Example Configuration Input File - Unicycle Pods with OVS-DPDK Dataplane on Dell 740XD Servers

Ericsson Validation Labs

This section includes a example input file similar to that used during Ericsson Validation testing to deploy a Unicycle pod with an OVS_DPDK dataplane.

Please reference the following lab configuration Ericsson Unicycle OVS-DPDK Validation HW, Networking and IP plan.

```
site_name: akraino-ki20
site_type: ovsdpdk         # Note this field defines the dataplane to be deployed as OVS-DPDK

ipmi_admin:
  username: root
  password: calvin

networks:
  bonded: yes
  primary: bond0
  slaves:
    - name: enp95s0f0
    - name: enp95s0f1

  oob:
    vlan: 400 # Note this VID is not used by current network cloud deployment process
    interface:
    cidr: 10.51.35.128/27 # Note this subnet mask length is used by the deployment scripts
    routes:
      gateway: 10.51.35.129
    ranges:
      reserved:
        start: 10.51.35.153
        end: 10.51.35.158
      static:
        start: 10.51.35.132
        end: 10.51.35.152

  host:
    vlan: 408
    interface: bond0.408
    cidr: 10.51.34.224/27 # Note this subnet mask length is used by the deployment scripts
    routes:
       gateway: 10.51.34.225
    ranges:
      reserved:
        start: 10.51.34.226
        end: 10.51.34.228
      static:
        start: 10.51.34.229
        end: 10.51.34.235

  storage:
    vlan: 23
    interface: bond0.23
    cidr: 10.224.174.0/24 # Note this subnet mask length is not used by the deployment scripts and is hard
coded to /24 in R1
    ranges:
      reserved:
        start: 10.224.174.1
        end: 10.224.174.10
      static:
        start: 10.224.174.11
        end: 10.224.174.254

  pxe:
    vlan: 407
    interface: eno3
    cidr: 10.224.168.0/24 # Note this subnet mask length is not used by the deployment scripts and is hard
```

```
coded to /24 in R1
    gateway: 10.224.168.1
    routes:
      gateway: 10.224.168.12 #This address is the PXE interface of the Genesis Node.
    ranges:
      reserved:
        start: 10.224.168.1
        end:  10.224.168.10
      static:
        start: 10.224.168.11
        end: 10.224.168.200
      dhcp:
        start: 10.224.168.201
        end: 10.224.168.254

  ksn:
    vlan: 22
    interface: bond0.22
    cidr: 10.224.160.0/24 # Note this subnet mask length is not used by the deployment scripts and is hard
coded to /24 in R1
    local_asnumber: 65531  # Note: this is the ASN of the k8s calico network
    ranges:
      static:
        start: 10.224.160.134
        end: 10.224.160.254
    additional_cidrs:
      -  10.224.160.200/29
    ingress_cidr: 10.224.160.201/32
    # Note: The inclusion of the 'peers' entries below result in external BGP peering to the fabric router
        # Removing the 'peers', 'ip', 'scope' and 'asnumber' entries will result in a full iBGP mesh peering
model without using an external fabric router
    peers:
    - ip: 10.224.160.129 # Note: this is the IP address of the external fabric bgp router
      scope: global
      asnumber: 65001  # Note: this is the ASN of the external fabric bgp router
    vrrp_ip: 10.224.160.129 # keep peers ip address in case of only peer.

  neutron:
    vlan: 24
    interface: bond0.24
    cidr: 10.224.171.0/24 # Note this subnet mask length is not used by the deployment scripts and is hard
coded to /24 in R1
    ranges:
      reserved:
        start: 10.224.171.1
        end: 10.224.171.10
      static:
        start: 10.224.171.11
        end: 10.224.171.254

  vxlan:
    vlan: 1 # Note this VID value defines that the dataplane interface is untagged and is the only supported
option in R1
    interface: enp134s0f0 #Note this is a single port and LAG is not support with an OVS-DPDK dataplane in r1
    cidr: 10.224.169.0/24 # Note this subnet mask length is not used by the deployment scripts and is hard
coded to /24 in R1
    ranges:
      reserved:
        start: 10.224.169.1
        end: 10.224.169.10
      static:
        start: 10.224.169.11
        end: 10.224.169.254

dns:
  upstream_servers:
    - 10.64.73.100
    - 10.64.73.101
    - 10.51.40.100
  ingress_domain: vran.k2.ericsson.se
  domain: vran.k2.ericsson.se
```

```
##################################################################################################################
#
#Note: The 'dpdk' statement below defines the deployment of and OVS-DPDK dataplane instead of an SR-IOV
dataplane

dpdk:
  nics:
  - name: dpdk0
    pci_id: '0000:86:00.0'
    bridge: br-phy
    migrate_ip: true

##################################################################################################################
#

storage:
  osds:
    - data: /dev/sda
      journal: /var/lib/ceph/journal/journal-sda
    - data: /dev/sdb
      journal: /var/lib/ceph/journal/journal-sdb
    - data: /dev/sdc
      journal: /var/lib/ceph/journal/journal-sdc
    - data: /dev/sdd
      journal: /var/lib/ceph/journal/journal-sdd
    - data: /dev/sde
      journal: /var/lib/ceph/journal/journal-sde
    - data: /dev/sdf
      journal: /var/lib/ceph/journal/journal-sdf
  osd_count: 6
  total_osd_count: 18

genesis:
  name : aknode23
  oob: 10.51.35.143
  host: 10.51.34.233
  storage: 10.224.174.12
  pxe: 10.224.168.12
  ksn: 10.224.160.135
  neutron: 10.224.171.12
  vxlan: 10.224.169.12
  root_password: akraino,d

masters:
  - name: aknode31
    oob: 10.51.35.147
    host: 10.51.34.229
    storage: 10.224.174.13
    pxe: 10.224.168.13
    ksn: 10.224.160.136
    neutron: 10.224.171.13
    vxlan: 10.224.169.13
    oob_user: root
    oob_password: calvin
  - name : aknode25
    oob: 10.51.35.144
    host: 10.51.34.232
    storage: 10.224.174.11
    pxe: 10.224.168.11
    ksn: 10.224.160.134
    neutron: 10.224.171.11
    vxlan: 10.224.169.11
    oob_user: root
    oob_password: calvin

#workers:
#  - name : aknode32 # Note not verified in this validation lab in R1
#    oob: 10.51.35.148
#    host: 10.51.34.234
#    storage: 10.224.174.14
```

```
#    pxe: 10.224.168.14
#    ksn: 10.224.160.137
#    neutron: 10.224.171.14
#    oob_user: root
#    oob_password: calvin
#  - name : aknode33 # Note not verified in this validation lab in R1
#    oob: 10.51.35.149
#    host: 10.51.34.235
#    storage: 10.224.174.15
#    pxe: 10.224.168.15
#    ksn: 10.224.160.138
#    neutron: 10.224.171.15
#    oob_user: root
#    oob_password: calvin

platform:
#  vcpu_pin_set: "4-21,26-43,48-65,72-87"
  kernel_params:
    hugepagesz: '1G'
    hugepages: 32
#   default_hugepagesz: '1G'
#   transparent_hugepage: 'never'
    iommu: 'pt'
    intel_iommu: 'on'
#   amd_iommu: 'on'
#   console: 'ttyS1,115200n8'

##########################################################################################
#Note: This section defines the use of Dell servers and their installed HW and BIOS version

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

##########################################################################################

disks:
  - name : sdg
    labels:
      bootdrive: 'true'
    partitions:
      - name: root
        size: 20g
        mountpoint: /
      - name: boot
        size: 1g
        mountpoint: /boot
      - name: var
        size: 100g
        mountpoint: /var
  - name : sdh
    partitions:
      - name: ceph
        size: 300g
        mountpoint: /var/lib/ceph/journal

disks_compute:
  - name : sdg
    labels:
      bootdrive: 'true'
    partitions:
      - name: root
        size: 20g
        mountpoint: /
      - name: boot
        size: 1g
```

```
        mountpoint: /boot
      - name: var
        size: '>300g'
        mountpoint: /var
  - name : sdh
    partitions:
      - name: nova
        size: '99%'
        mountpoint: /var/lib/nova

# Note: the key below must be generate each time a new RC is installed and inserted into the input file of any
pods deployed by that RC

genesis_ssh_public_key: "ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAABAQC+iukrMrXSPOnnz89BHQ0UWMb71OLhSb5byh4wPpjSHtqmTV7xsg0WWUId5K8ejqL+X1FKPdTlozY1Jy6L
Hq9yWu+nvSdCdcV5CnrodgNCIiY6z4B9Mhf3BoN9ADQtZKH7EpAzGiqYvncrZTwHlmIyc9ff8HxusWut1vKn8EJ96a07wybRpjOlblehSESTD6qy
UxUGt6hrJZY
/FXHJ+JvpogI55i0La9pt94RQVg8wOi1DqPWavOZzRT35A7bziKk79IoGOGnW9H+K5x7hiRFw1wrPoJrd1ixgLyg+UUwgZlDCf5AhDyajmb8rtDL
ckVFcw8KPuj7weGGFD7gqOw1N root@aknode29"

kubernetes:
  api_service_ip: 10.96.0.1
  etcd_service_ip: 10.96.0.2
  pod_cidr: 10.98.0.0/16
  service_cidr: 10.96.0.0/15

regional_server:
  ip: 10.51.34.230 # Note: this is the host IP address of the Regional Controller that is being used to deploy
this unicycle pod
#
```