

Project Infrastructure



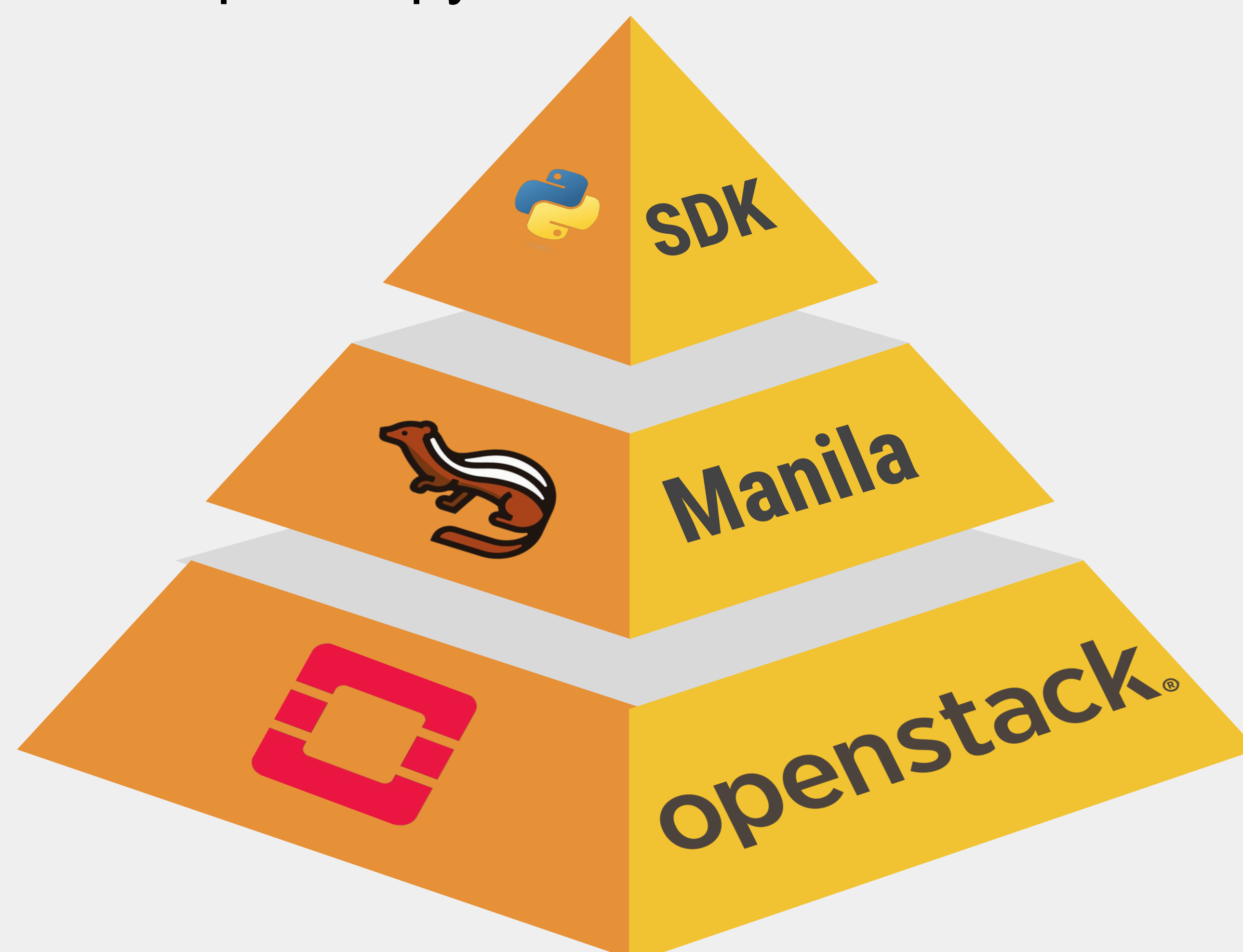
- **Open Source Cloud Computing platform.**
 - Supports multiple services such as compute, object storage, networking, **shared file systems (Manila)**.



- **Shared file system service part of OpenStack**
 - Supports multiple storage backends (Ceph, LVM, etc) and frontends (NFS, CIFS, CephFS).



- **Unified way of interacting with OpenStack service APIs.**
 - Abstracts the **Manila API** and other OpenStack services.
 - Developed in python.



Why Is the SDK Important?

- **Simplified Development**
 - Abstraction simplifies the process of creating, managing, and accessing shared file systems within OpenStack.
 - Developers can focus less on underlying complexity of the project.
- **Improved Flexibility**
 - More portable and customizable which enables organizations to tailor **file-sharing services (Manila)** to their specific needs.

Our Contributions

Capabilities added to SDK

- Modify access rules for shared file systems.
- Resize shared file systems with the SDK.
- Set the network for shares.
- Set the subnet shared file systems should use.
- Cleaner handling of resource requests.
- Manage export locations.
- Manage share instances/servers.
- Create share replicas.

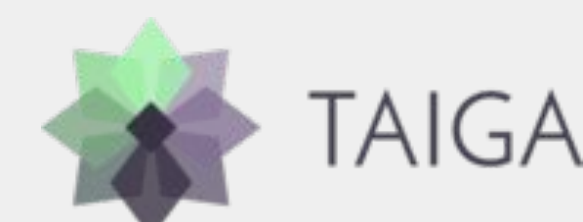
Example of SDK Usage:

```
nfs_share = conn.shared_file_system.get_share(share_id="5d350fdd-6823-4866-9869-a844f67c7856")
# Resize share to 20 GiB
conn.resize_share(nfs_share, new_size=20)
```

<input type="checkbox"/>	Name	Description	Metadata	Size	Status
<input type="checkbox"/>	Test Share	Share that's too small.		10GiB	Extending

<input type="checkbox"/>	Name	Description	Metadata	Size	Status
<input type="checkbox"/>	Test Share	Share that's too small.		20GiB	Available

Development and Workflow



- Ubuntu VMS configured with DevStack used as dev environment.
- Gerrit used for review and repository management, git for source control.
- Tox used for test automation including unit, functional, and styling conformance.
- Zuul for continuous integration.
- Taiga for issue and progress tracking.