Installing OSM

- Official REL5 installation procedure:

- Using Vagrant:

- Instructions when using a downloaded image:
  - Create a folder and copy the image there
  - Open the windows console and move to the folder created:
    - cd Documents\Vagrant
  - Initialize the environment:
    - vagrant init osm/releasefive --box-version 0
  - Copy the image to the same folder (if not done yet) and add it as a ‘vagrant box’:
    - vagrant box add osm/releasefive virtualbox.box
  - Modify the Vagrantfile your exposed ports preferences:
    - config.vm.network "forwarded_port", guest: 80, host: 8080
  - vagrant up
  - vagrant ssh
Troubleshooting Vagrant: Users with old windows

• In case you need see the following error after trying to power on the virtual machine:

```
C:\Users\guillermo.calvino\Documents\Vagrant>vagrant up
The version of powershell currently installed on this host is less than the required minimum version. Please upgrade the installed version of powershell to the minimum required version and run the command again.

   Installed version: 2
   Minimum required version: 3
```

• You need to upgrade the powershell version:
  • For example:
    • Windows 7 Service Pack 1 - 64-bit versions: Windows6.1-KB2506143-x64.msu
To get the latest version of OSM we will follow these instructions:

- Stop the OSM stack:
  - `docker stack rm osm`

- Check if all containers have been removed, and remove the remaining ones in “Exited” status:
  - `docker ps -a`
  - `docker container prune`

- Remove old images:
  - `docker image prune -a`

- Start the stack:
  - `docker stack deploy -c /etc/osm/docker/docker-compose.yaml osm`
After installing OSM

• Test OSM client
  • Try ‘osm’

• Test UI:
  • Access UI:
    http://localhost:8080
    Credentials are admin/admin
Local OSM instances

• osm-plugtest1: http://172.21.1.4

• osm-plugtest2: http://172.21.1.5

• osm-hackfest1: http://172.21.1.9

• osm-hackfest2: http://172.21.1.10
For people using ETSI OSM servers
Install OSM client

• Instructions could be found here:

Steps:

• curl https://osm-download.etsi.org/repository/osm/debian/ReleaseFIVE/OSM%20ETSI%20Release%20Key.gpg | sudo apt-key add -
• sudo add-apt-repository -y "deb [arch=amd64] https://osm-download.etsi.org/repository/osm/debian/ReleaseFIVE stable osmclient"
• sudo apt-get update
• sudo apt-get install -y python-osmclient

• After the installation completes, you might want to add the following environment variables to your .bashrc file:
  • export OSM_HOSTNAME=<OSM_host> # IP of the OSM server (default: 127.0.0.1)
Adding VIM accounts

• VIMs:

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>AUTH URL</th>
<th>tenant</th>
<th>user</th>
<th>Password</th>
<th>SDN controller</th>
</tr>
</thead>
<tbody>
<tr>
<td>openstack1</td>
<td>openstack</td>
<td><a href="http://172.21.2.20:5000/v2.0">http://172.21.2.20:5000/v2.0</a></td>
<td>xxx</td>
<td>xxx</td>
<td>xxx</td>
<td>YES</td>
</tr>
<tr>
<td>openstack2</td>
<td>openstack</td>
<td><a href="https://172.21.6.140:5000/v3">https://172.21.6.140:5000/v3</a></td>
<td>xxx</td>
<td>xxx</td>
<td>xxx</td>
<td>YES</td>
</tr>
<tr>
<td>openstack3</td>
<td>openstack</td>
<td><a href="https://172.21.6.26">https://172.21.6.26</a></td>
<td>xxx</td>
<td>xxx</td>
<td>xxx</td>
<td>NO</td>
</tr>
</tbody>
</table>

• ping <IP>
• curl -k http://<IP>:5000/v2.0 (or v3)
• Install python-openstackclient
  • sudo apt-get install python-openstackclient
Adding VIM accounts

• Load Openstack credentials and run some commands for testing:
  • export OS_AUTH_URL=xxx
  • export OS_USERNAME=xxx
  • export OS_TENANT_NAME=xxx
  • export OS_PASSWORD=xxx
  • export OS_IDENTITY_API_VERSION=3
  • openstack image list
  • openstack network list
  • openstack flavor list
  • openstack server list
OpenStack1
VIM Details

URL:
- http://172.21.2.20:5000/v2.0

Credentials
- User: etsi
- Tenant: etsi
- Password: etsiosm

Images:
- ubuntu1604
- US1604
- hackfest3-mgmt
- cirros034

Networks:
- Public & Management: mgmt

Adding OpenStack1 using “osm” cli:

```
osm vim-create --name openstack1 --account_type openstack --auth_url http://172.21.2.20:5000/v2.0 \  --user etsi --password etsiosm --tenant etsi --description "Hackfest OpenStack1"
osm vim-list```

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OpenStack2
VIM Details

**URL:**
- http://172.21.5.4:5000/v3

**Credentials**
- Tenant: osm
- Tenant user: osm
- Tenant password: osm@W1nd

**Images:**
- ubuntu1604
- US1604
- hackfest3-mgmt
- cirros034

**Networks:**
- Provider/Management: external

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**Adding Openstack2 VIM using “osm” cli:**

```
osm vim-create --name openstack2 --account_type openstack
   --auth_url http://172.21.5.4:5000/v3
   --user osm --password osm@W1nd --tenant osm
   --description "ETSI openstack2 Windriver Openstack, with tenant osm"
```
OpenStack3
VIM Details

URL:
• http://172.21.7.5:5000/v3

Credentials
• Tenant: osmX
• Tenant user: osmX
• Tenant password: osmX

Where X goes from 1 to 40

Images:
• ubuntu1604
• US1604
• hackfest3-mgmt
• cirros034

Adding Openstack3 VIM using “osm” cli:
osm vim-create --name openstack3 --account_type openstack --auth_url http://172.21.7.5:5000/v3 --user osm1 --password osm1 --tenant osm1 --description "ETSI openstack3 WhiteCloud Openstack, with tenant osm"
Adding images to the VIM

• Image management is not implemented in OSM today. It has to be done independently on each VIM.

• IMAGES HAVE BEEN ALREADY ADDED TO THE REMOTE VIMS IN THE HACKFEST

• Example for Openstack:
  • openstack image create --file="./cirros-0.3.4-x86_64-disk.img" --container-format=bare --disk-format=qcow2 --public cirros034
## Adding images to the VIM

<table>
<thead>
<tr>
<th>Image name in descriptors</th>
<th>Filename</th>
</tr>
</thead>
<tbody>
<tr>
<td>ubuntu1604</td>
<td>xenial-server-cloudimg-amd64-disk1.img (you can get it from <a href="https://cloud-images.ubuntu.com/xenial/current/">https://cloud-images.ubuntu.com/xenial/current/</a>)</td>
</tr>
<tr>
<td>US1604</td>
<td>US1604.qcow2</td>
</tr>
<tr>
<td>hackfest3-mgmt</td>
<td>hackfest3-mgmt-qcow2</td>
</tr>
<tr>
<td>hackfest-pktgen</td>
<td>hackfest-pktgen-qcow2</td>
</tr>
<tr>
<td>cirros034</td>
<td>cirros-0.3.4-x86_64-disk.img</td>
</tr>
</tbody>
</table>
Deploying our first NS with OSM UI
Deploying our first NS with the UI

• Add VNF package (drag&drop)
• Add NS package (drag&drop)
• Instantiate
• Get VNF record and obtain mgmt IP address
• Access to the VNF via SSH (user: “cirros”, pass: “cubswin:)” or “gocubsgo” depending on the VIM)
• Delete NS instance
• Delete NS
• Delete VNF
Deploying our first NS with OSM client

• Add VNF and NS packages
  • osm vnfd-create cirros_vnf.tar.gz
  • osm vnfd-list
  • osm nsd-create cirros_2vnf_ns.tar.gz
  • osm nsd-list

• Instantiate
  • osm ns-create --nsd_name cirros_2vnf_ns --ns_name <ns-instance-name> --vim_account <data-center-name>
  • osm ns-list

• Delete NS instance
  • osm ns-delete <ns-instance-name>
  • osm ns-list

• Delete VNF and NS package
  • osm nsd-delete cirros_2vnf_ns
  • osm nsd-list
  • osm vnfd-delete cirros_vnfd
  • osm vnfd-list