

# OpenStack Manila User Interface Enhancements

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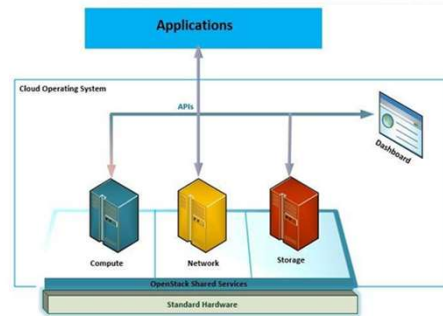
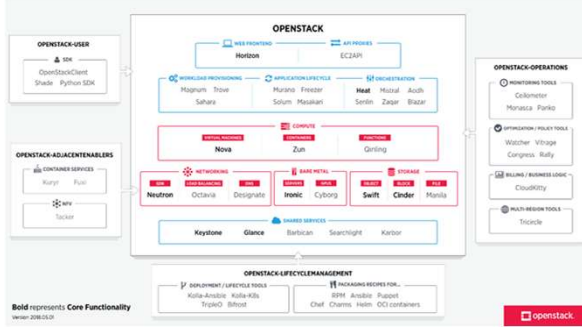
Sponsor: Red Hat Openstack



Capstone 2025

## OpenStack Overview

- Open-source cloud computing platform offering many services to organizations globally:
  - Nova (compute)
  - Neutron (networking)
  - Manila (shared file system)**
  - etc.



## Tools



## Project Overview

- Openstack Manila is a shared file system service provided by OpenStack
- Many of Manila's services are only available through the command-line interface. The goal of our project was to provide access to these services through OpenStack's Horizon dashboard.
- The implemented features provide OpenStack's clients a greater degree of administrative control over their shared file systems

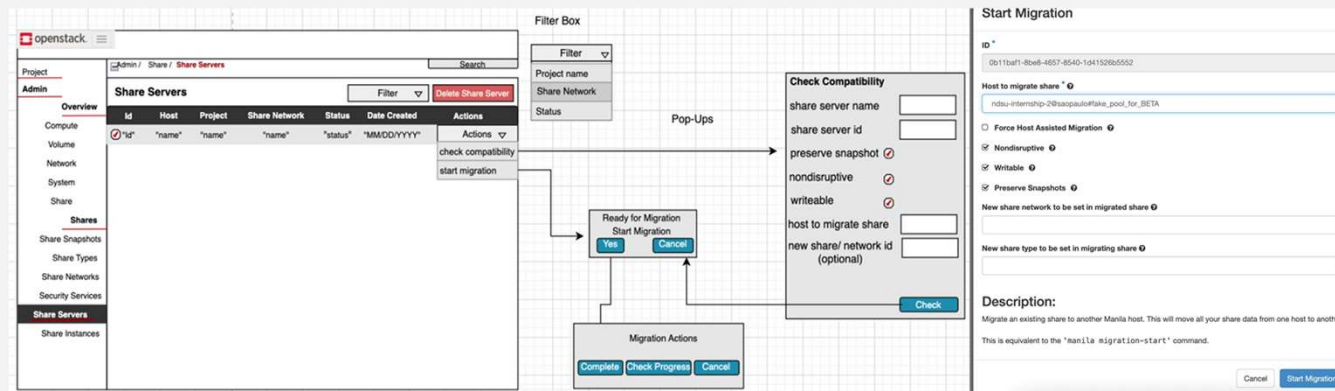
```
stack@nfsu-capstone-01:~$ openstack share list --project admin
```

ID	Name	Size	Share Proto	Status	Is Public	Share Type Name	Host	Availability Zone
cfb08f42-21c6-4fa0-8b8c-dc991999696a	Test2	1	NFS	available	False	dhss_true	ndsu-capston-e-58linafake-pool_for_GAM	manila-zone-2
a2718683-5165-42c1-8696-60708f727fd1	Test3	1	NFS	error	False	dhss_true	ndsu-capston-e-58linafake-pool_for_GAM	manila-zone-1
311d9110-e180-4026-997f-267807168062	Test4	1	NFS	error	False	dhss_true	ndsu-capston-e-58linafake-pool_for_GAM	None
40252607f-4034-4313-9f8f-066cc97d819	Test5	1	NFS	available	False	dhss_true	ndsu-capston-e-58linafake-pool_for_GAM	manila-zone-2
13de2b0f-4034-4313-9f8f-066cc97d819	TestShare	1	NFS	error	False	dhss_true	ndsu-capston-e-58linafake-pool_for_GAM	manila-zone-0

The screenshot shows the OpenStack Horizon dashboard with the 'Shares' table. The table lists various shares with columns for Name, Description, Metadata, Size, Status, Protocol, Availability, Share Network, Share Group, and Actions.

## Project Features

- Manage/Unmanage share
- Add new API filters to user messages
- Share server Migration
- New Quotas to quota table
- Provided support for managing a share with DHSS=True mode



```
MANILA_QUOTA_NAMES = {
    'shares': _('Shares'),
    'gigabytes': _('Share gigabytes'),
    'snapshots': _('Share Snapshots'),
    'snapshot_gigabytes': _('Share Snapshot gigabytes'),
    'share_networks': _('Share Networks'),
    'share_groups': _('Share Groups'),
    'share_group_snapshots': _('Share Group Snapshots'),
    'share_replicas': _('Share Replicas'),
    'replica_gigabytes': _('Replica Gigabytes'),
    'per_share_gigabytes': _('Per Share Gigabytes'),
}
```

Defaults

Quota Name	Limit
Shares	30
Share gigabytes	1000
Share Snapshots	50
Share Snapshot gigabytes	1000
Share Networks	10
Share Groups	15
Share Group Snapshots	50
Share Replicas	101
Replica Gigabytes	1001
Per Share Gigabytes	1

