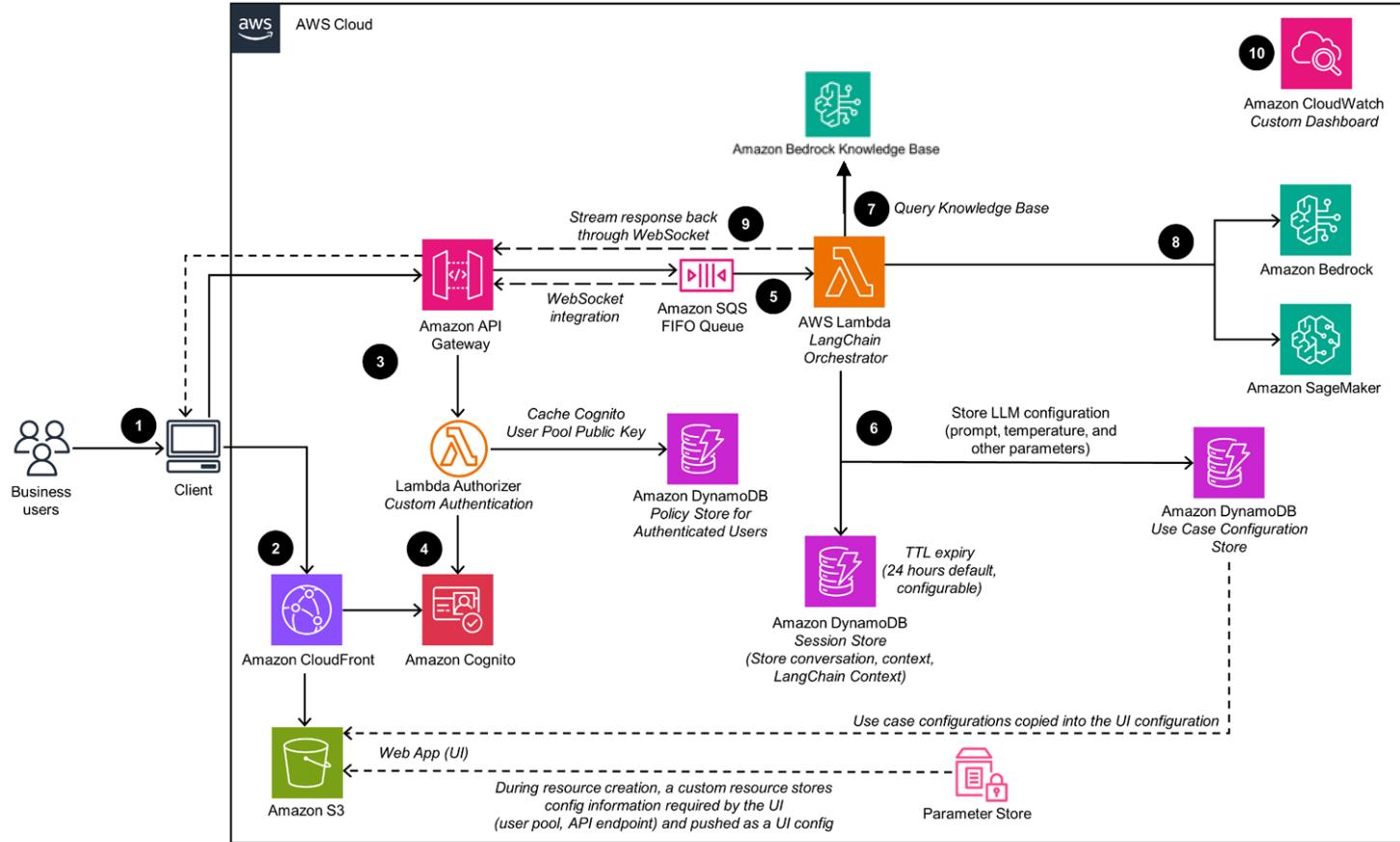# GeM AI Chatbot Architecture

GeM AI Voice bot Architecture

Ask GeM AI

✓ Hi, Welcome to GeM AI. Please ask your query

✓ Connected

MSME registration

React Frontend

Audio from frontend to Python API

API Response

1 Audio conversion

2 Python speech recognition

3 Final Output

Python Backend

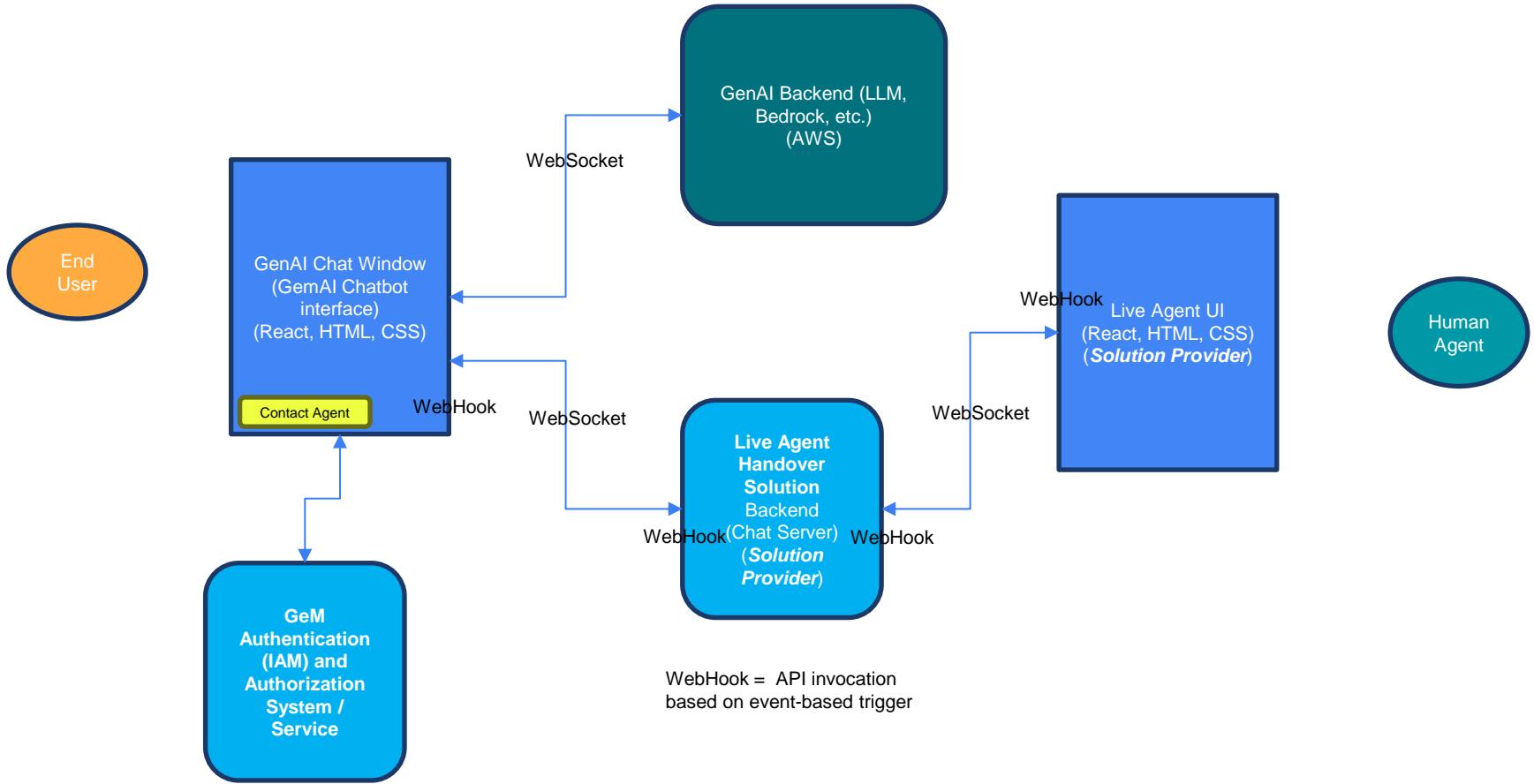**Chatbot Server on AWS**
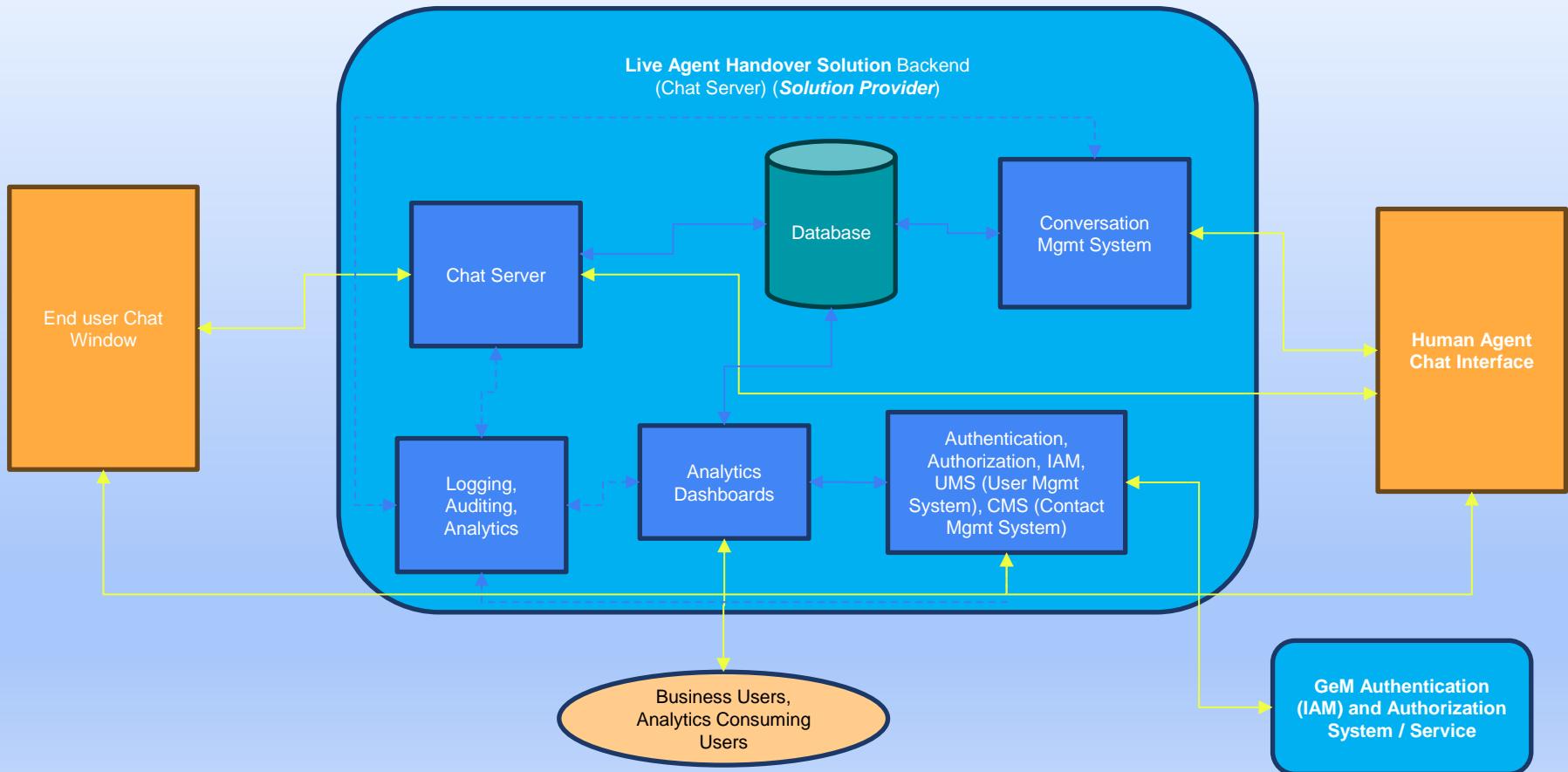
Python Libraries Used
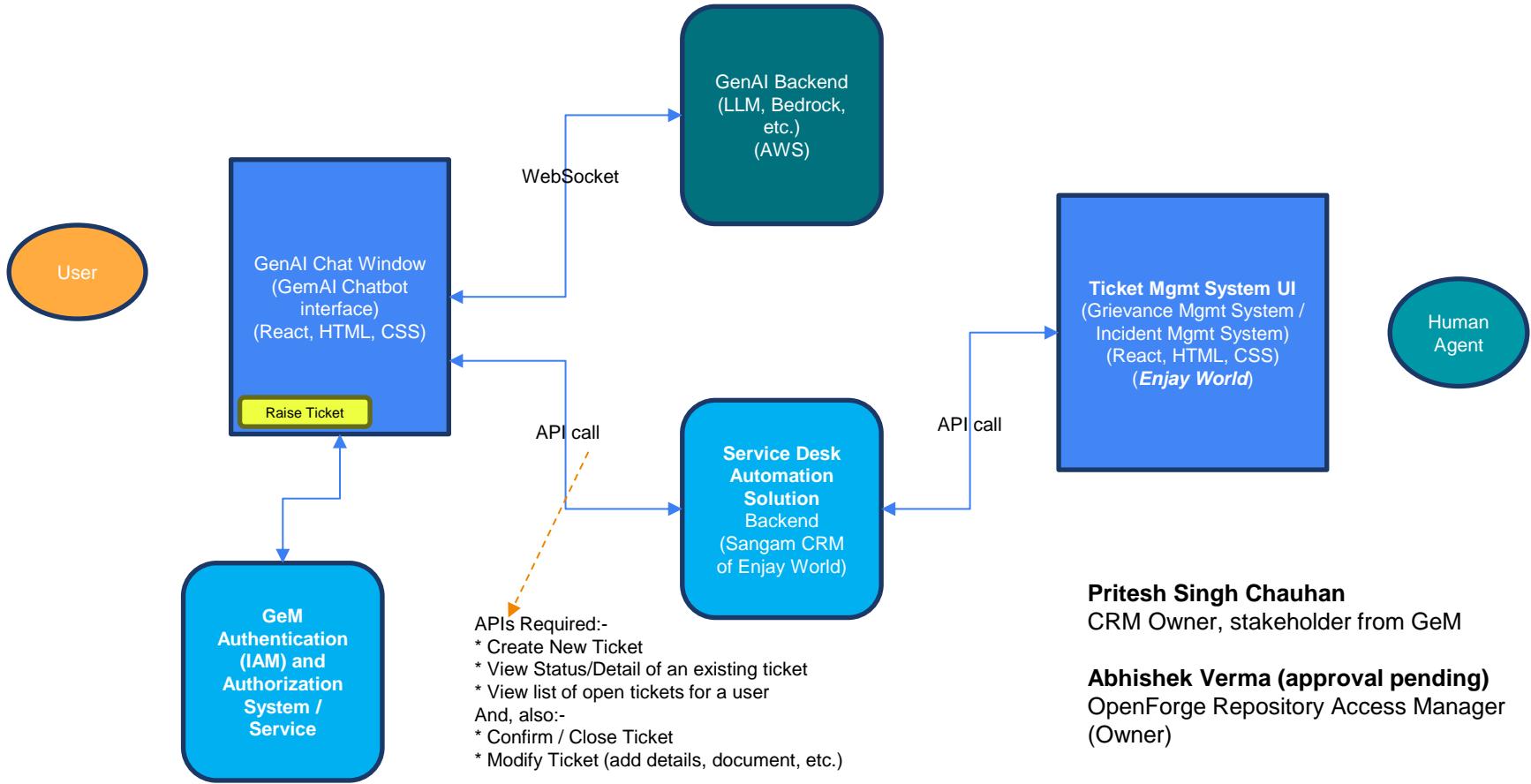
1. Flask 3.1.0

1. SpeechRecognition 3.11.0

1. pydub 0.25.1
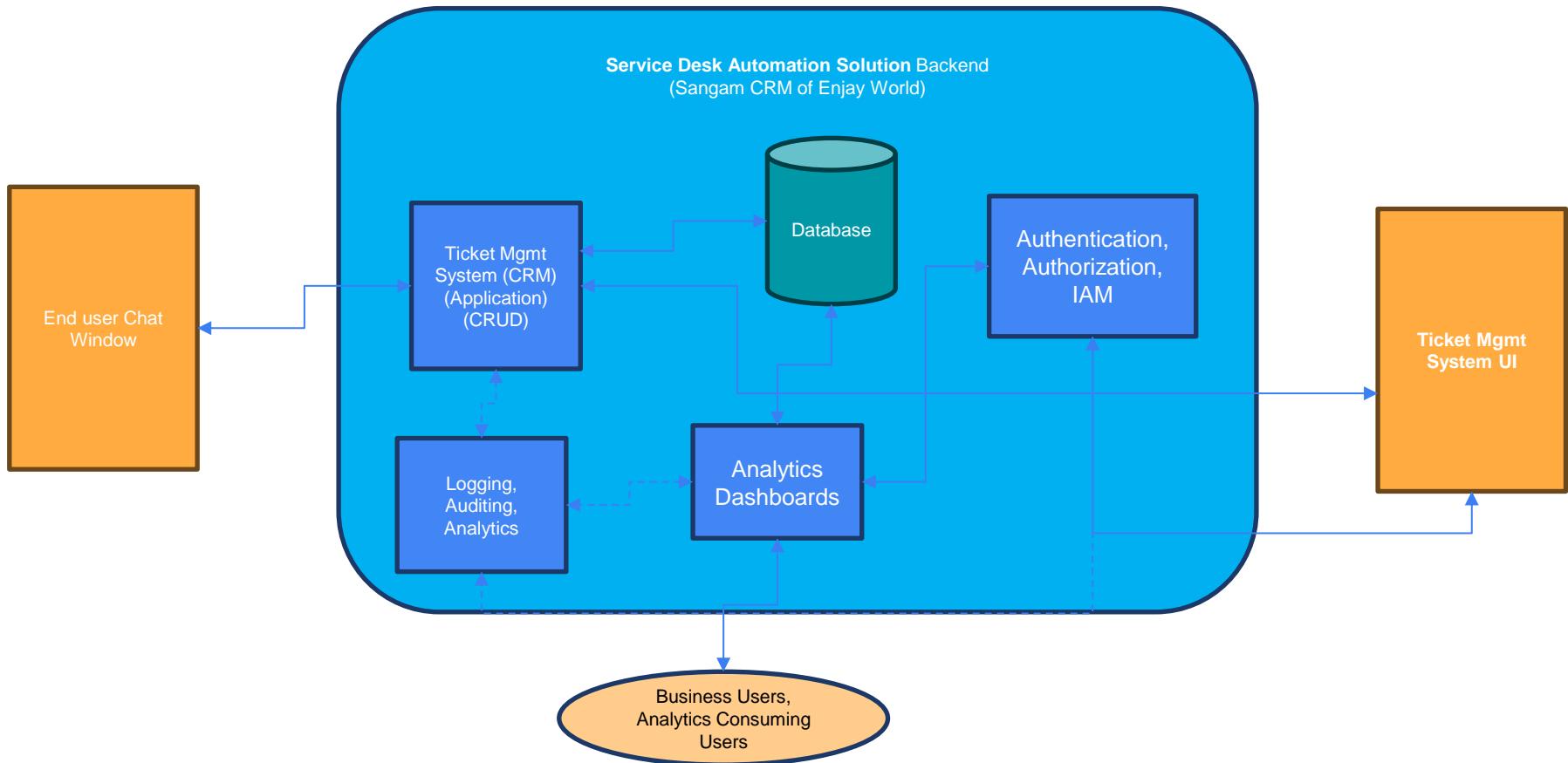
Solution Architecture for Live Agent Handover Solution

End User

GenAI Backend (LLM, Bedrock, etc.) (AWS)

WebSocket

GenAI Chat Window (GemAI Chatbot interface) (React, HTML, CSS)

Contact Agent

WebHook

WebHook

Live Agent UI (React, HTML, CSS) (*Solution Provider*)

Human Agent

WebSocket

WebSocket

WebHook

Live Agent Handover Solution Backend (Chat Server) (*Solution Provider*)

WebHook

GeM Authentication (IAM) and Authorization System / Service

WebHook = API invocation based on event-based trigger

Live Agent Handover Solution Backend
(Chat Server) (**Solution Provider**)

End user Chat Window

Chat Server

Database

Conversation Mgmt System

Logging, Auditing, Analytics

Analytics Dashboards

Authentication, Authorization, IAM, UMS (User Mgmt System), CMS (Contact Mgmt System)

Human Agent Chat Interface

Business Users, Analytics Consuming Users

GeM Authentication (IAM) and Authorization System / Service

Solution Architecture for Service Desk Automation Solution

User

GenAI Backend
(LLM, Bedrock, etc.)
(AWS)

GenAI Chat Window
(GemAI Chatbot interface)
(React, HTML, CSS)

WebSocket

Raise Ticket

Ticket Mgmt System UI
(Grievance Mgmt System / Incident Mgmt System)
(React, HTML, CSS)
(*Enjay World*)

Human Agent

API call

API call

GeM Authentication (IAM) and Authorization System / Service

Service Desk Automation Solution
Backend
(Sangam CRM of Enjay World)

APIs Required:-
* Create New Ticket
* View Status/Detail of an existing ticket
* View list of open tickets for a user
And, also:-
* Confirm / Close Ticket
* Modify Ticket (add details, document, etc.)

Pritesh Singh Chauhan
CRM Owner, stakeholder from GeM

Abhishek Verma (approval pending)
OpenForge Repository Access Manager (Owner)

TO BE CONTINUED…