

# **Real-time Chat Application**

## **User Story 1: User joins chat room**

### **As a user,**

I want to join a chat room and establish a live connection,  
so that I can start sending and receiving messages instantly without refreshing the page.

### **Acceptance Criteria**

- User can successfully join a chat room
  - A real-time connection is established on entry
  - Chat screen loads existing messages
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## **User Story 2: User sends a message**

### **As a user,**

I want to send a message that is delivered immediately,  
so that my communication feels instant and uninterrupted.

### **Acceptance Criteria**

- Message is sent without page reload
  - Message appears instantly for all participants
  - Message is saved with timestamp and sender details
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## **User Story 3: User receives messages in real time**

### **As a user,**

I want to receive messages instantly from others,  
so that conversations feel natural and live.

### **Acceptance Criteria**

- New messages appear automatically
  - No manual refresh is required
  - Message order is preserved correctly
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## **User Story 4: Moderator monitors chat in real time**

**As a chat room moderator,**

I want to see new messages appear in real time,  
so that I can monitor conversations continuously and take action if needed.

### **Acceptance Criteria**

- Moderator receives all messages instantly
  - Messages appear without page refresh
  - Moderator view stays in sync with users
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## **User Story 5: System broadcasts messages**

**As the system,**

I want to broadcast validated messages to all active participants,  
so that users and moderators stay synchronized in real time.

### **Acceptance Criteria**

- Message is validated before broadcast
  - Message is delivered to all connected clients
  - Failed deliveries are handled gracefully
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## **User Story 6: Maintain real-time session**

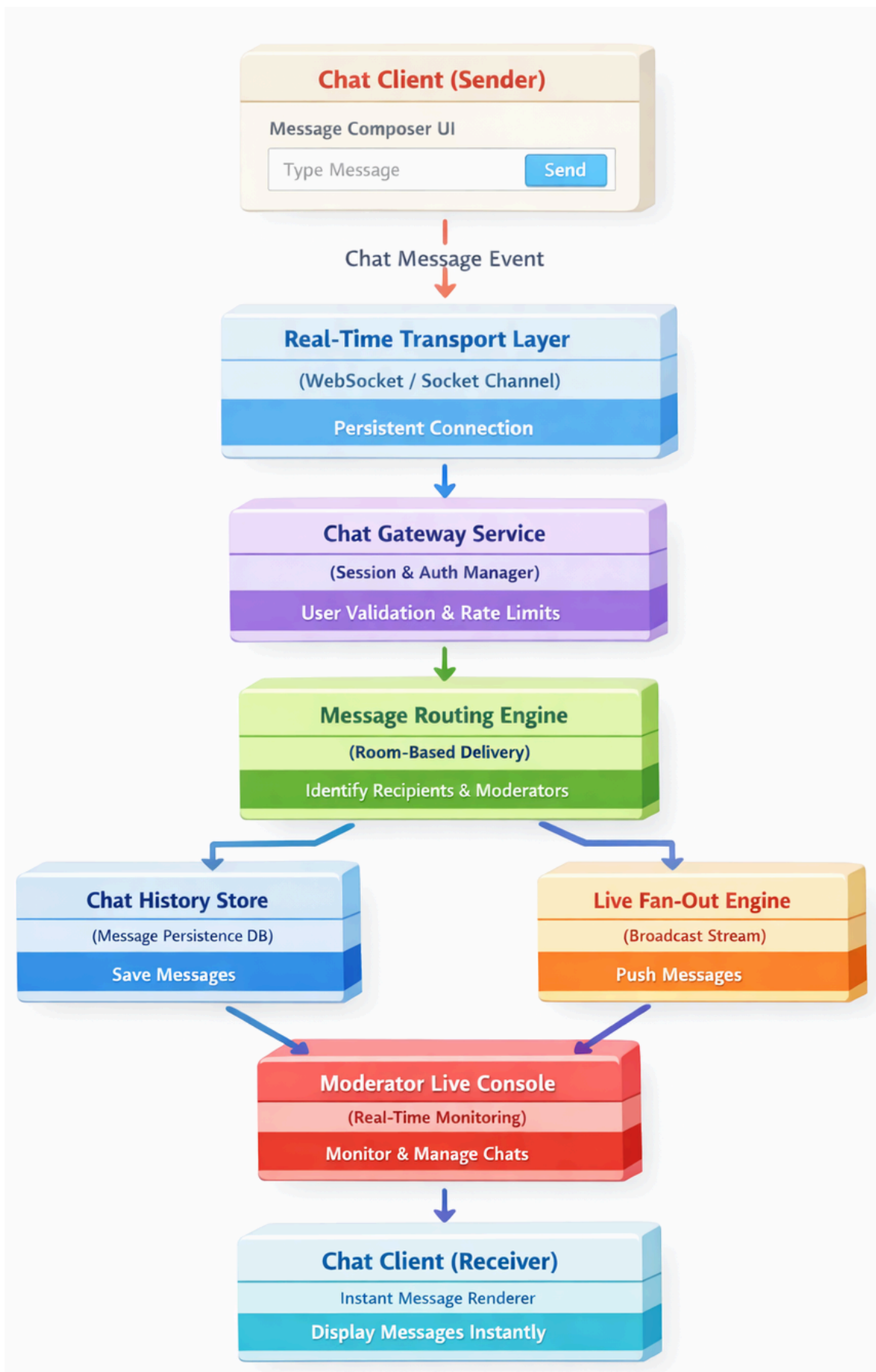
**As the system,**

I want to maintain an active real-time connection for each user,  
so that continuous communication is possible until the user leaves.

### **Acceptance Criteria**

- Connection remains open during chat session
  - Connection closes on logout or exit
  - System handles reconnect scenarios
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## Process Flow:



# Real-Time Chat Application Process Flow

