**Messages that will be used**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Serial #** | **Messages** | **Source** | **Client** | **Fields** |
| 1. | Chat Message | Client | Server | Message ID, Chat-Text |
| 2. | Chat Ack | Server | Client | Message ID, ACK-Boolean |
| 3. | Connect Request | Client | Server | Chat Username, Client IP, Receive Port |
| 4. | Update Client List | Server | Client | Clients List |
| 5. | Server Info | Client | Client | Server IP, Server Port |
| 6. | Broadcasted Message | Server | Client | Message ID (not req), Sequence Number, Chat- Text |
| 7. | Request Election | Client | Client | Election ID, Port |
| 8. | Client Alive Check | Server | Client | Message Type: Alive-Check |
| 9. | New Leader Message | Client | Client | New Leader’s IP, Port, Username |
| 10. | Stop Election Request | Client | Client | Message\_Type: Stop Election, election ID, Source Port |
| 11 | Client alive check response | Client | Server | Message type: Alive check, ACK-Boolean |

**Data-Structures that will be used:**

**Hold-Back-Queue:** Type - Queue,

Used at – Client

Stores – Message Structures/Objects

**Message Send To:** Type - List

**List** Used at – Client

Stores – Message with Message IDs

**Client List:** Type – List

Used at – Server

Stores – Clients Alive

**Message Queue:** Type - Queue

**At server** Used at – Server

Stores – Messages with Sequence Numbers to be broadcasted