



IT-OIS-CV
(Cloud & Virtualization Section)

Archiving OpenStack cloud volumes

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CERNopenlab

Cinder

- Openstack project/service providing volumes.
- Persistent storage for critical data
 - Not relying on VMs
 - Can switch between VMs

The CERN Openlab logo, featuring a blue globe with white lines and the text 'CERN openlab' in blue.

CERN openlab

The Cinder Block Storage logo, featuring the text 'CINDER BLOCK STORAGE' in red and black, next to a teal 3D cube icon.

CINDER
BLOCK STORAGE

Cinder


The CERN Openlab logo, featuring a blue globe with white lines and the text "CERN openlab" in blue.The Cinder Block Storage logo, with the word "CINDER" in red and "BLOCK STORAGE" in black below it.The Ceph logo, featuring a red circular icon with a white stylized 'C' and the word "ceph" in black lowercase letters.

- Openstack project/service providing volumes.
- Persistent storage for critical data
 - Not relying on VMs
 - Can switch between VMs
- Where do we keep them in CERN?
 - CEPH - Distributed object storage/file system
 - High-performing
 - Reliable
 - Scalable

Archiving Cinder volumes

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- Defining the necessary large scale deployment tools.

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- Ceph
 - Same cluster
 - Different cluster

Cinder backup - TSM

- + already used
- + support for Cinder
- no support for Cinder & Ceph

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- Possible, but not very useful.
 - All features already in Ceph.

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- Different location.
- Still same technology.

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- Different cluster



- Different location.
- Still same technology.

Cinder backup - Ceph

- Testing environment with connection to both Ceph clusters.

Consistency	Yes, with detaching volumes.
Quotas	Total size and number of backups. Latest release.
Scalability	All backups go through Cinder nodes.

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- Some minor problems with Libvirt, Cinder and Ceph.
 - <https://bugs.launchpad.net/nova/+bug/1482171>
 - <https://bugs.launchpad.net/nova/+bug/1288210>

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- Backups at TSM (tapes) - not possible.
 - <https://bugs.launchpad.net/cinder/+bug/1446644>
- Backups at Ceph - possible.
- Some minor problems with Libvirt, Cinder and Ceph.
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 - <https://bugs.launchpad.net/nova/+bug/1288210>
- Still not everything is implemented,
but new features are added every release.
 - <https://blueprints.launchpad.net/cinder/+spec/cinder-live-backup>
 - <https://blueprints.launchpad.net/cinder/+spec/backup-snapshot>
 - <https://blueprints.launchpad.net/cinder/+spec/scalable-backup-service>
 - <https://blueprints.launchpad.net/cinder/+spec/quiesced-snapshots-with-qemu-guest-agent>