

HDD on SSD caching

Speed up HDDs with additional SSD/NVMe caching.

Options:

- OpenZFS
 - it is possible to add cache and log devices to ZFS pool. Log is a journal for synchronous writes.
- LVM DM-Cache
 - No HDD reformatting if it is already using LVM
 - it is possible to add cache device to logical volume: [Improving read performance with dm-cache](https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/6/html/logical_volume_manager_administration/lvm_cache_volume_creation)
 - https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/6/html/logical_volume_manager_administration/lvm_cache_volume_creation
 - It is hot-spot cache, to cache only frequently accessed data, so simple copy of big file doesn't fill cache.
 - Write cache is also possible: <https://man.archlinux.org/man/lvmcache.7>
- [bcache](#)
 - need to reformat HDD

Writeback caching:

- Filesystem corruption when SSD cache fails. Possible workaround for mirroring FS is to use 2 separate caching devices for 2 mechanical drives.

Benchmarks:

- [bcache](#) and [lvmcache](#)

flashcache

```
apt-get install flashcache-dkms flashcache-utils
```

Reference <https://wiki.archlinux.org/index.php/flashcache>

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