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April 2019

Octavia

Project Update
OpenStack Summit - Denver

Adam Harwell - Train PTL - Verizon Media
Carlos Goncalves - Red Hat
Michael Johnson - Red Hat

What is Octavia?

Network Load Balancing as a Service for OpenStack.

- Octavia provides scalable, on demand, and self-service access to network load balancer services, in a technology agnostic manner, for OpenStack.
- The reference load balancing driver provides a highly available load balancer that scales with your compute environment.
- Founded during the Juno release of OpenStack.
- 88 contributors from 29 companies for latest release
- Moved from a Neutron sub-project to a top level OpenStack project during the Ocata series.
- #1 Neutron feature "actively using, interested in using, or looking forward to using" for previous OpenStack user surveys.
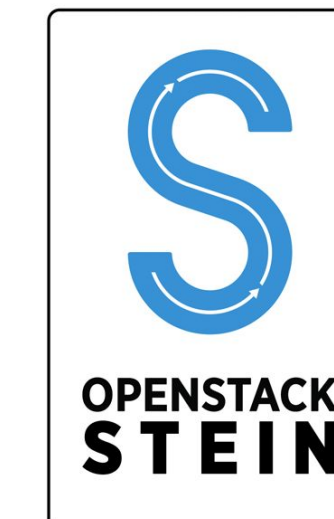
Octavia Stein Features

- Octavia flavors
- TLS client authentication
- TLS backend (member) re-encryption
- New L7 rules for TLS client authentication
- Tags
- Octavia-lib
- L7 policy redirects can now use a configurable HTTP status code
- New L7 policy REDIRECT_PREFIX
- Octavia API now supports Cloud Auditing Data Federation (CADF) auditing

Octavia Train Features

- Neutron-LBaaS retirement
- Log offloading
- VIP Access Control Lists
- Flow resumption

Note: These are not commited work items and the release timing may vary.

Beyond Train

- Active/Active with auto scaling
- Improved TLS cipher and protocol support
- Health monitor content checking
- Additional health monitor protocols
- Compression offload
- Amphora in containers
- Notifications
- HTTP/2
- <Your idea here>

Note: These are not commited work items and the release timing may vary.

Neutron-LBaaS Deprecation

- Neutron-lbaas was declared deprecated during the Queens release cycle.
  - No new features will be merged, but bug fixes will continue until retirement.
- Neutron-lbaas will be retired during the Train release cycle.
- A deprecation FAQ is available on the wiki
  - https://wiki.openstack.org/wiki/Neutron/LBaaS/Deprecation
- We have provided a pass-through proxy driver for neutron-lbaas that forwards requests made via the neutron endpoint to the new Octavia endpoint
- You can also use L7 policies to redirect LBaaS requests to the neutron API to the new Octavia v2 API
- Additional testing has been done validating that the Octavia v2 API is a compatible superset of the neutron-lbaas LBaaS v2 implementation
- Refer to "Migrate from Neutron LBaaS to Octavia LoadBalancing"
  - https://www.openstack.org/summit/berlin-2018/summit-schedule/events/22030/migrate-from-neutron-lbaas-to-octavia-loadbalancing

Cross-Project Work

- Still investigating ways to use containers for amphora

  - LXD based amphora proof of concept
- Potential neutron-fwaas integration for a more flexible load balancer port security solution
- Working with Keystone team on default RBAC roles
- Neutron team discussions about Ryu/Ken and OpenFlow controllers

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How to give feedback

Feel free to give feedback during the Q&A at the end of this session

We are available during multiple time zones on freenode IRC in #openstack-lbaas

Weekly IRC meetings:

Wednesday @ 16:00 UTC in #openstack-lbaas

We are also on the OpenStack discuss mailing list using "[octavia]" as the subject prefix.

Octavia has been migrated to storyboard for bug/RFE tracking:

https://storyboard.openstack.org

How to contribute

- We are looking for developers and code reviewers!
- We have work available:
  - ○ Bug fixing
  - ○ OpenFlow development
  - ○ API feature enhancements
  - ○ Tempest tests
  - ○ Web dashboard
- If you are a load balancing vendor, work on creating an Octavia provider driver. There is a driver developer guide and support from the team available.

Other sessions

Coming up
- Octavia - Project Onboarding
  - Tue 30, 5:10pm - 5:50pm
  - The Colorado Convention Center - 406

- OpenStack Load Balancing New Features Deep Dive
  - Wed 1, 10:50am - 11:30am
  - The Colorado Convention Center - Meeting Room Level - 501/502