# Method of Procedure (MOP) for Deploying an OpenStack VM with ntopng

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## Reference: OpenStack Documentation

### Prerequisites

- Access to an OpenStack environment with administrative privileges.

- OpenStack CLI installed and configured on your local machine or management node.

- A specific node in the OpenStack environment where the VM will be deployed.

- Knowledge of the desired static IP address, CPU, and RAM specifications for the VM.

### Objective

To deploy an OpenStack VM on a specific node, assign it a static IP address, install ntopng, and configure it to report usage by protocol.

### Steps

#### 1. Prepare the Environment

1. \*\*Log in to OpenStack\*\*:

```bash

source /path/to/your/openrc.sh

```

2. \*\*Identify the Node\*\*:

- Use the following command to list available compute nodes:

```bash

openstack hypervisor list

```

#### 2. Create a Flavor

- Create a flavor that specifies the desired CPU and RAM for the VM.

```bash

openstack flavor create --ram <RAM\_IN\_MB> --disk 20 --vcpus <CPU\_COUNT> <FLAVOR\_NAME>

```

- Example:

```bash

openstack flavor create --ram 2048 --disk 20 --vcpus 2 m1.ntopng

```

#### 3. Create a Security Group

- Create a security group to allow traffic for ntopng (port 3000).

```bash

openstack security group create ntopng-secgroup

openstack security group rule create --protocol tcp --dst-port 3000 ntopng-secgroup

```

#### 4. Create a Key Pair

- Create a key pair for SSH access to the VM.

```bash

openstack keypair create --public-key /path/to/your/public/key.pub <KEYPAIR\_NAME>

```

#### 5. Launch the VM

- Use the following command to launch the VM on the specific node with a static IP.

```bash

openstack server create --flavor <FLAVOR\_NAME> --image <IMAGE\_NAME> --key-name <KEYPAIR\_NAME> --security-group ntopng-secgroup --nic net-id=<NETWORK\_ID>,v4-fixed-ip=<STATIC\_IP> --availability-zone <AVAILABILITY\_ZONE> <VM\_NAME>

```

- Example:

```bash

openstack server create --flavor m1.ntopng --image Ubuntu-22.04 --key-name mykey --security-group ntopng-secgroup --nic net-id=public-net,v4-fixed-ip=192.168.1.100 --availability-zone nova:compute1 ntopng-vm

```

#### 6. Install ntopng on the VM

1. \*\*SSH into the VM\*\*:

```bash

ssh -i /path/to/your/private/key <USERNAME>@<STATIC\_IP>

```

2. \*\*Update the Package List\*\*:

```bash

sudo apt update

```

3. \*\*Install ntopng\*\*:

```bash

sudo apt install ntopng -y

```

4. \*\*Configure ntopng\*\*:

- Edit the ntopng configuration file to report usage by protocol.

```bash

sudo vi /etc/ntopng/ntopng.conf

```

- Add or modify the following line:

```

-i=eth0

```

- Ensure that the interface corresponds to the correct network interface.

5. \*\*Restart ntopng\*\*:

```bash

sudo systemctl restart ntopng

```

#### 7. Access ntopng

- Open a web browser and navigate to:

```

http://<STATIC\_IP>:3000

```

- Log in with the default credentials (admin/admin) and configure as needed.

### Verification

- Ensure that the VM is running:

```bash

openstack server list

```

- Check that ntopng is reporting usage by protocol by accessing the web interface.

### Cleanup

- To delete the VM and associated resources:

```bash

openstack server delete <VM\_NAME>

openstack keypair delete <KEYPAIR\_NAME>

openstack security group delete ntopng-secgroup

openstack flavor delete <FLAVOR\_NAME>

```

### Conclusion

This MOP outlines the steps to deploy an OpenStack VM, assign a static IP, install ntopng, and configure it to report usage by protocol. Ensure to adjust the parameters as per your environment and requirements.