



OpenStack: Notes on enabling Glance multistore support using a Cinder backend

https://kb.netapp.com/Cloud/OpenStack/OpenStack__Notes_on_enabling_Glance_multistore_support_...

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Applies to

- OpenStack
- DevStack

Description

Glance (the Image service for OpenStack) provides a catalog of images that are used to create VMs.

Glance can make use of multiple image backends such as (but not limited to):

- file (local storage)

- http
- rbd
- swift
- cinder

In this article, we'll cover using Cinder as a backend for Glance. There are a number of advantages to using Cinder as a backend for Glance:

- Leverage the logical separation that ONTAP Storage Virtual Machines (SVM) provide. This is useful if you want each project / tenant to manage and own their own images
- The potential to significantly improve provisioning times
 - With a non-Cinder based image backend, during VM / volume provisioning, the glance image would need to be copied from the glance store to a mounted volume. This usually leverages Linux `dd` to perform the copy, which could be time consuming
 - Using a Cinder based image backend, if the glance image (Image-Volume) is based on the same flexvol as the boot volume being created, Glance will instantly clone the image volume to create the boot volume. This can significantly decrease provisioning times.

In the following procedure, we will configure Glance to handle two possible use cases:

- Glance images are owned by a single project
- Glance images are owned by individual projects / tenants

Both configurations can leverage instant clones (if the image volume is present in the same flexvol as the cinder volume being created). The "each project / tenant owns their own images" meets the criteria of creating logical separation between tenants. Which could be useful for billing purposes (charging customers for the storage their images use).