Hassle-free migration of OpenStack cloud to OVN

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CANONICAL · ubuntu

Why OVN?

Virtual networking for Open vSwitch built by the Open vSwitch community

Cloud management systems agnostic

Scalability and efficiency

East/West Distributed Routing
by default

North/South Routing HA
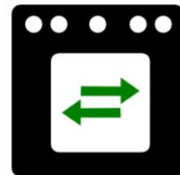by default

OpenFlow

Hardware offload

TLS/RBAC on control plane by default

Native DNS & DHCP

Active community

Vendor neutral

Integration with hardware network infrastructure possible (OVSDB Hardware VTEP)

Planning for a migration

Versions and prerequisites

- Neutron adopted the ML2 OVN driver into the main tree at OpenStack Ussuri

- Recommended upgrade path is to first upgrade to OpenStack Ussuri on Ubuntu Focal or Bionic

- Then perform migration from ML2+OVS to ML2+OVN

- Use of openvswitch firewall driver prior to migration is required

MTU

- OVN uses Geneve tunnels

- GRE overhead = 22 bytes
- VXLAN overhead = 30 bytes
- Geneve overhead = 38 bytes

- Does your cloud have available headroom for the increase of packet size?

- Instances using DHCP can automatically reduce MTU by changing configuration
- Requires time to pass for instances to renew lease, typically 24 hours

- Instances using IPv6 SLAAC automatically adjust MTU when OVN takes over control

- Statically configured instances require end user intervention prior to migration

IP Allocations and DNS

- Make sure all your subnets have free IP addresses for allocation

- OVN handles instance access to DNS differently, make sure all subnets are configured correctly

Demo

Thank you. Questions?

https://docs.openstack.org/project-deploy-guide/charm-deployment-guide/latest/

https://discourse.juju.is/