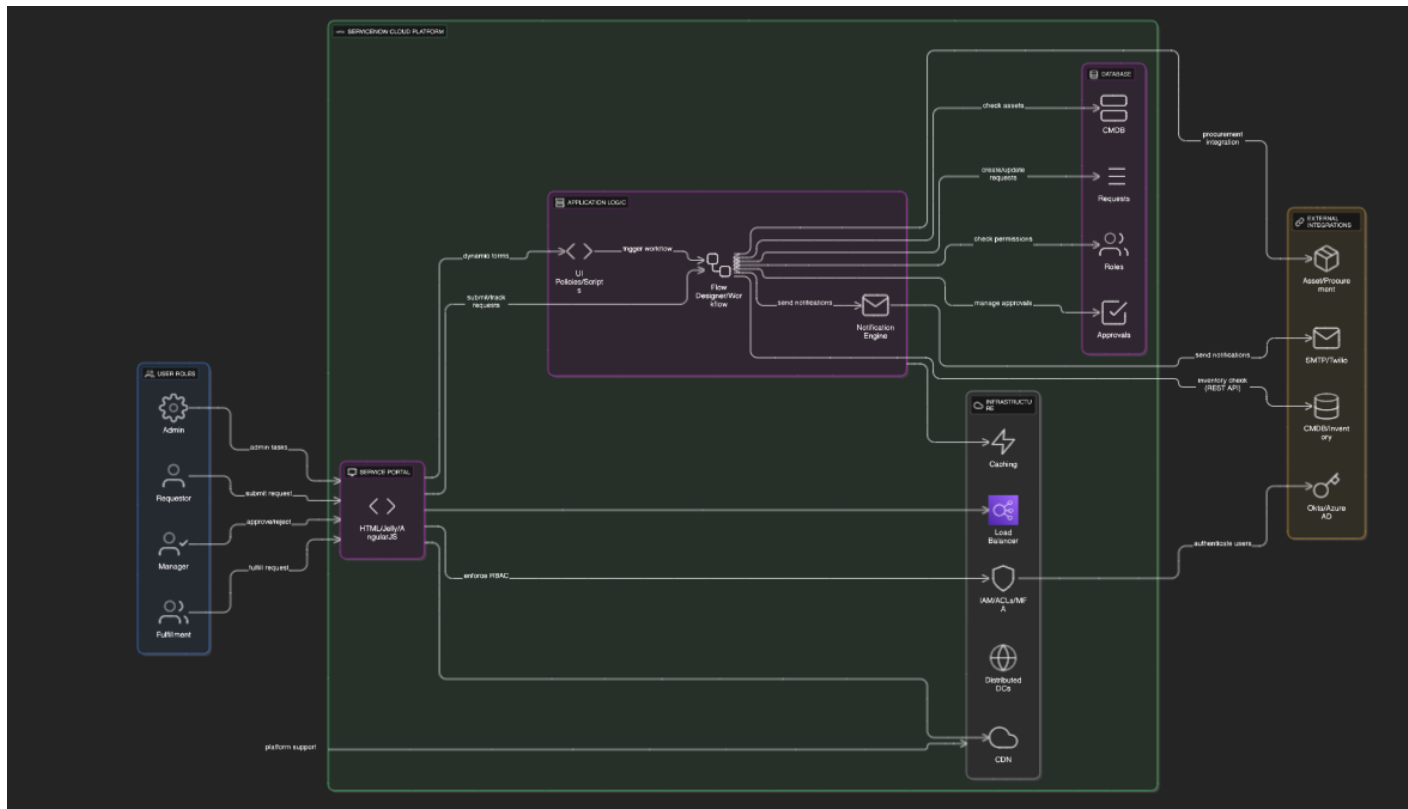


## Project Design Phase-II Technology Stack (Architecture & Stack)

|               |                             |
|---------------|-----------------------------|
| Date          | 01 November 2025            |
| Team ID       | NM2025TMID03271             |
| Project Name  | LAPTOP REQUEST CATALOG ITEM |
| Maximum Marks | 4 Marks                     |

### Technical Architecture:

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



**Table-1 : Components & Technologies:**

| S.No | Component                       | Description  | Technology   |
|------|---------------------------------|--|--|
| 1.   | User Interface                  | Web-based ServiceNow Service Catalog portal to submit requests | ServiceNow UI Framework (HTML, Jelly, AngularJS inside ServiceNow) |
| 2.   | Application Logic-1             | Dynamic form behavior using UI Policies and Client Scripts     | ServiceNow Server-side scripts (JavaScript, Glide API)             |
| 3.   | Application Logic-2             | Workflow automation and approval processing                    | ServiceNow Flow Designer / Workflow Engine                         |
| 4.   | Application Logic-3             | Email notification and alert logic                             | ServiceNow Notification Engine                                     |
| 5.   | Database                        | Stores laptop request, approval, and user data                 | ServiceNow CMDB, Task and Request tables (MySQL-based backend)     |
| 6.   | External API-1                  | Integration to fetch laptop availability from CMDB             | ServiceNow REST API or OOTB CMDB APIs                              |
| 7.   | Infrastructure (Server / Cloud) | ServiceNow Platform hosted on Cloud                            | ServiceNow Cloud SaaS Platform                                     |

**Table-2: Application Characteristics:**

| S.No | Characteristics          | Description  | Technology  |
|------|--------------------------|--|---|
| 1.   | Open-Source Frameworks   | ServiceNow platform leverages open-source components like AngularJS for UI, and JavaScript for client/server scripting.                  | AngularJS, JavaScript                             |
| 2.   | Security Implementations | Role-based access control, multi-factor authentication, encryption of data at rest and in transit, OWASP best practices.                 | ServiceNow IAM, HTTPS, TLS, ACLs, OAuth2          |
| 3.   | Scalable Architecture    | ServiceNow's multi-tenant cloud architecture supports scalability with modular components and APIs following microservices principles.   | ServiceNow Cloud Platform, REST APIs              |
| 4.   | Availability             | High availability with geographically distributed data centers, automated failover, scheduled maintenance windows.                       | ServiceNow Cloud Infrastructure, Load Balancers   |
| 5.   | Performance              | Optimized workflows, caching mechanisms within ServiceNow, and CDN services for static assets to ensure low latency and high throughput. | ServiceNow Caching Layer, CDN (Akamai or similar) |

