Mirrors 前端 & Rsync to Obj Stor

暑期点亮计划

Miao Wang

前端

页面结构

- 主页（新式/传统式）
- 状态页
- 帮助页
- 新闻页
- 目录浏览页（fancy-index）

前端

模板引擎

- 静态渲染：Jekyll
- 动态渲染：传统主页、目录页，njs + Mark.up
- 客户端渲染：vue.js
- 半静态资源：isoinfo.json、disk.json、流量图
- 伪静态资源：tunasync.json

前端

思路

- 避免在服务器上引入后端程序
- 尽量静态渲染
- 必要时可以在服务器端渲染部分资源

前端

任务目标

- i18n 框架
- 灵活可配置
- 移除 jQuery 和 bootstrap*
- 更换 Jekyll

Q&A

Rsync

What is rsync

- Rsync is a utility for syncing files between two ends.
- “Files” here means the whole directory structure, permission, ownership, modified time and other extended meta data.
- “Directory structure” includes the directory tree, soft links, hard links (optional).

Use scenario

- Rsync between two local filesystems
- Rsync via remote shell (e.g. ssh)
- Start a rsync daemon as a server and accept connections from clients for them to download/upload files

Roles in rsync

- Client / Server
- Sender / Receiver

Client and Server

- Client: The part which is initializing rsync connection
- Server: The part which is accepting rsync connection

Sender and Receiver

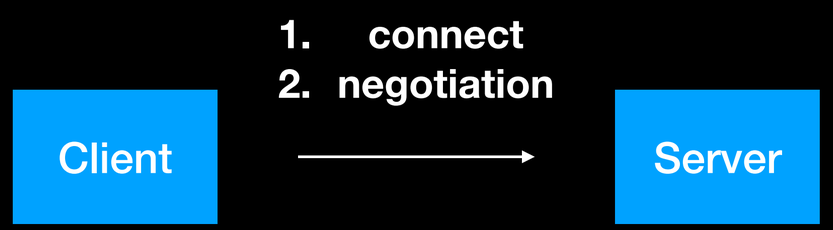
- Sender: The part which is sending files.
- Receiver: The part which is receiving files.

Examples

- A connects to B and wants to get synced with files on B
- A is client, B is server
- A is receiver, B is sender

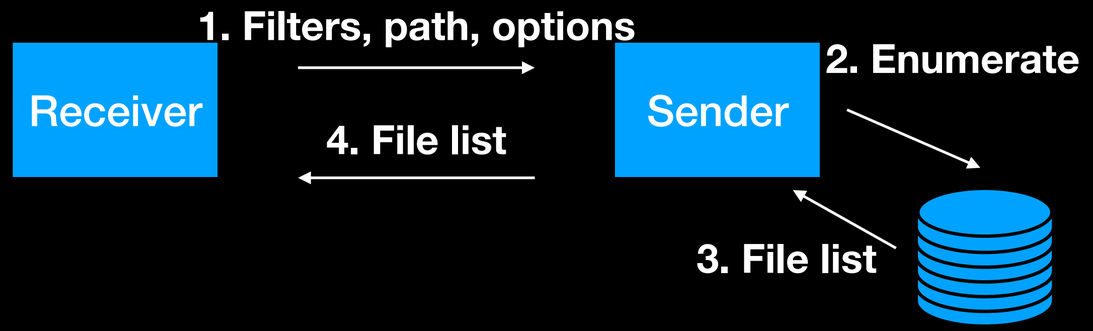
Procedure

- Client connects to the server
- Protocol negotiation
- Decide file transfer direction, i.e. who is sender and who is receiver.



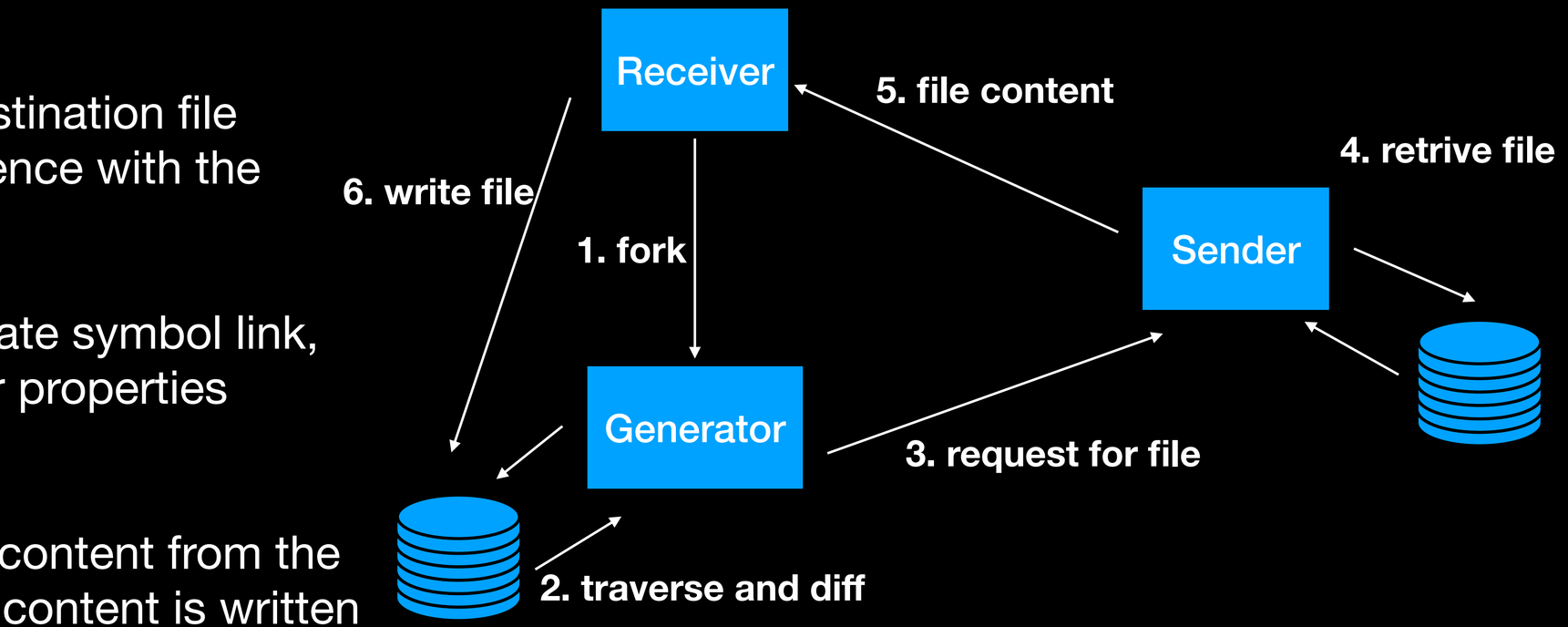
Procedure

- Phase 1:
- Initialize transfer options (checksum, compress, filter, etc)
- The sender enumerates the filesystem and sends a list of all files (containing all meta information including permission, ownership, size, modified time, etc)



Procedure

- Phase 2:
- Receiver process forks a children process named “generator”
- Generator traverse the destination file system and find the difference with the received file list.
- Generator can directly create symbol link, directory and modify other properties according to the file list.
- Or generator requests file content from the sender and the requested content is written to the destination filesystem by receiver.



Rsync

目标

- 使 Rsync 支持写入对象存储系统
- 支持 Protocol 31，兼容 30
- 占用本地存储 O(1)，与对象存储系统通信与变化量成线性关系
- （可选）支持基于对象存储系统提供 Rsync 服务

➡重新实现 Rsync 协议?

➡直接改代码?

Rsync

Things to consider

- 支持何种对象存储系统?
- 如何存储文件目录和文件?
- 改造的路线?