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Assignment 4

Notes from task 3

To create the same infrastructure as in assignment 2 you need:

- A network
  - With a subnet for floating IP
- A router with an interface to connect your network to ntnu-internal
- A key pair used to connect
- A VM running on a compute resource (m1.small, m1.medium, etc..)

Also need to either create a new security group or add a new rule to an already existing security group to allow ssh (listen on port 22)

Definition code

```
heat_template_version: 2021-04-16

description: Template to deploy a VM with floating IP

parameters:
  key_name:
    type: string
    description: Name of key pair
    label: Key name
    default: my_key

resources:
  internal_net:
    type: OS::Neutron::Net

  internal_subnet:
    type: OS::Neutron::Subnet
    properties:
      network_id: { get_resource: internal_net }
      cidr: '10.8.1.0/24'
      dns_nameservers: ['8.8.8.8', '8.8.4.4']
      ip_version: 4

  internal_router:
    type: OS::Neutron::Router
    properties:
      external_gateway_info: { network: ntnu-internal }

  internal_interface:
    type: OS::Neutron::RouterInterface
```

```
      properties:
        router_id: { get_resource: internal_router }
        subnet: { get_resource: internal_subnet }

    instance_port:
      type: OS::Neutron::Port
      properties:
        network: { get_resource: internal_net }
        fixed_ips:
          - subnet_id: { get_resource: internal_subnet }

    my_key:
      type: OS::Nova::KeyPair
      properties:
        save_private_key: true
        name: { get_param: key_name }

    my_instance:
      type: OS::Nova::Server
      properties:
        key_name: { get_resource: my_key }
        image: fe8be799-21f4-489a-9e3f-9b8a2e15c015 # Ubuntu Server 20.04 amd64
        flavor: m1.small
        networks:
          - port: { get_resource: instance_port }

  outputs:
    instance_ip:
      description: The IP address of the deployed MV
      value: { get_attr: [my_instance, first_address] }
    private_key:
      description: Private key
      value: { get_attr: [my_key, private_key] }
```

Stack resource list

```
+------------------+--------------------------------------------------------------------------------------+-------------------------------+-----------------+----------------------+
| my_instance      | 6d451ef2-0fc3-45b6-9c97-856da2d2e7a0                                                 | OS::Nova::Server              | CREATE_COMPLETE | 2022-10-13T11:24:29Z |
| instance_port    | 78f7868c-7d55-439c-b330-82a5d252ecc6                                                 | OS::Neutron::Port             | CREATE_COMPLETE | 2022-10-13T11:24:29Z |
| my_key           | my_key                                                                               | OS::Nova::KeyPair             | CREATE_COMPLETE | 2022-10-13T11:24:29Z |
| internal_interface | 05422fe7-7c32-41ed-a1ae-1f3425a8e219:subnet_id=9252f824-729e-4318-a199-3cf445301acd | OS::Neutron::RouterInterface | CREATE_COMPLETE | 2022-10-13T11:24:29Z |
| internal_subnet  | 9252f824-729e-4318-a199-3cf445301acd                                                 | OS::Neutron::Subnet           | CREATE_COMPLETE | 2022-10-13T11:24:29Z |
| internal_net     | 9fd46397-67d0-4851-8b76-55363e6d0364                                                 | OS::Neutron::Net              | CREATE_COMPLETE | 2022-10-13T11:24:29Z |
| internal_router  | 05422fe7-7c32-41ed-a1ae-1f3425a8e219                                                 | OS::Neutron::Router           | CREATE_COMPLETE | 2022-10-13T11:24:29Z |
+------------------+--------------------------------------------------------------------------------------+-------------------------------+-----------------+----------------------+
loginstud03:~$
```

Commands for stopping & deleting stack

Stopping:

```
openstack stack suspend stack-name
```

To resume after stopping:

```
openstack stack resume stack-name
```

Delete:

```
openstack stack delete stack-name
```