



**ONAP**

OPEN NETWORK AUTOMATION PLATFORM

# *ONAP Installation In Developer Lab*

*September 27, 2017*

# Download Openstack RC file

**WTND™**  
**Titanium Server**  
TiCloud Region 1

Project ^

Compute ^

- Overview
- Instances
- Server Groups
- Volumes
- Images

**Access & Security**

Network v

Orchestration v

Admin v

Identity v

ONAP1.1 v

9/24/2017, 12:52:07 PM C: 6 M: 6 m: 0 W: 1

yang.xu3@huawei.com v

## Access & Security

Security Groups   Key Pairs   Floating IPs   **API Access**

[Download OpenStack RC File v2.0](#)   [Download OpenStack RC File v3](#)   [+ View Credentials](#)

Service	Service Endpoint
Computev3	http://127.0.0.1:8774/v3
Network	http://172.21.5.4:9696
Identity	http://172.21.5.4:5000/v3
Nfv	http://172.21.5.4:4545
Metering	http://172.21.5.4:8777
Orchestration	http://172.21.5.4:8004/v1/d1ff914941c3437d866555cbd66e8cc1
Volumev2	http://172.21.5.4:8776/v2/d1ff914941c3437d866555cbd66e8cc1
Volume	http://172.21.5.4:8776/v1/d1ff914941c3437d866555cbd66e8cc1
Image	http://172.21.5.4:9292

# Preparing ONAP Heat Template

Wiki Instruction on how to install ONAP HEAT <https://wiki.onap.org/display/DW/ONAP+Installation+in+Vanilla+OpenStack>

```
> source v2_ONAP-openrc.sh  
> git clone http://gerrit.onap.org/r/demo  
> vi demo/heat/ONAP/onap_openstack_float.env
```

# HEAT Environment File

## Parameters:

```
#####  
#  
# Parameters used across all ONAP components #  
#  
#####
```

```
public_net_id: d18c6fe9-5108-4d5f-a8bb-33861b95f38e  
public_subnet_id: f9b30be1-83ac-473a-a943-5273200610ed  
router_gateway_ip: 172.21.5.79
```

```
ubuntu_1404_image: ubuntu_14.04_password  
ubuntu_1604_image: ubuntu_16.04_netplugd_password
```

```
flavor_small: m1.small  
flavor_medium: m1.medium  
flavor_large: m1.large  
flavor_xlarge: m1.large  
flavor_xxlarge: m1.xxlarge
```

```
vm_base_name: vm1  
key_name: onap_key
```

```
pub_key: ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDQH0H2sCpd7vkaf+HurxP8kwQ+fkTlyKybZ0rUIbGjAB  
UrNUJSOR6EYzXxpKhrdbeiizysdghHwSNZK39qsxTgYs2RkPbXiNbZ6P2tVZb7AE5+rznk92eWxTv36t67MNHrI+uYyD  
pn2Rdv8Ee80wbq/Wj0FhTcNlrio5d6yc4lk0nxSDtVkdXz2PueSZgodWRTghW4mt0F58y7CQHKL0w7IBVCNBmk4U8MUE  
OycwE6ChunF3mF1HpHvaGwsMhb5cBPZe5IKcB6Mh7u+9zPKw+wYgYbVnJ40LvDiSoqPpiaEbs0ioPp/SHLwsv3hMgfpI0  
2GHe0mEMLHuScFtp2jP Generated-by-Nova
```

```
openstack_tenant_id:  
openstack_username:  
openstack_api_key:
```

```
horizon_url: http://172.21.5.4
```

```
keystone_url: http://172.21.5.4:5000/v2.0
```

```
dns_list: 8.8.8.8  
external_dns: 8.8.8.8  
oam_network_cidr: 10.0.0.0/16
```

```
### Floating IP addresses ###
```

```
aa11_float_ip: 172.21.5.64  
aa12_float_ip: 172.21.5.61  
appc_float_ip: 172.21.5.22  
dcae_float_ip: 172.21.5.23  
dcae_coll_float_ip: 172.21.5.98  
dcae_db_float_ip: 172.21.5.80  
dcae_hdp1_float_ip: 172.21.5.81  
dcae_hdp2_float_ip: 172.21.5.82  
dcae_hdp3_float_ip: 172.21.5.83  
dns_float_ip: 172.21.5.25  
so_float_ip: 172.21.5.34  
mr_float_ip: 172.21.5.27  
policy_float_ip: 172.21.5.28  
portal_float_ip: 172.21.5.29  
robot_float_ip: 172.21.5.62  
sdc_float_ip: 172.21.5.36  
sdnc_float_ip: 172.21.5.63  
vid_float_ip: 172.21.5.52  
clamp_float_ip: 172.21.5.53
```

← From Openstack console -> Network -> Networks

← From Openstack console -> Compute > Images

← From Openstack console -> System -> Flavors

← From Openstack console -> Access & Security  
-> Key Pairs

← From Openstack console -> Identity -> Projects & Users  
openstack\_api\_key is your openstack password

← From Openstack console -> Compute  
-> Access & Security -> API Access

← From Openstack console -> Compute  
-> Access & Security -> Floating IPs, find  
IPs that are in public net and are not being  
Used. Ping those IPs to make sure no one is using the IP

# Installing ONAP Heat Template

```
ubuntu@yangtestvm4:~/onap/onap1.1$ openstack stack create -t onap_openstack_float.yaml -e onap_openstack_float.env onap1.1
```

```
ubuntu@yangtestvm4:~/onap/onap1.1$ openstack stack list
```

```
ubuntu@yangtestvm4:~/onap/onap1.1$ openstack stack event list onap1.1
```

```
ubuntu@yangtestvm4:~/onap/onap1.1$ openstack server list
```

ID	Name	Status	Networks
e73b74e8-b161-4582-94a1-63d935410497	vm1-aai-inst1	ACTIVE	oam_onap_pB82=10.0.1.1, 172.21.5.64
20532fba-1f84-4182-87c0-eea377c61e0c	vm1-policy	ACTIVE	oam_onap_pB82=10.0.6.1, 172.21.5.28
152e9aee-d14b-4d3f-8b06-22ea0e2626b5	vm1-sdc	ACTIVE	oam_onap_pB82=10.0.3.1, 172.21.5.36
f41f75a5-cfd4-43d4-bd3e-00cc9135f505	vm1-portal	ACTIVE	oam_onap_pB82=10.0.9.1, 172.21.5.29
2e86bb7f-4cd2-4fc5-bf6c-2fb7cb26d5af	vm1-aai-inst2	ACTIVE	oam_onap_pB82=10.0.1.2, 172.21.5.61
1a3b3286-d620-4b43-8bf3-7449d016e13c	vm1-clamp	ACTIVE	oam_onap_pB82=10.0.12.1, 172.21.5.53
29124fbc-4d06-43db-8870-40587e2e2edd	vm1-vid	ACTIVE	oam_onap_pB82=10.0.8.1, 172.21.5.52
1294c9f1-1fdf-451c-9fde-d4ab015cab3a	vm1-sdnc	ACTIVE	oam_onap_pB82=10.0.7.1, 172.21.5.63
01a19998-7004-4567-99d9-46194cb339d3	vm1-openo-server	ACTIVE	oam_onap_pB82=10.0.14.1, 172.21.5.51
5c2bdf43-d782-4e60-b06c-d20b0dd8b43b	vm1-appc	ACTIVE	oam_onap_pB82=10.0.2.1, 172.21.5.22
5173bff8-bb23-4477-affe-d933efb69690	vm1-robot	ACTIVE	oam_onap_pB82=10.0.10.1, 172.21.5.62
7a8db13a-167e-4496-8087-e5b2714e841e	vm1-message-router	ACTIVE	oam_onap_pB82=10.0.11.1, 172.21.5.27
653f76cb-ecd2-443c-a4da-58d5d53e2fa2	vm1-dcae-controller	ACTIVE	oam_onap_pB82=10.0.4.1, 172.21.5.23
28de3c40-89e9-4fbb-b259-66fb6c681e4a	vm1-dns-server	ACTIVE	oam_onap_pB82=10.0.100.1, 172.21.5.25
37f39bf1-bfcb-4b69-b1de-39586b8f7cc4	vm1-so	ACTIVE	oam_onap_pB82=10.0.5.1, 172.21.5.34

# ONAP Network Topology

WIND Titanium Server TiCloud Region 1

Project Compute Network **Network Topology** Networks Routers Orchestration Admin Identity

ONAP1.1 9/22/2017, 4:20:41 PM C: 6 M: 6 m: 0 W: 1

## Network Topology

Resize the canvas by scrolling up/down with your mouse/trackpad on the topology. Pan around the canvas by clicking and dragging the space behind the topology.

Toggle labels Toggle Network Collapse Launch Instance Create Network Create Router

The diagram illustrates a network topology within a cloud environment. At the center is a cloud icon labeled 'oam\_onap\_pB82'. This central cloud is connected to a large number of virtual machine (VM) instances, each represented by a computer icon and a label. The VM instances include: 'vm1-clamp', 'vm1-sdc', 'vm1-sdnc', 'vm1-policy', 'vm1-aai-inst1', 'vm1-aai-inst2', 'vm1-so', 'vm1-robot', 'vm1-message-router', 'vm1-dcae-controller', 'vm1-portal', 'vm1-dns-server', and 'vm1-robot'. To the left of the central cloud, there is a router icon labeled 'onap1.1-router-qcxqzcmrhyt', which is connected to an 'external' network represented by a globe icon. The entire network topology is contained within a light orange circular area. On the right side of the interface, there is a green circular button with a cloud icon.

# Update /etc/hosts

```
YANG-XUs-iMac-2:windriver yang$ cat /etc/hosts
```

```
# ONAP
```

```
172.21.5.29 portal portal.api.simplesdemo.openecomp.org
```

```
172.21.5.36 sdc sdc.api.simplesdemo.openecomp.org
```

```
172.21.5.52 vid vid.api.simplesdemo.openecomp.org
```

```
172.21.5.28 policy policy.api.simplesdemo.openecomp.org
```

```
172.21.5.64 aai1 aai.api.simplesdemo.openecomp.org
```

```
172.21.5.61 aai2
```

```
172.21.5.22 appc
```

```
172.21.5.62 robot
```

```
172.21.5.34 mso
```

```
172.21.5.23 dcae
```

```
172.21.5.27 message-router
```

```
172.21.5.28 policy
```

```
172.21.5.29 portal
```

```
172.21.5.36 sdc
```

```
172.21.5.63 sdnc
```

```
172.21.5.52 vid
```

# Run ONAP Health Check

```
>ssh -i yang.pem ubuntu@robot
ubuntu@vm1-robot:~$ sudo /opt/ete.sh health
```

```
... ..
```

```
-----
Basic A&AI Health Check          | PASS |
-----
```

```
Basic Policy Health Check       | PASS |
-----
```

```
Basic MSO Health Check          | FAIL |
503 != 200
-----
```

```
Basic ASDC Health Check         | PASS |
-----
```

```
... ..
```

```
=====
Output: /share/logs/ETE_10661/output.xml
```

```
Log: /share/logs/ETE_10661/log.html
```

```
Report: /share/logs/ETE_10661/report.html
```

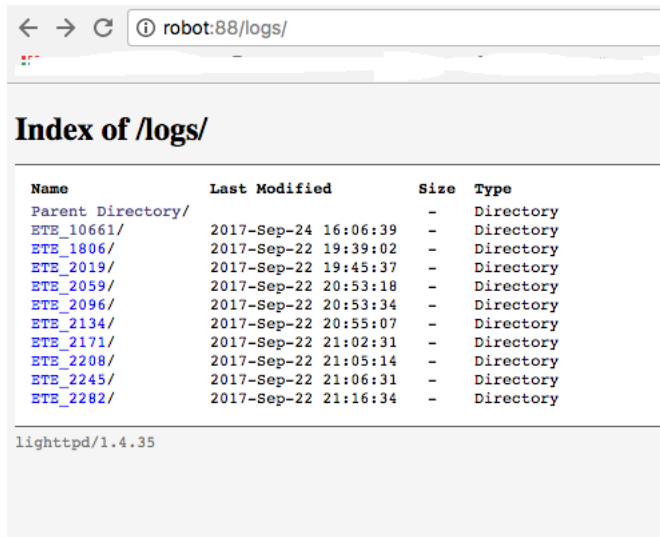
```
check robot logs for details:
```

```
see screenshot
```



# Enable Robot Log Access from Web

```
>ssh -i yang.pem ubuntu@robot
ubuntu@vm1-robot:~$ sudo docker exec -it openecompete_container bash
root@7446bb1530f0:/# echo "test:test" > /etc/lighttpd/authorization
root@7446bb1530f0:/# ln -s /share/logs /var/opt/OpenECOMP_ETE/html
root@7446bb1530f0:/# sed -i -e "s/disable/enable/" /etc/lighttpd/lighttpd.conf
root@7446bb1530f0:/# exit
ubuntu@vm1-robot:~$ sudo docker restart openecompete_container
```

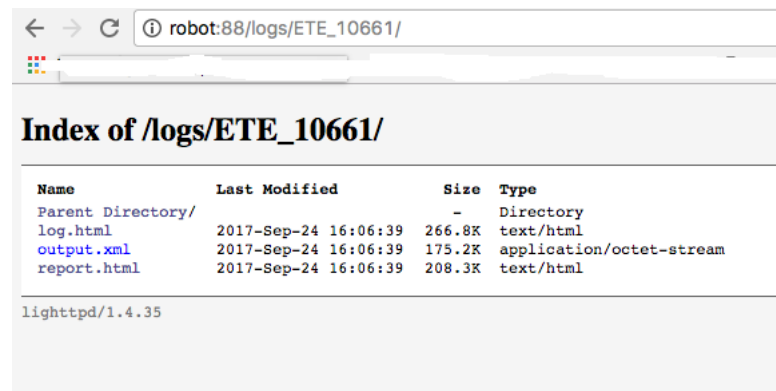


robot:88/logs/

### Index of /logs/

Name	Last Modified	Size	Type
Parent Directory/		-	Directory
<a href="#">ETE_10661/</a>	2017-Sep-24 16:06:39	-	Directory
<a href="#">ETE_1806/</a>	2017-Sep-22 19:39:02	-	Directory
<a href="#">ETE_2019/</a>	2017-Sep-22 19:45:37	-	Directory
<a href="#">ETE_2059/</a>	2017-Sep-22 20:53:18	-	Directory
<a href="#">ETE_2096/</a>	2017-Sep-22 20:53:34	-	Directory
<a href="#">ETE_2134/</a>	2017-Sep-22 20:55:07	-	Directory
<a href="#">ETE_2171/</a>	2017-Sep-22 21:02:31	-	Directory
<a href="#">ETE_2208/</a>	2017-Sep-22 21:05:14	-	Directory
<a href="#">ETE_2245/</a>	2017-Sep-22 21:06:31	-	Directory
<a href="#">ETE_2282/</a>	2017-Sep-22 21:16:34	-	Directory

lighttpd/1.4.35



robot:88/logs/ETE\_10661/

### Index of /logs/ETE\_10661/

Name	Last Modified	Size	Type
Parent Directory/		-	Directory
<a href="#">log.html</a>	2017-Sep-24 16:06:39	266.8K	text/html
<a href="#">output.xml</a>	2017-Sep-24 16:06:39	175.2K	application/octet-stream
<a href="#">report.html</a>	2017-Sep-24 16:06:39	208.3K	text/html

lighttpd/1.4.35

# Some Basic Steps for Debug

- ❑ Run `docker ps -a` to check if all containers are up running
- ❑ Check VM cloud-init log at `/var/log/cloud-init-output.log`
- ❑ Check docker log, e.g. `>docker logs sdnc_dbbuilder_container`
- ❑ Rerun install scripts manually in VM with `bash -x`
- ❑ Login to container to check application logs
- ❑ Login to mariadb to check DB if applicable
- ❑ Use Postman to send REST requests

# Postman for REST API

The screenshot displays the Postman interface for a REST API client. The main workspace shows a POST request to `http://172.21.5.4:5000/v2.0/tokens`. The request is configured with the following details:

- Method:** POST
- URL:** `http://172.21.5.4:5000/v2.0/tokens`
- Authorization:** No Auth
- Body:** JSON (Pretty view)

The response is a JSON object, displayed in the 'Body' tab. The status is 200 OK and the time taken is 242 ms. The response content is as follows:

```
1 {
2   "access": {
3     "token": {
4       "issued_at": "2017-09-24T16:25:19.155457Z",
5       "expires": "2017-09-24T17:25:19Z",
6       "id": "d7d9df5ea8fb4e70bba7cd0de976ee05",
7       "tenant": {
8         "description": "",
9         "enabled": true,
10        "id": "d1ff914941c3437d866555cbd66e8cc1",
11        "name": "ONAP1.1"
12      },
13      "audit_ids": [
14        "0Zvr0rN0TUaw-9L4YArvXA"
15      ]
16    },
17    "serviceCatalog": [
18      {
19        "endpoints": [
20          {
21            "adminURL": "http://192.168.204.2:8774/v2.1/d1ff914941c3437d866555cbd66e8cc1",
22            "region": "RegionOne"
23          }
24        ]
25      }
26    ]
27  }
28 }
```

# Curl for Rest API

```
root@8cb6bcd2942:/opt/app/dcae-controller-platform-server# cat token
curl -d '
{"auth": {
  "tenantName": "ONAP1.1",
  "passwordCredentials": {
    "username": "yang.xu3@huawei.com",
    "password": "xxxxxxxx"
  }
}
}\
-H "Content-type: application/json" \
"http://172.21.5.4:5000/v2.0/tokens" | json_pp
root@8cb6bcd2942:/opt/app/dcae-controller-platform-server# bash token
{
  "access": {
    ... ..
    "token": {
      "expires": "2017-07-01T00:02:05Z",
      "id": "8fcadcd416184dc99f754495ef155dbc",
      "audit_ids": [
        "Oz4w_lRhT4qI0i-8meNXLw"
      ],
      "issued_at": "2017-06-30T23:02:05.284339Z",
      "tenant": {
        "enabled": true,
        "description": "",
        "id": "d1ff914941c3437d866555cbd66e8cc1",
        "name": "ONAP1.1"
      }
    }
  }
}
```

```
root@60de64b3ebfe:/var/opt/OpenECOMP_ETE# cat ~/foo.sh
curl -v \
-H "Content-type: application/json" \
-H "X-Auth-Token: 8fcadcd416184dc99f754495ef155dbc" \
-H "X-Auth-Project-Id: d1ff914941c3437d866555cbd66e8cc1" \
http://172.21.5.4:8774/v2.1/images | json_pp
root@60de64b3ebfe:/var/opt/OpenECOMP_ETE# bash ~/foo.sh
... ..
{
  "images": [
    {
      "id": "2d1d64e7-567b-4d2a-9106-7b1f0e2f403d",
      "name": "Titanium-Cloud-host-installer-17.06-b6.iso",
      "links": [
        {
          "href": "http://192.168.204.2:18774/v2.1/images/2d1d64e7-567b-4d2a-9106-7b1f0e2f403d",
          "rel": "self"
        },
        {
          "rel": "bookmark",
          "href": http://192.168.204.2:18774/images/2d1d64e7-567b-4d2a-9106-7b1f0e2f403d
        },
        {
          "rel": "alternate",
          "href": "http://127.0.0.1:9292/images/2d1d64e7-567b-4d2a-9106-7b1f0e2f403d",
          "type": "application/vnd.openstack.image"
        }
      ]
    }
  ],
  ... ..
}
```

# Delete HEAT Template

Script borrowed from Eric Debeau to delete HEAT template

```
>openstack port delete $(neutron port-list | grep zldc | awk '{print $4}')  
>openstack server delete $(openstack server list | grep zldc | awk '{print $4}')  
>openstack keypair delete $(openstack keypair list | grep dcae | awk '{print $2}')  
>openstack stack delete -y $(openstack stack list | grep ONAP | awk '{print $4}')
```