

Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	01 NOVEMBER 2025
Team ID	NM2025TMID08563
Project Name	STREAMLINING TICKET ASSIGNMENT FOR EFFICIENT SUPPORT OPERATIONS
Maximum Marks	4 Marks

Technical Architecture:

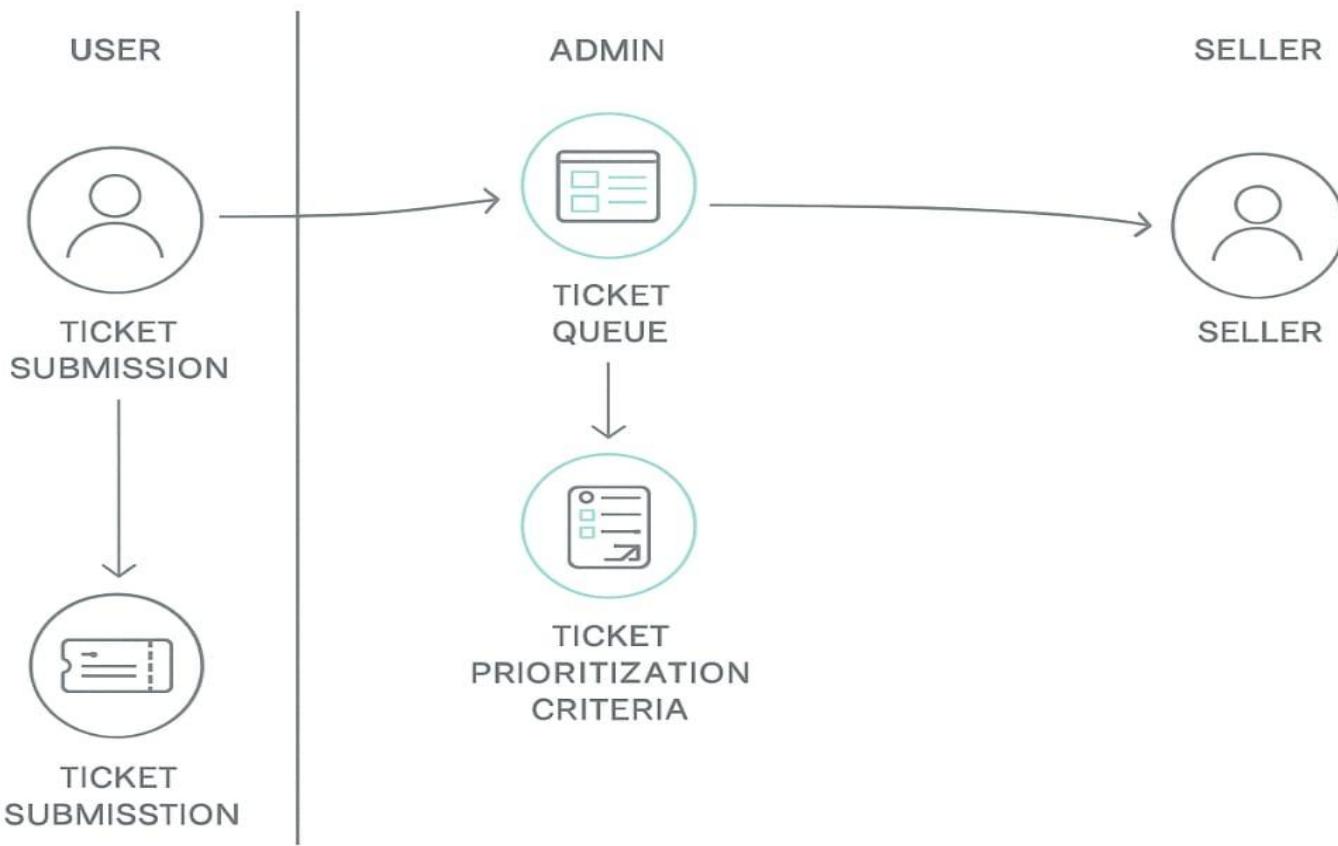
The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: Streamlining Ticket Assignment for Efficient Support Operations

Reference: https://www.zendesk.com/blog/skills-based-routing-route-way-success/?utm_source=chatgpt.com

Guidelines

- Show all main processes as logic blocks with their technologies.
- Mention whether each part runs on **Local** or **Cloud**.
- Indicate all **external interfaces** (APIs, integrations).
- Highlight **data storage** components used.
- Include **ML model interface** if applicable.



STREAMLINING TICKET ASSIGNMENT FOR EFFICIENT SUPPORT OPERATION

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Support agents and supervisors interact via a web dashboard to view, assign, and track tickets..	ServiceNow Agent Workspace / Web UI
2.	Application Logic-1	Automatically routes tickets based on predefined rules like priority, category, and skill set.	ServiceNow Flow Designer (Decision Tables, Rules)
3.	Application Logic-2	Checks agent workload and availability before assigning a new ticket.	GlideRecord queries in Server Script / Script Includes
4.	Application Logic-3	Sends notifications to assigned agents and escalates if not acknowledged within SLA.	ServiceNow Notifications / Flow Actions
5.	Database	Stores details of tickets, agents, skills, and workload data.	ServiceNow Incident, Task, and Assignment Tables
6.	Cloud Database	Managed by ServiceNow's backend for data storage and reliability..	ServiceNow Cloud Database (SaaS)
7.	File Storage	Stores logs and assignment audit trails for compliance and monitoring.	ServiceNow System Logs / Attachments

8.	External API-1	Integrates with HRMS or Workforce Management to fetch agent skill and schedule data.	REST API Integration via ServiceNow IntegrationHub
9.	External API-2	Connects with email/chat systems to ingest new tickets automatically.	REST / Email Inbound Actions / Virtual Agent
10.	Machine Learning Model	Recommends best-fit agents for new tickets based on historical resolution data.	ServiceNow Predictive Intelligence / ML Recommendations
11.	Infrastructure (Server / Cloud)	Hosted entirely on ServiceNow's SaaS cloud platform ensuring scalability and uptime.	ServiceNow Cloud (SaaS)

Table-2: Application Characteristics

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Not applicable, as the ticket assignment automation is built within ServiceNow's proprietary platform.	-
2.	Security Implementations	Implements strong access control with user roles, ACLs, and scoped app permissions to ensure only authorized users can modify assignment rules.	Role-Based Access Control (RBAC), ACLs, Scoped Applications
3.	Scalable Architecture	Designed on ServiceNow's SaaS architecture that supports horizontal scaling and handles large ticket volumes efficiently	ServiceNow Cloud Architecture
4.	Availability	Hosted on the ServiceNow cloud platform with redundancy and failover for continuous availability (typically 99.95% uptime).	Load-balanced ServiceNow Instances

5.	Performance	Optimized with asynchronous Flow Designer actions, indexed tables, and GlideRecord queries for faster assignment processing.	Flow Designer, GlideRecord, Background Scripts
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