brant

Smart Inspector Progress

Division

- (B) Bonan Ruan: Construction of OPNFV platform
- (Z) Zhian Hou: Clearwater deployment
- (Y) Yuan Zang: Configuration of Doctor project

Progress

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(B)

- TripleO to construct OPNFV platform (do all as root)

```
# https://access.redhat.com/documentation/en-us/red_hat_openstack_platform/10/html/director_installation_and_usage/chap-introduction

# setup bulid environment
yum groupinstall 'Development Tools'
yum groupinstall 'Virtualization Host'

# install RDO Ocata for Euphrates release
yum install -y https://repos.fedorapeople.org/repos/openstack/openstack-ocata/rdo-release-ocata-3.noarch.rpm

yum install -y python2-virtualbmc
yum install -y epel-release
yum install -y python-devel python-setuptools libguestfs-tools python2-oslo-config python2-debtcollector python-pip openssl-devel bsdtar createrepo

# Needed for overcloud-opendaylight build
yum install -y libxml2-devel libxslt-devel python34-devel python34-pip
pip3 install gitpython
pip3 install pygerrit2
yum update -y
reboot
wget http://artifacts.opnfv.org/apex/dependencies/python34-markupsafe-0.23-9.el7.centos.x86_64.rpm
wget http://artifacts.opnfv.org/apex/dependencies/python3-jinja2-2.8-5.el7.centos.noarch.rpm
```

```
wget http://artifacts.opnfv.org/apex/dependencies/python3-ipmi-0.3.0-
1.noarch.rpm
yum install -y python34-markupsafe-*.rpm python3-jinja2-*.rpm python3-ipmi-
*.rpm

# Install apex image
cd /home/apex_pack
yum install -y opnfv-apex-5.0-20170705.noarch.rpm opnfv-apex-onos-5.0-
20170705.noarch.rpm opnfv-apex-common-5.0-20170705.noarch.rpm opnfv-apex-
undercloud-5.0-20170705.noarch.rpm

# Deploy openstack
cd /etc/opnfv-apex/
opnfv-deploy -v -n network_settings.yaml -d os-nosdn-nofeature-ha.yaml --debug

# If error occurs:
# Transaction check error:
# file /usr/lib/python3.4/site-packages/Jinja2-2.8-py3.4.egg-info/SOURCES.txt
from install of python34-jinja2-2.8-2.el7.noarch conflicts with file from
package python3-jinja2-2.8-5.el7.centos.noarch
# Dependence: python34-jinja2 noarch 2.8-2.el7 epel 269k
# Solution: rpm -e python3-jinja2-2.8-5.el7.centos.noarch
```

Network Architecture: https://2f11.slack.com/files/brant/F6E9JN5H8/opnfv_-_openstack_network

- Use test case

```
# For yardstick
## wiki
### https://wiki.opnfv.org/display/yardstick
## download & run
docker pull opnfv/yardstick:latest
docker run -itd --privileged -v /var/run/docker.sock:/var/run/docker.sock --
name yardstick opnfv/yardstick:latest
## interactive bash
docker exec -it yardstick bash
## test prepare
yardstick env prepare
## add identification
### copy identification from undercloud /home/stack/overcloudrc
vim /etc/yardstick/openstack.creds
### use identification
source /etc/yardstick/openstack.creds
## run samples
yardstick -d task start samples/ping.yaml
## see report
cat /tmp/yardstick.out
```

```
## delete yardstick
docker stop yardstick && docker rm yardstick

# For Functest
## wiki
### https://wiki.opnfv.org/display/functest
## download & run
docker pull opnfv/functest:latest
docker run -itd --privileged -v /var/run/docker.sock:/var/run/docker.sock --
name functest opnfv/functest:latest
## interactive bash
docker exec -it functest bash
## download images
download_images.sh /home/opnfv/functest/images/
## test prepare
functest env prepare
## add identification
### copy identification from undercloud /home/stack/overcloudrc
vim /home/opnfv/functest/conf/openstack.creds
### use identification
source /home/opnfv/functest/conf/openstack.creds
## show test tier
functest tier list
## run test
functest testcase run connection_check
functest testcase run vping_ssh
...
### (`doctor-notification` test case seems not completed)
```

- Openstack notes

```
# (On host to use these commands)
## show openstack nodes
virsh list
virsh list --all
## goto undercloud
opnfv-util undercloud
## ssh to specific openstack node (e.g. 192.0.2.3)
ssh heat-admin@192.0.2.3

# (On undercloud to use these commands)
## on undecloud to manage overcloud
source ~/stackrc
## on overcloud to manage real tenant*
source ~/overcloudrc
## commands
### list vm
```

```
nova list
### show specific vm
nova show VM_ID
### list network
openstack network list
### show specific subnet
openstack subnet show ...
### show image
nova image-list
### show flavor
nova flavor-list
### ......
openstack server list
openstack user list
openstack role list
openstack endpoint list
openstack catalog list
openstack stack list
openstack image list
openstack flavor list
```

Learning Notes: https://2f11.slack.com/files/brant/F6EAE2HTL/learnnotes

- Extra notes

```
# show containers
docker ps
# show images
docker images
# sudo
sudo -i
# add SSH key to container
docker cp /root/.ssh/id_rsa CONTAINER_ID:/root/.ssh/id_rsa
# use screen
## create a screen (name: inspector)
screen -S inspector
## go back to bash
Ctrl+A d
## list screen
screen -ls
## recovery (xxx is the ID of screen)
screen -r xxx
# to browse dashboard in PC browser
## deploy port retransmission on the server host
systemctl stop firewalld.service
nohup socat tcp-l:10000,reuseaddr,fork tcp:192.168.37.18:80 &
```

(Z)

- Clearwater deployment on a single node on the virtual machine (VMware, Ubuntu14.04LTS), to try Clearwater out before deployment

```
First step:
     Install All-in-one image, which consist of Ubuntu 14.04, configured to
     use DHCP bono, sprout, homestead, homer and ellis Clearwater auto-
     configuration scripts.
     Download the image file in ovf format,since VMware support ovf
     format,import the virtual machine.
     (Since we deploy Clearwater inside virtual machine, here are some
     restrictions: the virtual machine was configured by NAT to communicate
     with our host. If it is not, the parts of Clearwater could not be
     configured properly. Because our guest communicate with host through NAT,
     it's not possible to config an android or ios SIP client to make phone
     call.)
     (Our virtual machine was behind NAT, mobile device could not connect to
     our Clearwater virtual machine. I was trying to add some port forward
     rules to forward tcp requests from mobile device to the Clearwater
     virtual machine, "Method not allowed" error occurs, Maybe Zoiper use some
     other protocals besides TCP)

Second step:
     Config SIP client. What information needed depends on the SIP client
     software you are using, usually these information is enough:
          SIP Username: <username>
          SIP Password: <password>
          SIP Domain: <domain>
          Authorization Name: <username>@<domain>
          Transport: TCP
          STUN/TURN/ICE:
          Enabled: true
          Server: <domain> (or <aio-identity> on an All-in-One node)
          Username: <username>@<domain>
          Password: <password>
     After SIP clients are configured properly, try to make our first phone
     call
```

- Known issues :

  registered successfully, failed to make the call.

  Half of the clear water live test (https://github.com/Metaswitch/clearwater-live-test) failed
  (remains to be solved if we have time)

- Juju

  Bootstrap Juju on top of an openstack private cloud

  Write environments.yaml for our own private cloud constructed by openstack

```
Suppose docker has been installed, run
```

- Other

  From the perspective of my understanding，we use openstack to construct our own private cloud, and we will use Juju to deploy Clearwater on our own private cloud Write proper environment config file (environments.yaml) which suits our private cloud built by openstack, we can deploy any service by Juju easily. Most of information from the Internet was about deployment on Amazon cloud or Azure, hard to fingure out how to write proper config file for private cloud

(Y)