Dell OPNFV Testlab

Overview

Dell is hosting an OPNFV testlab at its Santa Clara facility. The testlab would host baremetal servers for the use of OPNFV community as part of the OPNFV Pharos Project.

The Dell Testlab consists of 2 PODs

- POD1 for Fuel
- POD2 for Foreman

Each of the 2 PODs consists of 6 servers that consist of

- 1 Jump Server
- 3 Servers for Control Nodes
- 2 Servers for Compute Nodes

Hardware details

POD1-Fuel

The specifications for the servers within POD1 can be found below:

Hostname	Model	Memory	Storage	Processor	Socket
Fuel Jump Server	Dell PowerEdge M620	64 GB	600GB HDD	Intel Xeon E5-2640	2
Node2	Dell PowerEdge M620	64 GB	600GB HDD	Intel Xeon E5-2640	2
Node3	Dell PowerEdge M620	64 GB	600GB HDD	Intel Xeon E5-2640	2
Node4	Dell PowerEdge M620	64 GB	600GB HDD	Intel Xeon E5-2640	2
Node5	Dell PowerEdge M620	64 GB	600GB HDD	Intel Xeon E5-2640	2
Node6	Dell PowerEdge M620	64 GB	600GB HDD	Intel Xeon E5-2640	2

The specifications for the Network Interfaces of servers within POD1 can be seen below:

Hostname	NIC Model	Ports	MAC	BW	Roles
Fuel Jump	1, Broadcom NetXtreme II BCM57810	em1	A4:1F:72:11:B4:81	1G	Unused
		em2	A4:1F:72:11:B4:84	1G	Unused
	2, Intel 82599	p3p1	A4:1F:72:11:B4:85	10G	Public
		p3p2	A4:1F:72:11:B4:87	10G	Fuel Admin/mgmt/pvt/ storage
	3, Intel 82599	p1p1	A4:1F:72:11:B4:89	10G	Unused
		p1p2	A4:1F:72:11:B4:8B	10G	Unused

Node2	1, Broadcom NetXtreme II BCM57810	em1	A4:1F:72:11:B4:9E	Unused
		em2	A4:1F:72:11:B4:9F	Unused
	2, Intel 82599	p3p1	A4:1F:72:11:B4:A0	Public
		p3p2	A4:1F:72:11:B4:A2	Fuel Admin/mgmt/pvt/ storage
	3, Intel 82599	p1p1	A4:1F:72:11:B4:A4	Unused
		p1p2	A4:1F:72:11:B4:A6	Unused
Node3	1, Broadcom NetXtreme II BCM57810	em1	A4:1F:72:11:B4:A7	Unused
		em2	A4:1F:72:11:B4:A9	Unused
	2, Intel 82599	p3p1	A4:1F:72:11:B4:AB	Public
		p3p2	A4:1F:72:11:B4:AD	Fuel Admin/mgmt/pvt/ storage
	3, Intel 82599	p1p1	A4:1F:72:11:B4:AF	Unused
		p1p2	A4:1F:72:11:B4:B1	Unused
Node4	1, Broadcom NetXtreme II BCM57810	em1	A4:1F:72:11:B4:B2	Unused
		em2	A4:1F:72:11:B4:B4	Unused
	2, Intel 82599	p3p1	A4:1F:72:11:B4:B6	Public
		p3p2	A4:1F:72:11:B4:B8	Fuel Admin/mgmt/pvt/ storage
	3, Intel 82599	p1p1	A4:1F:72:11:B4:BA	Unused
		p1p2	A4:1F:72:11:B4:BC	Unused
Node5	1, Broadcom NetXtreme II BCM57810	em1	A4:1F:72:11:B4:BD	Unused
		em2	A4:1F:72:11:B4:BF	Unused
	2, Intel 82599	p3p1	A4:1F:72:11:B4:C1	Public
		p3p2	A4:1F:72:11:B4:C3	Fuel Admin/mgmt/pvt/ storage
	3, Broadcom NetXtreme II BCM57810	p1p1	A4:1F:72:11:B4:C5	Unused
		p1p2	A4:1F:72:11:B4:C7	Unused
Node6	1, Broadcom NetXtreme II BCM57810	em1	A4:1F:72:11:B4:C8	Unused
		em2	A4:1F:72:11:B4:CA	Unused
	2, Intel 82599	p3p1	A4:1F:72:11:B4:CC	Public
		p3p2	A4:1F:72:11:B4:CE	Fuel Admin/mgmt/pvt/ storage
	3, Broadcom NetXtreme II BCM57810	p1p1	A4:1F:72:11:B4:D0	Unused
		p1p2	A4:1F:72:11:B4:D2	Unused

POD2-Foreman

The specifications for the servers within POD2 can be found below:

Hostname	Model	Memory	Storage	Processor	Socket
Foreman Jump Server	Dell PowerEdge M620	64 GB	600GB HDD	Intel Xeon E5-2640	2

+--------------------+--------------------+---------------+-------------+--------------------+------------+ |Node7 | Dell PowerEdge M620| 64 GB |600GB HDD |Intel Xeon E5-2640 | 2 | +--------------------+--------------------+---------------+-------------+--------------------+------------+ |Node8 | Dell PowerEdge M620| 64 GB |600GB HDD |Intel Xeon E5-2640 | 2 | +--------------------+--------------------+---------------+-------------+--------------------+------------+ |Node9 | Dell PowerEdge M620| 64 GB |600GB HDD |Intel Xeon E5-2640 | 2 | +--------------------+--------------------+---------------+-------------+--------------------+------------+ |Node11 | Dell PowerEdge M620| 64 GB |600GB HDD |Intel Xeon E5-2640 | 2 | +--------------------+--------------------+---------------+-------------+--------------------+------------+ |Node12 | Dell PowerEdge M620| 64 GB |600GB HDD |Intel Xeon E5-2640 | 2 | +--------------------+--------------------+---------------+-------------+--------------------+------------+

The specifications for the Network Interfaces of the servers within POD2 can be seen below: +--------------------+---+------+----------------+-------+-------------------------------+ | Hostname | NIC Model | Ports| MAC | BW | Roles | +--------------------+---+------+----------------+-------+-------------------------------+ |Foreman Jump | 1, Broadcom NetXtreme II BCM57810 | em1 |A4:1F:72:11:B5:1D| 10G | Foreman Admin | | | +------+----------------+-------+-------------------------------+ | | | em2 |A4:1F:72:11:B5:20| 10G | Foreman Private/ Storage | | +---+------+----------------+-------+-------------------------------+ | | 2, Intel 82599 | p3p1 |A4:1F:72:11:B5:21| 10G | Public | | | +------+----------------+-------+-------------------------------+ | | | p3p2 |A4:1F:72:11:B5:23| 10G | Unused | | +---+------+----------------+-------+-------------------------------+ | | 3, TBD | p1p1 |A4:1F:72:11:B4:89| 10G | Unused | | | +------+----------------+-------+-------------------------------+ | | | p1p2 |A4:1F:72:11:B4:8B| 10G | Unused | +--------------------+---+------+----------------+-------+-------------------------------+ |Node7 | 1, Broadcom NetXtreme II BCM57810 | em1 |A4:1F:72:11:B4:CF| 10G | Foreman Admin | | | +------+----------------+-------+-------------------------------+ | | | em2 |A4:1F:72:11:B4:D2| 10G | Foreman Private/ Storage | | +---+------+----------------+-------+-------------------------------+ | | 2, Intel 82599 | p3p1 |A4:1F:72:11:B4:D3| 10G | Public | | | +------+----------------+-------+-------------------------------+ | | | p3p2 |A4:1F:72:11:B4:D5| 10G | Unused | | +---+------+----------------+-------+-------------------------------+ | | 3, Broadcom NetXtreme II BCM57810 | p1p1 |A4:1F:72:11:B4:D7| 10G | Unused | | | +------+----------------+-------+-------------------------------+ | | | p1p2 |A4:1F:72:11:B4:DA| 10G | Unused | +--------------------+---+------+----------------+-------+-------------------------------+ |Node8 | 1, Broadcom NetXtreme II BCM57810 | em1 |A4:1F:72:11:B4:DC| 10G | Foreman Admin | | | +------+----------------+-------+-------------------------------+ | | | em2 |A4:1F:72:11:B4:DF| 10G | Foreman Private/ Storage | | +---+------+----------------+-------+-------------------------------+ | | 2, Intel 82599 | p3p1 |A4:1F:72:11:B4:E0| 10G | Public | | | +------+----------------+-------+-------------------------------+ | | | p3p2 |A4:1F:72:11:B4:E2| 10G | Unused | | +---+------+----------------+-------+-------------------------------+ | | 3, Broadcom NetXtreme II BCM57810 | p1p1 |A4:1F:72:11:B4:E4| 10G | Unused | | | +------+----------------+-------+-------------------------------+ | | | p1p2 |A4:1F:72:11:B4:E7| 10G | Unused | +--------------------+---+------+----------------+-------+-------------------------------+ |Node9 | 1, Broadcom NetXtreme II BCM57810 | em1 |A4:1F:72:11:B4:E9| 10G | Foreman Admin | | | +------+----------------+-------+-------------------------------+ | | | em2 |A4:1F:72:11:B4:EC| 10G | Foreman Private/ Storage | | +---+------+----------------+-------+-------------------------------+ | | 2, Intel 82599 | p3p1 |A4:1F:72:11:B4:ED| 10G | Public | | | +------+----------------+-------+-------------------------------+ | | | p3p2 |A4:1F:72:11:B4:EF| 10G | Unused | | +---+------+----------------+-------+-------------------------------+ | | 3, Intel 82599 | p1p1 |A4:1F:72:11:B4:F1| 10G | Unused | | | +------+----------------+-------+-------------------------------+ | | | p1p2 |A4:1F:72:11:B4:F3| 10G | Unused | +--------------------+---+------+----------------+-------+-------------------------------+ |Node11 | 1, Broadcom NetXtreme II BCM57810 | em1 |A4:1F:72:11:B5:03| 10G | Foreman Admin | | |

+------+-----------------+-------+----------------------------------+ | | | em2 |A4:1F:72:11:B5:06| 10G | Foreman Private/ Storage | |
+---+------+-----------------+-------+----------------------------------+ | | 2, Intel 82599 | p3p1 |A4:1F:72:11:B5:07| 10G | Public | | | +------+-----------------+-------+----------------------------------+
| | | p3p2 |A4:1F:72:11:B5:09| 10G | Unused | |
+---+------+-----------------+-------+----------------------------------+ | | 3, Intel 82599 | p1p1 |A4:1F:72:11:B5:0B| 10G | Unused | | |
+------+-----------------+-------+----------------------------------+ | | | p1p2 |A4:1F:72:11:B5:0D| 10G | Unused |
+---------------------+---+------+-----------------+-------+----------------------------------+
|Node12 | 1, Broadcom NetXtreme II BCM57810 | em1 |A4:1F:72:11:B5:10| 10G | Foreman Admin | | |
+------+-----------------+-------+----------------------------------+ | | | em2 |A4:1F:72:11:B5:13| 10G | Foreman Private/ Storage | |
+---+------+-----------------+-------+----------------------------------+ | | 2, Intel 82599 | p3p1 |A4:1F:72:11:B5:14| 10G | Public | | | +------+-----------------+-------+----------------------------------+
| | | p3p2 |A4:1F:72:11:B5:16| 10G | Unused | |
+---+------+-----------------+-------+----------------------------------+ | | 3, TBD | p1p1 |A4:1F:72:11:B4:89| 10G | Unused | | | +------+-----------------+-------+----------------------------------+ | | | p1p2 |A4:1F:72:11:B4:8B| 10G | Unused |
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Software

The Jump servers in the Testlab are pre-provisioned with the following software:

- **Fuel-Jump Server:**

  1. OS: Ubuntu 14.04
  2. Preprovisoned softwares: KVM, VNC server

- **Foreman-Jump Server:**

  1. OS: Provisioned with CentOS7

Networks

POD1-Foreman Diagram

POD2-Foreman Diagram

Subnet allocations

Network name	Address	Mask	Gateway	VLAN id
Foreman Admin	10.4.14.0	255.255.255.0	10.4.14.100	Untagged
Foreman Private	10.4.5.0	255.255.255.0	10.4.5.1	Untagged
Public	172.18.0.0	255.255.255.0	172.18.0.1	Untagged
Fuel Admin	10.20.0.0	255.255.0.0	10.20.0.1	Untagged
Fuel Mangement	192.168.0.0	255.255.255.0	192.168.0.1	101
Fuel Storage	192.168.1.0	255.255.255.0	192.168.1.1	102

Lights out Network

POD1

Hostname	Lights-out address	MAC	Username	Password
Fuel-Jump	172.18.1.101	A4:1F:72:11:B4:80	root	calvin
Node2	172.18.1.102	A4:1F:72:11:B4:8D	root	calvin
Node3	172.18.1.103	A4:1F:72:11:B4:9A	root	calvin
Node4	172.18.1.104	A4:1F:72:11:B4:A7	root	calvin
Node5	172.18.1.105	A4:1F:72:11:B4:B4	root	calvin
Node6	172.18.1.106	A4:1F:72:11:B4:C1	root	calvin

POD2

Hostname	Lights-out address	MAC	Username	Password
Foreman-Jump	172.18.1.113	A4:1F:72:11:B5:10	root	calvin
Node7	172.18.1.107	A4:1F:72:11:B4:CE	root	calvin
Node8	172.18.1.108	A4:1F:72:11:B4:DB	root	calvin
Node9	172.18.1.109	A4:1F:72:11:B4:E8	root	calvin
Node11	172.18.1.111	A4:1F:72:11:B5:02	root	calvin
Node12	172.18.1.112	A4:1F:72:11:B5:0F	root	calvin

Remote access infrastructure

The Dell OPNFV testlab is free to use for the OPNFV community.

A VPN is used to provide access to the Dell Testlab. Details can be found in *Dell OPNFV-lab Access* document (Attach link)

To access the Testlab, please contact Waqas_Riaz@DELL.com with the following details:

- Name
- Organization
- Purpose of using the lab

Processing the request can take 2-3 business days.

Accessing the Jump Server

The credentials for accessing the Jump servers are:

Fuel-Jump

User: opnfv password: d3ll1234

Foreman-Jump

User: root password: d3ll1234