

OpenStack  
& Container Workloads

# OpenStack Kolla-Ansible

Containers for deploying/operating OpenStack clouds

<https://wiki.openstack.org/wiki/Kolla>



- Kolla-Ansible provides Docker containers + Ansible playbooks to deploy OpenStack services and infrastructure components in Docker containers on baremetal or VM

```
allinone@oska:~$ docker ps -a
```

| CONTAINER ID   | IMAGE  | COMMAND                   | CREATED             |
|--|--|---------------------------|---------------------|
| STATUS   | PORTS NAMES  |                           |                     |
| 80712c44e063<br>single-c" 2 minutes ago Up 2 minutes | kolla/centos-binary-horizon:queens                   | horizon                   | "dumb-init --       |
| bc4da43738c1<br>single-c" 2 minutes ago Up 2 minutes | kolla/centos-binary-heat-engine:queens               | heat_engine               | "dumb-init --       |
| 9e18eb2c7dd9<br>single-c" 2 minutes ago Up 2 minutes | kolla/centos-binary-heat-api-cfn:queens              | heat_api_cfn              | "dumb-init --       |
| fcacf74fc697<br>single-c" 2 minutes ago Up 2 minutes | kolla/centos-binary-heat-api:queens                  | heat_api                  | "dumb-init --       |
| c535293e7eb2<br>single-c" 3 minutes ago Up 3 minutes | kolla/centos-binary-neutron-metadata-agent:queens    | neutron_metadata_agent    | "dumb-init --       |
| 088f00a0ca48<br>single-c" 3 minutes ago Up 3 minutes | kolla/centos-binary-neutron-l3-agent:queens          | neutron_l3_agent          | "dumb-init --       |
| 3626e51e4608<br>single-c" 3 minutes ago Up 3 minutes | kolla/centos-binary-neutron-dhcp-agent:queens        | neutron_dhcp_agent        | "dumb-init --       |
| 44e32416f91b<br>single-c" 3 minutes ago Up 3 minutes | kolla/centos-binary-neutron-openvswitch-agent:queens | neutron_openvswitch_agent | "dumb-init --       |
| e62fcf00417f<br>single-c" 3 minutes ago Up 3 minutes | kolla/centos-binary-neutron-server:queens            | neutron_server            | "dumb-init --       |
| 6a6eb47d4c58<br>single-c" 5 minutes ago Up 5 minutes | kolla/centos-binary-openvswitch-vswitchd:queens      | openvswitch_vswitchd      | "dumb-init --       |
| ed1025ed5fb6<br>single-c" 6 minutes ago Up 6 minutes | kolla/centos-binary-openvswitch-db-server:queens     | openvswitch_db            | "dumb-init -- [...] |

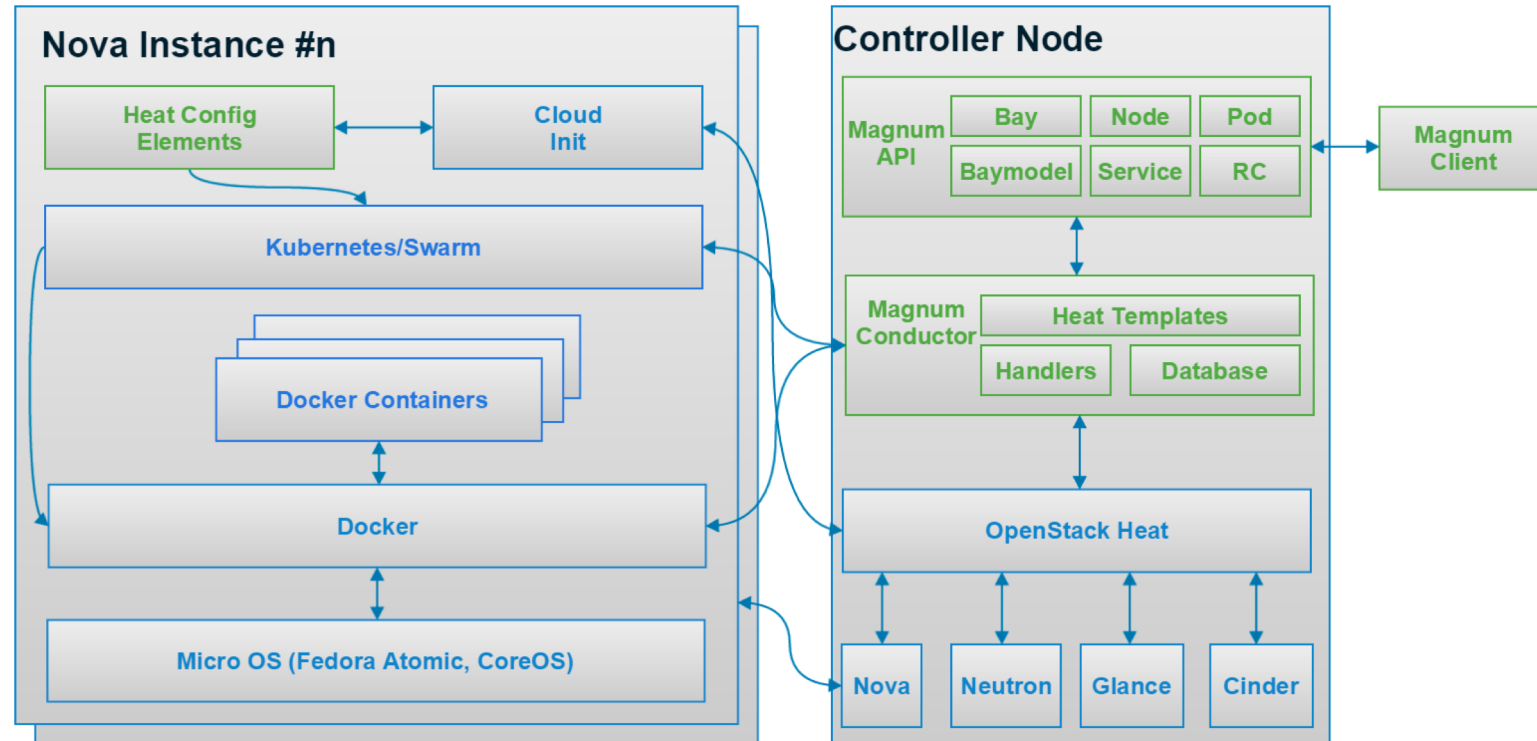
# Magnum

Container Service for OpenStack

<https://wiki.openstack.org/wiki/Magnum>



- uses Heat to orchestrate an OS image with Docker and Container Orchestration Engine (COE)
  - Docker Swarm, Kubernetes, Apache Mesos
- runs image in VM or bare metal in a cluster configuration

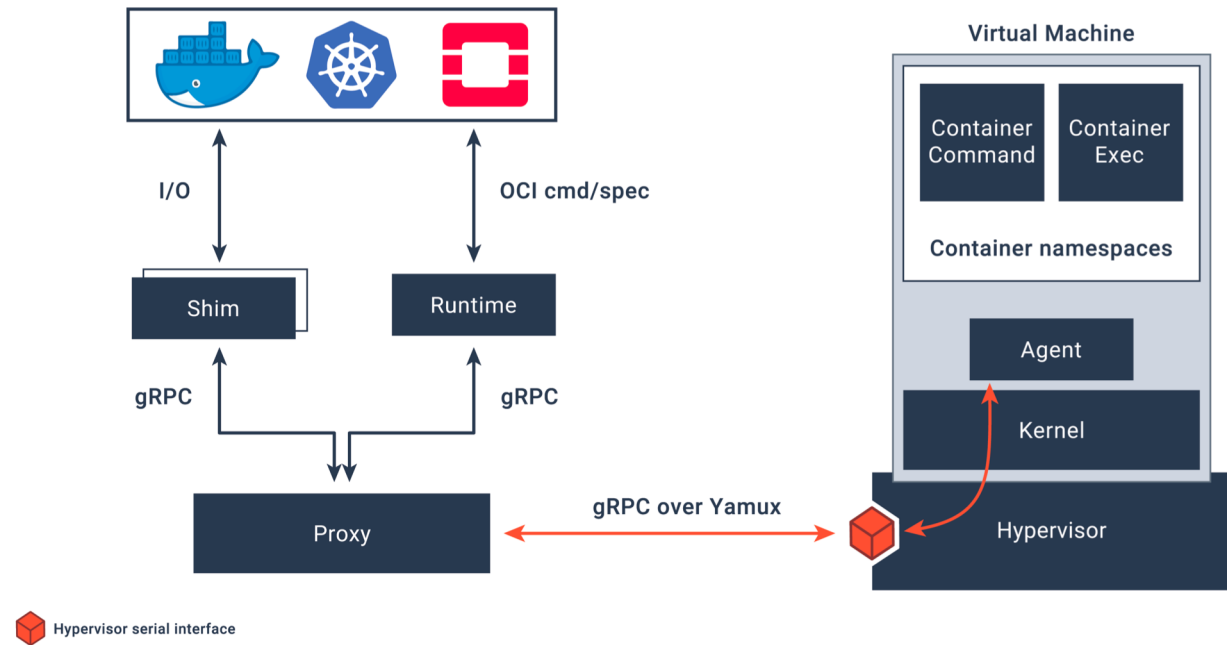


# Kata Containers

Container runtime building lightweight VM

<https://katacontainers.io/>

- secure container runtime with lightweight virtual machines that feel and perform like containers, but provide stronger workload isolation using hardware virtualization technology
- Open Container Initiative (OCI) compliant

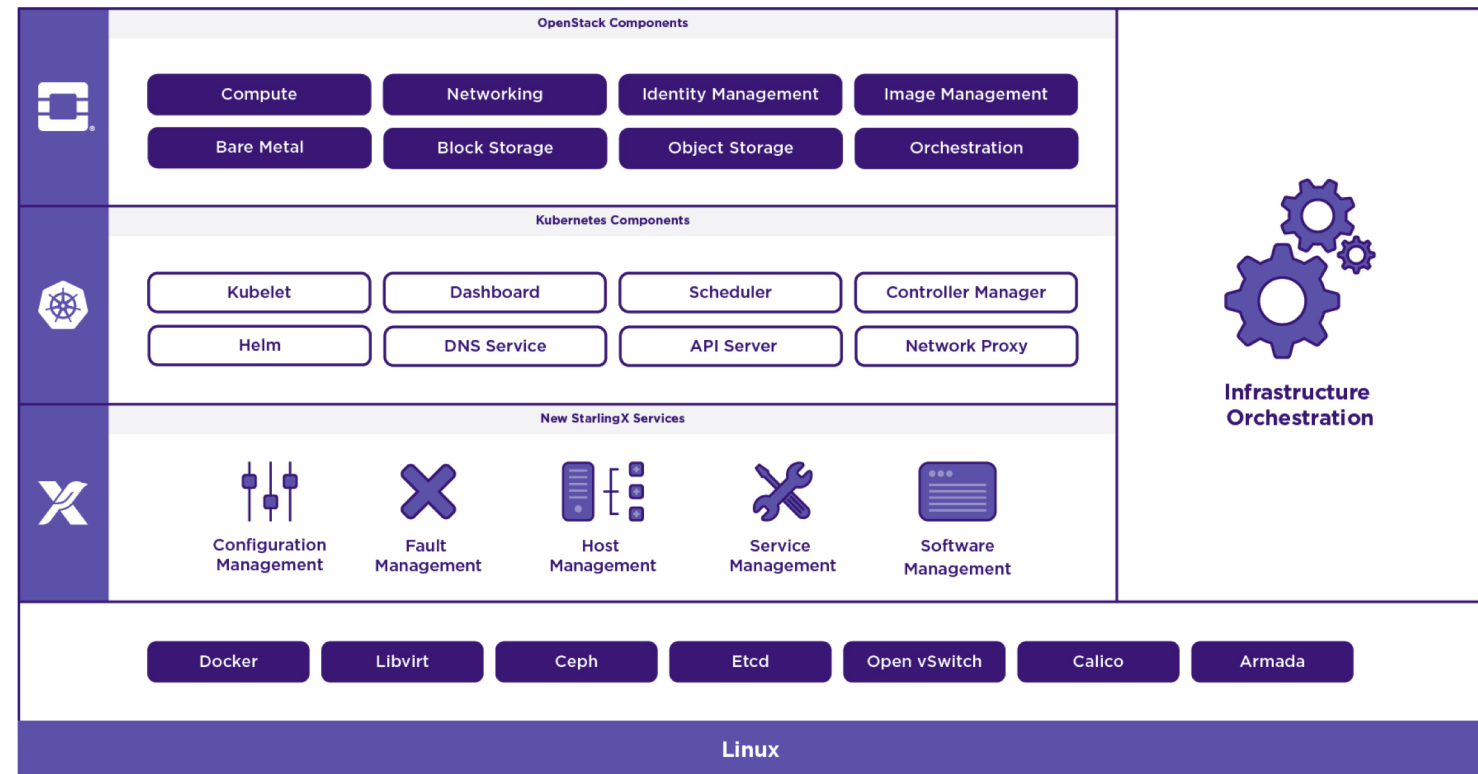


# StarlingX

cloud for the distributed edge

<https://www.starlingx.io/>

- cloud infrastructure software stack for the edge
- Deploys a K8s to run an OS at the edge
- Integrates a number of upstream projects: CentOS, OvS-DPDK, Ceph, Kubernetes, OpenStack



# Zuul

## Project Gating System

<https://zuul-ci.org/docs/zuul/>

- continuous integration, delivery, and deployment systems
  - focus on project gating and interrelated projects.
- facilitates running tests and automated tasks in response to Code Review events

