Fence User Quotas

Requirements

- Rate Limiting (against flooding)
  - Time stamp each request and make sure there is not more than a fixed amount over the last time interval (seconds/minutes/hours/etc)
- Requests Quota (against user overusing the system)
  - Keep a counter of how many requests a user can make
  - Decrease counter with every new request
  - When at 0 notify user they are out of requests
  - This could be a fixed number or could be reset every year/month/week
- Byte count
  - We could do the same as with Requests Quota, but by counting bytes
  - Or we could to byte size limit for individual files
- Limits are by user
  - If we want them by key we need to limit keys as well

Tasks

- Move storing of events to MongoDB or Postgres
  - It's taking up too much space in Redis
- Add key users:{user}:uploaded:bytes and users:{user}:uploaded:count
- Add check when uploading. If current users:{user}:uploaded:bytes > config value, then send error
- More accurate byte counts
  - Change Clowder to return file size after upload
  - Change Polyglot to return file size after upload

Other

- Return appropriate message when token has expired so user can request a new one and retry the request

Background Resources

- https://tyk.io/tyk-documentation/rate-limiting/