

OpenStack Multi Node Installation

참고자료

참고 자료

- <https://www.rdoproject.org/install/adding-a-compute-node/>

Adding a compute node

Expanding your single-node OpenStack cloud to include a second compute node requires a second network adapter: in order for our pair of nodes to share the same private network, we must replace the "lo" interface we used for the private network with a real nic.

Edit the answer file

First, you must edit the "answer file" generated during the initial packstack setup. You'll find it in the directory from which you ran packstack.

NOTE: by default \$youranswerfile is called packstack-answer-\$date-\$time.txt

```
$EDITOR $youranswerfile
```

Replace \$EDITOR with your preferred editor.

Adjust network card names

Change both `CONFIG_NOVA_COMPUTE_PRIVIF` and `CONFIG_NOVA_NETWORK_PRIVIF` from `lo` to `eth1` or whatever name your network card uses.

Your second NIC may have a different name. You can find the names of your devices by running:

```
ifconfig | grep '^I'
```

Change IP addresses

Change the value for `CONFIG_COMPUTE_HOSTS` from the value of your first host IP address to the value of your second host IP address. Ensure that the key `CONFIG_NETWORK_HOSTS` exists and is set to the IP address of your first host.

Skip installing on an already existing servers

In case you do not want to run the installation over again on the already configured servers, add the following parameter to the answerfile:

```
EXCLUDE_SERVERS=<serverIP>,<serverIP>,...
```

사전 준비 사항

사양

. 2CPU/8G/200G Disk(SSD)/Vmware vSphere 5.5 환경

The screenshot displays the VMware vSphere 5.5 interface for a virtual machine named 'openstack_3'. The interface is divided into several sections:

- Summary:** Shows the VM's name, guest OS (CentOS 4/5/6/7 (64-bit)), and various status indicators. Key metrics include CPU usage at 467.00 MHz, memory usage at 1.12 GB, and storage usage at 20.70 GB. The VM is currently in a 'Powered Off' state.
- VM Hardware:** A list of hardware components including 2 CPUs, 8192MB of memory, a 200.00 GB hard disk, and network adapters connected to the 'MGMT Network'.
- VM Storage Policy:** Shows the storage policy and its configuration.
- Tags:** A section for managing tags, currently showing no active tags.
- Related Items:** A list of related items including the host (172.17.16.24), the cluster, the network, and the storage.

The interface also includes a 'VMRC' (Virtual Machine Remote Console) section with options to download the plug-in, start the console, or download the VMRC.

사전 준비 사항

Single Node Installation 완료
. IP : 172.17.19.81

← → ↻ 172.17.19.81/dashboard/identity/

Apps ★ Bookmarks 00. SPKR 00. Solution 01. Quanta 00. Server 01. Storage 02. Network 09. Private G Dic Map f

openstack admin admin

프로젝트
관리자
인증

프로젝트

사용자
그룹
역할

필터

Q

+ 프로젝트 생성

프로젝트 삭제

<input type="checkbox"/>	이름	설명	프로젝트 ID	도메인 이름	활성화됨	작업
<input type="checkbox"/>	demo	default tenant	7714d24691a24d34be0a561da17d2476	Default	예	멤버 관리
<input type="checkbox"/>	admin	admin tenant	84c548f4ae9746069939a1346230eef7	Default	예	멤버 관리
<input type="checkbox"/>	services	Tenant for the openstack services	da8564afabf24fd3adb2ac1ac0050f81	Default	예	멤버 관리

3 항목 표시

← → ↻ 172.17.19.81/dashboard/project/networks/

Apps ★ Bookmarks 00. SPKR 00. Solution 01. Quanta 00. Server 01. Storage 02. Network 09. Private G Dic Map f

openstack admin admin

프로젝트
Compute
네트워크
네트워크 토폴로지

네트워크

라우터
오브젝트 스토리지
관리자
인증

필터

Q

+ 네트워크 생성

네트워크 삭제

<input type="checkbox"/>	이름	관련 서브넷	공유	외부	Status	관리자 상태	작업
<input type="checkbox"/>	public	public_subnet 172.24.4.224/28	아니오	예	Active	UP	네트워크 편집

1 항목 표시

Multinode 준비

- `sudo yum update -y`
- `[root@localhost ~]# yum update -y`
- Loaded plugins: fastestmirror, langpacks
- Repodata is over 2 weeks old. Install yum-cron? Or run: `yum makecache fast`
- base | 3.6 kB 00:00
- `^Chttp://mirror.centos.org/centos/7/storage/x86_64/ceph-hammer/repodata/repomd.xml: [Errno 14] curl#56 - "Network error recv()"`
- Trying other mirror.
- `[root@localhost ~]# yum makecache fast`
- Loaded plugins: fastestmirror, langpacks
- base | 3.6 kB 00:00
- centos-ceph-hammer | 2.9 kB 00:00
- centos-openstack-mitaka | 2.9 kB 00:00
- centos-qemu-ev | 2.9 kB 00:00
- extras | 3.4 kB 00:00
- updates | 3.4 kB 00:00

Multinode 준비

- SELinux Off
[root@localhost ~]# getenforce
 - Enforcing
- sudo vi /etc/selinux/config
 - Change like following line
 - SELINUX=disabled
 - Reboot
- sudo service NetworkManager stop
- sudo chkconfig NetworkManager off
- [root@localhost ~]# chkconfig NetworkManager off
- Note: Forwarding request to 'systemctl disable NetworkManager.service'.
- Removed symlink /etc/systemd/system/multi-user.target.wants/NetworkManager.service.
- Removed symlink /etc/systemd/system/dbus-org.freedesktop.NetworkManager.service.
- Removed symlink /etc/systemd/system/dbus-org.freedesktop.nm-dispatcher.service.

사전 준비 사항

2대 서버 준비 for Compute Node
. 172.17.17.104, 172.17.17.113

```
[root@localhost ~]# ip addr show ens32
2: ens32: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP
qlen 1000
    link/ether 00:50:56:9a:67:a9 brd ff:ff:ff:ff:ff:ff
    inet 172.17.17.104/22 brd 172.17.19.255 scope global dynamic ens32
        valid_lft 13945sec preferred_lft 13945sec
    inet6 fe80::250:56ff:fe9a:67a9/64 scope link
        valid_lft forever preferred_lft forever
```

```
[root@localhost ~]# ip a show ens32
2: ens32: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP
qlen 1000
    link/ether 00:50:56:9a:84:92 brd ff:ff:ff:ff:ff:ff
    inet 172.17.17.113/22 brd 172.17.19.255 scope global dynamic ens32
        valid_lft 14272sec preferred_lft 14272sec
    inet6 fe80::250:56ff:fe9a:8492/64 scope link
        valid_lft forever preferred_lft forever
```

사전 준비 사항

Packstack file 수정

```
[root@localhost ~] # vim packstack-answers-20160519-091615.txt
```

...

```
# List the servers on which to install the Compute service.
```

```
CONFIG_COMPUTE_HOSTS=172.17.17.104,172.17.17.113
```

명령어 수행

```
[root@localhost ~] # packstack --answer-file=packstack-answers-20160519-091615.txt
```

Welcome to the Packstack setup utility

The installation log file is available at: /var/tmp/packstack/20160526-100711-hUbD6E/openstack-setup.log

Installing:

Clean Up [DONE]

Discovering ip protocol version [DONE]

root@172.17.17.104's password:

root@172.17.17.113's password:

Setting up ssh keys [DONE]

Preparing servers [DONE]

(시간 소요)

설치 중 에러

Multinode 설치 에러

```
Pre installing Puppet and discovering hosts' details[ ERROR ]

ERROR : Failed to run remote script, stdout: Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: centos.mirror.cdnetworks.com
 * extras: centos.mirror.cdnetworks.com
 * updates: centos.mirror.cdnetworks.com
Package 2:tar-1.26-29.el7.x86_64 already installed and latest version
Package rubygem-json-1.7.7-25.el7_1.x86_64 already installed and latest version
Resolving Dependencies
--> Running transaction check
--> Package hiera.noarch 0:1.3.4-1.el7 will be installed
--> Package nmap-ncat.x86_64 2:6.40-4.el7 will be updated
--> Package nmap-ncat.x86_64 2:6.40-7.el7 will be an update
--> Package openssh-clients.x86_64 0:6.4p1-8.el7 will be updated
--> Package openssh-clients.x86_64 0:6.6.1p1-25.el7_2 will be an update
--> Processing Dependency: openssh = 6.6.1p1-25.el7_2 for package: openssh-clients-6.6.1p1-25.el7_2.x86_64
--> Package puppet.noarch 0:3.6.2-3.el7 will be installed
--> Processing Dependency: facter >= 1.6.6 for package: puppet-3.6.2-3.el7.noarch
--> Processing Dependency: rubygem(rgen) for package: puppet-3.6.2-3.el7.noarch
--> Processing Dependency: ruby(shadow) for package: puppet-3.6.2-3.el7.noarch
--> Processing Dependency: ruby(selinux) for package: puppet-3.6.2-3.el7.noarch
--> Processing Dependency: ruby(augeas) for package: puppet-3.6.2-3.el7.noarch
```

설치 실패

설치 중 에러-2

Multinode 다른 방법으로 시도

From :

https://access.redhat.com/documentation/en-US/Red_Hat_Enterprise_Linux_OpenStack_Platform/2/html/Getting_Started_Guide/chap-Running_PackStack.html

```
valid_lft forever preferred_lft forever
[root@localhost ~]# packstack --install-hosts=172.17.17.104,172.17.17.113
Welcome to the Packstack setup utility

The installation log file is available at: /var/tmp/packstack/20160526-132336-40zG5Q/openstack-setup.log
Packstack changed given value  to required value /root/.ssh/id_rsa.pub

Installing:
Clean Up                                [ DONE ]
Discovering ip protocol version         [ DONE ]
root@172.17.17.104's password:
root@172.17.17.113's password:
Setting up ssh keys                     [ DONE ]
Preparing servers                       [ DONE ]
```

설치 중 에러

Answer-file 확인 시 동일한 결과

```
# List the servers on which to install the Compute service.  
CONFIG_COMPUTE_HOSTS=172.17.17.108
```

에러 메시지

시스템 복제 후 Multinode 테스트



동일 에러

<https://ask.openstack.org/en/question/55696/failed-to-run-remote-script/>

```
[root@localhost network-scripts]# packstack --install-hosts=172.17.17.139,172.17.17.113
Welcome to the Packstack setup utility

The installation log file is available at: /var/tmp/packstack/20160526-140658-WsDJbF/openstack-setup.log

Installing:
Clean Up [ DONE ]
Discovering ip protocol version [ DONE ]
Setting up ssh keys [ DONE ]
Preparing servers [ DONE ]

Pre installing Puppet and discovering hosts' details[ ERROR ]

ERROR : Failed to run remote script, stdout: Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
* base: centos.mirror.cdnetworks.com
* extras: centos.mirror.cdnetworks.com
* updates: centos.mirror.cdnetworks.com
Package 2:tar-1.26-29.el7.x86_64 already installed and latest version
Package rubygem-json-1.7.7-25.el7_1.x86_64 already installed and latest version
Resolving Dependencies
```

에러 메시지

```
stderr: Warning: Permanently added '172.17.17.113' (ECDSA) to the list of known hosts.
+ trap t ERR
+ yum install -y puppet hiera openssh-clients tar nc rubygem-json
There are unfinished transactions remaining. You might consider running yum-complete-tr
ete-transaction --cleanup-only" and "yum history redo last", first to finish them. If t
ave to try removing/installing packages by hand (maybe package-cleanup can help).

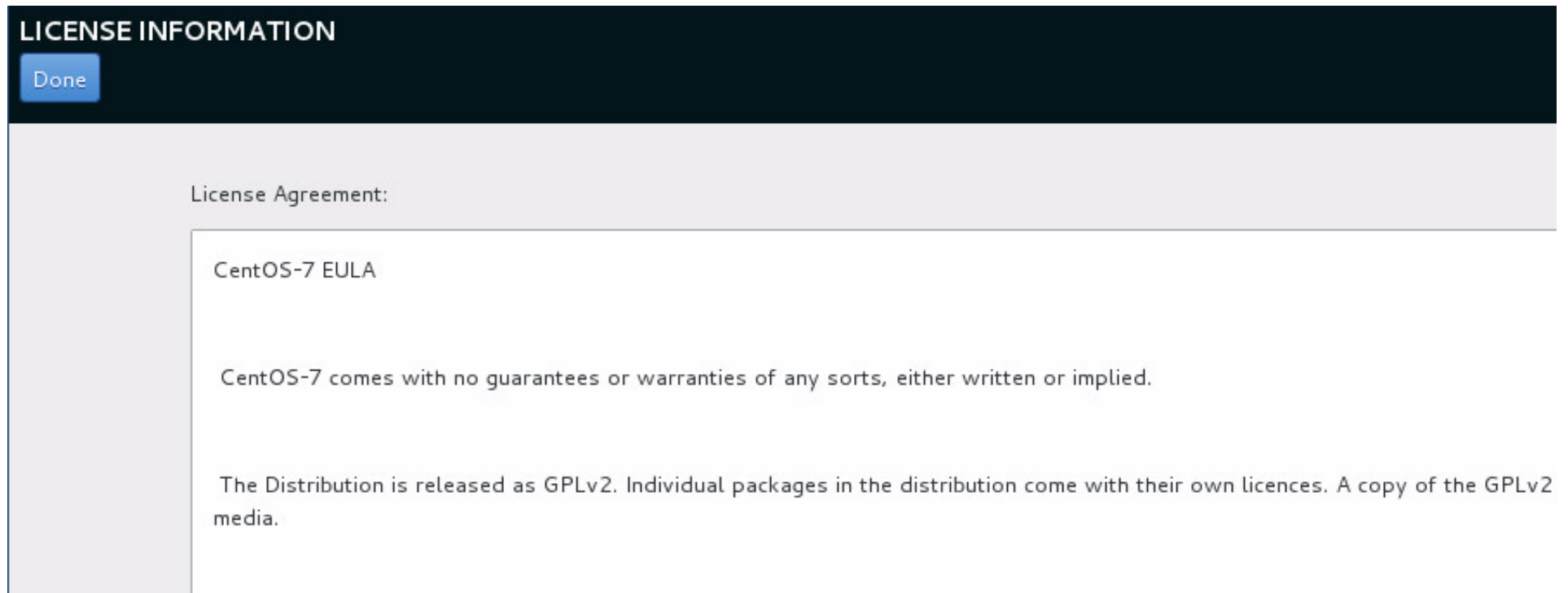
Transaction check error:
  package nmap-ncat-2:6.40-7.el7.x86_64 is already installed

Error Summary
-----

++ t
++ exit 1
```

다시 시도

OS 재설치



다시 시도

```
[root@localhost ~]# yum install -y centos-release-openstack-mitaka
```

```
[root@localhost ~]# yum -y update
```

```
[root@localhost ~]# yum install -y openstack-packstack
```

스냅샷 생성

OS Down

가상 시스템 복제

. ~ About 30min 시간 소요

```
[root@localhost ~]# yum install -y centos-release-openstack-mitaka
```

```
Loaded plugins: fastestmirror, langpacks
```

```
Loading mirror speeds from cached hostfile
```

```
* base: mirror.navercorp.com
```

```
* extras: mirror.navercorp.com
```

```
* updates: mirror.navercorp.com
```

```
Package centos-release-openstack-mitaka-1-2.el7.centos.noarch already installed and latest version
```

```
Nothing to do
```

```
[root@localhost ~]#
```

```
[root@localhost ~]# yum update -y
```

```
Loaded plugins: fastestmirror, langpacks
```

```
Loading mirror speeds from cached hostfile
```

다시 시도

- vi /etc/selinux/config
 - Change like following line
 - SELINUX=disabled
 - Reboot

```
[root@localhost ~] # packstack --install-hosts=172.17.17.167,172.17.17.108
Welcome to the Packstack setup utility
```

The installation log file is available at: /var/tmp/packstack/20160526-160259-W6rC7V/openstack-setup.log
Packstack changed given value to required value /root/.ssh/id_rsa.pub

```
Installing:
Clean Up [ DONE ]
Discovering ip protocol version [ DONE ]
root@172.17.17.108's password:
root@172.17.17.167's password:
Setting up ssh keys [ DONE ]
Preparing servers [ DONE ]
```

(시간 소요)

다시 시도

... 넘어감 ...

```
Pre installing Puppet and discovering hosts' details [ DONE ]
Adding pre install manifest entries [ DONE ]
Setting up CACERT [ DONE ]
Adding AMQP manifest entries [ DONE ]
Adding MariaDB manifest entries [ DONE ]
Adding Apache manifest entries [ DONE ]
Fixing Keystone LDAP config parameters to be undef if empty [ DONE ]
Adding Keystone manifest entries [ DONE ]
Adding Glance Keystone manifest entries [ DONE ]
Adding Glance manifest entries [ DONE ]
Adding Cinder Keystone manifest entries [ DONE ]
Checking if the Cinder server has a cinder-volumes vg [ DONE ]
Adding Cinder manifest entries [ DONE ]
Adding Nova API manifest entries [ DONE ]
Adding Nova Keystone manifest entries [ DONE ]
Adding Nova Cert manifest entries [ DONE ]
Adding Nova Conductor manifest entries [ DONE ]
Creating ssh keys for Nova migration [ DONE ]
Gathering ssh host keys for Nova migration [ DONE ]
Adding Nova Compute manifest entries [ DONE ]
Adding Nova Scheduler manifest entries [ DONE ]
```

다시 시도

Hang.....

```
172.17.17.167_api_nova.pp:          [ DONE ]
Applying 172.17.17.167_nova.pp
Applying 172.17.17.108_nova.pp
172.17.17.167_nova.pp:              [ DONE ]
Testing if puppet apply is finished: 172.17.17.108_nova.pp [ W ]
Testing if puppet apply is finished: 172.17.17.108_nova.pp [ - ]
```

```
Testing if puppet apply is finished: 172.17.17.108_nova.pp [ - ]
Testing if puppet apply is finished: 172.17.17.108_nova.pp [ / ]
```

```
Testing if puppet apply is finished: 172.17.17.108_nova.pp [ / ]
```

```
Testing if puppet apply is finished: 172.17.17.108_nova.pp [ W ]
Testing if puppet apply is finished: 172.17.17.108_nova.pp [ - ]
```

```
Testing if puppet apply is finished: 172.17.17.108_nova.pp [ - ]
Testing if puppet apply is finished: 172.17.17.108_nova.pp [ / ]
```

```
Testing if puppet apply is finished: 172.17.17.108_nova.pp [ - ]
```

(1시간 이상...)

다시 시도

설치 중 에러

-> Ctrl+C, 강제 종료

* To use Nagios, browse to <http://172.17.17.167/nagios> username: nagiosadmin, password: 086308099f3e4442

Traceback (most recent call last):

File "/usr/bin/packstack", line 15, in <module>

run_setup.main()

File "/usr/lib/python2.7/site-packages/packstack/installer/run_setup.py", line 996, in main

single_step_install(options, logFile)

File "/usr/lib/python2.7/site-packages/packstack/installer/run_setup.py", line 791, in single_step_install

_main(options, answerfilepath, logFile)

File "/usr/lib/python2.7/site-packages/packstack/installer/run_setup.py", line 660, in _main

runSequences()

File "/usr/lib/python2.7/site-packages/packstack/installer/run_setup.py", line 627, in runSequences

controller.runAllSequences()

File "/usr/lib/python2.7/site-packages/packstack/installer/setup_controller.py", line 81, in runAllSequences

sequence.run(config=self.CONF, messages=self.MESSAGES)

File "/usr/lib/python2.7/site-packages/packstack/installer/core/sequences.py", line 109, in run

설정 파일 확인

설정 파일 확인

Server on which to install OpenStack services specific to the
controller role (for example, API servers or dashboard).
CONFIG_CONTROLLER_HOST=172.17.17.167

List the servers on which to install the Compute service.
CONFIG_COMPUTE_HOSTS=172.17.17.108

List of servers on which to install the network service such as
Compute networking (nova network) or OpenStack Networking (neutron).
CONFIG_NETWORK_HOSTS=172.17.17.167

Allinone 테스트

다른 장비 준비

```
. [root@localhost ~] # yum install -y centos-release-openstack-mitaka  
. [root@localhost ~] # yum -y update  
. [root@localhost ~] # yum install -y openstack-packstack
```

```
. [root@localhost ~] # getenforce  
Disabled
```

```
. [root@localhost ~] # packstack --allinone  
16:53
```

Testing if puppet apply is finished: 172.17.17.139_nova.pp [/]

. hang

죄송합니다 -.-