



ZMQ Chat Application

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Functionality

- Encrypted single user chat
- Encrypted group chat
- In case of user disconnect, recovering all single user and group chat data for that user

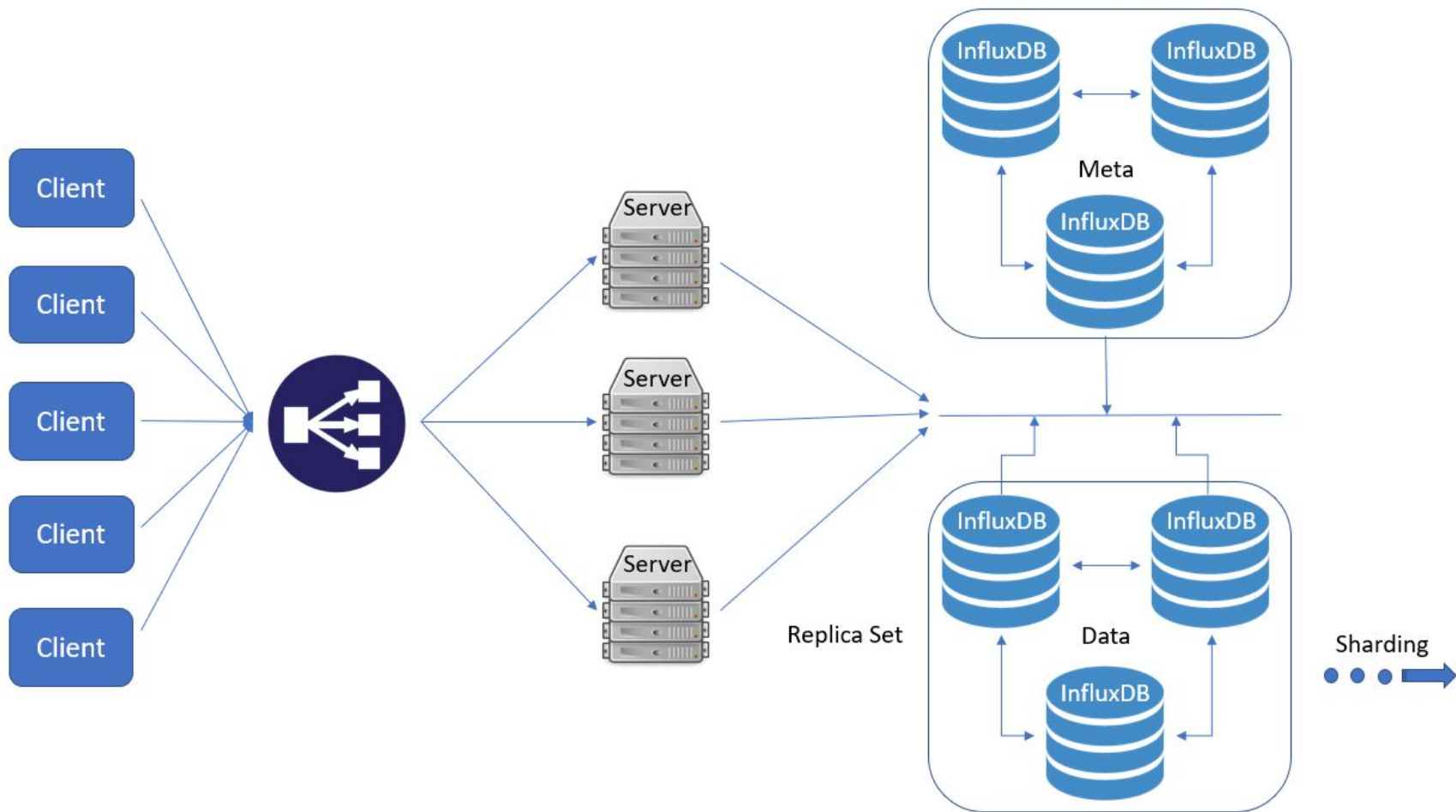


Tech stack



Flask







Failure mode analysis

- Mailbox architecture for messages
- Load balancer
 - Problem: Clients have a single point of communication and in the case of failure will lead to the app crashing
 - Tentative solution: Vertically scale load balancer
- Server
 - Problem: Can tolerate up to 2 failures
 - Tentative solution: Add more machines
- InfluxDB cluster
 - Problem: Can tolerate up to 2 failures
 - Tentative solution: Increase number of meta nodes and shard replica sets

Demo
