

# Simple Object Storage - Weekly Report

Nijad Huseynov

June 2023

This week, I mainly focused on implementing very basic distributed system using raft algorithm and I am still working on it. To do that i have found open source implementation of raft by Hashicorp (<https://github.com/hashicorp/raft>) . It provides good skeleton to implement a distributed systems based on raft. I will use it in my project where metadata servers will be managed by raft algorithm to elect the leader and provide consistency across the system.

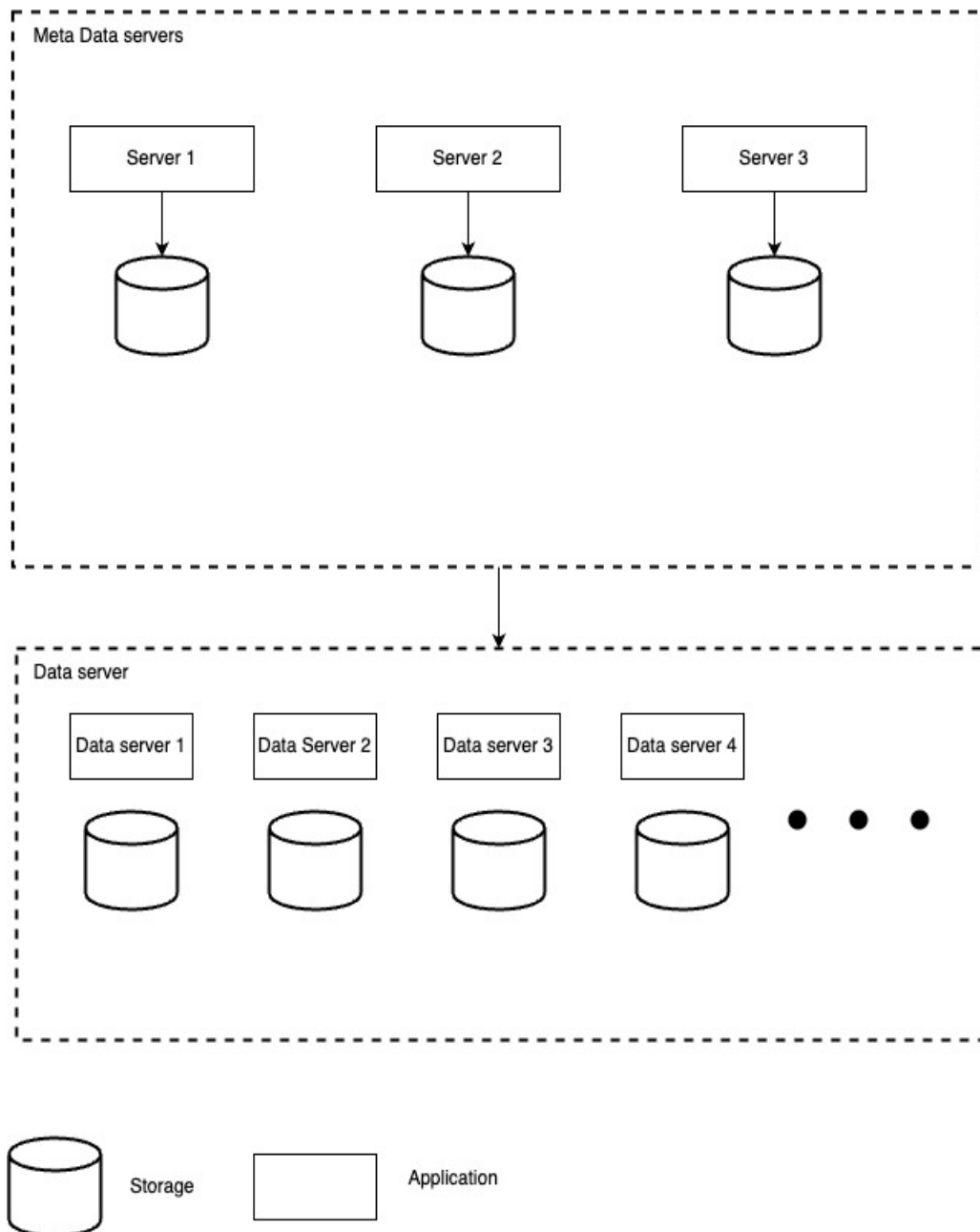


Figure 1: High level architecture of the system[draft]

In addition, I have drawn the draft version of the high level architecture of the system.

My plan for the following weeks is first getting comfortable with raft library, and after that i will implement the first version of the system where the file will be saved as it is. Next I plan to use the idea from the facebook's haystack storage where instead of storing small files in one file in os file system, they join the files and store them in one file. This reduces the metadata overhead of the local file system and makes the system more performant for the small files. After that, my plan is to introduce erasure coding for fault tolerance and implement file corruption checking by using checksums.