

세상을
바꾸는
시간, 15분

가상머신 만드는 시간, 15분

OpenStack folsom, Quantum
choe.chengdae@kt.com
kt cloudware

이야기할 것들

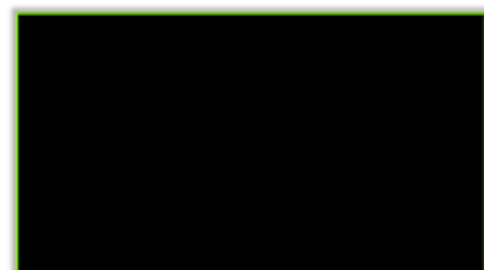
- Local Deploy 환경
- Physical Deploy Model
- Quantum Deploy Models
- Why Automation?
- Demo

LOCAL DEPLOY 환경

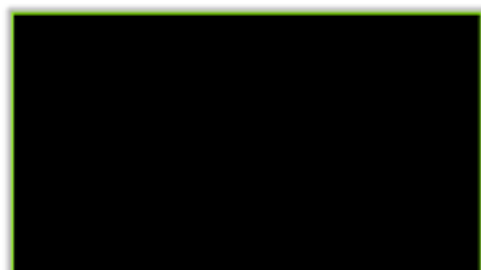
로컬 환경이 필요할까?

- 물리적인 제한: physical machine, switch, networks
- Just in time
- 뭔가 잘못되면...
- 자유롭게 놀 공간이 필요하다.

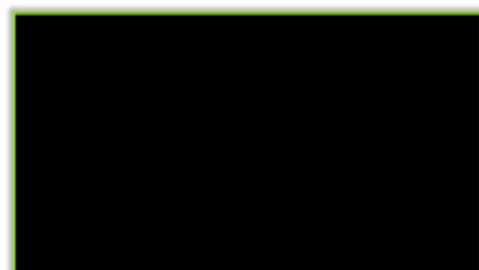
openstack



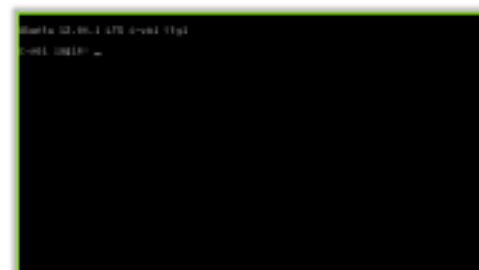
database



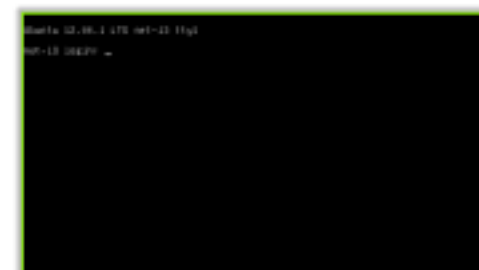
keystone



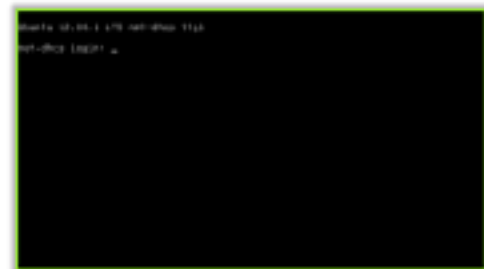
control



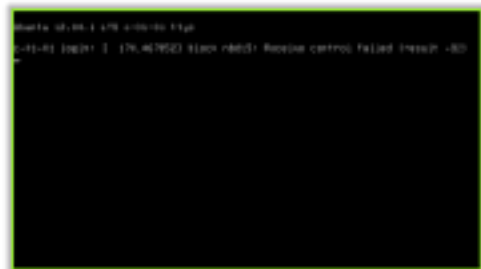
cinder-volume



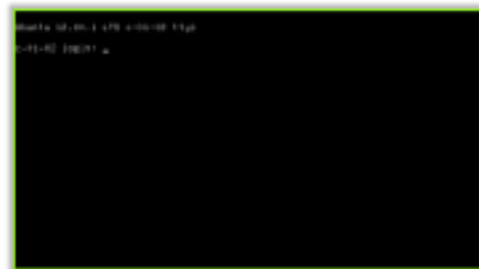
net-l3



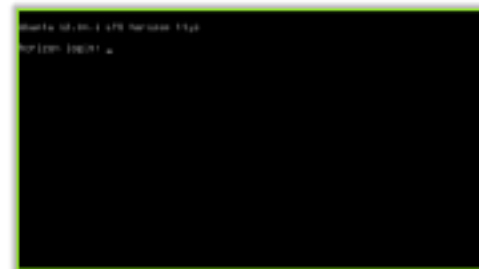
net-dhcp



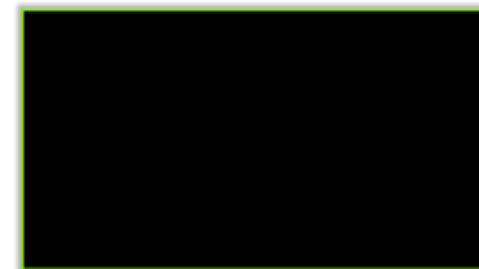
c-01-01



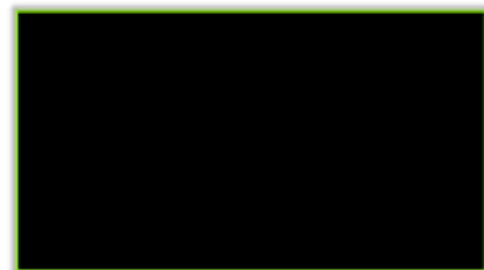
c-01-02



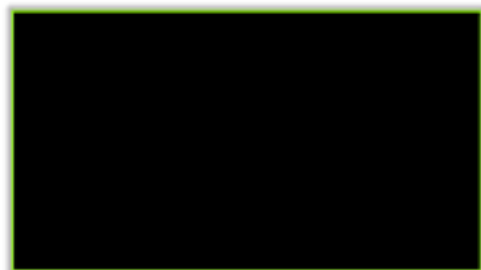
horizon



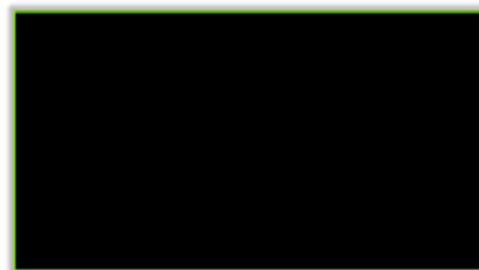
repo



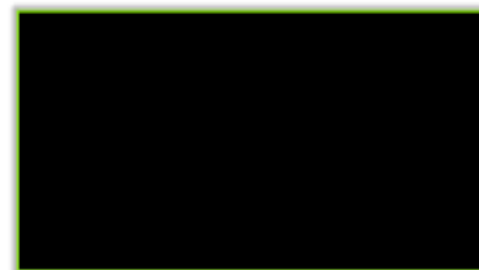
chef-server



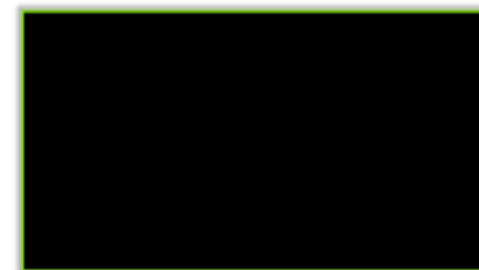
pxe



router-ext



router-data



devstack



Virtual Network Editor

Name	Type	External Connection	Host Connection	DHCP	Subnet IP Address
vmnet0	bridged	auto-bridging	—	—	—
vmnet1	host-only	none	vmnet1	no	10.100.1.0
vmnet2	host-only	none	vmnet2	no	10.20.1.0
vmnet3	host-only	none	vmnet3	no	10.130.1.0
vmnet4	host-only	none	none	no	10.140.1.0

+

Add Network...

—

Remove Network

vmnet0

Bridged (connect VMs directly to the external network)

Bridge to: AutomaticAutomatic Settings...

NAT (share host's IP address with VMs)

Host-only (connect VMs internally in a private network)

Use local DHCP service to distribute IP addresses to VMs

Connect a host virtual adapter (vmnet0) to this network

Subnet IP: . . . Subnet mask:

i

Leave blank to automatically select an unused subnet IP.

?

Help

×

Cancel

↓

Save

12년 12월 3일 월요일

머나먼 길...

- revert to snapshot(created, os_setup)
- pxe os setup
- chef bootstrap
- assign chef role
- reboot
- when boot up run chef-client
- wait two nova-compute setup
- create quantum network
- create instance(ubuntu uec image)

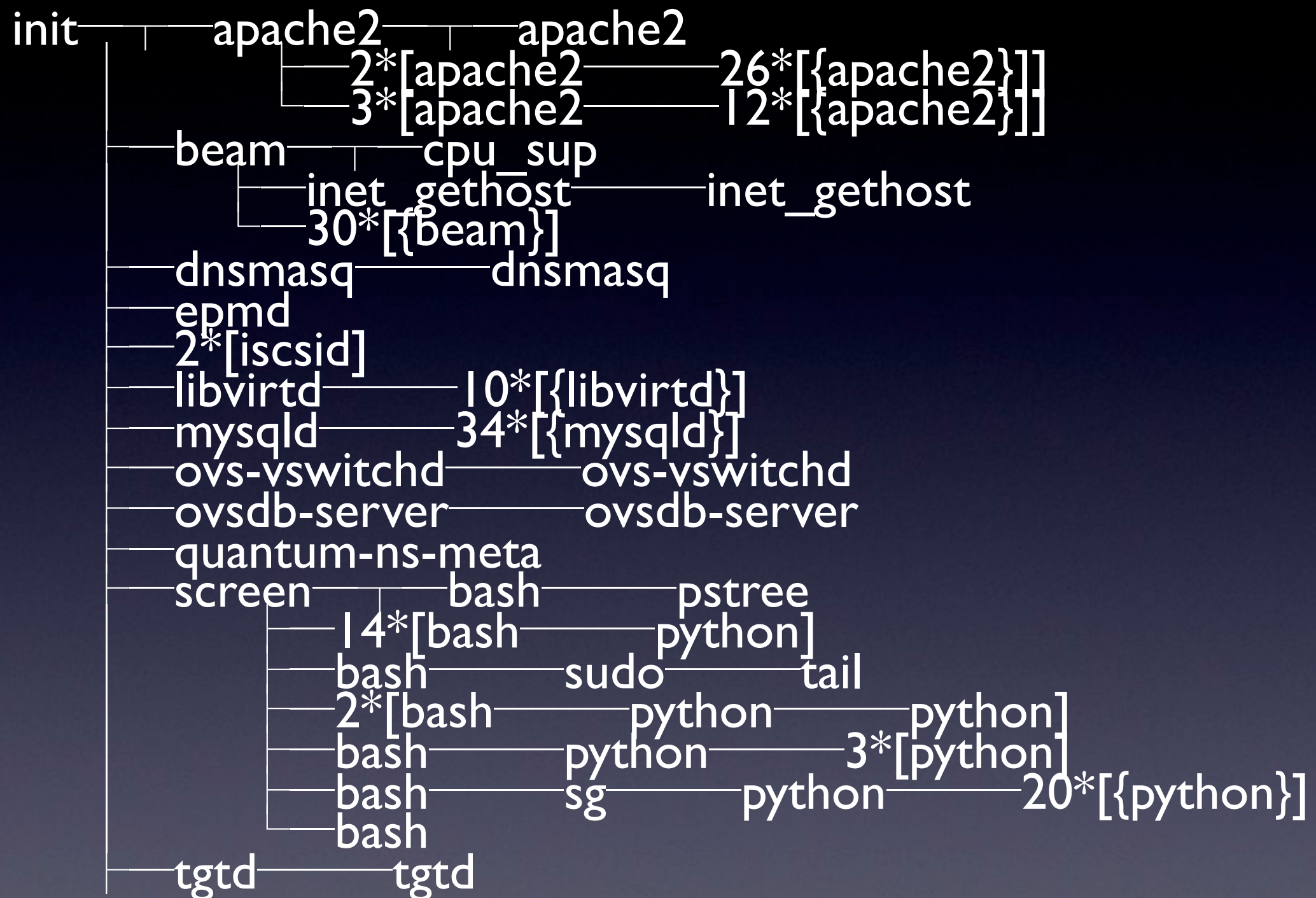
빌드 시작합니다.



PHYSICAL DEPLOY MODEL

DEVSTACK

- `git clone git://github.com/openstack-dev/devstack.git`
- `cd devstack; ./stack.sh`
- `.. bla bla.....`
- `stack.sh` completed in 449 seconds.
- Yeah~~



stack@devstack: ~/devstack		
Num	Name	Flags
0	shell	\$
1	key	\$
2	horizon	\$
3	g-reg	\$
4	g-api	\$
5	n-api	\$
6	q-svc	\$
7	q-agt	\$
8	q-dhcp	\$
9	q-l3	\$
10	n-cpu	\$
11	n-crt	\$
12	n-sch	\$
13	n-novnc	\$
14	n-xvnc	\$
15	n-cauth	\$
16	n-cond	\$
17	c-api	\$
18	c-vol	\$
19	c-sch	\$
20	n-obj	\$

- * 0-\$ shell 1\$ key 2\$ horizon 3\$ g-reg 4\$ g-api 5\$ n-api 6\$ q-svc 7\$ q-agt 8\$ q-d

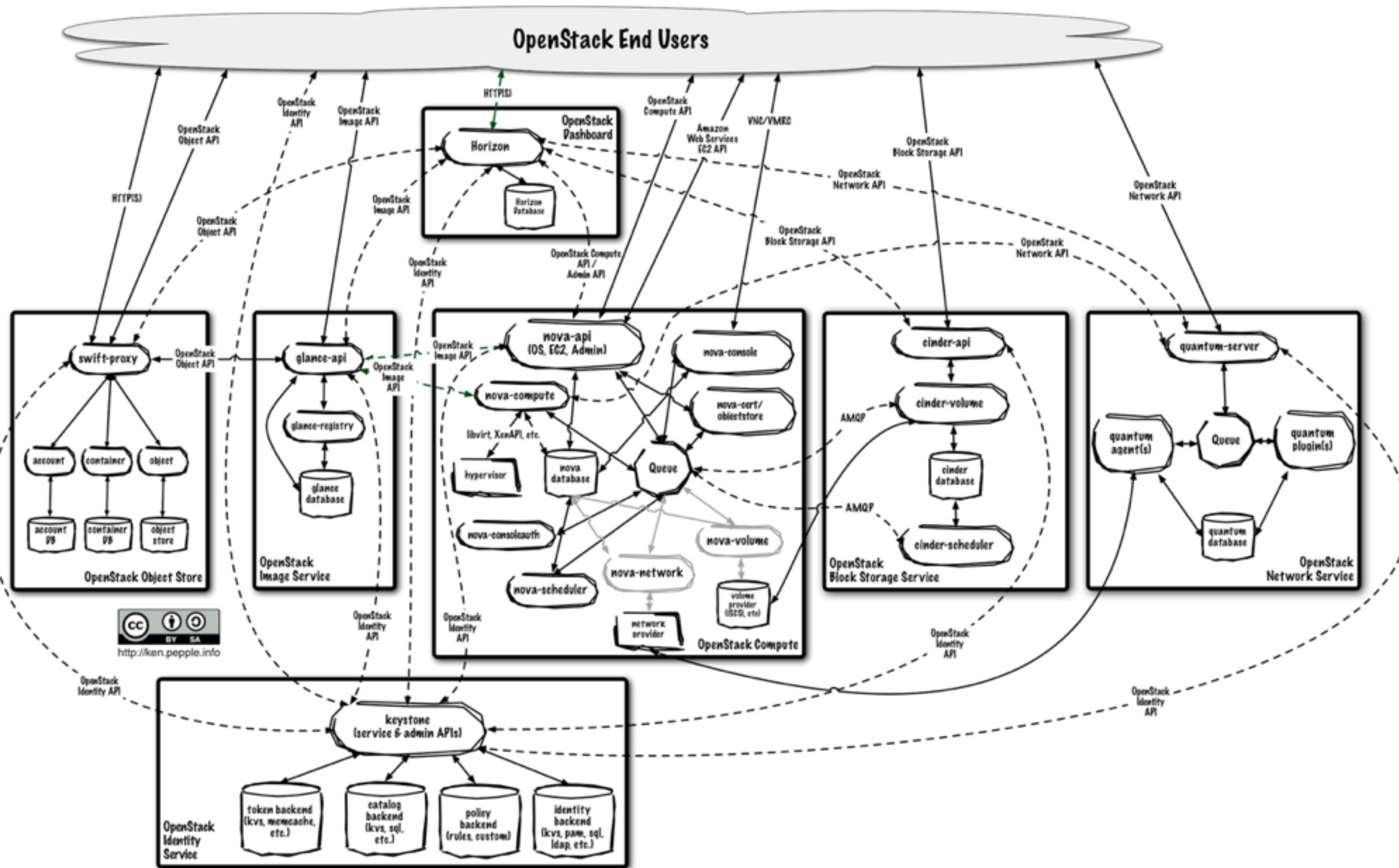
DEVSTACK

- OpenStack 그 자체 개발을 위한 환경~
- OpenStack을 구성하거나 그 위에 돌아가는 서비스를 테스트하기 위한 환경은 아니다.

구성요소들

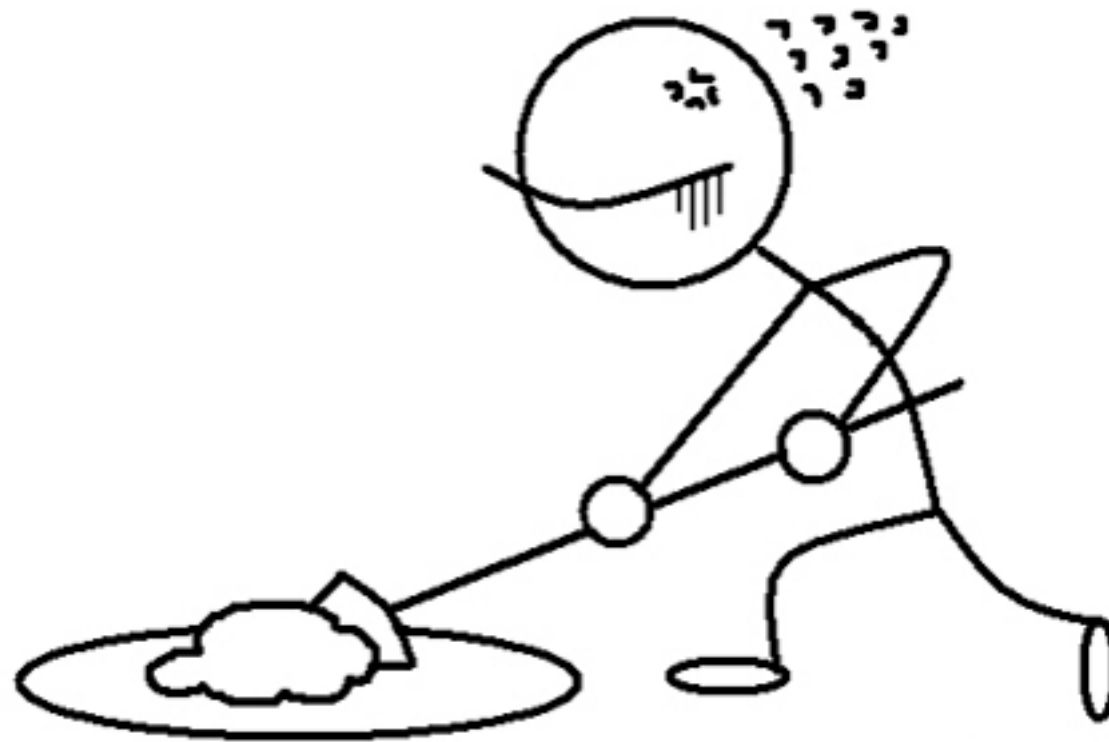
- compute
- network: l3-agent, dhcp-agent
- control: keystone, glance, cinder, quantum
- database, amqp
- storage: instance disk, volume
- chef, repo, dhcp....

도대체 어떻게 구성해야
하는거지?



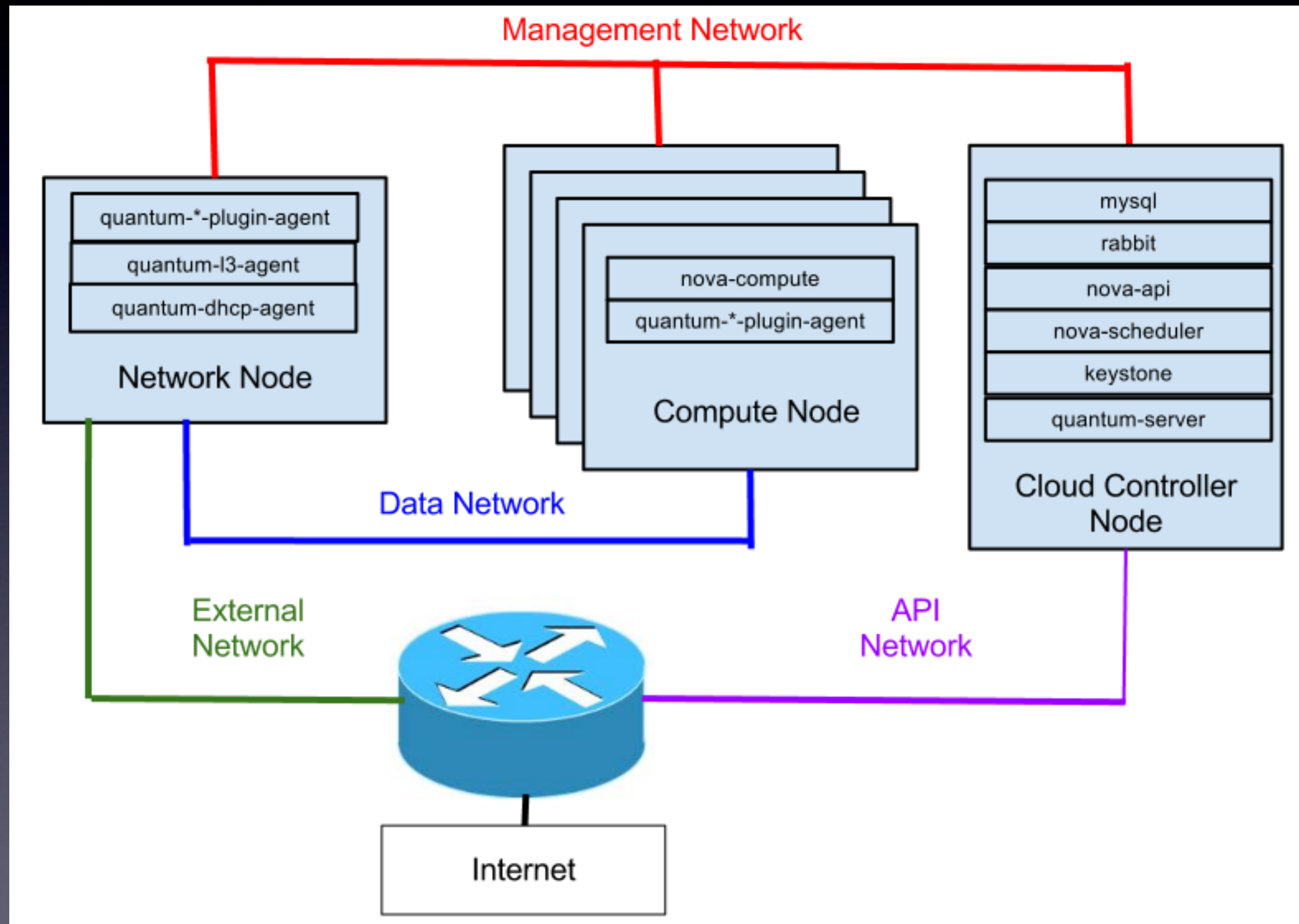


이 농의 삼길 인생...



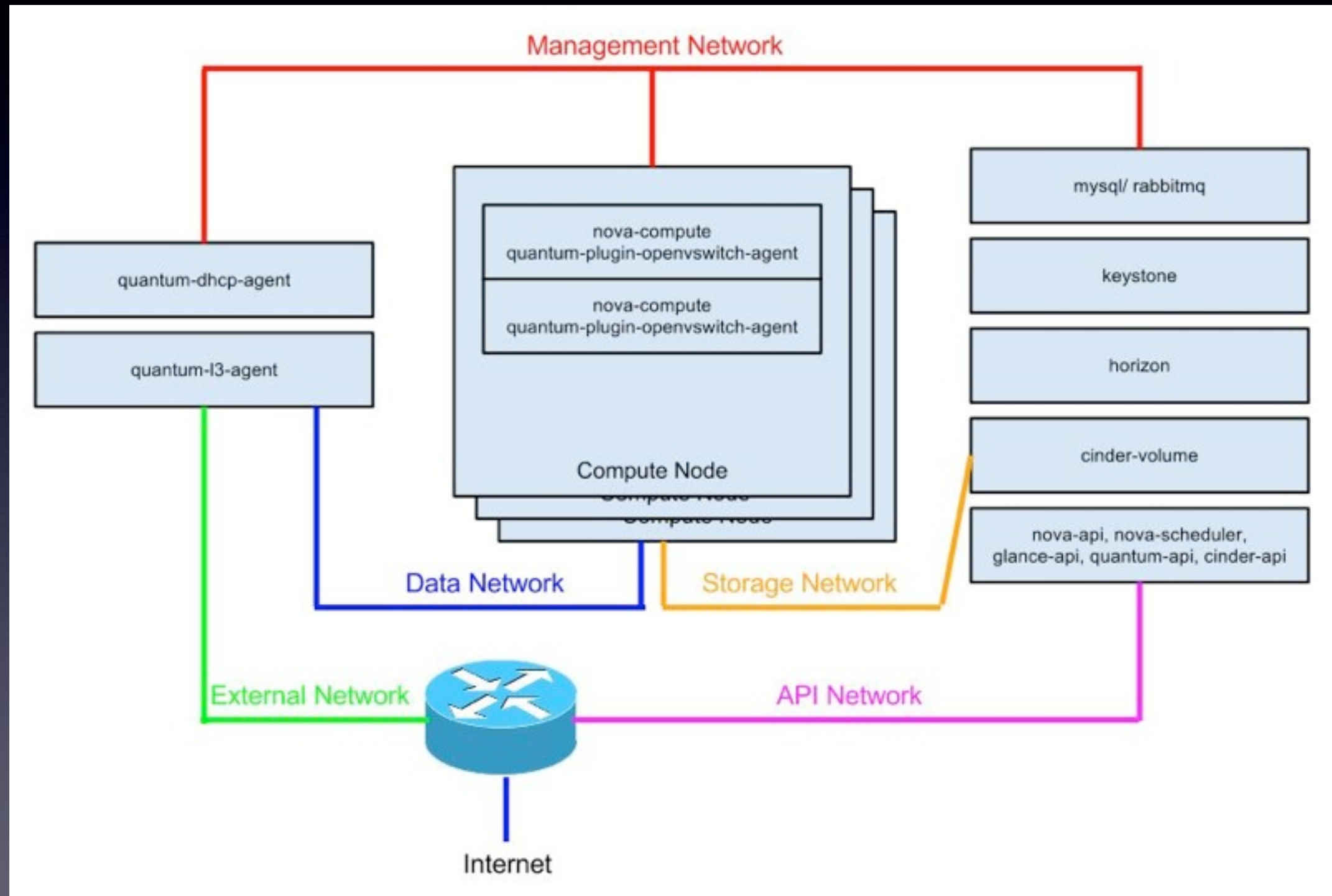
2005. 6. 10. by Idiot

PHYSICAL DEPLOYMENT



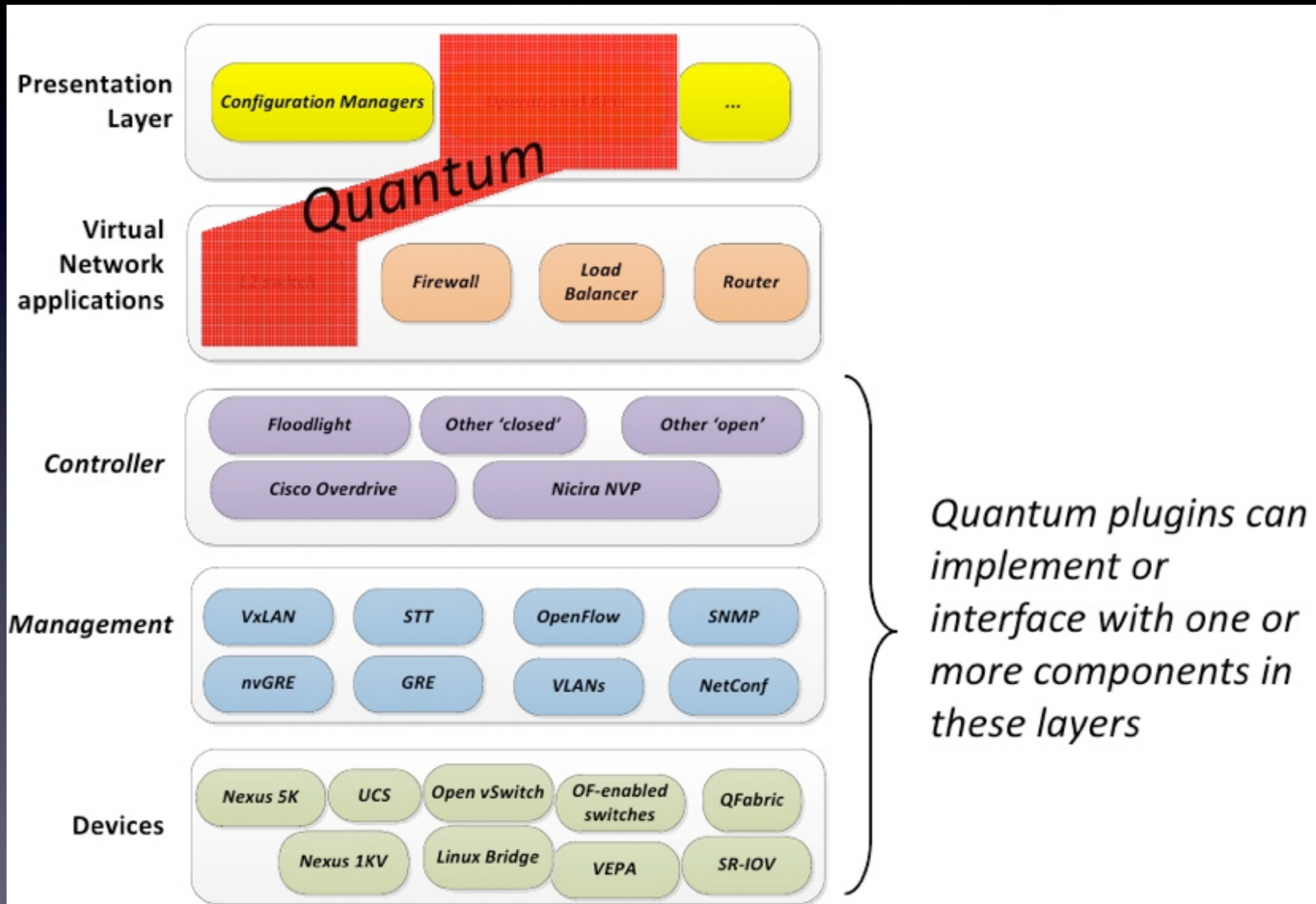
뭔가 빠진것 몇 가지

PHYSICAL DEPLOY



QUANTUM DEPLOY MODELS

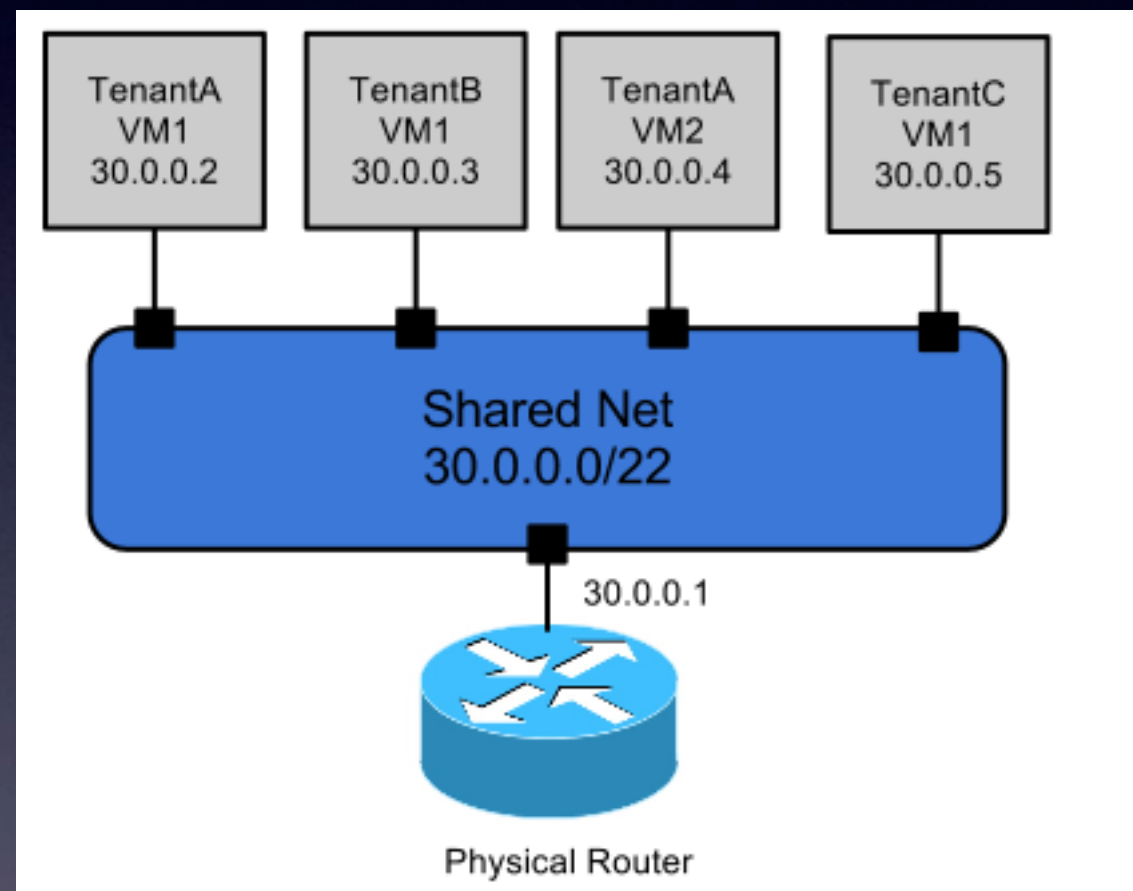
NETWORK AS A SERVICE



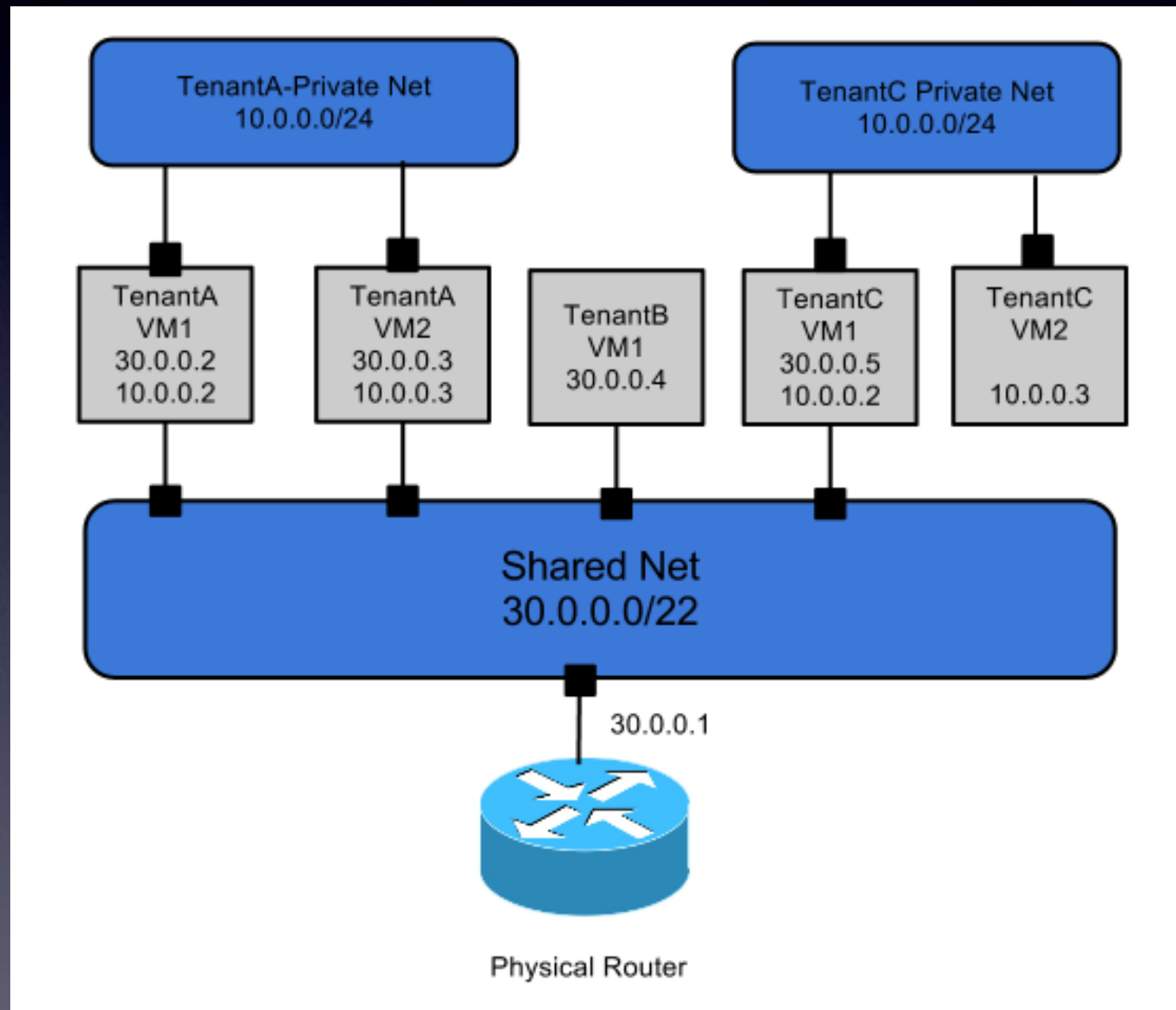
퀀텀 네트워크 모델

- quantum net-create <name>
- quantum subnet-create <net-id>
- quantum router-create <router-name>
- quantum router-interface-add <router-id> <subnet-id>
- quantum router-gateway-set <router-id> <net-id>
- quantum floatingip-create <net-id>
- quantum floatingip-associate <floatingip-id> <vm-id>

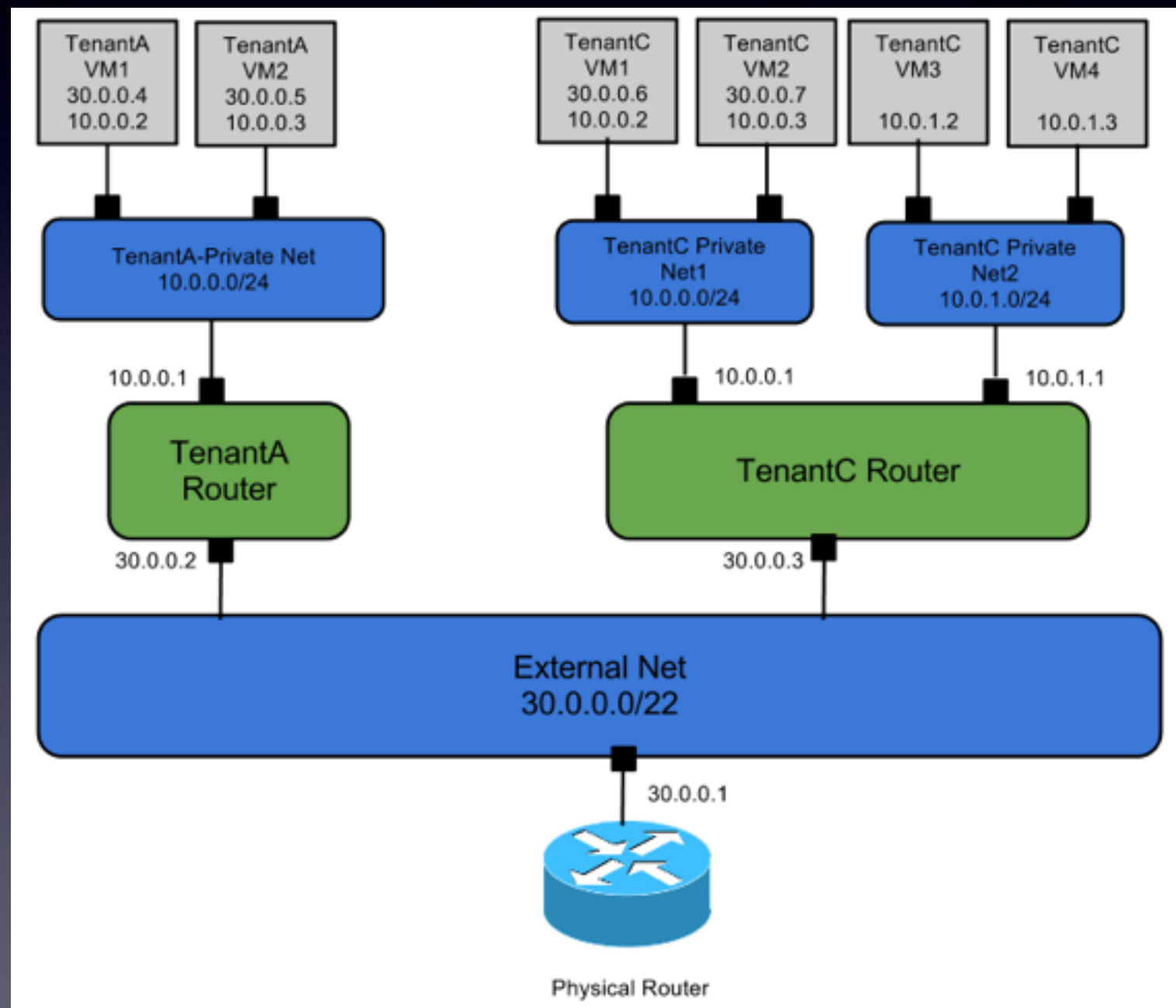
SINGLE FLAT NETWORK



MIXED FLAT AND PRIVATE NETWORK



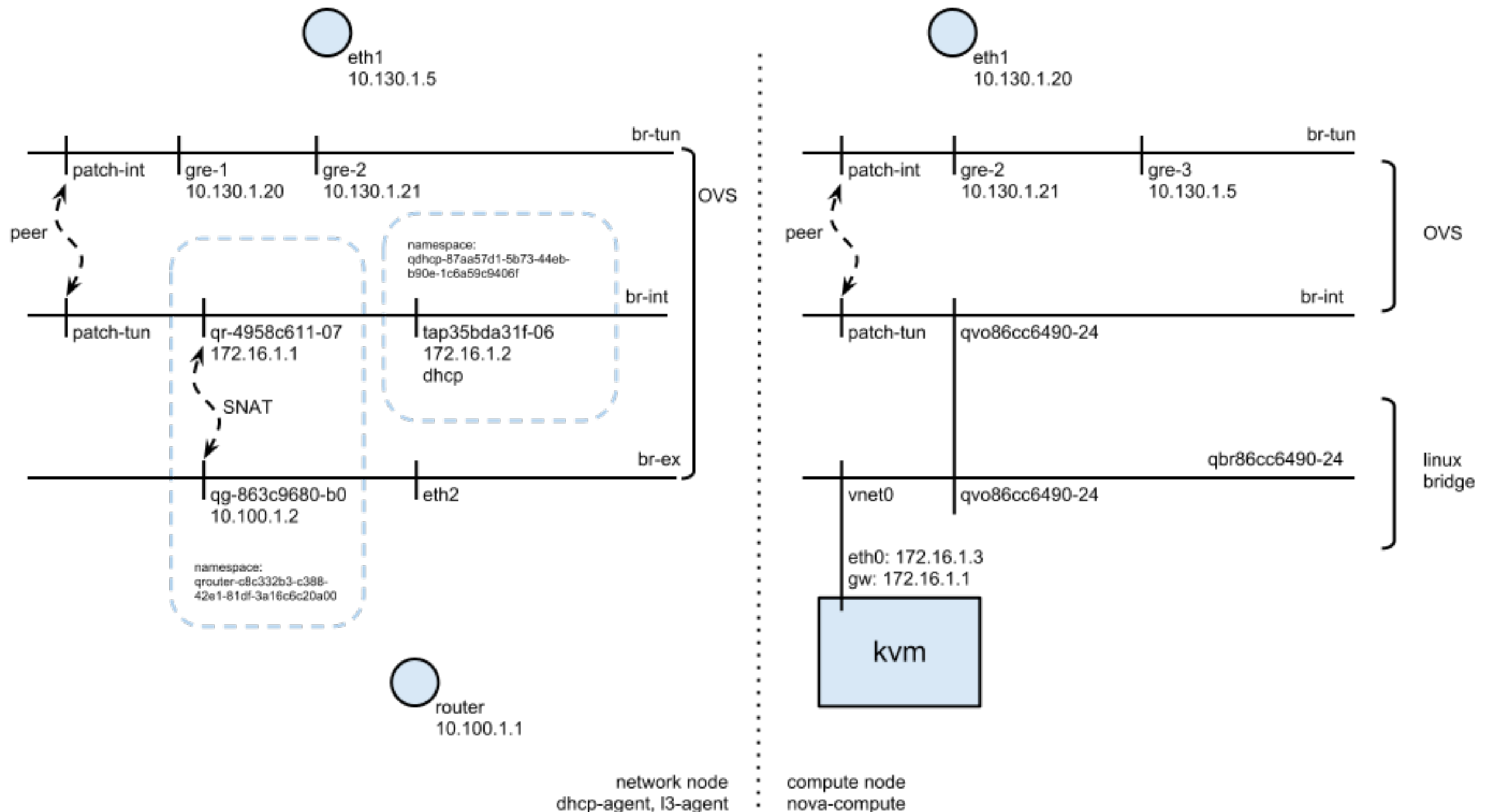
PER TENANT ROUTERS AND PRIVATE NETWORKS



PER TENANT ROUTERS AND PRIVATE NETWORKS WITH QUANTUM

- # External Network
- quantum net-create ext_net --tenant_id=\$TENANT_ID --router:external=True
- quantum subnet-create \$EXTNET_ID 10.100.128/25 --tenant_id=\$TENANT_ID --name=ext_net_subnet --enable_dhcp=False
- # Private Network
- quantum net-create admin_net --tenant_id=\$TENANT_ID
- quantum subnet-create \$NET_ID admin_net --tenant_id=\$TENANT_ID --name=admin_net_subnet --dns_nameservers list=true 168.126.63.1 8.8.8.8
- # Private network과 External Network의 연결
- quantum router-create --tenant_id=\$TENANT_ID \$ROUTER_NAME
- quantum router-interface-add \$ROUTER_ID \$PRI_SUBNET_ID
- quantum router-gateway-set \$ROUTER_ID \$EXTNET_ID
- # 이제 가상머신 생성하고 floatingip를 할당한다.
- nova boot --image=\$IMAGE_ID --flavor=1 --nic net-id=\$NET_ID --key_name=\${KEYNAME} \$VM
- quantum floatingip-create \$EXTNET
- quantum floatingip-associate \$FLOATINGIP_ID \$PORT_ID

FROM KVM TO WORLD

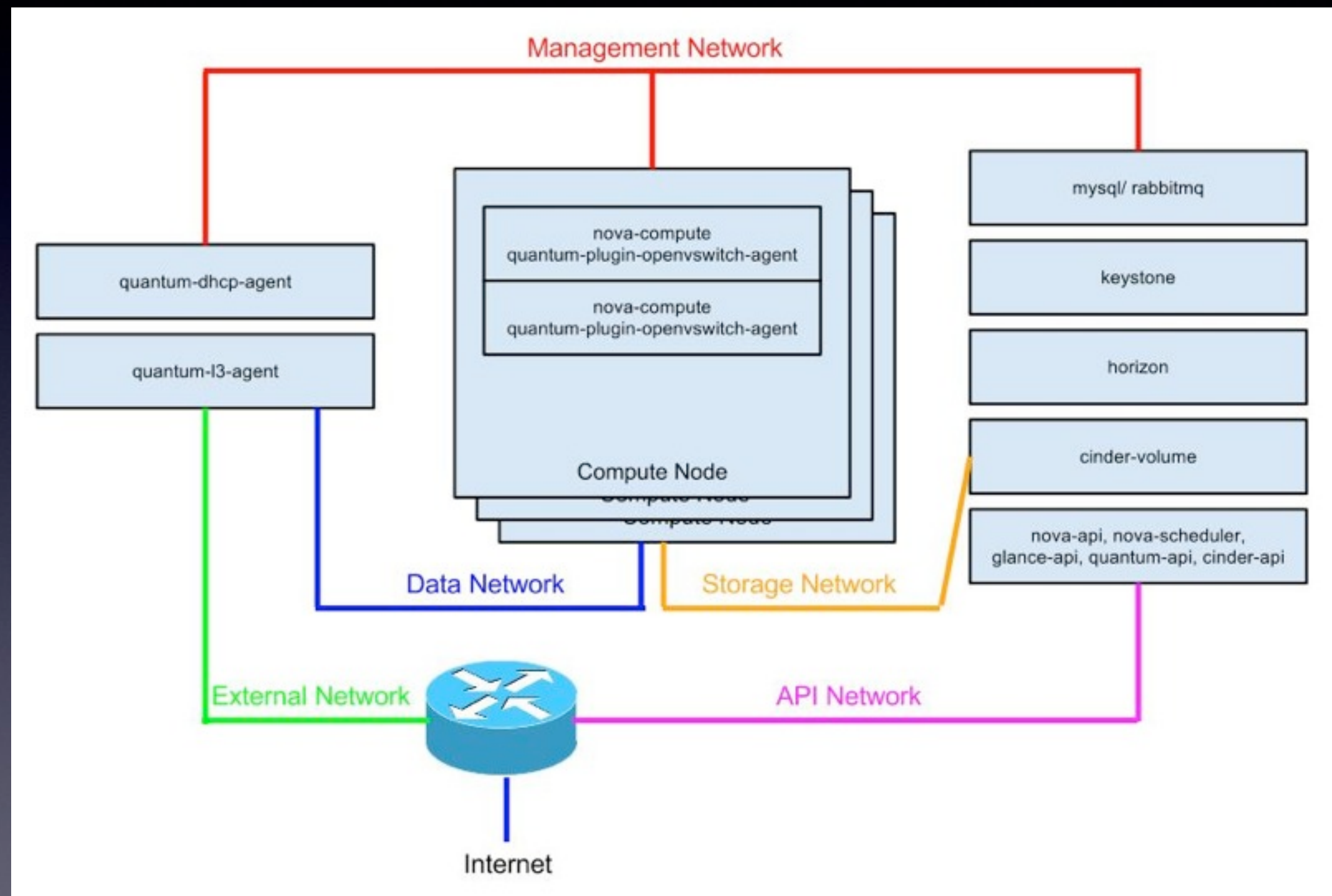


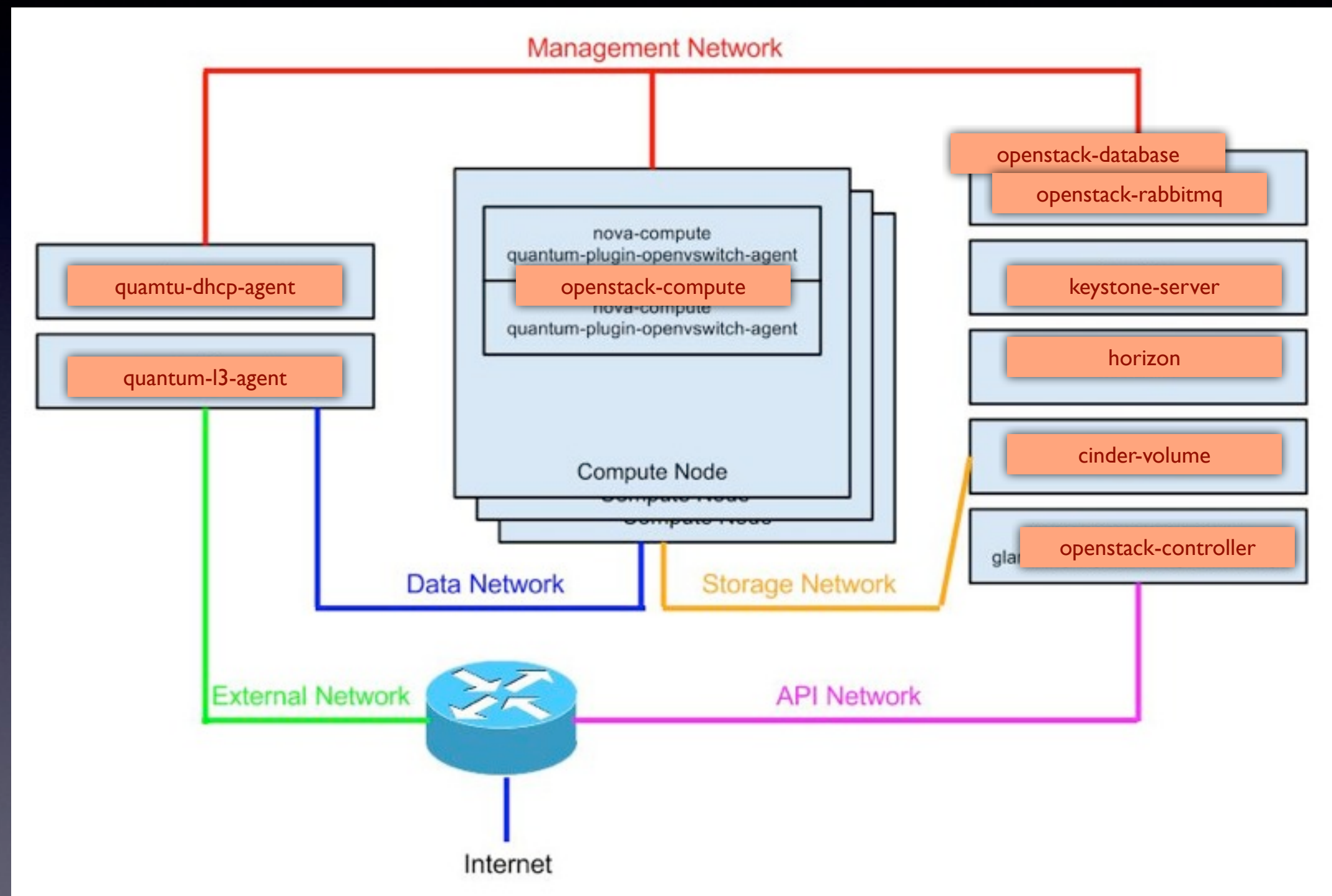
다시는 손으로 직접 설정
하고 싶지 않다 ㅠㅠ

AUTOMATION?

- \$ keystone --os-token 012345SECRET99TOKEN012345 --os-endpoint <http://192.168.206.130:35357/v2.0>
tenant-create --name demo --description "Default Tenant"
- \$ keystone --os-token 012345SECRET99TOKEN012345 --os-endpoint <http://192.168.206.130:35357/v2.0>
user-create --tenant-id b5815b046cfe47bb891a7b64119e7f80 --name admin --pass secretword
- \$ keystone --os-token 012345SECRET99TOKEN012345 --os-endpoint <http://192.168.206.130:35357/v2.0>
role-create --name admin
- \$ keystone --os-token 012345SECRET99TOKEN012345 --os-endpoint <http://192.168.206.130:35357/v2.0>
user-role-add --user-id a4c2d43f80a549a19864c89d759bb3fe --tenant-id
b5815b046cfe47bb891a7b64119e7f80 --role-id e3d9d157cc95410ea45d23bbbc2e5c10
- \$ keystone --os-token 012345SECRET99TOKEN012345 --os-endpoint <http://192.168.206.130:35357/v2.0>
tenant-create --name service --description "Service Tenant"
- \$ keystone --os-token 012345SECRET99TOKEN012345 --os-endpoint <http://192.168.206.130:35357/v2.0>
user-create --tenant-id eb7e0c10a99446cfa14c244374549e9d --name glance --pass glance
- \$ keystone --os-token 012345SECRET99TOKEN012345 --os-endpoint <http://192.168.206.130:35357/v2.0>
user-role-add --user-id 46b2667a7807483d983e0b4037a1623b --tenant-id
eb7e0c10a99446cfa14c244374549e9d --role-id e3d9d157cc95410ea45d23bbbc2e5c10
- \$ keystone --os-token 012345SECRET99TOKEN012345 --os-endpoint <http://192.168.206.130:35357/v2.0>
user-create --tenant-id eb7e0c10a99446cfa14c244374549e9d --name nova --pass nova
- \$ keystone --os-token 012345SECRET99TOKEN012345 --os-endpoint <http://192.168.206.130:35357/v2.0>
user-role-add --user-id 54b3776a8707834d983e0b4037b1345c --tenant-id
eb7e0c10a99446cfa14c244374549e9d --role-id e3d9d157cc95410ea45d23bbbc2e5c10

CHEF를 이용해서
OPENSTCK을 구성~





CHEF 시작하기...

- <http://wiki.opscode.com/display/chef/Home>
- <http://dev.kthcorp.com/tag/chef/>
- <https://github.com/kt-cloudware/cookbook-style-guide>

확인해봅시다

- vm connectivity
- network isolation
- tunneling

Thank you!

