

2023.1 ☐☐ ☐☐ ☐ ☐☐

OpenStack 在 OpenStack 中, 提供了 Customization 功能。通过 OpenStack Snap 功能

```
sudo snap install openstack --channel 2023.1
```

Sunbeam MicroStack 提供一個簡單、輕便的部署環境。它基於 Docker 和 Kubernetes，可以輕鬆地在任何地方部署您的應用程序。

```
sunbeam prepare-node-script | bash -x && newgrp snap_daemon
```

`ssh -o StrictHostKeyChecking=no root@10.10.10.10`. openssh-server

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```
# --role flag[] [] MicroStack[] [] [] [] [] [] [] []
sunbeam cluster bootstrap --role control --role compute --role storage
```

OpenStack API 与 MetalLB 交互，IP 地址分配

MicroStack

```
# sunbeam configure --openrc demo-openrc

Local or remote access to VMs [local/remote] (local): remote
CIDR of network to use for external networking (10.20.20.0/24): 192.168.1.0/24
IP address of default gateway for external network (192.168.1.1): 192.168.1.2
Populate OpenStack cloud with demo user, default images, flavors etc [y/n] (y):
Username to use for access to OpenStack (demo):
Password to use for access to OpenStack (hJ*****):
Network range to use for project network (192.168.122.0/24):
Enable ping and SSH access to instances? [y/n] (y):
Start of IP allocation range for external network (192.168.1.2): 192.168.1.21
End of IP allocation range for external network (192.168.1.254): 192.168.1.57
```

Network type for access to external network [flat/vlan] (flat):

Writing openrc to demo-openrc ... done

Free network interface that will be configured for external traffic [ens34] (ens34):

[[[]]] [[[[[]]]]] [[[[[]]]]] [[[[[]]]]] Router External [[[[[]]]]] [[[[[]]]]]

```
# ens34 [[[[[ ]]]] ] UP [[[[[ ]]]] ]
```

```
sudo ip link set up dev ens34
```

```
# br-ex [[[[[ ]]]] ] ens34 [[[[[ ]]]] ] [[[[[ ]]]] ]
```

```
sudo openstack-hypervisor.ovs-vsctl show
```

```
35c97266-ccfd-40a7-afb2-7672e7aa6158
```

```
Bridge br-ex
```

```
datapath_type: system
```

```
Port ens34
```

```
Interface ens34
```

```
Port patch-provnet-20661610-1756-402f-8df8-4e027e639e2e-to-br-int
```

```
Interface patch-provnet-20661610-1756-402f-8df8-4e027e639e2e-to-br-int
```

```
type: patch
```

```
options: {peer=patch-br-int-to-provnet-20661610-1756-402f-8df8-4e027e639e2e}
```

```
Port br-ex
```

```
Interface br-ex
```

```
type: internal
```

```
Bridge br-int
```

```
fail_mode: secure
```

```
datapath_type: system
```

```
Port patch-br-int-to-provnet-20661610-1756-402f-8df8-4e027e639e2e
```

```
Interface patch-br-int-to-provnet-20661610-1756-402f-8df8-4e027e639e2e
```

```
type: patch
```

```
options: {peer=patch-provnet-20661610-1756-402f-8df8-4e027e639e2e-to-br-int}
```

```
Port br-int
```

```
Interface br-int
```

```
type: internal
```

```
ovs_version: "3.1.0"
```

```
## [[[[[ ]]]] ] [[[[[ ]]]] ] [[[[[ ]]]] ]
```

```
sudo openstack-hypervisor.ovs-vsctl add-port br-ex ens34
```

OpenStack Hypervisor admin 2016. 2016 Admin clouds.ya

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```
sunbeam cloud-config -u -c sunbeam-demo
```

Writing cloud information to /home/ubuntu/.config/openstack/clouds.yaml ... done

Admin

```
sunbeam cloud-config --admin -u -c sunbeam-admin
```

Writing cloud information to /home/ubuntu/.config/openstack/clouds.yaml ... done

```
# 000000 'admin' 000000
```

```
vi /home/ubuntu/.config/openstack/clouds.yaml
```

clouds:

sunbeam-admin:

auth:

auth_url: http://192.168.1.6:80/openstack-keystone

password: MqlcF4f4t3sp

```
project_domain_name: admin_domain
```

```
project_name: admin
```

```
user_domain_name: admin_domain
```

```
username: admin
```

sunbeam-demo:

auth:

auth_url: http://192.168.1.6:80/openstack-keystone

password: YBk9CX2est2b

```
project_domain_name: users
```

```
project_name: demo
```

```
user_domain_name: users
```

username: demo

```
sudo touch admin openrc
```

```
sudo vi admin openrc
```

admin □□ □□□ □□□ □□ □□□□ □□

```
export OS_AUTH_URL=http://192.168.1.6:80/openstack-keystone
```

```
export OS_USERNAME=admin
```

```
export OS_PASSWORD=Mq|cF4f4t3sp
```

```
export OS_USER_DOMAIN_NAME=admin_domain
export OS_PROJECT_DOMAIN_NAME=admin_domain
export OS_PROJECT_NAME=admin
export OS_AUTH_VERSION=3
export OS_IDENTITY_API_VERSION=3
```

```
# admin 用户 配置
source admin_openrc
```

查看 Hypervisor 信息

```
openstack hypervisor list
+-----+-----+-----+-----+-----+
| ID                | Hypervisor Hostname | Hypervisor Type | Host IP    | State |
+-----+-----+-----+-----+-----+
| d7a8e150-fee4-4b12-bc04-9c4027afbc66 | ubuntu            | QEMU           | 192.168.1.80 | up    |
+-----+-----+-----+-----+-----+

openstack compute service list
+-----+-----+-----+-----+-----+-----+-----+
| ID                | Binary      | Host  | Zone  | Status | State | Updated At          |
+-----+-----+-----+-----+-----+-----+-----+
| a2b2918f-6493-466e-be6b-b109676da353 | nova-conductor | nova-0 | internal | enabled | up    | 2023-06-13T07:10:54.000000 |
| 78e06c73-e377-4eb3-bdd8-25311ea0e9c1 | nova-scheduler | nova-0 | internal | enabled | up    | 2023-06-13T07:10:53.000000 |
| ea690ec7-212c-4405-bc48-960abb0c1b57 | nova-compute  | ubuntu | nova   | enabled | up    | 2023-06-13T07:10:58.000000 |
+-----+-----+-----+-----+-----+-----+-----+
```

查看 IP 地址分配情况

demo-router

- 개요
- 인터페이스
- 정적 경로

이름	demo-router
ID	f12ad939-b8ad-45b3-a138-bf6556d282db
설명	
프로젝트 ID	9a9e27aa041d46518139d77fff227fef
Status	Active
관리 상태	UP

외부 게이트웨이

네트워크 이름	external-network
네트워크 ID	dc76c640-e562-4212-949a-cc55c56834a6
외부 fixed IP	<ul style="list-style-type: none">서브넷 ID 613d41dd-bd96-4ffa-8d9f-8864c616f27dIP 주소 192.168.1.29
SNAT	활성화됨

```
ping 192.168.1.29
PING 192.168.1.29 (192.168.1.29) 56(84) bytes of data.
64 bytes from 192.168.1.29: icmp_seq=1 ttl=254 time=52.8 ms
64 bytes from 192.168.1.29: icmp_seq=2 ttl=254 time=0.704 ms
64 bytes from 192.168.1.29: icmp_seq=3 ttl=254 time=0.679 ms
```