

ZMQ Chat

Alan Wilms, Yunhua Zhao



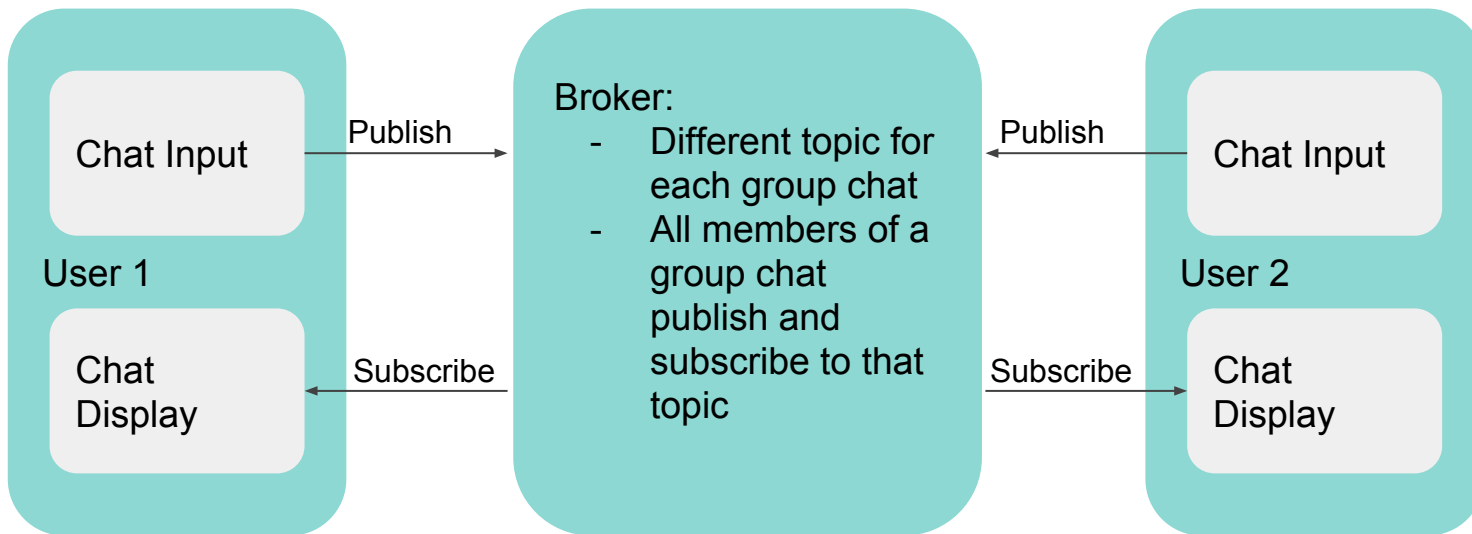


Broad Design Overview

- ZMQ publish-subscribe pattern
- Features:
 - Encryption using **curveZMQ**
 - Decentralized database with **etcd**
 - Broker management by etcd as well
 - **Text-based CLI**
 - Multiple chats per user
 - Multiple users per chat (group chats)
 - Client/node status monitoring (**Grafana**)



Pub-Sub Model





Deliverables

- Client chat application
- System block diagram
- Reliability analysis
 - Estimation of system reliability
 - Fault-tree analysis
 - Failure modes effect and criticality analysis
 - Future improvements