



Project Metadata

Item	Details
Date	02 November 2025
Team ID	NM2025TMID00980
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows
Maximum Marks	4 Marks



Technical Architecture

This architecture outlines how ServiceNow components interact to automate user provisioning, enforce access control, and manage roles and groups securely.



- Automate user, group, and role assignment using Flow Designer
- Enforce granular access control using ACLs
- Validate provisioning logic with Business Rules
- Maintain audit trails and system integrity
- Ensure scalability across departments and modules



If you'd like to include a visual architecture diagram (e.g., showing data flow between sys_user, sys_user_role, ACL engine, and Flow Designer), I can help you design one or format your sketch.



Table-1: Components & Technologies

S.No	Component	Description	Technology

1.	User Interface	Admin interacts via ServiceNow dashboard to manage users, roles, and groups	ServiceNow Web UI
2.	Application Logic-1	Automates role and group assignment based on user attributes	Flow Designer
3.	Application Logic-2	Validates access control using ACLs and role checks	ACLs, Scoped Apps
4.	Application Logic-3	Business Rules prevent misconfigurations and enforce provisioning logic	GlideRecord, Server Scripts
5.	Database	Stores user, role, group, and task data	sys_user, sys_user_role, sys_user_group
6.	Cloud Database	Managed by ServiceNow SaaS backend	ServiceNow Cloud Database
7.	File Storage	Minimal use; logs and audit trails stored internally	System Logs, Audit Tables
8.	External API-1	Optional integration with HRMS or LDAP for user sync	REST API, IntegrationHub
9.	External API-2	Optional integration with external identity providers	OAuth 2.0, SAML
10.	Machine Learning Model	Not applicable for current use case	-
11.	Infrastructure	Hosted and managed on ServiceNow SaaS platform	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 control, ACLs, scoped apps	ACLs, Scoped Applications
3.	Scalable Architecture	SaaS-based, horizontally scalable across modules and departments	ServiceNow Cloud Architecture
4.	Availability	Highly available via load-balanced ServiceNow instances	ServiceNow SaaS Infrastructure
5.	Performance	Optimized via asynchronous flows and indexed tables	GlideRecord, Background Scripts
