🗓️ 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

🧭 Goals of the Architecture

- ✅ Automate user provisioning and role/group assignment
- ✅ Enforce granular access control using ACLs
- ✅ Maintain data integrity across user-role relationships
- ✅ Reduce manual errors and improve audit readiness
- ✅ Streamline onboarding and access workflows

🧩 Key Components

- **sys_user table** – Stores user records
- **sys_user_role table** – Maps users to roles
- **sys_user_group table** – Maps users to groups
- **Custom task table (u_task_table)** – Used to validate role-based access
- **Access Control Rules (ACLs)** – Enforce record and field-level security
- **Flow Designer** – Automates provisioning and notifications
- **Business Rules** – Validate role/group logic and prevent misconfigurations

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🛠️ Development Phases

1. Create test users (e.g., Alice, Bob)
2. Assign users to roles and groups based on department/title
3. Configure ACLs for record and field-level access
4. Build Flow Designer logic for automated provisioning
5. Implement business rules to validate role/group consistency
6. Test impersonation scenarios and access restrictions

🧠 Solution Architecture Description

The architecture for **Optimizing User, Group, and Role Management** in ServiceNow is designed to automate provisioning, enforce secure access, and maintain consistency across user records. It integrates:

- **Flow Designer** to trigger role/group assignment based on user attributes
- **ACLs** to restrict access to sensitive fields and records
- **Business Rules** to validate provisioning logic and prevent unauthorized changes
- **Custom tables** to simulate real-world task assignments and enforce role-based access

This architecture ensures that users are granted appropriate access based on their roles, and that any changes are logged and validated. It reduces manual effort, improves compliance, and supports scalable governance across departments.