



OST
Ostschweizer
Fachhochschule

Distributed Systems

Challenge Task

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DSy

Agenda

- Introduction
- Architecture
- Workflow
- Learnings
- Demo

Introduction

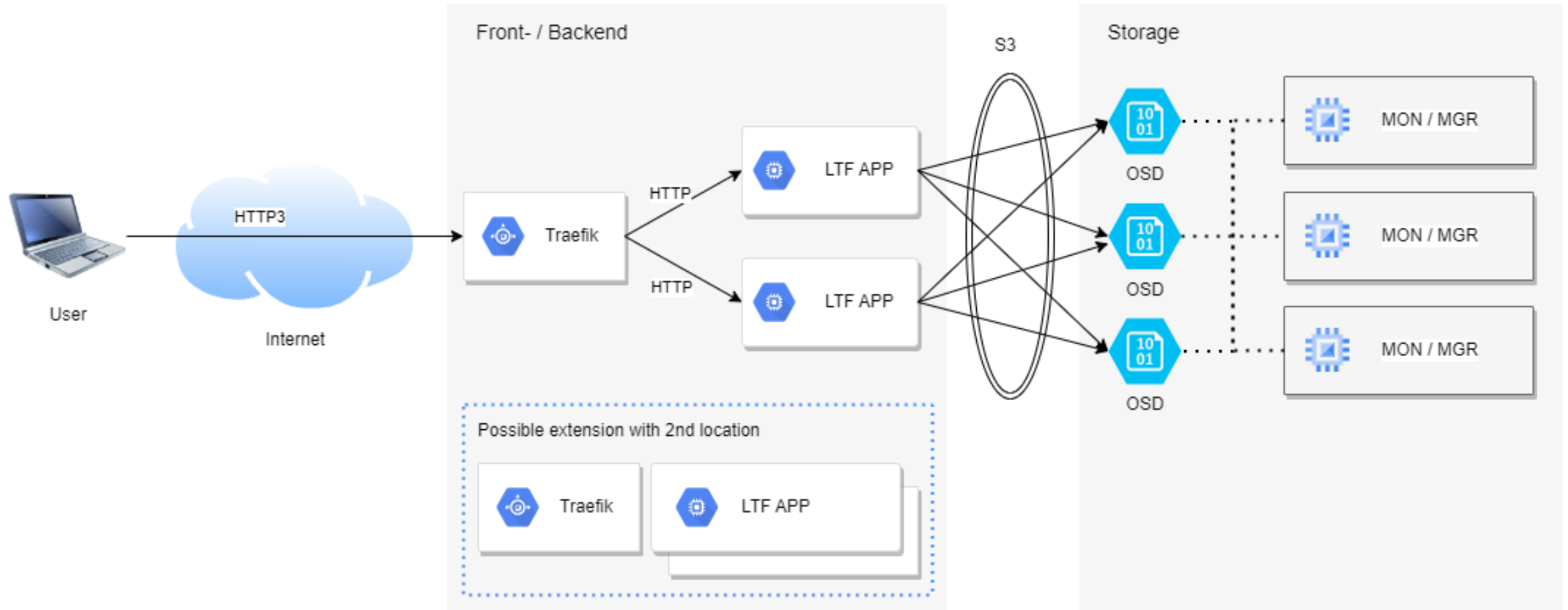
- Los(T)ransfer
 - File transfer service
 - Function to set maximal number of downloads before a file is deleted
 - Link to file: hashed file content
 - no visible file name in link/browser history for privacy
 - Allows for user-based integrity checking
 - Written in Golang



Use
existing transfer
service

Create
own transfer
service

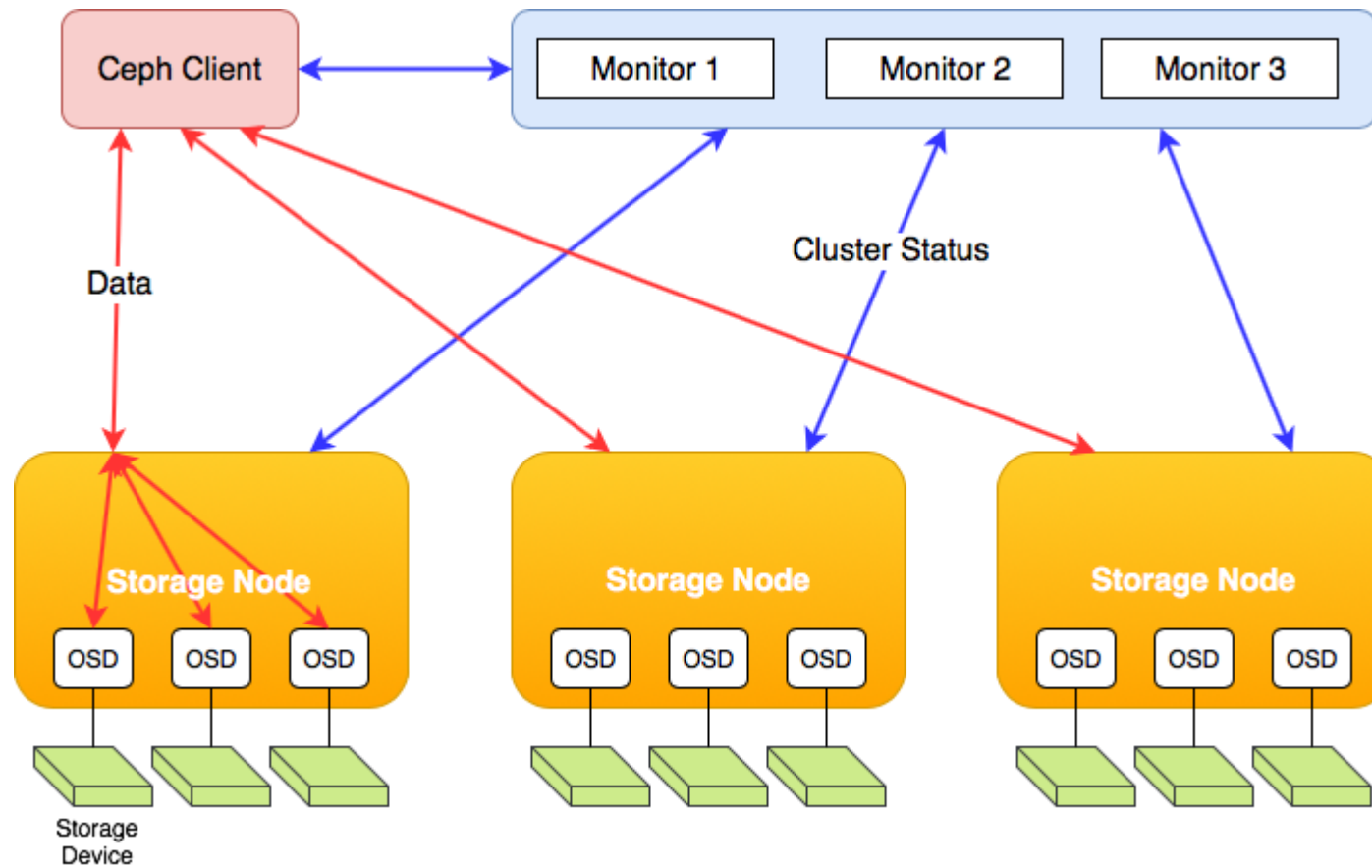
Architecture



CEPH

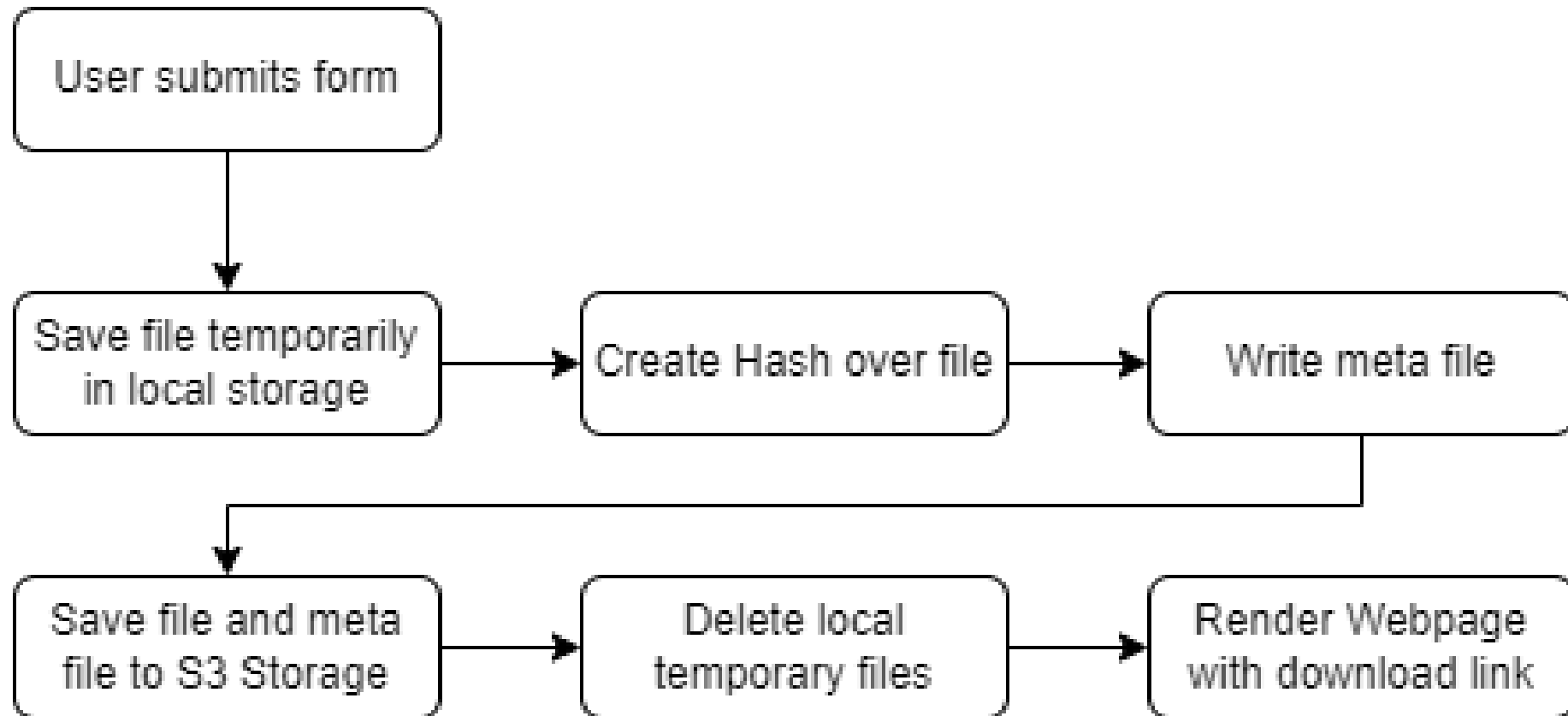
- Monitor / MON
 - Watches the cluster
 - Listen to reports of OSDs
 - Ensures a quorum
 - Takes decision
 - Manages crush map
- Manager / MGR
 - manages the cluster (api, cli, dashboard)
 - collects metrics
- Object Storage Daemon / OSD
 - Receives and transmits data from/to clients
 - Write & read the data to ssd/hdd
 - ensures replication, rebalancing and recovery

CEPH

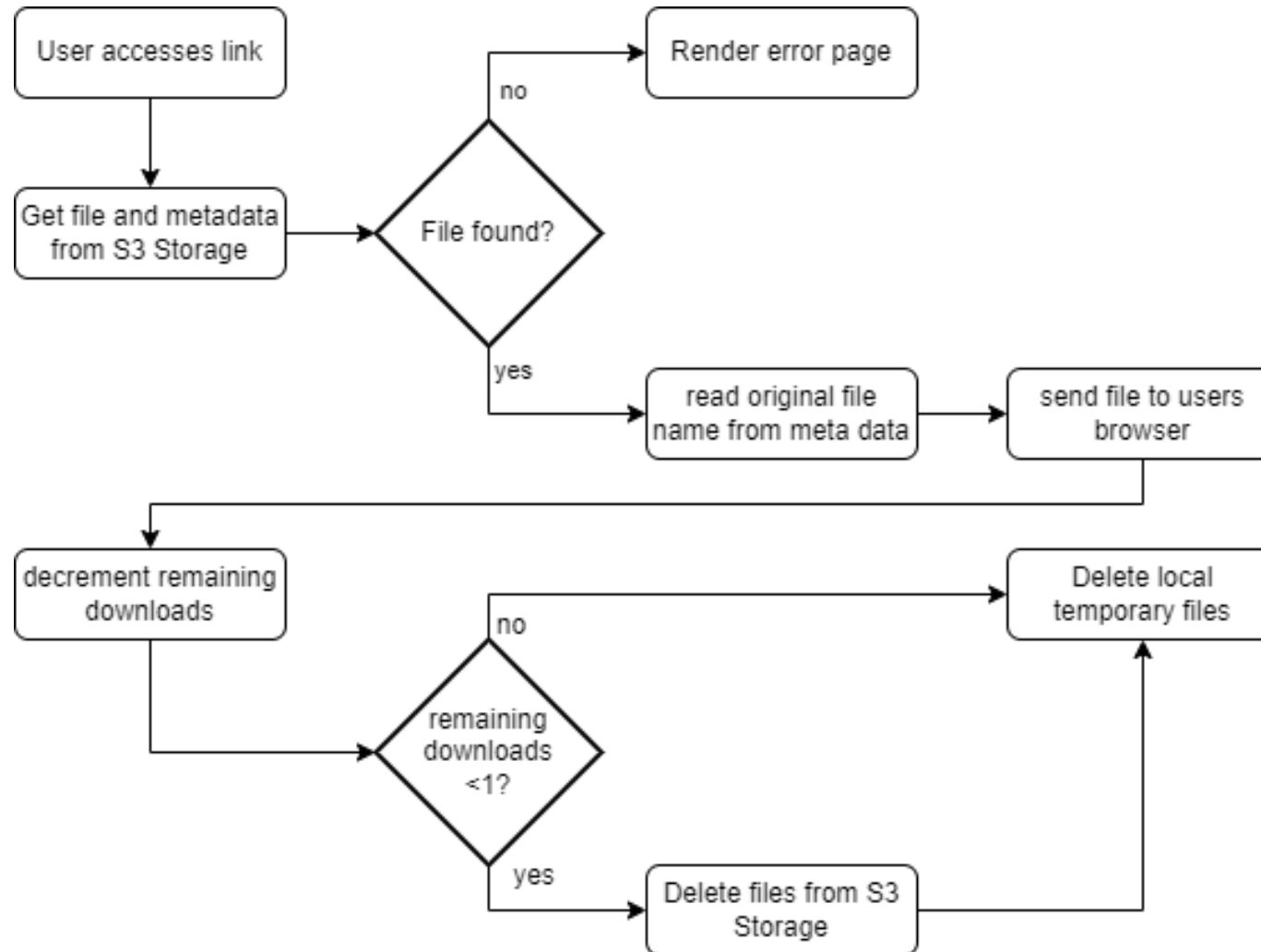


<https://louwrentius.com/static/images/cephdiagram01.png>

Workflow



Workflow



Possible Extensions

- Client-side file encryption
- Send link to file via E-Mail
- Expire by time and not by downloads
- Run multiple times on different continents

Learnings / Problems

- Golang: completely new for us both
- Problems with file pointer (read for hash – rewind – read to write to S3)
- http3 in Traefik took forever
- CEPH Installer did not like my HW
- CEPH IPv6 works, but not that easy

Add Host

Hostname * ✓

Network address ⓘ
The value is not a valid IP address.

Labels There are no labels.

☐ Maintenance Mode

Cancel Add Host

Demo



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Thank you
Any questions?

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