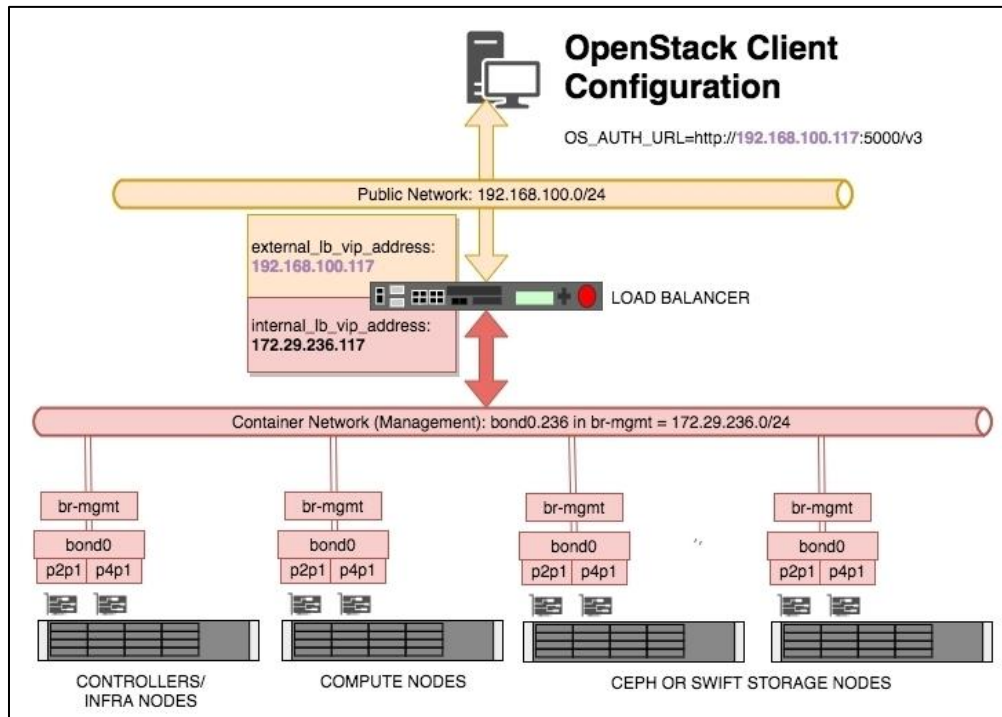
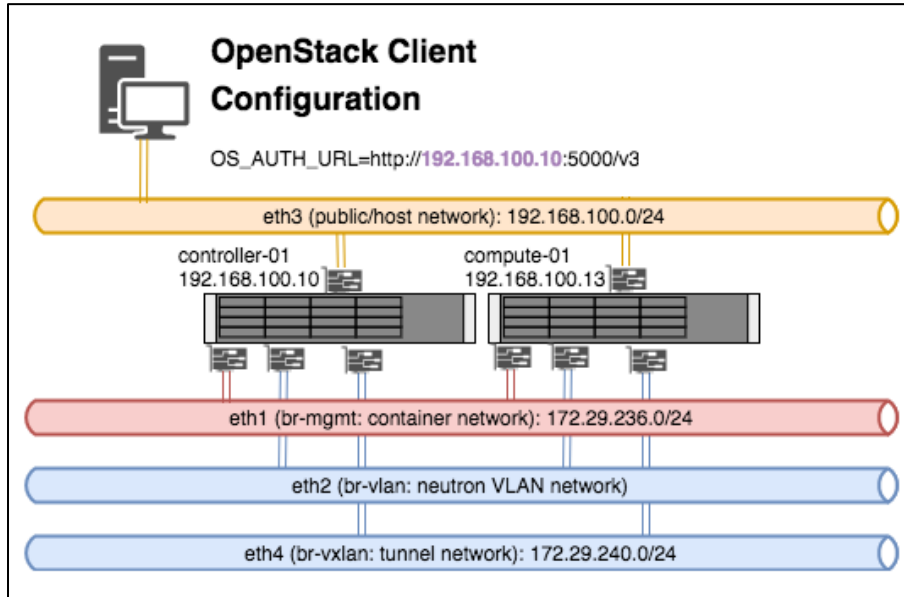
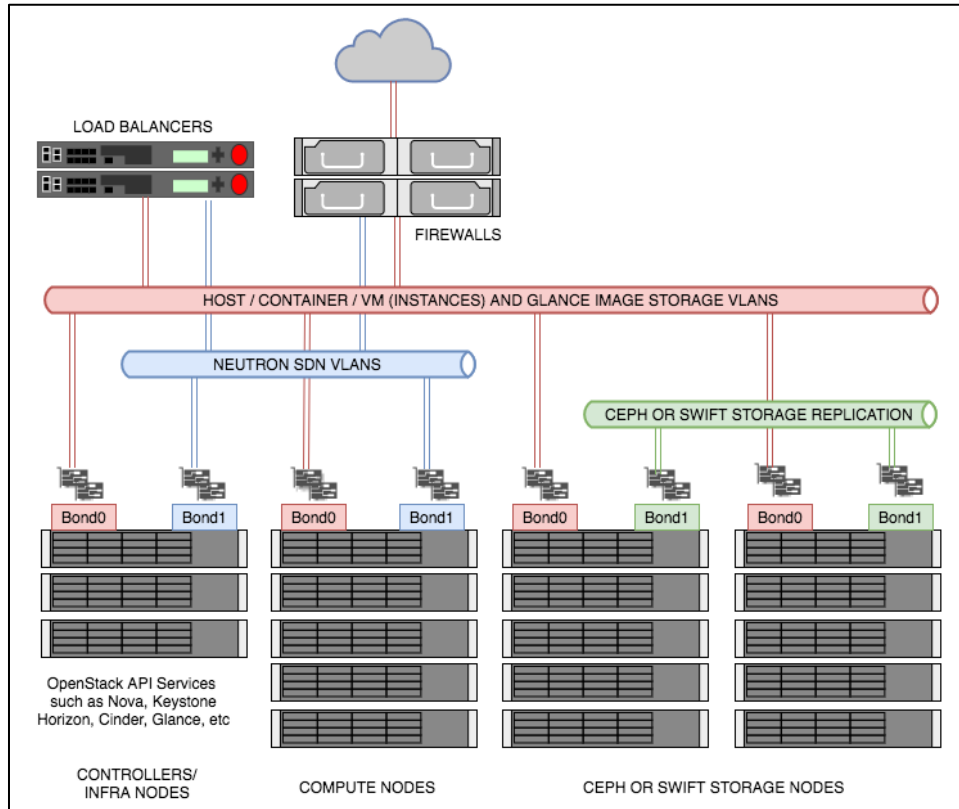
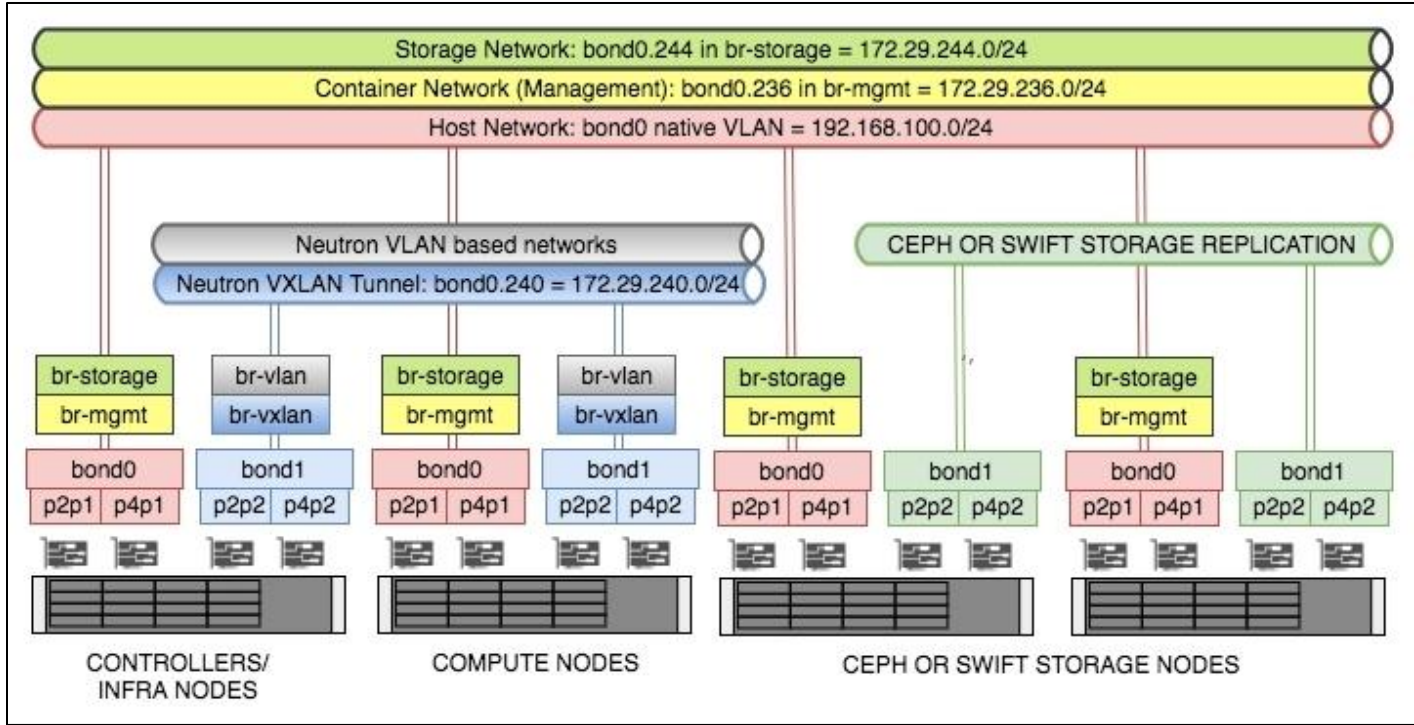
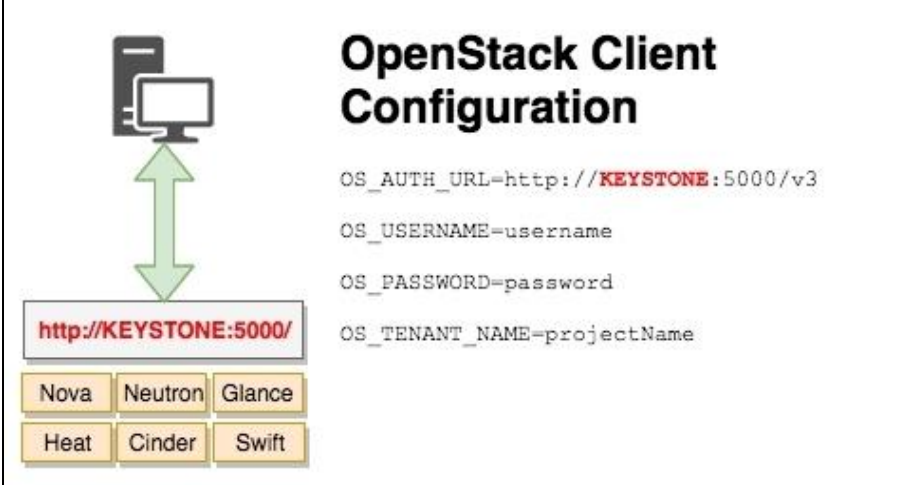


Chapter 1: Installing OpenStack with Ansible





Chapter 2: The OpenStack Client



The diagram shows a computer icon with a green double-headed arrow pointing to a box containing the URL `http://KEYSTONE:5000/`. Below this box are six buttons representing OpenStack services: Nova, Neutron, Glance, Heat, Cinder, and Swift.

OpenStack Client Configuration

```
OS_AUTH_URL=http://KEYSTONE:5000/v3
OS_USERNAME=username
OS_PASSWORD=password
OS_TENANT_NAME=projectName
```

ID	Name	Status
f6578a80-5f6f-4f2d-9a8a-9d84cec8a60d	cirros-image	active
d870f943-7617-4a57-a1d9-c3cdaedce03e	xenial-image	active

Field	Value
created_at	2017-12-14T11:08:59Z
image_id	f6578a80-5f6f-4f2d-9a8a-9d84cec8a60d
member_id	7321238d575342089c957d9e73f77af3
schema	/v2/schemas/member
status	pending
updated_at	2017-12-14T11:08:59Z

ID	Name
31d0c145fad24a53a7838f2629465dab	admin
7321238d575342089c957d9e73f77af3	anotherProject
b604fbcc259047b4813d45a71b1f246e	31d0c145fad24a53a7838f2629465dab-0f2ba0b6-a047-4e31-9ec9-9ccb0e9
db5594c6479346c690397d5bb5b5fa3c	service

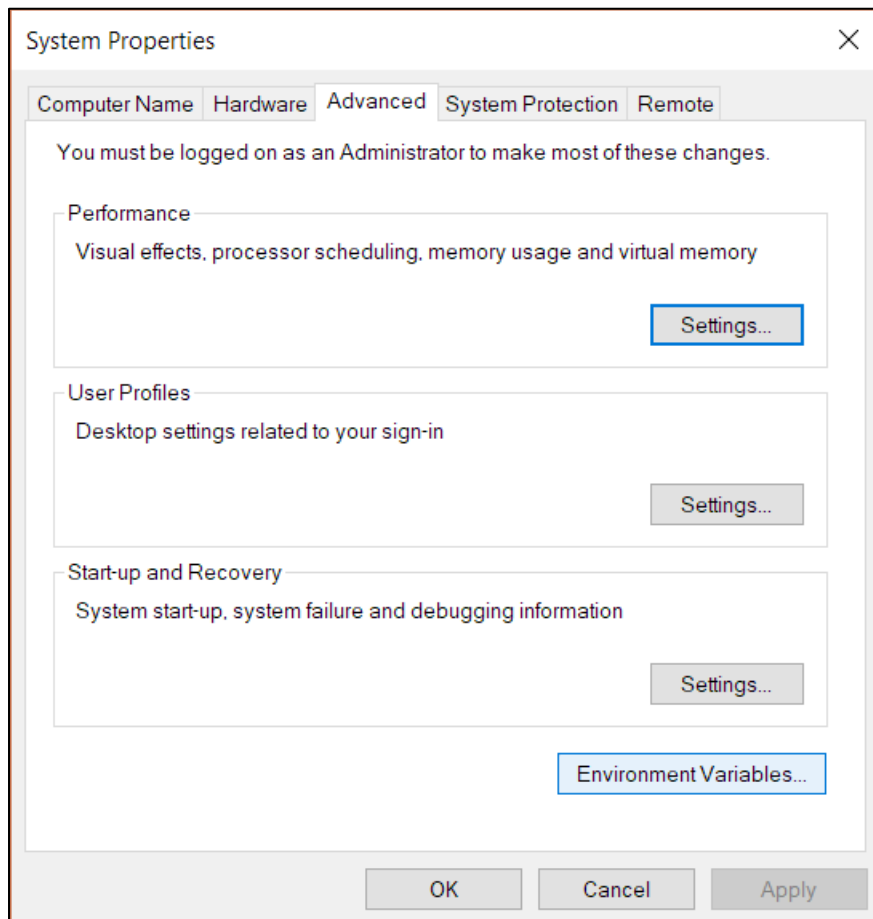
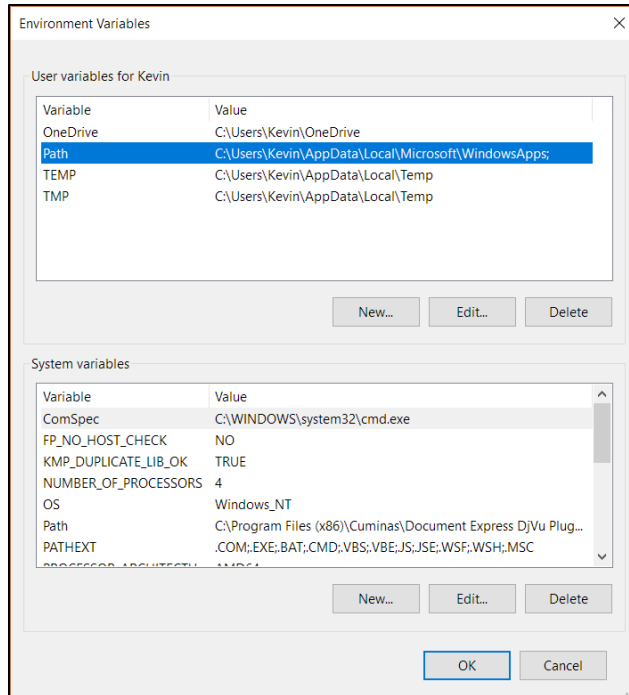
ID	Name	Status	Networks	Image Name
58ea640b-16ba-447c-85db-952174d70f7c	myWebserver1	VERIFY_RESIZE	GATEWAY_NET=192.168.100.25	cirros-image

```
Windows PowerShell
PS C:\Users\Kevin> python --version
Python 2.7.13
PS C:\Users\Kevin>
```

Edit environment variable

%USERPROFILE%\AppData\Local\Microsoft\WindowsApps	New
C:\Python27	Edit
	Browse...
	Delete
	Move Up
	Move Down
	Edit text...

OK Cancel



System

Control Panel > System and Security > System

Control Panel Home

View basic information about your computer


Windows edition

Windows 10 Pro

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Windows 10

- Device Manager
- Remote settings
- System protection
- Advanced system settings



Open

Pin to Quick access

 Manage

Pin to Start

Map network drive...

Disconnect network drive...

Create shortcut

Delete

Rename

Properties

Chapter 3: Keystone – OpenStack Identity Service

Name	Type	Endpoints
neutron	network	RegionOne public: https://192.168.100.117:9696 RegionOne internal: http://172.29.236.117:9696 RegionOne admin: http://172.29.236.117:9696
<u>cinderv2</u>	<u>volumev2</u>	RegionOne public: https://198.61.196.82:8776/v2/34637400afb9427d968242677f00df38 RegionOne internal: http://172.29.236.117:8776/v2/34637400afb9427d968242677f00df38 RegionOne admin: http://172.29.236.117:8776/v2/34637400afb9427d968242677f00df38
placement	placement	RegionOne public: https://198.61.196.82:8780/placement RegionOne internal: http://172.29.236.117:8780/placement RegionOne admin: http://172.29.236.117:8780/placement
keystone	identity	RegionOne admin: http://172.29.236.117:35357/v3 RegionOne internal: http://172.29.236.117:5000/v3 RegionOne public: https://198.61.196.82:5000/v3

Name	Type	Endpoints
neutron	network	RegionOne public: https://192.168.100.117:9696 RegionOne internal: http://172.29.236.117:9696 RegionOne admin: http://172.29.236.117:9696
cinderv2	volumev2	RegionOne public: https://192.168.100.117:8776/v2/34637400afb9427d968242677f00df38 RegionOne internal: http://172.29.236.117:8776/v2/34637400afb9427d968242677f00df38 RegionOne admin: http://172.29.236.117:8776/v2/34637400afb9427d968242677f00df38
placement	placement	RegionOne public: https://192.168.100.117:8780/placement RegionOne internal: http://172.29.236.117:8780/placement RegionOne admin: http://172.29.236.117:8780/placement
keystone	identity	RegionOne admin: http://172.29.236.117:35357/v3 RegionOne internal: http://172.29.236.117:5000/v3 RegionOne public: https://192.168.100.117:5000/v3

openstack domain list

ID	Name	Enabled	Description
7fa46026e99d412f8e8e1bafbe223b28	heat	True	
9ac17ca9db364339ac4c2ec0a63944dc	bookstore	True	Book domain
default	Default	True	The default domain
8743598cd239809898ac3434c2789891	olddomain	True	

ID	Name
6ed63575c8774ac19b55c4e68bdf3346	readergroup
6ed63585c9345633546754d98acf4374	oldgroup

ID	Name
26be34552f10466591f61b5ddf888408	oldrole
29fad90250ef4e1fa05e1fd872c34e76	user
2ff2b5fd48a54566801efb5297d874fd	heat_stack_owner
3275ad86248045efa90eafed7a8afdd7	admin
727c56418b2a40efb8bb43ab506e5b1d	heat_stack_user
9fe2ff9ee4384b1894a90878d3e92bab	_member_
c2e2e4c4c9b54ac8bb7d5c2b7748fecf	reseller_admin
d43790edbbfd4439817894d02037b3aa	ResellerAdmin
d5aa33d9cbe4451cb126b024742b1b80	remote_image

ID	Name
04fdb90ce9414c17837e8798638d7866	designate
12f4bb1040144fe79f7ea64e937efce3	keystone
140d7a1d25ee452aa0334f384f2e09f2	cinder
2691dc86d02e4c22a65ef85e3f47a20b	stack_domain_admin
28b2ba508e0241528b781854b602469b	nova
644299adb2a043af8c435b84efe013c0	swift
67d124ea1a0242768d55534bf02b2d14	developer
6f65086f244b4d78a53b7c8965f74c2e	oldreader
72dfeb591bb549e882009168c8fe3251	glance
792b25e2bd034200869b23e1e07a4033	heat
8b3632f9c6244432abd5b236733dc814	dispersion
b3cd17987bc64f6783c1c52ae6e5a6ff	admin
c5a31faa7f444f65bfa93a59f58c50f7	neutron
dfe887e4ff2c4ce2899d842d878d593f	alt_demo
ea6b80e54cc649c4ba4a569ab2ae3274	placement
edd0d6d781a149d9a07e96189aa5c654	demo

ID	Name
2381eba808264d1889bd526f7ab613d6	alt_demo
34637400afb9427d968242677f00df38	admin
6e076f2e3b5544bfacd47dafc28a5e46	service
c076aa3d961d4b8e85c0a7fe2c563708	cookbook
e70912f53a8c4b1bb75e99de18db1732	oldbook
f4c838a069884bf0a6f0641ef3160be1	demo

ID	Name
6ed63575c8774ac19b55c4e68bdf3346	reader group

Field	Value
description	Bookstore reader group
domain_id	9ac17ca9db364339ac4c2ec0a63944dc
id	6ed63575c8774ac19b55c4e68bdf3346
name	reader_group

Field	Value
default_project_id	c076aa3d961d4b8e85c0a7fe2c563708
domain_id	9ac17ca9db364339ac4c2ec0a63944dc
enabled	True
id	81607c74ea7340198ccda9c5e568df91
name	reader
options	{}
password_expires_at	None

ID	Name
2381eba808264d1889bd526f7ab613d6	alt_demo
34637400afb9427d968242677f00df38	admin
6e076f2e3b5544bfacd47dafc28a5e46	service
c076aa3d961d4b8e85c0a7fe2c563708	cookbook
f4c838a069884bf0a6f0641ef3160be1	demo

Field	Value
domain_id	9ac17ca9db364339ac4c2ec0a63944dc
enabled	True
id	3280e5d54e0048a381fa728e51f1ef7a
name	cloud_admin
options	{}
password_expires_at	None

openstack domain list

ID	Name	Enabled	Description
7fa46026e99d412f8e8e1bafbe223b28	heat	True	
9ac17ca9db364339ac4c2ec0a63944dc	bookstore	True	Book domain
default	Default	True	The default domain

ID	Name
26be34552f10466591f61b5ddf687407	swiftoperator
29fad90250ef4e1fa05e1fd872c34e76	user
2ff2b5fd48a54566801efb5297d874fd	heat_stack_owner
3275ad86248045efa90eafed7a8afdd7	admin
727c56418b2a40efb8bb43ab506e5b1d	heat_stack_user
9fe2ff9ee4384b1894a90878d3e92bab	_member_
c2e2e4c4c9b54ac8bb7d5c2b7748fecf	reseller_admin
d43790edbbfd4439817894d02037b3aa	ResellerAdmin
d5aa33d9cbe4451cb126b024742b1b80	remote_image

ID	Name	Domain
f33dcb973c6649ea9c7cb6d8ce7a1188	cloud_admin	bookstore

Field	Value
domain_id	default
id	29fad90250ef4e1fa05e1fd872c34e76
name	user

Field	Value
domain_id	9ac17ca9db364339ac4c2ec0a63944dc
id	f33dcb973c6649ea9c7cb6d8ce7a1188
name	cloud_admin

Field	Value
description	Cookbook Project
domain_id	9ac17ca9db364339ac4c2ec0a63944dc
enabled	True
id	c076aa3d961d4b8e85c0a7fe2c563708
is_domain	False
name	cookbook
parent_id	9ac17ca9db364339ac4c2ec0a63944dc



openstack®

Log in

Domain

User Name

Password

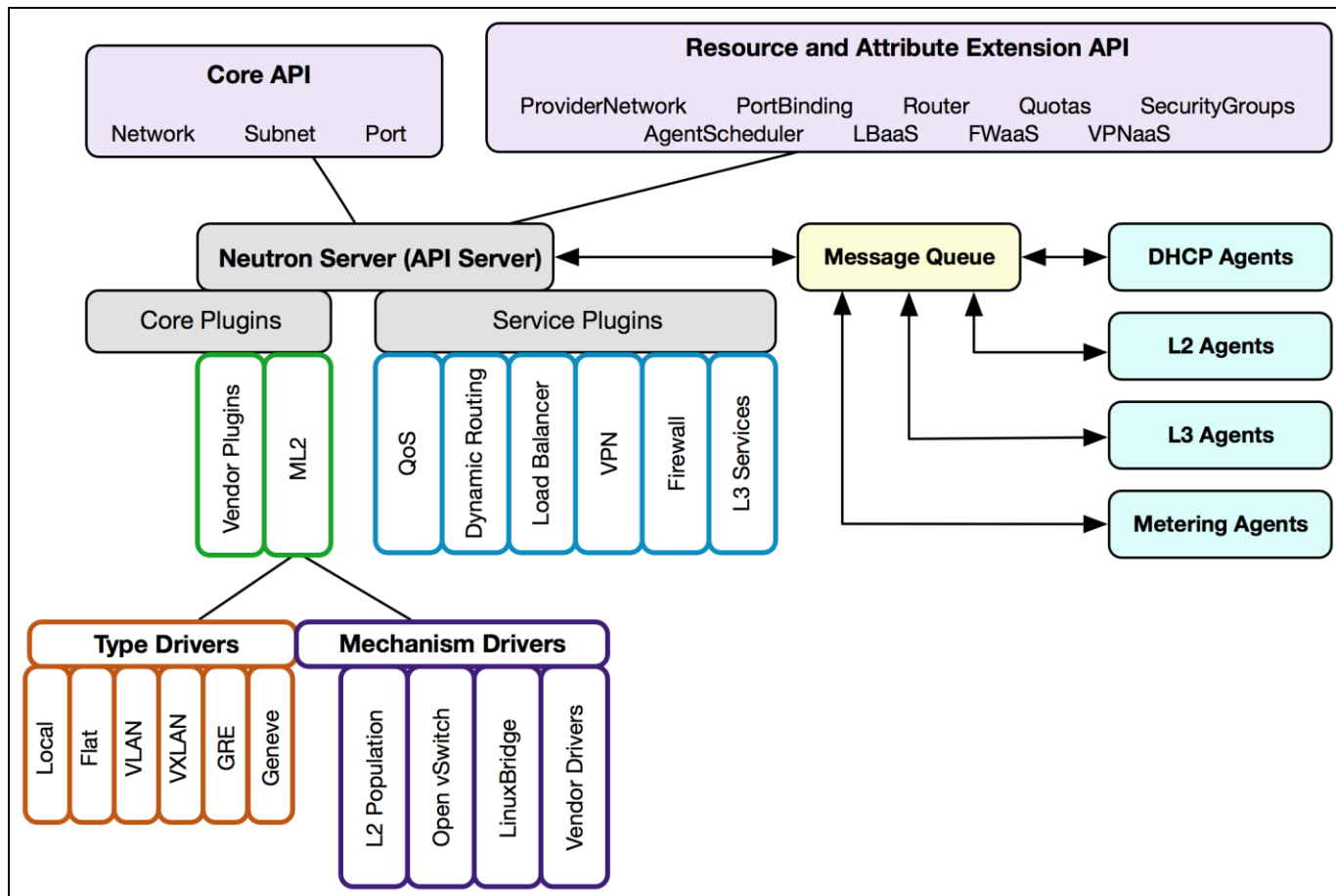


Connect

Field	Value
description	Book domain
enabled	True
id	9ac17ca9db364339ac4c2ec0a63944dc
name	bookstore

Chapter 4: Neutron – OpenStack Networking

Field	Value
admin_state_up	UP
availability_zone_hints	
availability_zones	
created_at	2017-10-11T21:26:24Z
description	
dns_domain	None
id	c881ce20-1649-4f03-bea7-40da536e21b2
ipv4_address_scope	None
ipv6_address_scope	None
is_default	False
is_vlan_transparent	None
mtu	1500
name	COOKBOOK_PROVIDER_NET
port_security_enabled	True
project_id	4819f952f3d0411183956113f0727b30
provider:network_type	vlan
provider:physical_network	vlan
provider:segmentation_id	200
qos_policy_id	None
revision_number	2
router:external	Internal
segments	None
shared	False
status	ACTIVE
subnets	
tags	
updated_at	2017-10-11T21:26:24Z



Created a new listener:

Field	Value
admin_state_up	True
connection_limit	-1
default_pool_id	0eddb485-af4b-4cf5-8d2f-4eaa13466059
default_tls_container_ref	
description	
id	6f31848a-e55e-4ada-8a14-38cbb2e89cb1
loadbalancers	{"id": "aa599cee-b49f-44f1-a0fd-51fa69ebf6db"}
name	COOKBOOK_LISTENER_1
protocol	HTTP
protocol_port	80
sni_container_refs	
tenant_id	4819f952f3d0411183956113f0727b30

Created a new member:

Field	Value
address	172.16.200.11
admin_state_up	True
id	dbf61f40-e9cd-435a-9a86-f3c8b537f1bb
name	COOKBOOK_MEMBER_1
protocol_port	80
subnet_id	eb7ccbbe-aac5-4c65-8f49-6d82bf806e15
tenant_id	4819f952f3d0411183956113f0727b30
weight	1

Created a new pool:

Field	Value
admin_state_up	True
description	
healthmonitor_id	
id	0eddb485-af4b-4cf5-8d2f-4eaa13466059
lb_algorithm	ROUND_ROBIN
listeners	
loadbalancers	{"id": "aa599cee-b49f-44f1-a0fd-51fa69ebf6db"}
members	
name	COOKBOOK_POOL_1
protocol	HTTP
session_persistence	
tenant_id	4819f952f3d0411183956113f0727b30

Created a new loadbalancer:

Field	Value
admin_state_up	True
description	
id	aa599cee-b49f-44f1-a0fd-51fa69ebf6db
listeners	
name	COOKBOOK_LOADBALANCER_1
operating_status	OFFLINE
pools	
provider	haproxy
provisioning_status	PENDING_CREATE
tenant_id	4819f952f3d0411183956113f0727b30
vip_address	172.16.200.14
vip_port_id	ea1b4c37-814b-4ac7-a31e-df1e694a1987
vip_subnet_id	eb7ccbbe-aac5-4c65-8f49-6d82bf806e15

Field	Value
security_group_ids	42231729-317e-4512-8996-635437b9adca, aafe2ee4-9958-4859-a2b3-2fac65650fee

Field	Value
admin_state_up	UP
allowed_address_pairs	
binding_host_id	
binding_profile	
binding_vif_details	
binding_vif_type	unbound
binding_vnic_type	normal
created_at	2017-10-12T14:18:42Z
data_plane_status	None
description	
device_id	
device_owner	
dns_assignment	None
dns_name	None
extra_dhcp_opts	
fixed_ips	ip_address='172.16.200.3', subnet_id='eb7ccbbe-aac5-4c65-8f49-6d82bf806e15'
id	e1dfc164-3015-4b78-83ec-6a31ccd1b7cd
ip_address	None
mac_address	fa:16:3e:b0:8c:d3
name	COOKBOOK_TEST_PORT_3
network_id	1a1a4e20-5d02-40aa-b534-7f76cbeb77a8
option_name	None
option_value	None
port_security_enabled	True
project_id	4819f952f3d0411183956113f0727b30
qos_policy_id	None
revision_number	3
security_group_ids	aafe2ee4-9958-4859-a2b3-2fac65650fee
status	DOWN
subnet_id	None
tags	
trunk_details	None
updated_at	2017-10-12T14:18:42Z

Field	Value
created_at	2017-10-12T13:37:48Z
description	
direction	ingress
ether_type	IPv4
id	08fd181f-d19f-49ca-b2d9-35b3f5acc574
name	None
port_range_max	80
port_range_min	80
project_id	4819f952f3d0411183956113f0727b30
protocol	tcp
remote_group_id	None
remote_ip_prefix	0.0.0.0/0
revision_number	0
security_group_id	aafe2ee4-9958-4859-a2b3-2fac65650fee
updated_at	2017-10-12T13:37:48Z

Field	Value
created_at	2017-10-12T13:34:49Z
description	COOKBOOK_SG_WEB
id	aafe2ee4-9958-4859-a2b3-2fac65650fee
name	COOKBOOK_SG_WEB
project_id	4819f952f3d0411183956113f0727b30
revision_number	2
rules	created_at='2017-10-12T13:34:49Z', direction='egress', ethertype='IPv4', id='6057b795-92c6-41f6-9c7f-6cd4d676223c', updated_at='2017-10-12T13:34:49Z'
updated_at	2017-10-12T13:34:49Z

ID	Name	Status	State	Distributed	HA	Project
058ea6a3-ca86-46f8-80c8-d63bbc195212	COOKBOOK_ROUTER_STANDALONE	ACTIVE	UP	False	False	4819f952f3d0411183956113f0727b30
90fa4310-8ead-4f8c-b867-8395ff089928	COOKBOOK_ROUTER_HA	ACTIVE	UP	False	True	4819f952f3d0411183956113f0727b30

```

root@controller-01-neutron-agents-container-21200603:~# ip netns exec qrouter-058ea6a3-ca86-46f8-80c8-d63bbc195212 iptables -t nat -L
Chain PREROUTING (policy ACCEPT)
target prot opt source destination
neutron-l3-agent-PREROUTING all -- anywhere anywhere

Chain INPUT (policy ACCEPT)
target prot opt source destination

Chain OUTPUT (policy ACCEPT)
target prot opt source destination
neutron-l3-agent-OUTPUT all -- anywhere anywhere

Chain POSTROUTING (policy ACCEPT)
target prot opt source destination
neutron-l3-agent-POSTROUTING all -- anywhere anywhere
neutron-postrouting-bottom all -- anywhere anywhere

Chain neutron-l3-agent-OUTPUT (1 references)
target prot opt source destination
DNAT all -- anywhere 192.168.200.13 to:172.16.200.11

Chain neutron-l3-agent-POSTROUTING (1 references)
target prot opt source destination
ACCEPT all -- anywhere anywhere ! ctstate DNAT

Chain neutron-l3-agent-PREROUTING (1 references)
target prot opt source destination
REDIRECT tcp -- anywhere 169.254.169.254 tcp dpt:http redir ports 9697
DNAT all -- anywhere 192.168.200.13 to:172.16.200.11

Chain neutron-l3-agent-float-snat (1 references)
target prot opt source destination
SNAT all -- 172.16.200.11 anywhere to:192.168.200.13

Chain neutron-l3-agent-snat (1 references)
target prot opt source destination
neutron-l3-agent-float-snat all -- anywhere anywhere
SNAT all -- anywhere anywhere to:192.168.200.3
SNAT all -- anywhere anywhere mark match ! 0x2/0xffff ctstate DNAT to:192.168.200.3

Chain neutron-postrouting-bottom (1 references)
target prot opt source destination
neutron-l3-agent-snat all -- anywhere anywhere /* Perform source NAT on outgoing traffic. */

```

Used to translate floating IP to fixed IP for traffic heading inbound from external provider network to instance/port

Used to translate fixed IP to floating IP for traffic heading outbound from instance/port in tenant network

Used to translate all other outbound traffic from instances/ports in tenant network

Field	Value
created_at	2017-10-12T13:03:43Z
description	
fixed_ip_address	172.16.200.11
floating_ip_address	192.168.200.13
floating_network_id	c881ce20-1649-4f03-bea7-40da536e21b2
id	e9659231-1820-464a-a154-a949bb332821
name	192.168.200.13
port_id	122dae7b-0340-42b5-856a-3e8e19f731e1
project_id	4819f952f3d0411183956113f0727b30
revision_number	0
router_id	058ea6a3-ca86-46f8-80c8-d63bbc195212
status	DOWN
updated_at	2017-10-12T13:03:43Z

```

root@controller-01-neutron-agents-container-21200603:~# ip netns exec qrouter-058ea6a3-ca86-46f8-80c8-d63bbc195212 ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: qg-ed006ed1-b8@if12: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default qlen 1000
    link/ether fa:16:3e:ed:6c:e7 brd ff:ff:ff:ff:ff:ff link-netnsid 0
    inet 192.168.200.3/24 brd 192.168.200.255 scope global qg-ed006ed1-b8
        valid_lft forever preferred_lft forever
    inet6 fe80::f816:3eff:feed:6ce7/64 scope link
        valid_lft forever preferred_lft forever
3: qr-c69005cb-aa@if13: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1450 qdisc noqueue state UP group default qlen 1000
    link/ether fa:16:3e:38:03:1c brd ff:ff:ff:ff:ff:ff link-netnsid 0
    inet 172.16.200.1/24 brd 172.16.200.255 scope global qr-c69005cb-aa
        valid_lft forever preferred_lft forever
    inet6 fe80::f816:3eff:fe38:31c/64 scope link
        valid_lft forever preferred_lft forever

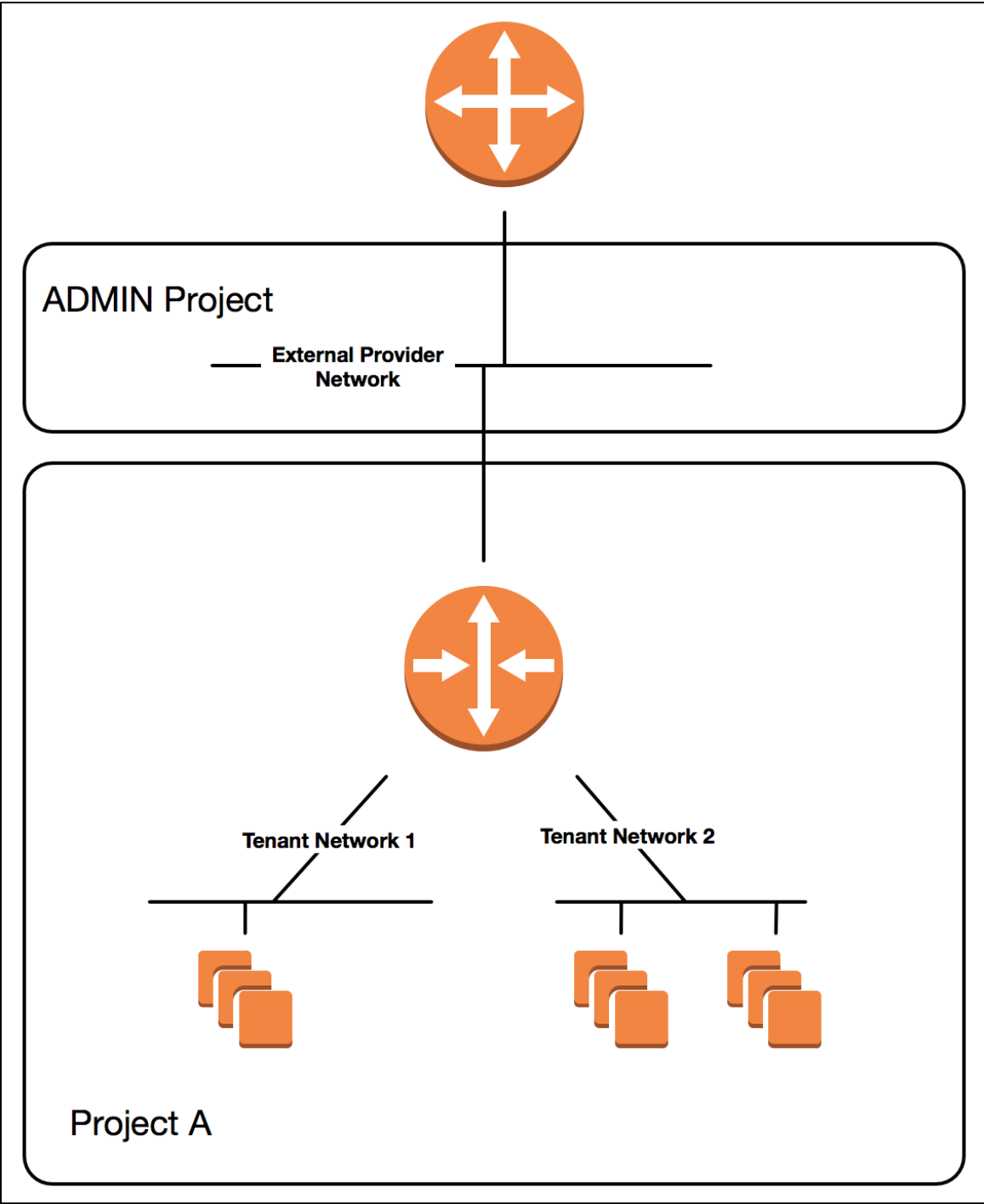
```

```

root@controller-01-utility-container-e2bad038:~# openstack port list --router COOKBOOK_ROUTER_STANDALONE

```

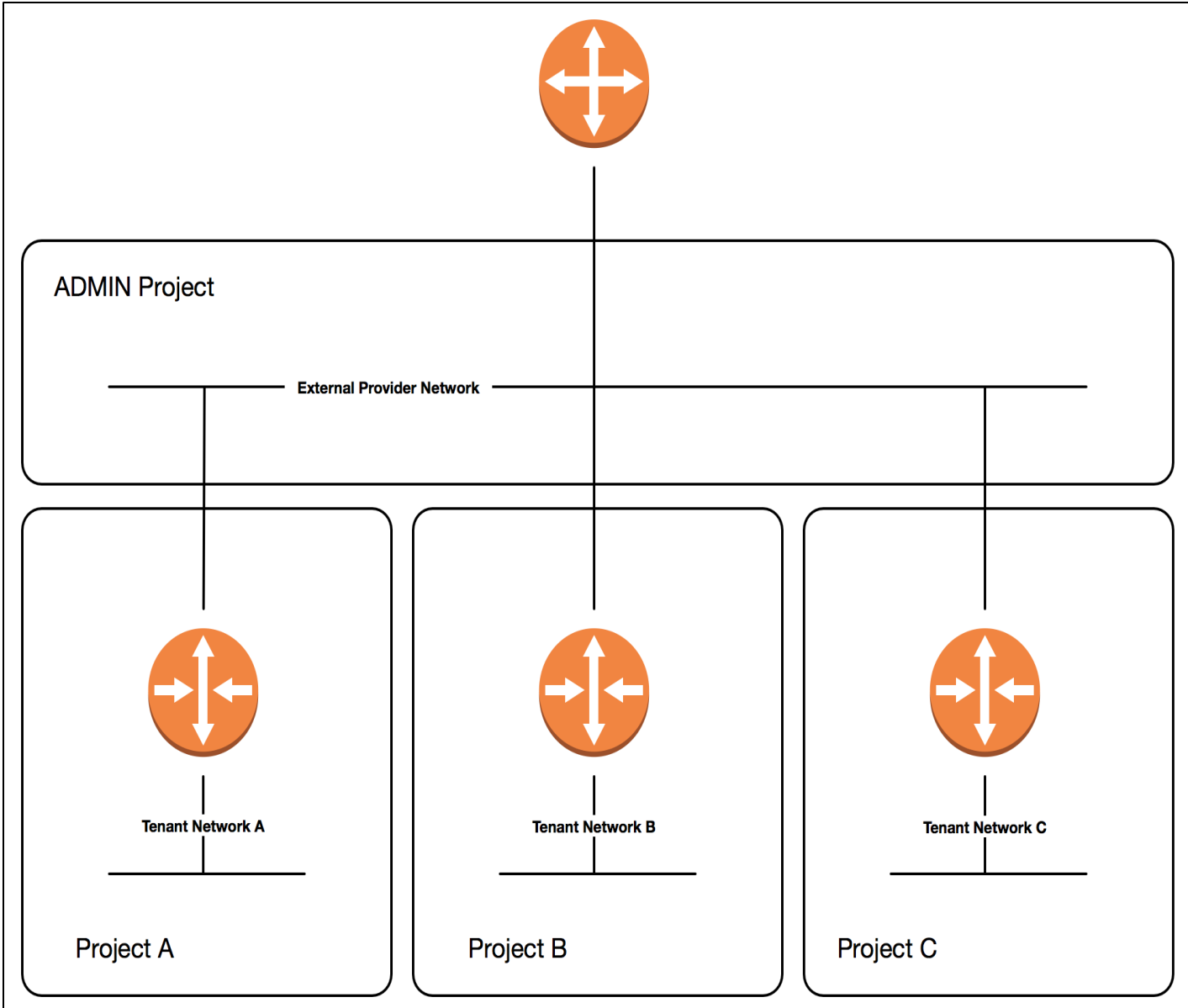
ID	Name	MAC Address	Fixed IP Addresses	Status
c69005cb-aa86-4fe7-81aa-64ea265863b4		fa:16:3e:38:03:1c	ip_address='172.16.200.1', subnet_id='eb7ccbbe-aac5-4c65-8f49-6d82bf806e15'	ACTIVE
ed006ed1-b832-41ab-b08c-7fc1ee4da10c		fa:16:3e:ed:6c:e7	ip_address='192.168.200.3', subnet_id='83b8a728-4914-4667-af19-bd8b798a2e25'	ACTIVE



Field	Value
admin_state_up	UP
availability_zone_hints	
availability_zones	
created_at	2017-10-12T12:06:33Z
description	
distributed	True
external_gateway_info	None
flavor_id	None
ha	False
id	c4dd4dbc-dfec-4a73-bc6d-e5df473699e9
name	COOKBOOK_ROUTER_DVR
project_id	4819f952f3d0411183956113f0727b30
revision_number	None
routes	
status	ACTIVE
tags	
updated_at	2017-10-12T12:06:33Z

Field	Value
admin_state_up	UP
availability_zone_hints	
availability_zones	
created_at	2017-10-12T12:04:58Z
description	
distributed	False
external_gateway_info	None
flavor_id	None
ha	True
id	90fa4310-8ead-4f8c-b867-8395ff089928
name	COOKBOOK_ROUTER_HA
project_id	4819f952f3d0411183956113f0727b30
revision_number	None
routes	
status	ACTIVE
tags	
updated_at	2017-10-12T12:04:58Z

Field	Value
admin_state_up	UP
availability_zone_hints	
availability_zones	
created_at	2017-10-12T11:33:17Z
description	
distributed	False
external_gateway_info	None
flavor_id	None
ha	False
id	058ea6a3-ca86-46f8-80c8-d63bbc195212
name	COOKBOOK_ROUTER_STANDALONE
project_id	4819f952f3d0411183956113f0727b30
revision_number	None
routes	
status	ACTIVE
tags	
updated_at	2017-10-12T11:33:17Z



Field	Value
admin_state_up	UP
allowed_address_pairs	
binding_host_id	
binding_profile	
binding_vif_details	
binding_vif_type	unbound
binding_vnic_type	normal
created_at	2017-10-12T11:30:06Z
data_plane_status	None
description	
device_id	
device_owner	
dns_assignment	None
dns_name	None
extra_dhcp_opts	
fixed_ips	ip_address='172.16.200.7', subnet_id='eb7ccbbe-aac5-4c65-8f49-6d82bf806e15'
id	5e9dde89-e498-4c63-83da-331e96b7fbd5
ip_address	None
mac_address	fa:16:3e:6c:91:83
name	C00KB00K_TEST_PORT_1
network_id	1a1a4e20-5d02-40aa-b534-7f76cbeb77a8
option_name	None
option_value	None
port_security_enabled	True
project_id	4819f952f3d0411183956113f0727b30
qos_policy_id	None
revision_number	3
security_group_ids	42231729-317e-4512-8996-635437b9adca
status	DOWN
subnet_id	None
tags	
trunk_details	None
updated_at	2017-10-12T11:30:06Z

Field	Value
allocation_pools	172.16.200.2-172.16.200.254
cidr	172.16.200.0/24
created_at	2017-10-12T11:28:43Z
description	
dns_nameservers	
enable_dhcp	True
gateway_ip	172.16.200.1
host_routes	
id	eb7ccbbe-aac5-4c65-8f49-6d82bf806e15
ip_version	4
ipv6_address_mode	None
ipv6_ra_mode	None
name	COOKBOOK_TENANT_SUBNET_1
network_id	1a1a4e20-5d02-40aa-b534-7f76cbeb77a8
project_id	4819f952f3d0411183956113f0727b30
revision_number	0
segment_id	None
service_types	
subnetpool_id	None
tags	
updated_at	2017-10-12T11:28:43Z
use_default_subnet_pool	None

Field	Value
admin_state_up	UP
availability_zone_hints	
availability_zones	
created_at	2017-10-12T11:26:37Z
description	
dns_domain	None
id	1a1a4e20-5d02-40aa-b534-7f76cbeb77a8
ipv4_address_scope	None
ipv6_address_scope	None
is_default	False
is_vlan_transparent	None
mtu	1450
name	COOKBOOK_TENANT_NET_1
port_security_enabled	True
project_id	4819f952f3d0411183956113f0727b30
provider:network_type	vxlan
provider:physical_network	None
provider:segmentation_id	40
qos_policy_id	None
revision_number	2
router:external	Internal
segments	None
shared	False
status	ACTIVE
subnets	
tags	
updated_at	2017-10-12T11:26:38Z

Field	Value
allocation_pools	192.168.200.2-192.168.200.254
cidr	192.168.200.0/24
created_at	2017-10-12T11:25:07Z
description	
dns_nameservers	
enable_dhcp	True
gateway_ip	192.168.200.1
host_routes	
id	83b8a728-4914-4667-af19-bd8b798a2e25
ip_version	4
ipv6_address_mode	None
ipv6_ra_mode	None
name	COOKBOOK_PROVIDER_SUBNET
network_id	c881ce20-1649-4f03-bea7-40da536e21b2
project_id	4819f952f3d0411183956113f0727b30
revision_number	0
segment_id	None
service_types	
subnetpool_id	None
tags	
updated_at	2017-10-12T11:25:07Z
use_default_subnet_pool	None

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ID	Name	Availability Zone
19	cookbook-threadripper-hosts	None
20	cookbook-ssd-hosts	None

Field	Value
availability_zone	None
created_at	2017-09-08T19:43:41.141075
deleted	False
deleted_at	None
id	20
name	cookbook-ssd-hosts
updated_at	None

ID	Name	Availability Zone
19	cookbook-threadripper-hosts	None

Server UUID	Live Migration Accepted	Error Message
ee2b46c0-015f-4928-9a49-367ccea599e2	True	

Binary	Host	Status
nova-conductor	controller-01-nova-conductor-container-660b30cd	enabled
nova-scheduler	controller-01-nova-scheduler-container-95b0fedf	enabled
nova-consoleauth	controller-01-nova-console-container-d428ff27	enabled
nova-compute	compute-01	enabled
nova-compute	compute-02	enabled
nova-compute	compute-03	disabled

Binary	Host	Status
nova-conductor	controller-01-nova-conductor-container-660b30cd	enabled
nova-scheduler	controller-01-nova-scheduler-container-95b0fedf	enabled
nova-consoleauth	controller-01-nova-console-container-d428ff27	enabled
nova-compute	compute-01	enabled
nova-compute	compute-02	enabled
nova-compute	compute-03	enabled

ID	Hypervisor Hostname	Hypervisor Type	Host IP	State
1	compute-01.cook.book	QEMU	172.29.236.13	up
2	compute-02.cook.book	QEMU	172.29.236.14	up
3	compute-03.cook.book	QEMU	172.29.236.15	up

Field	Value
addresses	public=10.1.13.9
name	cookbook.test
status	ACTIVE

Field	Value
addresses	public=10.1.13.9
name	cookbook.test
status	SHELVED_OFFLOADED

Field	Value
name	cookbook.test
status	ACTIVE

Field	Value
name	cookbook.test
status	RESCUE

Field	Value
adminPass	zmWJRw6C5XHk

Name	Status
cookbook.test_restore	ACTIVE
cookbook.test.03	ACTIVE
cookbook.test.02	ACTIVE
cookbook.test	ACTIVE

Name	Status
cookbook.test.03	ACTIVE
cookbook.test.02	ACTIVE
cookbook.test	ACTIVE

ID	Name	Status
f2c92002-7441-4ef2-bb09-e5ca606b9de7	cookbook.test_snapshot-2017-09-06T214209	active

Field	Value
checksum	None
container_format	None
created_at	2017-09-06T21:42:13Z
disk_format	None
file	/v2/images/f2c92002-7441-4ef2-bb09-e5ca606b9de7/file
id	f2c92002-7441-4ef2-bb09-e5ca606b9de7
min_disk	5
min_ram	0
name	cookbook.test_snapshot-2017-09-06T214209
owner	b54c75536541478f9c9ce48b0d8992c5
properties	base_image_ref='00b822ba-be44-4639-b577-45e8dd37c06d', boot_roles='heat_stack_owner,admin', image_type='snapshot', instance_uuid='94f5c32f-2412-4f5c-ba92-7874790b832a', user_id='832892c82c2a48fca3571946e4cdcce9'
protected	False
schema	/v2/schemas/image
size	None
status	queued
tags	
updated_at	2017-09-06T21:42:13Z
virtual_size	None
visibility	private

Name	Status
cookbook.test.03	ACTIVE
cookbook.test.02	ACTIVE
cookbook.test	ACTIVE

Name	Status
Ubuntu 16.04 amd64	active
cirros	active
cirros_alt	active

Field	Value
OS-EXT-SRV-ATTR:hypervisor_hostname	compute-02.cook.book
name	cookbook.test

Field	Value
OS-EXT-STS:task_state	resize_migrating
name	cookbook.test

Field	Value
OS-EXT-SRV-ATTR:hypervisor_hostname	compute-01.cook.book
name	cookbook.test

ID	Hypervisor Hostname	Hypervisor Type	Host IP	State
1	compute-01.cook.book	QEMU	172.29.236.13	up
2	compute-02.cook.book	QEMU	172.29.236.14	up

ID	Name	Status	Networks	Image Name
0001bbf6-a054-4d78-b17d-d1d389fa5777	cookbook.test.02	ACTIVE	public=10.1.13.5	Ubuntu 16.04 amd64

ID	Name	Status	Networks	Image Name
0001bbf6-a054-4d78-b17d-d1d389fa5777	cookbook.test.02	ACTIVE	public=10.1.13.5	Ubuntu 16.04 amd64
51119fbb-fe94-4cbb-87ab-9f57cb880250	cookbook.test	ACTIVE	public=10.1.13.7	Ubuntu 16.04 amd64

ID	Name	Status	Networks	Image Name
62df5e12-e13d-4132-ac73-a17cf7d190d4	cookbook.test	SHUTOFF	public=10.1.13.3	Ubuntu 16.04 amd64

ID	Name	Status	Networks	Image Name
62df5e12-e13d-4132-ac73-a17cf7d190d4	cookbook.test	ACTIVE	public=10.1.13.3	Ubuntu 16.04 amd64

Field	Value
OS-DCF:diskConfig	MANUAL
OS-EXT-AZ:availability_zone	nova
OS-EXT-SRV-ATTR:host	compute-01
OS-EXT-SRV-ATTR:hypervisor_hostname	compute-01.cook.book
OS-EXT-SRV-ATTR:instance_name	instance-00000073
OS-EXT-STS:power_state	Running
OS-EXT-STS:task_state	None
OS-EXT-STS:vm_state	active
OS-SRV-USG:launched_at	2017-09-06T18:49:54.000000
OS-SRV-USG:terminated_at	None
accessIPv4	
accessIPv6	
addresses	public=10.1.13.3
config_drive	
created	2017-09-06T18:49:40Z
flavor	openstack.cookbook (0e039b72-50b2-4827-9403-e1f855bc2faf)
hostId	8c16dc36a8f61c00194243889c92a3e0079a987cf15b2029b025201e
id	62df5e12-e13d-4132-ac73-a17cf7d190d4
image	Ubuntu 16.04 amd64 (08b822ba-be44-4639-b577-45e8dd37c06d)
key_name	cookbook_key
name	cookbook.test
progress	0
project_id	b54c75536541478f9c9ce48b0d8992c5
properties	
security_groups	name='default'
status	ACTIVE
updated	2017-09-06T18:49:55Z
user_id	832892c82c2a48fca3571946e4cdcce9
volumes_attached	

Field	Value
fingerprint	79:7e:e3:a1:d3:6b:9c:a8:73:75:94:d7:2a:b5:61:2d
name	cookbook_key
user_id	832892c82c2a48fca3571946e4cdcce9

ID	Name	Subnets
3f263ef3-6b81-4e4e-a125-4804dff53aeb	private	6e0cbdcf-2e75-4bf2-9e99-8e3ba4b42ad6
6cb5a4ce-1ea5-4817-9c34-a2212a66f394	public	db3b0e8d-bc2b-4569-8d42-7c833ff3a330

ID	Name	Status
08b822ba-be44-4639-b577-45e8dd37c06d	Ubuntu 16.04 amd64	active
d47b0acc-4755-44c6-8128-1a70b169437d	cirros	active
6aa08a3d-c4b4-4f6f-97af-9b37ae02b87b	cirros_alt	active

Field	Value
OS-FLV-DISABLED:disabled	False
OS-FLV-EXT-DATA:ephemeral	0
access_project_ids	None
disk	5
id	5c3c4400-412d-431e-900d-75f50c6bf73f
name	openstack.cookbook
os-flavor-access:is_public	True
properties	quota:disk_read_iops='100', quota:disk_write_iops='100'
ram	512
rxtx_factor	1.0
swap	
vcpus	1

Field	Value
OS-FLV-DISABLED:disabled	False
OS-FLV-EXT-DATA:ephemeral	0
access_project_ids	None
disk	5
id	5c3c4400-412d-431e-900d-75f50c6bf73f
name	openstack.cookbook
os-flavor-access:is_public	True
properties	
ram	512
rxtx_factor	1.0
swap	
vcpus	1

Field	Value
OS-FLV-DISABLED:disabled	False
OS-FLV-EXT-DATA:ephemeral	0
access_project_ids	None
disk	5
id	5c3c4400-412d-431e-900d-75f50c6bf73f
name	openstack.cookbook
os-flavor-access:is_public	True
properties	quota:cpu_period='2500', quota:cpu_quota='5000'
ram	512
rxtx_factor	1.0
swap	
vcpus	1

Field	Value
OS-FLV-DISABLED:disabled	False
OS-FLV-EXT-DATA:ephemeral	0
access_project_ids	None
disk	20
id	5c3c4400-412d-431e-900d-75f50c6bf73f
name	openstack.cookbook
os-flavor-access:is_public	True
properties	
ram	1024
rxtx_factor	1.0
swap	
vcpus	2

ID	Name	RAM	Disk	Ephemeral	VCPUs	Is Public
201	tempest1	256	1	0	1	True
202	tempest2	512	1	0	1	True

ID	Name	RAM	Disk	Ephemeral	VCPUs	Is Public
201	tempest1	256	1	0	1	True
202	tempest2	512	1	0	1	True
e15fd116-cf35-4a20-b035-84b1d297ec82	openstack.cookbook	512	5	0	1	True

ID	Name	RAM	Disk	Ephemeral	VCPUs	Is Public
201	tempest1	256	1	0	1	True
202	tempest2	512	1	0	1	True
e15fd116-cf35-4a20-b035-84b1d297ec82	openstack.cookbook	512	5	0	1	True

Field	Value
OS-FLV-DISABLED:disabled	False
OS-FLV-EXT-DATA:ephemeral	0
disk	5
id	e15fd116-cf35-4a20-b035-84b1d297ec82
name	openstack.cookbook
os-flavor-access:is_public	True
properties	
ram	512
rxtx_factor	1.0
swap	
vcpus	1

ID	Name	RAM	Disk	Ephemeral	VCPUs	Is Public
201	tempest1	256	1	0	1	True
202	tempest2	512	1	0	1	True

Zone Name	Zone Status
internal	available
nova	available
nova	available
nova	available

Field	Value
availability_zone	cookbook-az
created_at	2017-09-19T00:54:48.000000
deleted	False
deleted_at	None
hosts	[]
id	24
metadata	{'availability_zone': 'cookbook-az'}
name	cookbook-az
updated_at	None

Field	Value
availability_zone	cookbook-az
created_at	2017-09-19T00:54:48.000000
deleted	False
deleted_at	None
hosts	[u'compute-01']
id	24
metadata	{u'availability_zone': u'cookbook-az'}
name	cookbook-az
updated_at	None

Zone Name	Zone Status
internal	available
cookbook-az	available
nova	available
nova	available
nova	available

Field	Value
OS-DCF:diskConfig	MANUAL
OS-EXT-AZ:availability_zone	cookbook-az
OS-EXT-SRV-ATTR:host	None
OS-EXT-SRV-ATTR:hypervisor_hostname	None
OS-EXT-SRV-ATTR:instance_name	
OS-EXT-STS:power_state	NOSTATE
OS-EXT-STS:task_state	scheduling
OS-EXT-STS:vm_state	building
OS-SRV-USG:launched_at	None
OS-SRV-USG:terminated_at	None
accessIPv4	
accessIPv6	
addresses	
adminPass	doUrpyJUJ5GL
config_drive	
created	2017-09-19T01:15:48Z
flavor	openstack.cookbook (0e039b72-50b2-4827-9403-e1f855bc2faf)
hostId	
id	0897c2f6-86e8-4860-86be-54ce6f750658
image	Ubuntu 16.04 amd64 (08b822ba-be44-4639-b577-45e8dd37c06d)
key_name	cookbook_key
name	cookbook.test-03
progress	0
project_id	b54c75536541478f9c9ce48b0d8992c5
properties	
security_groups	name='bd7d5e0f-538a-4d93-b123-98cc3207b3d2'
status	BUILD
updated	2017-09-19T01:15:48Z
user_id	832892c82c2a48fca3571946e4cdcce9
volumes_attached	

Zone Name	Zone Status
internal	available
cookbook-az	available
nova	available
nova	available
nova	available

Field	Value
availability_zone	cookbook-az
created_at	2017-09-19T00:54:48.000000
deleted	False
deleted_at	None
hosts	[u'compute-01']
id	24
metadata	{u'availability_zone': u'cookbook-az'}
name	cookbook-az
updated_at	None

Field	Value
availability_zone	cookbook-az
created_at	2017-09-19T00:54:48.560890
deleted	False
deleted_at	None
id	24
name	cookbook-az
updated_at	None

Zone Name	Zone Status
internal	available
nova	available
nova	available
nova	available

ID	Name	Availability Zone
20	cookbook-ssd-hosts	None

Field	Value
availability_zone	None
created_at	2017-09-08T20:37:33.000000
deleted	False
deleted_at	None
hosts	[]
id	21
name	cookbook-threadripper-hosts
properties	
updated_at	None

ID	Name	Availability Zone
20	cookbook-ssd-hosts	None
21	cookbook-threadripper-hosts	None

Field	Value
availability_zone	None
created_at	2017-09-08T19:43:41.000000
deleted	False
deleted_at	None
hosts	[u'compute-02']
id	20
name	cookbook-ssd-hosts
properties	ssd='true'
updated_at	None

Field	Value
availability_zone	None
created_at	2017-09-08T19:43:41.000000
deleted	False
deleted_at	None
hosts	[u'compute-02']
id	20
name	cookbook-ssd-hosts
properties	
updated_at	None

Field	Value
availability_zone	None
created_at	2017-09-08T19:43:41.000000
deleted	False
deleted_at	None
hosts	[u'compute-02']
id	20
metadata	{}
name	cookbook-ssd-hosts
updated_at	None

Field	Value
availability_zone	None
created_at	2017-09-08T19:43:41.000000
deleted	False
deleted_at	None
hosts	[u'compute-02', u'compute-01']
id	20
metadata	{}
name	cookbook-ssd-hosts
updated_at	None

Field	Value
availability_zone	None
created_at	2017-09-08T19:43:41.000000
deleted	False
deleted_at	None
hosts	[u'compute-02', u'compute-01']
id	20
metadata	{}
name	cookbook-ssd-hosts
updated_at	None

Field	Value
availability_zone	None
created_at	2017-09-08T19:43:41.000000
deleted	False
deleted_at	None
hosts	[u'compute-02']
id	20
name	cookbook-ssd-hosts
properties	
updated_at	None

Chapter 6: Glance – OpenStack Image Service

ID	Name	Status
a4b5074c-3520-439f-9f85-15e78d5d62f2	COOKBOOK_CIRROS_IMAGE	active
d120a923-5246-4dca-8f52-51a951bffce5	COOKBOOK_UBUNTU_IMAGE	active

Field	Value
checksum	7316af7358dd32ca1956d72ac2c9e147
container_format	bare
created_at	2017-10-16T12:26:38Z
disk_format	qcow2
file	/v2/images/a4b5074c-3520-439f-9f85-15e78d5d62f2/file
id	a4b5074c-3520-439f-9f85-15e78d5d62f2
min_disk	0
min_ram	0
name	COOKBOOK_CIRROS_IMAGE
owner	4819f952f3d0411183956113f0727b30
protected	False
schema	/v2/schemas/image
size	12528640
status	active
tags	
updated_at	2017-10-16T12:26:39Z
virtual_size	None
visibility	shared

Field	Value
checksum	14268d0aa56d24a1336955ede3759f7b
container_format	bare
created_at	2017-10-17T18:48:28Z
disk_format	qcow2
file	/v2/images/c61095ad-6029-4a86-9af9-7cd02934b7d8/file
id	c61095ad-6029-4a86-9af9-7cd02934b7d8
min_disk	0
min_ram	0
name	MY_CENTOS_IMAGE
owner	4819f952f3d0411183956113f0727b30
protected	False
schema	/v2/schemas/image
size	1811021824
status	active
tags	
updated_at	2017-10-17T18:48:40Z
virtual_size	None
visibility	shared

```

...
[ 42.133751] 8021q: 802.1Q VLAN Support v1.8
[ 43.365590] dracut-initqueue[564]: RTNETLINK answers: File exists
[ 45.471515] 8021q: adding VLAN 0 to HW filter on device eth0
[ 56.147404] dracut-initqueue[564]: % Total    % Received % Xferd  Average Speed   Time    Time       Time  Current
[ 56.164660] dracut-initqueue[564]: Dload  Upload  Total  Spent    Left  Speed
 6 317M   6 19.7M   0    0  811k    0  0:06:40  0:00:24  0:06:16  625k   0  --:--:--  --:--:--  --:--:--    0
17 317M  17 55.3M   0    0 1113k    0  0:04:51  0:00:50  0:04:05 1787k
24 317M  24 79.2M   0    0 1055k    0  0:05:07  0:01:15  0:03:50  628k
31 317M  31 98.5M   0    0  980k    0  0:05:31  0:01:41  0:03:56 1459k
...
Starting automated install.....
Checking software selection
...
Running pre-installation scripts
.
Starting package installation process
...

```

Field	Value
checksum	e6f42cddf356ae2a2633e91e20a9916b
container_format	bare
created_at	2017-10-16T12:34:21Z
disk_format	qcow2
file	/v2/images/d120a923-5246-4dca-8f52-51a951bffce5/file
id	d120a923-5246-4dca-8f52-51a951bffce5
min_disk	0
min_ram	0
name	COOKBOOK_UBUNTU_IMAGE
owner	4819f952f3d0411183956113f0727b30
properties	architecture='m68k', os_distro='ubuntu'
protected	False
schema	/v2/schemas/image
size	290652160
status	deactivated
tags	
updated_at	2017-10-17T13:19:46Z
virtual_size	None
visibility	shared

Field	Value
checksum	e6f42cddf356ae2a2633e91e20a9916b
container_format	bare
created_at	2017-10-16T12:34:21Z
disk_format	qcow2
file	/v2/images/d120a923-5246-4dca-8f52-51a951bffce5/file
id	d120a923-5246-4dca-8f52-51a951bffce5
min_disk	0
min_ram	0
name	COOKBOOK_UBUNTU_IMAGE
owner	4819f952f3d0411183956113f0727b30
properties	architecture='m68k', os_distro='ubuntu'
protected	True
schema	/v2/schemas/image
size	290652160
status	active
tags	
updated_at	2017-10-16T13:53:14Z
virtual_size	None
visibility	shared

Field	Value
checksum	e6f42cddf356ae2a2633e91e20a9916b
container_format	bare
created_at	2017-10-16T12:34:21Z
disk_format	qcow2
file	/v2/images/d120a923-5246-4dca-8f52-51a951bfffce5/file
id	d120a923-5246-4dca-8f52-51a951bfffce5
min_disk	0
min_ram	0
name	COOKBOOK_UBUNTU_IMAGE
owner	4819f952f3d0411183956113f0727b30
properties	architecture='m68k', os_distro='ubuntu'
protected	False
schema	/v2/schemas/image
size	290652160
status	active
tags	
updated_at	2017-10-16T13:21:57Z
virtual_size	None
visibility	shared

Field	Value
checksum	None
container_format	None
created_at	2017-10-16T13:11:59Z
disk_format	None
file	/v2/images/9c3d3a31-a436-44c4-ba5c-7c26ae38a1de/file
id	9c3d3a31-a436-44c4-ba5c-7c26ae38a1de
min_disk	1
min_ram	0
name	COOKBOOK_TEST_SNAPSHOT_20171016
owner	4819f952f3d0411183956113f0727b30
properties	base_image_ref='a4b5074c-3520-439f-9f85-15e78d5d62f2', boot_roles='heat_stack_owner,admin', image_type='snapshot', instance_uuid='d92eaf20-ee99-4e5d-9a31-f987016446ad', owner_project_name='admin', owner_user_name='admin', user_id='2ce040fef90e4ee69b1affadcb6491e0'
protected	False
schema	/v2/schemas/image
size	None
status	queued
tags	
updated_at	2017-10-16T13:11:59Z
virtual_size	None
visibility	private

ID	Name	Status
d120a923-5246-4dca-8f52-51a951bfffce5	COOKBOOK_UBUNTU_IMAGE	active

Field	Value
created_at	2017-10-16T13:01:06Z
image_id	d120a923-5246-4dca-8f52-51a951bfffce5
member_id	55143cf943124d04b2e02db05af907d0
schema	/v2/schemas/member
status	pending
updated_at	2017-10-16T13:01:06Z

```
root@controller-01-utility-container-e2bad038:~# openstack image list
```

```
root@controller-01-utility-container-e2bad038:~# ls -la /tmp/*.qcow2
-rw-r--r-- 1 root root 290652160 Oct 16 12:43 /tmp/my_downloaded_ubuntu_image.qcow2
```

```
root@controller-01-utility-container-e2bad038:~# openstack image show COOKBOOK_CIRROS_IMAGE
```

Field	Value
checksum	7316af7358dd32ca1956d72ac2c9e147
container_format	bare
created_at	2017-10-16T12:26:38Z
disk_format	qcow2
file	/v2/images/a4b5074c-3520-439f-9f85-15e78d5d62f2/file
id	a4b5074c-3520-439f-9f85-15e78d5d62f2
min_disk	0
min_ram	0
name	COOKBOOK_CIRROS_IMAGE
owner	4819f952f3d0411183956113f0727b30
protected	False
schema	/v2/schemas/image
size	12528640
status	active
tags	
updated_at	2017-10-16T12:26:39Z
virtual_size	None
visibility	shared

Chapter 7: Cinder – OpenStack Block Storage

Name	Status
cookbook.volume.boot.test	available
cookbook.boot.volume	available
cookbook.test	available

Name	Status
cookbook.volume.boot.test	attaching
cookbook.boot.volume	attaching
cookbook.test	available

Name	Consumer	Properties
High IOPS	both	maxIOPS='500'

Field	Value
consumer	both
id	6c19d357-71fb-4be7-bede-2590b2512067
name	High IOPS
properties	maxIOPS='500'

ID	Name	Consumer	Associations	Properties
----	------	----------	--------------	------------

Field	Value
attachments	[]
availability_zone	nova
bootable	false
consistencygroup_id	None
created_at	2018-01-02T16:42:10.820348
description	High IOPS Volume
encrypted	False
id	978780e6-49ca-4a6a-b242-cdc4a181a4d3
migration_status	None
multiattach	False
name	highiops.volume
properties	
replication_status	None
size	1
snapshot_id	None
source_valid	None
status	creating
type	High IOPS
updated_at	None
user_id	b01e337fd00f42b195ee8287eb6d8334

ID	Name	Is Public
419d30c5-e030-48a0-a232-38ebb4c5f2d1	High IOPS	True
27aaadd0-907c-4db9-8314-ffcadf840d4c	lvm	True

Field	Value
description	The High IOPS volume type is QOS applied to 500 IOPS
id	419d30c5-e030-48a0-a232-38ebb4c5f2d1
is_public	True
name	High IOPS

ID	Name	Is Public
27aaadd0-907c-4db9-8314-ffcadf840d4c	lvm	True

ID	Name	Status
dba5520f-1e0b-4368-821b-03639a7f0725	newcookbook.volume	available
47ad8896-22fa-4120-ae71-940db069346d	cookbook.volume	available

Field	Value
attachments	[]
availability_zone	nova
bootable	false
consistencygroup_id	None
created_at	2018-01-02T16:09:09.528566
description	None
encrypted	False
id	dba5520f-1e0b-4368-821b-03639a7f0725
migration_status	None
multiattach	False
name	newcookbook.volume
properties	
replication_status	None
size	1
snapshot_id	c74a9ba9-10a1-4567-b744-381c3ac1f4cd
source_volid	None
status	creating
type	None
updated_at	None
user_id	b01e337fd00f42b195ee8287eb6d8334

Field	Value
created_at	2018-01-02T15:57:37.061775
description	None
id	8acfb2bd-1911-4885-9490-179959a60d51
name	cookbook.snapshot
properties	
size	10
status	creating
updated_at	None
volume_id	daeddd6c-908a-4ea8-8632-d93d198c2621

ID	Name	Status
daeddd6c-908a-4ea8-8632-d93d198c2621	cookbook.volume	available

ID	Name	Status	Size	Attached to
daeddd6c-908a-4ea8-8632-d93d198c2621	cookbook.volume	available	10	

ID	Name	Status	Size	Attached to
daeddd6c-908a-4ea8-8632-d93d198c2621	cookbook.volume	available	10	

ID	Name	Status	Size	Attached to
daeddd6c-908a-4ea8-8632-d93d198c2621	cookbook.volume	in-use	10	Attached to cookbook.test on /dev/vdb

ID	Name
90654098-477f-417f-b102-453c0f1f9119	cookbook.test

ID	Name	Status	Size	Attached to
daeddd6c-908a-4ea8-8632-d93d198c2621	cookbook.volume	available	10	

ID	Name
90654098-477f-417f-b102-453c0f1f9119	cookbook.test

Field	Value
attachments	[]
availability_zone	nova
bootable	false
consistencygroup_id	None
created_at	2017-09-22T20:25:16.943250
description	Cookbook Volume
encrypted	False
id	bb7a7d2c-8069-4924-a18e-8fb398584a5d
migration_status	None
multiattach	False
name	cookbook.volume
properties	
replication_status	None
size	10
snapshot_id	None
source_volid	None
status	available
type	None
updated_at	None
user_id	7d79ffa6b2614377b08339be7eb62af9

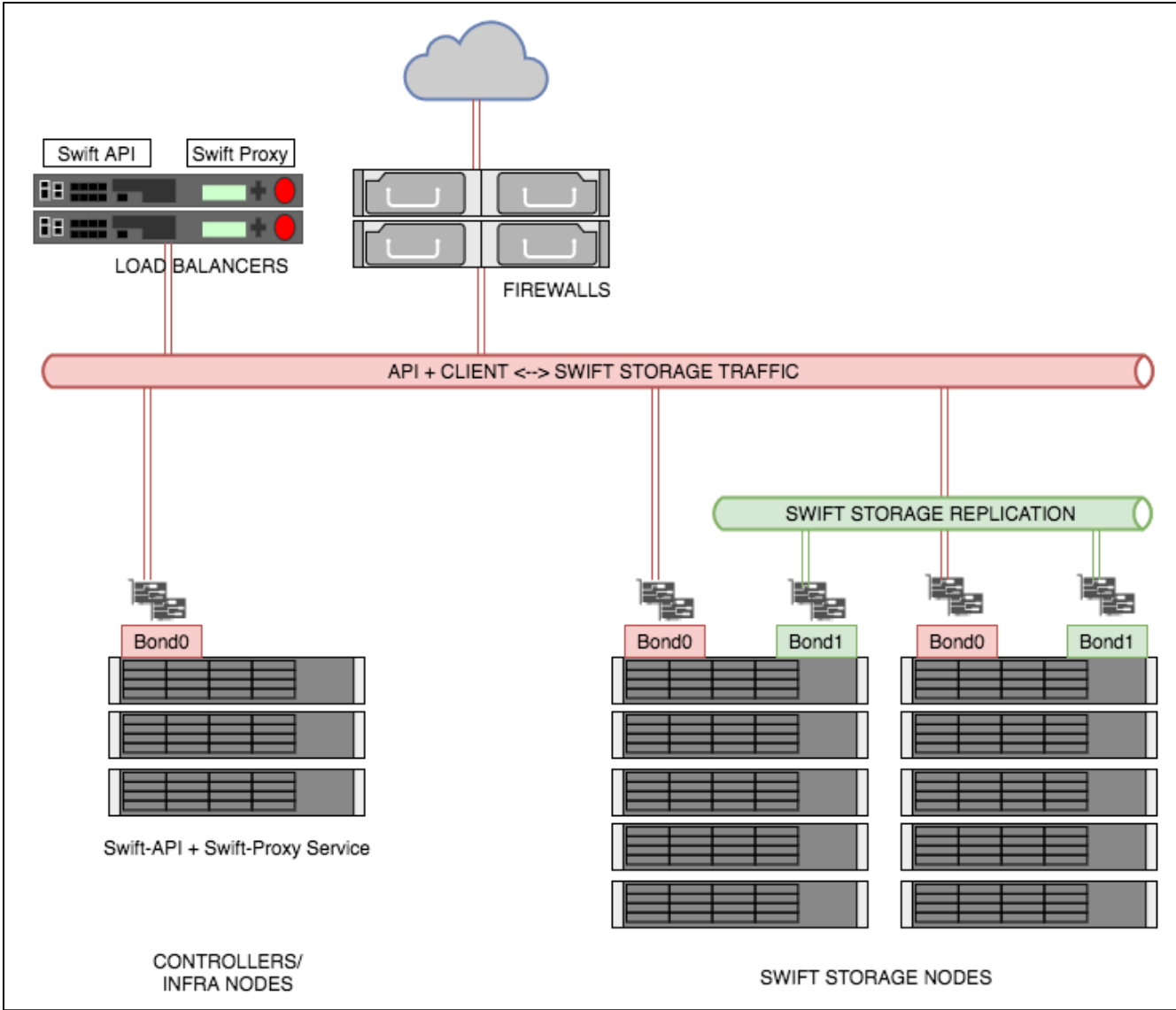
Binary	Host	Zone	Status	State	Updated_at	Disabled Reason
cinder-scheduler	controller-01-cinder-scheduler-container-18ca83af	nova	enabled	up	2017-09-22T20:15:29.000000	-
cinder-volume	cinder-volume@lvm	nova	enabled	up	2017-09-22T20:15:29.000000	-

Chapter 8: Swift – OpenStack Object Storage

Field	Value
account	AUTH_402e8fe274c143ea91fe905a1b8c7614
bytes_used	0
container	books
object_count	0
properties	Title='cookbooks'

Name
books

account	container	x-trans-id
AUTH_402e8fe274c143ea91fe905a1b8c7614	books	tx4fed0bc15e47450b82835-005a238985



```

+-----+
| Name   |
+-----+
| chapter1 |
| chapter1/swift.txt |
| nova.txt  |
+-----+

```

```

+-----+
| Name   |
+-----+
| chapter1 |
| chapter1/swift.txt |
| intro.txt  |
| nova.txt   |
+-----+

```

Field	Value
account	AUTH_402e8fe274c143ea91fe905a1b8c7614
container	books
content-length	32757
content-type	text/plain
etag	922ce68107fcfb7744dc2e2aee589ee6
last-modified	Sat, 16 Dec 2017 21:44:07 GMT
object	chapter1/swift.txt

Name
chapter1/swift.txt

Name
chapter1
chapter1/swift.txt
intro.txt

object	container	etag
swift.txt	books/chapter1	922ce68107fcfb7744dc2e2aee589ee6

Name
chapter1
intro.txt

object	container	etag
intro.txt	books	0ed4362d6b074cccabc41cff7c2cb283

Field	Value
account	AUTH_402e8fe274c143ea91fe905a1b8c7614
bytes_used	0
container	books
object_count	0
properties	Title='cookbooks'

Field	Value
account	AUTH_402e8fe274c143ea91fe905a1b8c7614
bytes_used	None
container	books/chapter1
object_count	None

account	container	x-trans-id
AUTH_402e8fe274c143ea91fe905a1b8c7614	books/chapter1	txa712d8af947d49fab6337-005a3566fd

Chapter 9: OpenStack Orchestration Using Heat and Ansible

Field	Value
description	Floating IP address of haproxy in public network
output_key	haproxy_public_ip
output_value	192.168.100.108

output_key	description
haproxy_public_ip	Floating IP address of haproxy in public network
webserver2_private_ip	IP address of webserver2 in private network
webserver1_private_ip	IP address of webserver1 in private network

Field	Value
id	17061d1f-e885-4051-9957-781049e27b7b
stack_name	myStack
description	HOT template to deploy two instances running Apache, and an extra instance running HA Proxy that load balances traffic between then assigns a floating IP addresses to the HA Proxy instance from the Public Network
creation_time	2017-07-19T13:10:59Z
updated_time	None
stack_status	CREATE_COMPLETE
stack_status_reason	Stack CREATE completed successfully
parameters	OS::project_id: 052b66ad725e4ab2952f8c052fc577d9 OS::stack_id: 17061d1f-e885-4051-9957-781049e27b7b OS::stack_name: myStack flavor: ml.tiny image: xenial-image key_name: demokey private_net_id: 78a5a119-c27a-41c4-8310-5c04d3a6bc31 private_subnet_id: 3cee2bb9-5673-4a6e-bb1e-8cb66be066b2 public_net_id: 2da8979e-dcf8-4eb8-b207-f33bfce4a15a
outputs	- description: Floating IP address of haproxy in public network output_key: haproxy_public_ip output_value: 192.168.100.108 - description: IP address of webserver2 in private network output_key: webserver2_private_ip output_value: 10.10.10.11 - description: IP address of webserver1 in private network output_key: webserver1_private_ip output_value: 10.10.10.5
links	- href: http://172.29.236.10:8004/v1/052b66ad725e4ab2952f8c052fc577d9/stacks/myStack/17061d1f-e885-4051-9957-781049e27b7b rel: self
parent	None
disable_rollback	True
deletion_time	None
stack_user_project_id	5a2420d4ed924825ae465dc0bebc54af
capabilities	[]
notification_topics	[]
stack_owner	None
timeout_mins	None
tags	None

ID	Stack Name	Stack Status	Creation Time	Updated Time
17061d1f-e885-4051-9957-781049e27b7b	myStack	CREATE_COMPLETE	2017-07-19T13:10:59Z	None

Field	Value
id	17061d1f-e885-4051-9957-781049e27b7b
stack_name	myStack
description	HOT template to deploy two instances running Apache, and an extra instance running HA Proxy that load balances traffic between then assigns a floating IP addresses to the HA Proxy instance from the Public Network
creation_time	2017-07-19T13:10:59Z
updated_time	None
stack_status	CREATE_IN_PROGRESS
stack_status_reason	Stack CREATE started

ID	Name	Subnets
2da8979e-dcf8-4eb8-b207-f33bfce4a15a	GATEWAY_NET	a1b0e5e8-9f91-428a-aa69-2e41ee7a1c7a
78a5a119-c27a-41c4-8310-5c04d3a6bc31	private-net	3cee2bb9-5673-4a6e-bb1e-8cb66be066b2

```
[WARNING]: provided hosts list is empty, only localhost is available

PLAY [Launch instance on OpenStack] *****
TASK [Deploy an instance] *****
ok: [localhost]

PLAY RECAP *****
localhost                : ok=1    changed=0    unreachable=0    failed=0
```

← → ↻ 🏠 192.168.100.107/haproxy?stats

HAProxy version 1.6.3, released 2015/12/25

Statistics Report for pid 12529

> General process information

pid = 12529 (process #1, nbproc = 1)
 uptime = 0d 0h00m35s
 system limits: memmax = unlimited; ulimit-n = 4013
 maxsock = 4013; maxconn = 2000; maxpipes = 0
 current conns = 1; current pipes = 0/0; conn rate = 1/sec
 Running tasks: 1/5; idle = 100 %

- active UP
- active UP, going down
- active DOWN, going up
- active or backup DOWN
- active or backup DOWN for maintenance (MAINT)
- active or backup SOFT STOPPED for maintenance
- backup UP
- backup UP, going down
- backup DOWN, going up
- not checked

Note: "NOLB"/"DRAIN" = UP with load-balancing disabled.

myapp	Queue			Session rate			Sessions					Bytes		Denied		Errors			Warnings		Status		
	Cur	Max	Limit	Cur	Max	Limit	Cur	Max	Limit	Total	LbTot	Last	In	Out	Req	Resp	Req	Conn	Resp	Retr		Redis	
Frontend	0	0	-	1	3	-	1	2	2 000	7			3 166	14 781	0	0	0	0	0	0	0	0	OPEN
webserv1	0	0	-	0	2		0	1	-	3	3	13s	1 574	7 446	0	0	0	0	0	0	0	0	35s UP
webserv2	0	0	-	0	1		0	1	-	2	2	14s	1 078	7 075	0	0	0	0	0	0	0	0	35s UP
Backend	0	0		0	3		0	2	200	5	5	0s	3 166	14 781	0	0	0	0	0	0	0	0	35s UP

ID	Name	Status	Networks	Image	Flavor
9c27666d-462f-42d4-a896-c7b5d3caa29b	haproxy	ACTIVE	cookbook_network=192.168.0.9, 192.168.100.107	xenial-image	m1.tiny
320b57e6-b449-4f16-b36a-c67f522d98b5	webserv2	ACTIVE	cookbook_network=192.168.0.3, 192.168.100.105	xenial-image	m1.tiny
e7147424-2450-4959-98b3-1bd26e874921	webserv1	ACTIVE	cookbook_network=192.168.0.6, 192.168.100.101	xenial-image	m1.tiny

```
PLAY [Configure HAProxy] *****:
TASK [Set APT proxy] *****:
changed: [haproxy]
TASK [install python2] *****:
changed: [haproxy]
TASK [Update apt cache] *****:
ok: [haproxy]
TASK [Install haproxy] *****:
changed: [haproxy]
TASK [Enable init script] *****:
ok: [haproxy]
TASK [Update HAProxy config] *****:
changed: [haproxy]
RUNNING HANDLER [restart haproxy] *****:
changed: [haproxy]
PLAY RECAP *****:
haproxy      : ok=8    changed=5    unreachable=0    failed=0
localhost   : ok=13   changed=2    unreachable=0    failed=0
webserver1  : ok=7    changed=2    unreachable=0    failed=0
webserver2  : ok=7    changed=2    unreachable=0    failed=0
```

```
TASK [wait_for]
*****
ok: [cookbook1 -> localhost]
ok: [cookbook2 -> localhost]

PLAY [webservers]
*****

TASK [Set APT proxy]
*****
changed: [cookbook2]
changed: [cookbook1]

TASK [install python2]
*****
changed: [cookbook1]
changed: [cookbook2]

TASK [Ensure Apache is installed]
*****
changed: [cookbook1]
changed: [cookbook2]

TASK [Ensure that Apache is started]
*****
ok: [cookbook1]
ok: [cookbook2]

PLAY RECAP
*****
cookbook1      : ok=5    changed=3    unreachable=0    failed=0
cookbook2      : ok=5    changed=3    unreachable=0    failed=0
localhost     : ok=11   changed=2    unreachable=0    failed=0
```


[WARNING]: provided hosts list is empty, only localhost is available

```
PLAY [Launch instance on OpenStack] *****
TASK [Deploy an instance] *****
ok: [localhost]

TASK [Add instance to Inventory] *****
changed: [localhost]

PLAY [Wait for port 22 to be ready] *****
TASK [wait_for] *****
ok: [cookbook1 -> localhost]

PLAY [webservers] *****
TASK [Set APT proxy] *****
changed: [cookbook1]

TASK [install python2] *****
changed: [cookbook1]

TASK [Ensure Apache is installed] *****
changed: [cookbook1]

TASK [Ensure that Apache is running] *****
ok: [cookbook1]

PLAY RECAP *****
cookbook1      : ok=5    changed=3    unreachable=0    failed=0
localhost     : ok=2    changed=1    unreachable=0    failed=0
```

ID	Name	Status	Networks	Image Name
3cc3f42e-be89-40a6-878f-4afe81a9d984	cookbook1	ACTIVE	private-net=10.10.10.10, 192.168.100.101	xenial-image

[WARNING]: provided hosts list is empty, only localhost is available

```
PLAY [Launch instance on OpenStack] *****
TASK [Deploy an instance] *****
changed: [localhost]

PLAY RECAP *****
localhost     : ok=1    changed=1    unreachable=0    failed=0
```

```
ansible 2.3.2.0
config file = /etc/ansible/ansible.cfg
configured module search path = Default w/o overrides
python version = 2.7.6 (default, Oct 26 2016, 20:30:19) [GCC 4.8.4]
```

Field	Value
id	17061d1f-e885-4051-9957-781049e27b7b
stack_name	myStack
description	HOT template to deploy two instances running Apache, and an extra instance running HA Proxy that load balances traffic between then assigns a floating IP addresses to the HA Proxy instance from the Public Network
creation_time	2017-07-19T13:10:59Z
updated_time	2017-07-20T10:06:09Z
stack_status	UPDATE_COMPLETE
stack_status_reason	Stack UPDATE completed successfully
parameters	OS::project_id: 052b66ad725e4ab2952f8c052fc577d9 OS::stack_id: 17061d1f-e885-4051-9957-781049e27b7b OS::stack_name: myStack flavor: m1.large image: xenial-image key_name: demokey private_net_id: 78a5a119-c27a-41c4-8310-5c04d3a6bc31 private_subnet_id: 3cee2bb9-5673-4a6e-bb1e-8cb66be066b2 public_net_id: 2da8979e-dcf8-4eb8-b207-f33bfce4a15a
outputs	- description: Floating IP address of haproxy in public network output_key: haproxy_public_ip output_value: 192.168.100.108 - description: IP address of webserver2 in private network output_key: webserver2_private_ip output_value: 10.10.10.11 - description: IP address of webserver1 in private network output_key: webserver1_private_ip output_value: 10.10.10.5
links	- href: http://172.29.236.10:8004/v1/052b66ad725e4ab2952f8c052fc577d9/stacks/myStack/17061d1f-e885-4051-9957-781049e27b7b rel: self
parent	None
disable_rollback	True
deletion_time	None
stack_user_project_id	5a2420d4ed924825ae465dc0bebc54af
capabilities	[]
notification_topics	[]
stack_owner	None
timeout_mins	None
tags	None

Field	Value
id	17061d1f-e885-4051-9957-781049e27b7b
stack_name	myStack
description	HOT template to deploy two instances running Apache, and an extra instance running HA Proxy that load balances traffic between then assigns a floating IP addresses to the HA Proxy instance from the Public Network
creation_time	2017-07-19T13:10:59Z
updated_time	2017-07-20T10:06:09Z
stack_status	UPDATE_IN_PROGRESS
stack_status_reason	Stack UPDATE started

ID	Stack Name	Project	Stack Status	Creation Time	Updated Time
0f2ba0b6-a047-4e31-9ec9-9ccb0e9ca687	myStack	31d0c145fad24a53a7838f2629465dab	DELETE_IN_PROGRESS	2017-12-14T10:33:21Z	2017-12-14T15:40:03Z

```
vagrant@openstack-client:~$ openstack stack delete myStack  
Are you sure you want to delete this stack(s) [y/N]? y
```

Chapter 10: Using OpenStack Dashboard

The screenshot shows the OpenStack Dashboard interface. At the top left is the OpenStack logo and the text "openstack.". To its right, there is a dropdown menu showing "Default • development". At the top right, there is a user profile icon and the text "developer".

On the left side, there is a navigation menu with the following items: "Project", "Compute", "Overview", "Instances", "Volumes", "Images", "Key Pairs" (highlighted in blue), and "API Access".

The main content area shows the breadcrumb "Project / Compute / Key Pairs" and the title "Key Pairs". Below the title, there is a search bar labeled "Filter" and two buttons: "+ Create Key Pair" (circled in red) and "Import Key Pair".

Below the buttons, there is a table with the following headers: "Key Pair Name", "Fingerprint", and "Actions". The table content shows "No items to display."

This is a close-up of the navigation menu from the OpenStack Dashboard. It shows the following items: "Project", "Compute", "Overview", "Instances", "Volumes", "Images", "Key Pairs" (highlighted in blue), and "API Access".

Confirm Delete Stacks ✕

You have selected: "haproxy101". Please confirm your selection. This action cannot be undone.

Project / Orchestration / Stacks

Stacks

Stack Name Filter

Displaying 1 item

<input type="checkbox"/>	Stack Name	Created	Updated	Status	Actions
<input type="checkbox"/>	haproxy101	10 minutes	Never	Create Complete	<input type="button" value="Check Stack"/> <input type="button" value=""/>

Displaying 1 item

Instances

Instance ID =

Displaying 3 items

<input type="checkbox"/>	Instance Name	Image Name	IP Address	Flavor	Key Pair	Status	Availability Zone	Task	Power State	Time since created	Actions
<input type="checkbox"/>	HAProxy	ubuntu-xenial	192.168.74.13 Floating IPs: 172.29.249.121	small	web	Active	nova	None	Running	8 minutes	Create Snapshot <input type="button" value=""/>
<input type="checkbox"/>	Webserver2	ubuntu-xenial	192.168.74.4	small	web	Active	nova	None	Running	9 minutes	Create Snapshot <input type="button" value=""/>
<input type="checkbox"/>	Webserver1	ubuntu-xenial	192.168.74.9	small	web	Active	nova	None	Running	9 minutes	Create Snapshot <input type="button" value=""/>

Displaying 3 items

haproxy101

Check Stack ▼

[Topology](#) [Overview](#) [Resources](#) [Events](#) [Template](#)

Displaying 18 items

Stack Resource	Resource	Time Since Event	Status	Status Reason
haproxy101	25465ba2-72e7-4f67-81f3-42dca205bdac	6 minutes	Create Complete	Stack CREATE completed successfully
haproxy	a7dd52a5-85ac-4b3b-9c4c-33d645c16908	6 minutes	Create Complete	state changed
haproxy	haproxy101-haproxy-j5ru3l2knkq5	6 minutes	Create In Progress	state changed
webserver1	5835515b-70e7-4e31-99dc-c4faa453befb	6 minutes	Create Complete	state changed
webserver2	58f4eec1-6a80-4343-855c-bc04a1735070	6 minutes	Create Complete	state changed
haproxy_floating_ip	b5b99473-95d7-4e84-a2ed-03383662825d	7 minutes	Create Complete	state changed
haproxy_floating_ip	haproxy101-haproxy_floating_ip-esgxouvbywte	7 minutes	Create In Progress	state changed

haproxy101

Check Stack

Topology

Overview

Resources

Events

Template

Displaying 8 items

Stack Resource	Resource	Stack Resource Type	Date Updated	Status	Status Reason
haproxy	a7dd52a5-85ac-4b3b-9c4c-33d645c16908	OS::Nova::Server	6 minutes	Create Complete	state changed
webserver1_port	2c09e3fe-ac58-4a59-84d8-6373239ca428	OS::Neutron::Port	6 minutes	Create Complete	state changed
server_security_group	1b278ee2-b6c0-4f11-81d3-5e8d438d0aaf	OS::Neutron::SecurityGroup	6 minutes	Create Complete	state changed
webserver2	58f4eec1-6a80-4343-855c-bc04a1735070	OS::Nova::Server	6 minutes	Create Complete	state changed
webserver1	5835515b-70e7-4e31-99dc-c4faa453befb	OS::Nova::Server	6 minutes	Create Complete	state changed
haproxy_port	04825764-2e23-41ea-a0cb-cf68d8985df0	OS::Neutron::Port	6 minutes	Create Complete	state changed
webserver2_port	b429a336-893c-4aa0-aac9-1550a85d1c85	OS::Neutron::Port	6 minutes	Create Complete	state changed
haproxy_floating_ip	b5b99473-95d7-4e84-a2ed-03383662825d	OS::Neutron::FloatingIP	6 minutes	Create Complete	state changed

Displaying 8 items

[Topology](#)
[Overview](#)
[Resources](#)
[Events](#)
[Template](#)


Name haproxy101
ID 25465ba2-72e7-4f67-81f3-42dca205bdac
Description HOT template to deploy two instances running Apache, and an extra instance running HA Proxy that load balances traffic between then assigns a floating IP addresses to the HA Proxy instance from the Public Network

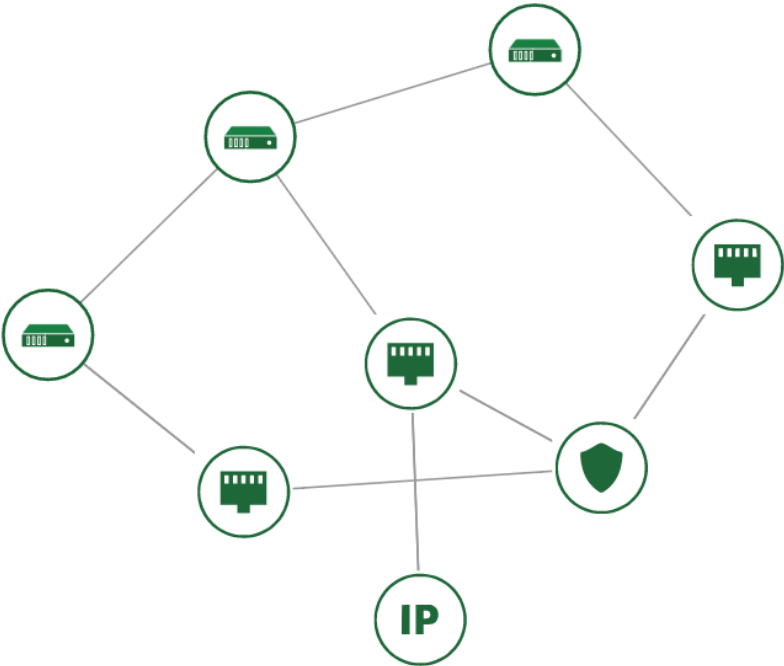
Status

Created 2 minutes
Last Updated Never
Status Create_Complete: Stack CREATE completed successfully

haproxy101

[Topology](#)
[Overview](#)
[Resources](#)
[Events](#)
[Template](#)

 haproxy101
 Create Complete



```

    graph TD
      S1((Server)) --- S2((Server))
      S1 --- S3((Server))
      S2 --- P1((Proxy))
      S2 --- P2((Proxy))
      S3 --- P1
      S3 --- P2
      P1 --- P2
      P1 --- SH((Shield))
      P2 --- SH
      P1 --- IP((IP))
      P2 --- IP
      SH --- IP
  
```

Stacks

Stack Name ▾ Filter [+ Launch Stack](#) [Preview Stack](#) [Delete Stacks](#) [More Actions ▾](#)

Displaying 1 item

<input type="checkbox"/>	Stack Name	Created	Updated	Status	Actions
<input type="checkbox"/>	haproxy101	1 minute	Never	Create Complete	Check Stack ▾

Displaying 1 item

Stacks

Stack Name Filter [+ Launch Stack](#) [Preview Stack](#) [Delete Stacks](#) [More Actions](#)

Displaying 1 item

<input type="checkbox"/>	Stack Name	Created	Updated	Status	Actions
<input type="checkbox"/>	haproxy101	0 minutes	Never	Create In Progress	Check Stack <input type="button" value="v"/>

Displaying 1 item

Launch Stack



Stack Name * ?

Creation Timeout (minutes) * ?

Rollback On Failure ?

Password for user "admin" * ?

flavor * ?

image * ?

key_name * ?

private_net_id * ?

private_subnet_id * ?

public_net_id * ?

Description:

Create a new stack with the provided values.

Cancel

Launch

Select Template ✕

Template Source *

URL

Template URL ⓘ

https://raw.githubusercontent.com/OpenStackCookb

Environment Source

File

Environment File ⓘ

Choose File cookbook-env.yml

Description:

Use one of the available template source options to specify the template to be used in creating this stack.

Cancel Next

Select Template ✕

Template Source *

File

Template File ⓘ

Choose File No file chosen

Environment Source

File

Environment File ⓘ

Choose File No file chosen

Description:

Use one of the available template source options to specify the template to be used in creating this stack.

Cancel Next

Stacks

Stack Name ▾

Filter

+ Launch Stack

👁 Preview Stack

Stack Name

Created

Updated

Status

Actions

No items to display.

Project



Compute



Network



Orchestration



Stacks

Resource Types

Template Versions

Confirm Delete Load Balancers



You have selected "web-loadbalancer". Please confirm your selection.
Deleted load balancers are not recoverable.

Cancel

Delete Load Balancers

Project / Network / [Load Balancers](#) / Load Balancers

[Load Balancers](#) / web-loadbalancer

Edit

Web load balancer

Associate Floating IP

IP Address 192.168.74.3 **Operating Status** Online **Provisioni**

 Delete Load Balancer

Provider haproxy
Admin State Up Yes
Floating IP Address None
Load Balancer ID 3eb17bba-19d3-459e-a000-4488fa2cbaf2
Subnet ID [4485b7ba-d895-487a-83c7-a319e90549ba](#)
Port ID [9c9982a2-8845-4dcf-89ca-63d1f1b8b0ad](#)



Filter

+ Create Listener

 Delete Listeners



Name ^

Description

Protocol

Port

Actions

No items to display.

Displaying 0 items

Confirm Delete Listeners ✕

You have selected "test-lb". Please confirm your selection. Deleted listeners are not recoverable.

Cancel

Delete Listeners

Project / Network / [Load Balancers](#) / Load Balancers

[Load Balancers](#) / [web-loadbalancer](#) / test-lb

Edit

Test listener

Create Pool

 Delete Listener

Protocol	HTTP
Protocol Port	80
Connection Limit	Unlimited
Admin State Up	Yes
Default Pool ID	None
Listener ID	6069a0ec-e9f5-4ba5-b536-addaa9be9547
Tenant ID	34637400afb9427d968242677f00df38

Confirm Delete Pool



You have selected "Pool 1". Please confirm your selection. Deleted pools are not recoverable.

Cancel

Delete Pool

Project / Network / [Load Balancers](#) / Load Balancers

[Load Balancers](#) / [web-loadbalancer](#) / [test-lb](#) / Pool 1

Edit Pool

Test load balancer pool

Create Health Monitor

Delete Pool

Protocol	HTTP
Load Balancer Algorithm	Round Robin
Session Persistence	None
Admin State Up	Yes
Health Monitor ID	None
Pool ID	a2a8e305-67d0-4f51-b508-f4c72875002d
Tenant ID	34637400afb9427d968242677f00df38

Filter

Add/Remove Pool Members

<input type="checkbox"/>	ID ^	IP Address	Protocol Port	Weight	Actions
--------------------------	------	------------	---------------	--------	---------

No items to display.

Displaying 0 items

Confirm Delete Health Monitor ✕

You have selected "f8b72fc0-7d58-4fa4-86e0-5ac8dbf39ecb". Please confirm your selection. Deleted health monitors are not recoverable.

Cancel

Delete Health Monitor

Project / Network / [Load Balancers](#) / Load Balancers

[Load Balancers](#) / [web-loadbalancer](#) / [test-lb](#) / [Pool 1](#) / f8b72fc0-7d58-4fa4-86e0-5ac8dbf39ecb

Edit

 Delete Health Monitor

Type	PING
Delay	20
Max Retries	3
Timeout	5
Admin State Up	Yes
Monitor ID	f8b72fc0-7d58-4fa4-86e0-5ac8dbf39ecb
Tenant ID	34637400afb9427d968242677f00df38

Protocol	HTTP
Load Balancer Algorithm	Round Robin
Session Persistence	None
Admin State Up	Yes
Health Monitor ID	f8b72fc0-7d58-4fa4-86e0-5ac8dbf39ecb
Pool ID	a2a8e305-67d0-4f51-b508-f4c72875002d
Tenant ID	34637400afb9427d968242677f00df38

Edit Pool ▼

Test load balancer pool

Protocol	HTTP
Load Balancer Algorithm	Round Robin
Session Persistence	None
Admin State Up	Yes
Health Monitor ID	f8b72fc0-7d58-4fa4-86e0-5ac8dbf39ecb
Pool ID	a2a8e305-67d0-4f51-b508-f4c72875002d
Tenant ID	34637400afb9427d968242677f00df38

Q Filter

Add/Remove Pool Members

<input type="checkbox"/>	ID ▲	IP Address	Protocol Port	Weight	Actions
--------------------------	------	------------	---------------	--------	---------

No items to display.

Displaying 0 items

Add/Remove Pool Members



Pool Members

Add members to the load balancer pool.



▼ Allocated Members

IP Address	Subnet	Port	Weight
------------	--------	------	--------

No members have been allocated

Add external member

▼ Available Instances

Filter

Name	IP Address
------	------------

web2	192.168.74.6
------	--------------

Add

web1	192.168.74.8
------	--------------

Add

✕ Cancel

Add/Remove Pool Members

Add/Remove Pool Members



Pool Members

Add members to the load balancer pool.



▼ Allocated Members 2

IP Address *	Subnet *	Port *	Weight	
192.168.74.6	private-subnet	80	1	Remove
192.168.74.8	private-subnet	80	1	Remove

Add external member

▼ Available Instances

Q Filter

Name	IP Address	
web2	192.168.74.6	Add
web1	192.168.74.8	Add

✕ Cancel

Add/Remove Pool Members

Project / Network / Load Balancers

Load Balancers / web-loadbalancer / test-lb / Pool 1

Edit Pool

Test load balancer pool

Protocol HTTP
Load Balancer Algorithm Round Robin
Session Persistence None
Admin State Up Yes
Health Monitor ID [f8b72fc0-7d58-4fa4-86e0-5ac8dbf39ecb](#)
Pool ID a2a8e305-67d0-4f51-b508-f4c72875002d
Tenant ID 34637400afb9427d968242677f00df38

Filter

Add/Remove Pool Members

<input type="checkbox"/>	ID ^	IP Address	Protocol Port	Weight	Actions
<input type="checkbox"/>	70578542-a183-4d33-8c73-004fa830adf0	192.168.74.6	80	1	<input type="button" value="Update Weight"/>
<input type="checkbox"/>	7b068ad2-ab9e-4882-8c67-30a03ff40c88	192.168.74.8	80	1	<input type="button" value="Update Weight"/>

Displaying 2 items

Admin State Up Yes
Default Pool ID [a2a8e305-67d0-4f51-b508-f4c72875002d](#)
Listener ID 6069a0ec-e9f5-4ba5-b536-addaa9be9547
Tenant ID 34637400afb9427d968242677f00df38

Project / Network / Load Balancers

[Load Balancers](#) / [web-loadbalancer](#) / test-lb

Edit

Test listener

Protocol	HTTP
Protocol Port	80
Connection Limit	Unlimited
Admin State Up	Yes
Default Pool ID	a2a8e305-67d0-4f51-b508-f4c72875002d
Listener ID	6069a0ec-e9f5-4ba5-b536-addaa9be9547
Tenant ID	34637400afb9427d968242677f00df38

Project / Network / Load Balancers

[Load Balancers](#) / [web-loadbalancer](#)

Edit

Web load balancer

IP Address 192.168.74.3 **Operating Status** Online **Provisioning Status** Active

Provider	haproxy
Admin State Up	Yes
Floating IP Address	None
Load Balancer ID	3eb17bba-19d3-459e-a000-4488fa2cbaf2
Subnet ID	4485b7ba-d895-487a-83c7-a319e90549ba
Port ID	9c9982a2-8845-4dcf-89ca-63d1f1b8b0ad

+ Create Listener

🗑 Delete Listeners

<input type="checkbox"/>	Name ^	Description	Protocol	Port	Actions
<input type="checkbox"/>	> test-lb	Test listener	HTTP	80	<input type="button" value="Edit"/>

Displaying 1 item

Load Balancers

<input type="text" value="Filter"/>	+ Create Load Balancer	Delete Load Balancers			
<input type="checkbox"/>	Name ^	Description	Operating Status	Provisioning Status	Actions
<input type="checkbox"/>	> web-loadbalancer	Web load balancer	Online	Active	Edit ▾

Displaying 1 item

Load Balancers

<input type="text" value="Filter"/>	+ Create Load Balancer	Delete Load Balancers					
<input type="checkbox"/>	Name ^	Description	Operating Status	Provisioning Status	IP Address	Listeners	Actions
<input type="checkbox"/>	▾ web-loadbalancer	Web load balancer	Online	Active	192.168.74.3	1	Edit ▾
Provider haproxy	Floating IP Address None	Admin State Up Yes	ID 3eb17bba-19d3-459e-a000-4488fa2cbaf2	Subnet ID 4485b7ba-d895-487a-83c7-a319e90549ba	Port ID 9c9982a2-8845-4dcf-89ca-63d1f1b8b0ad		

Displaying 1 item

Create Load Balancer



Load Balancer
Details

Listener Details

Pool Details

Pool Members

Monitor Details

Provide the details for the health monitor.



Monitor type *

PING

Interval (sec) *

20

Retries *

3

Timeout (sec) *

5

✕ Cancel

< Back

Next >

 Create Load Balancer

Create Load Balancer



Load Balancer
Details

Listener Details

Pool Details

Pool Members

Monitor Details *

Add members to the load balancer pool.



▼ Allocated Members 2

IP Address *	Subnet *	Port *	Weight	
192.168.74.8	private-subnet	<input type="text" value="80"/>	<input type="text" value="1"/>	<input type="button" value="Remove"/>
192.168.74.6	private-subnet	<input type="text" value="80"/>	<input type="text" value="1"/>	<input type="button" value="Remove"/>

▼ Available Instances

Name	IP Address	
web2	192.168.74.6	<input type="button" value="Add"/>
web1	192.168.74.8	<input type="button" value="Add"/>

Create Load Balancer

Provide the details for the pool.

Name
Pool 1

Description
Test load balancer pool

Method *
ROUND_ROBIN

✕ Cancel < Back Next > Create Load Balancer

Create Load Balancer

Provide the details for the listener.

Name
test-lb

Description
Test listener

Protocol *
HTTP

Port *
80

✕ Cancel < Back Next > Create Load Balancer

Create Load Balancer



Load Balancer
Details

Listener Details *

Pool Details *

Pool Members

Monitor Details *

Provide the details for the load balancer.



Name

Description

IP address

Subnet *

✕ Cancel

< Back

Next >

 Create Load Balancer

Project



Compute



Network



Network Topology

Networks

Routers

Security Groups

Load Balancers

Floating IPs

Edit Project



Project Information *

Project Members

Project Groups

Quota *

All Users	Filter	Q
designate		+
keystone		+
cinder		+
nova		+
swift		+
glance		+
heat		+
dispersion		+
admin		+
neutron		+

Project Members	Filter	Q
developer	admin, _member_ ▾	-
demo	heat_stack_owner ▾	-

Cancel

Save



demo

demo Tenant

f4c838a069884bf0a6f0641ef3160be1

Default

Yes

Manage Members



Edit Project



Project Information *

Project Members

Project Groups

Quota *

All Users	Filter	Q
designate		+
keystone		+
cinder		+
nova		+
swift		+
glance		+
heat		+
dispersion		+
admin		+
neutron		+
alt_demo		+

Project Members	Filter	Q
demo	heat_stack_owner	-
developer	admin, _member_	-

- swiftoperator
- user
- heat_stack_owner
- ✓ admin
- heat_stack_user
- ✓ _member_
- reseller_admin
- ResellerAdmin
- remote_image

Cancel

Save

Edit Project



Project Information *

Project Members

Project Groups

Quota *

All Users	Filter	Q
cinder		+
nova		+
swift		+
glance		+
heat		+
dispersion		+
admin		+
neutron		+
alt_demo		+
placement		+
developer		+

Project Members	Filter	Q
demo	heat_stack_owner ▾	-

Cancel

Save

Projects

Project Name = ▾

Filter

+ Create Project

Delete Projects

Displaying 7 items

<input type="checkbox"/>	Name	Description	Project ID	Domain Name	Enabled	Actions
<input type="checkbox"/>	horizon	Horizon project	07ee6c727fd94e00a5936c95e55cf2f0	Default	Yes	Manage Members ▾
<input type="checkbox"/>	alt_demo	alt_demo Tenant	2381eba808264d1889bd526f7ab613d6	Default	Yes	Manage Members ▾
<input type="checkbox"/>	admin	Bootstrap project for initializing the cloud.	34637400afb9427d968242677f00df38	Default	Yes	Manage Members ▾
<input type="checkbox"/>	development		402e8fe274c143ea91fe905a1b8c7614	Default	Yes	Manage Members ▾
<input type="checkbox"/>	service	Keystone Identity Service	6e076f2e3b5544bfacd47dafc28a5e46	Default	Yes	Manage Members ▾
<input type="checkbox"/>	cookbook	Cookbook Project	c076aa3d961d4b8e85c0a7fe2c563708	-	Yes	Manage Members ▾
<input type="checkbox"/>	demo	demo Tenant	f4c838a069884bf0a6f0641ef3160be1	Default	Yes	Manage Members ▾

Displaying 7 items

Update User



Domain ID

Domain Name

User Name *

Description

Email

Primary Project

Description:

Edit the user's details, including the Primary Project.

Confirm Delete User



You have selected: "test". Please confirm your selection. This action cannot be undone.

<input type="checkbox"/>	test	-	test@openstackcookbook.com	9873632bdf2d40fd96bc29be1ea0a95b	Yes	Default	Edit	▼
<input type="checkbox"/>	admin	-		b3cd17987bc64f6783c1c52ae6e5a6ff	Yes			Change Password Disable User Delete User
<input type="checkbox"/>	neutron	-		c5a31faa7f444f65bfa93a59f58c50f7	Yes			

Create User



Domain ID

Domain Name

User Name *

Description

Email

Password *



Confirm Password *



Primary Project



Role



Enabled

Description:

Create a new user and set related properties including the Primary Project and Role.

Users

User Name = ▾

Filter

[+ Create User](#)[🗑 Delete Users](#)

Displaying 15 items

<input type="checkbox"/>	User Name ▲	Description	Email	User ID	Enabled	Domain Name	Actions
<input type="checkbox"/>	admin	-		b3cd17987bc64f6783c1c52ae6e5a6ff	Yes	Default	Edit ▾
<input type="checkbox"/>	alt_demo	-		dfe887e4ff2c4ce2899d842d878d593f	Yes	Default	Edit ▾
<input type="checkbox"/>	cinder	-		140d7a1d25ee452aa0334f384f2e09f2	Yes	Default	Edit ▾
<input type="checkbox"/>	demo	-		edd0d6d781a149d9a07e96189aa5c654	Yes	Default	Edit ▾
<input type="checkbox"/>	designate	-		04fdb90ce9414c17837e8798638d7866	Yes	Default	Edit ▾
<input type="checkbox"/>	developer	-		67d124ea1a0242768d55534bf02b2d14	Yes	Default	Edit ▾

Create Project



Project Information *

Project Members

Project Groups

Quota *

Domain ID

default

Domain Name

Default

Name *

horizon

Description

Horizon project

Enabled



Cancel

Create Project

Projects

Project Name = ▾

Filter

+ Create Project

Delete Projects

Displaying 6 items

<input type="checkbox"/>	Name	Description	Project ID	Domain Name	Enabled	Actions
<input type="checkbox"/>	alt_demo	alt_demo Tenant	2381eba808264d1889bd526f7ab613d6	Default	Yes	Manage Members ▾
<input type="checkbox"/>	admin	Bootstrap project for initializing the cloud.	34637400afb9427d968242677f00df38	Default	Yes	Manage Members ▾
<input type="checkbox"/>	development		402e8fe274c143ea91fe905a1b8c7614	Default	Yes	Manage Members ▾
<input type="checkbox"/>	service	Keystone Identity Service	6e076f2e3b5544bfacd47dafc28a5e46	Default	Yes	Manage Members ▾
<input type="checkbox"/>	cookbook	Cookbook Project	c076aa3d961d4b8e85c0a7fe2c563708	-	Yes	Manage Members ▾
<input type="checkbox"/>	demo	demo Tenant	f4c838a069884bf0a6f0641ef3160be1	Default	Yes	Manage Members ▾

Displaying 6 items

- Project >
- Admin >
- Identity v

- Projects**
- Users
- Groups
- Roles

Confirm Delete Instances ✕

You have selected: "jenkins". Please confirm your selection. Deleted instances are not recoverable.

Instances

Instance ID =

Displaying 2 items

<input type="checkbox"/>	Instance Name	Image Name	IP Address	Flavor	Key Pair	Status	Availability Zone	Task	Power State	Time since created	Actions
<input checked="" type="checkbox"/>	jenkins	ubuntu-xenial	192.168.75.12	small	developer	Active	nova	None	Running	3 hours, 44 minutes	Create Snapshot <input type="button" value="v"/>
<input type="checkbox"/>	testvm	cirros	192.168.75.6	tempest1	-	Active	nova	None	Running	1 day	Create Snapshot <input type="button" value="v"/>

Displaying 2 items

Instances

Instance ID =

Displaying 2 items

<input type="checkbox"/>	Instance Name	Image Name	IP Address	Flavor	Key Pair	Status	Availability Zone	Task	Power State	Time since created	Actions
<input type="checkbox"/>	jenkins	ubuntu-xenial	192.168.75.12	small	developer	Active	nova	None	Running	0 minutes	Create Snapshot <input type="button" value=""/>
<input type="checkbox"/>	testvm	cirros	192.168.75.6	tempest1	-	Active	nova	None	Running	20 hours, 43 minutes	Create Snapshot <input type="button" value=""/>

Displaying 2 items

Launch Instance



Details

A key pair allows you to SSH into your newly created instance. You may select an existing key pair, import a key pair, or generate a new key pair.



Source

+ Create Key Pair

Import Key Pair

Flavor

Allocated

Displaying 1 item

Networks

Name

> developer



Network Ports

Security Groups

Displaying 1 item

Key Pair

Available 1

Select one

Configuration

Click here for filters.



Server Groups

Displaying 1 item

Scheduler Hints

Name

> cookbook



Metadata

Displaying 1 item

Cancel

< Back

Next >

Launch Instance

Launch Instance



- Details
- Source
- Flavor
- Networks
- Network Ports
- Security Groups**
- Key Pair
- Configuration
- Server Groups
- Scheduler Hints
- Metadata

Select the security groups to launch the instance in.



▼ Allocated **2**

Name	
> default	↓
> webserver	↓

▼ Available **0**

Select one or more

🔍 Click here for filters. ✕

Name	Description
No available items	

✕ Cancel

< Back

Next >

☁ Launch Instance

Launch Instance



Details

Source

Flavor

Networks

Network Ports

Security Groups

Key Pair

Configuration

Server Groups

Scheduler Hints

Metadata

Networks provide the communication channels for instances in the cloud.



▼ Allocated **1**

Select networks from those listed below.

	Network	Shared	Admin State	Status	
⇅ 1	▶ testNetwork	No	Up	Active	↓

▼ Available **0**

Select at least one network

Network	Shared	Admin State	Status
<i>No available items</i>			

✕ Cancel

< Back

Next >

Launch Instance

Launch Instance



Details

Flavors manage the sizing for the compute, memory and storage capacity of the instance.



Source

Allocated

Name	VCPUS	RAM	Total Disk	Public	
> small	1	2 GB	20 GB	Yes	↓

Networks

Available 2

Select one

Q Click here for filters. X

Name	VCPUS	RAM	Total Disk	Public	
> tempest1	1	256 MB	1 GB	Yes	↑
> tempest2	1	512 MB	1 GB	Yes	↑

Network Ports

Security Groups

Key Pair

Configuration

Server Groups

Scheduler Hints

Metadata

X Cancel

< Back

Next >

Launch Instance

Launch Instance



Details

Source

Flavor *

Networks

Network Ports

Security Groups

Key Pair

Configuration

Server Groups

Scheduler Hints

Metadata

Instance source is the template used to create an instance. You can use an image, a snapshot of an instance (image snapshot), a volume or a volume snapshot (if enabled). You can also choose to use persistent storage by creating a new volume.



Select Boot Source

Create New Volume

Yes

No

Allocated

Name	Updated	Size	Type	Visibility	
> ubuntu-xenial	11/24/17 11:32 PM	279.69 MB	raw	Public	↓

Available 2

Select one

Name	Updated	Size	Type	Visibility	
> cirros_alt	8/14/17 3:49 PM	12.67 MB	qcow2	Public	↑
> cirros	8/14/17 3:49 PM	12.67 MB	qcow2	Public	↑

Cancel

< Back

Next >

Launch Instance

Launch Instance



Details

Source *

Flavor *

Networks

Network Ports

Security Groups

Key Pair

Configuration

Server Groups

Scheduler Hints

Metadata

Please provide the initial hostname for the instance, the availability zone where it will be deployed, and the instance count. Increase the Count to create multiple instances with the same settings.

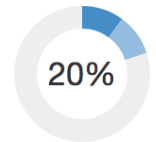


Instance Name *

Availability Zone

Count *

Total Instances (10 Max)



- 1 Current Usage
- 1 Added
- 8 Remaining

✕ Cancel

< Back

Next >

Launch Instance

Instances

Instance ID = ▾

Filter

 Launch Instance


 Delete Instances


More Actions ▾

Displaying 1 item

<input type="checkbox"/>	Instance Name	Image Name	IP Address	Flavor	Key Pair	Status	Availability Zone	Task	Power State	Time since created	Actions
<input type="checkbox"/>	testvm	cirros	192.168.75.6	tempest1	-	Active	nova	None	Running	2 hours, 25 minutes	Create Snapshot ▾

Displaying 1 item

Project 

Compute 

Overview

Instances

Volumes

Images

Key Pairs

API Access

Confirm Delete Security Groups

You have selected: "webserver". Please confirm your selection. This action cannot be undone.

Security Groups

Filter



+ Create Security Group

🗑 Delete Security Groups

Displaying 2 items

<input type="checkbox"/>	Name	Description	Actions
<input type="checkbox"/>	default	Default security group	Manage Rules
<input checked="" type="checkbox"/>	webserver	Web server security group	Manage Rules ▾

Displaying 2 items

Add Rule



Rule *

Custom TCP Rule

Direction

Ingress

Open Port *

Port Range

From Port ?

5900

To Port ?

5910

Remote * ?

CIDR

CIDR ?

0.0.0.0/0

Description:

Rules define which traffic is allowed to instances assigned to the security group. A security group rule consists of three main parts:

Rule: You can specify the desired rule template or use custom rules, the options are Custom TCP Rule, Custom UDP Rule, or Custom ICMP Rule.

Open Port/Port Range: For TCP and UDP rules you may choose to open either a single port or a range of ports. Selecting the "Port Range" option will provide you with space to provide both the starting and ending ports for the range. For ICMP rules you instead specify an ICMP type and code in the spaces provided.

Remote: You must specify the source of the traffic to be allowed via this rule. You may do so either in the form of an IP address block (CIDR) or via a source group (Security Group). Selecting a security group as the source will allow any other instance in that security group access to any other instance via this rule.

Cancel

Add

Manage Security Group Rules: webserver (57622e26-d835-46dd-afcd-c8a3e49cb5a1)

[+ Add Rule](#) [Delete Rules](#)

Displaying 3 items

<input type="checkbox"/>	Direction	Ether Type	IP Protocol	Port Range	Remote IP Prefix	Remote Security Group	Actions
<input type="checkbox"/>	Egress	IPv4	Any	Any	0.0.0.0/0	-	Delete Rule
<input type="checkbox"/>	Egress	IPv6	Any	Any	::/0	-	Delete Rule
<input type="checkbox"/>	Ingress	IPv4	TCP	443 (HTTPS)	0.0.0.0/0	-	Delete Rule

Displaying 3 items

Add Rule



Rule *

HTTPS

Remote * ?

CIDR

CIDR ?

0.0.0.0/0

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Cancel

Add

Add Rule



Rule *

- ✓ Custom TCP Rule
- Custom UDP Rule
- Custom ICMP Rule
- Other Protocol
- All ICMP
- All TCP
- All UDP
- DNS
- HTTP
- HTTPS**
- IMAP
- IMAPS
- LDAP
- MS SQL
- MYSQL
- POP3
- POP3S
- RDP
- SMTP
- SMTPS
- SSH

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Cancel

Add

Manage Security Group Rules: webserver (57622e26-d835- 46dd-afcd-c8a3e49cb5a1)

+ Add Rule

🗑 Delete Rules

Displaying 2 items

<input type="checkbox"/>	Direction	Ether Type	IP Protocol	Port Range	Remote IP Prefix	Remote Security Group	Actions
<input type="checkbox"/>	Egress	IPv4	Any	Any	0.0.0.0/0	-	Delete Rule
<input type="checkbox"/>	Egress	IPv6	Any	Any	::/0	-	Delete Rule

Displaying 2 items

webserver Web server security group

Manage Rules



Security Groups



+ Create Security Group

🗑 Delete Security Groups

Displaying 2 items

<input type="checkbox"/>	Name	Description	Actions
<input type="checkbox"/>	default	Default security group	<input type="button" value="Manage Rules"/>
<input type="checkbox"/>	webserver	Web server security group	<input type="button" value="Manage Rules"/> ▾

Displaying 2 items

Create Security Group



Name *

Description

Description:

Security groups are sets of IP filter rules that are applied to the network settings for the VM. After the security group is created, you can add rules to the security group.

Security Groups



+ Create Security Group

🗑 Delete Security Groups

Displaying 1 item

<input type="checkbox"/>	Name	Description	Actions
<input type="checkbox"/>	default	Default security group	Manage Rules

Displaying 1 item

Project



Compute



Network



Network Topology

Networks

Routers

Security Groups

Load Balancers

Floating IPs

Confirm Delete Networks



You have selected: "testNetwork". Please confirm your selection. This action cannot be undone.

Cancel

Delete Networks

Networks

Name = ▾

Filter

+ Create Network

Delete Networks

Displaying 2 items

<input type="checkbox"/>	Name	Subnets Associated	Shared	External	Status	Admin State	Actions
<input checked="" type="checkbox"/>	testNetwork	testSubnet 192.168.75.0/28	No	No	Active	UP	Edit Network ▾
<input type="checkbox"/>	public		No	Yes	Active	UP	

Displaying 2 items

Networks

Name = Filter [+ Create Network](#) [Delete Networks](#)

Displaying 2 items

<input type="checkbox"/>	Name	Subnets Associated	Shared	External	Status	Admin State	Actions
<input type="checkbox"/>	testNetwork	testSubnet 192.168.75.0/28	No	No	Active	UP	Edit Network <input type="button" value="▼"/>
<input type="checkbox"/>	public		No	Yes	Active	UP	

Displaying 2 items

Project



Compute



Network



Network Topology

Networks

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Routers

Router Name = ▾

Filter

+ Create Router

Name

Status

External Network

Admin State

Actions

No items to display.



Name

Status

External Network

Admin State

Actions



testRouter

Active

public

UP

Clear Gateway ▾

Displaying 1 item

Edit Router

Delete Router

Routers

Router Name = ▾

Filter

+ Create Router

🗑 Delete Routers

Displaying 1 item

<input type="checkbox"/>	Name	Status	External Network	Admin State	Actions
<input type="checkbox"/>	testRouter	Active	public	UP	Clear Gateway ▾

Displaying 1 item

Project



Compute



Network



Network Topology

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Load Balancers

Launch Instance

+ Create Network

+ Create Router

Topology

Graph

Small

Normal



testvm

ID 033447b8-b5c6-4706-9e1c-92dbdc69191f

STATUS ● Active

» View Instance Details

» Open Console

Delete Instance

Project



Compute



Network



Network Topology

Networks

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Security Groups

testRouter

Clear Gateway

Overview

Interfaces

Static Routes

+ Add Interface

Delete Interfaces

Displaying 1 item

<input type="checkbox"/>	Name	Fixed IPs	Status	Type	Admin State	Actions
<input type="checkbox"/>	(46ea75bf-2577)	<ul style="list-style-type: none">192.168.75.1	Down	Internal Interface	UP	Delete Interface

Displaying 1 item

Add Interface ✕

Subnet *

testNetwork: 192.168.75.0/28 (testSubnet) ▼

IP Address (optional) ⓘ

Router Name *

testRouter

Router ID *

98421b4e-242b-48d0-8047-eb3a3a2377bd

Description:

You can connect a specified subnet to the router.

The default IP address of the interface created is a gateway of the selected subnet. You can specify another IP address of the interface here. You must select a subnet to which the specified IP address belongs to from the above list.

Cancel
Submit

Project / Network / [Routers](#) / testRouter

testRouter

Clear Gateway ▼

Overview
Interfaces
Static Routes

+ Add Interface

Name	Fixed IPs	Status	Type	Admin State	Actions
No items to display.					

testRouter

Clear Gateway

Overview

Interfaces

Static Routes

Name	testRouter
ID	98421b4e-242b-48d0-8047-eb3a3a2377bd
Description	
Project ID	402e8fe274c143ea91fe905a1b8c7614
Status	Active
Admin State	UP
Availability Zones	<ul style="list-style-type: none">nova

External Gateway

Network Name	public
Network ID	eacdc30-9c41-4be5-8954-d8dff793512
External Fixed IPs	<ul style="list-style-type: none">Subnet ID 9599b6d1-3f00-4005-a407-a69c5305e5d7IP Address 172.29.249.120
SNAT	Enabled

Routers

Router Name = ▾

Filter

+ Create Router

🗑 Delete Routers

Displaying 1 item

<input type="checkbox"/>	Name	Status	External Network	Admin State	Actions
<input type="checkbox"/>	testRouter	Active	public	UP	Clear Gateway ▾

Displaying 1 item

Create Router ✕

Router Name

Enable Admin State

External Network

Description:
Creates a router with specified parameters.

Project / Network / Routers

Routers

Router Name =

Name	Status	External Network	Admin State	Actions
No items to display.				

Project



Compute



Network



Network Topology

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Load Balancers

Networks

Name =

Displaying 2 items

<input type="checkbox"/>	Name	Subnets Associated	Shared	External	Status	Admin State	Actions
<input type="checkbox"/>	testNetwork	testSubnet 192.168.75.0/28	No	No	Active	UP	<input type="button" value="Edit Network"/> <input type="button" value=""/>
<input type="checkbox"/>	public		No	Yes	Active	UP	

Displaying 2 items

Create Network



Network

Subnet

Subnet Details

Enable DHCP

Allocation Pools

192.168.75.2,192.168.75.14

DNS Name Servers

8.8.8.8

8.8.4.4

Host Routes

Specify additional attributes for the subnet.

Cancel

« Back

Create

Create Network



Network

Subnet

Subnet Details

Subnet Name

Network Address

IP Version

Gateway IP

Disable Gateway

Creates a subnet associated with the network. You need to enter a valid "Network Address" and "Gateway IP". If you did not enter the "Gateway IP", the first value of a network will be assigned by default. If you do not want gateway please check the "Disable Gateway" checkbox. Advanced configuration is available by clicking on the "Subnet Details" tab.

Cancel

« Back

Next »

Create Network



Network

Subnet

Subnet Details

Network Name

Enable Admin State ⓘ

Create Subnet

Create a new network. In addition, a subnet associated with the network can be created in the following steps of this wizard.

Cancel

« Back

Next »

Networks

Name = ▾

Filter

+ Create Network

🗑 Delete Networks

Displaying 1 item

<input type="checkbox"/>	Name	Subnets Associated	Shared	External	Status	Admin State	Actions
<input type="checkbox"/>	public		No	Yes	Active	UP	

Displaying 1 item

Project



Compute



Network



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Key Pairs

Filter  [+ Create Key Pair](#) [📁 Import Key Pair](#) [🗑 Delete Key Pairs](#)

Displaying 2 items

<input type="checkbox"/>	Key Pair Name	Fingerprint	Actions
<input type="checkbox"/>	cookbook	fe:94:08:c5:62:38:68:12:ed:65:22:1e:bd:8f:fc:80	Delete Key Pair
<input type="checkbox"/>	developer	b1:89:d4:26:c1:16:2c:b8:f8:fc:7e:8d:34:f6:34:c1	Delete Key Pair

Displaying 2 items

Import Key Pair



Key Pair Name *

cookbook

Public Key *

```
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAQADIL+gAM
P2GzU03WtK35tAZFlzhgibvYrrv/RjAcM9R+QxPWOZ
DWRGiszP8G05ZxAXdeRe94h5AKH3TbzonAKQuIL
My0/7/ZehbaAMe3RnybStU1ukXULGUywKfEXCv02
BtOBVv2XpYDIfpX51/MeWfdmhNRpvNp8g5c+7B0K
P49Q72nkR4C66Be7YS4Wtk3Xp+xr0zD4d8mFxu/w
FJhzVp7A2Bn0Zqj0vmlfu7zAvEd6QzNm2WFtHF0bN
e67NUEIXt2am5QyDbIvB21Krf+bl4PqbsxSIYdT2I2+i
VVEoR8ZlcRLFvKKPUe+bsaru0LJ1e8HJeWEwPLbO
```

Key Pairs are how you login to your instance after it is launched.

Choose a key pair name you will recognise and paste your SSH public key into the space provided.

SSH key pairs can be generated with the ssh-keygen command:

```
ssh-keygen -t rsa -f cloud.key
```

This generates a pair of keys: a key you keep private (cloud.key) and a public key (cloud.key.pub). Paste the contents of the public key file here.

After launching an instance, you login using the private key (the username might be different depending on the image you launched):

```
ssh -i cloud.key <username>@<instance_ip>
```

Cancel

Import Key Pair

+ Create Key Pair

📁 Import Key Pair

🗑 Delete Key Pairs

Confirm Delete Key Pair



You have selected: "developer". Please confirm your selection. Removing a key pair can leave OpenStack resources orphaned. You should not remove a key pair unless you are certain it is not being used anywhere.

Cancel

Delete Key Pair

developer b1:89:d4:26:c1:16:2c:b8:f8:fc:7e:8d:34:f6:34:c1

Delete Key Pair

Project ▼

Project / Compute / Key Pairs

Compute ▼

- Overview
- Instances
- Volumes
- Images
- Key Pairs**
- API Access
- Network >
- Orchestration >

Key Pairs

Filter 🔍 + Create Key Pair 📁 Import Key Pair 🗑 Delete Key Pairs

Displaying 1 item

<input type="checkbox"/>	Key Pair Name	Fingerprint	Actions
<input type="checkbox"/>	developer	b1:89:d4:26:c1:16:2c:b8:f8:fc:7e:8d:34:f6:34:c1	Delete Key Pair

Displaying 1 item

Project / Compute / [Key Pairs](#) / Download Key Pair

Download Key Pair

The key pair "developer" should download automatically. If not, use the button below.

Regenerate and download Key Pair "developer"

Create Key Pair ✕

Key Pair Name *

developer

Key pairs are SSH credentials which are injected into images when they are launched. Creating a new key pair registers the public key and downloads the private key (a .pem file).

Protect and use the key as you would any normal SSH private key.

Cancel

Create Key Pair