

Voice Agent Socket Implementation Feature

Feature Summary:

- New voice-agent socket type that authenticates using only the A5 API key (x-a5-apikey) passed in the socket handshake query.
- On connect (when type=voice_agent) server:
 - ★ Verifies API key using the existing AuthMiddleware.needsPublicAuth flow (same code path used by HTTP endpoints).
 - ★ Requires handshake query params: thread_id, crm_id. channel_id is optional.
 - ★ Sets socket.auth, socket.org_name, socket.voiceAgentId, socket.thread_id, socket.crm_id, socket.channel_id.
 - ★ Joins voice-agent rooms plus the thread room and livechat channel room (so messages/updates behave like livechat).
- Existing livechat / instant flows were preserved and not changed.

Socket Events:

1. init_voice_agent
2. post_message
3. save_crm_data

How to Test:

1. open a WebSocket connection to the Socket.IO endpoint with the API key and required query params. Then (because Socket.IO runs over Engine.IO) send the engine.io/socket.io frames: first the connect frame 40, then event frames like 42[...].
2. Open Postman → New → WebSocket Request.
3. Connection URL -

ws://localhost:8042/socket.io/?EIO=4&transport=websocket&type=voice_agent&x-a5-apikey=someapikey&thread_id=random_guid&crm_id=random_guid&channel_id=some_channel_of_org

4. Click Connect. When the WS connection opens Postman will show a blank conversation.
5. After connection is open, send the engine.io "connect" frame:
 - ★ Message to send (raw text): 40
 - ★ This completes the socket.io connect client handshake.

6. Now send an event frame for init_voice_agent. Socket.IO events are encoded as 42<json-array> where array[0] is event name and array[1] is payload.

For example:

```
42["init_voice_agent",{"thread_id":"thread_random_123","crm_id":"crm_random_456","channel_id":"your_channel_id"}]
```

7. What the server will do:
 - ★ Check/create CRM with crm_id.
 - ★ Check/create thread with thread_id.
 - ★ Join the socket to thread_id room and livechat_<channel_id> (if channel provided).
 - ★ Publish an init event to alive5-message for downstream processing.
 - ★ Emit an ack init_voice_agent_ack to the socket (you'll receive it as a 42["init_voice_agent_ack", {...}] frame).

8. Send a post_message event (persist message). Example:

- ★ Frame:

```
42["post_message",{"thread_id":"thread_random_123","crm_id":"some_random_guid","message_content":"Hello from voice agent","message_type":"voice_agent_post_message"}]
```

- ★ Server actions:
 - Persist message (via message.pushMessage).
 - Publish the message on alive5-message.
 - Emit post_message_ack with timestamp and message_id.

9. Send a save_crm_data event (update CRM field). Example:

Frame to set first name:

```
42["save_crm_data",{"crm_id":"crm_random_456","key":"first_name","value":"Alice"}]
```

Server actions:

Update CRM record for that crm_id using crm.update.

Publish an event and emit save_crm_data_ack with confirmation.

10. Observing server responses in Postman:

The server will send engine.io frames back. Example ack frame from server will look like:

```
42["init_voice_agent_ack",{"status":"initialized","voice_agent_id":"...", "thread_id":"thread_random_123","crm_id":"crm_random_456"}]
```

Postman shows these incoming frames in the WebSocket console.

Quick Postman Test Data:

URL:

ws://localhost:8042/[socket.io/?EIO=4&transport=websocket&type=voice_agent&x-a5-apikey=6caf5890-8860-49b9-9b3d-e2294d81d233&thread_id=7b7dfaf3-018d-44db-b761-79d1fe0cd18f&crm_id=0786ab1e-a5aa-433e-ba0c-a452ac5984d0&channel_id=558eea5f-de5a-482a-ba31-d9b5f2355e45](http://localhost:8042/socket.io/?EIO=4&transport=websocket&type=voice_agent&x-a5-apikey=6caf5890-8860-49b9-9b3d-e2294d81d233&thread_id=7b7dfaf3-018d-44db-b761-79d1fe0cd18f&crm_id=0786ab1e-a5aa-433e-ba0c-a452ac5984d0&channel_id=558eea5f-de5a-482a-ba31-d9b5f2355e45)

Handshake Message:

40

Init_voice_agent:

```
42["init_voice_agent",{"thread_id":"7b7dfaf3-018d-44db-b761-79d1fe0cd18f","crm_id":"0786ab1e-a5aa-433e-ba0c-a452ac5984d0","channel_id":"558eea5f-de5a-482a-ba31-d9b5f2355e45"}]
```

post_message (persist a message to the thread)

Voice Message:

```
42["post_message",{"thread_id":"7b7dfaf3-018d-44db-b761-79d1fe0cd18f","crm_id":"0786ab1e-a5aa-433e-ba0c-a452ac5984d0","message_content":"Hello from voice agent","message_type":"voice_agent_post_message"}]
```

save_crm_data

```
42["save_crm_data",{"crm_id":"0786ab1e-a5aa-433e-ba0c-a452ac5984d0","key":"first_name","value":"Alice"}]
```

