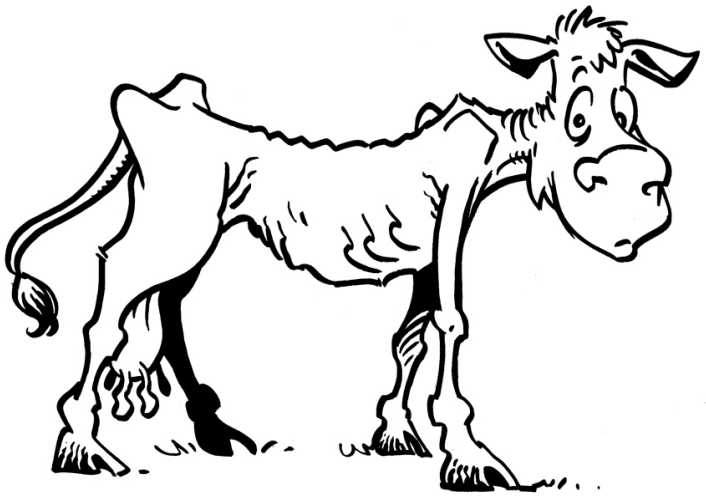
How to build a reliable, highly available OpenStack system?

Attila Szlovencsák

CTO, Component Soft
attila@componentsoft.eu

Pets or cattle?

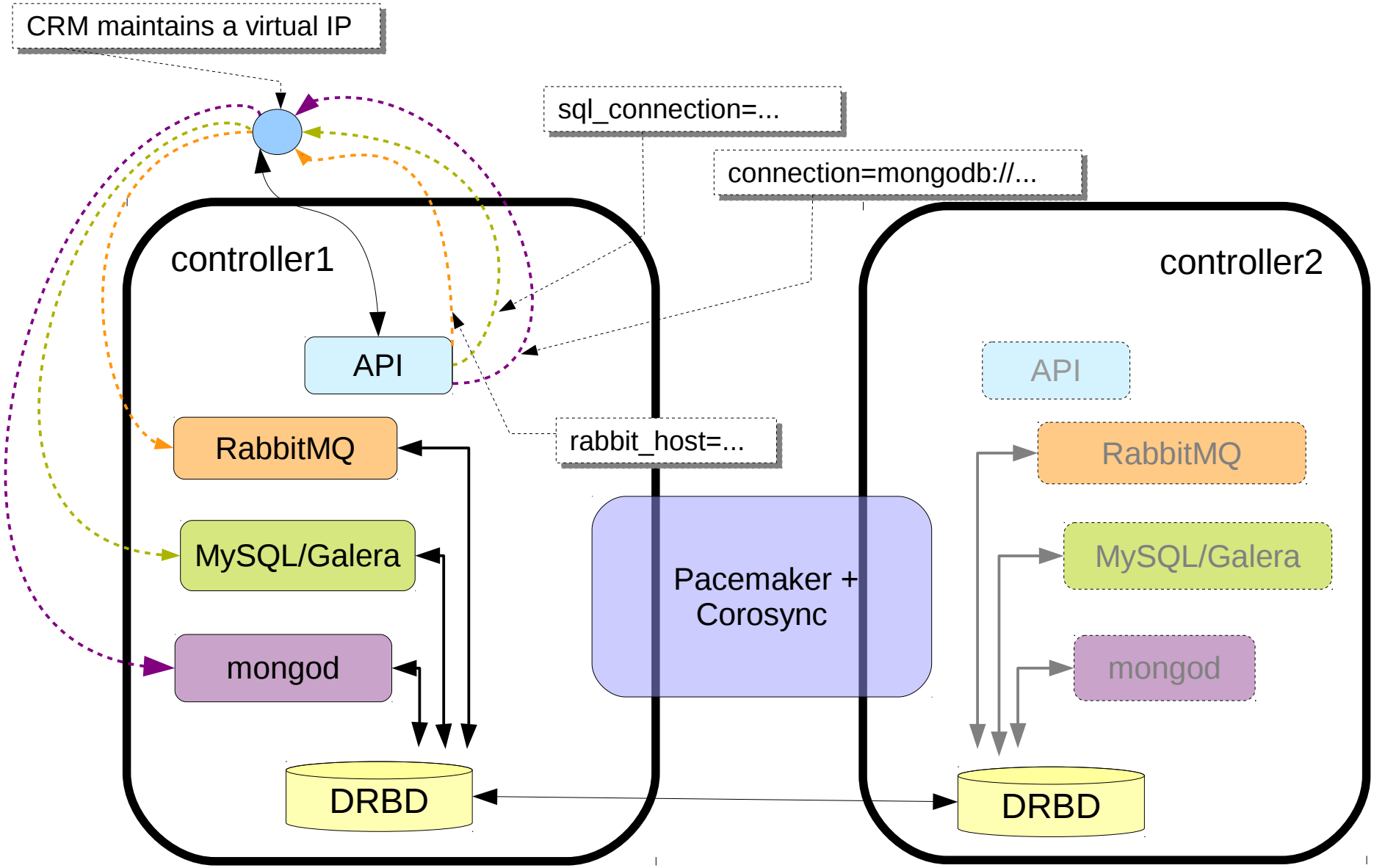
- Pet
  - has loving names
  - unique, hand raised
  - cared for, nursed when get ill
  - it gets bigger over time



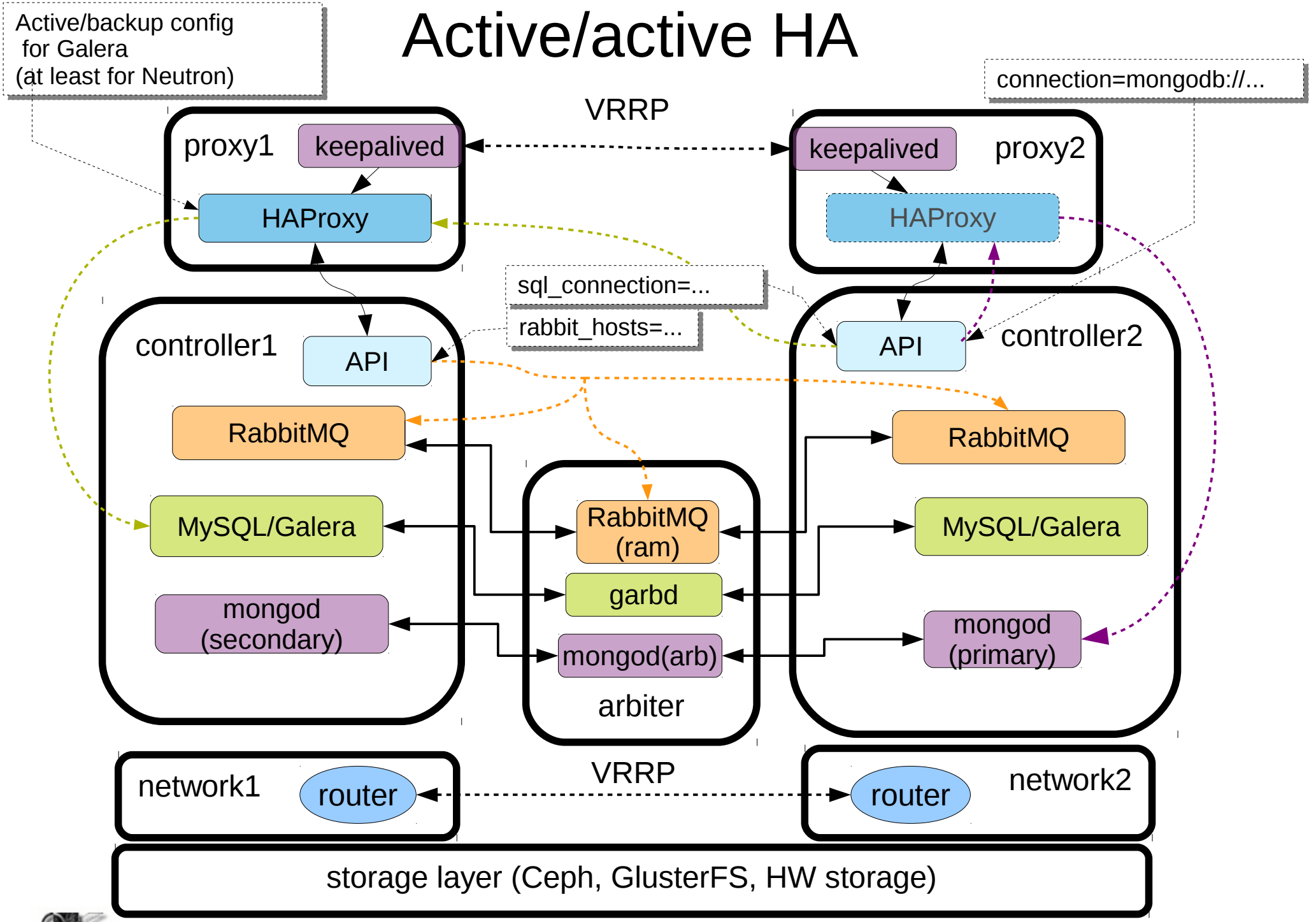
- Cattle
  - has a number (web001)
  - almost identical to another one
  - when they get sick, you shoot them, and buy another one
  - you get more over time

We need *cattle* style VMs in the cloud

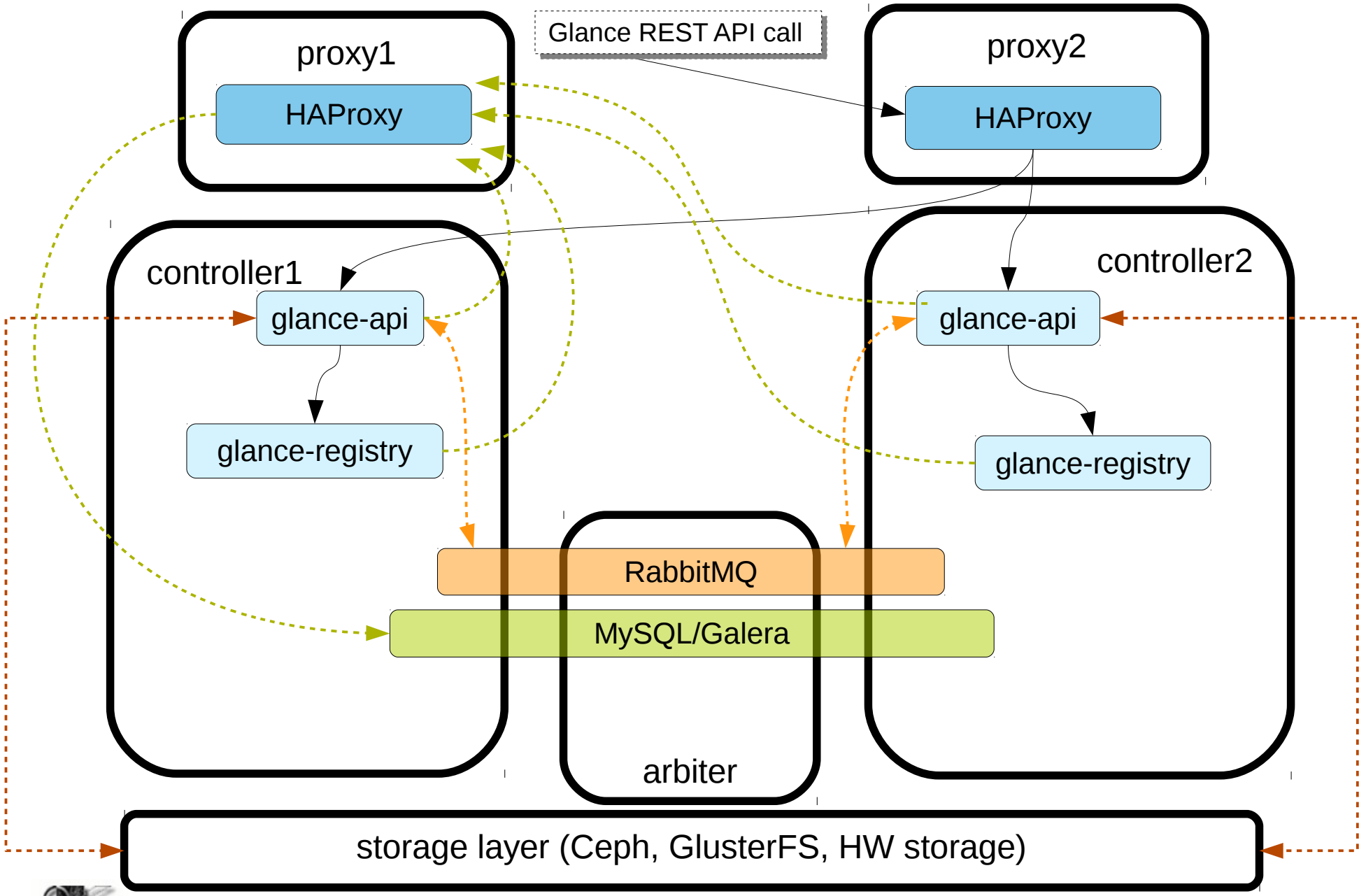
Active/passive HA



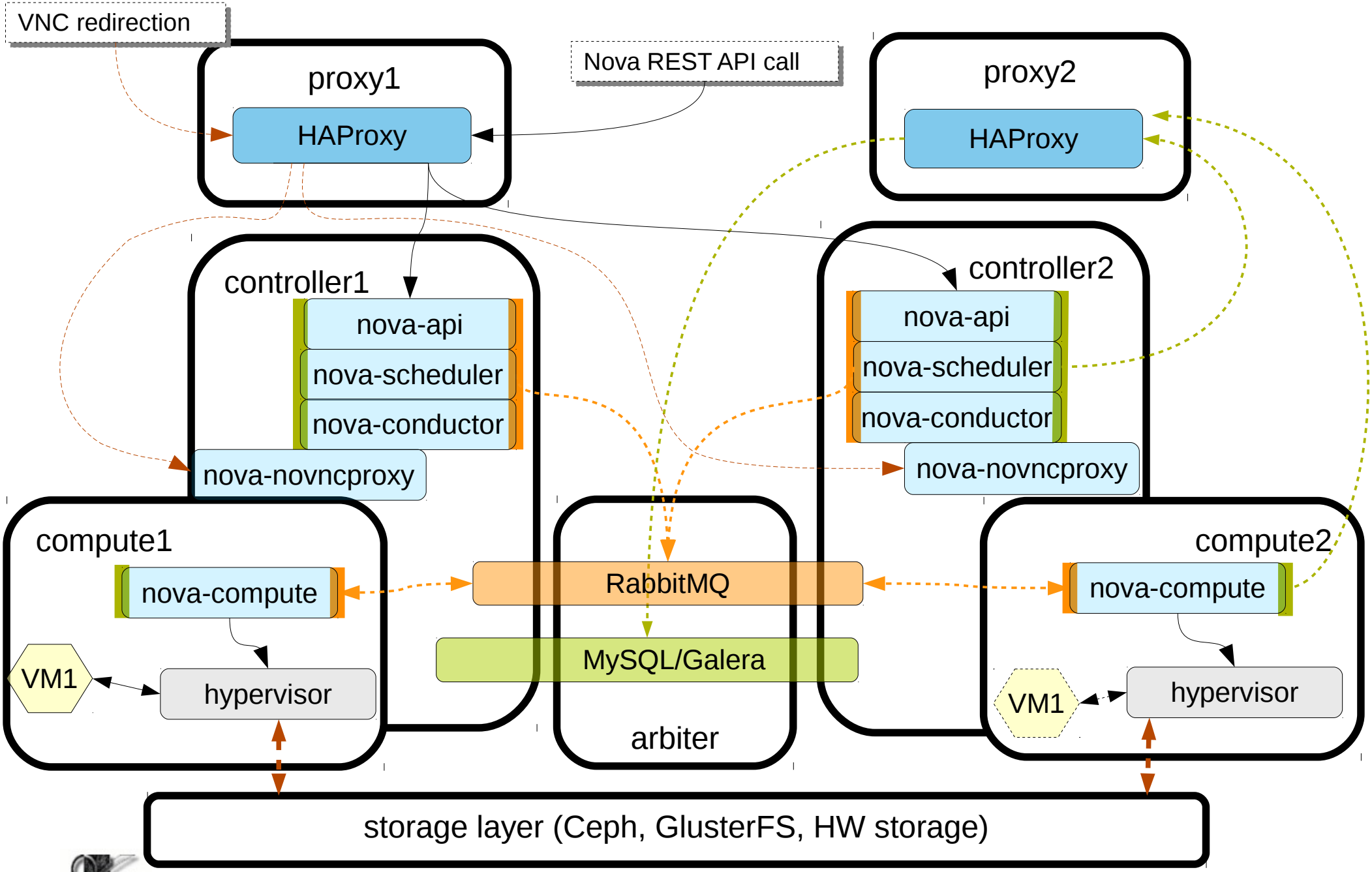
Active/active HA



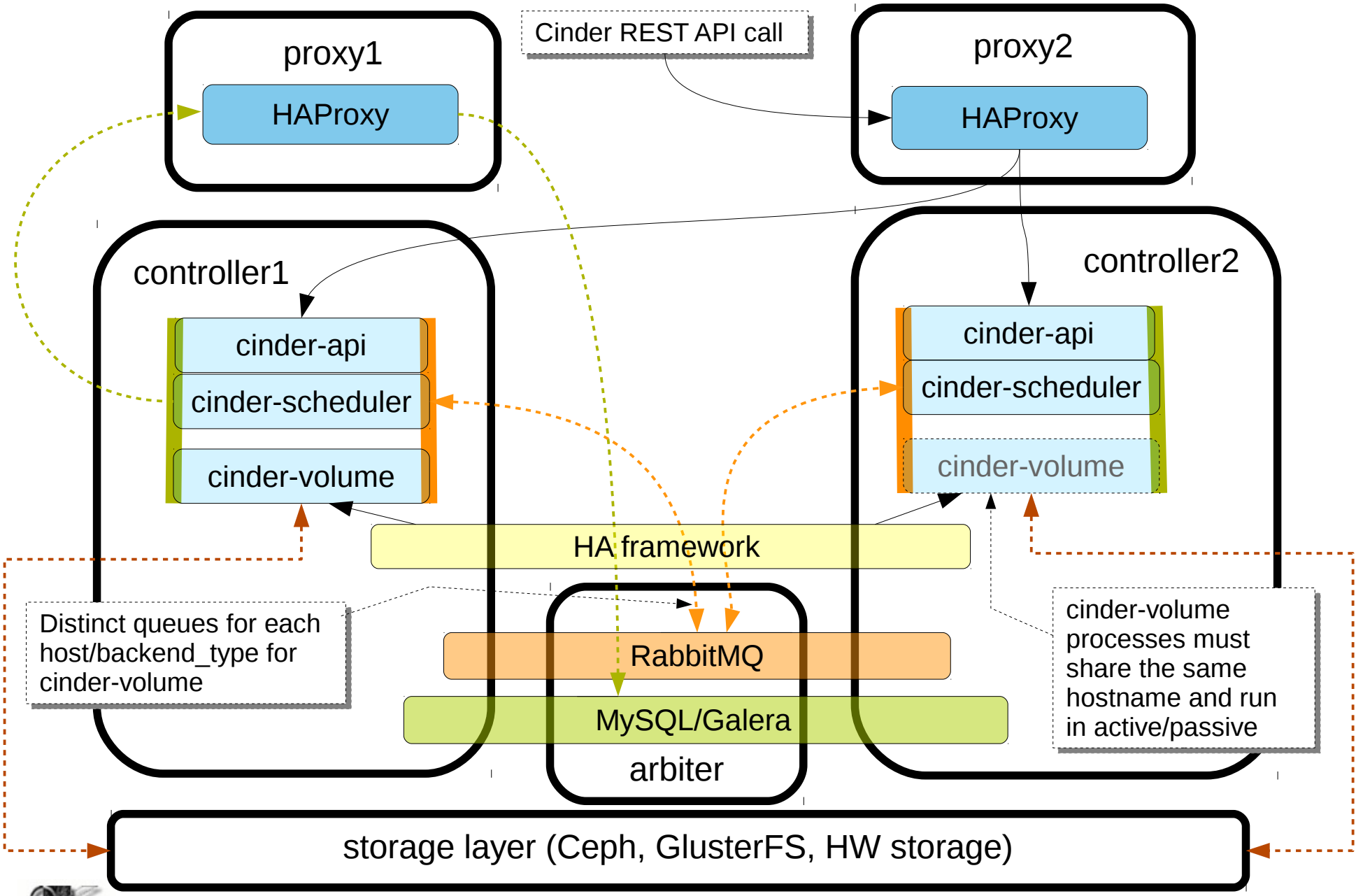
Glance HA (active-active)



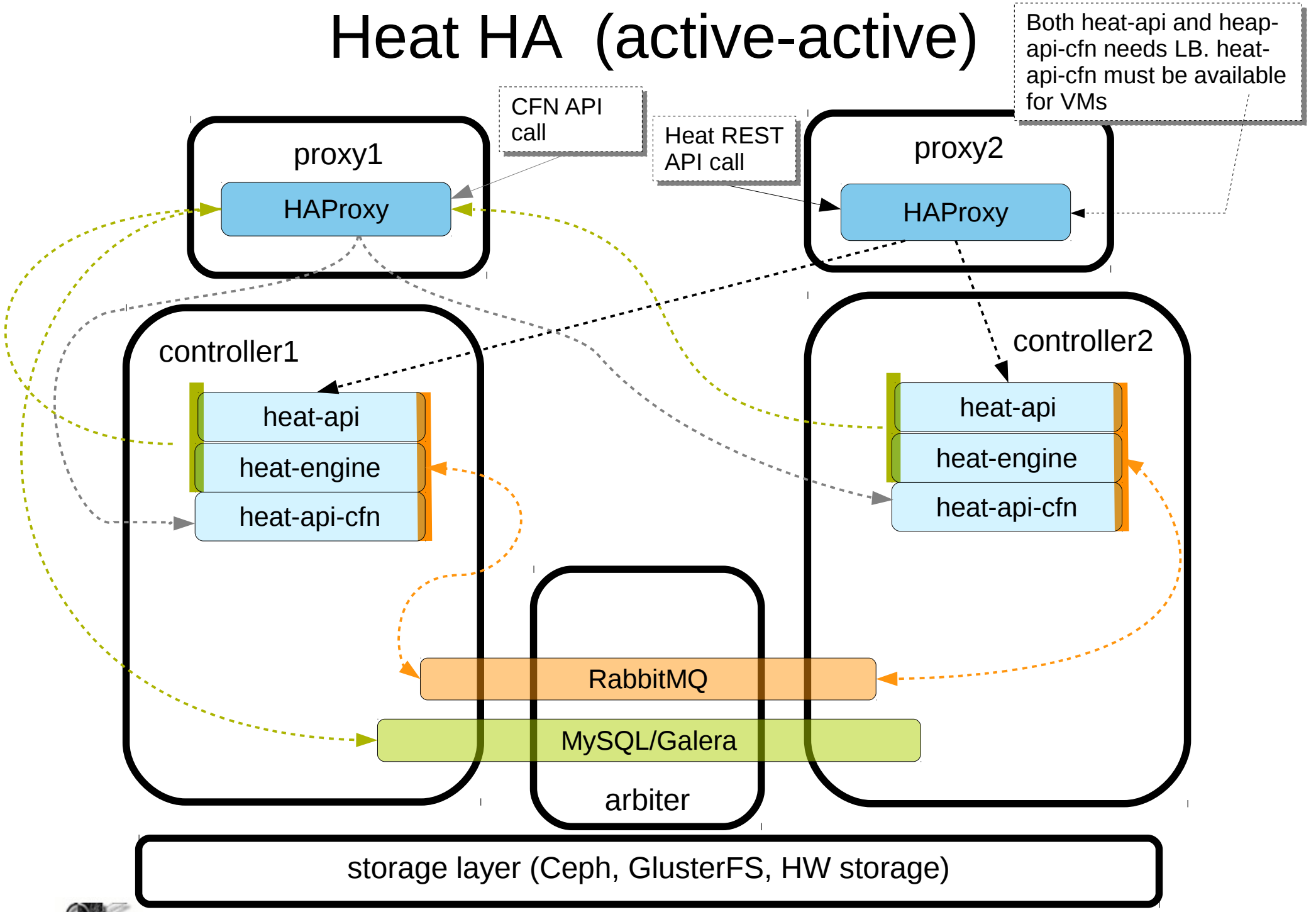
Nova HA (active-active)



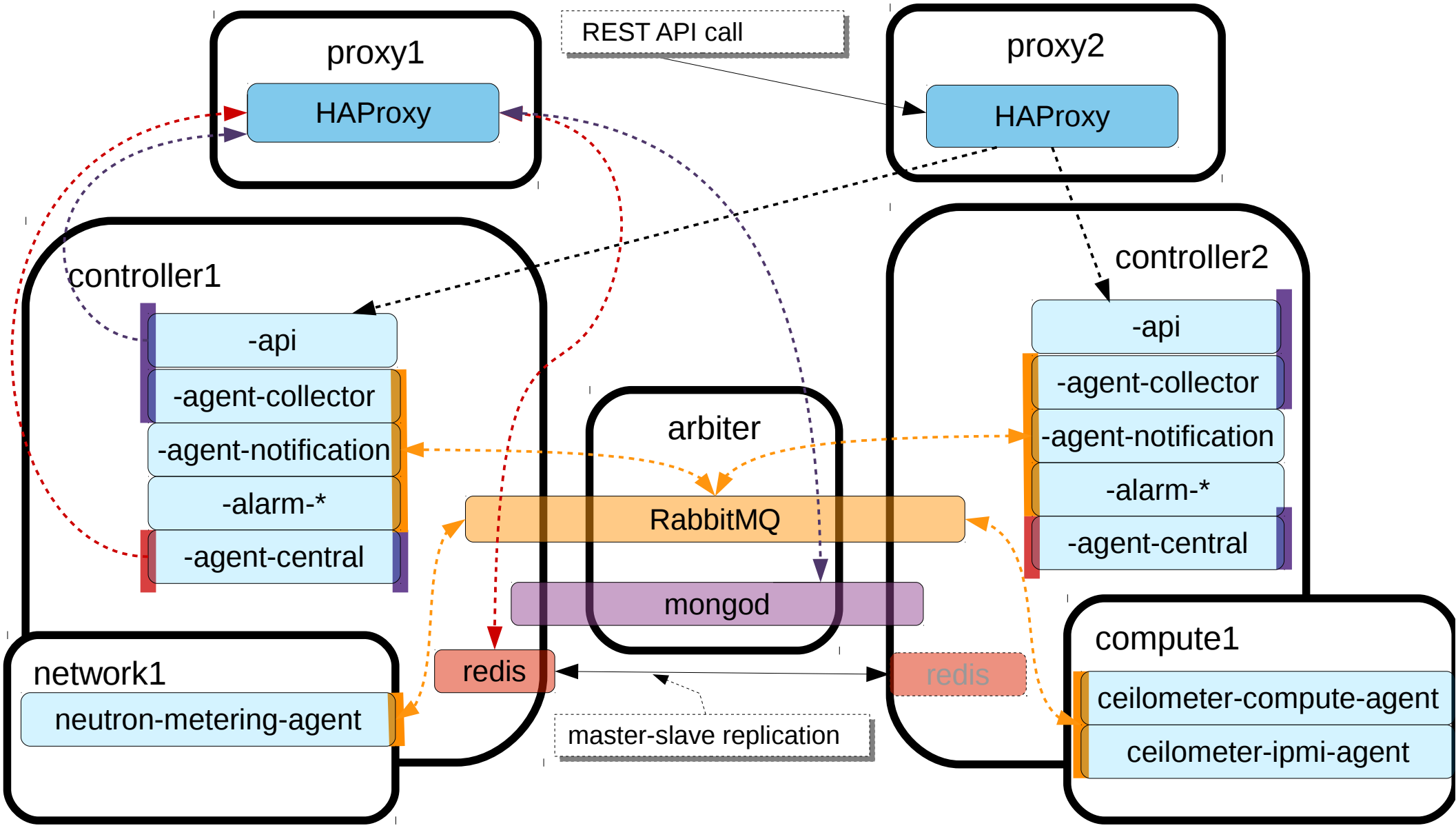
Cinder HA (active-passive)*



Heat HA (active-active)

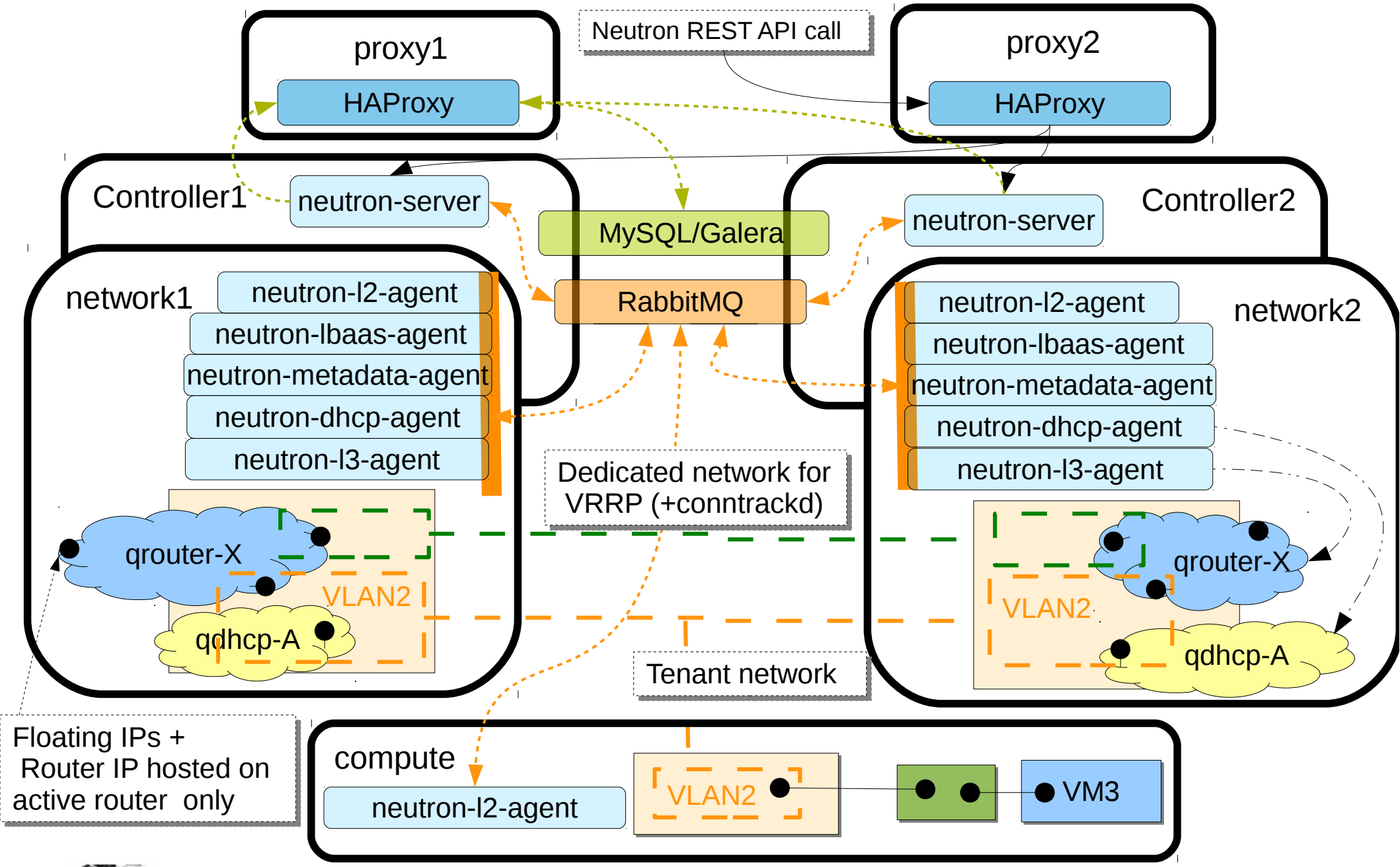


Ceilometer HA (active-active)

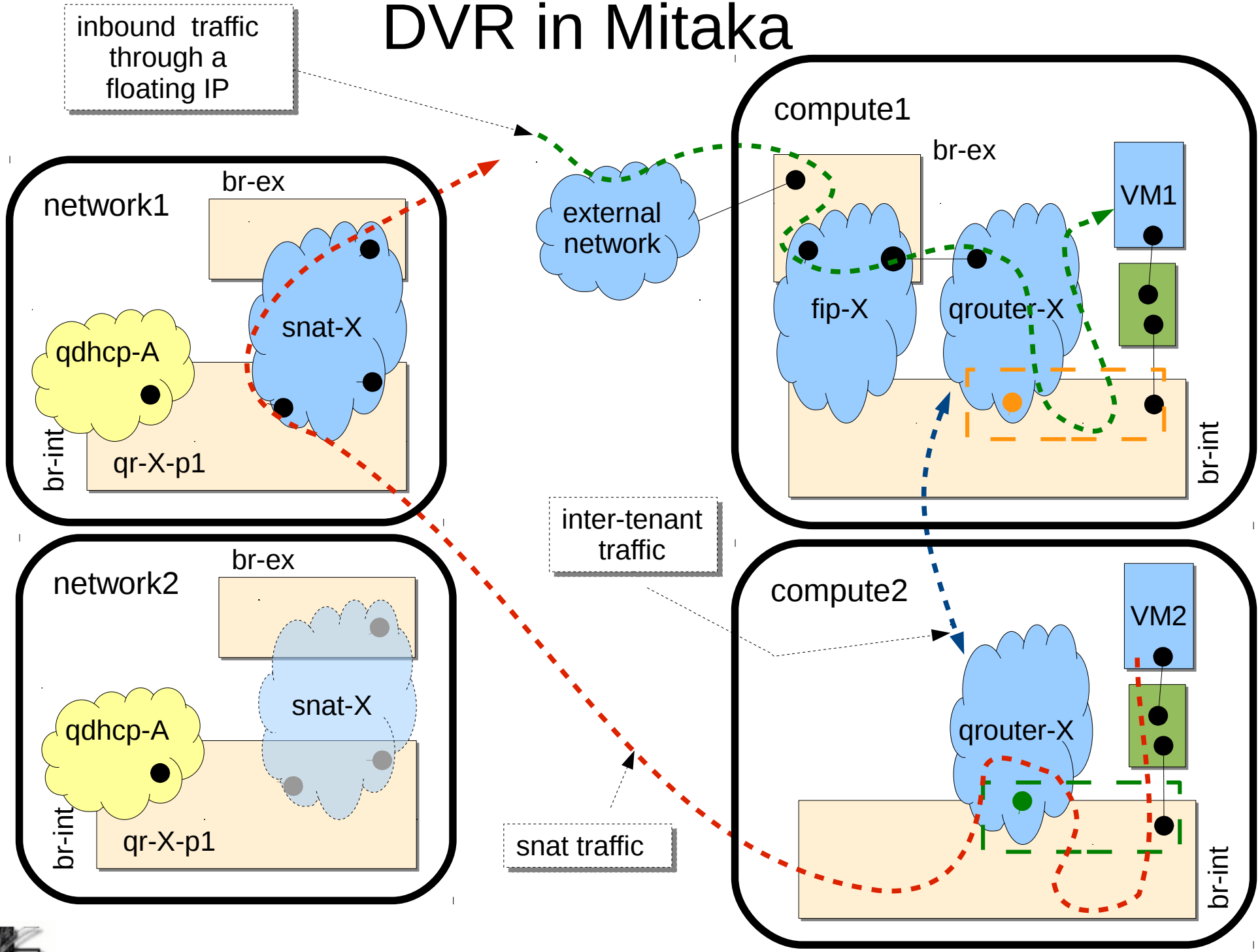


goo.gl/z4flP3

Neutron - L3 HA



DVR in Mitaka



Takeaways

- Nova – no end-to-end solution for VM HA
  - libvirt-watchdog
  - proposal for fencing (nova,neutron,cinder) (not implemented)
  - vendors provide pacemaker-based failover/fencing for your precious VMs
    - (pacemaker_remote, compute fence, evacuate)
- Neutron
  - Still “1213 Deadlock found...” bugs with active/active Galera.
  - DVR + HA routers are supported since Mitaka
    - adv-config-dvr-ha-snat.html
  - LBaaSv2/Octavia implements active/standby LB (haproxy/keepalived)
    - active_passive_loadbalancer.html
- Cinder
  - cinder-volume HA has not completed yet
    - specs/newton/ha-aa-manager_locks.html
    - specs/newton/ha-aa-job-distribution.html

Questions?