



**Easy to use local storage management for Linux**

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# What is Stratis Storage?

- Stratis is a Hybrid Volume-managing Filesystem
- Easy to use storage management
- Works as User-space daemon
- Powered by Device-mapper subsystem(DM) and XFS
- Future storage can compared to ZFS, Btrfs, LVM
- Working on Linux Kernel 4.14 and up
- Project of Red Hat  redhat.

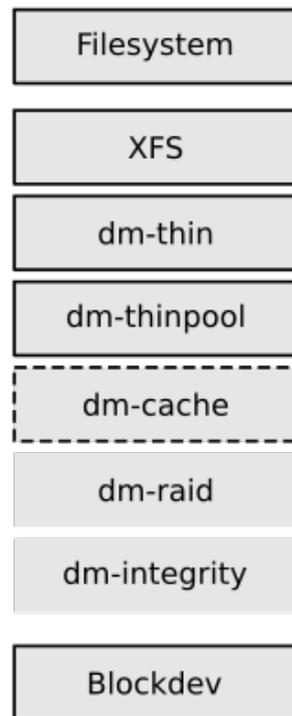
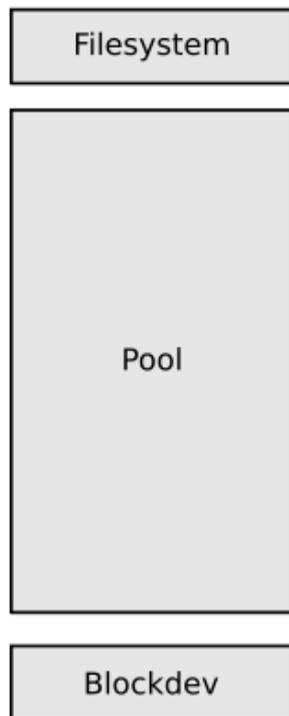
# Available Features

Release 1.0

- Thin-provisioning
- Snapshots
- Pool-based management
- Easy monitoring
- Ready to use D-BUS API
- Caching tier

# Stratis Layers

User View



Internal View

"Thinpool"

"Backstore"

 Optional

 Optional, not yet implemented

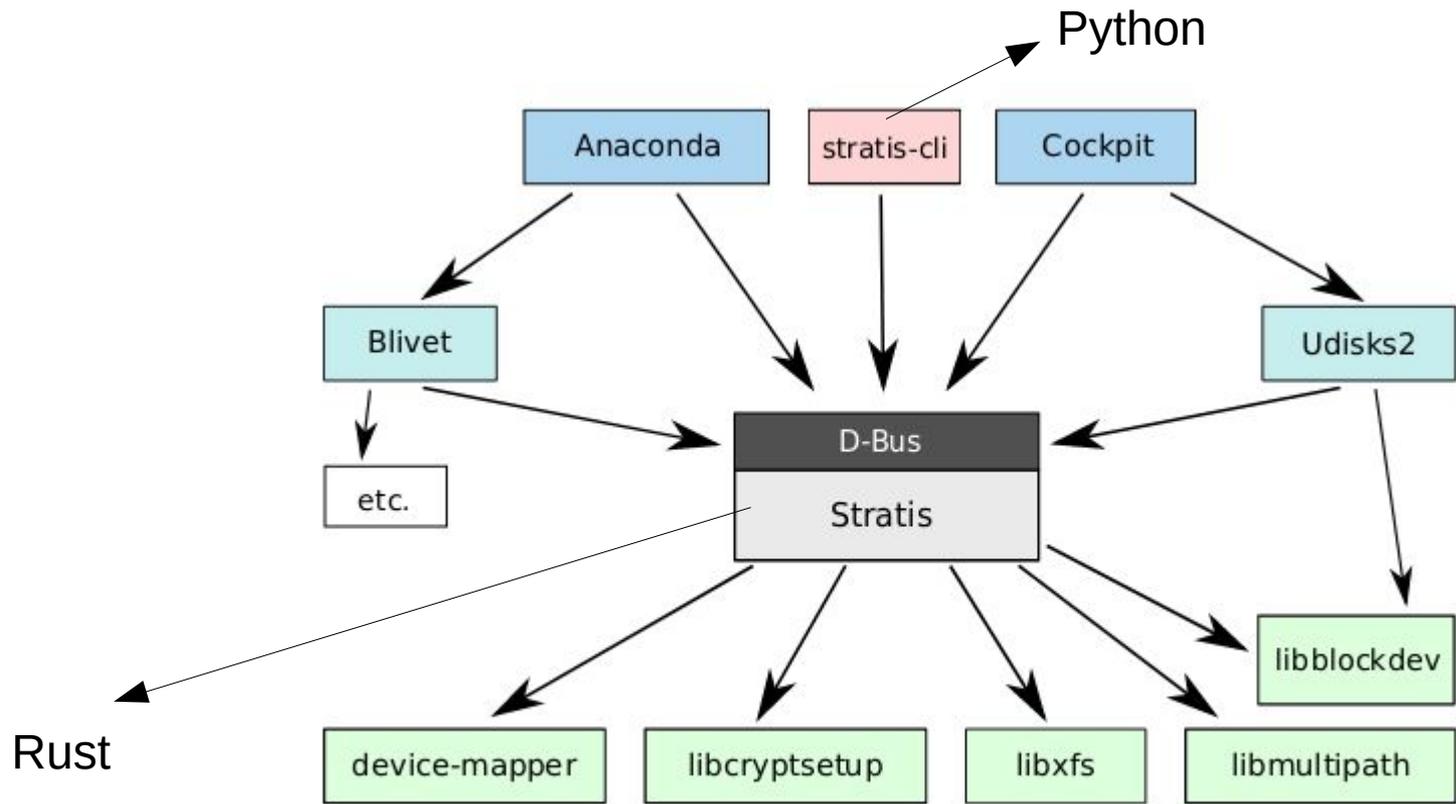


Figure 1: Future Stratis Position in the Linux Storage Management Stack

# Data tier layers

Layer 7	Filesystem	Manage filesystem, auto grow using xfs_growfs, fstrim.
Layer 6	Encryption (optional)	Provide per-filesystem encryption.
Layer 5	Thin volumes	Manage thin volumes on thin pool, snapshots.
Layer 4	Thin provisioning	Manage metadata and data DM, CoW, thinpool device, fstrim.
Layer 3	Flex	Manage and control pools, contains four liner DM.
Layer X	Cache tier (optional)	Provide caching layer for increase performance.
Layer 2	Redundancy (optional)	Provide RAID technology and manage redundancy.
Layer 1	Integrity (optional)	Detect data corruption and repair when pool is redundant.
Layer 0	Blockdevs	Responsible for block devices (1 GiB minimum).

# Stratis in Future

- Redundancy with RAID technology (RAID 1, 5, 6, 10)
- Integrity checking
- Compression
- Encryption
- Dedupe
- Multipath
- Mirroring in failure domain model
- Tag-based classification
- Boot from Stratis filesystem
- And more...

# Don't Do This!

- Don't rely on "df" command for available partition size!
- Don't reformat or change stratis default "XFS" filesystem!
- Don't stop "stratisd" daemon service!
- Don't resize stratis filesystems directly!

# Read more and Contribute



[stratis-storage.github.io](https://stratis-storage.github.io)

**Demo**

**Thanks for your attention.**

[www.bostandoust.ir](http://www.bostandoust.ir)