

# OpenSDS Contribution Primer

## Workflow, Tips and Tricks

Sean McGinnis



# The Core Projects

## SUSHI

The Northbound Plug-ins Project

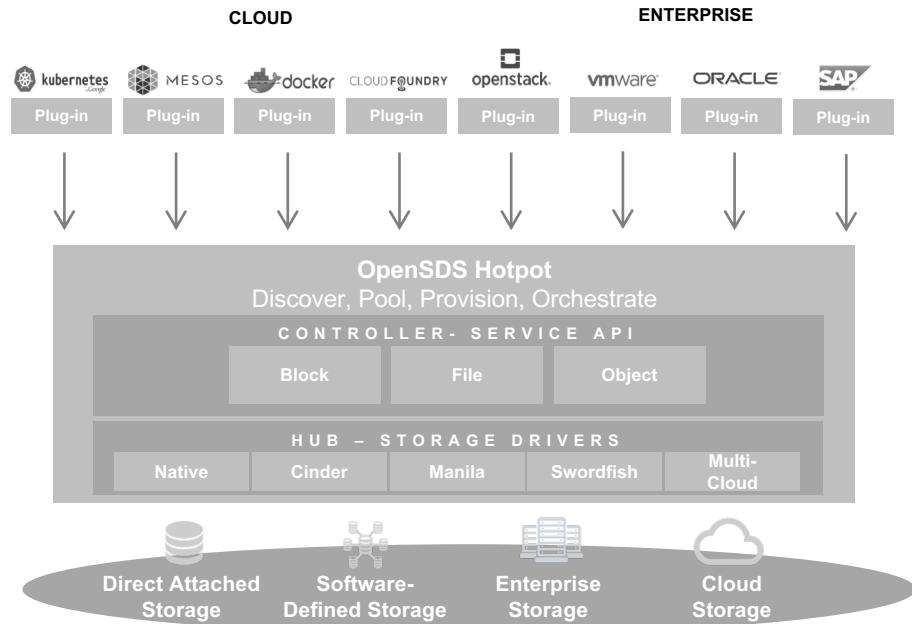
Common plug-ins to enable OpenSDS storage services for cloud and application frameworks



## HOTPOT

The Storage Controller Project

Single control for block, file, and object services across storage on premise and in clouds



# Project Repos

≡ [opensds](#)

Hotpot: OpenSDS Controller Project

● Go    ★ 88    ⚡ 56

≡ [nbp](#)

Sushi: OpenSDS Northbound Plugin Project

● Go    ★ 13    ⚡ 7

≡ [tsc](#)

OpenSDS TSC Meeting Documents

★ 3    ⚡ 2

≡ [design-specs](#)

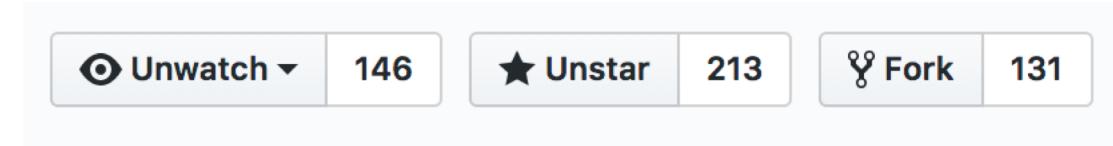
OpenSDS design proposals repo

★ 4    ⚡ 6

<https://github.com/opensds>



# Project Repos



# Governance

## Technical Steering Committee



**Steven Tan, Chairman**  
Huawei, VP & CTO Cloud Solution



**Rakesh Jain, Vice-Chair**  
IBM, Research Engineer and Architect



**Allen Samuels**  
Western Digital, R&D Engineering Fellow



**Anjaneya "Reddy" Chagam**  
Intel, Chief SDS Architect



**Jay Bryant**  
Lenovo, Cloud Storage Lead

## End-User Advisory Committee



**Cosimo Rossetti**  
Vodafone, Lead Storage Architect



**Yusuke Sato**  
Yahoo Japan, Infrastructure Lead



**Kei Kusunoki**  
NTT Communications, Storage Architect



**Yuji Yazawa**  
Toyota ITC, Group Lead



# Governance Structure

TSC

Project and Architecture  
Xing Yang

Ecosystem  
Howard Huang

Community and Release  
Sean McGinnis

Hotpot Project Lead  
Leon Wang

Sushi Project Lead  
Xiang



# Community Communication

OpenSDS Slack Channel

<https://opensds.slack.com/>

Mailing Lists

<https://lists.opensds.io/>

GitHub Issues

<https://github.com/opensds/opensds/issues>



# OpenSDS Meetings

Technical meetings weekly

Tuesdays, 12pm Eastern US time

Thursdays, 8pm Eastern US time

Meetings held using Zoom for audio and video.

See <https://github.com/opensds/opensds/blob/master/COMMUNITY.md> for more details.



# New Features

Design specification submitted as a pull request to  
`opensds/design-specs` repo.

Pull request used to discuss design decision and clarify  
plan.

<https://github.com/opensds/design-specs>



# Fixing Bugs

Open bugs are tracked using the GitHub issue tracker.  
Assign issue to yourself if no one is working on it.

Assignees



No one—assign yourself



# Early Release Testing

Manual testing is very much appreciated!

Development releases are available from  
the [opensds/opensds Releases tab.](#)



# GitHub Workflow

- Fork repo
- Clone your fork and create a branch
- Make changes to code
- Push changes to your forked repo
- Open pull request from your forked branch to the OpenSDS **development** branch



# GitHub Workflow Example

```
$ git clone https://github.com/stmcginnis/opensds.git
$ cd opensds
$ git checkout -b my_cool_new_feature
# Make changes to code
$ git add .
$ git commit
$ git push origin my_cool_new_feature
```



# GitHub Workflow Example

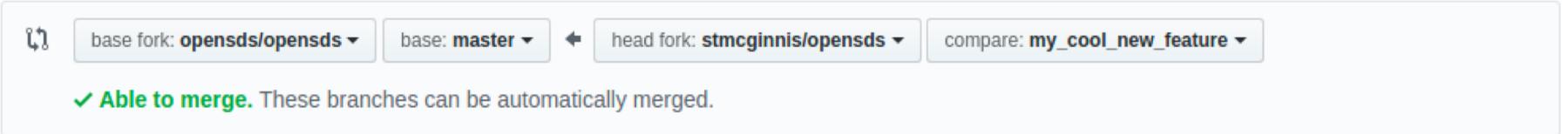
Your recently pushed branches:

 my\_cool\_new\_feature (less than a minute ago)

 Compare & pull request



# GitHub Workflow Example



base fork: [opensds/opensds](#) ▾ base: [master](#) ▾ ← head fork: [stmcginnis/opensds](#) ▾ compare: [my\\_cool\\_new\\_feature](#) ▾

✓ **Able to merge.** These branches can be automatically merged.



# GitHub Workflow Example

# Updating Changes

```
$ git add .
```

```
$ git commit
```

```
$ git push origin my_cool_new_feature
```

```
# Or...
```

```
$ git push --force origin my_cool_new_feature
```



# Workflow Using Hub

```
$ git clone opensds/opensds
$ cd opensds
$ git checkout -b my_cool_new_feature
# Make changes to code
$ git add .
$ git commit
$ git fork
$ git push USER_NAME my_cool_new_feature
$ git pull-request
```



# OpenSDS Roadmap v0.14

**2017H2**

**ZEALAND**

**Storage For  
Kubernetes**

- Kubernetes FlexVolume
- Vol CRUD
- Standalone Cinder Integration
- CSI Support
- Ceph, LVM

**2018H1**

**ARUBA**

**Storage  
Orchestration**

- OpenStack
- Replication Array-Based, Host-Based
- Dashboard
- Virtual Pools
- Storage Profiles
- NVMeoF preview
- Enumeration
- Block Storage
  - Ceph
  - LVM
  - IBM: XIV, Storwize, SVC
  - Huawei: Dorado

**2018H2**

**BALI**

**Storage  
Multi-Cloud**

- Data Migration Offline, Online\*
- Monitoring
- Multi-OpenStack
- S3 Object
- Multi-Cloud Control
- NVMeoF
- Storage Groups Snapshots, Replication
- CSI Mesos\*, Docker\*
- Swordfish Dell-EMC, NetApp

**2019H1**

**CAPRI**

**Storage  
Intelligence**

- Analytics
- Lifecycle
- Data Protection
- File Share

**2019H2++**

- Performance
- Optimization
- Tiering
- Security
- Sharing
- Networking
- SCM

<https://github.com/opensds>



# Supporting Organizations

An industry-wide open source project for software-defined storage management



## OUR NEWEST MEMBER

**LINBIT**



# Thank You!