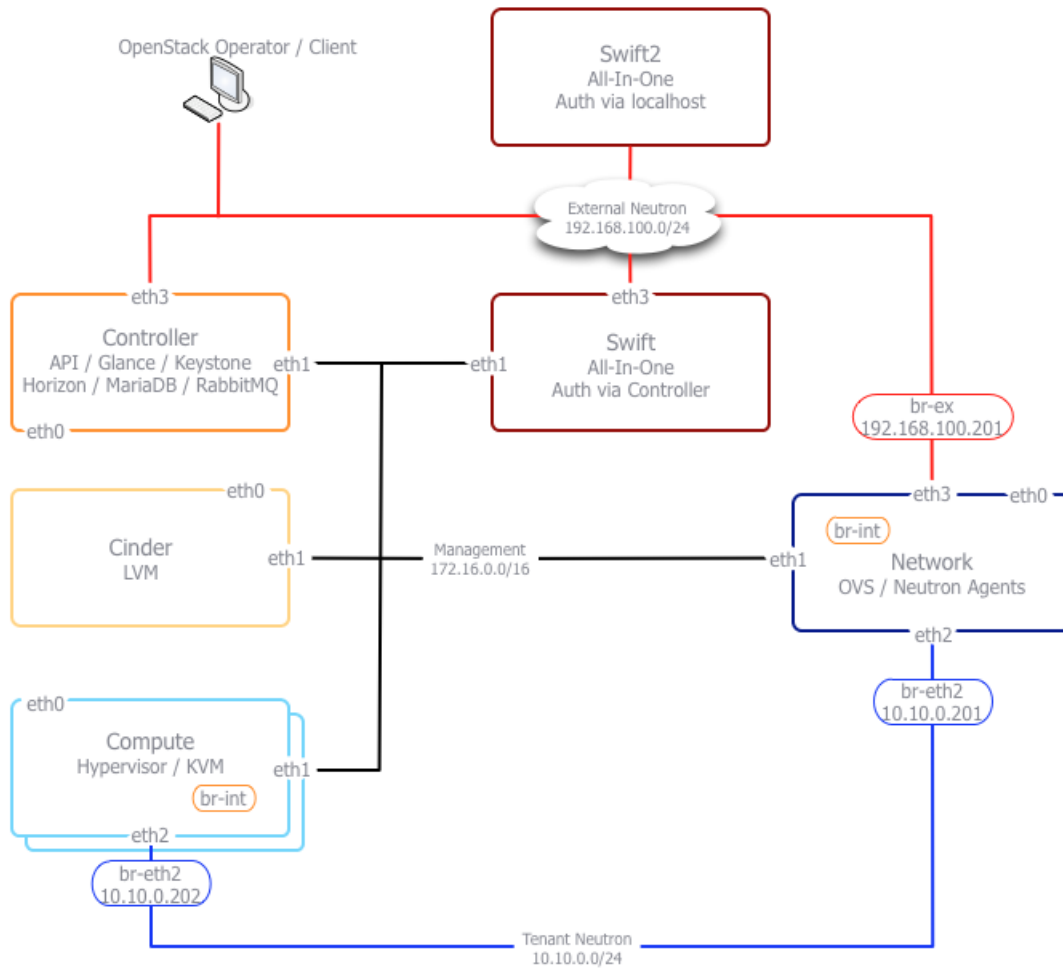


# Chapter 1



# Chapter 2

Property	Value
checksum	d03071f4d387dfb976e29f00ff397496
container_format	bare
created_at	2015-01-09T09:31:35
deleted	False
deleted_at	None
disk_format	qcow2
id	18584bff-2c12-4c2d-85f6-59771073c936
is_public	False
min_disk	0
min_ram	0
name	Ubuntu 14.04 x86_64 Server
owner	45c787efeaec42aa9cab522711bf5f4d
protected	False
size	256180736
status	active
updated_at	2015-01-09T09:31:37
virtual_size	None

ID	Name	Disk Format	Container Format	Size	Status
fc1ec7e2-f9ef-4afa-9634-993e370a26c0	cirros-image	qcow2	bare	9761280	active
db02ab51-f9a1-4e38-8c3d-22b367962154	trusty-image	qcow2	bare	256115200	active
18584bff-2c12-4c2d-85f6-59771073c936	Ubuntu 14.04 x86_64 Server	qcow2	bare	256180736	active

Property	Value
checksum	d03071f4d387dfb976e29f00ff397496
container_format	bare
created_at	2015-01-09T09:31:35
deleted	False
deleted_at	None
disk_format	qcow2
id	18584bff-2c12-4c2d-85f6-59771073c936
is_public	True
min_disk	0
min_ram	0
name	Ubuntu 14.04 x86_64 Server
owner	45c787efeaec42aa9cab522711bf5f4d
protected	False
size	256180736
status	active
updated_at	2015-01-09T09:41:21
virtual_size	None

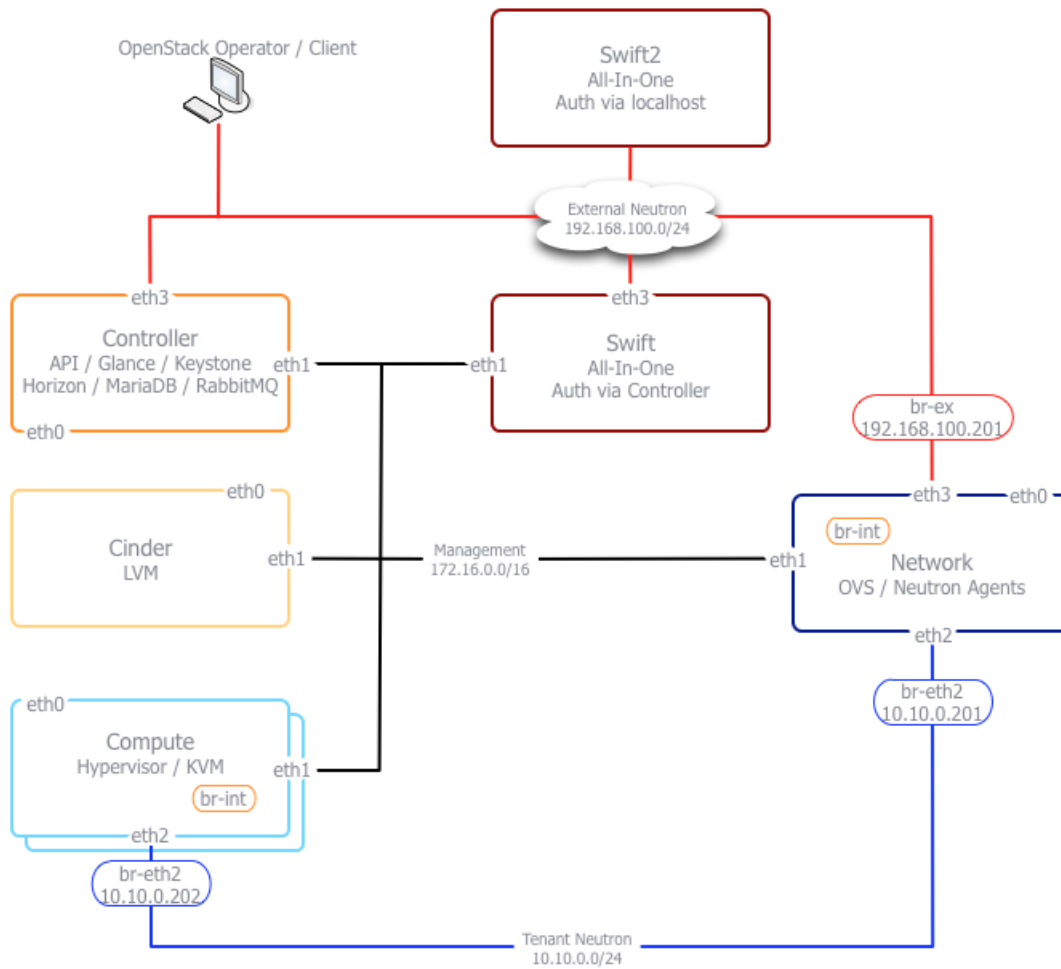
Property	Value
container_format	bare
created_at	2015-01-09T09:47:45
deleted	False
disk_format	qcow2
id	b03eb63b-e58c-4743-8dee-320b3b30fa3e
is_public	False
min_disk	0
min_ram	0
name	Ubuntu 12.04 x86_64 Server
owner	45c787efeaec42aa9cab522711bf5f4d
protected	False
size	262865408
status	active
updated_at	2015-01-09T09:47:45

Image ID	Member ID	Can Share
18584bff-2c12-4c2d-85f6-59771073c936	45c787efeaec42aa9cab522711bf5f4d	

Property	Value
Property 'image_state'	available
Property 'os_distro'	ubuntu
checksum	4a992ed9b91ddea133201cd45f127156
container_format	bare
created_at	2015-01-09T05:34:09
deleted	False
deleted_at	None
disk_format	qcow2
id	db02ab51-f9a1-4e38-8c3d-22b367962154
is_public	False
min_disk	0
min_ram	0
name	trusty-image
owner	45c787efeaec42aa9cab522711bf5f4d
protected	False
size	256115200
status	active
updated_at	2015-01-09T10:06:11
virtual_size	None

```
QEMU (centos-6.6) - VNC Viewer
mice: PS/2 mouse device common for all mice
input: AT Translated Set 2 keyboard as /devices/platform/i8042/serio0/input/input2
rtc_cmos 00:01: RTC can wake from S4
rtc_cmos 00:01: rtc core: registered rtc_cmos as rtc0
rtc0: alarms up to one day, 114 bytes nvram
cpuidle: using governor ladder
cpuidle: using governor menu
EFI Variables Facility v0.08 2004-May-17
usbcore: registered new interface driver hiddev
usbcore: registered new interface driver usbhid
usbhid: v2.6:USB HID core driver
GRE over IPv4 demultiplexor driver
TCP cubic registered
Initializing XFRM netlink socket
NET: Registered protocol family 17
registered taskstats version 1
rtc_cmos 00:01: setting system clock to 2014-12-08 04:56:29 UTC (1418014589)
Initializing network drop monitor service
Freeing unused kernel memory: 1292k freed
Write protecting the kernel read-only data: 10240k
Freeing unused kernel memory: 788k freed
Freeing unused kernel memory: 1568k freed
System halted.
```

## Chapter 3



id	name	subnets
5b738491-4368-4e56-adaa-f4bdb0ef9dd9	cookbook_network_1	6436a0dc-1537-4010-8981-ccb34fa35ee 10.200.0.0/24

id	name	cidr	allocation_pools
6436a0dc-1537-4010-8981-ccb34fa35ee	cookbook_subnet_1	10.200.0.0/24	{ "start": "10.200.0.2", "end": "10.200.0.254" }

id	name	mac_address	fixed_ips
0ecef17-f126-4205-9c86-6708316d2346		fa:16:3e:a2:73:4c	{ "subnet_id": "6436a0dc-1537-4010-8981-ccb34fa35ee", "ip_address": "10.200.0.1" }
8d007e1e-fd9e-4eb4-8f94-144bfff91ac96		fa:16:3e:91:66:fc	{ "subnet_id": "6436a0dc-1537-4010-8981-ccb34fa35ee", "ip_address": "10.200.0.3" }

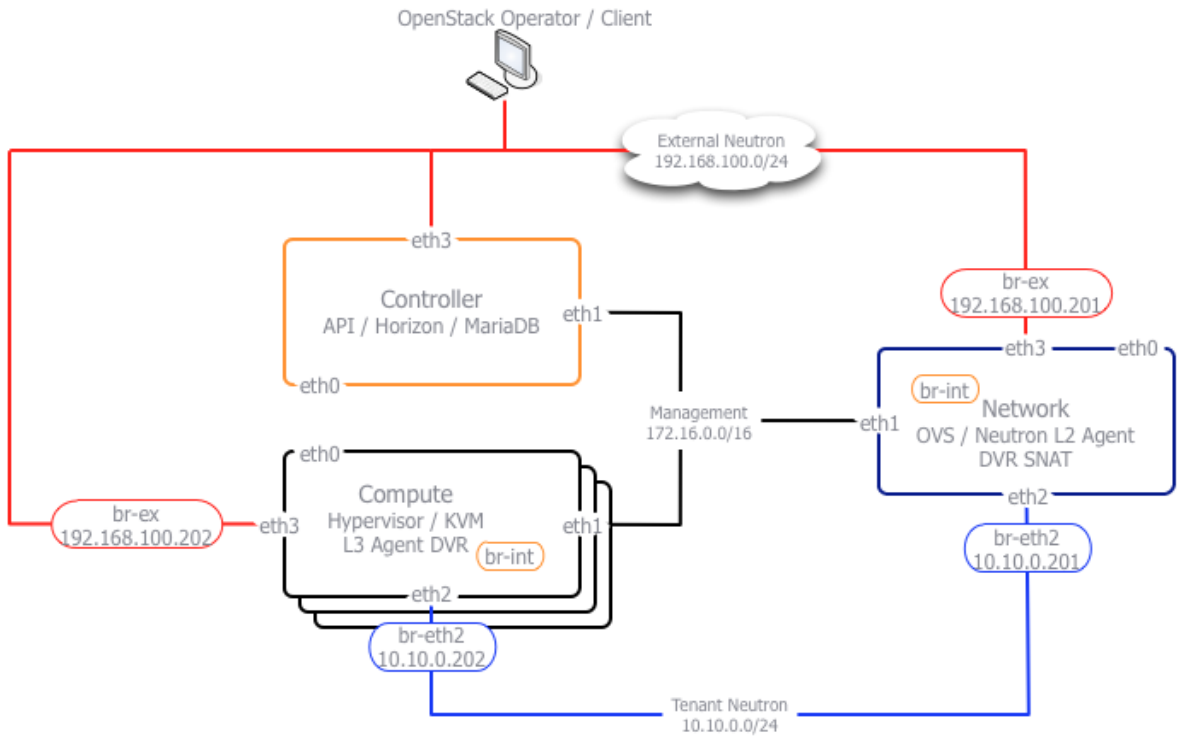
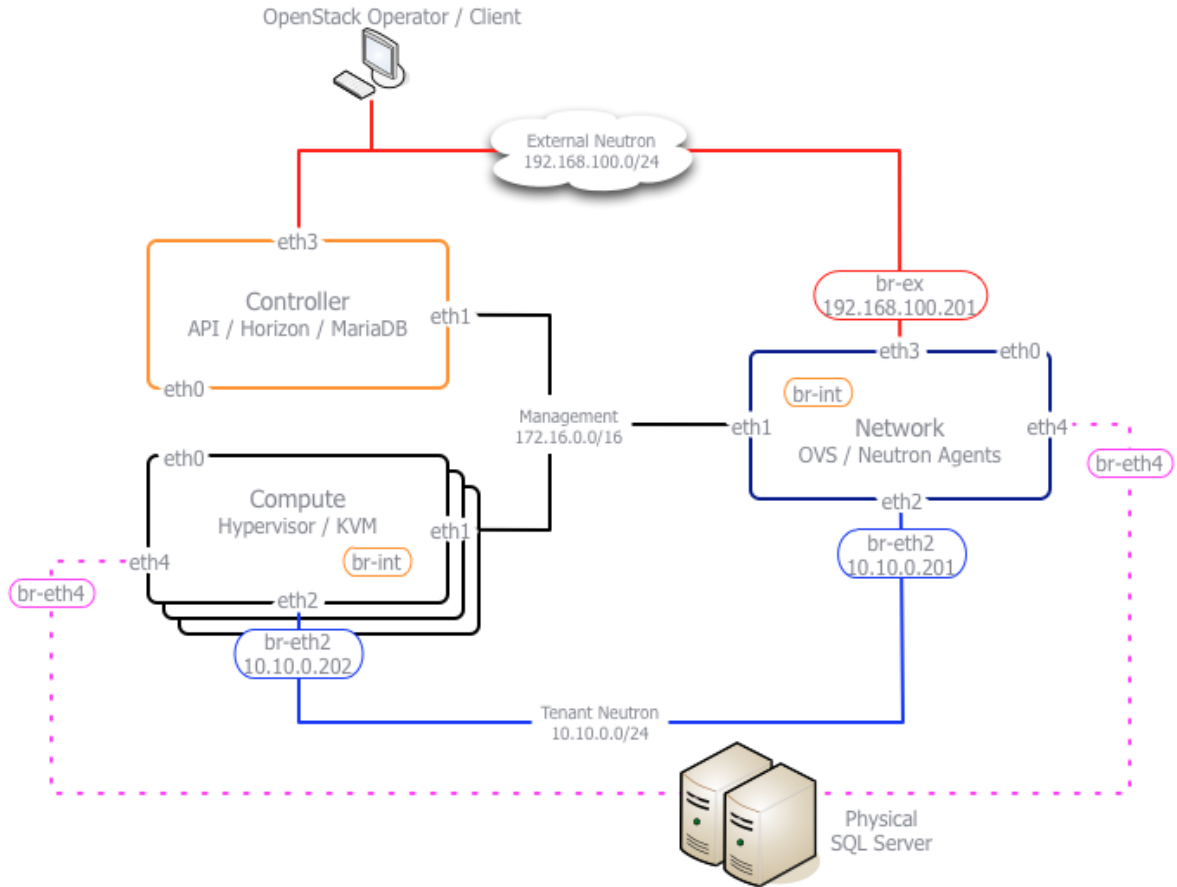
ID	Name	Status	Networks
0fa76731-8d5a-4251-8308-0aa10f739e97	test1	ACTIVE	cookbook_network_1=10.200.0.4

ID	Name	Status	Networks
9f8dff28-41fc-4f9f-a41f-a858abebc529	test1	ACTIVE	cookbookNet=10.200.0.2

Field	Value
admin_state_up	True
external_gateway_info	{"network_id": "213fedde-ae5e-4396-9754-cb757cba25ea"}
id	f0a5c988-6eb2-4593-8b15-90896fd55d3a
name	cookbookRouter
routes	
status	ACTIVE
tenant_id	d856d921d02d4ded8f590e30a5392254

id	name	mac_address	fixed_ips
41ea7756-9521-4ba2-a885-1aca70a96ddc	fa:16:3e:b4:b4:a4	{"subnet_id": "a2580694-d5f4-41b4-9ede-f5212d86deba", "ip_address": "192.168.100.10"}	
5f1f68a4-2af2-4528-934d-f7f52ac5b3d3	fa:16:3e:a3:2b:6f	{"subnet_id": "e88b3347-db4d-40c9-abf2-27762dfbb6a9", "ip_address": "10.200.0.2"}	
85f1f3ad-4285-42aa-a15e-45620f065fa4	fa:16:3e:33:35:16	{"subnet_id": "e88b3347-db4d-40c9-abf2-27762dfbb6a9", "ip_address": "10.200.0.3"}	
c8a2fa53-7aa8-459e-9233-2ec180049c3c	fa:16:3e:90:80:6c	{"subnet_id": "e88b3347-db4d-40c9-abf2-27762dfbb6a9", "ip_address": "10.200.0.1"}	

ID	Name	Status	Networks
9f8dff28-41fc-4f9f-a41f-a858abebc529	test1	ACTIVE	cookbookNet=10.200.0.2, 192.168.100.11



Created a new router:

Field	Value
admin_state_up	True
distributed	True
external_gateway_info	
ha	False
id	93953489-f5a2-42c9-9230-3d8d8c8a2e95
name	cookbook_router_1
routes	
status	ACTIVE
tenant_id	5481d8e9091f49dca2a72b9e223e1f40

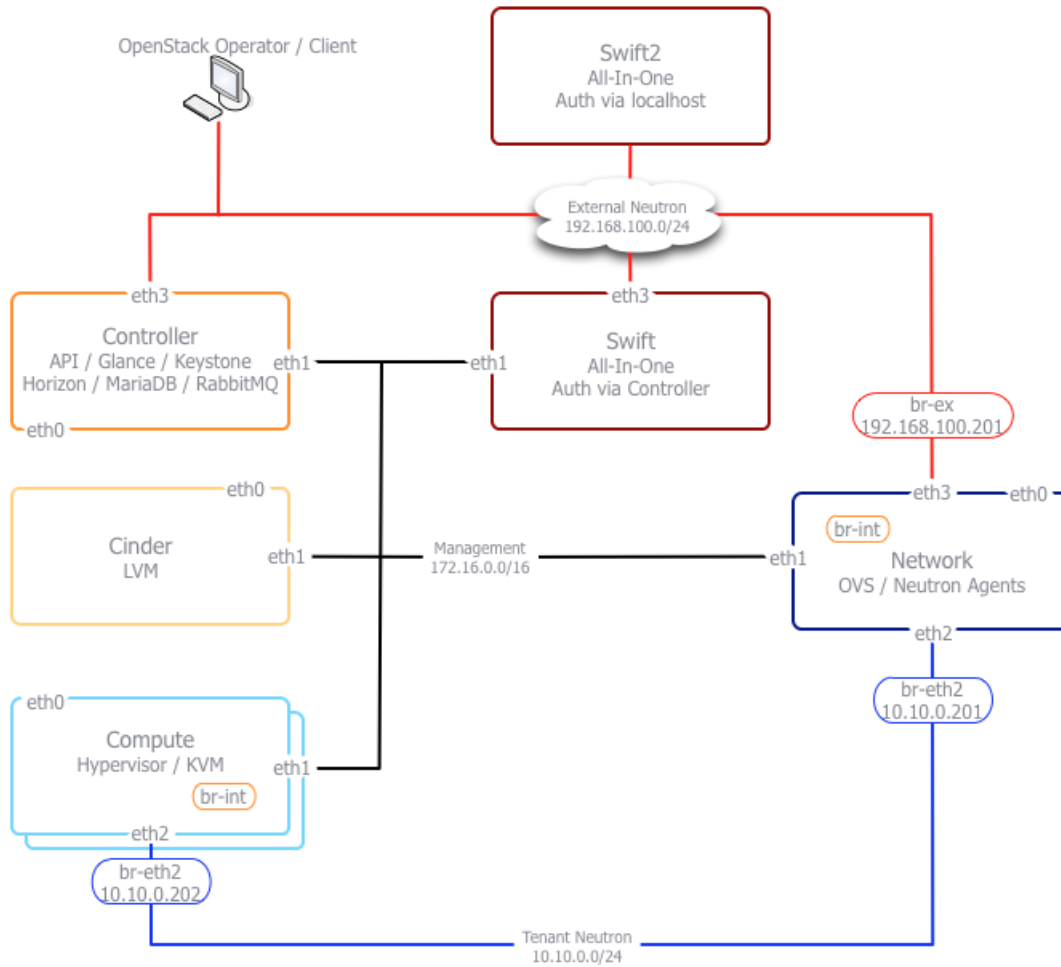
id	host	admin_state_up	alive
0d38b23b-855d-4a11-9765-b97fdb57f2d7	compute	True	: -)

```
fip-ca2fc700-b5e2-4c8b-9fa4-6a80f1174360
qrouter-93953489-f5a2-42c9-9230-3d8d8c8a2e95
```

```
PING 192.168.100.11 (192.168.100.11) 56(84) bytes of data.
64 bytes from 192.168.100.11: icmp_seq=1 ttl=63 time=6.31 ms
64 bytes from 192.168.100.11: icmp_seq=2 ttl=63 time=1.51 ms
64 bytes from 192.168.100.11: icmp_seq=3 ttl=63 time=1.13 ms
64 bytes from 192.168.100.11: icmp_seq=4 ttl=63 time=0.475 ms
^C
--- 192.168.100.11 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3005ms
rtt min/avg/max/mdev = 0.475/2.359/6.313/2.312 ms
```

## Chapter 4





Binary	Host	Zone	Status	State	Updated_At
nova-scheduler	controller	internal	enabled	:-)	2015-01-28 04:25:16
nova-consoleauth	controller	internal	enabled	:-)	2015-01-28 04:25:19
nova-cert	controller	internal	enabled	:-)	2015-01-28 04:25:19
nova-conductor	controller	internal	enabled	:-)	2015-01-28 04:25:15
nova-consoleauth	compute-01	internal	enabled	:-)	2015-01-28 04:25:16
nova-compute	compute-01	nova	enabled	:-)	2015-01-28 04:25:20
nova-consoleauth	compute-02	internal	enabled	:-)	2015-01-28 04:25:18
nova-compute	compute-02	nova	enabled	:-)	2015-01-28 04:25:15

Binary	Host	Zone	Status	State	Updated_At
nova-scheduler	controller	internal	enabled	:-)	2015-01-28 05:26:38
nova-consoleauth	controller	internal	enabled	:-)	2015-01-28 05:26:42
nova-cert	controller	internal	enabled	:-)	2015-01-28 05:26:41
nova-conductor	controller	internal	enabled	:-)	2015-01-28 05:26:46
nova-consoleauth	compute-01	internal	enabled	:-)	2015-01-28 05:26:38
nova-compute	compute-01	nova	enabled	XXX	2015-01-28 05:25:41
nova-consoleauth	compute-02	internal	enabled	:-)	2015-01-28 05:26:40
nova-compute	compute-02	nova	enabled	:-)	2015-01-28 05:26:46

Status of node rabbit@controller ...

```
{pid,26086},
{running_applications,[[{rabbit,"RabbitMQ","3.2.4"},
                        {os_mon,"CPO CXC 138 46","2.2.14"},
                        {mnesia,"MNESIA CXC 138 12","4.11"},
                        {xmerl,"XML parser","1.3.5"},
                        {sasl,"SASL CXC 138 11","2.3.4"},
                        {stdlib,"ERTS CXC 138 10","1.19.4"},
                        {kernel,"ERTS CXC 138 10","2.16.4"}]}],
{os,{unix,linux}},
{erlang_version,"Erlang R16B03 (erts-5.10.4) [source] [64-bit] [smp:2:2] [async-threads:30] [kernel-
poll:true]\n"},
{memory,[[{total,128095000},
          {connection_procs,3760040},
          {queue_procs,1981200},
          {plugins,0},
          {other_proc,13575624},
          {mnesia,355808},
          {mgmt_db,0},
          {msg_index,84024},
          {other_ets,918776},
          {binary,86007184},
          {code,16522377},
          {atom,594537},
          {other_system,4295430}}],
{vm_memory_high_watermark,0.4},
{vm_memory_limit,1303538892},
{disk_free_limit,50000000},
{disk_free,34748444672},
{file_descriptors,[[{total_limit,924},
                    {total_used,88},
                    {sockets_limit,829},
                    {sockets_used,86}]}],
{processes,[[{limit,1048576},{used,1013}]}],
{run_queue,0},
{uptime,90276}
...done.
```

remote	refid	st	t	when	poll	reach	delay	offset	jitter
*yurizoku.tk	209.51.161.238	2	u	104	1024	377	46.426	2.183	1.889
-propjet.latt.ne	187.253.153.32	2	u	56	1024	377	47.226	5.163	1.253
+juniperberry.ca	192.93.2.20	2	u	395	1024	377	113.354	2.171	1.618

Uptime: 91271 Threads: 21 Questions: 762166 Slow queries: 0 Opens: 1745 Flush tables: 1 Open tables: 332 Queries per second avg: 8.350

ID	Name	Status	Server
43f974b7-1f74-4305-8354-0ac0c3efe68d	cirros-image	ACTIVE	
5bfb4a6d-da77-4502-ba52-2e8e40597e96	trusty-image	ACTIVE	

ID	Name	Memory_MB	Disk	Ephemeral	Swap	VCPUs	RXTX_Factor	Is_Public
1	m1.tiny	512	0	0		1	1.0	True
2	m1.small	2048	20	0		1	1.0	True
3	m1.medium	4096	40	0		2	1.0	True
4	m1.large	8192	80	0		4	1.0	True
5	m1.xlarge	16384	160	0		8	1.0	True

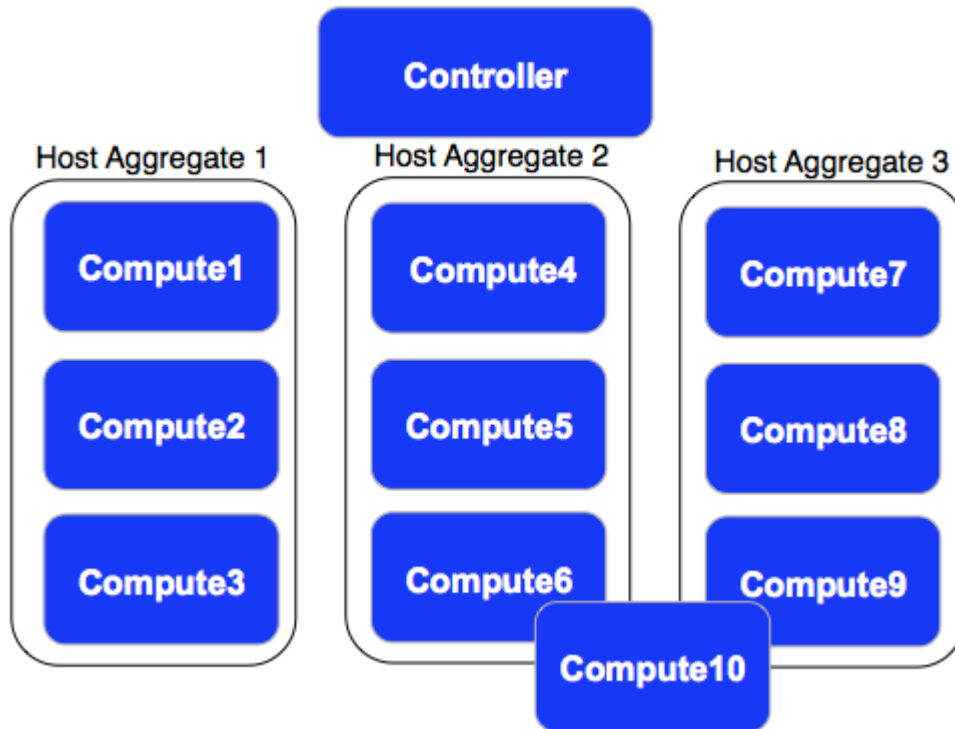
id	name	subnets
0375e772-b021-425c-bc17-5a3263247fb8 706c9118-68d9-4751-932c-3dc94ec6f4ed	cookbook_network_1 ext_net	37ca3149-ee6b-4288-b074-03a4e1635b7c 889c1ef7-09af-48d2-85bf-6971446e2eb7

Property	Value
OS-DCF:diskConfig	MANUAL
OS-EXT-AZ:availability_zone	nova
OS-EXT-SRV-ATTR:host	-
OS-EXT-SRV-ATTR:hypervisor_hostname	-
OS-EXT-SRV-ATTR:instance_name	instance-00000002
OS-EXT-STS:power_state	0
OS-EXT-STS:task_state	scheduling
OS-EXT-STS:vm_state	building
OS-SRV-USG:launched_at	-
OS-SRV-USG:terminated_at	-
accessIPv4	
accessIPv6	
adminPass	MgkrXAVjbpM8
config_drive	
created	2015-01-29T06:12:21Z
flavor	m1.small (2)
hostId	
id	5971ab77-9d91-40d8-9961-d86da0945f26
image	trusty-image (5bfb4a6d-da77-4502-ba52-2e8e40597e96)
key_name	demokey
metadata	{}
name	myInstance
os-extended-volumes:volumes_attached	[]
progress	0
security_groups	default
status	BUILD
tenant_id	e99b80a0de78451f91c97beef5b2c2d5
updated	2015-01-29T06:12:21Z
user_id	183fd6a93d7e4a65aa513bdb4fa9850e

Property	Value
OS-DCF:diskConfig	MANUAL
OS-EXT-AZ:availability_zone	nova
OS-EXT-SRV-ATTR:host	compute-02
OS-EXT-SRV-ATTR:hypervisor_hostname	compute-02.cook.book
OS-EXT-SRV-ATTR:instance_name	instance-00000002
OS-EXT-STS:power_state	1
OS-EXT-STS:task_state	-
OS-EXT-STS:vm_state	active
OS-SRV-USG:launched_at	2015-01-29T06:12:47.000000
OS-SRV-USG:terminated_at	-
accessIPv4	
accessIPv6	
config_drive	
cookbook_network_1 network	10.200.0.5
created	2015-01-29T06:12:21Z
flavor	m1.small (2)
hostId	c8b5ccd18b4c6930917d8e6a4b26e4ebf3722f9e6d2515a72991e1ef
id	5971ab77-9d91-40d8-9961-d86da0945f26
image	trusty-image (5bfb4a6d-da77-4502-ba52-2e8e40597e96)
key_name	demokey
metadata	{}
name	myInstance
os-extended-volumes:volumes_attached	[]
progress	0
security_groups	default
status	ACTIVE
tenant_id	e99b80a0de78451f91c97beef5b2c2d5
updated	2015-01-29T06:12:47Z
user_id	183fd6a93d7e4a65aa513bdb4fa9850e

ID	Name	Memory_MB	Disk	Ephemeral	Swap	VCPUs	RXTX_Factor	Is_Public
49	m1.javaserver	16384	30	0		2	1.0	True

ID	Name	Memory_MB	Disk	Ephemeral	Swap	VCPUs	RXTX_Factor	Is_Public
1	m1.tiny	512	0	0		1	1.0	True
2	m1.small	2048	20	0		1	1.0	True
3	m1.medium	4096	40	0		2	1.0	True
4	m1.large	8192	80	0		4	1.0	True
49	m1.javaserver	16384	30	0		2	1.0	True
5	m1.xlarge	16384	160	0		8	1.0	True



Id	Name	Availability Zone	Hosts	Metadata
1	TestAggregate	-		

host_name	service	zone
controller	scheduler	internal
controller	cert	internal
controller	consoleauth	internal
controller	conductor	internal
compute-01	consoleauth	internal
compute-01	compute	nova
compute-02	consoleauth	internal
compute-02	compute	nova

Host compute-02 has been successfully added for aggregate 1

Id	Name	Availability Zone	Hosts	Metadata
1	TestAggregate	-	'compute-02'	

Id	Name	Availability Zone
1	TestAggregate	-

Id	Name	Availability Zone	Hosts	Metadata
1	TestAggregate	-	'compute-02'	

Metadata has been successfully updated for aggregate 1.

Id	Name	Availability Zone	Hosts	Metadata
1	TestAggregate	-	'compute-02'	'highspec=true'

Property	Value
OS-FLV-DISABLED:disabled	False
OS-FLV-EXT-DATA:ephemeral	0
disk	20
extra_specs	{"highspec": "true"}
id	50
name	m1.highspec
os-flavor-access:is_public	True
ram	2048
rxtx_factor	1.0
swap	
vcpus	2

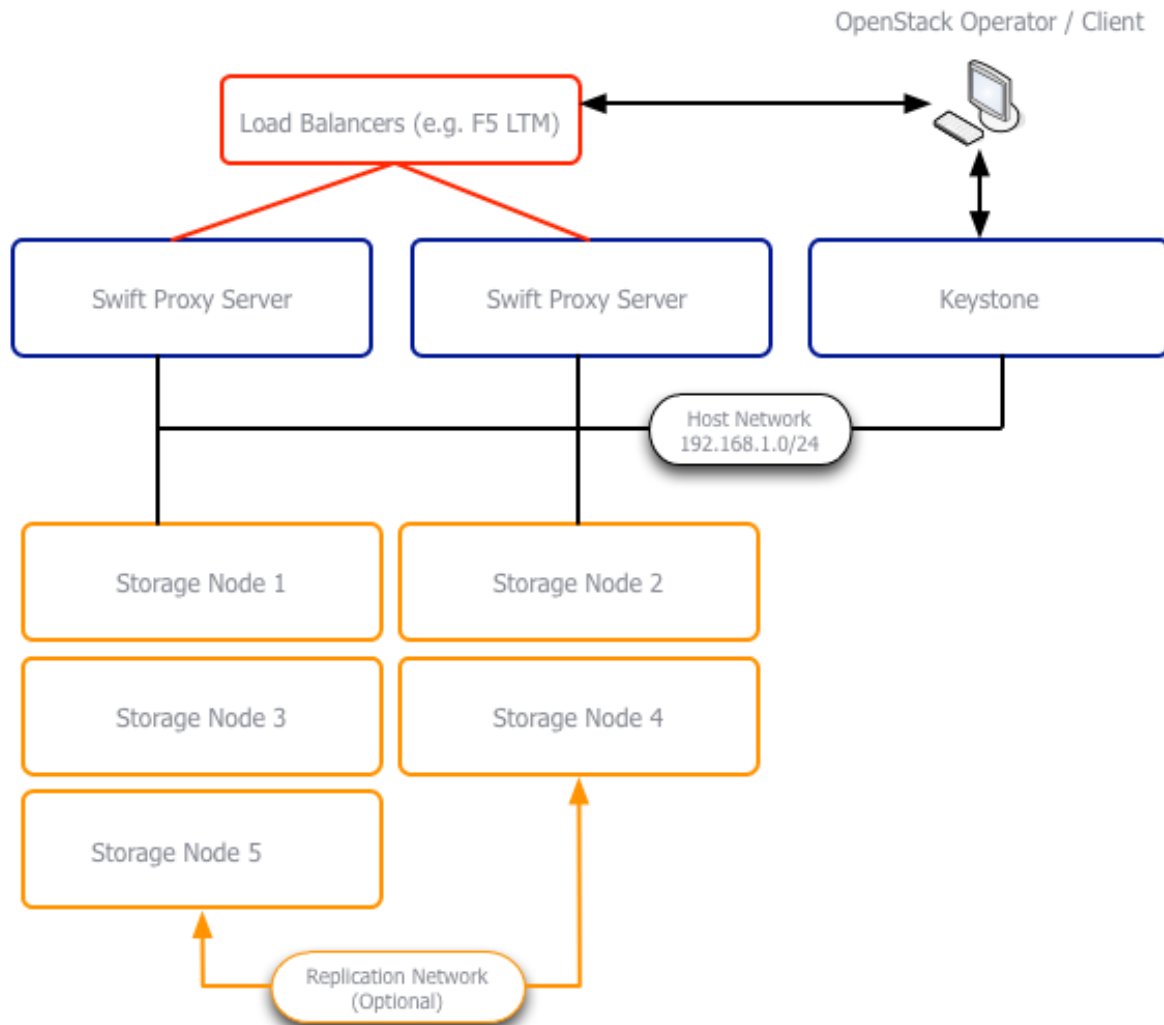
Id	Binary	Host	Zone	Status	State	Updated_at	Disabled Reason
1	nova-scheduler	controller	internal	enabled	up	2015-02-09T05:16:34.000000	-
2	nova-consoleauth	controller	internal	enabled	up	2015-02-09T05:16:41.000000	-
3	nova-cert	controller	internal	enabled	up	2015-02-09T05:16:40.000000	-
4	nova-conductor	controller	internal	enabled	up	2015-02-09T05:16:43.000000	-
5	nova-consoleauth	compute-01	internal	enabled	up	2015-02-09T05:16:37.000000	-
6	nova-compute	compute-01	nova	enabled	up	2015-02-09T05:16:37.000000	-
7	nova-consoleauth	compute-02	internal	enabled	up	2015-02-09T05:16:40.000000	-
8	nova-compute	compute-02	nova	enabled	up	2015-02-09T05:16:43.000000	-

ID	Name	Status	Task State	Power State	Networks
See8002a-c658-4a33-8ddd-11af50b2e18c	test1	ACTIVE	-	Running	cookbook_network_1=10.200.0.6

Id	Binary	Host	Zone	Status	State	Updated_at	Disabled Reason
1	nova-scheduler	controller	internal	enabled	up	2015-02-09T05:16:34.000000	-
2	nova-consoleauth	controller	internal	enabled	up	2015-02-09T05:16:41.000000	-
3	nova-cert	controller	internal	enabled	up	2015-02-09T05:16:40.000000	-
4	nova-conductor	controller	internal	enabled	up	2015-02-09T05:16:43.000000	-
5	nova-consoleauth	compute-01	internal	enabled	up	2015-02-09T05:16:37.000000	-
6	nova-compute	compute-01	nova	disabled	up	2015-02-09T05:16:40.000000	-
7	nova-consoleauth	compute-02	internal	enabled	up	2015-02-09T05:16:40.000000	-
8	nova-compute	compute-02	nova	enabled	up	2015-02-09T05:16:43.000000	-

Property	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-00000004
OS-EXT-STS:power_state	1
OS-EXT-STS:task_state	resize_migrating
OS-EXT-STS:vm_state	active
OS-SRV-USG:launched_at	2015-02-02T08:06:45.000000
OS-SRV-USG:terminated_at	-
accessIPv4	
accessIPv6	
config_drive	
cookbook_network_1 network	10.200.0.6
created	2015-02-02T08:06:37Z
flavor	m1.tiny (1)
hostId	80e19db4c2ee0ac10520eedbd960227393fa6467b300bf4db039d738
id	5ee8002a-c658-4a33-8ddd-11af50b2e18c
image	trusty-image (5bfb4a6d-da77-4502-ba52-2e8e40597e96)
key_name	demokey
metadata	{}
name	test1
os-extended-volumes:volumes_attached	[]
progress	0
security_groups	default
status	RESIZE
tenant_id	e99b80a0de78451f91c97beef5b2c2d5
updated	2015-02-09T04:36:23Z
user_id	183fd6a93d7e4a65aa513bdb4fa9850e

## Chapter 5



```

Device d0r1z1-172.16.0.221:6000R172.16.0.221:6000/sdb1_"" with 1.0 weight got id 0
Device d1r1z1-172.16.0.222:6000R172.16.0.222:6000/sdb1_"" with 1.0 weight got id 1
Device d2r1z1-172.16.0.223:6000R172.16.0.223:6000/sdb1_"" with 1.0 weight got id 2
Device d3r1z1-172.16.0.224:6000R172.16.0.224:6000/sdb1_"" with 1.0 weight got id 3
Device d4r1z1-172.16.0.225:6000R172.16.0.225:6000/sdb1_"" with 1.0 weight got id 4
Reassigned 262144 (100.00%) partitions. Balance is now 0.00.
Device d0r1z1-172.16.0.221:6001R172.16.0.221:6001/sdb1_"" with 1.0 weight got id 0
Device d1r1z1-172.16.0.222:6001R172.16.0.222:6001/sdb1_"" with 1.0 weight got id 1
Device d2r1z1-172.16.0.223:6001R172.16.0.223:6001/sdb1_"" with 1.0 weight got id 2
Device d3r1z1-172.16.0.224:6001R172.16.0.224:6001/sdb1_"" with 1.0 weight got id 3
Device d4r1z1-172.16.0.225:6001R172.16.0.225:6001/sdb1_"" with 1.0 weight got id 4
Reassigned 262144 (100.00%) partitions. Balance is now 0.00.
Device d0r1z1-172.16.0.221:6002R172.16.0.221:6002/sdb1_"" with 1.0 weight got id 0
Device d1r1z1-172.16.0.222:6002R172.16.0.222:6002/sdb1_"" with 1.0 weight got id 1
Device d2r1z1-172.16.0.223:6002R172.16.0.223:6002/sdb1_"" with 1.0 weight got id 2
Device d3r1z1-172.16.0.224:6002R172.16.0.224:6002/sdb1_"" with 1.0 weight got id 3
Device d4r1z1-172.16.0.225:6002R172.16.0.225:6002/sdb1_"" with 1.0 weight got id 4
Reassigned 262144 (100.00%) partitions. Balance is now 0.00.
  
```



Generating a 2048 bit RSA private key

.....+++

.....+++

writing new private key to 'cert.key'

-----

You are about to be asked to enter information that will be incorporated into your certificate request.

What you are about to enter is what is called a Distinguished Name or a DN.

There are quite a few fields but you can leave some blank

For some fields there will be a default value,

If you enter '.', the field will be left blank.

-----

Country Name (2 letter code) [AU]:GB

State or Province Name (full name) [Some-State]:.

Locality Name (eg, city) []:

Organization Name (eg, company) [Internet Widgits Pty Ltd]:Cookbook

Organizational Unit Name (eg, section) []:

Common Name (e.g. server FQDN or YOUR name) []:192.168.100.210

Email Address []:

id	region	publicurl
05e3619f45a24f8ba92cf49a6c56f222	RegionOne	http://172.16.0.211:8776/v1/(tenant_id)s
144c754040a14ce29024298d9170956b	RegionOne	http://192.168.100.200:9696
3482d9ccfe2241699be53cdf2de86f28	RegionOne	https://192.168.100.200:5000/v2.0
7807ae8bf89e4b429012b095399bf13c	RegionOne	http://192.168.100.200:8773/services/Cloud
bd46a06576a3489ba9f9a8a7eaa2b2bd	RegionOne	http://swift-proxy:8080/v1/AUTH_\$(tenant_id)s
caacafe99f304cc5a0ab4f786f25c048	RegionOne	http://192.168.100.200:9292/v2
d14fafa3f74f4a1fa77b91eb2d482d2c	RegionOne	http://192.168.100.200:8774/v2/\$(tenant_id)s

## Chapter 6

```
StorageURL: http://swift-proxy:8080/v1/AUTH_51e03fdce75e4b088ad1713d95a59e6e
Auth Token: ce6e955daf1d44d9afc353a0ff7d7d86
Account: AUTH_51e03fdce75e4b088ad1713d95a59e6e
Containers: 0
Objects: 0
Bytes: 0
Content-Type: text/plain; charset=utf-8
X-Timestamp: 1435349039.35466
X-Trans-Id: tx7b4dd493da5747bbb6c0c-00558db02f
X-Put-Timestamp: 1435349039.35466
```

```
tmp/example-1Gb segment 7
tmp/example-1Gb segment 5
tmp/example-1Gb segment 2
tmp/example-1Gb segment 0
tmp/example-1Gb segment 3
tmp/example-1Gb segment 6
tmp/example-1Gb segment 4
tmp/example-1Gb segment 10
tmp/example-1Gb segment 1
tmp/example-1Gb segment 8
tmp/example-1Gb segment 9
tmp/example-1Gb
```

```
tmp/example-1Gb/1435350204.204782/1073741824/102400000/00000000
tmp/example-1Gb/1435350204.204782/1073741824/102400000/00000001
tmp/example-1Gb/1435350204.204782/1073741824/102400000/00000002
tmp/example-1Gb/1435350204.204782/1073741824/102400000/00000003
tmp/example-1Gb/1435350204.204782/1073741824/102400000/00000004
tmp/example-1Gb/1435350204.204782/1073741824/102400000/00000005
tmp/example-1Gb/1435350204.204782/1073741824/102400000/00000006
tmp/example-1Gb/1435350204.204782/1073741824/102400000/00000007
tmp/example-1Gb/1435350204.204782/1073741824/102400000/00000008
tmp/example-1Gb/1435350204.204782/1073741824/102400000/00000009
tmp/example-1Gb/1435350204.204782/1073741824/102400000/00000010
```

```
tmp/example-500Mb
tmp/test/test1
tmp/test/test2
```

```
test/tmp/test/test1
test/tmp/test/test2
test/tmp/example-500Mb
```

```
Account: AUTH_d81683a9a2dd46cf9cac88c5b8eaca1a
Containers: 0
Objects: 0
Bytes: 0
Content-Type: text/plain; charset=utf-8
X-Timestamp: 1421140955.13054
X-Trans-Id: tx32e023c22538426096070-0054b4e3db
X-Put-Timestamp: 1421140955.13054
```

## Chapter 7

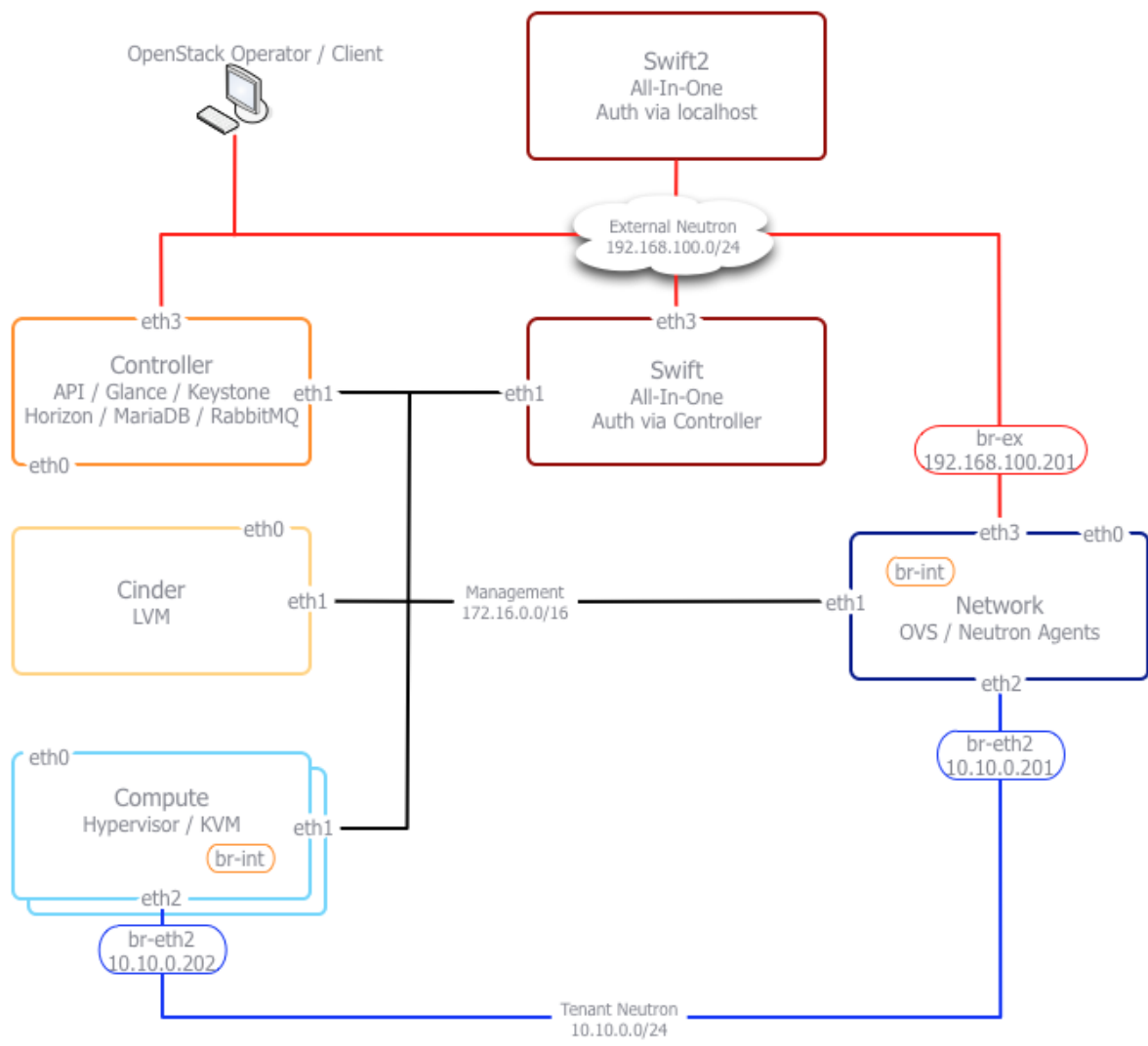
```
meta-data=/dev/sdb1      isize=1024   agcount=4, agsize=1310656 blks
                        =      sectsz=512       attr=2, projid32bit=0
data       =              bsize=4096     blocks=5242624, imaxpct=25
                        =              sunit=0      swidth=0 blks
naming     =version 2     bsize=4096   ascii-ci=0
log        =internal log bsize=4096   blocks=2560, version=2
                        =              sectsz=512   sunit=0 blks, lazy-count=1
realtime   =none         extsz=4096   blocks=0, rtextents=0
```

Created 2621 containers for dispersion reporting, 1m, 0 retries  
Created 2621 objects for dispersion reporting, 2m, 0 retries

Querying containers: 1101 of 2622, 37s left, 0 retries

Queried 2622 containers for dispersion reporting, 1m, 0 retries  
100.00% of container copies found (7866 of 7866)  
Sample represents 1.00% of the container partition space  
Queried 2621 objects for dispersion reporting, 30s, 0 retries  
There were 2621 partitions missing 0 copy.  
100.00% of object copies found (7863 of 7863)  
Sample represents 1.00% of the object partition space

## Chapter 8



Property	Value
attachments	[]
availability_zone	nova
bootable	false
created_at	2015-07-03T20:55:40.704025
display_description	None
display_name	cookbook
encrypted	False
id	06ab21fb-bc76-4216-9491-6c1918c1dab2
metadata	{}
size	1
snapshot_id	None
source_valid	None
status	creating
volume_type	None

--- Logical volume ---

```

LV Path          /dev/cinder-volumes/volume-06ab21fb-bc76-4216-9491-6c1918c1dab2
LV Name          volume-06ab21fb-bc76-4216-9491-6c1918c1dab2
VG Name          cinder-volumes
LV UUID          gg1gKl-X34n-q9xU-xGbc-7C8x-tIxF-yaPU6B
LV Write Access  read/write
LV Creation host, time cinder, 2015-07-03 15:55:40 -0500
LV Status        available
# open           0
LV Size          1.00 GiB
Current LE       256
Segments         1
Allocation       inherit
Read ahead sectors auto
- currently set to 256
Block device     252:2
    
```

ID	Status	Display Name	Size	Volume Type	Attached to
06ab21fb-bc76-4216-9491-6c1918c1dab2	available	cookbook	1	None	

ID	Status	Display Name	Size	Volume Type	Bootable	Attached to
b3e0f6b2-19cb-436f-a190-4b5c66ba2daf	available	demo	1	None	false	

Property	Value
created_at	2015-03-03T03:34:28.863739
display_description	None
display_name	None
id	855de1d1-1e43-4b19-93eb-5c60059890a7
metadata	{}
size	1
status	creating
volume_id	b3e0f6b2-19cb-436f-a190-4b5c66ba2daf

ID	Name	Status	Server
bbcf92a3-658b-4185-8686-7fb2f77b66a0	cirros-image	ACTIVE	
f5eba890-4660-4ee8-92d0-d7972510b7d6	trusty-image	ACTIVE	

ID	Name	Memory_MB	Disk	Ephemeral	Swap	VCPUs	RXTX_Factor	Is_Public
1	m1.tiny	512	1	0		1	1.0	True
2	m1.small	2048	20	0		1	1.0	True
3	m1.medium	4096	40	0		2	1.0	True
4	m1.large	8192	80	0		4	1.0	True
5	m1.xlarge	16384	160	0		8	1.0	True

id	name	subnets
0375e772-b021-425c-bc17-5a3263247fb8	cookbook_network_1	37ca3149-ee6b-4288-b074-03a4e1635b7c 10.200.0.0/24
706c9118-68d9-4751-932c-3dc94ec6f4ed	ext_net	889c1ef7-09af-48d2-85bf-6971446e2eb7 192.168.100.0/24

## Chapter 9

Name	Type	Unit	Resource ID	User ID	Project ID
cpu	cumulative	ns	4be430e2-9b12	37e4ba2f	d27f89204b8
cpu_util	gauge	%	4be430e2-9b12	37e4ba2f	d27f89204b8
disk.device.read.bytes	cumulative	B	4be430e2-9b12	37e4ba2f	d27f89204b8
disk.device.read.requests	cumulative	request	4be430e2-9b12	37e4ba2f	d27f89204b8
disk.device.write.bytes	cumulative	B	4be430e2-9b12	37e4ba2f	d27f89204b8
disk.device.write.requests	cumulative	request	4be430e2-9b12	37e4ba2f	d27f89204b8
disk.read.bytes	cumulative	B	4be430e2-9b12	37e4ba2f	d27f89204b8
disk.read.bytes.rate	gauge	B/s	4be430e2-9b12	37e4ba2f	d27f89204b8
disk.read.requests	cumulative	request	4be430e2-9b12	37e4ba2f	d27f89204b8
disk.read.requests.rate	gauge	request/s	4be430e2-9b12	37e4ba2f	d27f89204b8
disk.write.bytes	cumulative	B	4be430e2-9b12	37e4ba2f	d27f89204b8
disk.write.bytes.rate	gauge	B/s	4be430e2-9b12	37e4ba2f	d27f89204b8
disk.write.requests	cumulative	request	4be430e2-9b12	37e4ba2f	d27f89204b8
disk.write.requests.rate	gauge	request/s	4be430e2-9b12	37e4ba2f	d27f89204b8
image	gauge	image	b8ab5287-081a	None	d27f89204b8
image	gauge	image	e5f33281-c497	None	d27f89204b8
image.size	gauge	B	b8ab5287-081a	None	d27f89204b8
image.size	gauge	B	e5f33281-c497	None	d27f89204b8
instance	gauge	instance	4be430e2-9b12	37e4ba2f	d27f89204b8
instance:m1.tiny	gauge	instance	4be430e2-9b12	37e4ba2f	d27f89204b8
network.incoming.bytes	cumulative	B	instance-0000	37e4ba2f	d27f89204b8
network.incoming.bytes.rate	gauge	B/s	instance-0000	37e4ba2f	d27f89204b8
network.incoming.packets	cumulative	packet	instance-0000	37e4ba2f	d27f89204b8
network.incoming.packets.rate	gauge	packet/s	instance-0000	37e4ba2f	d27f89204b8
network.outgoing.bytes	cumulative	B	instance-0000	37e4ba2f	d27f89204b8
network.outgoing.bytes.rate	gauge	B/s	instance-0000	37e4ba2f	d27f89204b8
network.outgoing.packets	cumulative	packet	instance-0000	37e4ba2f	d27f89204b8
network.outgoing.packets.rate	gauge	packet/s	instance-0000	37e4ba2f	d27f89204b8

Name	Type	Unit	Resource ID	User ID	Project ID
cpu	cumulative	ns	4be430e2-9b12	37e4ba2f	d27f89204b
cpu_util	gauge	%	4be430e2-9b12	37e4ba2f	d27f89204b
disk.read.bytes	cumulative	B	4be430e2-9b12	37e4ba2f	d27f89204b
disk.read.bytes.rate	gauge	B/s	4be430e2-9b12	37e4ba2f	d27f89204b
disk.read.requests	cumulative	request	4be430e2-9b12	37e4ba2f	d27f89204b
disk.read.requests.rate	gauge	request/s	4be430e2-9b12	37e4ba2f	d27f89204b
disk.write.bytes	cumulative	B	4be430e2-9b12	37e4ba2f	d27f89204b
disk.write.bytes.rate	gauge	B/s	4be430e2-9b12	37e4ba2f	d27f89204b
disk.write.requests	cumulative	request	4be430e2-9b12	37e4ba2f	d27f89204b
disk.write.requests.rate	gauge	request/s	4be430e2-9b12	37e4ba2f	d27f89204b
instance	gauge	instance	4be430e2-9b12	37e4ba2f	d27f89204b
instance:m1.tiny	gauge	instance	4be430e2-9b12	37e4ba2f	d27f89204b

Resource ID	Name	Type	Volume	Unit	Timestamp
4be430e2-9b12-4e1b-941c-58b5d0f0918b	disk.write.bytes	cumulative	707003392.0	B	2015-04-20T08:48:16
4be430e2-9b12-4e1b-941c-58b5d0f0918b	disk.write.bytes	cumulative	707003392.0	B	2015-04-20T08:38:16
4be430e2-9b12-4e1b-941c-58b5d0f0918b	disk.write.bytes	cumulative	707003392.0	B	2015-04-20T08:28:16
4be430e2-9b12-4e1b-941c-58b5d0f0918b	disk.write.bytes	cumulative	707003392.0	B	2015-04-20T08:18:16
4be430e2-9b12-4e1b-941c-58b5d0f0918b	disk.write.bytes	cumulative	706917376.0	B	2015-04-20T08:08:16
4be430e2-9b12-4e1b-941c-58b5d0f0918b	disk.write.bytes	cumulative	706917376.0	B	2015-04-20T07:58:16
4be430e2-9b12-4e1b-941c-58b5d0f0918b	disk.write.bytes	cumulative	706917376.0	B	2015-04-20T07:48:16
4be430e2-9b12-4e1b-941c-58b5d0f0918b	disk.write.bytes	cumulative	706917376.0	B	2015-04-20T07:38:16
4be430e2-9b12-4e1b-941c-58b5d0f0918b	disk.write.bytes	cumulative	706917376.0	B	2015-04-20T07:28:16
4be430e2-9b12-4e1b-941c-58b5d0f0918b	disk.write.bytes	cumulative	706917376.0	B	2015-04-20T07:18:16
4be430e2-9b12-4e1b-941c-58b5d0f0918b	disk.write.bytes	cumulative	706810880.0	B	2015-04-20T07:08:16

Period	Period Start	Period End	Max	Min	Avg	Sum	Count	Duration	Duration Start	Duration End
0	2015-04-14T03:58:15	2015-04-14T03:58:15	134778.88	0.0	1329.6	1163356.4	875	529201.0	2015-04-14T03:58:15	2015-04-20T06:58:16

Period	Period Start	Period End	Max	Min	Avg	Sum	Count	Duration	Duration Start	Duration End
60	2015-04-14T22:48:15	2015-04-14T22:49:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-14T22:48:15	2015-04-14T22:48:15
60	2015-04-14T22:58:15	2015-04-14T22:59:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-14T22:58:15	2015-04-14T22:58:15
60	2015-04-14T23:08:15	2015-04-14T23:09:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-14T23:08:15	2015-04-14T23:08:15
60	2015-04-14T23:18:15	2015-04-14T23:19:15	177.4	177.4	177.4	177.4	1	0.0	2015-04-14T23:18:15	2015-04-14T23:18:15
60	2015-04-14T23:28:15	2015-04-14T23:29:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-14T23:28:15	2015-04-14T23:28:15
60	2015-04-14T23:38:15	2015-04-14T23:39:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-14T23:38:15	2015-04-14T23:38:15
60	2015-04-14T23:48:15	2015-04-14T23:49:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-14T23:48:15	2015-04-14T23:48:15
60	2015-04-14T23:58:15	2015-04-14T23:59:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-14T23:58:15	2015-04-14T23:58:15
60	2015-04-15T00:08:15	2015-04-15T00:09:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T00:08:15	2015-04-15T00:08:15
60	2015-04-15T00:18:15	2015-04-15T00:19:15	129.7	129.7	129.7	129.7	1	0.0	2015-04-15T00:18:15	2015-04-15T00:18:15
60	2015-04-15T00:28:15	2015-04-15T00:29:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T00:28:15	2015-04-15T00:28:15
60	2015-04-15T00:38:15	2015-04-15T00:39:15	61.44	61.44	61.44	61.44	1	0.0	2015-04-15T00:38:15	2015-04-15T00:38:15
60	2015-04-15T00:48:15	2015-04-15T00:49:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T00:48:15	2015-04-15T00:48:15
60	2015-04-15T00:58:15	2015-04-15T00:59:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T00:58:15	2015-04-15T00:58:15
60	2015-04-15T01:08:15	2015-04-15T01:09:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T01:08:15	2015-04-15T01:08:15
60	2015-04-15T01:18:15	2015-04-15T01:19:15	129.7	129.7	129.7	129.7	1	0.0	2015-04-15T01:18:15	2015-04-15T01:18:15
60	2015-04-15T01:28:15	2015-04-15T01:29:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T01:28:15	2015-04-15T01:28:15
60	2015-04-15T01:38:15	2015-04-15T01:39:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T01:38:15	2015-04-15T01:38:15
60	2015-04-15T01:48:15	2015-04-15T01:49:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T01:48:15	2015-04-15T01:48:15
60	2015-04-15T01:58:15	2015-04-15T01:59:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T01:58:15	2015-04-15T01:58:15
60	2015-04-15T02:08:15	2015-04-15T02:09:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T02:08:15	2015-04-15T02:08:15
60	2015-04-15T02:18:15	2015-04-15T02:19:15	129.7	129.7	129.7	129.7	1	0.0	2015-04-15T02:18:15	2015-04-15T02:18:15
60	2015-04-15T02:28:15	2015-04-15T02:29:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T02:28:15	2015-04-15T02:28:15
60	2015-04-15T02:38:15	2015-04-15T02:39:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T02:38:15	2015-04-15T02:38:15
60	2015-04-15T02:48:15	2015-04-15T02:49:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T02:48:15	2015-04-15T02:48:15
60	2015-04-15T02:58:15	2015-04-15T02:59:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T02:58:15	2015-04-15T02:58:15
60	2015-04-15T03:08:15	2015-04-15T03:09:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T03:08:15	2015-04-15T03:08:15
60	2015-04-15T03:18:15	2015-04-15T03:19:15	129.7	129.7	129.7	129.7	1	0.0	2015-04-15T03:18:15	2015-04-15T03:18:15
60	2015-04-15T03:28:15	2015-04-15T03:29:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T03:28:15	2015-04-15T03:28:15
60	2015-04-15T03:38:15	2015-04-15T03:39:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T03:38:15	2015-04-15T03:38:15
60	2015-04-15T03:48:15	2015-04-15T03:49:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T03:48:15	2015-04-15T03:48:15
60	2015-04-15T03:58:15	2015-04-15T03:59:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T03:58:15	2015-04-15T03:58:15
60	2015-04-15T04:08:15	2015-04-15T04:09:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T04:08:15	2015-04-15T04:08:15
60	2015-04-15T04:18:15	2015-04-15T04:19:15	402.7	402.7	402.7	402.7	1	0.0	2015-04-15T04:18:15	2015-04-15T04:18:15
60	2015-04-15T04:28:15	2015-04-15T04:29:15	0.0	0.0	0.0	0.0	1	0.0	2015-04-15T04:28:15	2015-04-15T04:28:15

Period	Period Start	Period End	Max	Min	Avg
0	2015-04-14T03:48:15	2015-04-14T03:48:15	56915.0	25157.0	41814.138009

Sum	Count	Duration	Duration Start	Duration End
36963698.0	884	534601.0	2015-04-14T03:48:15	2015-04-20T08:18:16

Period Start	Period End	Max	Min	Avg	Sum	Duration Start	Duration End
2015-04-14T22:48:15	2015-04-14T22:49:15	31323.0	31323.0	31323.0	31323.0	2015-04-14T22:48:15	2015-04-14T22:48:15
2015-04-14T22:58:15	2015-04-14T22:59:15	31323.0	31323.0	31323.0	31323.0	2015-04-14T22:58:15	2015-04-14T22:58:15
2015-04-14T23:08:15	2015-04-14T23:09:15	31323.0	31323.0	31323.0	31323.0	2015-04-14T23:08:15	2015-04-14T23:08:15
2015-04-14T23:18:15	2015-04-14T23:19:15	31323.0	31323.0	31323.0	31323.0	2015-04-14T23:18:15	2015-04-14T23:18:15
2015-04-14T23:28:15	2015-04-14T23:29:15	31323.0	31323.0	31323.0	31323.0	2015-04-14T23:28:15	2015-04-14T23:28:15
2015-04-14T23:38:15	2015-04-14T23:39:15	31323.0	31323.0	31323.0	31323.0	2015-04-14T23:38:15	2015-04-14T23:38:15
2015-04-14T23:48:15	2015-04-14T23:49:15	31323.0	31323.0	31323.0	31323.0	2015-04-14T23:48:15	2015-04-14T23:48:15
2015-04-14T23:58:15	2015-04-14T23:59:15	31323.0	31323.0	31323.0	31323.0	2015-04-14T23:58:15	2015-04-14T23:58:15
2015-04-15T00:08:15	2015-04-15T00:09:15	31323.0	31323.0	31323.0	31323.0	2015-04-15T00:08:15	2015-04-15T00:08:15
2015-04-15T00:18:15	2015-04-15T00:19:15	31323.0	31323.0	31323.0	31323.0	2015-04-15T00:18:15	2015-04-15T00:18:15
2015-04-15T00:28:15	2015-04-15T00:29:15	31323.0	31323.0	31323.0	31323.0	2015-04-15T00:28:15	2015-04-15T00:28:15
2015-04-15T00:38:15	2015-04-15T00:39:15	31707.0	31707.0	31707.0	31707.0	2015-04-15T00:38:15	2015-04-15T00:38:15
...							
2015-04-19T03:58:15	2015-04-19T03:59:15	48345.0	48345.0	48345.0	48345.0	2015-04-19T03:58:16	2015-04-19T03:58:16
2015-04-19T04:08:15	2015-04-19T04:09:15	48345.0	48345.0	48345.0	48345.0	2015-04-19T04:08:16	2015-04-19T04:08:16
2015-04-19T04:18:15	2015-04-19T04:19:15	48345.0	48345.0	48345.0	48345.0	2015-04-19T04:18:16	2015-04-19T04:18:16

id	name	cidr	allocation_pools
11c1dca-479b-435d-889d-fc29479b0a24	cookbook_float_subnet_1	192.168.100.0/24	{"start": "192.168.100.10", "end": "192.168.100.20"}
4cf209c-b3d5-40ed-9127-ec40e5e38343	cookbook_subnet_1	10.200.0.0/24	{"start": "10.200.0.2", "end": "10.200.0.254"}

Created a new pool:

Field	Value
admin_state_up	True
description	Web Load Balancer
health_monitors	
health_monitors_status	
id	546e1f04-b059-453e-a619-c0e4efff8a52
lb_method	ROUND_ROBIN
members	
name	Web-Load-Balancer
protocol	HTTP
provider	haproxy
status	PENDING_CREATE
status_description	
subnet_id	624ff352-2bca-40a2-bb45-efe0b824a6a1
tenant_id	61fbdb985a834dce8f68f8dfabd73bd0
vip_id	

ID	Name	Status	Task State	Power State	Networks
2b672837-cc50-45b1-898e-5ce6bb68652c	test1	ACTIVE	-	Running	cookbook_network_1=11.200.0.2, 192.168.100.11
0ab5d1ed-7c17-45ca-9d41-daf48e27af20	webserver-0ab5d1ed-7c17-45ca-9d41-daf48e27af20	ACTIVE	-	Running	cookbook_network_1=11.200.0.5
3d1eba44-25a1-4aa9-8ce9-085531dbd5e1	webserver-3d1eba44-25a1-4aa9-8ce9-085531dbd5e1	ACTIVE	-	Running	cookbook_network_1=11.200.0.6



Created a new member:

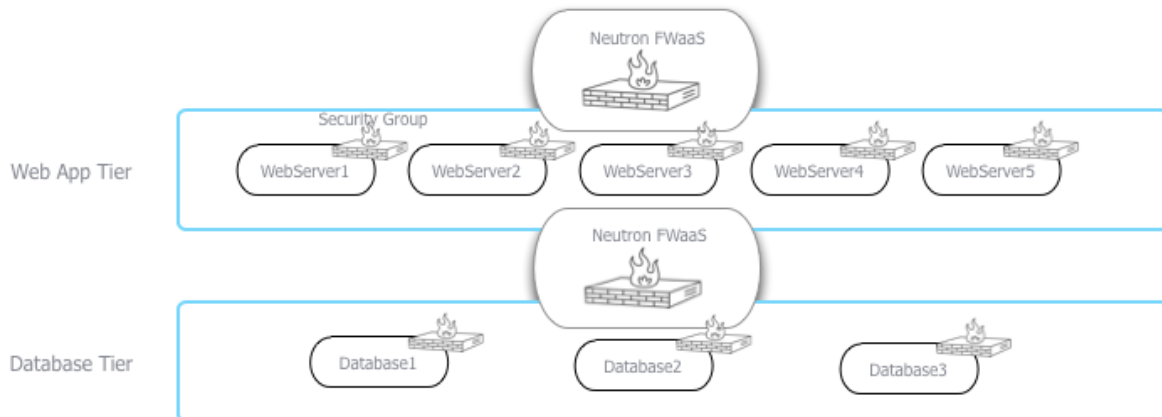
Field	Value
address	10.200.0.4
admin_state_up	True
id	5cade31f-7208-4623-88d2-f0d60818cce5
pool_id	7d1aef98-90ee-4b6f-82a2-1b4b39c3c444
protocol_port	80
status	PENDING_CREATE
status_description	
tenant_id	001504d6f08d4698824636fa00f4a0f2
weight	1

id	address	protocol_port	weight	admin_state_up	status
af96b7f1-e2b0-4f5c-ae70-7e99a75079bf	11.200.0.5	80	1	True	ACTIVE
ee1aa038-53d5-44df-ae29-89af7548d9fc	11.200.0.6	80	1	True	ACTIVE

id	name	cidr	allocation_pools
11c11dca-479b-435d-889d-fc29479b0a24	cookbook_float_subnet_1	192.168.100.0/24	{"start": "192.168.100.10", "end": "192.168.100.20"}
4cf2c09c-b3d5-40ed-9127-ec40e5e38343	cookbook_subnet_1	10.200.0.0/24	{"start": "10.200.0.2", "end": "10.200.0.254"}

Created a new vip:

Field	Value
address	192.168.100.12
admin_state_up	True
connection_limit	-1
description	
id	c66c59a8-b34a-47e2-8239-63aa685c96c5
name	WebserverVIF
pool_id	7d1aef98-90ee-4b6f-82a2-1b4b39c3c444
port_id	1b1f227c-9439-47fc-b6f9-e0c24e03b5b9
protocol	HTTP
protocol_port	80
session_persistence	
status	PENDING_CREATE
status_description	
subnet_id	11c11dca-479b-435d-889d-fc29479b0a24
tenant_id	001504d6f08d4698824636fa00f4a0f2



Created a new firewall\_rule:

Field	Value
action	allow
description	
destination_ip_address	
destination_port	80
enabled	True
firewall_policy_id	
id	e43bade8-f50d-4655-bbf3-0030b7aa3dc8
ip_version	4
name	
position	
protocol	tcp
shared	False
source_ip_address	
source_port	
tenant_id	68aa8242ee3c47279fcafa8fa6620311

Created a new firewall\_policy:

Field	Value
audited	False
description	
firewall_rules	e43bade8-f50d-4655-bbf3-0030b7aa3dc8
id	b12d0be0-9645-448a-b010-a8a8f47580d8
name	allow-http-policy
shared	False
tenant_id	68aa8242ee3c47279fcafa8fa6620311

Created a new firewall:

Field	Value
admin_state_up	True
description	
firewall_policy_id	b12d0be0-9645-448a-b010-a8a8f47580d8
id	1e0c0c8f-f8cf-46e2-bfd2-2b97f39d6ada
name	cookbook-firewall
status	CREATED
tenant_id	68aa8242ee3c47279fcafa8fa6620311

id	name	firewall_policy_id
1e0c0c8f-f8cf-46e2-bfd2-2b97f39d6ada	cookbook-firewall	b12d0be0-9645-448a-b010-a8a8f47580d8

Field	Value
admin_state_up	True
description	
firewall_policy_id	b12d0be0-9645-448a-b010-a8a8f47580d8
id	1e0c0c8f-f8cf-46e2-bfd2-2b97f39d6ada
name	cookbook-firewall
status	ACTIVE
tenant_id	68aa8242ee3c47279fcafa8fa6620311

Field	Value
audited	False
description	
firewall_rules	e43bade8-f50d-4655-bbf3-0030b7aa3dc8
id	b12d0be0-9645-448a-b010-a8a8f47580d8
name	allow-http-policy
shared	False
tenant_id	68aa8242ee3c47279fcafa8fa6620311

Field	Value
action	allow
description	
destination_ip_address	
destination_port	80
enabled	True
firewall_policy_id	b12d0be0-9645-448a-b010-a8a8f47580d8
id	e43bade8-f50d-4655-bbf3-0030b7aa3dc8
ip_version	4
name	
position	1
protocol	tcp
shared	False
source_ip_address	
source_port	
tenant_id	68aa8242ee3c47279fcafa8fa6620311

```
--2015-02-09 04:22:37-- http://10.200.0.2/
Connecting to 10.200.0.2:80... connected.
HTTP request sent, awaiting response... 200 OK
```

Created a new firewall\_policy:

Field	Value
audited	False
description	
firewall_rules	451e65e0-a1c2-4cc1-8a5d-1ef0608ec1f6
id	e78ba041-d1f3-4f9f-93c2-c6f0fc680e86
name	allow-ssh-policy
shared	False
tenant_id	35735709193949ffa8fbfed613ac2d46

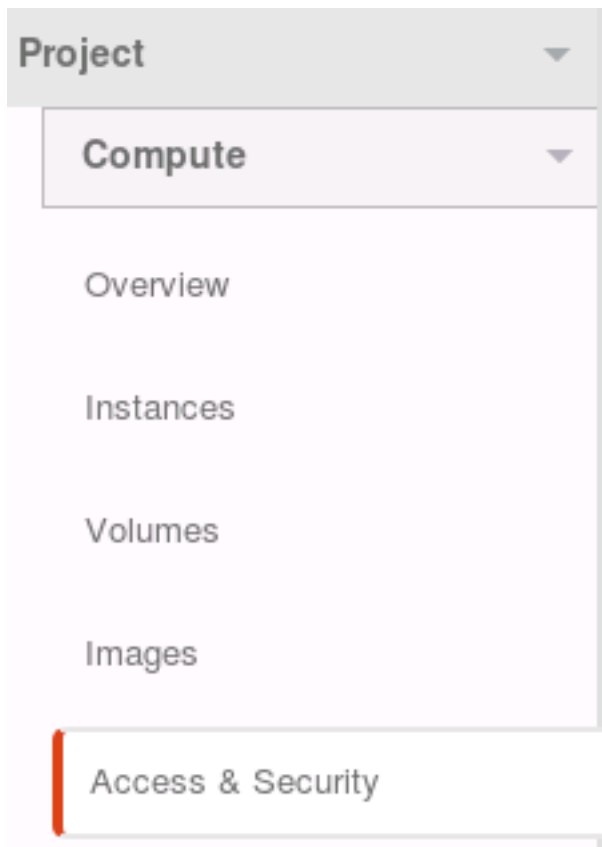
id	name	subnets
5e5d24bd-9d1f-4ed1-84b5-0b7e2a9a233b	ext_net	11c11dca-479b-435d-889d-fc29479b0a24 192.168.100.0/24
25153759-994f-4835-9b13-bf0ec77fb336	cookbook_network_1	4cf2c09c-b3d5-40ed-9127-ec40e5e38343 10.200.0.0/24

id	stack_name	stack_status	creation_time
5484d8ec-62ae-4c59-80f2-ce9a8ada9098	haproxy101	CREATE_IN_PROGRESS	2015-02-23T16:38:54Z

id	stack_name	stack_status	creation_time
5484d8ec-62ae-4c59-80f2-ce9a8ada9098	haproxy101	CREATE_COMPLETE	2015-02-23T16:38:54Z

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

## Chapter 10



## Access & Security

Security Groups   Key Pairs   Floating IPs   API Access

### Key Pairs

[+ Create Key Pair](#)  
 [📄 Import Key Pair](#)  
 [✖ Delete Key Pairs](#)

<input type="checkbox"/>	Key Pair Name	Fingerprint	Actions
<input type="checkbox"/>	cookbook	b8:d2:6b:8f:3c:35:1c:b7:95:4d:2a:80:5f:8d:c4:7e	<a href="#">Delete Key Pair</a>

Displaying 1 item

# Create Key Pair ✕

Key Pair Name \*

## Description:

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.

# Download Key Pair

The key pair "demo" should download automatically. If not use the link below.

[Download key pair "demo"](#)

The screenshot shows the OpenStack dashboard interface. The top navigation bar includes the OpenStack logo, a project dropdown set to 'cookbook', a user profile dropdown for 'demo', and a 'Sign Out' link. The left sidebar contains a navigation menu with categories: Project (Compute, Overview, Instances, Volumes, Images), Access & Security (highlighted), Network, and Orchestration. The main content area is titled 'Access & Security' and has tabs for Security Groups, Key Pairs (selected), Floating IPs, and API Access. Under the 'Key Pairs' tab, there are buttons for '+ Create Key Pair', 'Import Key Pair', and 'Delete Key Pairs'. Below these buttons is a table with the following data:

<input type="checkbox"/>	Key Pair Name	Fingerprint	Actions
<input type="checkbox"/>	cookbook	b8:d2:6b:8f:3c:35:1c:b7:95:4d:2a:80:5f:8d:c4:7e	Delete Key Pair
<input type="checkbox"/>	demo	06:13:63:4d:91:0d:cd:44:32:cf:cd:0b:5c:4a:2d:be	Delete Key Pair

At the bottom of the table, it says 'Displaying 2 items'.

<input type="checkbox"/>	cookbook	b8:d2:6b:8f:3c:35:1c:b7:95:4d:2a:80:5f:8d:c4:7e	Delete Key Pair
--------------------------	----------	---	-----------------

## Confirm Delete Key Pair

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

Delete Key Pair

Cancel

+ Create Key Pair

ⓘ Import Key Pair

✕ Delete Key Pairs

## Import Key Pair

### Key Pair Name \*

imortedkey|

### Public Key \*

```
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAQACIINuz
Yld+Q2sJk7+Pp34yvyDO5/lrr1wEGX9Q
/9F64pHvnV3E3lhphr2zSrV1L1DxeiKUzlxOCImhod
3D7EkWDA3X8o/ZTcz7dTgV+6y
/maXE3GXrtVj1Fwn
/5WaWksQumVYcB6Nwu0i7kLE4BZ5nCLjHr7MwI8
RnkB1IH6aMZA3z4bGBKINpJb8poUFSckXerxjvzpz
GfvKcaL3pCEyGC0SqID66GIISETXsjnGbxvV9JO3
V
/inuZshJk25qe9HGB274lpmECI8QwYqfNKLVIHI07
```

### Description:

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

# Access & Security

Security Groups   Key Pairs   Floating IPs   API Access

## Key Pairs

+ Create Key Pair

⊖ Import Key Pair

✖ Delete Key Pairs

<input type="checkbox"/>	Key Pair Name	Fingerprint	Actions
<input type="checkbox"/>	demo	06:13:63:4d:91:0d:cd:44:32:cf:cd:0b:5c:4a:2d:be	Delete Key Pair
<input type="checkbox"/>	imortedkey	1c:60:1a:f5:13:22:55:f1:17:ea:86:e6:68:0e:d8:da	Delete Key Pair

Displaying 2 items

## Project

Compute

Network

Network Topology

Networks

Routers

VPN



# Networks

## Networks

[+ Create Network](#)[✕ Delete Networks](#)

<input type="checkbox"/>	Name	Subnets Associated	Shared	Status	Admin State	Actions
<input type="checkbox"/>	<a href="#">ext_net</a>	<b>cookbook_float_subnet_1</b> 192.168.100.0/24	No	ACTIVE	UP	<a href="#">Edit Network</a> ▼
<input type="checkbox"/>	<a href="#">cookbook_network_1</a>	<b>cookbook_subnet_1</b> 10.200.0.0/24	No	ACTIVE	UP	<a href="#">Edit Network</a> ▼

Displaying 2 items

## Create Network

[✕](#)

Network \*   Subnet \*   Subnet Detail

**Network Name**

**Admin State \* ?**

Create a new network. In addition a subnet associated with the network can be created in the next panel.

[« Back](#)[Next »](#)

# Create Network

x

Network \*

Subnet \*

Subnet Detail

Create Subnet

**Subnet Name**

testSubnet

**Network Address** ?

192.168.2.0/24

**IP Version** \*

IPv4

**Gateway IP** ?

Disable Gateway

Create a subnet associated with the new network, in which case "Network Address" must be specified. If you wish to create a network without a subnet, uncheck the "Create Subnet" checkbox.

« Back

Next »

# Create Network



Network \* Subnet \* Subnet Detail

Enable DHCP

Specify additional attributes for the subnet.

**Allocation Pools** ?

**DNS Name Servers** ?

8.8.8.8  
8.8.4.4

**Host Routes** ?

0.0.0.0/0,192.168.2.254

« Back Create

## Networks

Networks + Create Network ✖ Delete Networks

<input type="checkbox"/>	Name	Subnets Associated	Shared	Status	Admin State	Actions
<input type="checkbox"/>	testNet	testSubnet 192.168.2.0/24	No	ACTIVE	UP	Edit Network ▾
<input type="checkbox"/>	ext_net	cookbook_float_subnet_1 192.168.100.0/24	No	ACTIVE	UP	Edit Network ▾
<input type="checkbox"/>	cookbook_network_1	cookbook_subnet_1 10.200.0.0/24	No	ACTIVE	UP	Edit Network ▾

Displaying 3 items

## Networks

Networks + Create Network ✖ Delete Networks

<input type="checkbox"/>	Name	Subnets Associated	Shared	Status	Admin State	Actions
<input checked="" type="checkbox"/>	testNet	testSubnet 192.168.2.0/24	No	ACTIVE	UP	Edit Network ▾
<input type="checkbox"/>	ext_net	cookbook_float_subnet_1 192.168.100.0/24	No	ACTIVE	UP	Edit Network ▾
<input type="checkbox"/>	cookbook_network_1	cookbook_subnet_1 10.200.0.0/24	No	ACTIVE	UP	Edit Network ▾

Displaying 3 items

## Confirm Delete Networks

×

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

Delete Networks

Cancel

Project

Compute

Network

Network Topology

Project

Compute

Network

Network Topology

Networks

Routers

VPN

Orchestration

Identity

# Network Topology

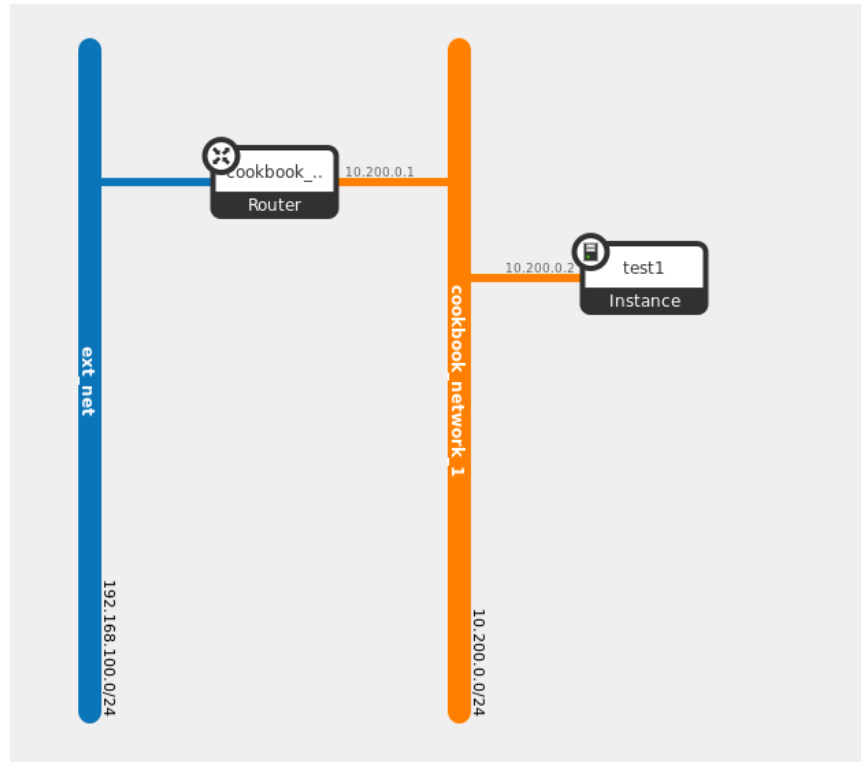
Small

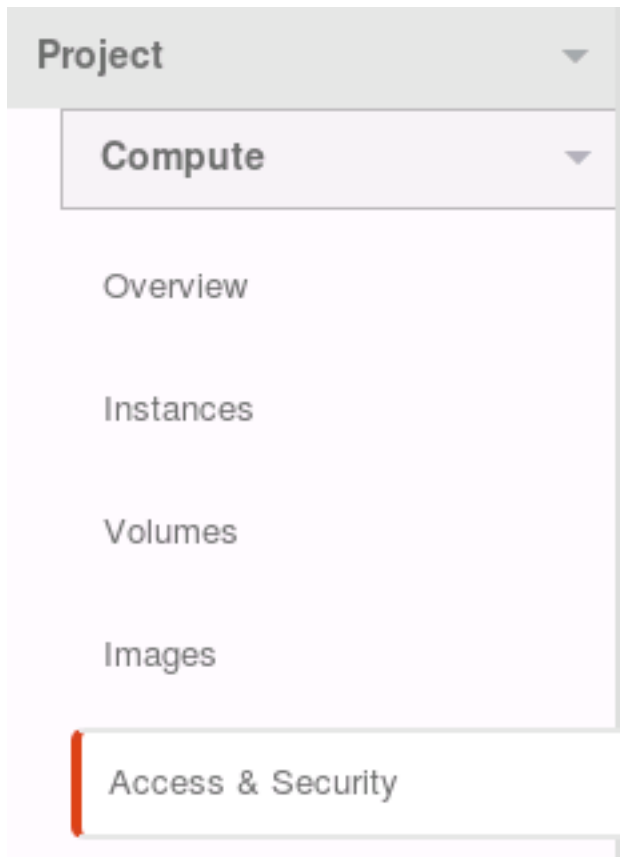
Normal

Launch Instance

Create Network

Create Router





## Access & Security

Security Groups   [Key Pairs](#)   [Floating IPs](#)   [API Access](#)

### Security Groups

[+ Create Security Group](#)   [✕ Delete Security Groups](#)

<input type="checkbox"/>	Name	Description	Actions
<input type="checkbox"/>	default	default	<a href="#">Manage Rules</a>

Displaying 1 item

# Create Security Group x

Name \*

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.

Description \*

## Access & Security

Security Groups

Key Pairs

Floating IPs

API Access

### Security Groups

<input type="checkbox"/>	Name	Description	Actions
<input type="checkbox"/>	default	default	Manage Rules
<input type="checkbox"/>	webserver	Webserver Security Group	Manage Rules ▼

Displaying 2 items

webserver

Webserver Security Group

Manage Rules



# Manage Security Group Rules: webserver

## Security Group Rules

+ Add Rule

✕ Delete Rules

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

Displaying 2 items

## Add Rule

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

### 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



## Add Rule

### Add Rule

Rule \*

HTTPS

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

### Security Group Rules

+ Add Rule

✕ Delete Rules

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

Displaying 3 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

## Access & Security

Security Groups

Key Pairs

Floating IPs

API Access

### Security Groups

+ Create Security Group

✕ Delete Security Groups

<input type="checkbox"/>	Name	Description	Actions
<input type="checkbox"/>	default	default	Manage Rules
<input checked="" type="checkbox"/>	webservers	Webservers Security Group	Manage Rules ▾

Displaying 2 items

# Confirm Delete Security Groups



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

Delete Security Groups

Cancel

openstack cookbook demo Sign Out

Project **Compute**

- Overview
- Instances
- Volumes
- Images**
- Access & Security
- Network
- Orchestration
- Identity

## Images

Project (2) Shared with Me (0) Public (0) [+ Create Image](#) [\\* Delete Images](#)

<input type="checkbox"/>	Image Name	Type	Status	Public	Protected	Format	Size	Actions
<input type="checkbox"/>	<a href="#">cirros-image</a>	Image	Active	No	No	QCOW2	9.3 MB	Launch ▾
<input checked="" type="checkbox"/>	<a href="#">trusty-image</a>	Image	Active	No	No	QCOW2	244.3 MB	Launch ▾

Displaying 2 items

# Launch Instance



Details \*

Access & Security \*

Networking \*

Post-Creation \*

Advanced Options

### Availability Zone

### Instance Name \*

### Flavor \* ?

### Instance Count \* ?

### Instance Boot Source \* ?

### Image Name

Specify the details for launching an instance.

The chart below shows the resources used by this project in relation to the project's quotas.

### Flavor Details

Name	m1.tiny
VCPUs	1
Root Disk	0 GB
Ephemeral Disk	0 GB
Total Disk	0 GB
RAM	512 MB

### Project Limits



Cancel

Launch

# Launch Instance

x

Details \*

Access & Security \*

Networking \*

Post-Creation \*

Advanced Options

## Key Pair

imortedkey

+

Control access to your instance via key pairs, security groups, and other mechanisms.

## Security Groups \*

webservers

default

Cancel

Launch

# Launch Instance

x

Details \*

Access & Security \*

Networking \*

Post-Creation \*

Advanced Options

## Selected networks

NIC:1  cookbook\_network\_1 (p30b41ee-7d71-4ef6-92ec-9aa4226b1b86) 

## Available networks

 ext\_net (2b752999-0a27-417e-85d1-f789bde7bd15) 

Choose network from Available networks to Selected networks by push button or drag and drop, you may change NIC order by drag and drop as well.

Cancel

Launch

## Instances

<input type="checkbox"/>	Instance Name	Image Name	IP Address	Size	Key Pair	Status	Availability Zone	Task	Power State	Time since created	Actions
<input type="checkbox"/>	horizon1	trusty-image	10.200.0.4	<a href="#">m1.tiny</a>	imortedkey	Active	nova	None	Running	0 minutes	Create Snapshot ▾
<input type="checkbox"/>	test1	trusty-image	10.200.0.2 192.168.100.11	<a href="#">m1.tiny</a>	demokey	Active	nova	None	Running	4 days, 2 hours	Create Snapshot ▾

Displaying 2 items

## Instances

<input type="checkbox"/>	Instance Name	Image Name	IP Address	Size	Key Pair	Status	Availability Zone	Task	Power State	Time since created	Actions
<input checked="" type="checkbox"/>	horizon1	trusty-image	10.200.0.4	<a href="#">m1.tiny</a>	imortedkey	Active	nova	None	Running	0 minutes	Create Snapshot ▾
<input type="checkbox"/>	test1	trusty-image	10.200.0.2 192.168.100.11	<a href="#">m1.tiny</a>	demokey	Active	nova	None	Running	4 days, 2 hours	Create Snapshot ▾

Displaying 2 items

## Confirm Terminate Instances ✕

You have selected "horizon1". Please confirm your selection. This action cannot be undone.

Terminate Instances

Cancel

# Instances

Instances

<input type="checkbox"/>	Instance Name	Image Name	IP Address	Size	Key Pair	Status	Availability Zone	Task	Power State	Time since created	Actions
<input type="checkbox"/>	horizon2	trusty-image	10.200.0.5	m1.tiny	importedkey	Active	nova	None	Running	0 minutes	Create Snapshot
<input type="checkbox"/>	test1	trusty-image	10.200.0.2 192.168.100.11	m1.tiny	demokey	Active	nova	None	Running	4 days, 3 hours	Associate Floating IP Disassociate Floating IP Edit Instance Edit Security Groups Console View Log Pause Instance Suspend Instance Resize Instance Soft Reboot Instance Hard Reboot Instance Shut Off Instance Rebuild Instance Terminate Instance

Displaying 2 items

Overview Log Console

## Instance Console

If console is not responding to keyboard input: click the grey status bar below. [Click here to show only console](#)

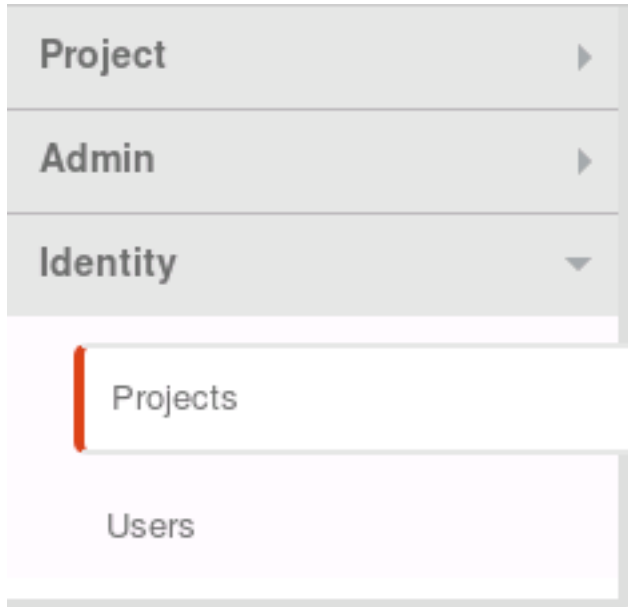
Connected (unencrypted) to: QEMU (instance-00000003)

Send Ctrl/Alt/Del

```
rio0/input/input1
[ 1.564973] usb 1-1: new full speed USB device number 2 using uhci_hcd
[ 1.700375] Freeing initrd memory: 2204k freed
[ 1.865044] Refined TSC clocksource calibration: 2285.542 MHz.
[ 1.868007] Switching to clocksource tsc
[ 1.890955] Magic number: 13:582:644
[ 1.893684] rtc_cmos 00:01: setting system clock to 2013-09-01 18:36:55 UTC (
1378060615)
[ 1.897126] BIOS EDD facility v0.16 2004-Jun-25, 0 devices found
[ 1.898521] EDD information not available.
[ 1.926016] Freeing unused kernel memory: 900k freed
[ 1.953167] Write protecting the kernel read-only data: 12288k
[ 2.031032] Freeing unused kernel memory: 1968k freed
[ 2.085177] Freeing unused kernel memory: 1368k freed

further output written to /dev/ttyS0
[ 2.491128] ACPI: PCI Interrupt Link [LNKC] enabled at IRQ 11
[ 2.967434] EXT3-fs (vda): warning: checktime reached, running e2fsck is reco
mmended
[ 5.231621] EXT3-fs (vda): warning: checktime reached, running e2fsck is reco
mmended

login as 'cirros' user. default password: 'cubswin:}'. use 'sudo' for root.
cirros login: _
```



## Projects

### Projects

[+ Create Project](#)[✖ Delete Projects](#)

<input type="checkbox"/>	Name	Description	Project ID	Enabled	Actions
<input type="checkbox"/>	cookbook	Default Cookbook Tenant	412b512d9fca40feacc81c1b83f183a9	True	Modify Users <input type="button" value="v"/>
<input type="checkbox"/>	service	Service Tenant	a2f9ec6666d4ee1bb25859fbcc3b401	True	Modify Users <input type="button" value="v"/>

Displaying 2 items



# Create Project



Project Information \*    Project Members    Quota \*

**Name \***

**Description**

Enabled

Create a project to organize users.

## Projects

Projects

<input type="checkbox"/>	Name	Description	Project ID	Enabled	Actions
<input type="checkbox"/>	cookbook	Default Cookbook Tenant	412b512d9fca40feacc81c1b83f183a9	True	Modify Users ▾
<input type="checkbox"/>	horizon	Cookbook Example	977d0a604660497d81ab7e7a96efa88c	True	Modify Users ▾
<input type="checkbox"/>	service	Service Tenant	a2f9ec66666d4ee1bb25859fbcc3b401	True	Modify Users ▾

Displaying 3 items

# Users

## Users

[+ Create User](#)[✖ Delete Users](#)

<input type="checkbox"/>	User Name	Email	User ID	Enabled	Actions
<input type="checkbox"/>	heat	heat@localhost	3c511c391e414d2f86f125f2061ca84f	True	Edit
<input type="checkbox"/>	demo	demo@localhost	447df476321449869d5a0b2c12cb4943	True	Edit
<input type="checkbox"/>	nova	nova@localhost	4da2cb3596374437bbd9cf4c32948c47	True	Edit
<input type="checkbox"/>	ceilometer	heat@localhost	58013fd4cc7847bdba81d0271b7c7f38	True	Edit
<input type="checkbox"/>	cinder	cinder@localhost	661847bc877c4caab004f326297dd92b	True	Edit
<input type="checkbox"/>	keystone	keystone@localhost	95c813c530fb40b9a65afcc36561b8a0	True	Edit
<input type="checkbox"/>	admin	root@localhost	9e89da2972524ca7bd0a331471c0128c	True	Edit
<input type="checkbox"/>	glance	glance@localhost	cdbb6a51ac984dde977e4d5175ec1d11	True	Edit
<input type="checkbox"/>	neutron	neutron@localhost	d31814ad50c740699580136cf19b91b8	True	Edit

Displaying 9 items

# Create User



User Name \*

Email

Password \*

Confirm Password \*

Primary Project \*

Role \*

## Description:



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

<input type="checkbox"/>	nova	nova@localhost	4da2cb3596374437bbd9cf4c32948c47	True	Edit
<input type="checkbox"/>	test	test@openstackcookbook.com	55228e55989f4986a821a254c55f013d	True	Edit
<input type="checkbox"/>	cellometer	heat@localhost	58013fd4cc7847bdba81d0271b7c7f38	True	Disable User Delete User
<input type="checkbox"/>	cinder	cinder@localhost	661847bc877c4caab004f326297dd92b	True	Edit

# Confirm Delete User



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

# Update User



User Name \*

Email

Password

Confirm Password

Primary Project \*

## Description:



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

Cancel

Update User

# Projects

## Projects

Filter



Filter

+ Create Project

✖ Delete Projects

<input type="checkbox"/>	Name	Description	Project ID	Enabled	Actions
<input type="checkbox"/>	cookbook	Default Cookbook Tenant	412b512d9fca40feacc81c1b83f183a9	True	Modify Users ▾
<input type="checkbox"/>	horizon	Cookbook Example	977d0a604660497d81ab7e7a96efa88c	True	Modify Users ▾
<input type="checkbox"/>	service	Service Tenant	a2f9ec66666d4ee1bb25859fbcc3b401	True	Modify Users ▾

Displaying 3 items

# Edit Project

✕

Project Information \*

Project Members

Quota \*

All Users	Filter	Q
heat		+
demo		+
nova		+
cellometer		+
cinder		+
keystone		+
admin		+
glance		+
neutron		+

Project Members	Filter	Q
test	_member_, admin ▾	-

Cancel

Save

# Edit Project

✕

Project Information \*

Project Members

Quota \*

All Users	Filter	Q
heat		+
nova		+
ceilometer		+
cinder		+
keystone		+
admin		+
glance		+
neutron		+

Project Members	Filter	Q
test		_member_ admin ▾ -
demo		Member ▾ -

- ✓ Member
- \_member\_
- admin

Cancel Save

## Projects

Projects

Filter Q

Filter

+ Create Project

✕ Delete Projects

<input type="checkbox"/>	Name	Description	Project ID	Enabled	Actions
<input type="checkbox"/>	cookbook	Default Cookbook Tenant	412b512d9fca40feacc81c1b83f183a9	True	Modify Users ▾
<input type="checkbox"/>	horizon	Cookbook Example	977d0a604660497d81ab7e7a96efa88c	True	Modify Users ▾
<input type="checkbox"/>	service	Service Tenant	a2f9ec66666d4ee1bb25859fbcc3b401	True	Modify Users ▾

Displaying 3 items

# Edit Project



Project Information \*

Project Members

Quota \*

All Users	Filter	Q
heat		+
nova		+
cellometer		+
cinder		+
keystone		+
admin		+
glance		+
neutron		+

Project Members	Filter	Q
test	_member_ ▾	-
demo	Member, admin ▾	-

Cancel

Save



**Project** ▼

**Compute** ▶

**Network** ▼

Network Topology

Networks

Routers

Load Balancers

**Orchestration** ▶

**Admin** ▶

**Identity** ▶



# Add Pool



Add New Pool \*

**Name \***

web-pool

**Description**

Web Pool

**Provider**

haproxy (default)

**Subnet \***

10.200.0.0/24

**Protocol \***

HTTP

**Load Balancing Method \***

ROUND\_ROBIN

**Admin State \***

UP

Create Pool for current project.

Assign a name and description for the pool. Choose one subnet where all members of this pool must be on. Select the protocol and load balancing method for this pool. Admin State is UP (checked) by default.

Cancel Add

## Load Balancer

Pools Members Monitors

**Pools** + Add Pool ✖ Delete Pools

<input type="checkbox"/>	Name	Description	Provider	Subnet	Protocol	Status	VIP	Actions
<input type="checkbox"/>	web-pool	Web Pool	haproxy	10.200.0.0/24	HTTP	ACTIVE	-	Edit Pool

Displaying 1 item

# Load Balancer

Pools Members Monitors

[+ Add Member](#)

IP Address	Protocol Port	Weight	Pool	Status	Actions
No items to display.					
Displaying 0 items					

## Add Member

Add New Member \*

Pool \*

web-pool

Member Source

Select from active instances

Member(s) ?

test1

webserver-8fa84a84-732b-42dd-957b-ba5de  
webserver-cec7d58d-72a0-4711-aa17-8f0e0

Weight ?

1

Protocol Port \* ?

80

Admin State \*

UP

Add member(s) to the selected pool.

Choose one or more listed instances to be added to the pool as member(s). Assign a numeric weight and port number for the selected member(s) to operate(s) on; e.g., 80.

Only one port can be associated with each instance.

Cancel

Add

# Load Balancer

Pools Members Monitors

## Members

+ Add Member

✖ Delete Members

<input type="checkbox"/>	IP Address	Protocol Port	Weight	Pool	Status	Actions
<input type="checkbox"/>	10.200.0.7	80	1	web-pool	ACTIVE	Edit Member ▾
<input type="checkbox"/>	10.200.0.6	80	1	web-pool	ACTIVE	Edit Member ▾

Displaying 2 items

# Load Balancer

Pools Members Monitors

## Pools

+ Add Pool

✖ Delete Pools

<input type="checkbox"/>	Name	Description	Provider	Subnet	Protocol	Status	VIP	Actions
<input type="checkbox"/>	web-pool	Web Pool	haproxy	10.200.0.0/24	HTTP	ACTIVE	-	Edit Pool ▾

Displaying 1 item

Add VIP

Delete Pool

## Add VIP

×

Specify VIP \*

Name \*

web-vip

Description

Web VIP

VIP Subnet

192.168.100.0/24

Specify a free IP address from the selected subnet \*

192.168.100.12

Protocol Port \* ?

80

Protocol \*

HTTP

Session Persistence

No Session Persistence

Connection Limit ?

-1

Admin State \*

UP

Create a VIP for this pool. Assign a name, description, IP address, port, and maximum connections allowed for the VIP. Choose the protocol and session persistence method for the VIP. Admin State is UP (checked) by default.

Cancel

Add

## Load Balancer

Pools Members Monitors

Pools

+ Add Pool

✖ Delete Pools

<input type="checkbox"/>	Name	Description	Provider	Subnet	Protocol	Status	VIP	Actions
<input type="checkbox"/>	web-pool	Web Pool	haproxy	10.200.0.0/24	HTTP	ACTIVE	web-vip	Edit Pool ▾

Displaying 1 item

# Load Balancer

---

## Pool Details

---

**ID**

003b26d0-8cb9-4010-b0aa-23b0edc810e8

**Name**

web-pool

**Description**

Web Pool

**Project ID**

001504d6f08d4698824636fa00f4a0f2

**VIP**

[web-vip](#)

**Provider**

haproxy

**Subnet**

[cookbook\\_subnet\\_1](#) 10.200.0.0/24

**Protocol**

HTTP

**Load Balancing Method**

ROUND\_ROBIN

**Members**

[10.200.0.6:80](#)

[10.200.0.7:80](#)

**Health Monitors**

-

**Admin State Up**

Yes

**Status**

ACTIVE

# Load Balancer

---

## VIP Details

**ID**

ab8c3766-d833-4328-bced-04c8e5db5c27

**Name**

web-vip

**Description**

Web VIP

**Project ID**

001504d6f08d4698824636fa00f4a0f2

**Subnet**

[cookbook\\_float\\_subnet\\_1](#) 192.168.100.0/24

**Address**

192.168.100.12

**Protocol Port**

80

**Protocol**

HTTP

**Pool**

[web-pool](#)

**Port ID**

[71231a0a-f1dd-413c-8420-6c650e059f4b](#)

**Session Persistence**

None

**Connection Limit**

-1

**Admin State Up**

Yes

**Status**

ACTIVE

## Load Balancer

Pools [Members](#) [Monitors](#)

Pools + Add Pool ✖ Delete Pools

<input type="checkbox"/>	Name	Description	Provider	Subnet	Protocol	Status	VIP	Actions
<input type="checkbox"/>	web-pool	Web Pool	haproxy	10.200.0.0/24	HTTP	ACTIVE	web-vip	<span>Edit Pool</span> <span>▼</span>

Displaying 1 item

- Edit VIP
- Delete VIP

## Confirm Delete VIP

You have selected "web-pool". Please confirm your selection. This action cannot be undone.

Delete VIP

Cancel

## Load Balancer

Pools [Members](#) [Monitors](#)

Pools + Add Pool ✖ Delete Pools

<input type="checkbox"/>	Name	Description	Provider	Subnet	Protocol	Status	VIP	Actions
<input type="checkbox"/>	web-pool	Web Pool	haproxy	10.200.0.0/24	HTTP	ACTIVE	-	<span>Edit Pool</span> <span>▼</span>

Displaying 1 item

- Add VIP
- Delete Pool

## Confirm Delete Pool

You have selected "web-pool". Please confirm your selection. This action cannot be undone.

Delete Pool

Cancel



Project ▾

Compute ▶

Network ▶

Orchestration ▾

Stacks

Admin ▶

Identity ▶

## Stacks

Stacks

[+ Launch Stack](#)

	Stack Name	Created	Updated	Status	Actions
No items to display.					
Displaying 0 items					



# Select Template

## Template Source \*

## Description:

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

## Template File ⓘ

 No file selected.

## Environment Source

## Environment File ⓘ

 No file selected.

Cancel

Next

# Select Template

## Template Source \*

## Description:

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

## Template File ⓘ

 cookbook.yaml

## Environment Source

## Environment File ⓘ

 cookbook-env.yaml

# Launch Stack

Stack Name \* ?

## Description:

Create a new stack with the provided values.

Creation Timeout (minutes) \* ?

Rollback On Failure ?

Password for user "admin" \* ?

key\_name ?

image ?

public\_net\_id ?

private\_net\_id ?

flavor ?

private\_subnet\_id ?

Cancel

Launch

## Stacks

Stacks

+ Launch Stack

✖ Delete Stacks

<input type="checkbox"/>	Stack Name	Created	Updated	Status	Actions
<input type="checkbox"/>	haproxy101	0 minutes	Never	In Progress	Delete Stack

Displaying 1 item

# Stacks

## Stacks

+ Launch Stack

✖ Delete Stacks

<input type="checkbox"/>	Stack Name	Created	Updated	Status	Actions
<input type="checkbox"/>	haproxy101	0 minutes	Never	Complete	Delete Stack

Displaying 1 item

# Stack Detail: haproxy101

Topology

Overview

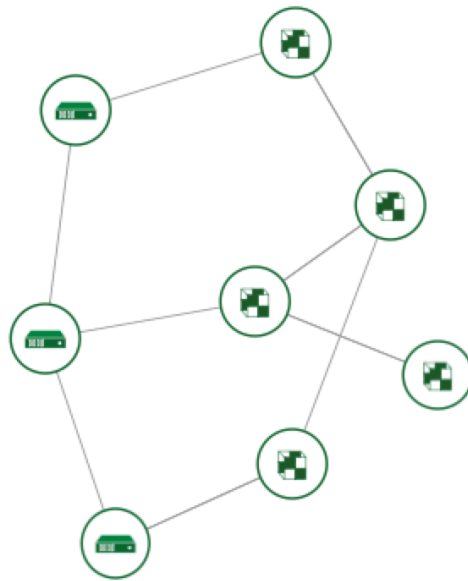
Resources

Events



haproxy101

Create Complete  
Create Complete



# Stack Detail: haproxy101

[Topology](#)

[Overview](#)

[Resources](#)

[Events](#)

## Stack Overview

### Info

**Name**

haproxy101

**ID**

46856e74-071f-4a3d-bd03-698767ac45e9

**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**

0 minutes

**Last Updated**

Never

**Status**

Create\_Complete: Stack CREATE completed successfully

# Stack Detail: haproxy101

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

## Stack Resources

Stack Resource	Resource	Stack Resource Type	Date Updated	Status	Status Reason
<a href="#">haproxy</a>	55fd3e3b-b03f-4894-b5c6-a161ca5cb7ac	OS::Nova::Server	2 minutes	Create Complete	state changed
<a href="#">webserver1_port</a>	027e51aa-6e29-408a-a731-4eb3434c2df5	OS::Neutron::Port	2 minutes	Create Complete	state changed
<a href="#">server_security_group</a>	908a0368-2233-41d2-9892-b8bfcdae4494	OS::Neutron::SecurityGroup	2 minutes	Create Complete	state changed
<a href="#">webserver2</a>	25e6b3d7-728a-403a-b076-0abab563be1c	OS::Nova::Server	2 minutes	Create Complete	state changed
<a href="#">webserver1</a>	cdf4af91-3add-41df-8972-afac3475605d	OS::Nova::Server	2 minutes	Create Complete	state changed
<a href="#">haproxy_port</a>	4bf85340-b688-4320-96ba-b190a4877d6e	OS::Neutron::Port	2 minutes	Create Complete	state changed
<a href="#">webserver2_port</a>	0ec3dd9d-28a1-4ef7-8eae-c9d69c4757b6	OS::Neutron::Port	2 minutes	Create Complete	state changed
<a href="#">haproxy_floating_ip</a>	08449f9f-56ef-4383-8c34-9f629e41d1f9	OS::Neutron::FloatingIP	2 minutes	Create Complete	state changed

Displaying 8 items

# Stack Detail: haproxy101

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

## Stack Events

Stack Resource	Resource	Time Since Event	Status	Status Reason
<a href="#">haproxy</a>		2 minutes	Create Complete	state changed
<a href="#">haproxy</a>	-	2 minutes	Create In Progress	state changed
<a href="#">webserver1</a>		2 minutes	Create Complete	state changed
<a href="#">webserver2</a>		2 minutes	Create Complete	state changed
<a href="#">haproxy_floating_ip</a>		2 minutes	Create Complete	state changed
<a href="#">webserver1</a>	-	2 minutes	Create In Progress	state changed
<a href="#">webserver2</a>	-	2 minutes	Create In Progress	state changed
<a href="#">haproxy_floating_ip</a>	-	2 minutes	Create In Progress	state changed
<a href="#">haproxy_port</a>		2 minutes	Create Complete	state changed
<a href="#">webserver1_port</a>		2 minutes	Create Complete	state changed
<a href="#">webserver2_port</a>		2 minutes	Create Complete	state changed
<a href="#">haproxy_port</a>	-	2 minutes	Create In Progress	state changed
<a href="#">webserver1_port</a>	-	2 minutes	Create In Progress	state changed
<a href="#">webserver2_port</a>	-	2 minutes	Create In Progress	state changed
<a href="#">server_security_group</a>		2 minutes	Create Complete	state changed
<a href="#">server_security_group</a>	-	2 minutes	Create In Progress	state changed

Displaying 16 items

# Instances

Instances

<input type="checkbox"/>	Instance Name	Image Name	IP Address	Size	Key Pair	Status	Availability Zone	Task	Power State	Time since created	Actions
<input type="checkbox"/>	HAProxy	trusty-image	10.200.0.13 192.168.100.15	m1.tiny	demokey	Active	nova	None	Running	4 minutes	Create Snapshot ▾
<input type="checkbox"/>	Webserver1	trusty-image	10.200.0.12	m1.tiny	demokey	Active	nova	None	Running	5 minutes	Create Snapshot ▾
<input type="checkbox"/>	Webserver2	trusty-image	10.200.0.11	m1.tiny	demokey	Active	nova	None	Running	5 minutes	Create Snapshot ▾
<input type="checkbox"/>	test1	trusty-image	10.200.0.2 192.168.100.11	m1.tiny	demokey	Active	nova	None	Running	22 hours, 37 minutes	Create Snapshot ▾

Displaying 4 items

cookbook ▾ admin ▾ Sign Out

Project ▾

- Compute ▾
- Network ▾
- Orchestration ▾
- Stacks**
- Admin ▾
- Identity ▾

## Stacks

<input type="checkbox"/>	Stack Name	Created	Updated	Status	Actions
<input type="checkbox"/>	haproxy101	1 hour, 25 minutes	Never	Complete	Delete Stack ▾

Displaying 1 item

## Confirm Delete Stack

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

Delete Stack

Cancel



## Chapter 11

```
+-----+
| cluster size |
+-----+
| 3             |
+-----+
```

```
Jul 2 16:06:46 packer-vmware-iso Keepalived[3869]: Starting VRRP child process, pid=3873
Jul 2 16:06:46 packer-vmware-iso Keepalived_vrrp[3873]: VRRP_Script(chk_haproxy) succeeded
Jul 2 16:06:47 packer-vmware-iso Keepalived_vrrp[3873]: VRRP_Instance(VI_1) Transition to MASTER STATE
Jul 2 16:06:48 packer-vmware-iso Keepalived_vrrp[3873]: VRRP_Instance(VI_1) Entering MASTER STATE
Jul 2 16:08:53 packer-vmware-iso Keepalived_vrrp[3873]: VRRP_Instance(VI_1) Received lower prio advert, forcing new election
```

```
Jul 2 16:08:52 packer-vmware-iso Keepalived[3886]: Starting VRRP child process, pid=3890
Jul 2 16:08:53 packer-vmware-iso Keepalived_vrrp[3890]: VRRP_Script(chk_haproxy) succeeded
Jul 2 16:08:53 packer-vmware-iso Keepalived_vrrp[3890]: VRRP_Instance(VI_1) Transition to MASTER STATE
Jul 2 16:08:53 packer-vmware-iso Keepalived_vrrp[3890]: VRRP_Instance(VI_1) Received higher prio advert
Jul 2 16:08:53 packer-vmware-iso Keepalived_vrrp[3890]: VRRP_Instance(VI_1) Entering BACKUP STATE
```

```
Last updated: Sun Mar 29 12:32:45 2015
Last change: Sun Mar 29 12:32:14 2015 via crmd on controller1
Stack: corosync
Current DC: controller1 (739246301) - partition with quorum
Version: 1.1.10-42f2063
2 Nodes configured
0 Resources configured
```

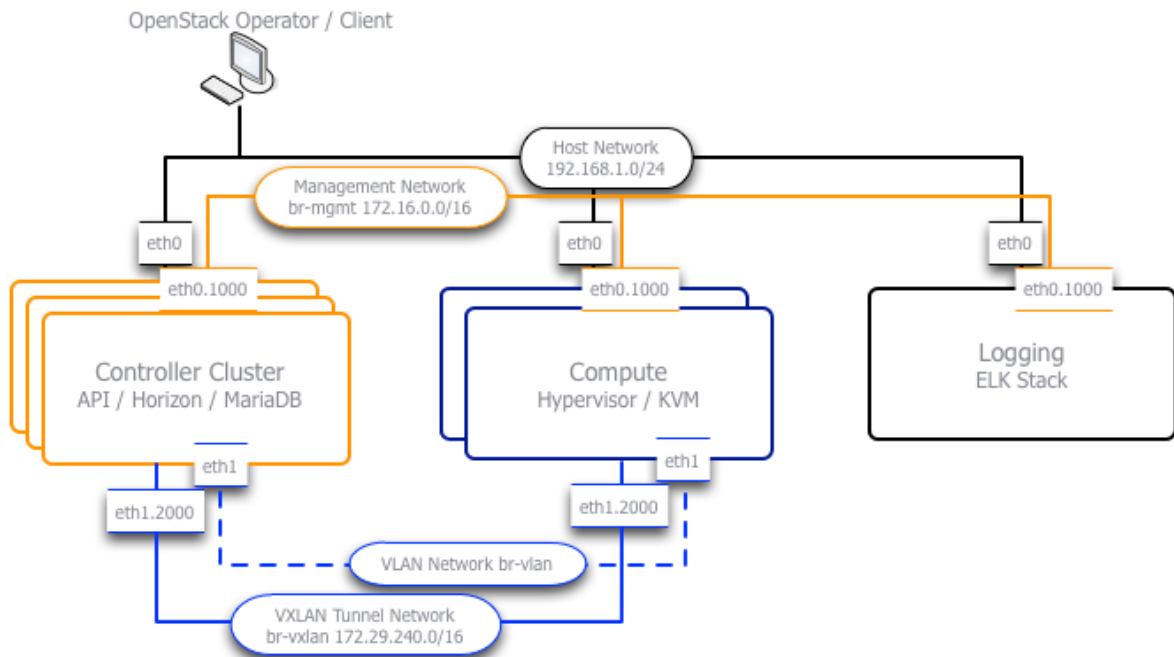
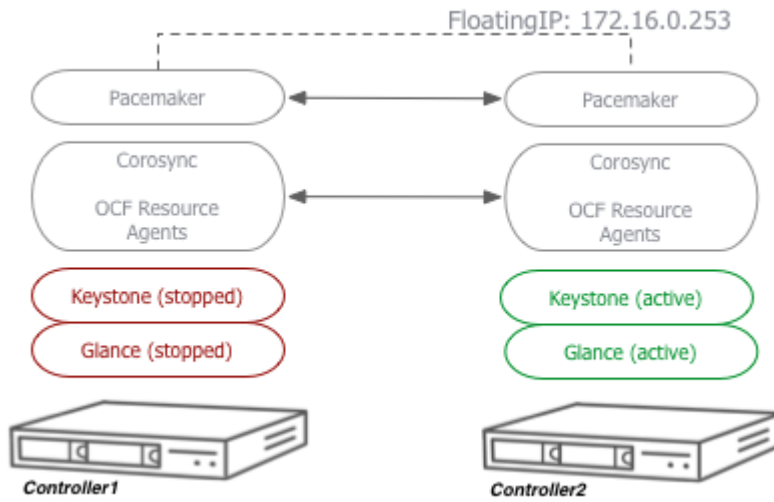
```
Online: [ controller1 controller2 ]
```

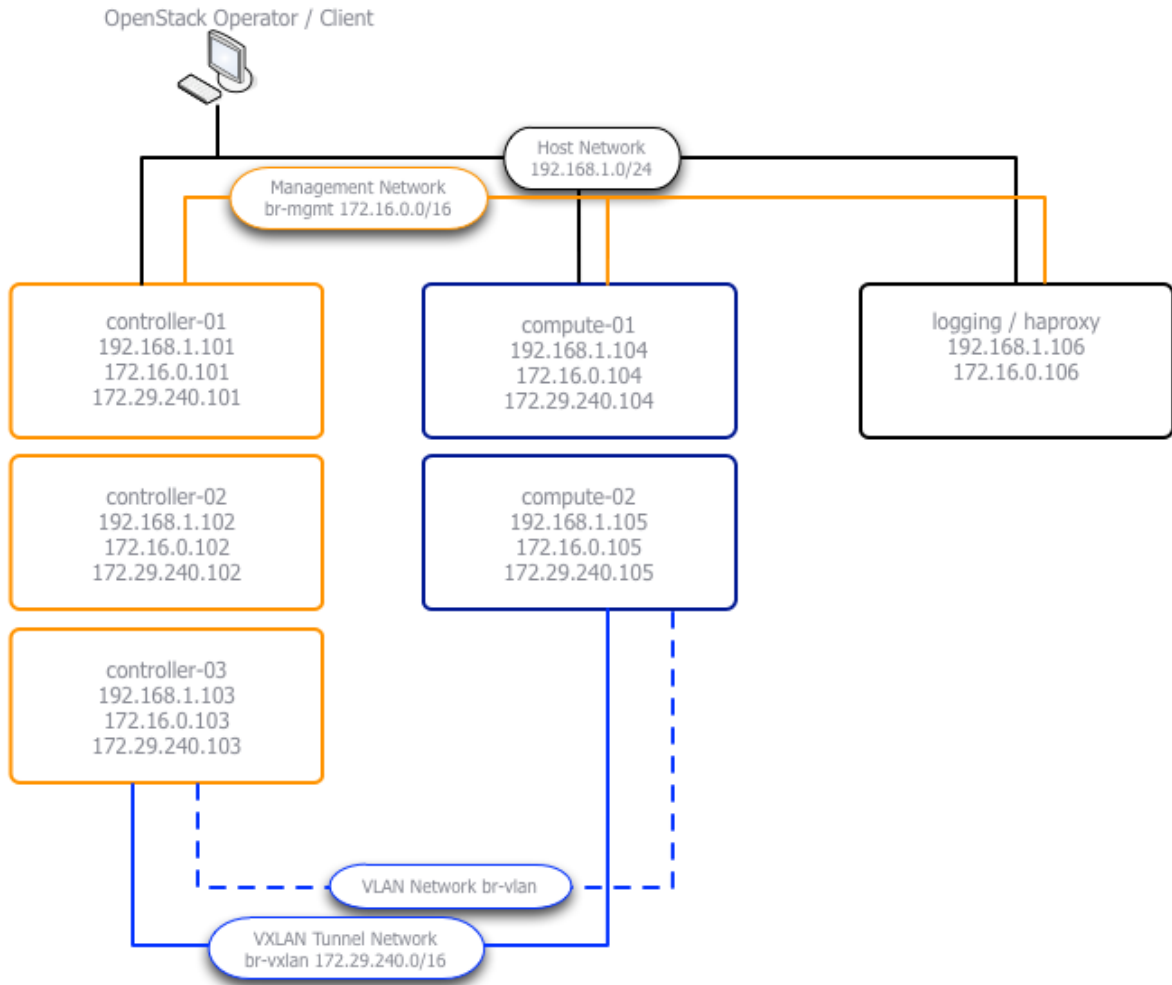
```
Last updated: Sun Mar 29 15:18:06 2015
Last change: Sun Mar 29 15:13:23 2015 via cibadmin on controller2
Stack: corosync
Current DC: controller1 (1084777693) - partition with quorum
Version: 1.1.10-42f2063
2 Nodes configured
1 Resources configured
```

```
Online: [ controller1 controller2 ]
```

```
FloatingIP__ (ocf::heartbeat:IPaddr2): Started controller1
```

id	name	enabled
ee59bfbf11924c90a535a2eb7a9390e1	cookbook	True
cd849efa42b7471d819d6c196060b8cb	service	True





PLAY RECAP \*\*\*\*\*  
to retry, use: --limit @/root/setup-openstack.retry

```
controller-02_glance_container-05d84ae8 : ok=0    changed=0    unreachable=1    failed=0
controller-03_glance_container-f3ad477d : ok=58     changed=43   unreachable=0    failed=0
```