Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	2 November 2025
Team ID	NM2025TMID06157
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows
Maximum Marks	4 Marks

Technical Architecture

This architecture diagram and tables describe the technology and components used to implement optimized user, group, and role management in ServiceNow.

Architecture Overview

- User and HR events trigger identity creation
- Workflow engine manages role & group assignment requests
- Manager and security approvals ensure controlled access
- ACLs enforce access restrictions
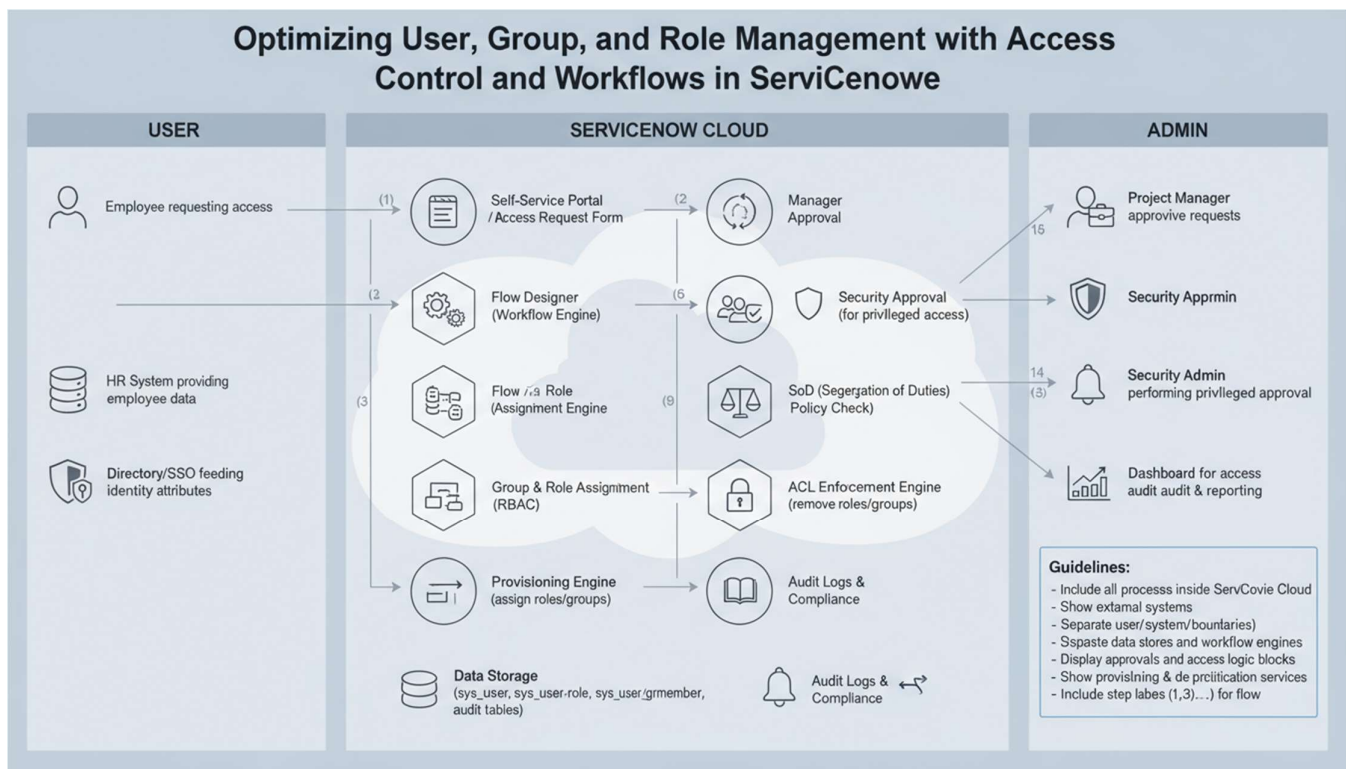- Audit logs maintain compliance

Optimizing User, Group, and Role Management with Access Control and Workflows in ServiCenowe

Table-1: Components & Technologies

S.No	Component	Description	Technology
1	User Interface	Users & admins use ServiceNow UI to request & manage access	ServiceNow Web UI
2	Application Logic-1	Auto-create/update users from HR feed	Flow Designer / Integration Hub
3	Application Logic-2	Group assignment based on role/department	Business Rules / Flow Designer
4	Application Logic-3	Manager approval for access	Flow Designer Approvals
5	Application Logic-4	Security approval for elevated roles	Flow Designer + RITM Approval
6	ACL Access Layer	Enforces role-based access to tables & UI	ACL (Access Control List) Rules
7	Database	Stores user roles, groups, audit records	ServiceNow User & Role Tables
8	Audit System	Logs access changes for compliance	System Logs & Audit History
9	Directory Integration	Validates employee identity, sync	LDAP / Azure AD (if integrated)
10	Notifications	Sends approval alerts to managers/security	ServiceNow Notification Engine
11	Infrastructure	Cloud hosting & runtime	ServiceNow Cloud (SaaS)

Table-2: Application Characteristics

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	Not applicable (ServiceNow proprietary)	—
2	Security	RBAC, ACLs, SoD controls, logs	ACLs, RBAC, Script Security
3	Scalable Architecture	Supports large org users & roles	ServiceNow SaaS Cloud
4	Availability	Highly available platform	Load-balanced ServiceNow instance
5	Performance	Optimized workflows & indexed tables	Flow Designer, GlideRecord, Background Jobs