Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	2 November 2025
Team ID	NM2025TMID00329
Project Name	Streamlining Ticket Assignment for Efficient Support Operations
Maximum Marks	4 Marks

Technical Architecture

The *Streamlining Ticket Assignment for Efficient Support Operations* project is built entirely on the **ServiceNow App Engine.** The system automates the process of routing support tickets to the appropriate technical teams using **Flow Designer** and role-based logic.

The architecture integrates **users, groups, roles, and automated workflows** to create a seamless ticket management experience. When a user submits an issue via the ServiceNow form, the system evaluates the issue type, determines the correct support group (Platform or Certificates), and assigns the ticket automatically. All actions are securely logged and monitored for transparency and performance tracking.

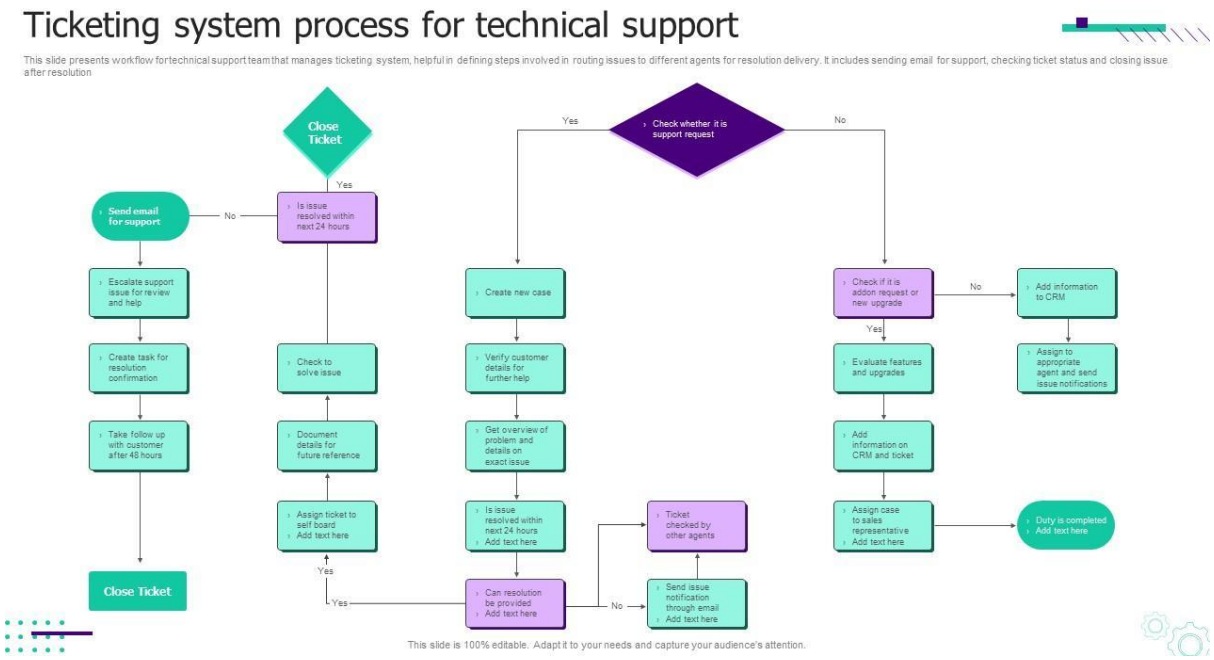

Table – 1: Components & Technologies:

S.No:	Component	Description	Technology
1	User Interface	Users and admins interact through the ServiceNow web-based form to create and track tickets.	ServiceNow Web UI
2	Application Logic – 1	Automates ticket assignment using issue-based conditions and triggers.	ServiceNow Flow Designer
3	Application Logic – 2	Manages record creation, updates, and validations through scripted logic.	Flow Designer & Server Scripts
4	Application Logic – 3	Sends automated notifications to users and groups upon ticket creation or update.	ServiceNow Notifications
5	Database	Stores all records, including user data, issue details, and group assignments.	Custom Table: *Operations Related*
6	Cloud Database	Managed by ServiceNow's SaaS infrastructure ensuring data redundancy and uptime.	ServiceNow Cloud Database
7	File Storage	Stores activity logs and audit data internally for tracking and security.	System Logs in ServiceNow
8	Access Control	Restricts user operations based on assigned roles and ACL permissions.	Role-Based Access Control (RBAC), ACLs
9	External API (Optional)	Allows future integration with third-party applications for extended automation.	REST API Integration
10	Infrastructure	Entire application hosted and managed by ServiceNow's cloud platform.	ServiceNow Cloud (SaaS)

Table – 2: Application Characteristics:

S.No	Characteristic	Description	Technology / Method
1	Open-Source Frameworks	Not applicable, as ServiceNow is a proprietary SaaS environment.	–
2	Security Implementations	Strict role-based security, ACLs, and scoped application boundaries protect all records.	ACLs, Scoped Applications
3	Scalable Architecture	The SaaS model supports horizontal scalability to handle large ticket volumes.	ServiceNow Cloud Architecture
4	Availability	High availability ensured through redundant cloud instances and load balancing.	ServiceNow Cloud Hosting
5	Performance Optimization	Optimized through asynchronous flows, indexed tables, and background scripts for faster response times.	GlideRecord, Flow Designer Optimization
6	Maintainability	Modular structure allows new flows, tables, and roles to be added easily.	Low-Code / No-Code Environment
7	Auditability	Each transaction and ticket update is logged for compliance and traceability.	ServiceNow System Logs

Summary

The chosen technology stack provides a robust, secure, and scalable foundation for automating support operations.
By leveraging ServiceNow Flow Designer, the system ensures that each ticket is processed efficiently and routed correctly, minimizing manual errors and maximizing team productivity.

The combination of cloud infrastructure, secure ACLs, and automated workflows makes this solution ideal for organizations seeking digital transformation in their IT support operations.