UNH-IOL LaaS Deployment

Hosts

The IOL RI2 pod 1 is currently deployed across 6 hosts. Five hosts (hpe12, hpe29, hpe27, hpe31, and hpe07) make up the k8s deploy, with an additional sixth node as the jumphost (hpe30).

The IOL RI2 pod 2 is deployed with the same topology, with hpe9 as a jumphost, and (hpe16, hpe18, hpe21, hpe37, hpe38) as node1 through node5

HPE x86_64 node:

Memory	Capacity	512 GB
	Technology	DDR4
Network Interface Type 1	Count	4
	Speed	25Gbit
	Model	
Network Interface Type 2	Count	2
	Speed	10Gbit
	Model	
CPU	Socket count	2
	Cores/Socket	22
	Threads/Core	2
	Model	
Disk Type 1	Capacity	~1TiB
	Count	3
	Interface	SATA 3
	Storage Type	SSD
	RAID	None
Disk Type 2	Capacity	~800GiB
	Count	1
	Interface	SATA 3
	RAID	1 (two 480GiB members)
	Storage Type	SSD
Feature Support	RedFish	
	IPMI	Yes

Networking

RI2 pod 1 has 7 layer 3 networks:

Name	DHCP Provided	Subnet	Gateway	Netmask	Underlay VLAN
public	no	10.200.120.0	10.200.120.1	24	120
oob	no	10.200.122.0	N/A	24	122
mgmt	no	10.200.123.0	10.200.123.1	24	123
private_1	no	127.0.101.0	N/A	24	201
private_2	no	127.0.102.0	N/A	24	202
private_3	no	127.0.103.0	N/A	24	203
private_4	no	127.0.104.0	N/A	24	200

RI2 pod 2 also has 7 layer 3 networks, with different underlay vlans:

Name	DHCP Provided	Subnet	Gateway	Netmask	Underlay VLAN
public	no	10.200.138.0	10.200.120.1	24	138
oob	no	10.200.111.0	N/A	24	111
mgmt	no	10.200.128.0	10.200.123.1	24	128
private_1	no	127.0.101.0	N/A	24	210
private_2	no	127.0.102.0	N/A	24	211
private_3	no	127.0.103.0	N/A	24	212
private_4	no	127.0.104.0	N/A	24	209

The jumphost has the following connections by interface name:

Interface	Network	Handles Default Route	IP
ens1f0	mgmt	yes	10.200.123.11
ens1f1	oob	no	10.200.122.16

Each host is connected to networks as follows:

Interface	Network	Handles Default Route	IP
ens1f0	oob	no	<subnet>.<node # + 10>
ens1f1	public	yes	<subnet>.<node # + 10>
eno49	private_2	no	<subnet>.<node # + 10>
eno50	private_3	no	<subnet>.<node # + 10>
ens4f0	private_4	no	<subnet>.<node # + 10>

- [ ] Update topology, integrate with draft PDF/IDF
  - [ ] Validated descriptor files PDF and IDF might help recognize the network topology we need. They are defined under hw_config/intel as YAML schema and can be used to refer to. The code can be found at **https://gerrit.opnfv.org/gerrit/admin/repos/kuberef** **.**

OS Environment

OS is wiped away by kuberef (baremetal deploy), jumphost can be Ubuntu or CentOS

- [ ] Find OS variant+version for jumphost
- [ ] Access/permissioning for jumphost: keys/accounts for all involved parties (add each as points below this)

PDF/IDF

The current IDF and PDF for the pod are idf.yaml and pdf.yaml.

Generation Scripts

A series of scripts were created to generate configuration files and the PDF/IDF pair for the pod. These files are available in the kuberef repository at <awaiting PR>.

The versions used to create the current deployment of the pod are attached to this page as install.py and gen_net_configs.py