

Project Design Phase – II

Technology Stack (Architecture & Stack)

Date: 2 November 2025

Team ID / NM ID: 1B7E2B53849503BABC14DF402D5447BF

Project Name: Streamlining Ticket Assignment for Efficient Support Operations

Maximum Marks: 4 Marks

Technical Architecture

This project utilizes the ServiceNow platform to automate and optimize ticket assignment within IT support operations. The architecture integrates built-in ServiceNow modules, cloud infrastructure, and flow designer automation to improve efficiency and reduce manual workload in support ticket management.

The key components include:

- Web-based UI for administrators and support agents.
- Flow Designer for automation and rule-based assignment.
- GlideRecord scripting for dynamic logic and validations.
- Cloud-hosted CMDB and Incident tables for centralized data management.
- Notifications and REST APIs for external integration and communication.

Table 1: Components & Technologies

| S.No | Component | Description | Technology |
|------|---------------------------------|--------------------------------------|----------------------------------|
| 1 | User Interface | Admin dashboard for ticket handling. | ServiceNow Web UI |
| 2 | Application Logic – 1 | Automates ticket routing. | ServiceNow Flow Designer |
| 3 | Application Logic – 2 | Validates and routes tickets. | Business Rules, GlideRecord |
| 4 | Application Logic – 3 | Triggers notifications. | ServiceNow Notifications |
| 5 | Database | Stores ticket data. | ServiceNow CMDB, Incident Tables |
| 6 | Cloud Database | Managed cloud storage. | ServiceNow Cloud Database |
| 7 | File Storage | Stores logs and attachments. | ServiceNow File Storage |
| 8 | External API – 1 | Integrates with HRMS. | REST API Integration |
| 9 | External API – 2 | Not applicable. | – |
| 10 | Machine Learning Model | Future enhancement. | – |
| 11 | Infrastructure (Server / Cloud) | ServiceNow SaaS model. | ServiceNow Cloud (SaaS) |

Table 2: Application Characteristics

| S.No | Characteristics | Description | Technology |
|------|--------------------------|---|-------------------------|
| 1 | Open-Source Frameworks | Not applicable (ServiceNow is proprietary). | |
| 2 | Security Implementations | Role-based access and ACLs. | Role-based Access, ACLs |
| 3 | Scalable Architecture | Supports multi-instance scaling. | ServiceNow Cloud |

| | | | |
|---|--------------|--|--------------------------------|
| 4 | Availability | High uptime with load balancing. | Load-Balanced Instances |
| 5 | Performance | Optimized through scripts and indexes. | HideRecord, Background Scripts |