

# Basic Architecture Design

Arnav Gupta

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## 1 File Store

For S3 file store, use randomized UUID to prevent public scan, with different sizes.

CDN is highest cost.

## 2 Scaling

For DB scaling, add read-replicas (horizontal) and use bigger instances (vertical).

For app scaling, add lots of app servers and load balancing.

For frontend caching, add CDN in front of web app to cache HTML and CDN for all media files, even on detail pages.

Can estimate how much more load system can handle using performance modeling.

Some system could be easy to scale if:

- traffic mostly reads
- no login for visitors

- effects of visitors actions need not be immediately visible to other visitors (caching possible)
- users don't interact directly with each other
- no user notifications
- pages independent of each other
- data size does not scale with traffic
- writes don't involve transactions