R2 Example Configuration Input File - Unicycle Pods with SR-IOV Dataplane on Dell 740XD Servers

ATT Validation Labs

This section includes a example input file similar to that used during ATT validation testing to deploy a Unicycle pod with a SR-IOV dataplane.

The example file defines the network and server settings for a cluster with four master nodes with SR-IOV dataplane enabled. Three of the nodes can run VNF workloads.

```
---
##############################################################################
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##############################################################################

site_name: dellgen10
site_type: sriov-a13
ipmi_admin:
  username: root
  password: calvin
networks:
  bonded: yes
  primary: bond0
  slaves:
    - name: enp94s0f0
    - name: enp94s0f1
  oob:
    vlan: 40
    interface:
    cidr: 192.168.41.0/24
    routes:
      gateway: 192.168.41.1
    ranges:
      reserved:
        start: 192.168.41.2
        end: 192.168.41.12
      static:
        start: 192.168.41.13
        end: 192.168.41.254
  host:
    vlan: 41
    interface: bond0.41
    cidr: 192.168.2.0/24
    ingress_vip: 192.168.2.49
    maas_vip: 192.168.2.48
    routes:
       gateway: 192.168.2.200
    ranges:
      reserved:
        start: 192.168.2.84
        end: 192.168.2.86
      static:
        start: 192.168.2.40
        end: 192.168.2.49
  storage:
    vlan: 42
```

```
    interface: bond0.42
    cidr: 172.31.2.0/24
    ranges:
      reserved:
        start: 172.31.2.1
        end: 172.31.2.10
      static:
        start: 172.31.2.11
        end: 172.31.2.254
  pxe:
    vlan: 43
    interface: eno3
    cidr: 172.30.2.0/24
    gateway: 172.30.2.1
    routes:
      gateway: 172.30.2.40
    ranges:
      reserved:
        start: 172.30.2.2
        end:  172.30.2.10
      static:
        start: 172.30.2.11
        end: 172.30.2.200
      dhcp:
        start: 172.30.2.201
        end: 172.30.2.254
  ksn:
    vlan: 44
    interface: bond0.44
    cidr: 172.29.1.0/24
    gateway: 172.29.1.1
    local_asnumber: 65531
    ranges:
      reserved:
        start: 172.29.1.1
        end:  172.29.1.10
      static:
        start: 172.29.1.11
        end: 172.29.1.254
    additional_cidrs:
      -  172.29.1.128/29
    ingress_vip: 172.29.1.129/32
#    peers:
#    - ip: 172.29.1.1
#      scope: global
#      asnumber: 65001
    vrrp_ip: 172.29.1.1
  neutron:
    vlan: 45
    interface: bond0.45
    cidr: 10.0.102.0/24
    ranges:
      reserved:
        start: 10.0.102.1
        end: 10.0.102.10
      static:
        start: 10.0.102.11
        end: 10.0.102.254
dns:
  upstream_servers:
    - 192.168.2.85
    - 192.168.2.85
  ingress_domain: dellgen10.lab.akraino.org
  domain: dellgen10.lab.akraino.org
gpu:
  alias:
    - name: "P4"
      product_id: "1bb2"
      vendor_id: "10de"
    - name: "P40"
      product_id: "1b38"
```

```
      vendor_id: "10de"
    - name: "P100"
      product_id: "15f8"
      vendor_id: "10de"
    - name: "V100"
      product_id: "1db4"
      vendor_id: "10de"
sriov:
  alias:
    - name: "sriov0"
      product_id: "158b"
      vendor_id: "8086"
  nets:
    - physical: sriovnet1
      interface: enp135s0f0
      vlan_start: 2001
      vlan_end: 3000
      whitelists:
      - "address": "0000:87:02.*"
      - "address": "0000:87:03.*"
      - "address": "0000:87:04.*"
      - "address": "0000:87:05.*"
    - physical: sriovnet2
      interface: enp135s0f1
      vlan_start: 2001
      vlan_end: 3000
      whitelists:
      - "address": "0000:87:0a.*"
      - "address": "0000:87:0b.*"
      - "address": "0000:87:0c.*"
      - "address": "0000:87:0d.*"
storage:
  osds:
    - data: /dev/sda
      journal: /dev/sdh1
    - data: /dev/sdb
      journal: /dev/sdh2
    - data: /dev/sdc
      journal: /dev/sdh3
  osd_count: 3
  total_osd_count: 9
tenant_storage:
  osds:
    - data: /dev/sdd
      journal: /dev/sdh4
    - data: /dev/sde
      journal: /dev/sdh5
    - data: /dev/sdf
      journal: /dev/sdh6
  osd_count: 3
genesis:
  name: aknode40
  oob: 192.168.41.40
  host: 192.168.2.40
  storage: 172.31.2.40
  pxe: 172.30.2.40
  ksn: 172.29.1.40
  neutron: 10.0.102.40
  root_password: akraino,d
masters:
  - name : aknode41
    oob: 192.168.41.41
    host: 192.168.2.41
    storage: 172.31.2.41
    pxe: 172.30.2.41
    ksn: 172.29.1.41
    neutron: 10.0.102.41
  - name : aknode42
    oob: 192.168.41.42
    host: 192.168.2.42
    storage: 172.31.2.42
```

```
    pxe: 172.30.2.42
    ksn: 172.29.1.42
    neutron: 10.0.102.42
  - name : aknode43
    oob: 192.168.41.43
    host: 192.168.2.43
    storage: 172.31.2.43
    pxe: 172.30.2.43
    ksn: 172.29.1.43
    neutron: 10.0.102.43
#workers:
#  - name : aknode43
#    oob: 192.168.41.43
#    host: 192.168.2.43
#    storage: 172.31.2.43
#    pxe: 172.30.2.43
#    ksn: 172.29.1.43
#    neutron: 10.0.102.43
platform:
#  vcpu_pin_set: "6-21,28-43,50-65,74-87"
  kernel_params:
#    kernel_package: 'linux-image-4.15.0-66-generic'
    hugepagesz: '1G'
    hugepages: 32
#    default_hugepagesz: '1G'
#    transparent_hugepage: 'never'
    iommu: 'pt'
    intel_iommu: 'on'
#    amd_iommu: 'on'
#    console: 'ttyS1,115200n8'
hardware:
  vendor: DELL
  generation: '10'
  hw_version: '3'
  bios_version: '2.8'
  bios_template: dell_r740_g14_uefi_base.xml.template
  boot_template: dell_r740_g14_uefi_httpboot.xml.template
  http_boot_device: NIC.Slot.2-1-1
  device_aliases:
    ## network
    - name: eno3
      key: pxe_nic01
      address: '0000:01:00.0'
      dev_type: 'I350 Gigabit Network Connection'
      bus_type: 'pci'
    - name: enp94s0f0
      key: data_nic01
      address: '0000:5e:00.0'
      dev_type: 'Ethernet 10G 2P X520 Adapter'
      bus_type: 'pci'
    - name: enp94s0f1
      key: data_nic02
      address: '0000:5e:00.1'
      dev_type: 'Ethernet 10G 2P X520 Adapter'
      bus_type: 'pci'
    - name: enp135s0f0
      key: sriov_nic01
      address: '0000:87:00.0'
      dev_type: 'Ethernet 10G 2P X520 Adapter'
      bus_type: 'pci'
    - name: enp135s0f1
      key: sriov_nic02
      address: '0000:87:00.1'
      dev_type: 'Ethernet 10G 2P X520 Adapter'
      bus_type: 'pci'
    ## storage  - use "dmesg | grep -Pe 'sd \d:\d'" to find address of drives
    - name: /dev/sdg
      key: bootdisk
      address: '0:2.0.0'
      dev_type: 'PERC H730P'
      bus_type: 'scsi'
```

```
    - name: /dev/sdh
      key: cephjournal1
      address: '0:2.1.0'
      dev_type: 'PERC H730P'
      bus_type: 'scsi'
disks:
  - name : bootdisk
    labels:
      bootdrive: 'true'
    partitions:
      - name: root
        size: 30g
        bootable: true
        mountpoint: /
      - name: boot
        size: 1g
        mountpoint: /boot
      - name: var
        size: '300g'
        mountpoint: /var
disks_compute:
  - name : bootdisk
    labels:
      bootdrive: 'true'
    partitions:
      - name: root
        size: 30g
        bootable: true
        mountpoint: /
      - name: boot
        size: 1g
        mountpoint: /boot
      - name: var_log
        size: '100g'
        mountpoint: /var/log
      - name: var
        size: '>100g'
        mountpoint: /var
  - name : ephemeral
    partitions:
      - name: nova
        size: 99%
        mountpoint: /var/lib/nova
genesis_ssh_public_key:
kubernetes:
  api_service_ip: 10.96.0.1
  etcd_service_ip: 10.96.0.2
  pod_cidr: 10.98.0.0/16
  service_cidr: 10.96.0.0/16
regional_server:
  ip: 192.168.2.44
...
```