Uploadcare ⬤

Mapping out a Fully Fledged File Handling Infrastructure

Are you launching an app with lots of user-submitted or product content?
Here's a high-level overview of a fully fledged infrastructure for receiving, processing, and delivering files.

Engineering time

Up to 2-3 years to build the whole infrastructure from scratch.

Maintenance

Up to 50 hours of engineering time per year.

Possible metrics

- Time to market
- Resilience, uptime and downtime
- New bugs over time
- Engineering and operational costs
- Net Promoter Score
- Number of support tickets
- Web performance metrics

Uploads

File types

- ○ Audio files
- ○ Video files
- ○ Image files

- ○ Documents
- ○ GIFs
- ○ ZIPs

- ○ Any others
- ○ Crazy large files

UX

- ○ 3rd party sources like Dropbox or Instagram
- ○ Dev experience
- ○ User experience

- ○ Image compression
- ○ Cross-browser UX
- ○ Cross-platform UX

- ○ Lazy uploads/proxy
- ○ I18n and L10n

Performance and security:

- ○ Encryption
- ○ Upload acceleration
- ○ Resumable uploads
- ○ Error handling
- ○ Multiupload

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- ○ Multipart uploads
- ○ Malware protection
- ○ Network issue handling
- ○ Timeout handling

- ○ Monitoring
- ○ Large files
- ○ Custom validation
- ○ File shrinking upon upload
- ○ Upload signing

Storage

Performance:

- ◯ Scalability
- ◯ Compliance
- ◯ Encryption
- ◯ Performance
- ◯ Dev experience

- ◯ Backup
- ◯ Management
- ◯ Search
- ◯ Durability

- ◯ Monitoring
- ◯ Metadata handling
- ◯ Availability
- ◯ Automation

Security:

- ◯ HIPAA etc. compliance

- ◯ Signed URLs

Processing

Performance and security:

- ◯ Virus checking
- ◯ Malware checking

- ◯ Explicit content checking
- ◯ Async processing

- ◯ DDOS

Content insights:

- ◯ Color recognition
- ◯ Face and object recognition
- ◯ Identity check
- ◯ OCR

- ◯ Object tagging
- ◯ Trend analytics
- ◯ Spike prediction
- ◯ Categorization

- ◯ Duplication checks
- ◯ Similarity checks
- ◯ Advanced external APIs
- ◯ Smart cropping

Content optimization:

- ◯ Image compression
- ◯ Video encoding

- ◯ GIF to video
- ◯ Monitoring

- ◯ AI-based compression
- ◯ Conversion to next-gen formats

Content processing:

- ◯ Image enhancement
- ◯ Video enhancement
- ◯ Doc conversion
- ◯ Upscaling

- ◯ Cropping
- ◯ Watermarks/Overlays
- ◯ Thumbnails

- ◯ RGB ←→ CMYK
- ◯ Filters
- ◯ Text extraction

Delivery

Performance:

- ◯ Efficiency
- ◯ Global presence
- ◯ Monitoring

- ◯ Resilience
- ◯ Cost effectiveness
- ◯ Precision

- ◯ Auto format switch (e.g. WebP, GIF to video)
- ◯ Auto size detection
- ◯ Network detection

Security:

- ◯ Access control
- ◯ Encryption

- ◯ Security
- ◯ Attack protection

- ◯ Audit
- ◯ HIPAA etc. compliance

Designed by Uploadcare, an out-of-the-box file handling infrastructure for your media-heavy platform.

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