

Distributed Storage Middleware

Goal:

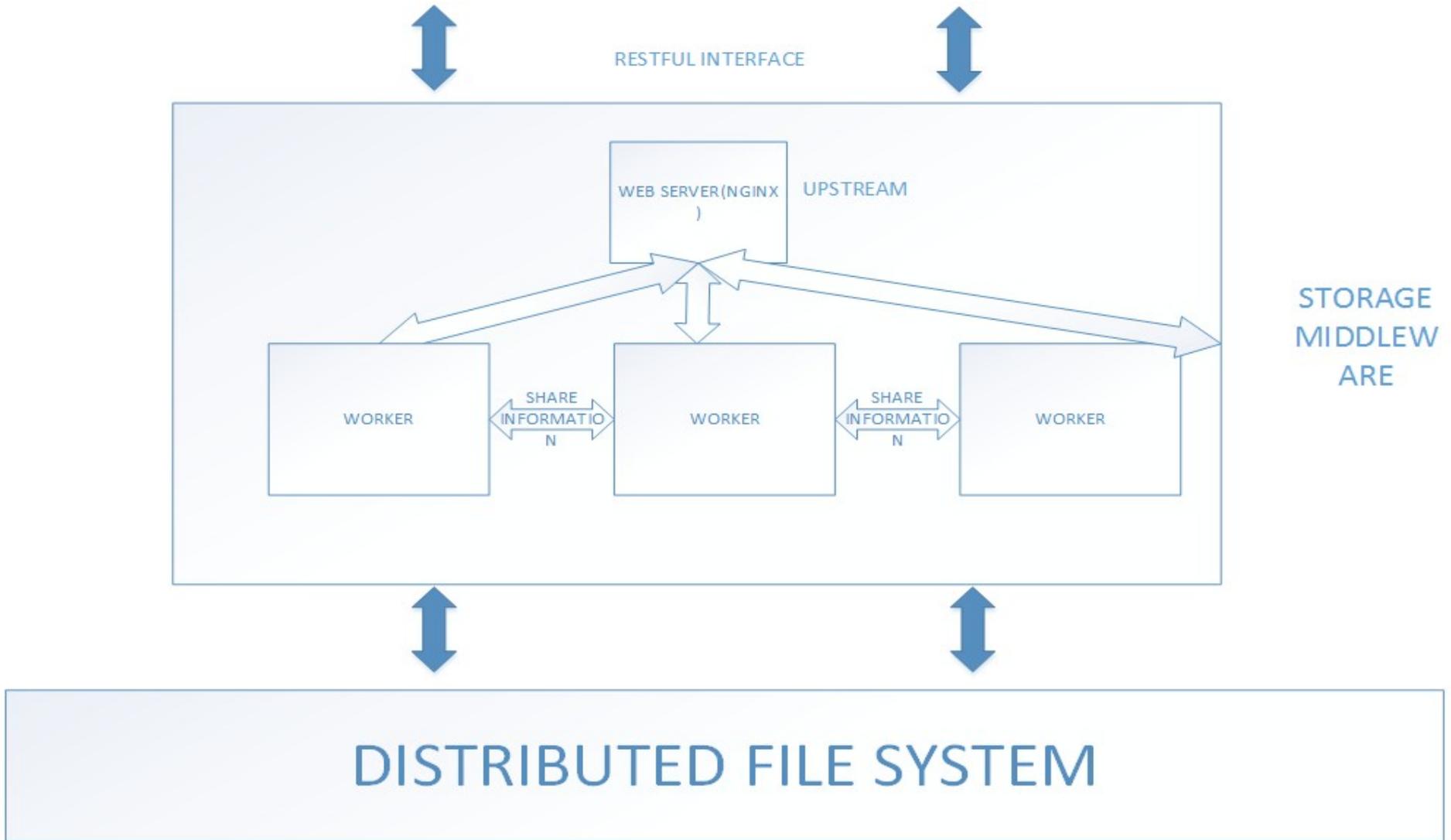
To build a distributed web storage service for small files;

To provides RESTFUL interface to access directories and files that are stored in distributed object-oriented storage system, which is designed for small files.

Related Work

- Build a high-available web server(Nginx, uwsgi and Django);
- Build a distributed in-memory data structure server(Redis);
- Build a distributed file system(Weedfs);
- Build the interface between web service and Redis, and the interface between web service and Weedfs.

System Architecture



Testing & Evaluation

- Test basic methods:

Check whether clients can read, write, update, and delete files via web;

- Performance Test:

Requests Served per second;

Serving Time per request;

Percentage of the requests served within a certain time.

Use Case

Family photo storage and sharing;

Later, distribute files to different home disks according to file size and use frequency.