



# **OPNFV(Brahmaputra) Compass4nfv Frequently Asked Questions**

*Release draft (93d8ef4)*

**OPNFV**

February 25, 2016



## CONTENTS

<b>1</b>	<b>How to build a customized ISO</b>	<b>3</b>
<b>2</b>	<b>How to deploy without internet access</b>	<b>7</b>
<b>3</b>	<b>How to integrate plugins</b>	<b>9</b>



Contents:



## HOW TO BUILD A CUSTOMIZED ISO

If you want to use Compass4nfv official ISO to deploy the environment, you can jump over this section.

This section indicates how to add additional packages and how to build a new compass4nfv ISO file so that Compass4nfv would install the additional packages automatically during the deployment.

- Approach 1 — apt/yum installation:

1. Confirm the targeted packages could be installed via apt-get(Ubuntu) and yum(Centos), you can verify on your own environment first by commands “apt-get install {targeted packages}” on Ubuntu and “yum install {targeted packages}” on Centos.

2. Create a new role folder ({newrole}) in the compass4nfv/deploy/adapters/ansible/roles/, create a new folder named “vars” in the new role folder({newrole}), and create a file named “main.yml” and add “—” at the head of this file.

3. If the targeted packages names are same in both Ubuntu and Centos, you just need edit main.yml.

Add the packages’ names as following:

```
packages_noarch:
  - {targeted packages1}
  - {targeted packages2}
  - {targeted packages3}
  ...
```

4. If the targeted packages’ names are different in Ubuntu and Centos, you need create “Debian.yml” and/or “RedHat.yml” in the same folder as “main.yml” and add “—” at the head of the files.

Add the packages’ names as following in the “Debian.yml” and/or “RedHat.yml” :

```
---
packages:
  - {targeted Ubuntu/RedHat packages1}
  - {targeted Ubuntu/RedHat packages2}
  - {targeted Ubuntu/RedHat packages3}
  ...
```

Also you can refer “compass4nfv/deploy/adapters/ansible/roles/glance/vars” as example.

5.1 Add the new role to ansible so that Compass4nfv will install the packages during the deployment : “enter compass4nfv/deploy/adapters/ansible/openstack\_juno/” and edit HA-ansible-multinodes.yml and/or single-controller.yml, add {newrole} at an appropriate position, please be aware of that compass4nfv deploys the roles in the order as list in HA-ansible-multinodes.yml/single-controller.yml, you can add a new section as the following:

```
- hosts: all/controller/compute/ha
  remote_user: root
  sudo: True
  roles:
    - {newrole}
```

The first line “hosts” of the section means compass4nfv will deploy {newrole} on which baremetals/VMs, “all” means it deploys on all baremetals/VMs, “controller” means it deploys on all controller and so on.

Also you can refer “glance” position in HA-ansible-multinodes.yml and single-controller.yml.

**Attention** “HA-ansible-multinodes.yml” deploys controllers backup targeted environment

**and 3 controllers in backup mode + 2 compute by default;** “single-controller.yml” deploys 1 controller + 4 compute.

5.2 Or insert the new role into the existing section at an appropriate position in HA-ansible-multinodes.yml and single-controller.yml.

Example:

```
- hosts: controller/all/compute/ha
  remote_user: root
  sudo: True
  roles:
    - database
    - mq
    - keystone
    - nova-controller
    - neutron-controller
    - {newrole}
```

Please pay attention to the first line “hosts” by which Compass4nfv deploys {newrole} on which baremetals/VMs.

Also please pay attention to the position inserted as Compass4nfv deploys the packages in the order as list.

Also you can refer “glance” position as example in HA-ansible-multinodes.yml and single-controller.yml.

6. Run compass4nfv/build/make\_repo.sh.

7. After 6 finishes, please check “compass4nfv/work/repo/” folder, if files as following exist in the folder, that means building packages successfully.

centos7-juno-ppa.tar.gz is OpenStack Juno version for Centos7.

trusty-juno-ppa.tar.gz is OpenStack Juno version for Ubuntu14.04.

trusty-kilo-ppa.tar.gz is OpenStack Kilo version for Ubuntu14.04.

8. Edit compass4nfv/build/build.conf, find CENTOS7\_JUNO\_PPA and TRUSTY\_JUNO\_PPA items, modify these 2 items as local paths(if you just want deploy with one operating system, you just modify one item).

CENTOS7\_JUNO\_PPA is packages path for Centos, TRUSTY\_JUNO\_PPA is packages path for Ubuntu

```
CENTOS7_JUNO_PPA=/compass4nfv/work/repo/centos7-juno-ppa.tar.gz
```

```
TRUSTY_JUNO_PPA=/compass4nfv/work/repo/trusty-juno-ppa.tar.gz
```

9. Run compass4nfv/build.sh to build a new ISO, after finished, if there is a new ISO file compass.iso in the “compass4nfv/work/building” folder, that means building iso successfully.

- Approach 2 — source installation

This section indicates to install packages from source codes. If the targeted packages could not be installed from apt-get and yum but from source codes, please refer this section.

1. Enter folder “compass4nfv/build/arch/Debian” or “compass4nfv/build/arch/RedHat” that depend on operating system you want to install package, create a bash(.sh) file which includes all the commands which install the packages from source codes.

Example:



```
#!/bin/bash
apt-get update
apt-get install -y build-essential fakeroot debhelper \
    autoconf automake bzip2 libssl-dev \
    openssl graphviz python-all procps \
    python-qt4 python-zopeinterface \
    python-twisted-conch libtool wget

pushd .
cd /tmp
wget http://openvswitch.org/releases/openvswitch-2.3.1.tar.gz
tar -zxvf openvswitch-2.3.1.tar.gz
cd openvswitch-2.3.1
DEB_BUILD_OPTIONS='parallel=8 nocheck' fakeroot debian/rules binary
cd -
cp -f *.deb /var/cache/apt/archives/
popd
```

Please pay attention to the last second sentence, all the compiled packages need to be copied to the “/var/cache/apt/archives/”(Ubuntu) folder, and for Centos, the folder is ... to be continued .

2. Add a new role so that Compass4nfv will install the packages during the deployment, create a new role folder ({newrole}) in the “compass4nfv/deploy/adapters/ansible/roles/”, create a new folder named “vars” in the new role folder({newrole}), and create a file named “main.yml” and add “—” at the head of this file.

3. If the packages’ names are same in both Ubuntu and Centos, you just need edit main.yml.

Add the packages’ names as following:

```
packages_noarch:
  - {targeted packages1}
  - {targeted packages2}
  - {targeted packages3}
  ...
```

4. If the targeted packages’ names are different in Ubuntu and Centos, you need create “Debian.yml” and/or “RedHat.yml” in the same folder as “main.yml” and add “—” at the head of the files.

Add the packages’ names as following in the “Debian.yml” and/or “RedHat.yml” :

```
packages:
  - {targeted Ubuntu/RedHat packages1}
  - {targeted Ubuntu/RedHat packages2}
  - {targeted Ubuntu/RedHat packages3}
  ...
```

Also you can refer “compass4nfv/deploy/adapters/ansible/roles/glance/vars” as example.

5.1 Enter “compass4nfv/deploy/adapters/ansible/openstack\_juno/” and edit HA-ansible-multinodes.yml and/or single-controller.yml, add {newrole} at an appropriate position, please be aware of that compass4nfv deploys the roles in the order as list in HA-ansible-multinodes.yml/single-controller.yml, you can add a new section as the following:

```
- hosts: all/controller/compute/ha
  remote_user: root
  sudo: True
  roles:
    - {newrole}
```

The first line “hosts” of the section means compass4nfv will deploy {newrole} on which baremetals/VMs, “all” means it deploys on all baremetals/VMs, “controller” means it deploys on all controller and so on.

Also you can refer “glance” position in HA-ansible-multinodes.yml and single-controller.yml.

**Attention** “HA-ansible-multinodes.yml” deploys controllers backup targeted environment and

**3 controllers in backup mode + 2 compute by default.** “single-controller.yml” deploys 1 controller + 4 compute.

5.2 Or insert the new role into the existing section at an appropriate position in HA-ansible-multinodes.yml and single-controller.yml.

Example:

```
- hosts: controller
  remote_user: root
  sudo: True
  roles:
    - database
    - mq
    - keystone
    - nova-controller
    - neutron-controller
    - {newrole}
```

Please pay attention to the first line “hosts” by which Compass4nfv deploys {newrole} on which baremetals/VMs.

Also please pay attention to the position inserted as Compass4nfv deploys the packages in the order as list.

Also you can refer “glance” position as example in HA-ansible-multinodes.yml and single-controller.yml.

6. Run compass4nfv/build/make\_repo.sh .

7. After 6 finishes, please check “compass4nfv/work/repo/” folder, if files as following exist in the folder, that means building packages successfully.

centos7-juno-ppa.tar.gz is OpenStack Juno version for Centos7.

trusty-juno-ppa.tar.gz is OpenStack Juno version for Ubuntu14.04.

trusty-kilo-ppa.tar.gz is OpenStack Kilo version for Ubuntu14.04.

8. Edit compass4nfv/build/build.conf, find CENTOS7\_JUNO\_PPA and TRUSTY\_JUNO\_PPA items, modify these 2 items as local paths(if you just want deploy with one operating system, you just modify one item).

CENTOS7\_JUNO\_PPA is packages path for Centos, TRUSTY\_JUNO\_PPA is packages path for Ubuntu

```
CENTOS7_JUNO_PPA=/compass4nfv/work/repo/centos7-juno-ppa.tar.gz
```

```
TRUSTY_JUNO_PPA=/compass4nfv/work/repo/trusty-juno-ppa.tar.gz
```

9. Run compass4nfv/build.sh to build a new ISO, after finished, if there is a new ISO file compass.iso in the “compass4nfv/work/building” folder, that means building ISO successfully.

- Approach 3 — autonomous packages installation

package installed, to be continued...

## HOW TO DEPLOY WITHOUT INTERNET ACCESS

If you have created your own ISO file(compass.iso), you really could deploy without internet access, edit “compass4nfv/deploy/conf/base.conf” file and assign item ISO\_URL as your local ISO file path (export ISO\_URL=file:///compass4nfv/work/building/compass.iso). Then execute “compass4nfv/deploy.sh” and Compass4nfv could deploy with local compass.iso without internet access.

Also you can download compass.iso first from OPNFV artifacts repository (<http://artifacts.opnfv.org/>, search compass4nfv and select an appropriate ISO file) via wget or curl. After this, edit “compass4nfv/deploy/conf/base.conf” file and assign item ISO\_URL as your local ISO file path. Then execute “compass4nfv/deploy.sh” and Compass4nfv could deploy with local compass.iso without internet access.



## HOW TO INTEGRATE PLUGINS

tbd