

Project Design Phase-II

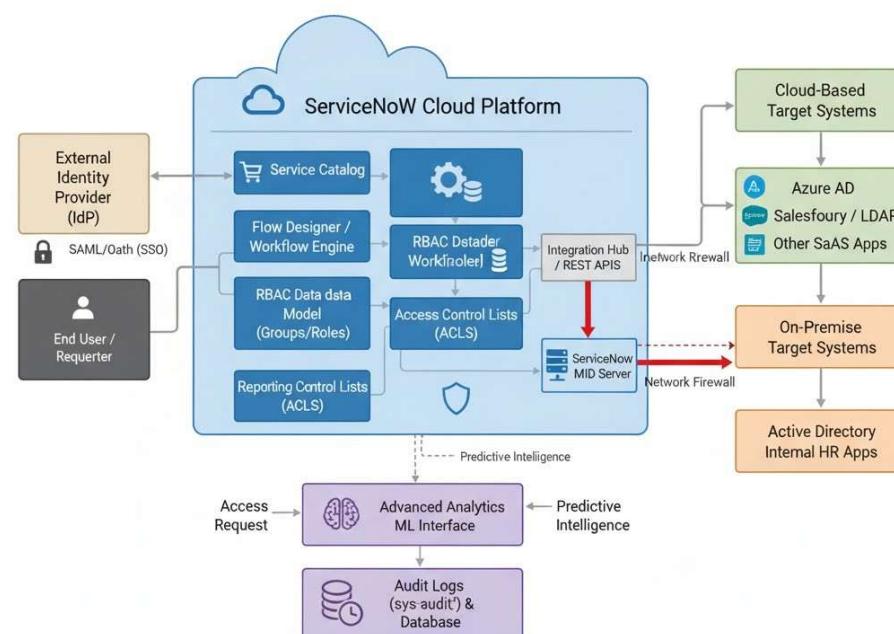
Technology Stack (Architecture & Stack)

Date	1 NOVEMBER 2025
Team ID	NM2025TMID00409
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows
Maximum Marks	4 Marks

Technical Architecture:

The technical architecture for "Optimizing User, Group, and Role Management with Access Control and Workflows" is built upon the robust and extensible ServiceNow Platform. It integrates various modules and functionalities to deliver a seamless, secure, and automated access provisioning and governance solution.

Technical Architecture: Optimized & Role Management with Access Control & Workflows



**Table-1: Components & Technologies:
Optimizing User, Group, & Role Management with Access Control
& Workflows**

S.No.		Description	Technology
1	User Interface	End-users request access, admins manage ServiceNow Catalog / UI via Web dashboard in ServiceNow.	
2	Application Logic-1	Orchestrates multi-level approval flow, tasks	ServiceNow Catalog / UI
3	Application Logic-2	Automates user provisioning: adds users and groups.	Task creation, Dataloader, and reports
3	Application Logic-3	and notifications.	
4		Enforces access rules (e.g., SoD checks) before deployment of roles.	Integration Hub
5		before/during provisioning.	
5	Data Model	ServiceNow Business Rules / Script Includes	ServiceNow Database
6	Cloud Database	Stores users, groups, roles, requests	and tables
7	File Storage	ServiceNow Access Control Tables	ServiceNow Cloud Database
8		ServiceNow Cloud Database	SAML / OAuth 2.0
9	External API-1 for SSO)	Management by ServiceNow backend infrastructure.	Integration in Identity SSO)
9	External API-2	Integration with corporate target apps (e.g., (e.ID, Azure AD, SAP), just-in-time system logs / attachments)	

Table-2: Application Characteristics:
Optimizing User, Group, & Role Management with Access Control & Workflows

S.No	Characterisus	Description	Description
1.	Open-Source Frameworks	Not applicable (ServiceNow is proprietary)	-
2.	Security Implementations	Role-based access control (RBAC), Access Control	ACLs, Scoper ACLS, secure scripts
3.	Scalable Architecture	SaaS-based access control (Segergaation of Duties (SOD) checks)	ServiceNow Cloud Architecture
4.	Availability	Highly available with ServiceNow cloud hosting	Load-balanced ServiceNow Instances
5.	Performance	Highly available with ServiceNoud hosting, Load-balblent Cluxed queries	GlideRecord, Background Scripts
6.	Integration Capabilities	Optimized via asynchronous flows, indesed tables and efficient GlideRecord queriys	GlideRecord, identity providers (IIPs)