Server/Client Communication Protocol

How It Works

There is one thread on the client side that can send and receive information from the server. When it sends a message, it always attaches a two character indicator to the beginning. The server then reads this indicator to figure out what it should do. The server will then send a message back to the client. It may or may not attach an indicator to the beginning depending on the situation.

There is a second thread on the client side that only listens for message updates from the server. It uses a message indicator to figure out whether it has received a message update.

Client Indicators

These are the values and names of the indicators that the client sends to the server.

- "00" REQUEST_USERNAMES: This means the client wants a list of the usernames of all the profiles that currently exist.
- "01" LOG_IN: This has a username attached to it for the server to use to log in.
- "02" CREATE_PROFILE: This has a username attached to it for the broker to use to create a new profile.
- "03" CREATE_TOPIC: This has a topic name attached to it for the broker to use to create a new topic
- "04" REQUEST_TOPIC _NAMES: This means the client wants a list of the names of every topic that currently exists.
- "05" ADD_SUBSCRIPTION: This has a topic name attached to it so that the broker can add it to the user's subscription list.
- "06" REQUEST_NOT _SUBSCRIBED _TOPIC _NAMES: This means the client wants a list of the names of every topic that the user is not currently subscribed to.
- "07" REQUEST_USERS _TOPIC _NAMES: This means the client wants a list of the names of every topic that the user currently owns.
- "08" PUBLISH_MESSAGE: This has a topic name and a message attached to it. The broker publishes the message to the given topic.
- "09" MESSAGE_LISTENER _CONNECTION: This indicates that a connection has been made with a thread that is only listening for message updates. The connection is added to a list so that it can be sent message updates in the future.
- "10" REQUEST_SUBSCRIPTION _NAMES: This means the client wants a list of the names of every topic that the user is currently subscribed to.
- "11" REQUEST_SUBSCRIPTION _MESSAGES: This has a topic name attached to it. The broker sends back a list of every message that has been sent to the topic since the user joined the topic.
- "12" REQUEST_NEW _MESSAGE _COUNT: This has a topic name attached to it. The broker sends back the number of messages that have been sent to the topic since the last time the user looked at the messages for that topic.

- "13" REQEUST_AUTO _RUN _STATUS: This has a topic name attached to it. The broker sends back whether the topic is currently automatically sending messages to clients.
- "14" REQUEST_DEFAULT _MESSAGES: This has a topic name attached to it. The broker sends back a list of all the default messages for the given topic
- "15" TOGGLE_AUTO _RUN: This means the client wants to turn the auto run on/off
- "16" ADD_DEFAULT _MESSAGE: This has a topic name and a message attached to it. It adds the given message as a default message to the given topic.
- "17" DELETE_DEFAULT _MESSAGE: This has a topic name and a message attached to it. The broker looks for the given message in the given topics default messages and deletes it.
- "18" REMEOVE_SUBSCRIPTION: This has a topic name attached to it. The broker removes the given topic from the user's subscription list.
- "19" REQUEST_WELCOME _MESSAGE: This has a topic name attached to it. The broker sends back the welcome message for the given topic.
- "20" SET_WELCOME _MESSAGE: This has a topic name and a message attached to it. The broker sets the welcome message of the given topic to the given message.
- "21" REQUEST_TOPIC _HISTORY: This has a topic name attached to it. The broker sends back the entire message history of the given topic.

Server Indicators

These are the values and names of the indicators that the server sends to the client.

- "22" NO_ACTION _REQUIRED: This simply tells the client that everything went fine on the server side.
- "23" NAME_TAKEN: This means that the name to user wanted, either for a username or topic name, is already taken.
- "24" PROFILE_DELETED: This means that the profile the user tried to log in with was deleted by the time they selected it.
- "25" MESSAGE_NOTIFICATION: This tells the message listening thread that the message it received is a message update.