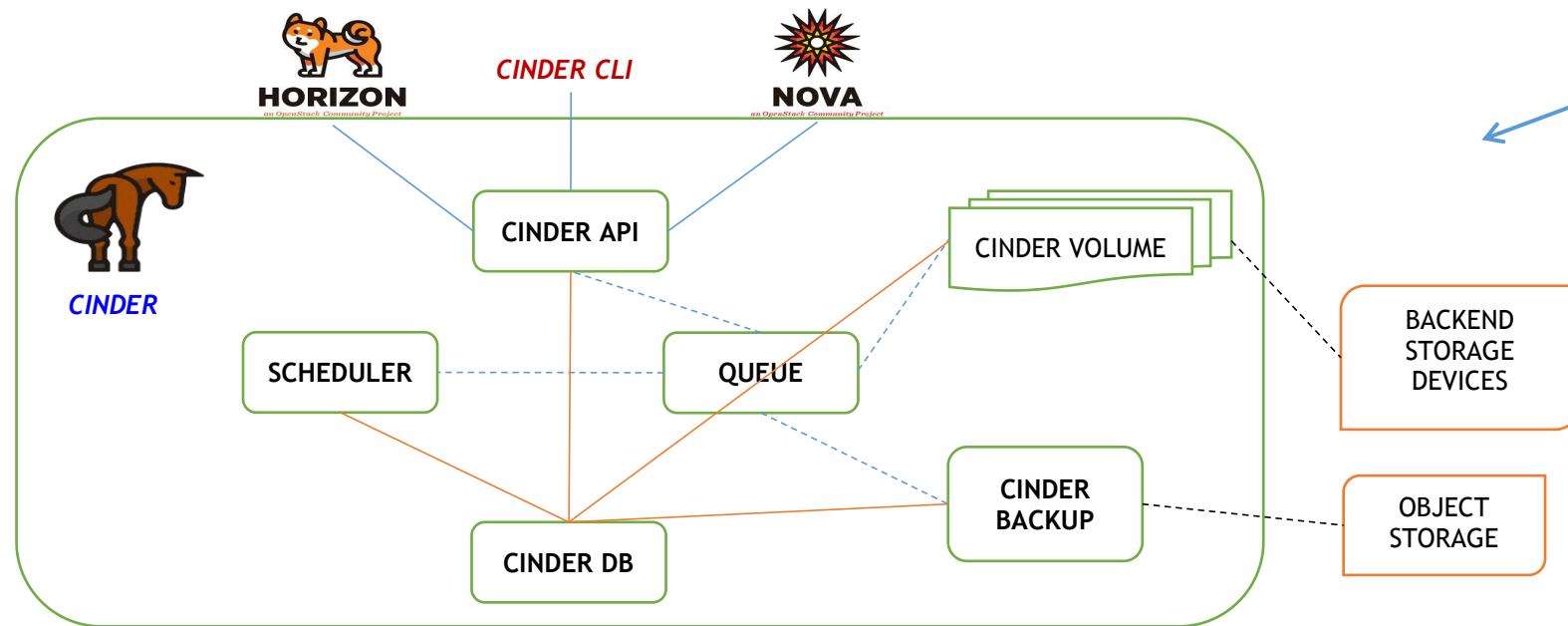# CINDER - OPENSTACK

Cinder is a block storage service from OpenStack that provides volumes to virtual machines, bare metal hosts, and containers

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ARCHITECTURE

HORIZON
an OpenStack Community Project

CINDER CLI

NOVA
an OpenStack Community Project

CINDER

- CINDER API
- SCHEDULER
- QUEUE
- CINDER VOLUME
- CINDER DB
- CINDER BACKUP

BACKEND STORAGE DEVICES

OBJECT STORAGE

Openstack storage realms

- Block Storage (cinder)
- Object Storage (swift)
- Image Storage (glance)
- Epermeral Storage (nova)

CINDER API

- Volume API
- Snapshot API
- Consistency Group API
- Backup API
- Group API
- Volume Type API
- Volume Type Extra Specs API
- Volume Type QoS Specs API

CINDER FUNCTIONS

- Create Volume
- Delete Volume
- Attach Volume
- Detach Volume
- Extend Volume
- Create Snapshot
- Delete Snapshot
- Create Volume from Snapshot
- Create Volume from Volume (clone)
- Create Image from Volume
- Volume Migration (host assisted)

CONTROLLER

REST

- CINDER API
- RPC
- CINDER SCHEDULER

RPC

DATABASE NODE

STORAGE NODE

- CINDER VOLUME MANAGER
- VOLUME DRIVER
- TARGER DRIVER

COMPUTE NODE

- iSCSI initator
- /dev/sdc/
- libvirt
- Instance

STORAGE NODE

- iSCSI target
- LVM logical volume
- LVM volume group