

Text Conferencing Lab Documentation

Direct Messaging

Usage: /dm <user_id> <message>

Sent Packet

size: sizeof(message)
type: DM
source: <sending client id>
data: <user_id^message>

Received Packet

size: sizeof(message)
type: DM
source: <sending client id>
data: <sending client id (dm): message>

Implementation:

When a client wants to direct message another client, we first check on the client side if the client is logged in. On the server side we check if the client they are sending to exists, logged in if they exist, and are not the same user. We assume secure messaging just like what was done with the message feature. If all the information is valid, the server will extract the message and forward it to the receiving client.

On the receiving end, the client's server handler thread will print the message that it has received in the format <source> (dm): <message>.

Inviting

Usage: /invite <type> <argument>

The <type> field may take either the values **send** or **response**. If the value is **send** the argument field will take the <user_id> of the user to invite. If the value of type is **respond** the argument field will take on either the value **reject** or **accept**.

Sent Packet

size: sizeof(message)
type: INVITE
source: <sending client id>
data: <user_id^session_id^generic_message>

Received Packet

size: sizeof(message)
type: INVITE
source: <sending client id>
data: <session_id^generic_message>

Implementation:

When a client sends an invite to a user, it will be accompanied by a generic message <sending client> has invited you to join <session id>. Additionally, the message is verified similar to that of direct messaging ensuring that the receiving client exists, is logged in, and is not the same user. Again, we assume secure messaging so there are no acknowledgements.

The receiving client stores the invitation and can respond to it at any point in time using the method highlighted above. If the client chooses to accept the invitation a JOIN packet is sent to the server. In both the accept and reject cases the invitation is deleted once responded to.