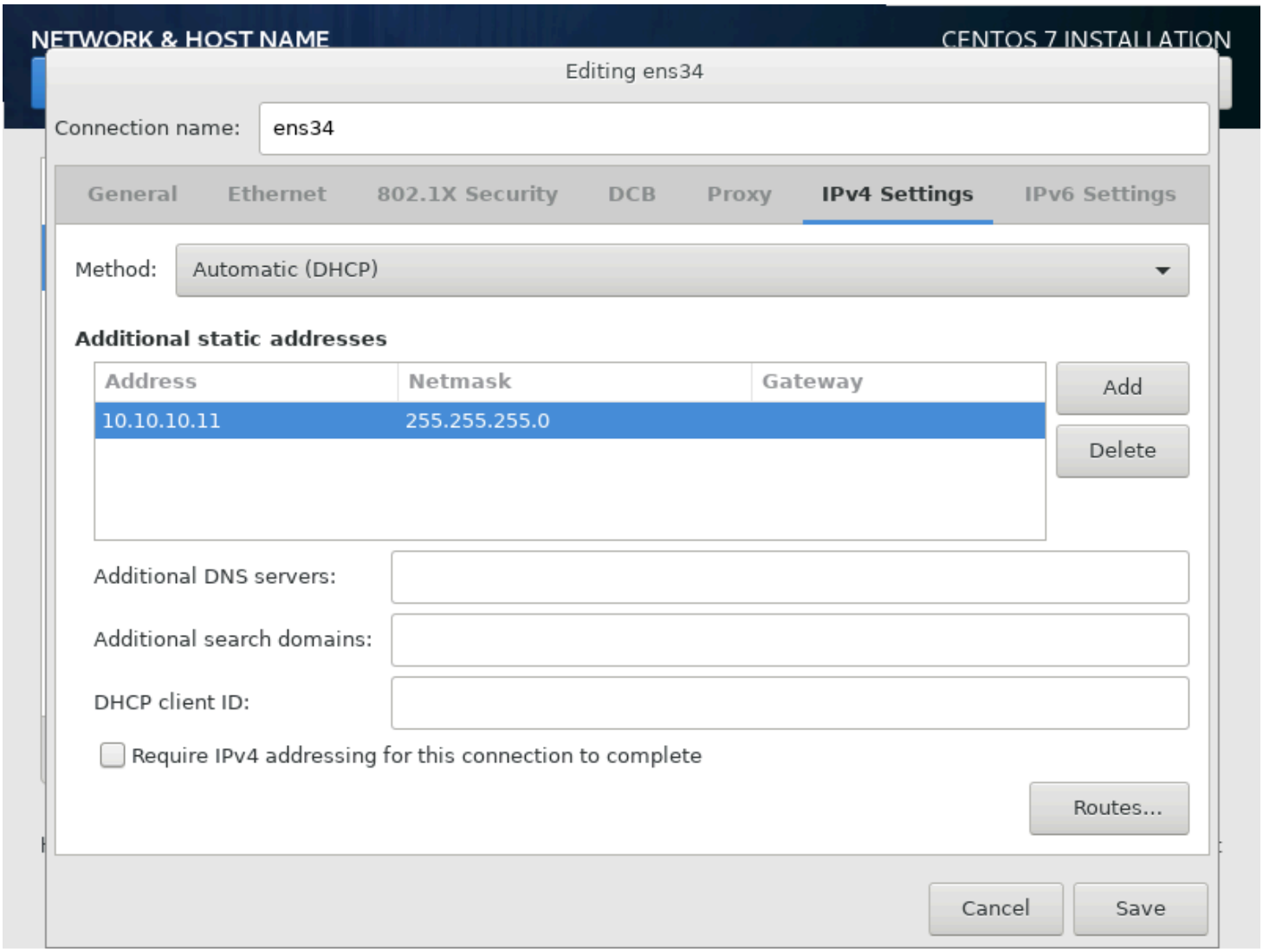
- 解决win11 vmvare虚拟化问题（此平台不支持虚拟化的 Intel VT-x/EP）
- VMware Workstation 16平台不支持虚拟化的Intel VT-x/EPT解决方法

例如：

名称:	Compute
位置:	D:\LearningOpenStack\Compute
版本:	Workstation 16.2.x
操作系统:	CentOS 7 64 位
硬盘:	100 GB, 拆分
内存:	16384 MB
网络适配器:	NAT, 自定义 (VMnet2), 自定义 (VMnet3)
其他设备:	4 个 CPU 内核, CD/DVD, USB 控制器, 打印机, 声卡

网卡分配

- Nat：DHCP
- ManageNetWork：10.10.10.0/24 10.10.10.10，不需要配置Gateway



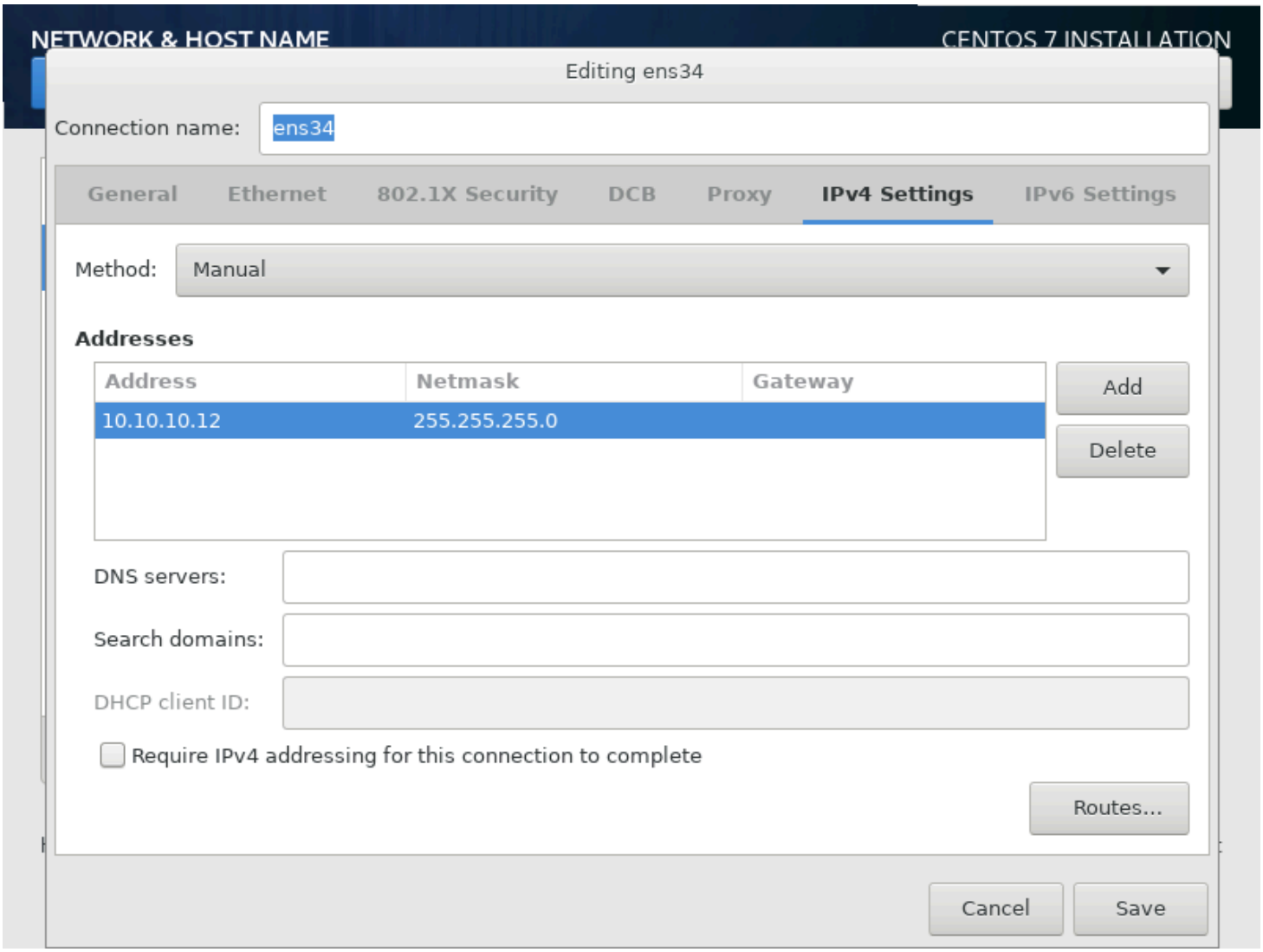
分区和密码与Controller节点一致

存储节点：

- Mem：4g
- NIC：1
- CPU：1

运行服务：Cinder-Volume的服务，通过Driver对接存储

比如：



网络配置

网络类型：

Networking Option： Self-service networks

The following minimum requirements should support a proof-of-concept environment with core services and several CirrOS instances:

- Controller Node: 1 processor, 4 GB memory, and 5 GB storage
- Compute Node: 1 processor, 2 GB memory, and 10 GB storage

Controller节点：

```
su -

nmcli connection show

nmcli connection modify ens34 autoconnection yes

nmcli connection show

nmcli connection modify ens34 autoconnect yes ipv4.method manual
```

```
[caicloudcat@controller ~]$ cat /etc/sysconfig/network-scripts/ifcfg-ens34
TYPE=Ethernet
PROXY_METHOD=none
BROWSER_ONLY=no
BOOTPROTO=none
DEFROUTE=yes
IPV4_FAILURE_FATAL=no
IPV6INIT=yes
IPV6_AUTOCONF=yes
IPV6_DEFROUTE=yes
IPV6_FAILURE_FATAL=no
IPV6_ADDR_GEN_MODE=stable-privacy
NAME=ens34
UUID=92f79b8b-21d8-40b7-ba03-b83323df4d82
DEVICE=ens34
ONBOOT=yes
IPADDR=10.10.10.10
PREFIX=24
IPV6_PRIVACY=no
[caicloudcat@controller ~]$
```

其余节点也一样：

```
nmcli connection modify ens34 autoconnect yes ipv4.method manual
```

这是未修改之前：

```
[caicloudcat@compute ~]$ nmcli connection show
NAME    UUID                                  TYPE      DEVICE
ens33   8c4ccce4-0969-4799-813b-8f8fe7d568c8  ethernet  ens33
virbr0  9717eb7c-3bb7-4495-a95f-fe4ea80036a0  bridge    virbr0
ens34   21fd4054-d3d5-4289-8212-63a47fab8704  ethernet  --
ens35   1ebff2c5-1dad-4e8d-ada1-289c42b80c8c  ethernet  --
[caicloudcat@compute ~]$
```

```
[caicloudcat@storage ~]$ nmcli connection show
NAME    UUID                                  TYPE      DEVICE
ens33   73e68c09-982b-4721-a5e6-903f9163d808  ethernet  ens33
virbr0  62b54141-e6b9-4491-b48c-106198191917  bridge    virbr0
ens34   11335e8e-af94-4a8d-8789-c4ce69883097  ethernet  --
ens35   5c92c0a4-afbe-4508-8e3d-6db9e109889a  ethernet  --
[caicloudcat@storage ~]$
```

检查各个节点是否可以连接：

```
[caicloudcat@controller ~]$ ping 10.10.10.11
PING 10.10.10.11 (10.10.10.11) 56(84) bytes of data.
64 bytes from 10.10.10.11: icmp_seq=1 ttl=64 time=0.999 ms
64 bytes from 10.10.10.11: icmp_seq=2 ttl=64 time=1.93 ms
64 bytes from 10.10.10.11: icmp_seq=3 ttl=64 time=0.617 ms
64 bytes from 10.10.10.11: icmp_seq=4 ttl=64 time=0.597 ms
^C
--- 10.10.10.11 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3003ms
rtt min/avg/max/mdev = 0.597/1.036/1.933/0.542 ms
[caicloudcat@controller ~]$ ping 10.10.10.12
PING 10.10.10.12 (10.10.10.12) 56(84) bytes of data.
64 bytes from 10.10.10.12: icmp_seq=1 ttl=64 time=0.529 ms
64 bytes from 10.10.10.12: icmp_seq=2 ttl=64 time=0.956 ms
64 bytes from 10.10.10.12: icmp_seq=3 ttl=64 time=2.99 ms
64 bytes from 10.10.10.12: icmp_seq=4 ttl=64 time=0.634 ms
^C
--- 10.10.10.12 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3005ms
rtt min/avg/max/mdev = 0.529/1.278/2.995/1.004 ms
[caicloudcat@controller ~]$
```

然后配置 `hosts`， 在Controller节点下使用该命令：

```
vim /etc/hosts
```

添加下面的内容：

```
10.10.10.10 controller.example.com controller
10.10.10.11 compute.example.com compute
10.10.10.12 storage.example.com storage
```

然后将其传给其他的节点：

```
cp /etc/hosts root@compute:/etc/
cp /etc/hosts root@storage:/etc/
```

```
[root@controller etc]# scp /etc/hosts root@compute:/etc/
The authenticity of host 'compute (10.10.10.11)' can't be established.
ECDSA key fingerprint is SHA256:9+pNPRbxe2bzYoJEn0m9ZQtQLO7Z9Tcu9wtZu82vRwA.
ECDSA key fingerprint is MD5:7b:25:a3:e9:91:20:69:fd:94:16:d0:b8:09:c2:33:4b.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'compute,10.10.10.11' (ECDSA) to the list of known hosts.
root@compute's password:
hosts                                                                                         100%  285   185.4KB/s   00:00
[root@controller etc]# scp /etc/hosts root@storage:/etc/
The authenticity of host 'storage (10.10.10.12)' can't be established.
ECDSA key fingerprint is SHA256:/1MwiEgW5EKT2uvOCsy+7JysTh5qWb+uDhRsh4UUerI.
ECDSA key fingerprint is MD5:5b:7e:2e:2e:ce:42:07:9c:fe:c6:a3:a8:2a:a4:bb:fe.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'storage,10.10.10.12' (ECDSA) to the list of known hosts.
root@storage's password:
hosts                                                                                         100%  285   287.7KB/s   00:00
[root@controller etc]#
```

关闭防火墙

在所有的节点进行关闭防火墙操作：

```
systemctl disable firewalld.service
systemctl stop firewalld.service
```

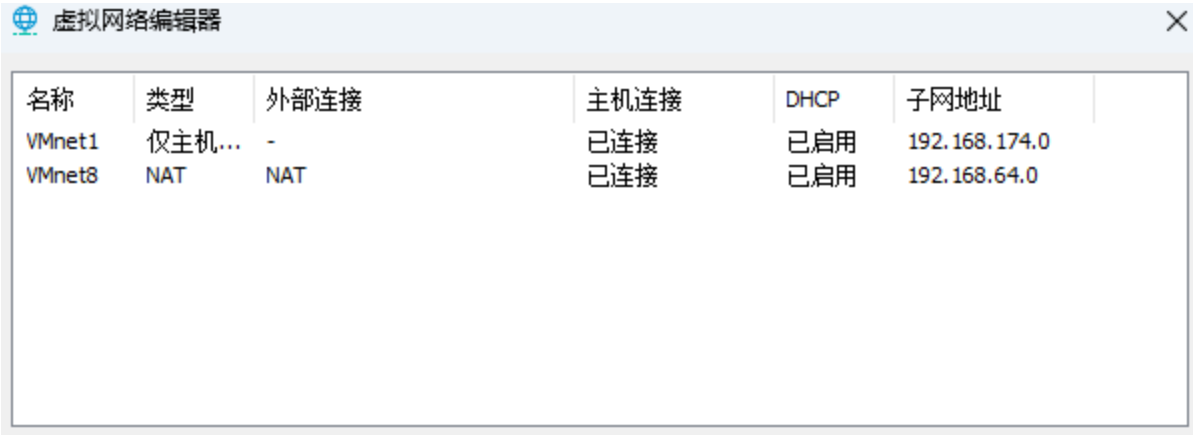
```
setenforce 0    # 临时关闭selinux防火墙，0表示关闭，1表示开启
getenforce      # 查看selinux防火墙的状态

# 如果要永久关闭，则修改内容
vim /etc/selinux/confi
# 将SELINUX修改为permissive
SELINUX=permissive
```

配置网卡

配置所有节点的网卡

查看VM虚拟机网段：



Controller的IP地址

- 第一块网卡 ens33：192.168.64.129
- 第二块网卡 ens34：10.10.10.10

Compute的IP地址

- 第一块网卡 ens33：192.168.64.132
- 第二块网卡 ens34：10.10.10.11

配置两张网卡，以Controller节点为例：

```
[root@controller network-scripts]# cd /etc/sysconfig/network-scripts/
[root@controller network-scripts]# ls
ifcfg-ens33  ifdown-ib      ifdown-sit       ifup-eth    ifup-post      ifup-wireless
ifcfg-ens34  ifdown-ippp    ifdown-Team      ifup-ib     ifup-ppp       init.ipv6-global
ifcfg-ens35  ifdown-ipv6    ifdown-TeamPort  ifup-ippp   ifup-routes    network-functions
ifcfg-lo     ifdown-isdn    ifdown-tunnel    ifup-ipv6   ifup-sit       network-functions-ipv6
ifdown       ifdown-post    ifup             ifup-isdn   ifup-Team
ifdown-bnep  ifdown-ppp     ifup-aliases     ifup-plip   ifup-TeamPort
ifdown-eth   ifdown-routes  ifup-bnep        ifup-plusb  ifup-tunnel
[root@controller network-scripts]#
```

ens33

```
vim /etc/sysconfig/network-scripts/ifcfg-ens33
```

```
IPADDR=192.168.64.129
GATEWAY=192.168.64.2
NETMASK=255.255.255.0
DNS1=8.8.8.8
```

```
TYPE="Ethernet"
PROXY_METHOD="none"
BROWSER_ONLY="no"
BOOTPROTO="static"
DEFROUTE="yes"
IPV4_FAILURE_FATAL="no"
IPV6INIT="yes"
IPV6_AUTOCONF="yes"
IPV6_DEFROUTE="yes"
IPV6_FAILURE_FATAL="no"
IPV6_ADDR_GEN_MODE="stable-privacy"
NAME="ens33"
UUID="07c83e3f-8233-44af-aaec-d78f6b4ca2e8"
DEVICE="ens33"
ONBOOT="yes"
IPADDR=192.168.64.129
GATEWAY=192.168.64.2
NETMASK=255.255.255.0
DNS1=8.8.8.8
~
~
~
"/etc/sysconfig/network-scripts/ifcfg-ens33" 19L, 390C
```

ens34

```
vim /etc/sysconfig/network-scripts/ifcfg-ens34
```

与上面的类似，将IPADDR改为： `10.10.10.10`

而其他的节点也做同样的处理。

在修改上述网卡配置文件后，进行 **重启网卡** ，并测试是否可以访问：

```
systemctl restart network
ping www.baidu.com
```

硬盘分区

```
fdisk /dev/sdb
```

如果之前没有初始就分区硬盘，就可以采取上面的命令进行硬盘分区，根据自己划分的硬盘进行大小分配。

```
lsblk # 查看分区
```

以Controller节点为例：

```
[root@controller ~]# lsblk
NAME            MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda               8:0    0  100G  0 disk
├─sda1            8:1    0    1G  0 part /boot
└─sda2            8:2    0   99G  0 part
  └─centos-root 253:0    0   99G  0 lvm  /
sr0              11:0    1  4.3G  0 rom  /run/media/caicloudcat/CentOS 7 x86_64
[root@controller ~]#
```

1. 在这个输出中：
    - `sda` 是一个 100G 的磁盘。
    - `sda1` 是 `sda` 的一个 1G 分区，挂载在 `/boot` 。
    - `sda2` 是 `sda` 的一个 99G 分区。
    - `centos - root` 是一个逻辑卷管理（LVM）设备，大小为 99G，挂载在 `/` 。
    - `sr0` 是一个 4.3G 的只读设备，挂载在 `/run/media/caicloud/CentOS 7 x86_64` 。

Controller配置

挂载镜像

上传镜像文件到Controller控制节点（使用Xftp8），上传至root用户根目录下。

```
[root@controller network-scripts]# cd ~
[root@controller ~]# ls
anaconda-ks.cfg  CentOS-7-x86_64-DVD-1810.iso  chinaskills_cloud_iaas.iso  initial-setup-ks.cfg
[root@controller ~]#
```

```
[root@controller ~]# ls
anaconda-ks.cfg  CentOS-7-x86_64-DVD-1810.iso  chinaskills_cloud_iaas.iso  initial-setup-ks.cfg
[root@controller ~]# mount -o loop CentOS-7-x86_64-DVD-1804.iso /mnt/
mount: /dev/loop0 is write-protected, mounting read-only
[root@controller ~]# mkdir /opt/centos
[root@controller ~]# mkdir /opt/openstack
[root@controller ~]# cp -rf /mnt/* /opt/centos/
[root@controller ~]# umount /mnt/
[root@controller ~]# mount -o loop chinaskills_cloud_iaas.iso /mnt/
mount: /dev/loop0 is write-protected, mounting read-only
[root@controller ~]# cp -rf /mnt/* /opt/openstack
[root@controller ~]# umount /mnt/
[root@controller ~]#
```

yum源文件处理

```
[root@controller ~]# cd /etc/yum.repos.d/
[root@controller yum.repos.d]# ls
=2.0.0  CentOS-Base-ali.repo  CentOS-OpenStack-stein.repo  epel.repo          yumcentos7.sh
bak     CentOS-Base.repo.bak  CentOS-Vault.repo            epel-testing.repo
[root@controller yum.repos.d]# mv * /media/
[root@controller yum.repos.d]# ls
[root@controller yum.repos.d]#
```

写入yum源文件

```
[root@controller yum.repos.d]# vim local.repo
[root@controller yum.repos.d]# cat local.repo
[centos]
name=centos
baseurl=file:///opt/centos
gpgcheck=0
enabled=1

[iaas]
name=iaas
baseurl=file:///opt/openstack/iaas-repo
gpgcheck=0
enabled=1
```

```
yum clean all
yum repolist
```

```
[root@controller yum.repos.d]# yum clean all
Loaded plugins: fastestmirror, langpacks
Cleaning repos: centos iaas
Cleaning up list of fastest mirrors
Other repos take up 1.7 G of disk space (use --verbose for details)
[root@controller yum.repos.d]#
[root@controller yum.repos.d]# yum repolist
Loaded plugins: fastestmirror, langpacks
Determining fastest mirrors
centos                                                          | 3.6 kB  00:00:00
iaas                                                            | 2.9 kB  00:00:00
(1/3): centos/group_gz                                          | 166 kB  00:00:00
(2/3): centos/primary_db                                        | 3.1 MB  00:00:00
(3/3): iaas/primary_db                                          | 1.4 MB  00:00:00
repo id                                     repo name                          status
centos                                      centos                             4,021
iaas                                        iaas                               3,232
repolist: 7,253
```

```
yum install -y vim vsftpd iaas-xiandian   #安装所需的软件包
```

配置vsftpd服务

```
yum install -y vsftpd
vim /etc/vsftpd/vsftpd.conf
在最后添加 anon_root=/opt/
systemctl start vsftpd
systemctl enable vsftpd
```

修改脚本

在Linux的 `vim` 编辑器中，在非插入模式下按下 `Ctrl+v` ，然后按 `Shift+g` 选中到文件末尾，再按 `D` 来删除从当前光标位置到文件末尾的内容，包括注释符号等。以下是对这一系列操作的详细解释：

`Ctrl+v` ：在 `vim` 的非插入模式下按下 `Ctrl+v` 进入可视块模式（Visual Block mode）。在这种模式下，可以通过移动光标来选择一个矩形区域的文本，方便进行批量操作，如删除、复制、粘贴等。

`Shift+g` ：在可视块模式下按下 `Shift+g` ，会将光标快速定位到文件的末尾，并选中从当前光标位置到文件末尾的所有行。这是一种快速选择大量文本的方法，在处理长文件时非常有用。

`D` ：在可视块模式下选中文本后，按下 `D` 键会删除所选中的文本。

这一系列操作就会删除从当前光标位置到文件末尾的所有内容，包括注释符号以及其他任何文本。

```
[root@controller yum.repos.d]# cd /etc/xiandian/
[root@controller xiandian]# ls -l
total 4
-rwxr-xr-x. 1 root root 3617 Jan 19  2020 openrc.sh

[root@controller xiandian]# vim openrc.sh
```

在非插入模式下按下Ctrl+v——shift+g——D可删除注释符号，推荐直接复制：

```
#--------------------system Config--------------------##
#Controller Server Manager IP. example:x.x.x.x
HOST_IP=192.168.64.129        #controller节点的IP地址

#Controller HOST Password. example:000000
HOST_PASS=caicloudcat

#Controller Server hostname. example:controller
HOST_NAME=controller

#Compute Node Manager IP. example:x.x.x.x
HOST_IP_NODE=192.168.64.132        #compute节点的IP地址

#Compute HOST Password. example:000000
HOST_PASS_NODE=caicloudcat

#Compute Node hostname. example:compute
HOST_NAME_NODE=compute

#--------------------Chrony Config-------------------##
#Controller network segment IP.  example:x.x.0.0/16(x.x.x.0/24)
network_segment_IP=192.168.64.0/24        #controller节点所在的网段

#--------------------Rabbit Config ------------------##
#user for rabbit. example:openstack
RABBIT_USER=openstack

#Password for rabbit user .example:000000
RABBIT_PASS=caicloudcat

#--------------------MySQL Config---------------------##
#Password for MySQL root user . exmaple:000000
DB_PASS=caicloudcat

#--------------------Keystone Config------------------##
#Password for Keystore admin user. exmaple:000000
DOMAIN_NAME=demo
ADMIN_PASS=caicloudcat
DEMO_PASS=caicloudcat

#Password for Mysql keystore user. exmaple:000000
KEYSTONE_DBPASS=caicloudcat
```

```
#--------------------Glance Config--------------------##
#Password for Mysql glance user. exmaple:000000
GLANCE_DBPASS=caicloudcat

#Password for Keystore glance user. exmaple:000000
GLANCE_PASS=caicloudcat

#--------------------Nova Config----------------------##
#Password for Mysql nova user. exmaple:000000
NOVA_DBPASS=caicloudcat

#Password for Keystore nova user. exmaple:000000
NOVA_PASS=caicloudcat

#--------------------Neturon Config-------------------##
#Password for Mysql neutron user. exmaple:000000
NEUTRON_DBPASS=caicloudcat

#Password for Keystore neutron user. exmaple:000000
NEUTRON_PASS=caicloudcat

#metadata secret for neutron. exmaple:000000
METADATA_SECRET=caicloudcat

#Tunnel Network Interface. example:x.x.x.x
INTERFACE_IP=192.168.64.129      #本机IP地址

#External Network Interface. example:eth1
INTERFACE_NAME=eth1

#External Network The Physical Adapter. example:provider
Physical_NAME=provider

#First Vlan ID in VLAN RANGE for VLAN Network. exmaple:101
minvlan=101

#Last Vlan ID in VLAN RANGE for VLAN Network. example:200
maxvlan=200

#--------------------Cinder Config--------------------##
#Password for Mysql cinder user. exmaple:000000
CINDER_DBPASS=caicloudcat
```

```
#Password for Keystore cinder user. exmaple:000000
CINDER_PASS=caicloudcat

#Cinder Block Disk. example:md126p3
BLOCK_DISK=sdb2        #compute节点的存储块

#--------------------Swift Config---------------------##
#Password for Keystore swift user. exmaple:000000
SWIFT_PASS=caicloudcat

#The NODE Object Disk for Swift. example:md126p4.
OBJECT_DISK=sdb2        #compute节点的存储块

#The NODE IP for Swift Storage Network. example:x.x.x.x.
STORAGE_LOCAL_NET_IP=192.168.64.132   #compute节点的IP地址

#--------------------Heat Config----------------------##
#Password for Mysql heat user. exmaple:000000
HEAT_DBPASS=caicloudcat

#Password for Keystore heat user. exmaple:000000
HEAT_PASS=caicloudcat

#--------------------Zun Config-----------------------##
#Password for Mysql Zun user. exmaple:000000
ZUN_DBPASS=caicloudcat

#Password for Keystore Zun user. exmaple:000000
ZUN_PASS=caicloudcat

#Password for Mysql Kuryr user. exmaple:000000
KURYR_DBPASS=caicloudcat

#Password for Keystore Kuryr user. exmaple:000000
KURYR_PASS=caicloudcat

#--------------------Ceilometer Config----------------##
#Password for Gnocchi ceilometer user. exmaple:000000
CEILOMETER_DBPASS=caicloudcat

#Password for Keystore ceilometer user. exmaple:000000
CEILOMETER_PASS=caicloudcat
```

```
#--------------------AODH Config----------------##
#Password for Mysql AODH user. exmaple:000000
AODH_DBPASS=caicloudcat

#Password for Keystore AODH user. exmaple:000000
AODH_PASS=caicloudcat

#--------------------Barbican Config----------------##
#Password for Mysql Barbican user. exmaple:000000
BARBICAN_DBPASS=caicloudcat

#Password for Keystore Barbican user. exmaple:000000
BARBICAN_PASS=caicloudcat
```

Compute配置

yum 源文件处理

```
cd /etc/yum.repos.d/
mv * /media/
ls
```

创建yum源文件

```
[root@compute ~]# vim /etc/yum.repos.d/local.repo
[centos]
name=centos
baseurl=ftp://192.168.64.129/centos
gpgcheck=0
enabled=1
[iaas]
name=iaas
baseurl=ftp://192.168.64.129/openstack/iaas-repo
gpgcheck=0
enabled=1
```

清理软件源下载软件包（Compute在做yum repolist之前一定要先在Controller中做vsftp）

```
[root@compute yum.repos.d]# yum clean all
Loaded plugins: fastestmirror, langpacks
Cleaning repos: centos iaas
Cleaning up list of fastest mirrors
[root@compute yum.repos.d]# yum repolist
Loaded plugins: fastestmirror, langpacks
Determining fastest mirrors
centos                    | 3.6 kB  00:00:00
iaas                      | 2.9 kB  00:00:00
(1/3): centos/group_gz                  | 166 kB  00:00:00
(2/3): iaas/primary_db                  | 1.4 MB  00:00:00
(3/3): centos/primary_db                | 3.1 MB  00:00:00
repo id                             repo name                                   status
centos                              centos                                      4,021
iaas                                iaas                                        3,232
repolist: 7,253
[root@compute yum.repos.d]# yum install -y vim iaas-xiandian
```

脚本修改

```
[root@compute yum.repos.d]# scp 10.10.10.10:/etc/xiandian/openrc.sh /etc/xiandian/openrc.sh
[root@compute yum.repos.d]# vim /etc/xiandian/openrc.sh
```

修改 `/etc/xiandian/openrc.sh`：

```
#Tunnel Network Interface. example:x.x.x.x
INTERFACE_IP=192.168.64.132      #本机IP地址
```

在刷脚本之前，建议创建快照

刷脚本

Controller

```
[root@controller ~]# iaas-pre-host.sh
......

[root@controller ~]# iaas-install-mysql.sh
......

[root@controller ~]# iaas-install-keystone.sh
......
[root@controller ~]# source /etc/keystone/admin-openrc.sh          #使环境生效

[root@controller ~]# iaas-install-glance.sh
......

[root@controller ~]# iaas-install-nova-controller.sh
......

[root@controller ~]# iaas-install-neutron-controller.sh
# 如果出现问题则运行该两个命令

# yum remove net-snmp-libs#卸载当前版本
# yum install 1:net-snmp-1ibs-5.7.2-37.el7.x86_64 # 安装指定版本

# yum remove1 ibxslt#卸载当前版本
# yum insta111ibxs1t-1.1.28-5.e17.x8664#安装符合依赖要求的版本
......

[root@controller ~]# iaas-install-dashboard.sh
......
```

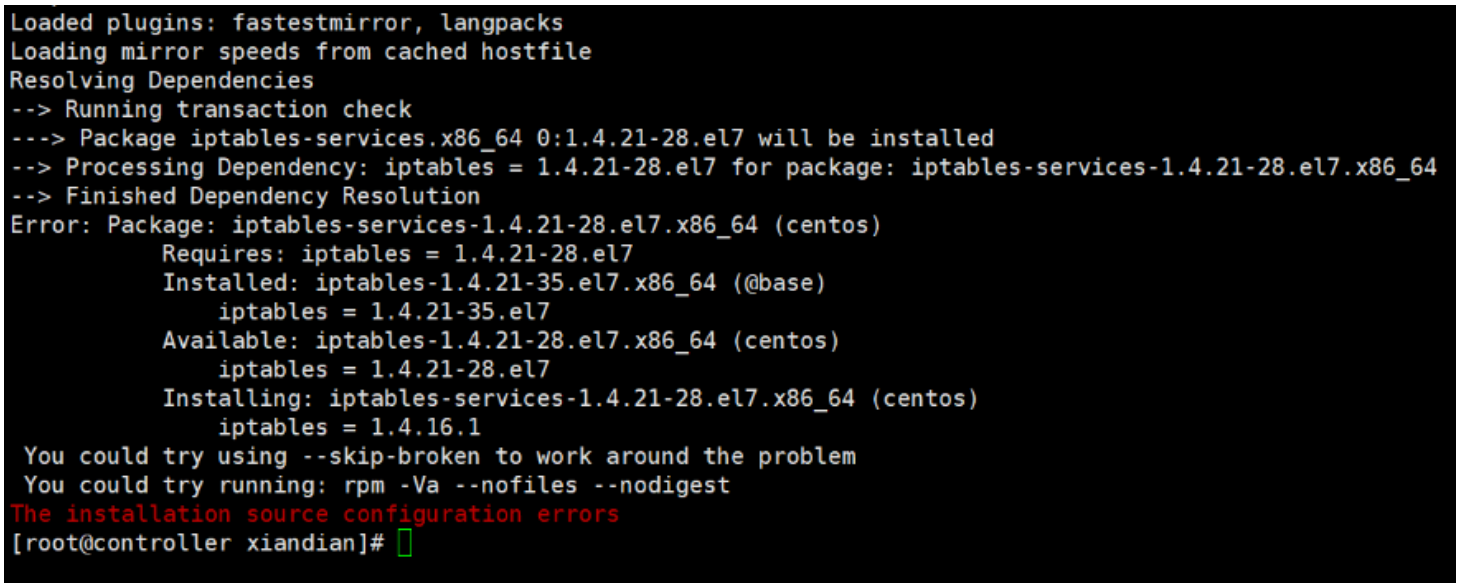
Compute

```
[root@compute ~]# iaas-pre-host.sh
......

[root@compute ~]# iaas-install-nova-compute.sh
......
# yum remove rdma-core
# yum install rdma-core-17.2-3.el7.x86_64
# yum remove libvirt-libs
# yum install libvirt-libs-4.5.0-10.el7_6.12.x86_64
#

[root@compute ~]# iaas-install-neutron-compute.sh
......
```

注意，刷完该脚本后需要重启reboot重启




```
yum downgrade iptables-1.4.21-28.el7.x86_64
```

```
--> Processing Dependency: net-snmp-libs = 1:5.7.2-37.el7 for package: 1:net-snmp-agent-libs-5.7.2-37.e
l7.x86_64
---> Package openpgm.x86_64 0:5.2.122-2.el7 will be installed
--> Finished Dependency Resolution
Error: Package: 1:net-snmp-agent-libs-5.7.2-37.el7.x86_64 (centos)
           Requires: net-snmp-libs = 1:5.7.2-37.el7
           Installed: 1:net-snmp-libs-5.7.2-49.el7_9.4.x86_64 (@updates)
               net-snmp-libs = 1:5.7.2-49.el7_9.4
           Available: 1:net-snmp-libs-5.7.2-37.el7.x86_64 (centos)
               net-snmp-libs = 1:5.7.2-37.el7
Error: Package: libxslt-python-1.1.28-5.el7.x86_64 (iaas)
           Requires: libxslt = 1.1.28-5.el7
           Installed: libxslt-1.1.28-6.el7.x86_64 (@base)
               libxslt = 1.1.28-6.el7
           Available: libxslt-1.1.28-5.el7.x86_64 (centos)
               libxslt = 1.1.28-5.el7
 You could try using --skip-broken to work around the problem
 You could try running: rpm -Va --nofiles --nodigest
```

```
yum remove net-snmp-libs # 卸载当前版本
yum install 1:net-snmp-1ibs-5.7.2-37.el7.x86_64 # 安装指定版本

yum remove1 ibxslt # 卸载当前版本
yum insta111ibxs1t-1.1.28-5.e17.x8664 # 安装符合依赖要求的版本
```

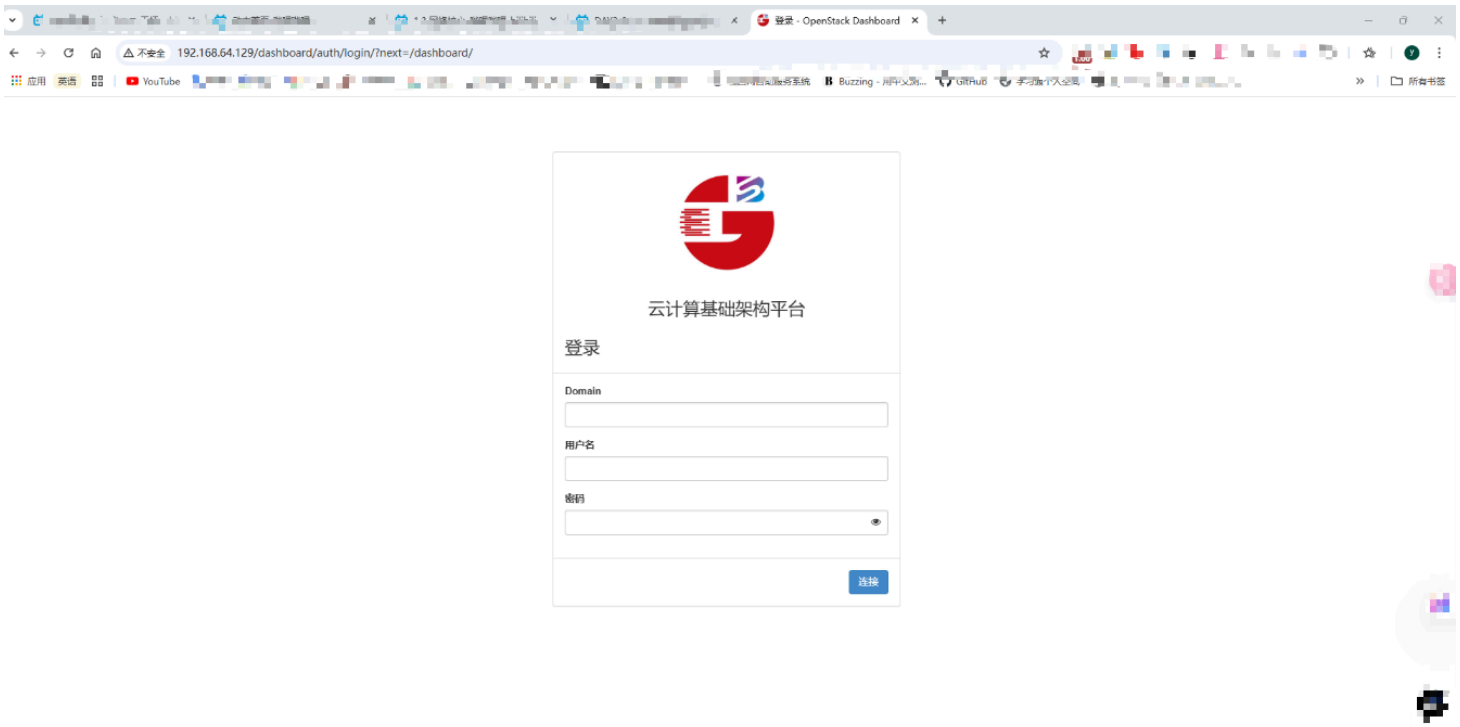
登录

可打开浏览器输入：

```
http://192.168.140.14/ dashboard

http://192.168.140.14/dashboard/auth/login/
```

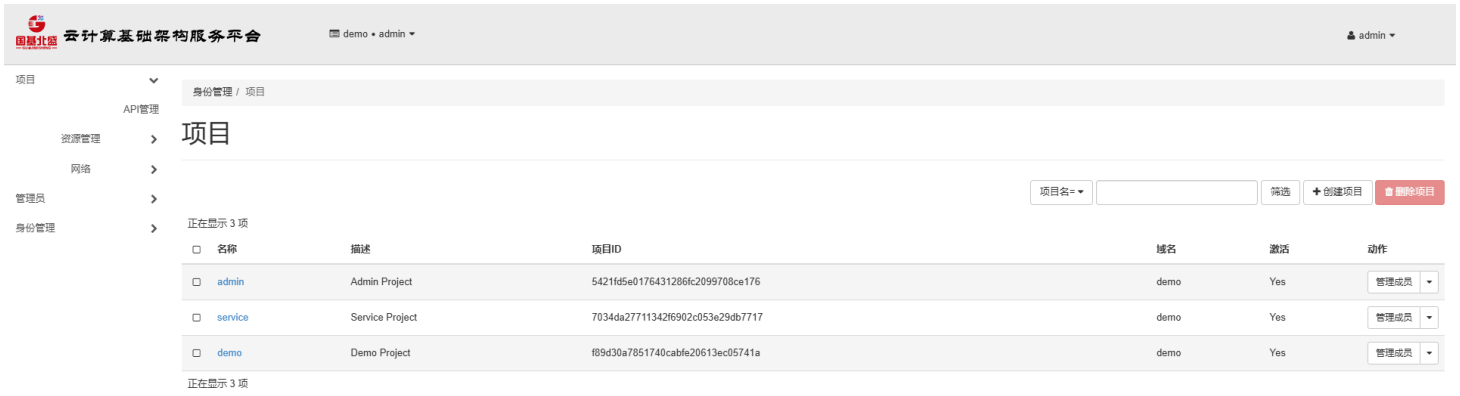
即： `http: ip(controller的ip) /dashboard`



Domian：demo

用户名：admin

密码：caicloudcat



配置Chronyd

在Controller节点中编辑 `chrony.conf` ：

```
vim /etc/chrony.conf


# Allow NTP client access from local network.
#al1ow192.168.0.0/16
al1ow10.10.10.0/24

# Serve time even if not synchronized to a time source.
#local stratum 10
```

并重启服务：

```
systemctl restart chronyd
systemctl enable chronyd
```

在另外的两个节点也编辑 `chrony.conf` ， 与Controller节点不同：

```
# Please consider joining the pool (http://www.pool.ntp.org/join.html)
server controller.example.com iburst
```

版本选择

由于CentOS已经停止支持，因此yum源已经失效了，下面的已经无法正常操作
由于用的是CentOS7，所以使用的是T版(Train)

首先更换国内镜像源：推荐使用阿里云、清华大学、网易等国内知名的 CentOS 镜像源。例如，阿里云镜像源的配置方法如下：

```
cd /etc/yum.repos.d/
mkdir yum.repos.d.backup # 备份旧镜像
mv *.repo yum.repos.d.backup/
wget -O /etc/yum.repos.d/CentoOS7.aliyun.repo http://mirrors.aliyun.com/repo/Centos-7.repo
yum clean all
```

更新镜像源缓存：执行 `yum makecache` 命令，重新生成 yum 缓存，使新的镜像源配置生效。

Enable the OpenStack repository：

```
yum install centos-release-openstack-train
```

```
yum install python-openstackclient
yum install openstack-selinux
yum upgrade
```

参考

核心参考：openstack平台搭建详细教程