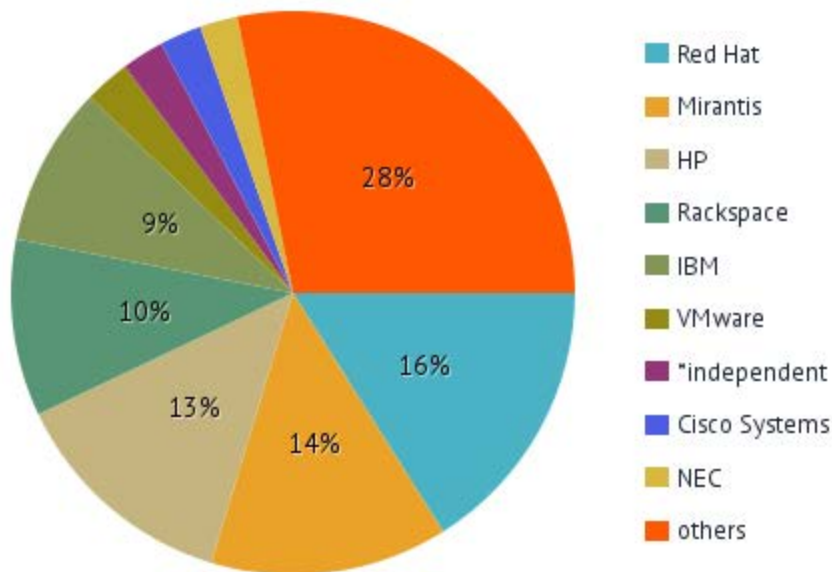




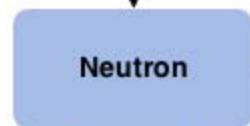
#	Company	Reviews
1	Red Hat	125146
2	Mirantis	106197
3	HP	103097
4	Rackspace	79023
5	IBM	71216
6	VMware	20459
	*independent	18933
7	Cisco Systems	18708
8	NEC	16859
9	Huawei	16721



Оркестрация облака



Пользовательский интерфейс



Организация
сети для



Хранение
образов VM

Обеспечивает
блочные
устройства

Внедряет VM

Хранит
образы
VM



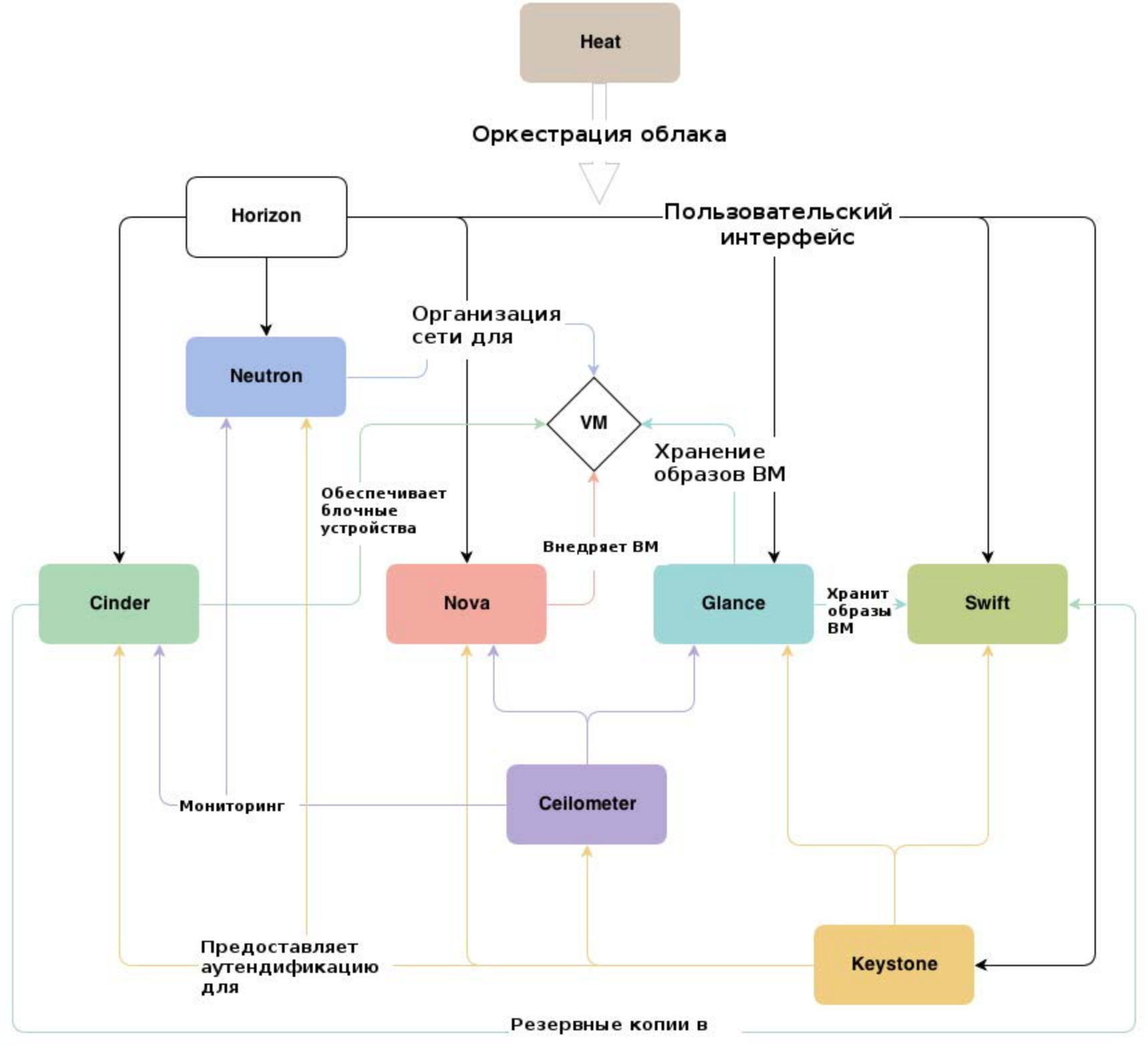
Мониторинг



Предоставляет
аутентификацию
для



Резервные копии в



CPU Configuration

Module Version: 15.13

AGESA Version : 1.0.0.3

Physical Count: 1

Logical Count : 2

AMD Athlon(tm) II Neo N36L Dual-Core Processor

Revision: C3

Cache L1: 256KB

Cache L2: 2048KB

Cache L3: N/A

Speed : 1300MHz, NB C1

Secure Virtual Machine Mode [Enabled]

Active Processor Cores [All]

Channel Interleaving [Auto]

PowerNow [Enabled]

C1E Support [Enabled]

Options

Disabled

Enabled

Enable/Disable

Secure Virtual Machine
Mode (SUM)

↔ Select Screen

↑↓ Select Item

+- Change Option

F1 General Help

F10 Save and Exit

ESC Exit

☒ Virtualization Technology (VTx)☒ Virtualization Technology for Directed I/O (VTd)☐ Trusted Execution Technology (TXT)☐ HP HV Secure Boot☒ Multi Core CPU

Multi Core CPU has been enabled because Deep sleep is set to On

☒ Intel(R) HT Technology

Intel(R) HT Technology has been enabled because Deep sleep is set to On .

Smart Card Reader Power Setting (if present)

☒ Powered on if card is present

☐ Always powered on

☐ Power on unit when AC is detected ?

Deep sleep

☐ Off

Save

Help

Exit

Virtual Machine Manager

Open [play] [pause] [power]

Name	CPU usage
▼ localhost (QEMU)	

- CO7_Ceph1**
Running
- CO7_Ceph2**
Running
- CO7_Ceph3**
Running
- CO7_Compute**
Running
- CO7_Compute-opt**
Running
- CO7_Controller**
Running
- CO7_Network**
Running
- CO7_SW1**
Shutoff
- CO7_SW2**
Shutoff
- CO7_SW3**
Shutoff

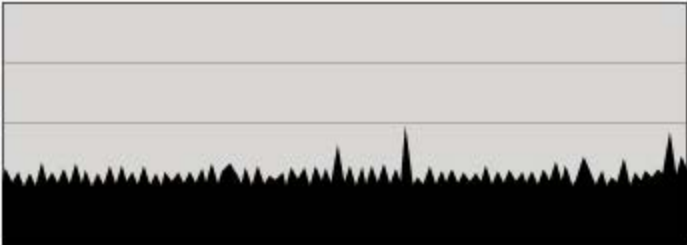
elx Connection Details

Overview Virtual Networks Storage Network Interfaces

Basic details

Connection: qemu:///system
Hostname: elx
Hypervisor: qemu
Memory: 15.53 GB
Logical CPUs: 4
Architecture: x86_64
Autoconnect: ☒

Performance

CPU usage:  28 %

Memory usage:  14.00 GB of 15.53 GB



Log out

Admin

▼ Totals

Time	Number of people in queue
15:20	0.0
15:25	1.0
15:30	0.0
15:35	2.0
15:40	0.0
15:55	2.0
16:00	0.0
16:05	1.0
16:10	0.0
16:15	4.0

Ready	4 msg
Unacknowledged	0 msg
Total	4 msg

Publish	1.8/s
Confirm	1.8/s
Deliver	1.8/s
Acknowledge	1.8/s

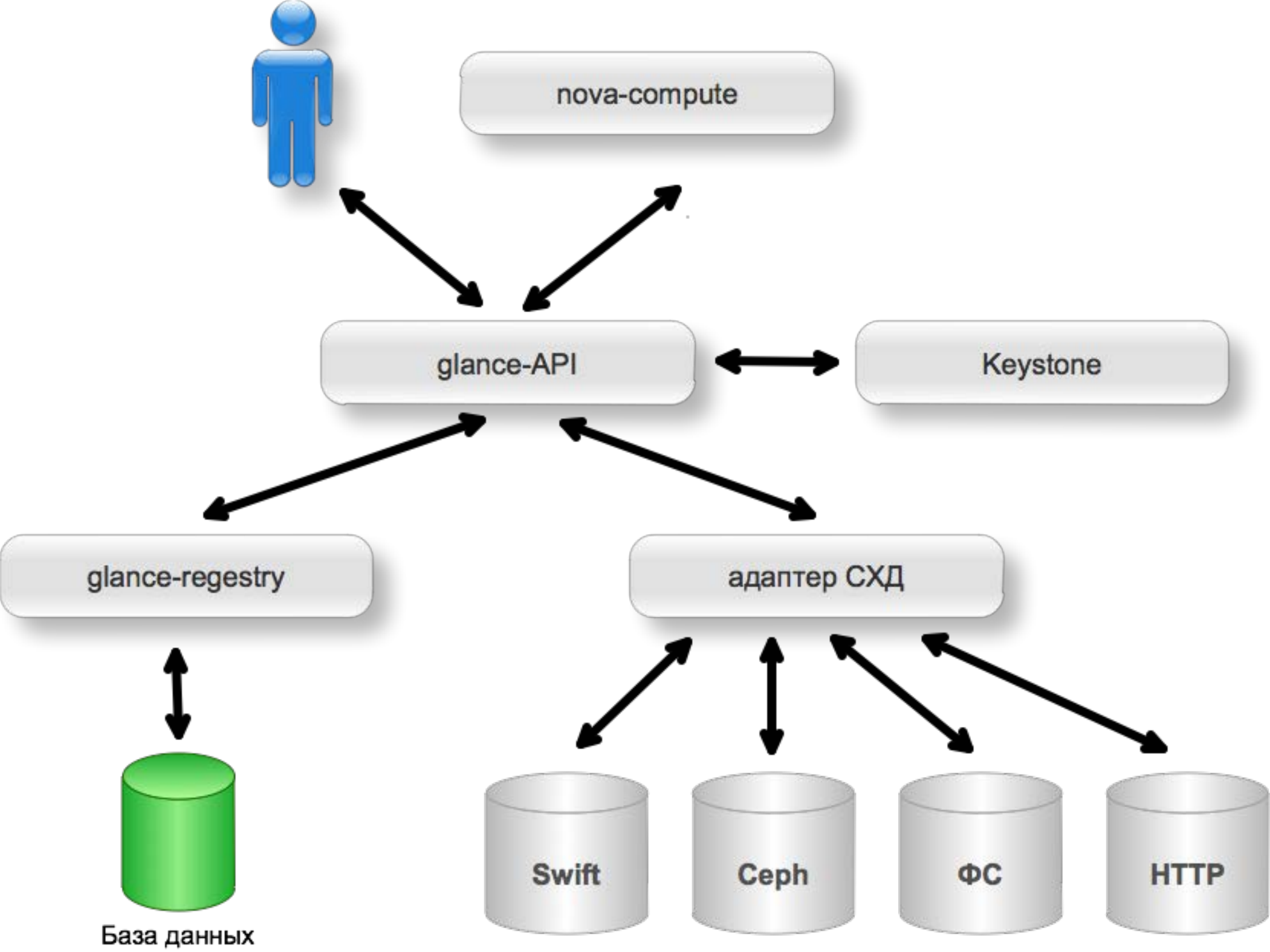
Consumers: 152

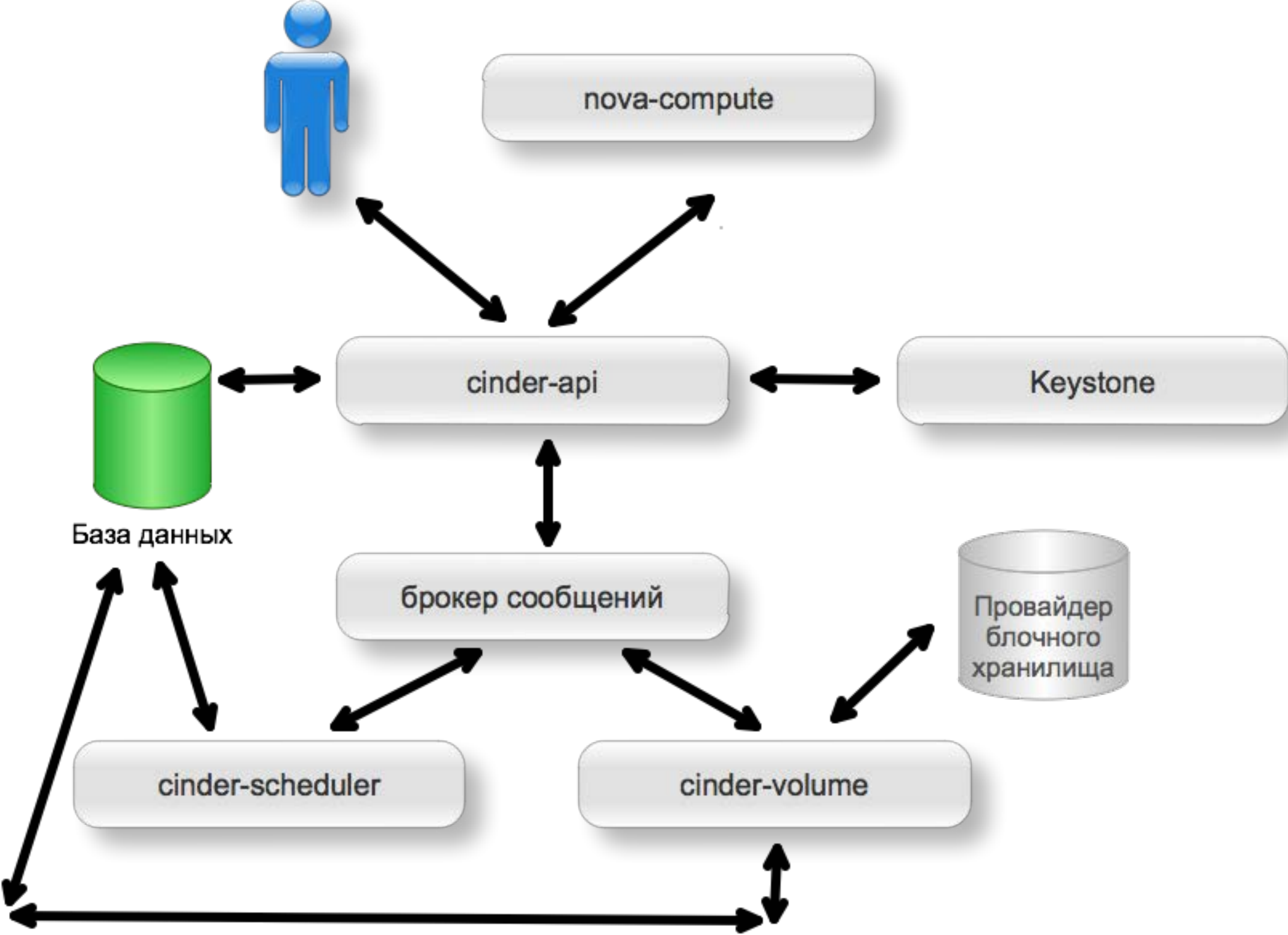
▼ **Nodes**

Name	File descriptors (?)	Socket descriptors (?)	Erlang processes	Memory	Disk space	Uptime	Type
rabbit@controller	134 1024 available	114 829 available	1529 1048576 available	108MB 801MB high watermark	45GB 48MB low watermark	5h 11m	Disc Stats ...

▼ Ports and contexts

Protocol	Bound to	Port
amqp	::	5672
clustering	::	25672





Volumes - OpenStack Dashboard - Mozilla Firefox

Volumes - OpenStac... x

controller.test.local/dashboard/project/volumes/

Search

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openstack

demo

demo

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Volume Snapshots

Filter

+

Create Volume

≡

Accept Transfer

✖

Delete Volumes

☐	Name	Description	Size	Status	Type	Attached To	Availability Zone	Bootable	Encrypted	Actions
☐	myvolumeEncr	-	1GB	Available	LUKS		nova	No	Yes	Edit Volume
☐	testvol1	-	1GB	Available	-		nova	No	No	Edit Volume

Displaying 2 items



controller.test.local

RabbitMQ, MariaDB, NTP
Keystone
Glance
Cinder



sw1.test.local

swift-proxy



sw2.test.local

swift-account
swift-container
swift-object



sw3.test.local

swift-account
swift-container
swift-objectl

/dev/vdb1 /dev/vdc1



/dev/vdb1 /dev/vdc1



Project ▾

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Object Store ▾

Containers

Orchestration ▸

Identity ▸

Containers

test-cont1 : / etc

Containers

+ Create Container

Folder Path: test-cont1 / / etc

test-cont1	Object Count: 4 Size: 18.9 MB Access: Private	View Details ▾
test-cont2	Object Count: 2 Size: 4.7 MB Access: Public	View Details ▾
volumebackups	Object Count: 22 Size: 1.0 MB Access: Private	View Details ▾

Displaying 3 items

Objects

Filter



Filter

+ Create Pseudo-folder

ⓘ Upload Object

✕ Delete Objects

☐	hosts	295 bytes	Download ▾
☐	networks	58 bytes	Download ▾
☐	services	654.6 KB	Download ▾

Displaying 3 items



Connected (unencrypted) to: QEMU (Instance-00000004)

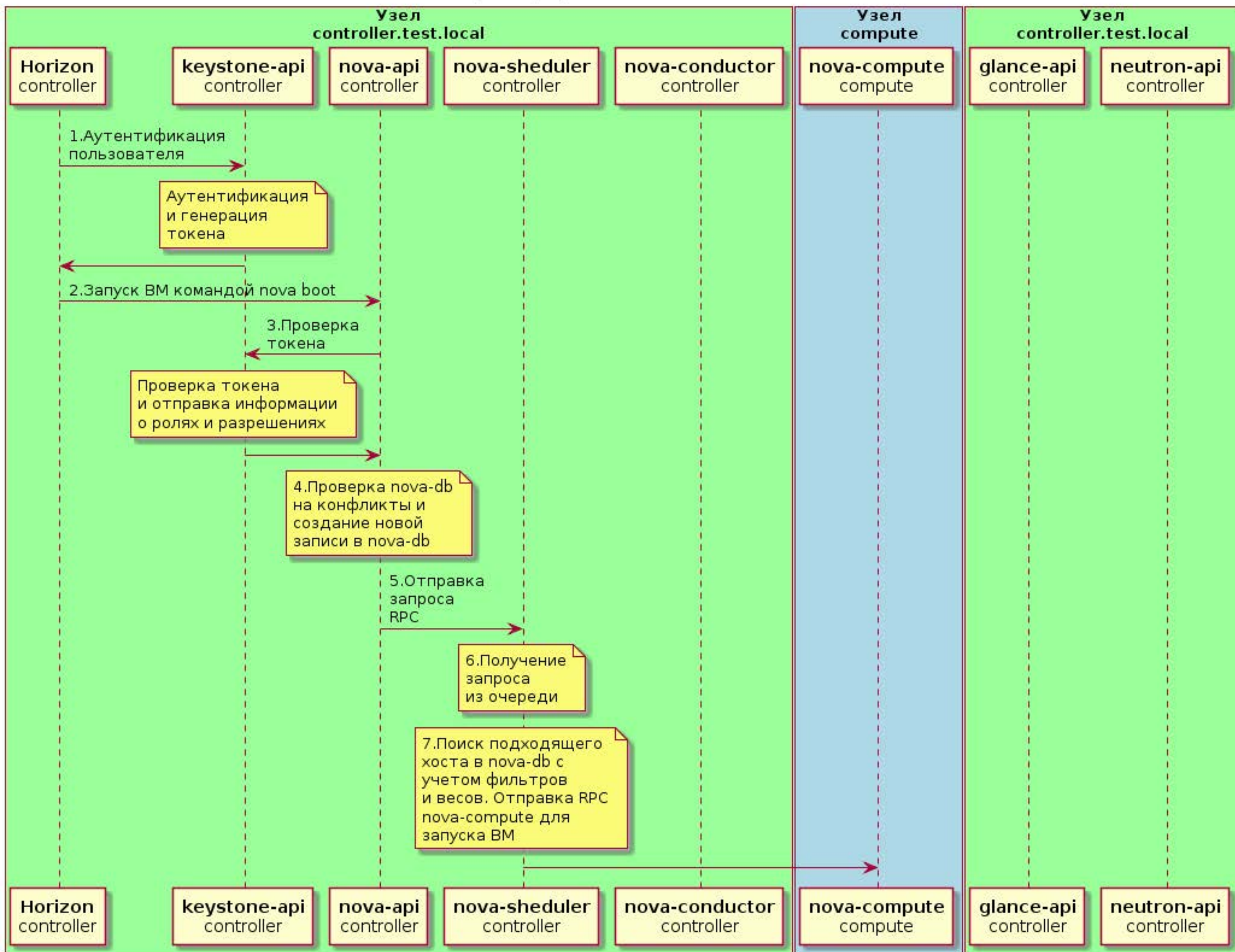
Send CtrlAltDel

```
[ 1.885066] device-mapper: ioctl: 4.22.0-iocli (2011-10-19) initialised: dm-d
evel@redhat.com
[ 1.898499] cpuidle: using governor ladder
[ 1.905895] cpuidle: using governor menu
[ 1.911270] EFI Variables Facility v0.08 2004-May-17
[ 1.920731] TCP cubic registered
[ 1.927396] NET: Registered protocol family 10
[ 1.935953] NET: Registered protocol family 17
[ 1.943469] Registering the dns_resolver key type
[ 1.953135] registered taskstats version 1
[ 1.963672] Magic number: 7:938:625
[ 1.971198] rtc_cmos 00:01: setting system clock to 2015-11-05 09:36:31 UTC (
1446716191)
[ 1.985573] BIOS EDD facility v0.16 2004-Jun-25, 0 devices found
[ 1.994398] EDD information not available.
[ 2.003535] Freeing unused kernel memory: 928k freed
[ 2.018267] Write protecting the kernel read-only data: 12288k
[ 2.033553] Freeing unused kernel memory: 1596k freed
[ 2.049395] Freeing unused kernel memory: 1184k freed
```

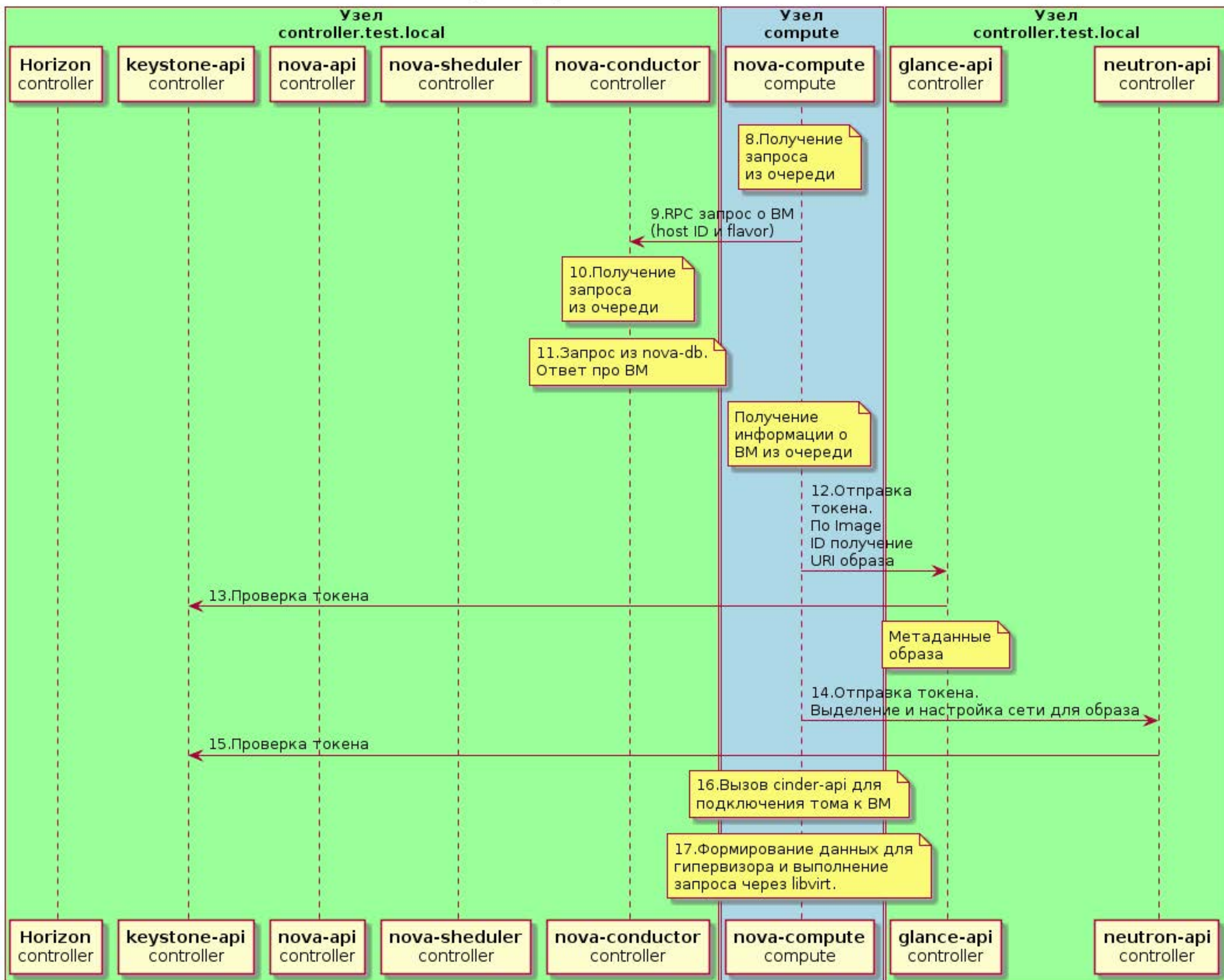
further output written to /dev/ttyS0

login as 'cirros' user. default password: 'cubswin:)' . use 'sudo' for root.
myinstance1 login:

Запуск виртуальной машины. Часть I



Запуск виртуальной машины. Часть II



Host Aggregates - OpenStack Dashboard - Mozilla Firefox

Host Aggregates - O... x

controller.test.local/dashboard/admin/aggregates/

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openstack

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Host Aggregates

Filter

+ Create Host Aggregate

✖ Delete Host Aggregates

☐	Name	Availability Zone	Hosts	Metadata	Actions
☐	MyAggregate	-	compute.test.local	mynewmetadata = true	Edit Host Aggregate
☐	MyAggregateZ	MyZone	compute-opt.test.local	availability_zone = MyZone	Edit Host Aggregate

Displaying 2 items

Availability Zones

Filter

Availability Zone Name	Hosts	Available
internal	controller.test.local (Services Up)	Yes
MyZone	compute-opt.test.local (Services Up)	Yes
nova	compute.test.local (Services Up)	Yes

Displaying 3 items

Project

Compute

Network

Network Topology

Networks

Routers

Identity

Network Topology

Resize the canvas by scrolling up/down with your mouse/trackpad on the topology. Pan around the canvas by clicking and dragging the space behind the topology.

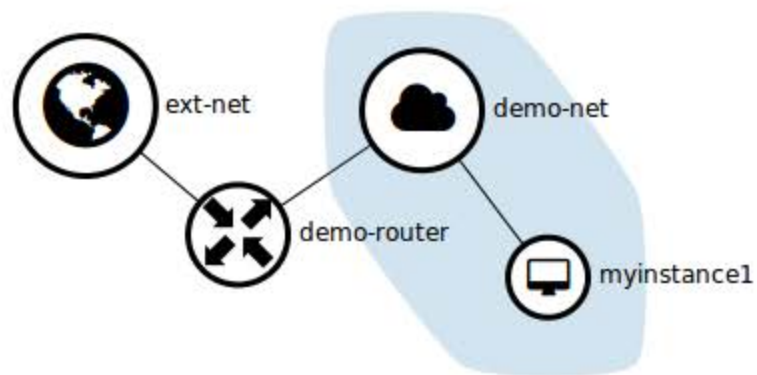
Toggle labels

Toggle Network Collapse

Launch Instance

+ Create Network

+ Create Router



Project

Compute

Network

Network Topology

Networks

Routers

Object Store

Identity

Network Topology

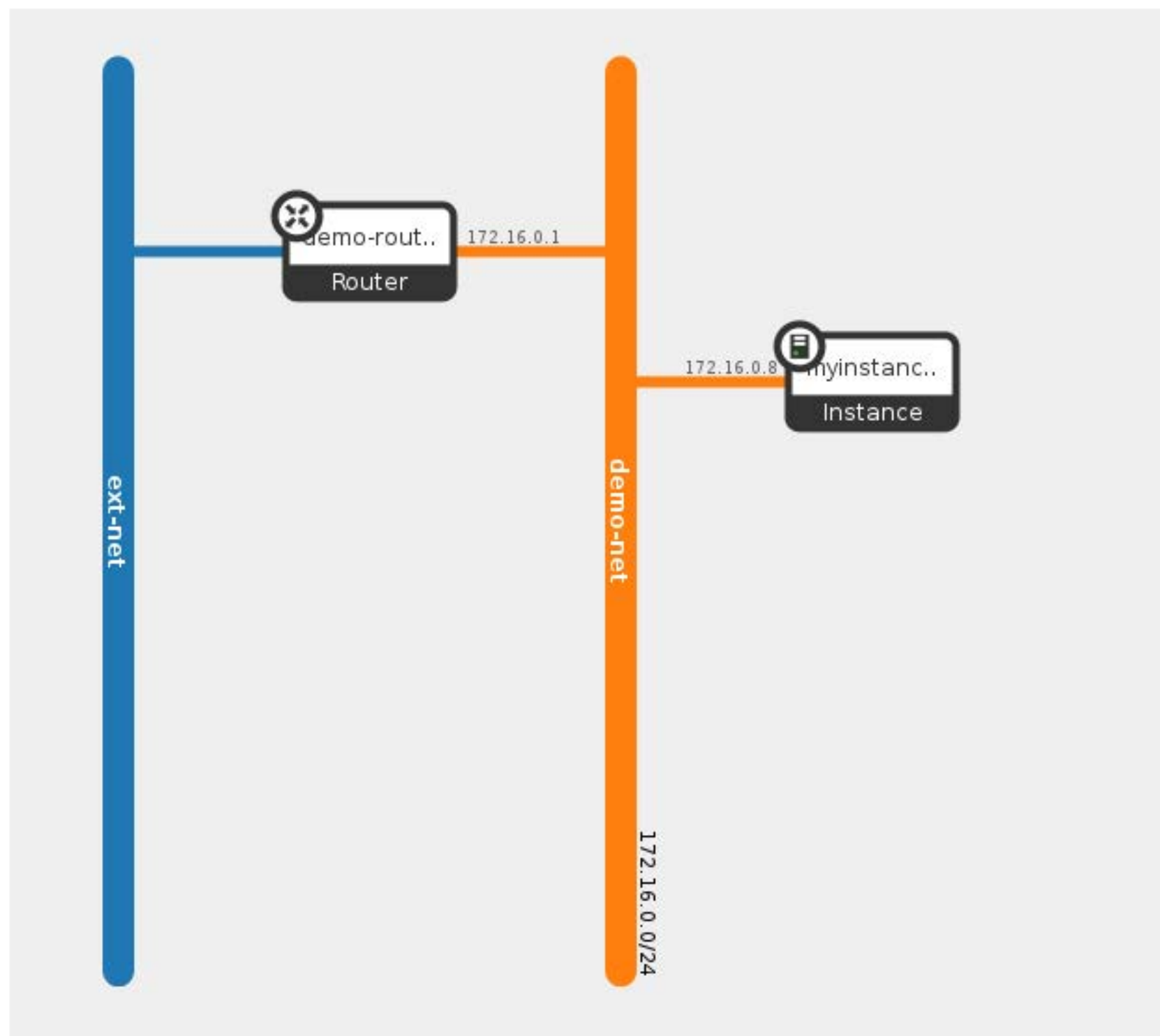
Small

Normal

Launch Instance

+ Create Network

+ Create Router



Project

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All Hypervisors

Hypervisor Summary

VCPU Usage

Used 4 of 8

Memory Usage

Used 9GB of 7.7GB

Local Disk Usage

Used 80GB of 98GB

Hypervisor

Compute Host

Hostname	Type	VCPUs (used)	VCPUs (total)	RAM (used)	RAM (total)	Local Storage (used)	Local Storage (total)	Instances
compute.test.local	QEMU	2	4	4.5GB	3.9GB	40GB	49GB	2
compute-opt.test.local	QEMU	2	4	4.5GB	3.9GB	40GB	49GB	2

Displaying 2 items

Контроллер SDN

6632
tcp

6633
tcp

Сетевой узел

OVSDB-SERVER

6632
tcp

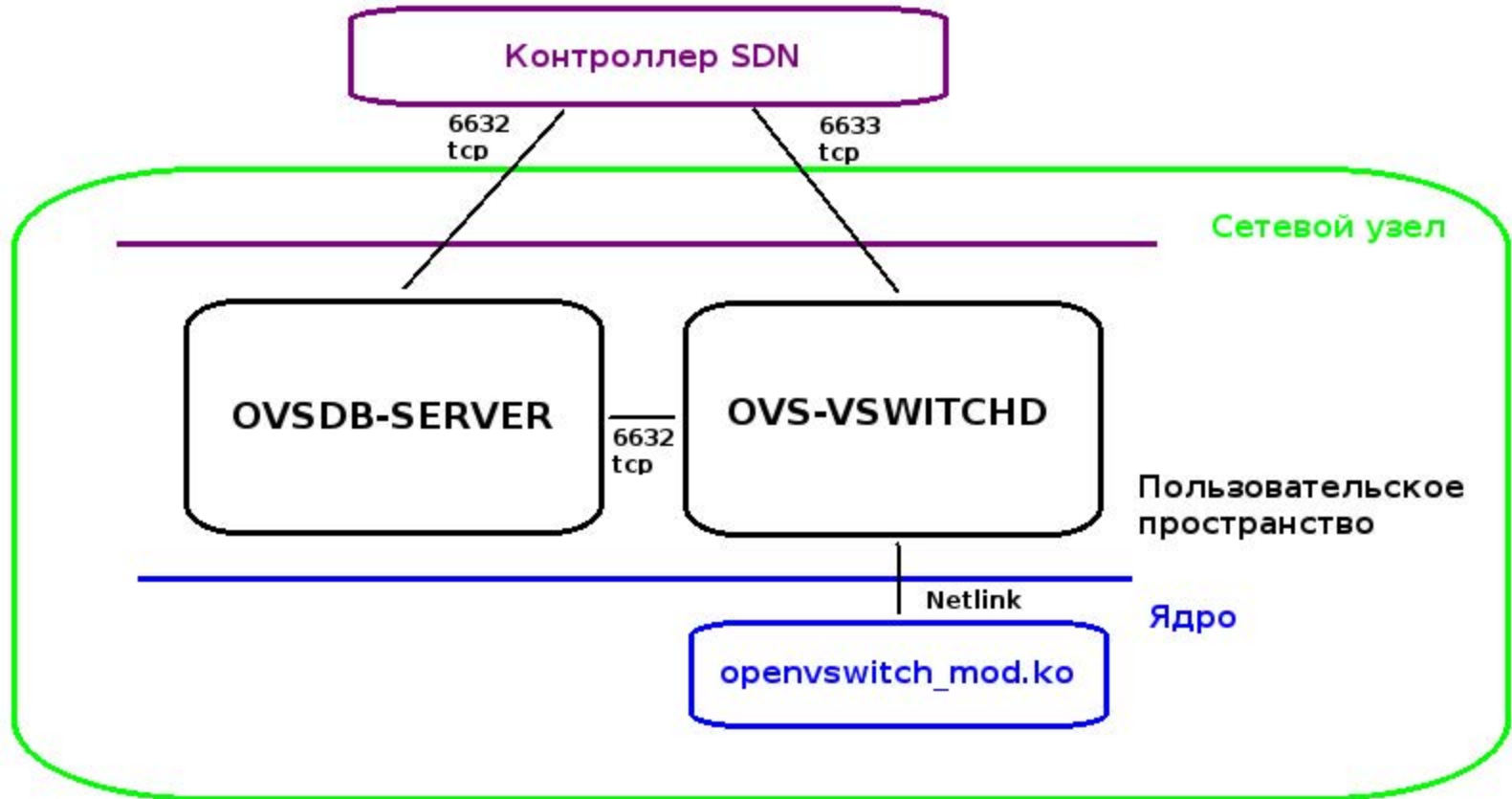
OVS-VSWITCHD

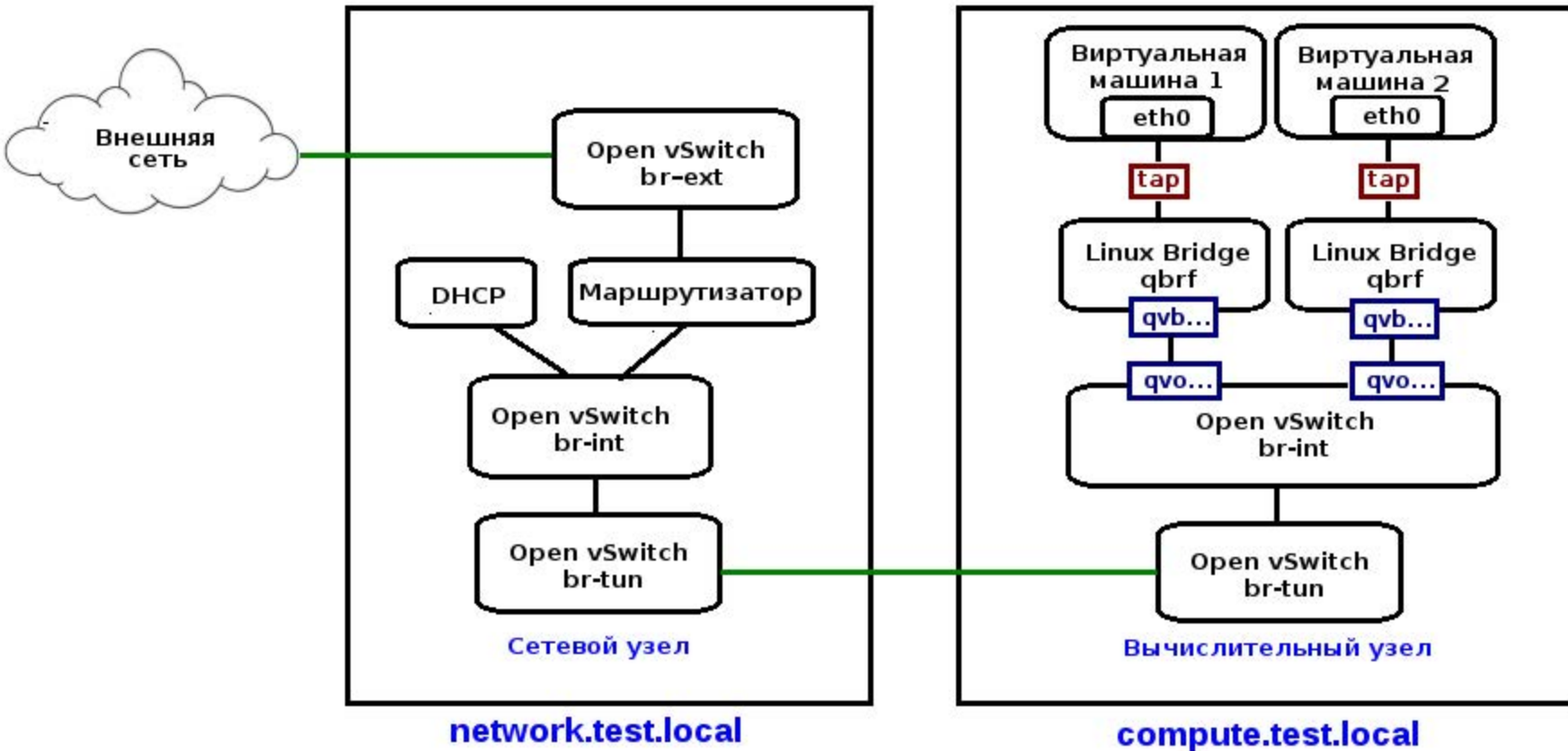
Пользовательское
пространство

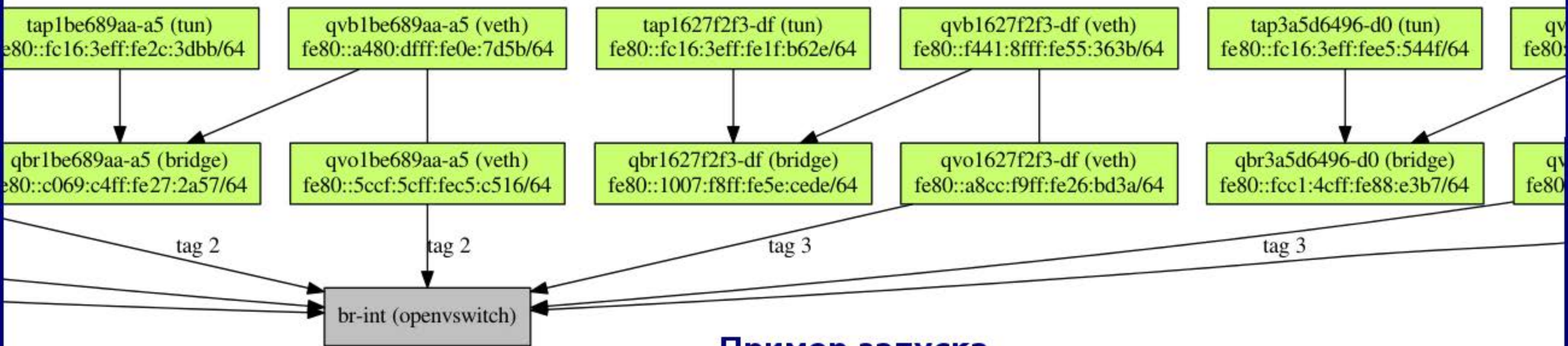
Netlink

Ядро

openvswitch_mod.ko

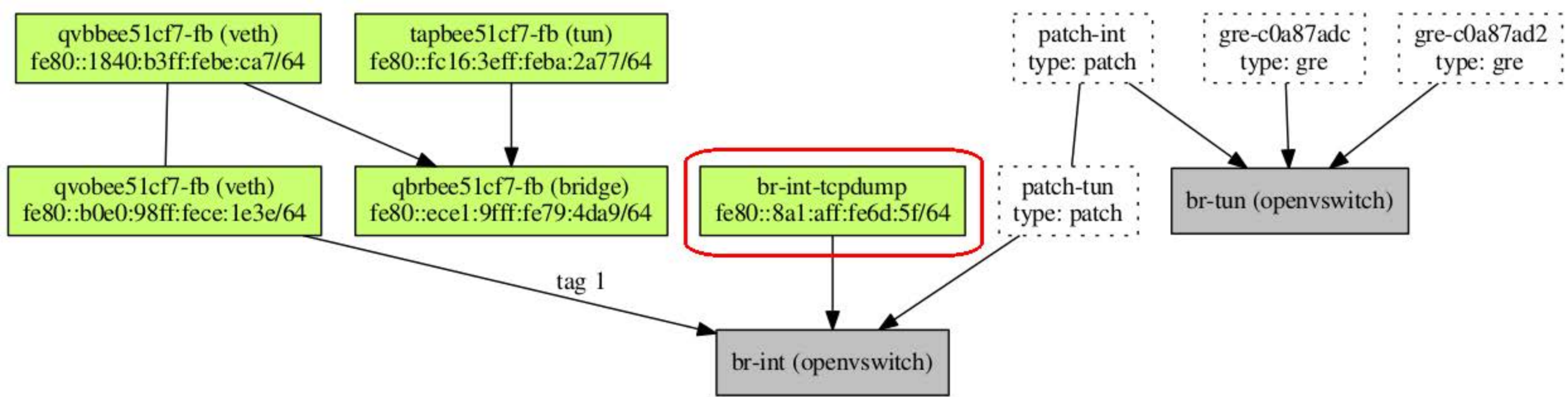






Пример запуска

[root@compute ~] plotnetcfg | dot -Tpdf > node.pdf



File Edit View Go Capture Analyze Statistics Telephony Tools Internals Help



Filter:

Expression... Clear Apply Save

No.	Time	Source	Destination	Protocol	Length	Info
1	0	fa:16:3e:ba:2a:77	Broadcast	ARP	46	Who has 172.16.0.1? Tell 172.16.0.143
2	0	172.16.0.143	172.16.0.1	ICMP	102	Echo (ping) request id=0x4f01, seq=0/0, ttl=64
3	1	172.16.0.143	172.16.0.1	ICMP	102	Echo (ping) request id=0x4f01, seq=1/256, ttl=64
4	2	172.16.0.143	172.16.0.1	ICMP	102	Echo (ping) request id=0x4f01, seq=2/512, ttl=64
5	3	172.16.0.143	172.16.0.1	ICMP	102	Echo (ping) request id=0x4f01, seq=3/768, ttl=64
6	4	172.16.0.143	172.16.0.1	ICMP	102	Echo (ping) request id=0x4f01, seq=4/1024, ttl=64
7	5	172.16.0.143	172.16.0.1	ICMP	102	Echo (ping) request id=0x4f01, seq=5/1280, ttl=64
8	5	fa:16:3e:ba:2a:77	fa:16:3e:2c:d0:b0	ARP	46	172.16.0.143 is at fa:16:3e:ba:2a:77
9	6	172.16.0.143	172.16.0.1	ICMP	102	Echo (ping) request id=0x4f01, seq=6/1536, ttl=64
10	7	172.16.0.143	172.16.0.1	ICMP	102	Echo (ping) request id=0x4f01, seq=7/1792, ttl=64
11	8	172.16.0.143	172.16.0.1	ICMP	102	Echo (ping) request id=0x4f01, seq=8/2048, ttl=64

+ Frame 2: 102 bytes on wire (816 bits), 102 bytes captured (816 bits)

+ Ethernet II, Src: fa:16:3e:ba:2a:77 (fa:16:3e:ba:2a:77), Dst: fa:16:3e:2c:d0:b0 (fa:16:3e:2c:d0:b0)

+ 802.1Q Virtual LAN, PRI: 0, CFI: 0, ID: 1

+ Internet Protocol Version 4, Src: 172.16.0.143 (172.16.0.143), Dst: 172.16.0.1 (172.16.0.1)

+ Internet Control Message Protocol

```

0000 fa 16 3e 2c d0 b0 fa 16 3e ba 2a 77 81 00 00 01  ..>.....>.*w....
0010 08 00 45 00 00 54 46 ce 40 00 40 01 9b 2a ac 10  ..E..TF. @.@..*..
0020 00 8f ac 10 00 01 08 00 ee cc 4f 01 00 00 78 e7  .....0...x.
0030 41 4a 00 00 00 00 00 00 00 00 00 00 00 00 00  AJ.....
0040 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  .....
0050 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  .....
0060 00 00 00 00 00 00  .....

```

Instance Overview - OpenStack Dashboard - Mozilla Firefox

Instance Overview - ... x

controller.test.local/dashboard/project/

Search

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openstack

demo

demo

Project

Compute

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Limit Summary

Instances

Used 3 of 10

VCPUs

Used 3 of 20

RAM

Used 6,144 of 51,200

Floating IPs

Used 1 of 50

Security Groups

Used 2 of 10

Volumes

Used 1 of 10

Volume Storage

Used 1 of 1,000

Usage Summary

Select a period of time to query its usage:

From: 2015-12-01

To: 2015-12-04

Submit

The date should be in YYYY-mm-dd format.

Active Instances: 3 Active RAM: 6GB This Period's VCPU-Hours: 79.99 This Period's GB-Hours: 428.66 This Period's RAM-Hours: 56074.07

Usage

Download CSV Summary

Instance Name	VCPUs	Disk	RAM	Time since created
wpstack1-webserver_instance-qdu4xxv23qi6	1	20GB	2GB	2 hours, 31 minutes
wpstack1-dbserver_instance-6fqvis5gqztc	1	20GB	2GB	2 hours, 31 minutes
apcera1	1	20GB	2GB	12 minutes

Displaying 3 items

Instances - OpenStack Dashboard - Mozilla Firefox

Instances - OpenSta... x +

controller.test.local/dashboard/project/instances/ Search

openstack demo demo

ProjectComputeNetworkOrchestrationIdentity

Launch Instance

Details *Access & SecurityNetworking *Post-CreationAdvanced Options

Availability Zone

nova

Instance Name *

andreyinstancce1

Flavor * ?

m1.large

Instance Count * ?

1

Instance Boot Source * ?

Boot from image

Image Name *

Select Image

Select Image

ManagelQ-devel (1.2 GB)

apcera-trusty-deploy_1437172606 (956.9 MB)

apcera-trusty-orchestrator_20151013191029 (976.3 MB)

cirros-0.3.4-x86_64 (12.7 MB)

fedora-20.x86_64 (204.2 MB)

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.large
VCPUs	4
Root Disk	80 GB
Ephemeral Disk	0 GB
Total Disk	80 GB
RAM	8,192 MB

Project Limits

Number of Instances

2 of 10 Used

Number of VCPUs

2 of 20 Used

Total RAM

4,096 of 51,200 MB Used

Cancel

Launch

System Information - OpenStack Dashboard - Mozilla Firefox

System Information ... x

controller.test.local/dashboard/admin/info/

Search

☆📁🔒⬇️🏠😊☰

openstack

admin

admin

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System Information

ServicesCompute ServicesBlock Storage ServicesNetwork AgentsOrchestration Services

Filter

Name	Service	Host	Status
nova	compute	controller.test.local	Enabled
neutron	network	controller.test.local	Enabled
cinderv2	volumev2	controller.test.local	Enabled
glance	image	controller.test.local	Enabled
ceilometer	metering	controller.test.local	Enabled
heat-cfn	cloudformation	controller.test.local	Enabled
cinder	volume	controller.test.local	Enabled
heat	orchestration	controller.test.local	Enabled
keystone	identity (native backend)	controller.test.local	Enabled

Displaying 9 items

Version: 8.0.0

⚙ Настройки

🔗 Помощь

🚪 Выход

Проект ^

Compute ^

Обзор

Инстансы

Диски

Образы

Доступ и безопасность

Сеть ▾

Оркестрация ▾

Identity ▾

Настройки ▾

Настройки пользователя

Настройки пользователя

Язык *

Русский (ru) ▾

Часовой пояс *

UTC +03:00: Россия (Москва) ▾

Элементов на странице * ?

20 ▴ ▾

Строк журнала для инстансы * ?

35 ▴ ▾

Описание:

Измените настройки панели управления для вашего пользователя.

Сохранить

System Info

Services

Filter



Filter

Name	Service	Host	Status
nova	compute	172.25.0.10	Enabled
neutron	network	172.25.0.10	Enabled
cinderv2	volumev2	172.25.0.10	Enabled
novav3	computev3	172.25.0.10	Enabled
glance	image	172.25.0.10	Enabled
ceilometer	metering	172.25.0.10	Enabled



System Panel

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Identity Panel

[Projects](#)[Users](#)

Alarm Monitoring

[Active Alarms](#)[Alarm & Alert History](#)

COMPUTE ENVIRONMENT

[Show filters](#) • [Reset filters](#)

Sort hosts by...

Instances states:
● = running ○ = other

compute-0-10

7 ● 1 ○

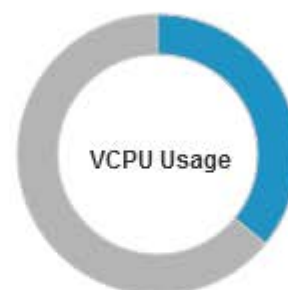
Type: QEMU

VCUP: 15 / 42

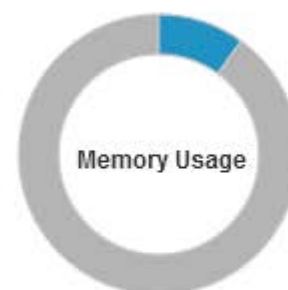
RAM: 10%

DISK: 51%

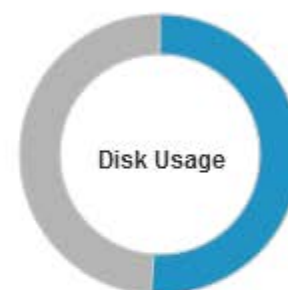
Hypervisor Summary



Used 15 of 42



Used 11GB of 111GB



Used 240.0GB of 467.0GB

Project ▾
Admin ^
System ^
Overview

Resources Usage Overview

Usage Report

Stats

Metric: memory ▾

Group by: Project ▾

Value: Avg. ▾

Period: Last 30 days ▾

From:

To:

Resource Usage

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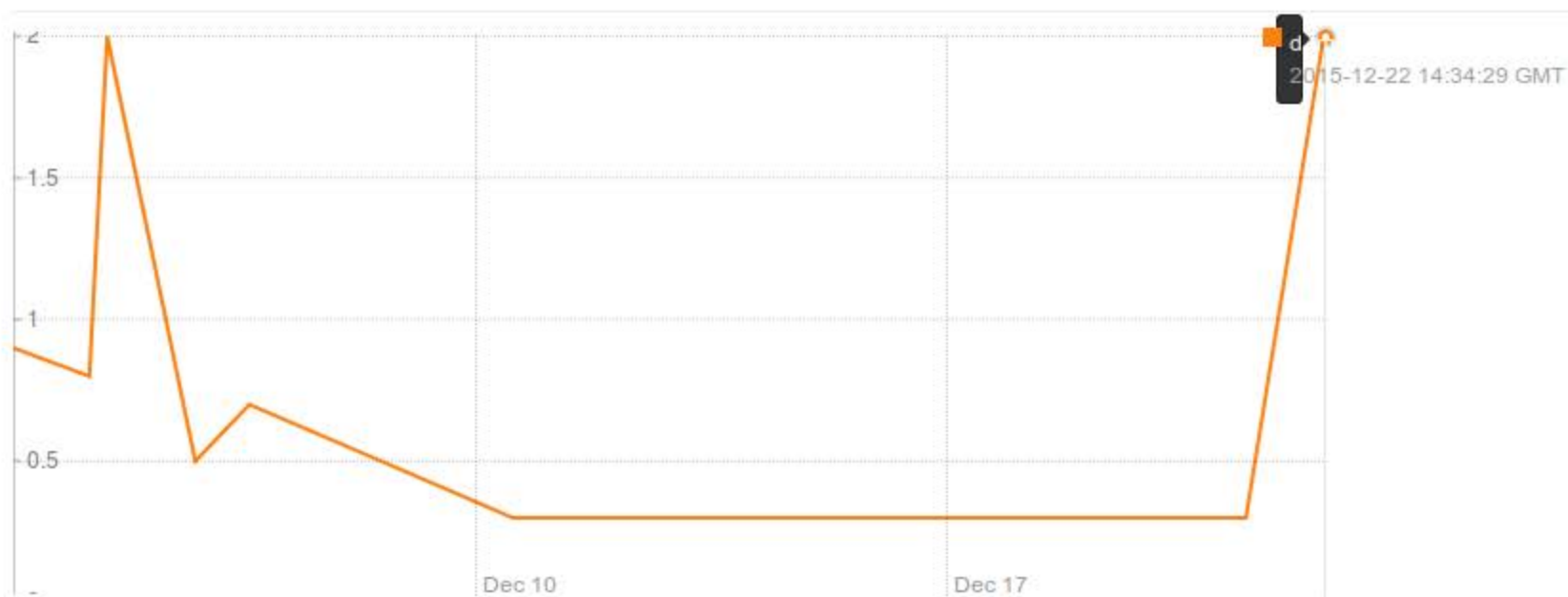
Defaults

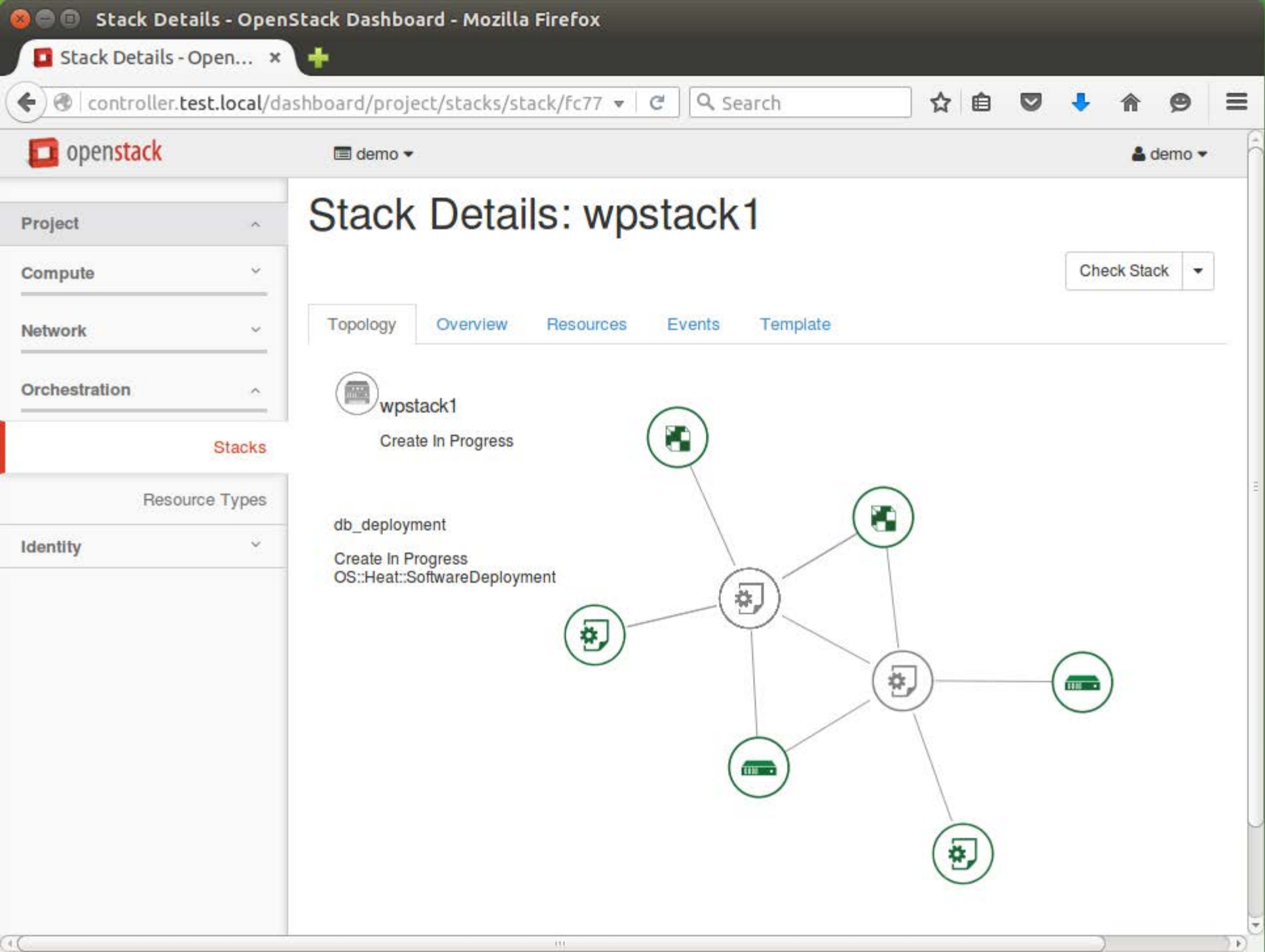
Metadata Definitions

System Information

Identity ▾

Statistics of all resources





Project ^

Compute ^

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Images

Project (1)

Shared with Me (0)

Public (7)

+ Create Image

x Delete Images

☐	Image Name	Type	Status	Public	Protected	Format	Size	Actions
☐	larsks/thttpd	Image	Active	Yes	No	Docker	1.0 MB	Launch Instance ▾
☐	cirros-raw	Image	Active	Yes	No	Raw	39.2 MB	Launch Instance ▾
☐	apcera-trusty-orchestrator_2015101319...	Image	Active	Yes	No	QCOW2	976.3 MB	Launch Instance ▾
☐	apcera-trusty-deploy_1437172606	Image	Active	Yes	No	QCOW2	956.9 MB	Launch Instance ▾
☐	ManageIQ-devel	Image	Active	Yes	No	QCOW2	1.2 GB	Launch Instance ▾
☐	fedora-20.x86_64	Image	Active	Yes	No	QCOW2	204.2 MB	Launch Instance ▾
☐	cirros-0.3.4-x86_64	Image	Active	Yes	No	QCOW2	12.7 MB	Launch Instance ▾

Displaying 7 items

Instances - OpenStack Dashboard - Mozilla Firefox

Instances - OpenSta... x +

←

controller.test.local/dashboard/project/instances/

↻

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Launch Instance

Terminate Instances

More Actions ▾

☐	Instance Name	Image Name	IP Address	Size	Key Pair	Status	Availability Zone	Task	Power State	Time since created	Actions
☐	test1	larsks/thttpd	172.16.0.149 Floating IPs: 10.100.1.105	m1.small	-	Active	nova	None	Running	13 minutes	Create Snapshot ▾

Displaying 1 item

