Book up: 9:08 PM

Inter slide Service

1) Multi user
2) Real time chat & Video

Agenda

1) Facebook messenger low latency

Requirements for MVP

1) MVP (Requirement gathering)
2) Get notion of scale
3) Design goal
4) API
5) Detailed implementation

Messages

→ Total = Accounts order y^2

1) MVP:
   a) 1:1 chat
   b) Chat today with recent message feed
   c) List of recent conversations

Output only:
   1) Text chat
   2) Text personal info
   3) Online / Active status

2) Estimation of scale

i) Daily activities
   a) 50 Billion messages every day
   b) Text (1KB bytes)
      - message
      - sender
      - receiver
      - timestamp

→ 200 bytes

→ 200 bytes × 50 Billion = 200 × 10 GB
= 2000 GB = 2.5 TB/day

ii) For 10 yrs: (2.5 TB × 365 DS)
= 9.125 TB
= 9.125 PB

→ Distributed database
→ Sharding key

iii) Traffic type
   - Read read if write heavy

3) Design goals

→ Low latency (low latency)
→ Availability
→ Consistency

4) API design

→ Send message (message, receiver, timestamp, type)

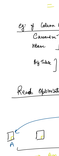
→ for Messaging (chat only)

→ get message (cursor, receiver, limit = 50)

→ get Conversations (cursor, limit, offset)

→ Chat data, and fetch previous user operations
→ Reduce network calls

Implementation


Chat
Chat
Chat