服务器：

SA5112M4 818498931 64G 2*8核 100.200.0.42 admin/J#hwlwKYPTUwlamz CentOS Linux release 7.9.2009 (Core) 192.168.221.107 root/Abcd-1234

SA5112M4 818465101 64G 2*8核 100.200.0.43 admin/J#hwlwKYPTUwlamz CentOS Linux release 7.9.2009 (Core) 192.168.221.108 root/Abcd-1234

物理网卡：

2: eno1: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq master cloudbr0 state UP group default qlen 1000

link/ether 6c:92:bf:a2:cc:24 brd ff:ff:ff:ff:ff:ff

3: eno2: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc mq state DOWN group default qlen 1000

link/ether 6c:92:bf:a2:cc:25 brd ff:ff:ff:ff:ff:ff

4: enp7s0f0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc mq state DOWN group default qlen 1000

link/ether 6c:92:bf:68:aa:f0 brd ff:ff:ff:ff:ff:ff

5: enp7s0f1: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc mq state DOWN group default qlen 1000

link/ether 6c:92:bf:68:aa:f1 brd ff:ff:ff:ff:ff:ff

接线：

eno1接入交换机1-4口管理网vlan221,eno2接入交换机5-8口trunk口

```
#交换机配置
erase backup-config

conf t
generate ssh-key
ssh2 server port 22
ssh2 server authentication password
ssh2 server
exit

conf t
interface range  gigaethernet 1/1/1-4
```

```
switchport mode access
switchport access vlan 221
no shutdown

interface range  gigaethernet 1/1/5-8
switchport mode trunk
switchport trunk allowed vlan all
no shutdown

interface range  gigaethernet 1/1/9-12
switchport mode access
switchport access vlan 168
no shutdown

vlan 100
name guest
exit
interface vlan 100
ip address 10.0.0.254 255.255.255.0
no shutdown

interface vlan 221
ip address 192.168.221.254 255.255.255.0
no shutdown

interface vlan 168
ip address 10.168.1.2 255.255.255.0
no shutdown
exit
exit

conf t
#路由器10.168.1.1能连接外网，在交换机配置vlan168使主机可以连接外网，需要给路由器配
ip route 0.0.0.0/0 10.168.1.1

write backup-config

```

In the Advanced networking mode, it is most common to have (at least) two physical interfaces per hypervior-host. We will use the interface eth0 linked to the bridge ‘cloudbr0’ using the untagged (native) VLAN for hypervisor management. Additionally

we configure the second interface for usage with the bridge ‘cloudbr1’ for public and guest traffic. This time there are no VLANs applied by us - CloudStack will add the VLANs as required during actual use.

```
计算节点配置网络/etc/sysconfig/network-scripts：
[root@management1 network-scripts]# cat ifcfg-eno1
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=eno1
UUID=d3685dcb-e326-425b-9a7c-8e4572aa5e52
DEVICE=eno1
ONBOOT=yes
BRIDGE=cloudbr0

[root@management1 network-scripts]# cat ifcfg-eno2
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=eno2
UUID=f1e2cb4b-885a-4f62-bea1-8fa9fda3d65c
DEVICE=eno2
ONBOOT=no
BRIDGE=cloudbr1

[root@management1 network-scripts]# cat ifcfg-cloudbr0
```

```
DEVICE=cloudbr0
TYPE=Bridge
ONBOOT=yes
BOOTPROTO=none
IPV6INIT=no
IPV6_AUTOCONF=no
DELAY=5
IPADDR=192.168.221.108
GATEWAY=192.168.221.254
NETMASK=255.255.255.0
STP=yes

[root@management1 network-scripts]# cat ifcfg-cloudbr1
DEVICE=cloudbr1
TYPE=Bridge
ONBOOT=yes
BOOTPROTO=none
IPV6INIT=no
IPV6_AUTOCONF=no
DELAY=5
STP=yes
```

```
/etc/sysconfig/modules目录创建文件8021q.modules，cloudstack实际使用vlan时会自动
/usr/sbin/modinfo -F filename 8021q &>/dev/null
if [ "$?" -eq 0 ]; then
    /usr/sbin/modprobe 8021q
fi
```

Let's add a zone

1 Zone type — 2 Core zone type — 3 Zone details — 4 Network — 5 Add resources — 6 Launch

Core

Core Zones are intended for Datacenter based deployments and allow the full range of networking and other functionality in Apache CloudStack. Core zones have a number of prerequisites and rely on the presence of shared storage and helper VMs.

Edge

Edge Zones are lightweight zones, designed for deploying in edge computing scenarios. They are limited in functionality but have far fewer prerequisites than core zones.

Please refer to the Apache CloudStack documentation for more information on Zone Types
http://docs.cloudstack.apache.org/en/latest/installguide/configuration.html#adding-a-zone

Next

Let's add a zone

1 Zone type — 2 Core zone type — 3 Zone details — 4 Network — 5 Add resources — 6 Launch

(•) Advanced

This is recommended and allows more sophisticated network topologies. This network model provides the most flexibility in defining guest networks and providing custom network offerings such as firewall, VPN, or load balancer support.

[on] Security groups

Choose this if you wish to use security groups to provide guest VM isolation.

( ) Basic

Provide a single network where each VM instance is assigned an IP directly from the network. Guest isolation can be provided through layer-3 means such as security groups (IP address source filtering).

Previous Next

Let's add a zone

Zone type — Core zone type — 3 Zone details — 4 Network — 5 Add resources — 6 Launch

A zone is the largest organizational unit in CloudStack, and it typically corresponds to a single datacenter. Zones provide physical isolation and redundancy. A zone consists of one or more pods (each of which contains hosts and primary storage servers) and a secondary storage server which is shared by all pods in the zone.

* Name:	Zone1
* IPv4 DNS1:	114.114.114.114
IPv4 DNS2:	8.8.8.8
IPv6 DNS1:	
IPv6 DNS2:	
IPv6 CIDR:	
IPv6 Gateway:	
* Internal DNS 1:	192.168.221.254
Internal DNS 2:	114.114.114.114
* Hypervisor:	KVM

Previous Next

Zone type — Core zone type — Zone details — Network — Add resources — Launch

Physical network — Pod — Guest traffic

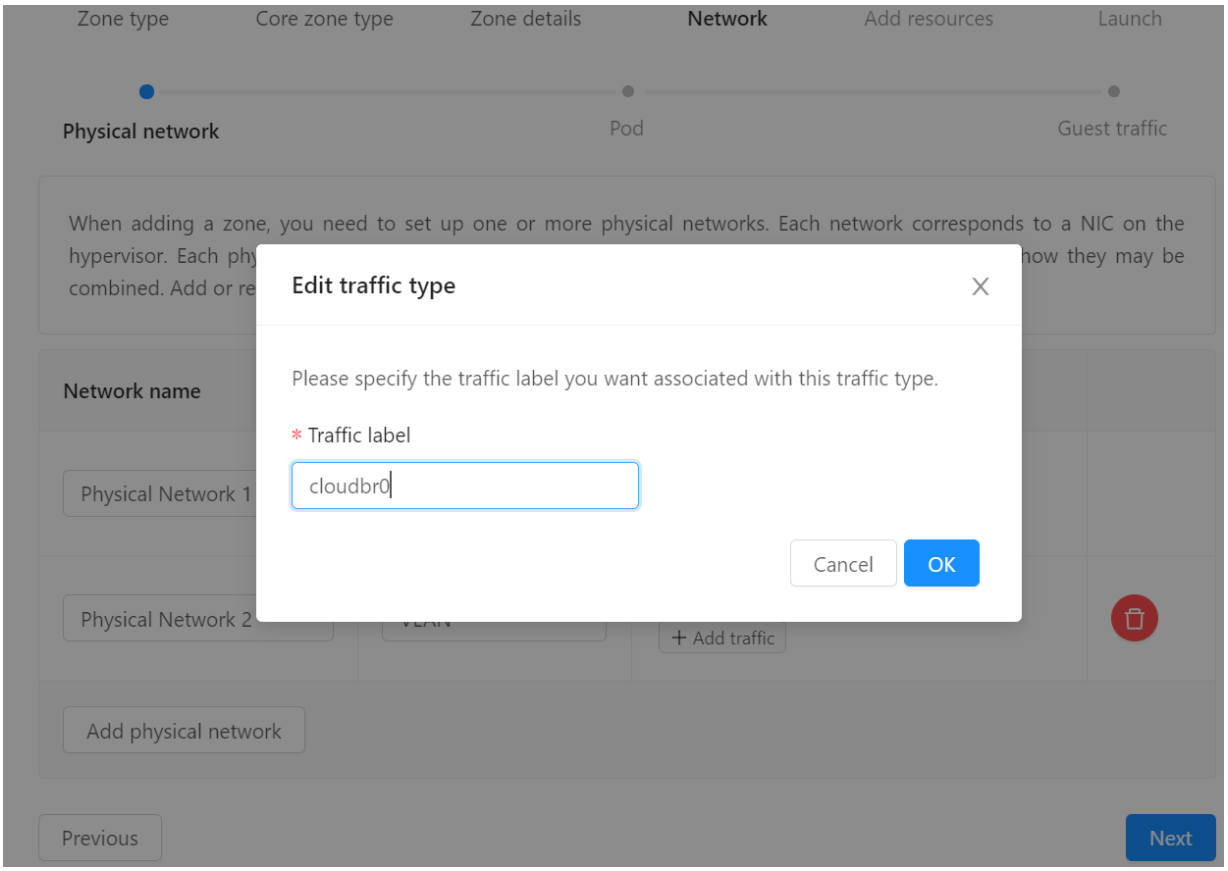
When adding a zone, you need to set up one or more physical networks. Each network corresponds to a NIC on the hypervisor. Each physical network can carry one or more types of traffic, with certain restrictions on how they may be combined. Add or remove one or more traffic types onto each physical network.

Network name	Isolation method	Traffic types	
Physical Network 1	VLAN	MANAGEMENT + Add traffic	
Physical Network 2	VLAN	GUEST + Add traffic	

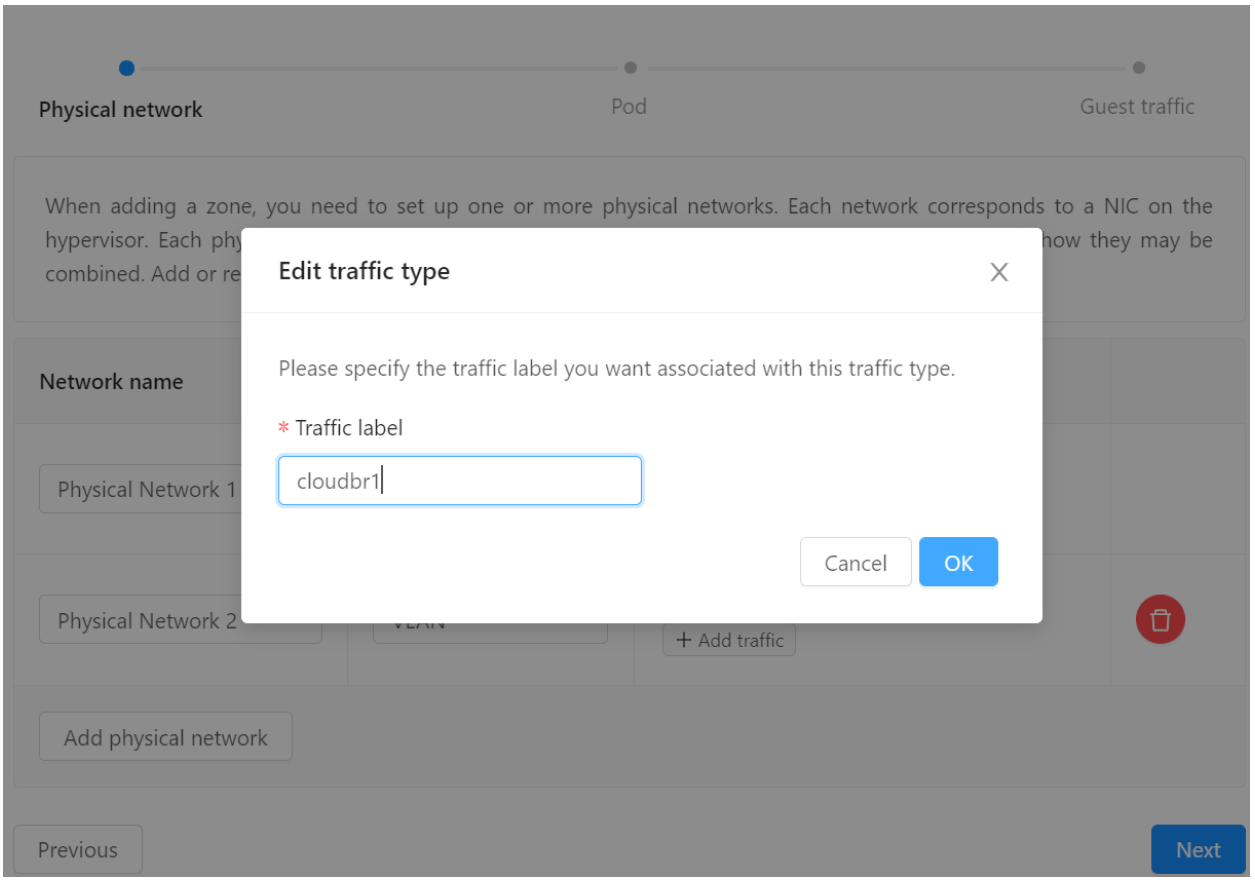
Add physical network

Previous Next

管理网指定标签cloudbr0



客户网指定标签cloudbr1



Let's add a zone

Zone type — Core zone type — Zone details — 4 Network — 5 Add resources — 6 Launch

Physical network — Pod — Guest traffic

Each zone must contain one or more pods. We will add the first pod now. A pod contains hosts and primary storage servers, which you will add in a later step. First, configure a range of reserved IP addresses for CloudStack's internal management traffic. The reserved IP range must be unique for each zone in the cloud.

* Pod name:	Pod1
* Reserved system gateway:	192.168.221.254
* Reserved system netmask:	255.255.255.0
* Start reserved system IP:	192.168.221.5
* End reserved system IP:	192.168.221.20

Previous Next

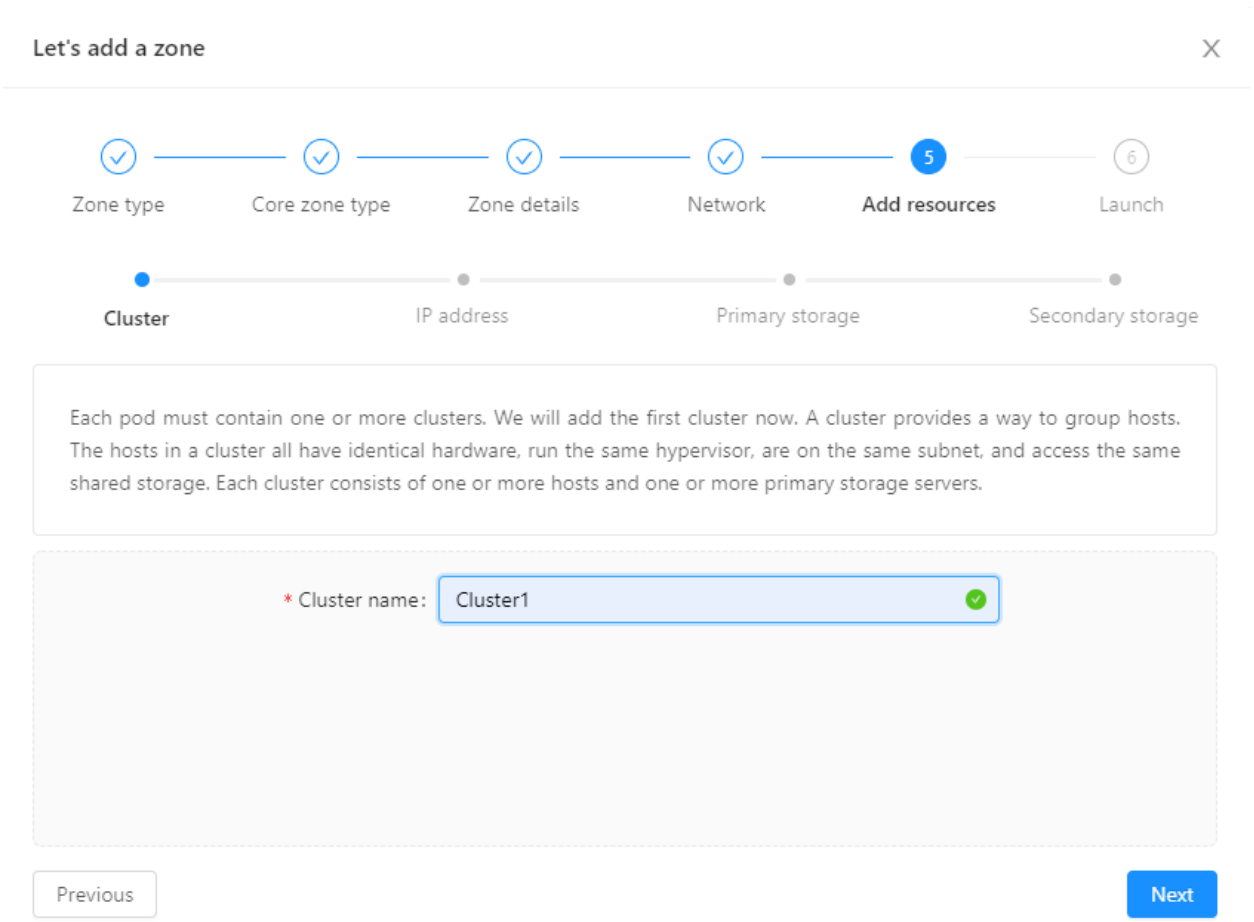
Zone type — Core zone type — Zone details — 4 Network — 5 Add resources — 6 Launch

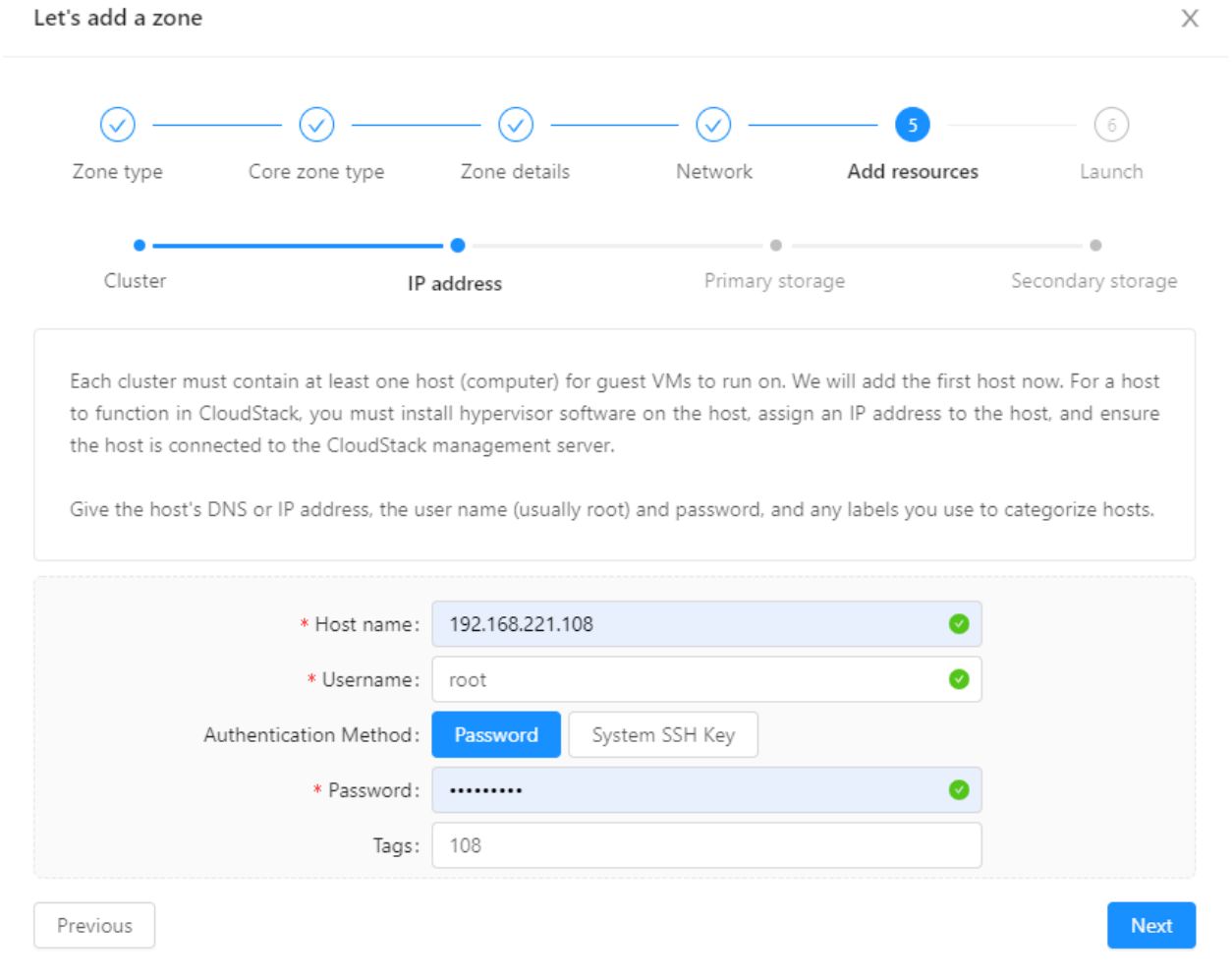
Physical network — Pod — Guest traffic

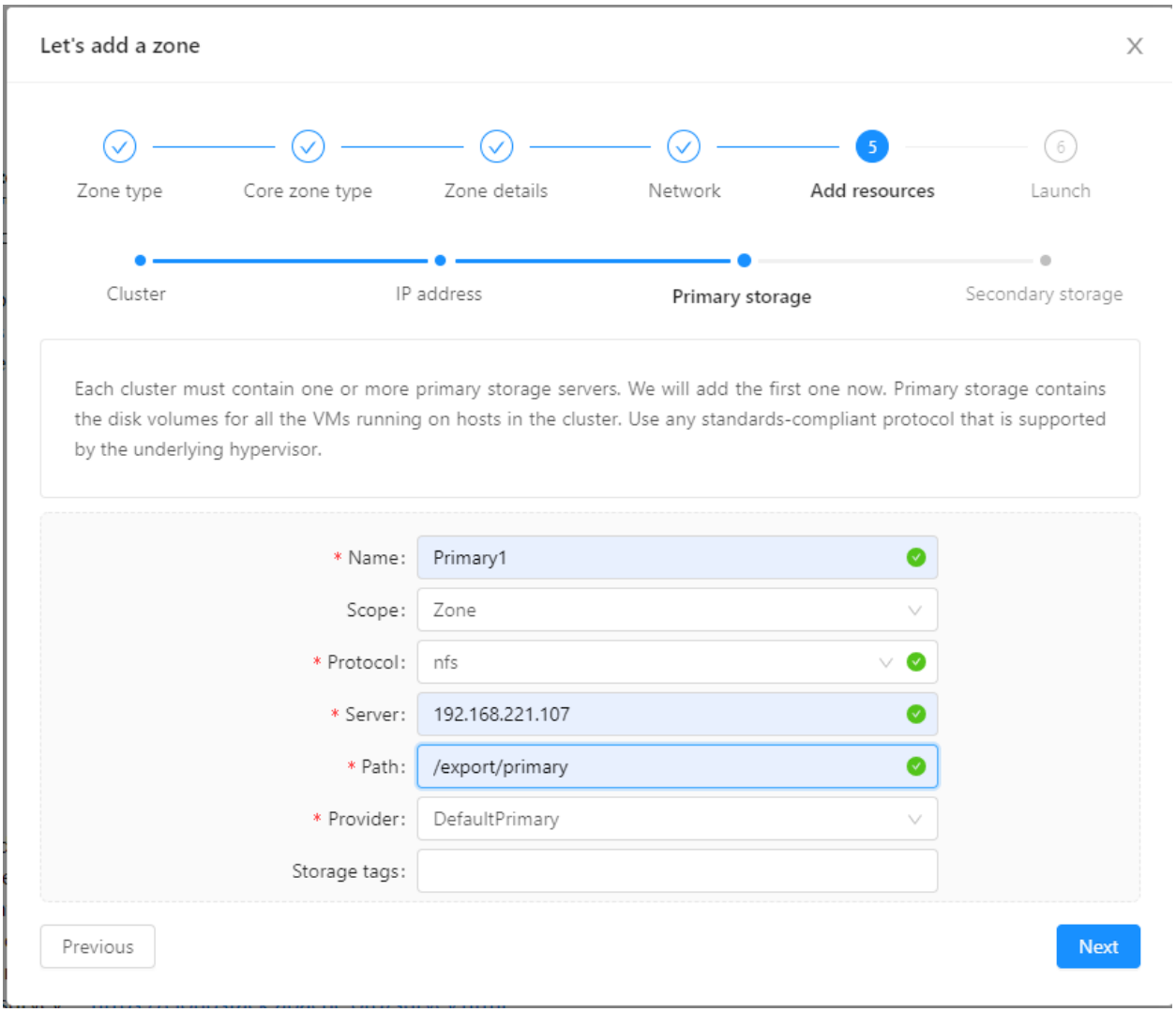
Guest network traffic is communication between end-user virtual machines. Specify a range of VLAN IDs or VXLAN network identifiers (VNIs) to carry guest traffic for each physical network.

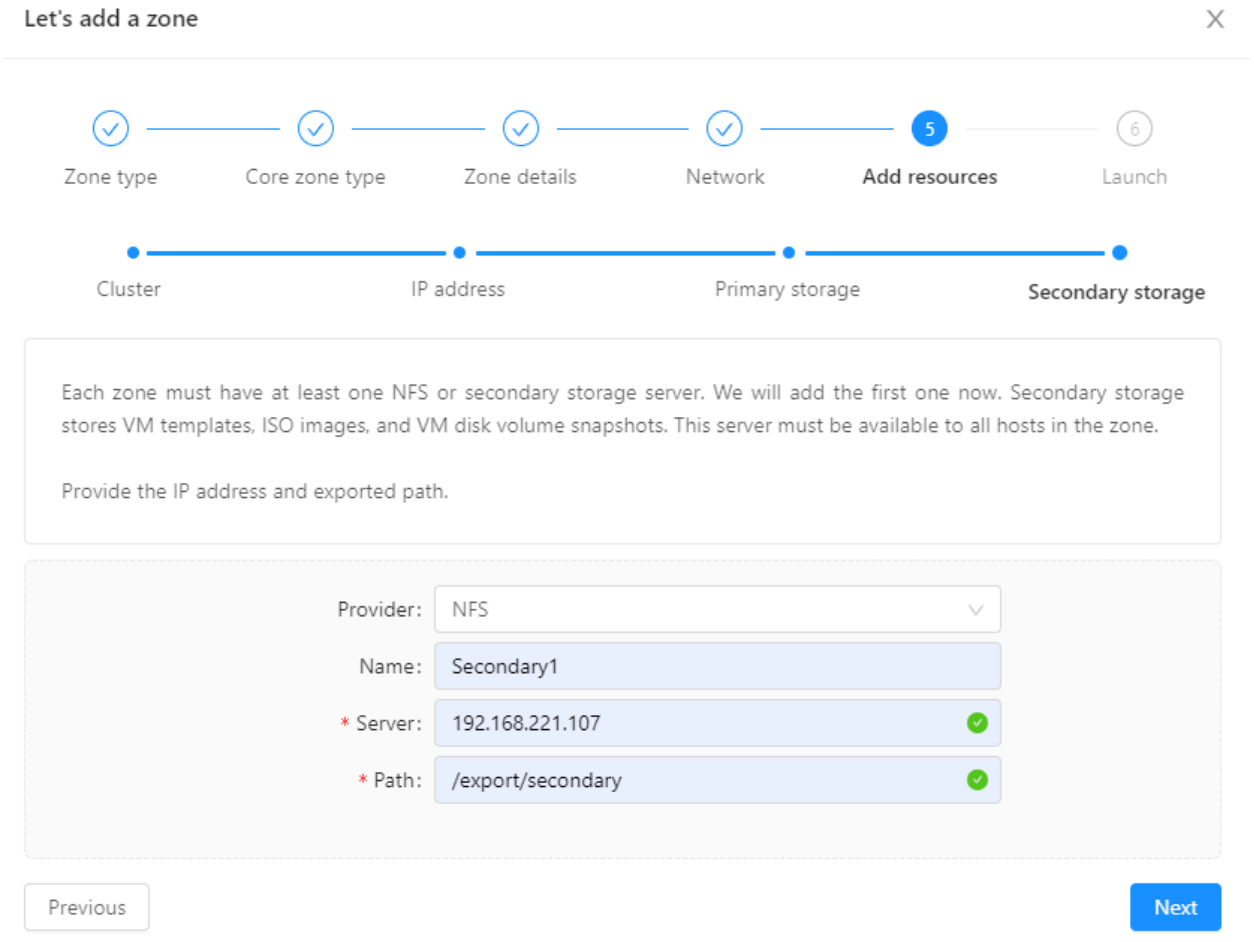
Guest gateway:	10.0.0.254
Guest netmask:	255.255.255.0
Guest start IP:	10.0.0.20
Guest end IP:	10.0.0.250
VLAN/VNI ID:	100

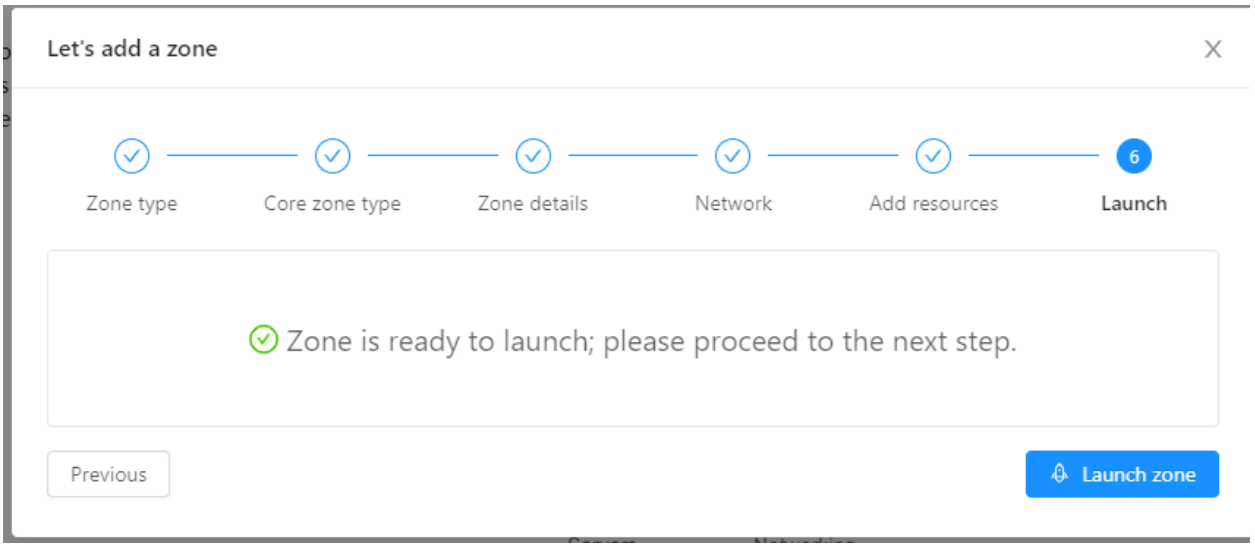
Previous Next


Let's add a zone
Zone type
Core zone type
Zone details
Network
5
Add resources
6
Launch
Cluster
IP address
Primary storage
Secondary storage
Each pod must contain one or more clusters. We will add the first cluster now. A cluster provides a way to group hosts. The hosts in a cluster all have identical hardware, run the same hypervisor, are on the same subnet, and access the same shared storage. Each cluster consists of one or more hosts and one or more primary storage servers.
* Cluster name:
Cluster1
Previous
Next


Let's add a zone
Zone type
Core zone type
Zone details
Network
5
Add resources
6
Launch
Cluster
IP address
Primary storage
Secondary storage
Each cluster must contain at least one host (computer) for guest VMs to run on. We will add the first host now. For a host to function in CloudStack, you must install hypervisor software on the host, assign an IP address to the host, and ensure the host is connected to the CloudStack management server.
Give the host's DNS or IP address, the user name (usually root) and password, and any labels you use to categorize hosts.
* Host name:
192.168.221.108
* Username:
root
Authentication Method:
Password
System SSH Key
* Password:
Tags:
108
Previous
Next


Let's add a zone
Zone type
Core zone type
Zone details
Network
5
Add resources
6
Launch
Cluster
IP address
Primary storage
Secondary storage
Each cluster must contain one or more primary storage servers. We will add the first one now. Primary storage contains the disk volumes for all the VMs running on hosts in the cluster. Use any standards-compliant protocol that is supported by the underlying hypervisor.
* Name: Primary1
Scope: Zone
* Protocol: nfs
* Server: 192.168.221.107
* Path: /export/primary
* Provider: DefaultPrimary
Storage tags:
Previous
Next


Let's add a zone
Zone type
Core zone type
Zone details
Network
5
Add resources
6
Launch
Cluster
IP address
Primary storage
Secondary storage
Each zone must have at least one NFS or secondary storage server. We will add the first one now. Secondary storage stores VM templates, ISO images, and VM disk volume snapshots. This server must be available to all hosts in the zone.
Provide the IP address and exported path.
Provider: NFS
Name: Secondary1
* Server: 192.168.221.107
* Path: /export/secondary
Previous
Next


Let's add a zone
Zone type
Core zone type
Zone details
Network
Add resources
6
Launch
Zone is ready to launch; please proceed to the next step.
Previous
Launch zone