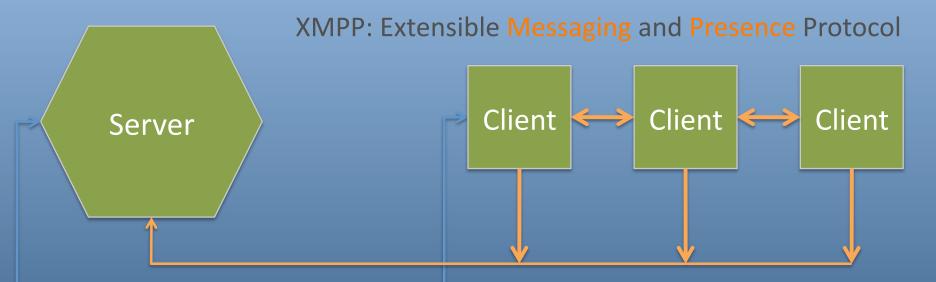
# ChatDev

Python XMPP-Based Network Chat
Client & Protocol
Alex Marcus

## ChatDev: What is XMPP?



- Receives connections from clients
- Receives login data of clients
- Keeps database of online users with profile info
- Checks that clients have checked in recently
- Returns to clients with online users lists

- Sends login data to server to indicate online status
- Receives online user data from server
- Keeps list of online users from data
- Allows P2P connections for sending text
- Provides user interface to chat protocol

## ChatDev: How does it work?

#### Server

#### Main Thread

- Create TCP/IP socket on standard port
- 2. Start client connection
- 3. Start presence thread
- 4. Store user information in online user dictionary
- 5. Loop back to step 2

### Client Connection Thread

- 1. Listen to socket for incoming connections
- 2. Receive client XML data with new thread
- 3. Store user information in online user dictionary
- 4. Send XML of online users back to client
- 5. Loop to step 1

#### Presence Thread

- Loop through all users in dictionary
- If time since
   user last seen >
   time limit,
   remove from
   dictionary

## ChatDev: How does it work?

#### Main Thread

- 1. Collect user information
- 2. Start server connection thread
- 3. Start incoming chat connection thread
- 4. Display menu with options
  - Allow viewing of currently online users
- 5. If message chosen, create TCP/IP socket connection with peer
- 6. Reform message into XML
- 7. Send message XML string to peer
- 8. Loop back to step 1

### Server Connection Thread

- 1. Connect to server with TCP/IP socket
- 2. Generate user XML
- 3. Send XML string over socket
- 4. Receive XML of online users back
- Clear current online users dictionary
  - 6. Parse online users XML into dictionary
  - 7. Loop back to 1

### Chat Connection Thread

- 1. Create TCP/IP socket on port reported to server
- 2. Listen for incoming connections
- 3. Receive message XML
- 4. Display message

Client