Devstack Plugin Ceph Documentation

OpenStack Foundation

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DEVSTACK CEPH PLUGIN

1.1 Overview

Devstack plugin to configure Ceph as the storage backend for openstack services

As part of `stack.sh`:

- Creates a Ceph cluster for use with openstack services using Ceph orchestrator

- Configures Ceph as the storage backend for Cinder, Cinder Backup, Nova, Manila, and Glance services

- (Optionally) Sets up & configures Rados gateway (aka rgw or radosgw) as a Swift endpoint with Keystone integration. Set `ENABLE_CEPH_RGW=True` in your `localrc`

- Supports Ceph cluster running local or remote to openstack services

As part of `unstack.sh|clean.sh`:

- Tears down the Ceph cluster and its related services

1.2 Usage

- To get started quickly, just enable the plugin in your `local.conf`:

  ```
  enable_plugin devstack-plugin-ceph https://opendev.org/openstack/
  devstack-plugin-ceph
  ```

Run `stack.sh` in your devstack tree and boom! Youre good to go.

- Ceph is setup as the default storage backend for Cinder, Cinder Backup, Glance, Manila and Nova services. You have the ability to control each of the enabled services with the following configuration in your `local.conf`:

  ```
  ENABLE_CEPH_CINDER=True      # ceph backend for cinder
  ENABLE_CEPH_GLANCE=True      # store images in ceph
  ENABLE_CEPH_C_BAK=True       # backup volumes to ceph
  ENABLE_CEPH_NOVA=True        # allow nova to use ceph resources
  ENABLE_CEPH_MANILA=True      # allow manila to use CephFS as backend
  (Native CephFS or CephFS via NFS)
  ```

Change any of the above lines to `False` to disable that feature specifically.

Manilas CephFS Native driver that supports native Ceph protocol is enabled by default. To use CephFS NFS-Ganesha driver that supports NFS protocol add the setting:

```
MANILA_CEPH_DRIVER=cephfsnfs
```

If youd like to use a standalone NFS Ganesha service in place of ceph orchestrator deployed `ceph-nfs` service, set:

```
CEPHADM_DEPLOY_NFS=False
```

Make sure that the manila plugin is enabled before devstack-plugin-ceph in the `local.conf` file.

- Then run `stack.sh` and wait for the *magic* to happen :)

1.3 Known Issues / Limitations

- Rados Gateway with Keystone for Swift - works on Ubuntu only

- Tempest test failures when using RGW as swift endpoint

- Tempest fails due to verify-tempest-config erroring out, when using RGW as swift endpoint

1.4 Bugs

- https://bugs.launchpad.net/devstack-plugin-ceph

FOR CONTRIBUTORS

If you are a new contributor to devstack-plugin-ceph please refer: *So You Want to Contribute*

2.1 So You Want to Contribute

For general information on contributing to OpenStack, please check out the contributor guide to get started. It covers all the basics that are common to all OpenStack projects: the accounts you need, the basics of interacting with our Gerrit review system, how we communicate as a community, etc.

Below will cover the more project specific information you need to get started with Devstack Plugin Ceph.

2.1.1 Communication

- IRC channel `#openstack-qa` at OFTC

- Mailing list (prefix subjects with `[qa]` for faster responses) http://lists.openstack.org/cgi-bin/mailman/listinfo/openstack-discuss

2.1.2 Contacting the Core Team

Please refer to the Devstack Plugin Ceph Core Team contacts.

2.1.3 New Feature Planning

If you want to propose a new feature please read Feature Proposal Process Devstack features are tracked on Launchpad BP.

2.1.4 Task Tracking

We track our tasks in Launchpad.

If youre looking for some smaller, easier work item to pick up and get started on, search for the low-hanging-fruit tag.

2.1.5 Reporting a Bug

You found an issue and want to make sure we are aware of it? You can do so on Launchpad. More info about Launchpad usage can be found on OpenStack docs page

2.1.6 Getting Your Patch Merged

All changes proposed to the Devstack Plugin Ceph require two `Code-Review +2` votes from core reviewers before one of the core reviewers can approve the patch by giving `Workflow +1` vote.

2.1.7 Project Team Lead Duties

All common PTL duties are enumerated in the PTL guide.

The Release Process for QA is documented in QA Release Process.