

# How to integrate new storage into CloudStack

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# Agenda

- Current storage architecture
- New storage framework
- Implementation
- Show me the code
- Q&A

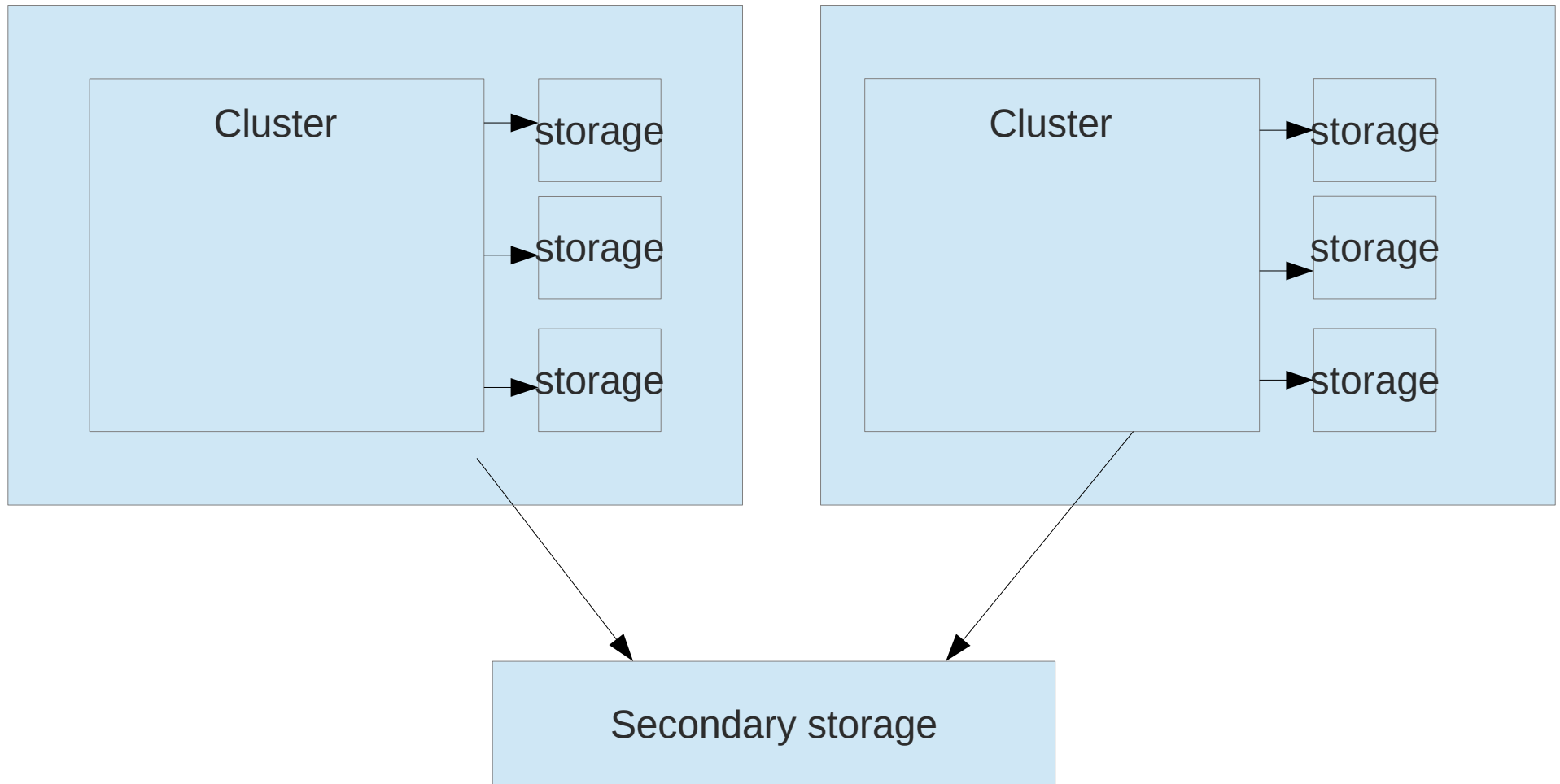
# Current Storage architecture

- Primary Storage
  - Root disk and data disk
  - Per cluster
  - Support NFS, ISCSI, local disk, Ceph, Gluster
  - Storage migration
  - tags

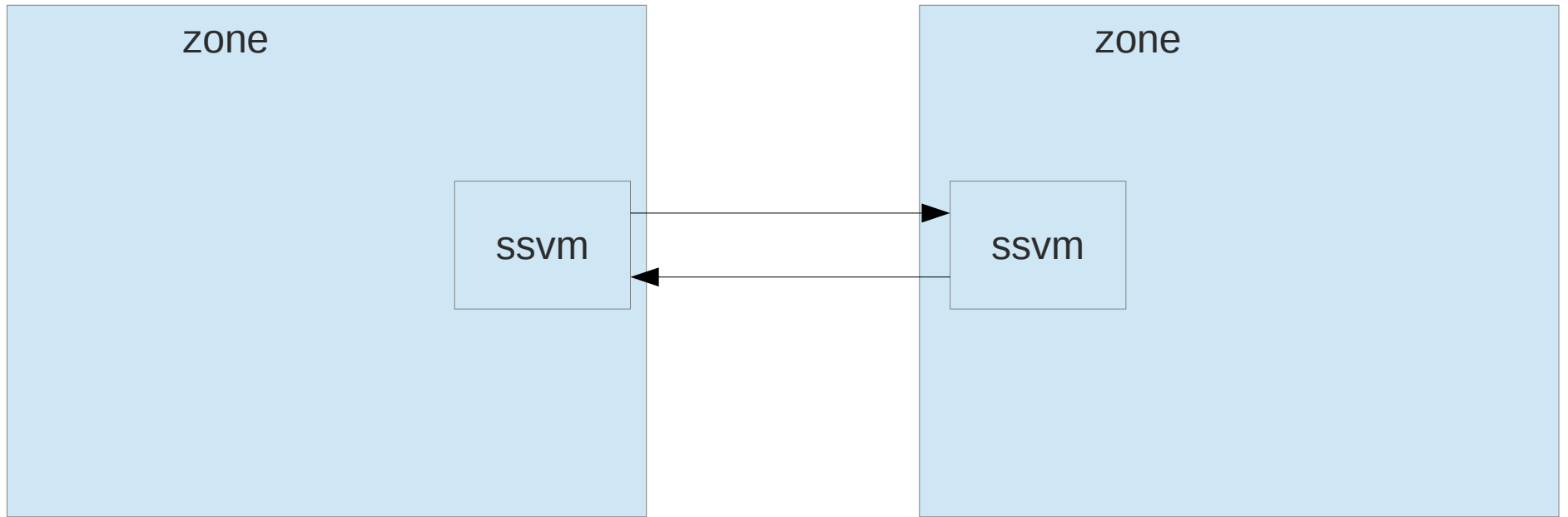
# Current Storage architecture

- Secondary storage
  - Store template, ISO, snapshot
  - Zone wide
  - Support NFS, Swift
  - Template download, Cross-zone copy through secondary storage VM
  -

# Current Storage architecture



# Current Storage architecture



# Current Storage architecture

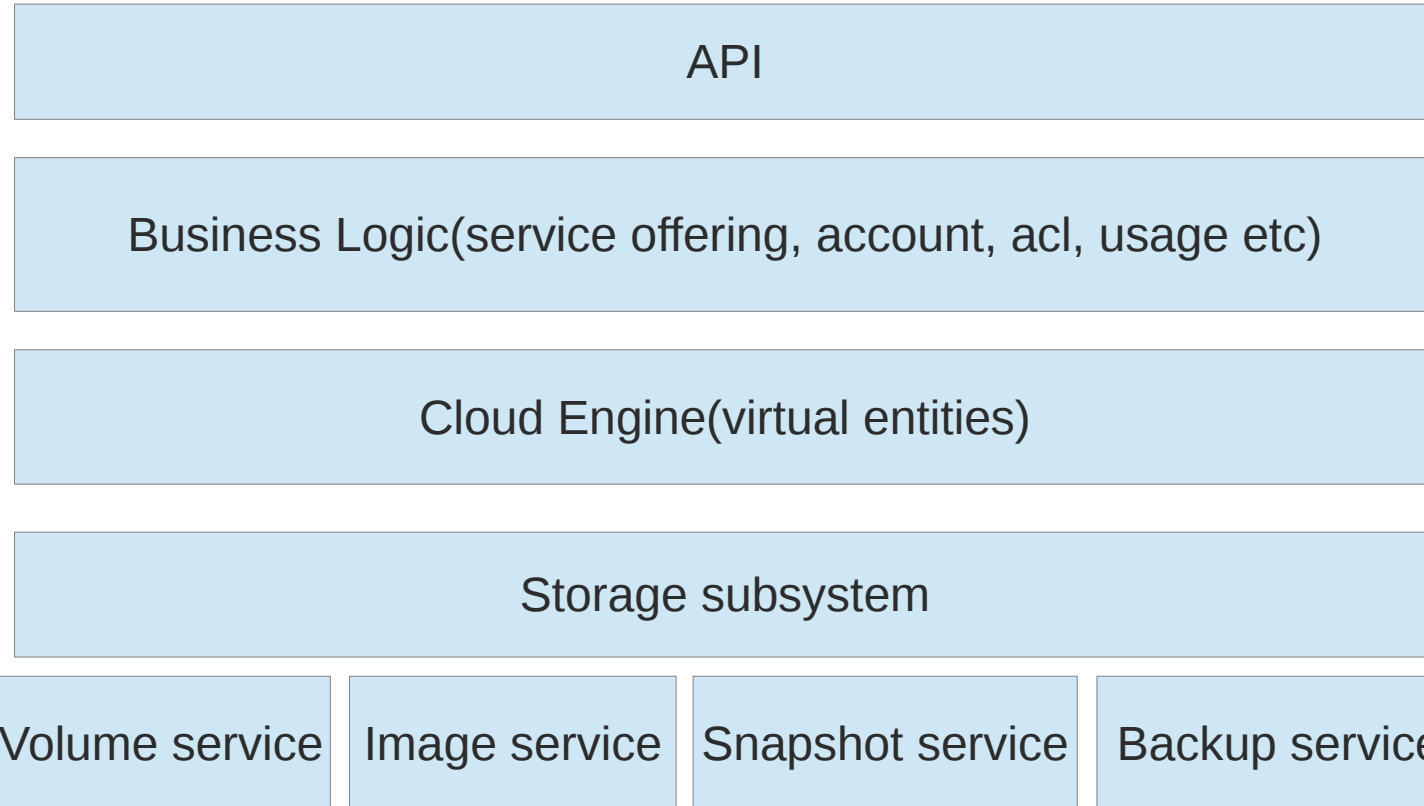
- Pro
  - Pretty stable
  - Work well in production with off-the-shell-storages available in 3 - 4 years ago
- Con
  - Difficult to extend:
    - Difficult to add a new storage
    - Difficult to add new functionalities:
      - VM based snapshot
      - Separate snapshot and backup
      - Storage migration

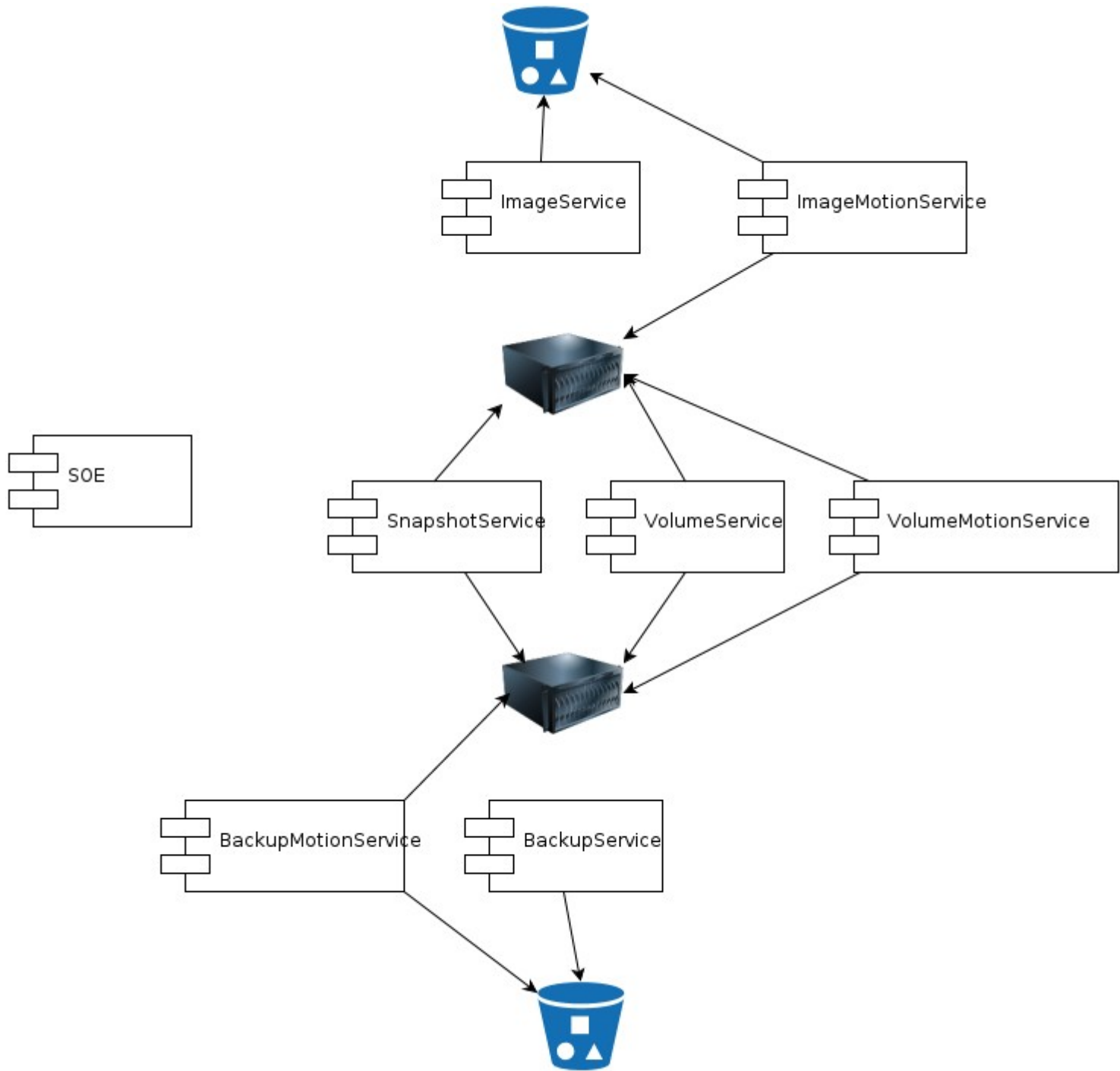
# New storage framework

- Goals
  - Modularize
  - Focus on orchestrating the storage, not on the business logic
  - Easy to extend
  - Easy to test

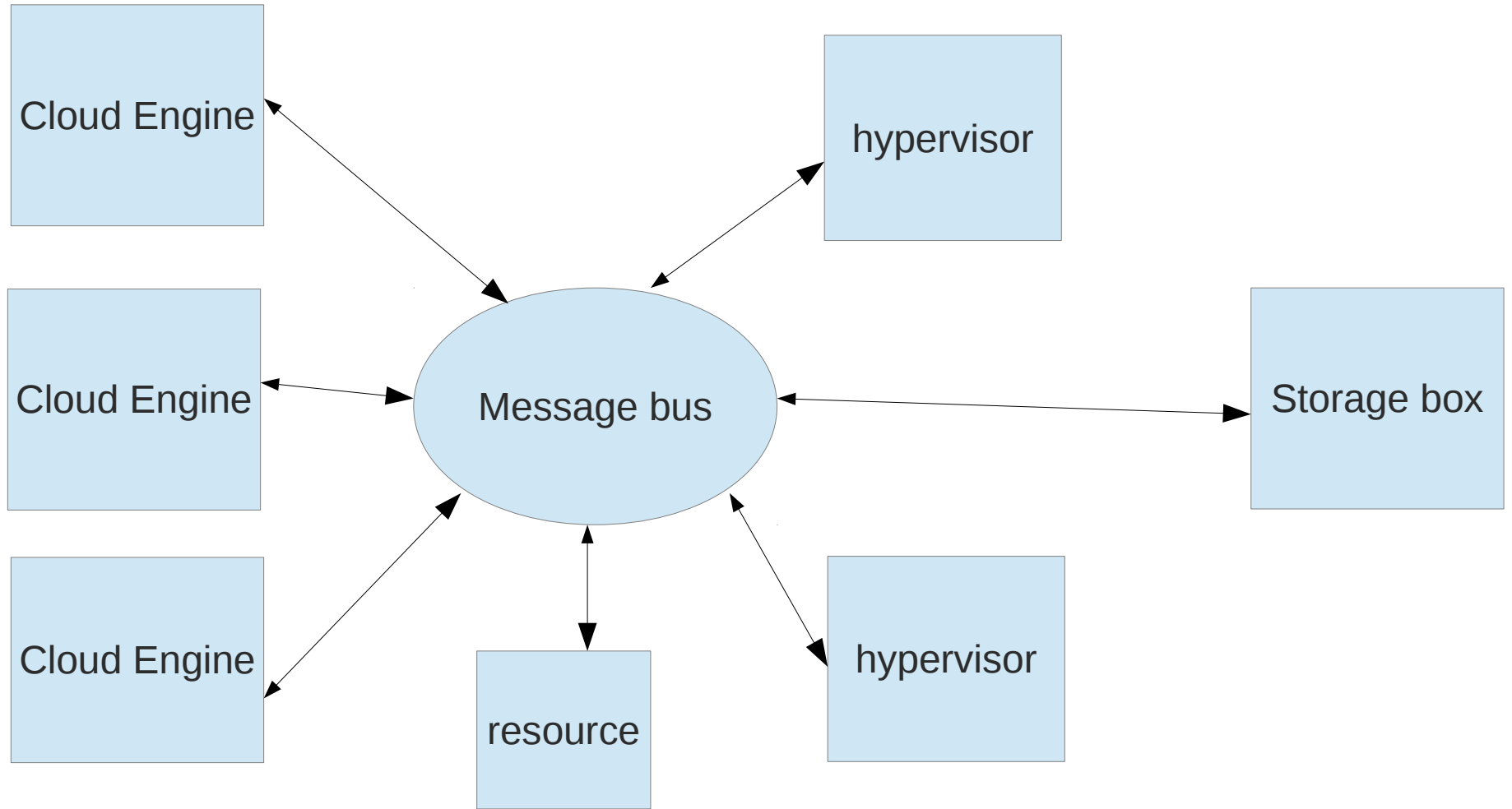


# New storage framework

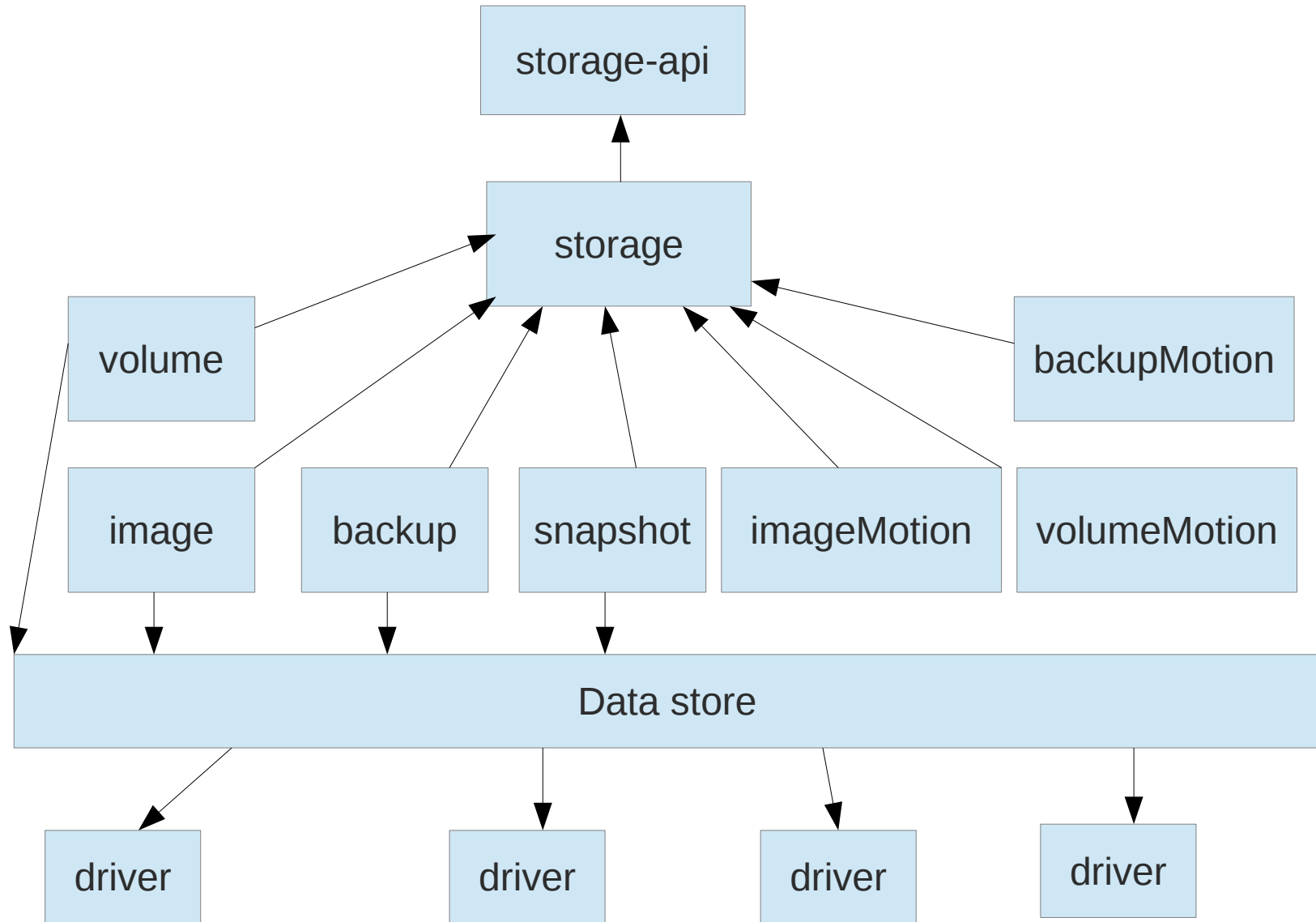


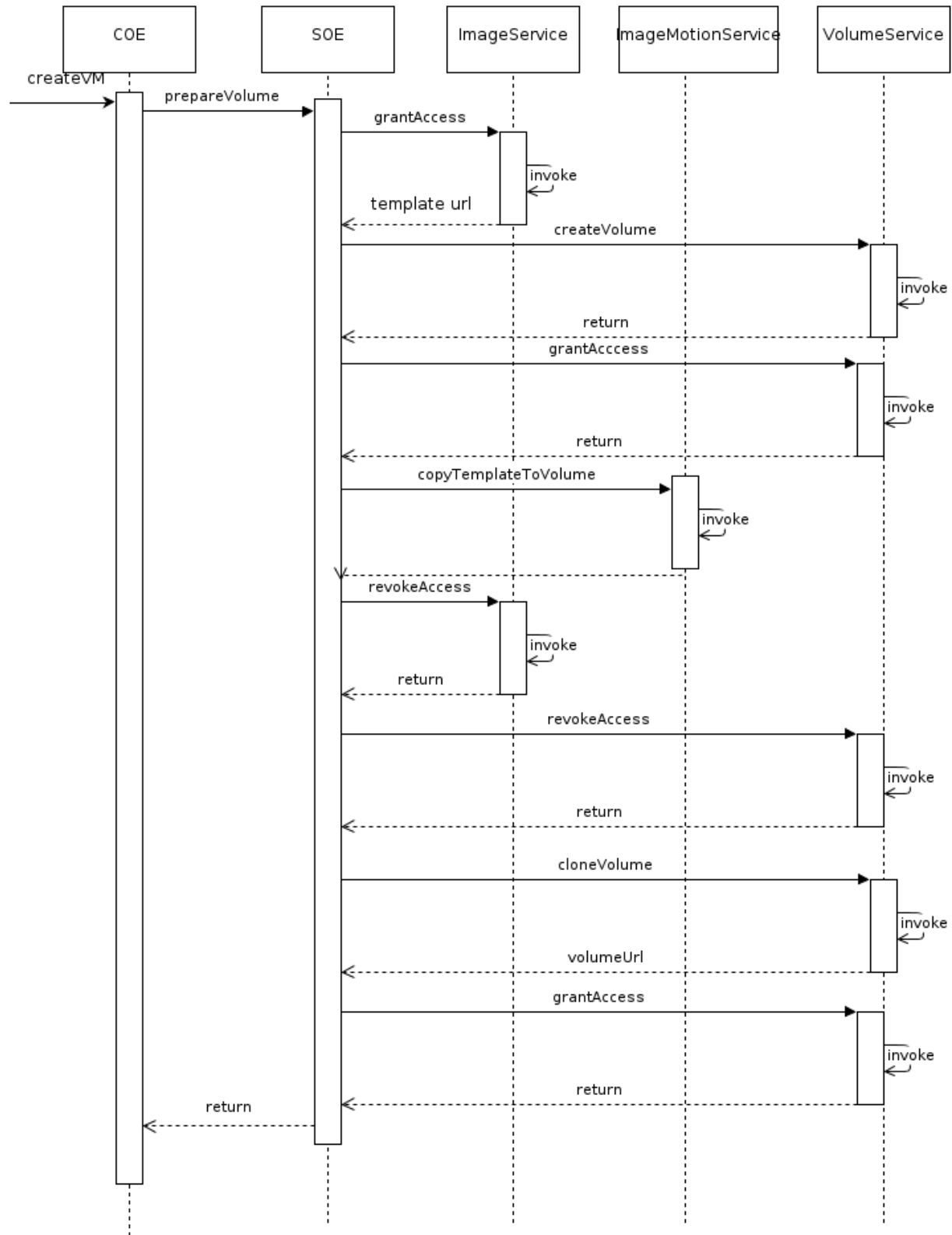


# New storage framework

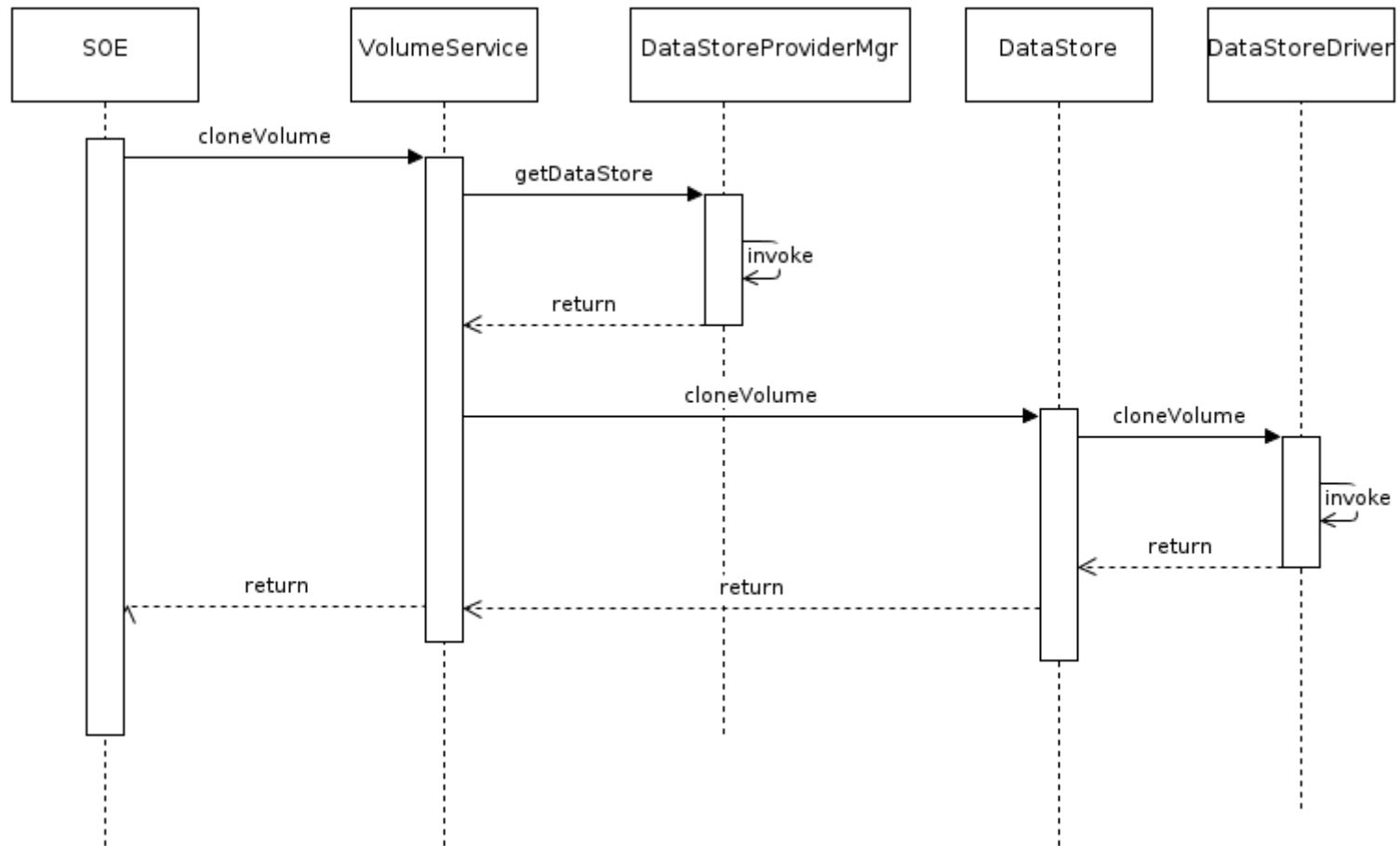


# Implementation

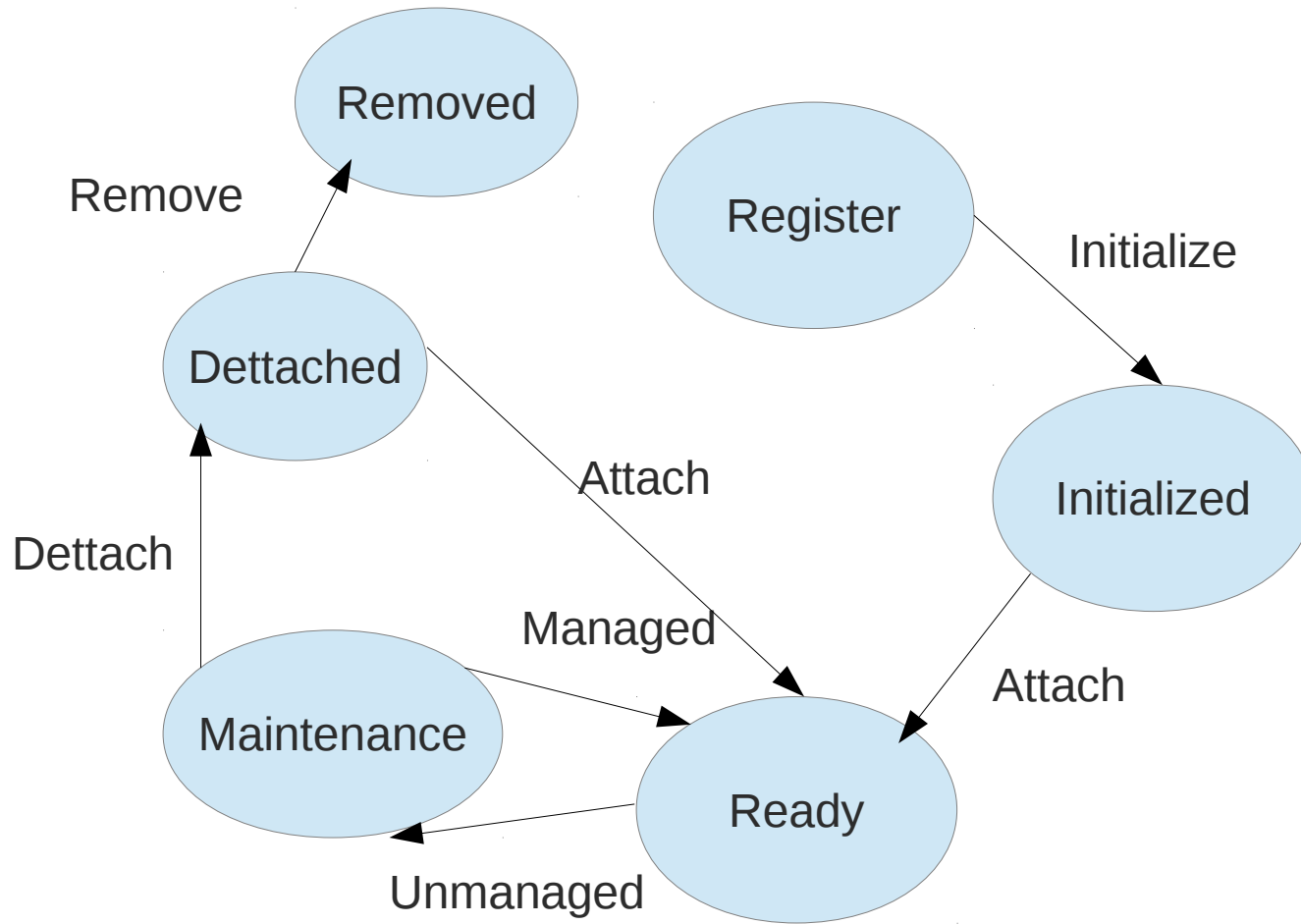




# Driver model



# LifeCycle of a storage



Show me the code



# Q&A

- Feedback and help are appreciated