# OpenStack操作题：

（根据题目要求进行结果的提交）

45、

NFS服务管理

使用xserver1、xserver2虚拟机，安装NFS服务所需要的软件包，将xserver1节点中的/mnt/share目录使用NFS服务共享出来（目录不存在请自行创建，要求可访问共享目录的网段为192.168.100.0/24），接着在xserver2节点上，将xserver1中共享的文件挂载到/mnt目录下。操作完毕后，依次将xserver1节点上执行showmount -e ip命令和xserver2节点上执行df -h命令的返回结果以文本形式提交到答题框。 (30)分

[root@xserver1 ~]# yum install -y nfs-utils

[root@xserver2 ~]# yum install -y nfs-utils

[root@xserver1 ~]# mkdir /mnt/share

[root@xserver1 ~]# vi /etc/exports

/mnt/share 192.168.100.0/24

[root@xserver1 ~]# systemctl start rpcbind

[root@xserver1 ~]# systemctl start nfs-server

[root@xserver1 ~]# systemctl status nfs-server

● nfs-server.service - NFS server and services

Loaded: loaded (/usr/lib/systemd/system/nfs-server.service; disabled; vendor preset: disabled)

Active: active (exited) since Wed 2020-11-11 14:18:45 EST; 2min 27s ago

Process: 23123 ExecStartPost=/bin/sh -c if systemctl -q is-active gssproxy; then systemctl reload gssproxy ; fi (code=exited, status=0/SUCCESS)

Process: 23104 ExecStart=/usr/sbin/rpc.nfsd $RPCNFSDARGS (code=exited, status=0/SUCCESS)

Process: 23103 ExecStartPre=/usr/sbin/exportfs -r (code=exited, status=0/SUCCESS)

Main PID: 23104 (code=exited, status=0/SUCCESS)

CGroup: /system.slice/nfs-server.service

Nov 11 14:18:44 xserver1 systemd[1]: Starting NFS server and services...

Nov 11 14:18:45 xserver1 systemd[1]: Started NFS server and services.

[root@xserver2 ~]# showmount -e 192.168.100.11

Export list for 192.168.100.11:

/mnt/share 192.168.100.0/24

[root@xserver2 ~]# vi /etc/fstab

192.168.100.11:/mnt/share /mnt nfs defaults 0 0

[root@xserver2 ~]# mount -a

[root@xserver2 ~]# df -h

Filesystem Size Used Avail Use% Mounted on

/dev/mapper/centos-root 36G 902M 35G 3% /

devtmpfs 1.9G 0 1.9G 0% /dev

tmpfs 1.9G 0 1.9G 0% /dev/shm

tmpfs 1.9G 8.7M 1.9G 1% /run

tmpfs 1.9G 0 1.9G 0% /sys/fs/cgroup

/dev/sda1 497M 114M 384M 23% /boot

tmpfs 378M 0 378M 0% /run/user/0

192.168.100.11:/mnt/share 36G 7.6G 28G 22% /mnt

提交答案

46、

主从数据库管理

在xserver1、xserver2上安装mariadb数据库，并配置为主从数据库（xserver1为主节点、xserver2为从节点），实现两个数据库的主从同步。配置完毕后，请在xserver2上的数据库中执行“show slave status \G”命令查询从节点复制状态，将查询到的结果以文本形式提交到答题框。 (30)分

[root@xserver1 ~]# yum install -y mariadb mariadb-server.x86\_64

[root@xserver2 ~]# yum install -y mariadb mariadb-server.x86\_64

[root@xserver1 ~]# vi /etc/my.cnf

[mysqld]

server\_id=11

[root@xserver2 ~]# vi /etc/my.cnf

[mysqld]

server\_id=12

[root@xserver1 ~]# systemctl start mariadb.service

[root@xserver1 ~]# mysql\_secure\_installation

操作步骤：

回车

Y

000000

000000

然后一直回车

[root@xserver1 ~]# mysql -uroot -p000000

MariaDB [(none)]> grant all privileges on \*.\* to root@'%' identified by '000000';

[root@xserver2 ~]# systemctl start mariadb.service

[root@xserver2 ~]# mysql\_secure\_installation

操作步骤：

回车

Y

000000

000000

然后一直回车

[root@xserver2 ~]# mysql -uroot -p000000

MariaDB [(none)]> change master to master\_host='xserver1',master\_user='root',master\_password='000000';

MariaDB [(none)]> start slave;

Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> show slave status\G

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 1. row \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Slave\_IO\_State:

Master\_Host: xserver1

Master\_User: root

Master\_Port: 3306

Connect\_Retry: 60

Master\_Log\_File:

Read\_Master\_Log\_Pos: 4

Relay\_Log\_File: mariadb-relay-bin.000001

Relay\_Log\_Pos: 4

Relay\_Master\_Log\_File:

Slave\_IO\_Running: No

Slave\_SQL\_Running: Yes

Replicate\_Do\_DB:

Replicate\_Ignore\_DB:

Replicate\_Do\_Table:

Replicate\_Ignore\_Table:

Replicate\_Wild\_Do\_Table:

Replicate\_Wild\_Ignore\_Table:

Last\_Errno: 0

Last\_Error:

Skip\_Counter: 0

Exec\_Master\_Log\_Pos: 0

Relay\_Log\_Space: 245

Until\_Condition: None

Until\_Log\_File:

Until\_Log\_Pos: 0

Master\_SSL\_Allowed: No

Master\_SSL\_CA\_File:

Master\_SSL\_CA\_Path:

Master\_SSL\_Cert:

Master\_SSL\_Cipher:

Master\_SSL\_Key:

Seconds\_Behind\_Master: NULL

Master\_SSL\_Verify\_Server\_Cert: No

Last\_IO\_Errno: 1236

Last\_IO\_Error: Got fatal error 1236 from master when reading data from binary log: 'Binary log is not open'

Last\_SQL\_Errno: 0

Last\_SQL\_Error:

Replicate\_Ignore\_Server\_Ids:

Master\_Server\_Id: 11

1 row in set (0.00 sec)

提交答案

47、

LNMP环境部署

使用xserver1节点，安装单节点lnmp环境。安装lnmp环境需要用到的YUM源为CentOS-7-x86\_64-DVD-1511.iso和lnmp目录（均在/root目录下）。安装并配置完lnmp环境后。依次查询数据库、nginx、php服务的状态，并使用netstat -ntpl命令查看端口开放情况。最后依次将查询服务状态的返回结果，和查看端口开放情况的返回结果以文本形式提交到答题框。 (50)分

提交答案

48、

部署WordPress应用

使用xserver1节点，基于lnmp环境，部署WordPress应用（WordPress源码包在/root目录下）。应用部署完毕后，设置WordPress的站点标题为自己的姓名（例：名字叫张三，则设置站点标题为张三的BLOG），设置完毕后登录WordPresss首页。最后将命令curl ip（ip为wordpress的首页ip）的返回结果以文本形式提交到答题框。 (30)分

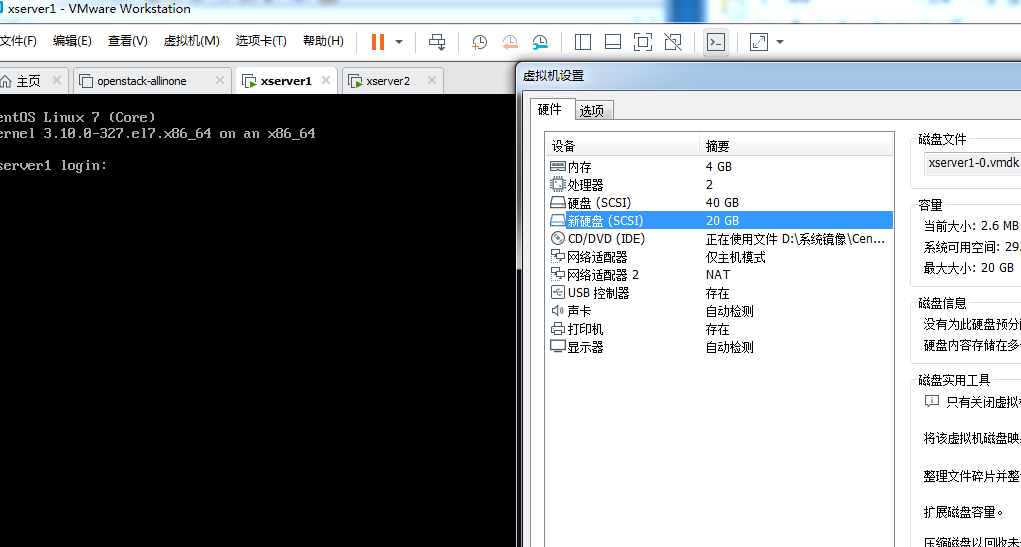
提交答案

49、

Linux存储LVM管理

使用xserver1虚拟机，使用VMWare软件自行添加一块大小为20G的硬盘，使用fdisk命令对该硬盘进形分区，要求分出两个大小为5G的分区。使用两个分区，创建名xcloudvg的卷组，然后再创建一个5G的分区，将xcloudvg扩容至15G，最后执行vgdisplay命令查看卷组信息。将上述所有操作命令和返回结果以文本形式提交到答题框。 (30)分

给Xserver1添加一个20G硬盘



[root@xserver1 ~]# fdisk -l /dev/sdb

重复下面的操作3次，以添加三块5G硬盘

Command (m for help): n

Partition type:

p primary (2 primary, 0 extended, 2 free)

e extended

Select (default p):

Using default response p

Partition number (3,4, default 3):

First sector (20973568-41943039, default 20973568):

Using default value 20973568

Last sector, +sectors or +size{K,M,G} (20973568-41943039, default 41943039): +5G

Partition 3 of type Linux and of size 5 GiB is set

最后结果：

Command (m for help): P

Disk /dev/sdb: 21.5 GB, 21474836480 bytes, 41943040 sectors

Units = sectors of 1 \* 512 = 512 bytes

Sector size (logical/physical): 512 bytes / 512 bytes

I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk label type: dos

Disk identifier: 0x6d77a6ac

Device Boot Start End Blocks Id System

/dev/sdb1 2048 10487807 5242880 83 Linux

/dev/sdb2 10487808 20973567 5242880 83 Linux

/dev/sdb3 20973568 31459327 5242880 83 Linux

Command (m for help): wq

[root@xserver1 ~]# vgcreate xcloudvg /dev/sdb1 /dev/sdb2

Physical volume "/dev/sdb1" successfully created

Physical volume "/dev/sdb2" successfully created

Volume group "xcloudvg" successfully created

[root@xserver1 ~]# vgextend xcloudvg /dev/sdb3

Physical volume "/dev/sdb3" successfully created

Volume group "xcloudvg" successfully extended

[root@xserver1 ~]# vgdisplay xcloudvg

--- Volume group ---

VG Name xcloudvg

System ID

Format lvm2

Metadata Areas 3

Metadata Sequence No 2

VG Access read/write

VG Status resizable

MAX LV 0

Cur LV 0

Open LV 0

Max PV 0

Cur PV 3

Act PV 3

VG Size 14.99 GiB

PE Size 4.00 MiB

Total PE 3837

Alloc PE / Size 0 / 0

Free PE / Size 3837 / 14.99 GiB

VG UUID cGjZJq-rr7F-Yeyc-najo-abjx-JA1k-nmb9Og

提交答案

50、

OpenStack Keystone管理

使用VMWare软件启动提供的opensatckallinone镜像，自行检查openstack中各服务的状态，若有问题自行排查。在keystone中创建用户testuser，密码为123456，创建好之后，查看testuser的详细信息。将上述所有操作命令及返回结果以文本形式提交到答题框。 (30)分

[root@controller ~]# source /etc/keystone/admin-openrc.sh

[root@controller ~]# openstack user create testuser --domain xiandian --password 123456

+-----------+----------------------------------+

| Field | Value |

+-----------+----------------------------------+

| domain\_id | 9321f21a94ef4f85993e92a228892418 |

| enabled | True |

| id | 52b209a2e3254920ac385f1a0e509a94 |

| name | testuser |

+-----------+----------------------------------+

[root@controller ~]# openstack user show testuser

+-----------+----------------------------------+

| Field | Value |

+-----------+----------------------------------+

| domain\_id | 9321f21a94ef4f85993e92a228892418 |

| enabled | True |

| id | 52b209a2e3254920ac385f1a0e509a94 |

| name | testuser |

+-----------+----------------------------------+

提交答案

51、

OpenStack Glance管理

使用VMWare软件启动提供的opensatckallinone镜像，自行检查openstack中各服务的状态，若有问题自行排查。在xserver1节点的/root目录下存在一个cirros-0.3.4-x86\_64-disk.img镜像；使用glance命令将镜像上传，并命名为mycirros，最后将glance image-show id命令的返回结果以文本形式提交到答题框。 (40)分

[root@xserver1 ~]# scp cirros-0.3.4-x86\_64-disk.img root@192.168.100.10:~

root@192.168.100.10's password:

cirros-0.3.4-x86\_64-disk.img 100% 13MB 12.7MB/s 00:00

[root@controller ~]# glance image-create --name 'mycirros' --disk-format qcow2 --container-format bare --progress < cirros-0.3.4-x86\_64-disk.img

[=============================>] 100%

+------------------+--------------------------------------+

| Property | Value |

+------------------+--------------------------------------+

| checksum | ee1eca47dc88f4879d8a229cc70a07c6 |

| container\_format | bare |

| created\_at | 2020-11-12T16:19:55Z |

| disk\_format | qcow2 |

| id | 5c981efa-955d-44f4-9120-bed616501033 |

| min\_disk | 0 |

| min\_ram | 0 |

| name | mycirros |

| owner | f9ff39ba9daa4e5a8fee1fc50e2d2b34 |

| protected | False |

| size | 13287936 |

| status | active |

| tags | [] |

| updated\_at | 2020-11-12T16:19:56Z |

| virtual\_size | None |

| visibility | private |

+------------------+--------------------------------------+

[root@controller ~]# glance image-show 5c981efa-955d-44f4-9120-bed616501033

+------------------+--------------------------------------+

| Property | Value |

+------------------+--------------------------------------+

| checksum | ee1eca47dc88f4879d8a229cc70a07c6 |

| container\_format | bare |

| created\_at | 2020-11-12T16:19:55Z |

| disk\_format | qcow2 |

| id | 5c981efa-955d-44f4-9120-bed616501033 |

| min\_disk | 0 |

| min\_ram | 0 |

| name | mycirros |

| owner | f9ff39ba9daa4e5a8fee1fc50e2d2b34 |

| protected | False |

| size | 13287936 |

| status | active |

| tags | [] |

| updated\_at | 2020-11-12T16:19:56Z |

| virtual\_size | None |

| visibility | private |

+------------------+--------------------------------------+

提交答案

52、

OpenStack Nova管理

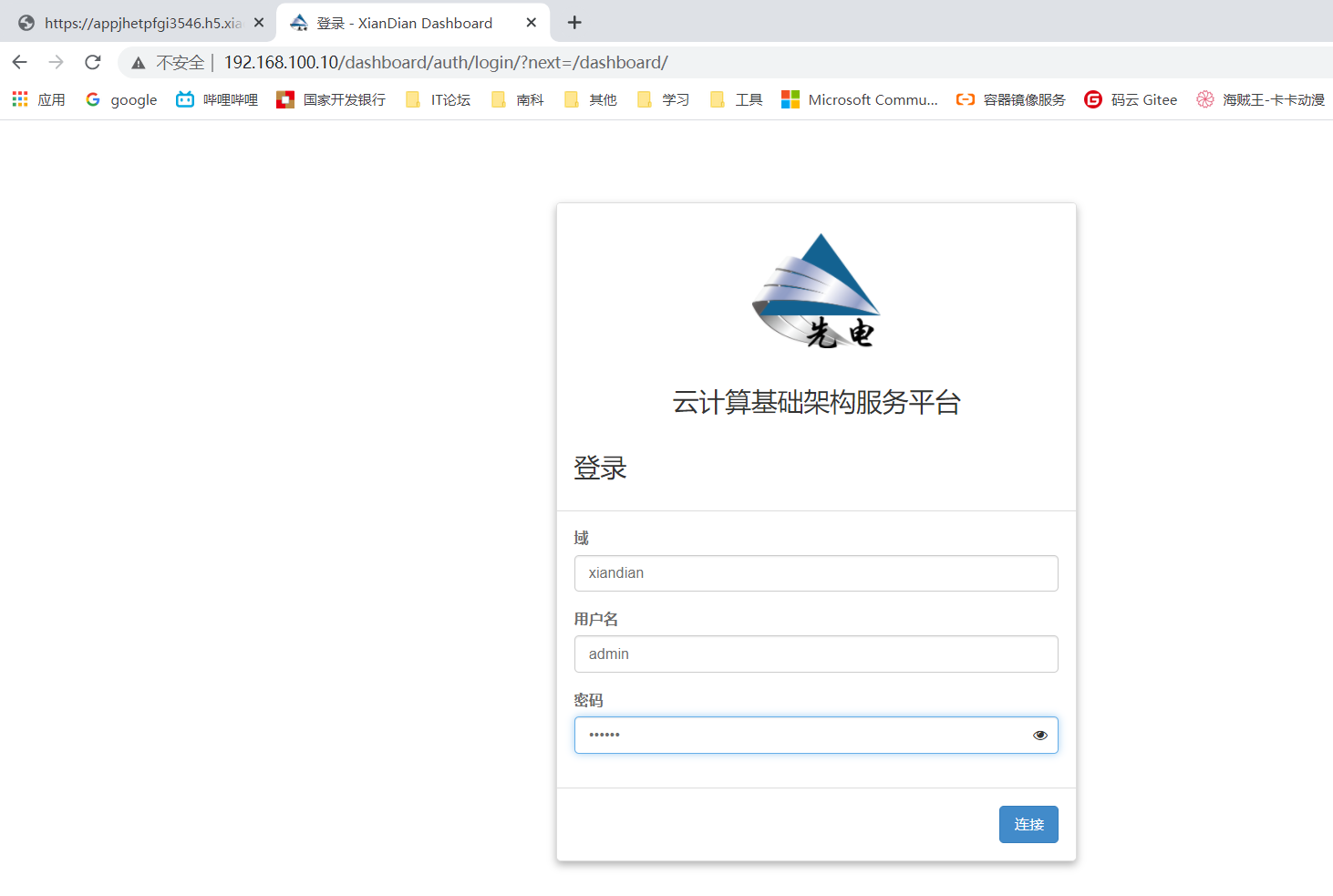
使用VMWare软件启动提供的opensatckallinone镜像，自行检查openstack中各服务的状态，若有问题自行排查。使用nova相关命令，启动一个云主机，云主机类型使用m1.tiny，镜像使用上一题中上传的mycirros镜像，云主机名称为examtest，将上述所有操作命令及返回结果以文本的方式提交到答题框。 (50)分

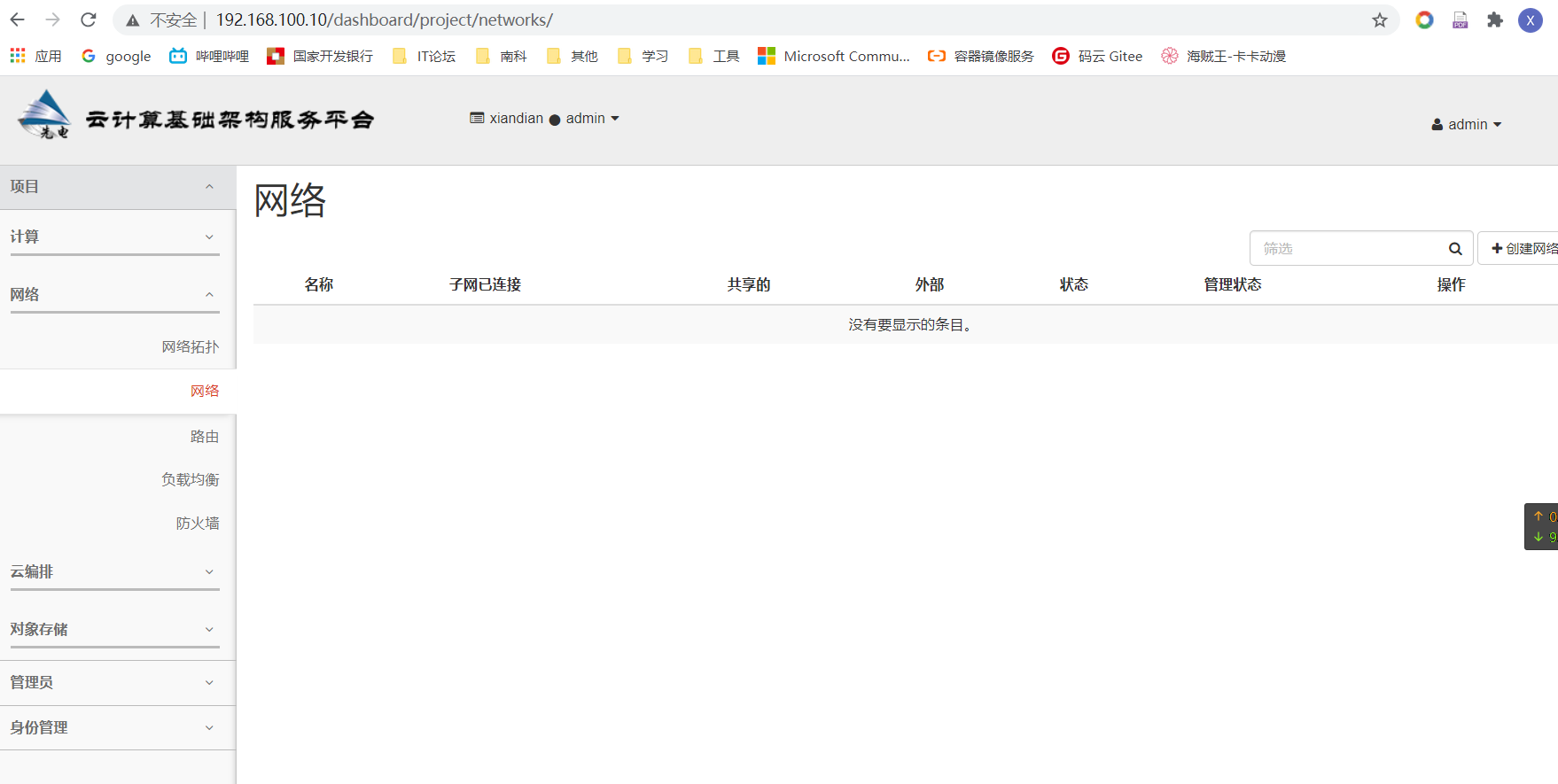
浏览器登录<http://192.168.100.10/dashboard>

域： xiandian

用户名: admin

密码： 000000



项目--网络—网络

创建网络，，填下面的然后创建



创建虚拟机

准备工作：

1. [root@controller ~]# nova image-list

+--------------------------------------+----------+--------+--------+

| ID | Name | Status | Server |

+--------------------------------------+----------+--------+--------+

| 5c981efa-955d-44f4-9120-bed616501033 | mycirros | ACTIVE | |

+--------------------------------------+----------+--------+--------+

[root@controller ~]# nova network-list

+--------------------------------------+---------+------+

| ID | Label | Cidr |

+--------------------------------------+---------+------+

| 55b14d75-d01b-4a03-ae73-f47d11dcf70b | int-net | - |

+--------------------------------------+---------+------+

[root@controller ~]# nova flavor-list

+----+-----------+-----------+------+-----------+------+-------+-------------+-----------+

| ID | Name | Memory\_MB | Disk | Ephemeral | Swap | VCPUs | RXTX\_Factor | Is\_Public |

+----+-----------+-----------+------+-----------+------+-------+-------------+-----------+

| 1 | m1.tiny | 512 | 1 | 0 | | 1 | 1.0 | True |

| 2 | m1.small | 2048 | 20 | 0 | | 1 | 1.0 | True |

| 3 | m1.medium | 4096 | 40 | 0 | | 2 | 1.0 | True |

| 4 | m1.large | 8192 | 80 | 0 | | 4 | 1.0 | True |

| 5 | m1.xlarge | 16384 | 160 | 0 | | 8 | 1.0 | True |

+----+-----------+-----------+------+-----------+------+-------+-------------+-----------+

[root@controller ~]# nova boot --flavor 1 --image 5c981efa-955d-44f4-9120-bed616501033 --nic net-id=55b14d75-d01b-4a03-ae73-f47d11dcf70b examtest

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